

GBC eWire

Service Manual



CAUTION

Certain components in the GBC eWire are susceptible to damage from electrostatic discharge. Observe all appropriate ESD procedures to avoid component damage.

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NOTICE

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GBC
ACCO Brands Inc.
Four Corporate Drive
Lake Zurich, IL 60047.
USA

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Organization

In addition to the Introduction, this documentation contains the following sections.

Section 1	Service Call Procedures
Section 2	Repair Analysis Procedures (RAPs)
Section 3	Book Quality
Section 4	Repairs and Adjustments (REPs)
Section 5	Parts List
Section 6	General Procedures
Section 7	Wiring Data
Section 8	Installation

How to Use This Documentation

Introduction

This section provides the Service Representative with information pertaining to the organization and use of this service documentation.

Section 1: Service Call Procedures (SCP)

This section is used by the Service Representative as a structured process for determining the type and sequence of actions that are performed during a service call. The Service Call Procedures section is designed to assist in the effective recognition of machine symptoms and problems, as well as to provide instructions for the maintenance and corrective actions that are required to return the machine to the full operating condition.

Section 1 of this service documentation is the entry level for all service calls. The Service Representative should begin each service call with the Initial Action Procedure found in Section 1.

The Service Call Procedures section is composed of five integral elements: Initial Action, System Checks, Every Call Activities, Scheduled Maintenance, and Final Action.

The maintenance and diagnostic activities in this section may direct the Service Representative to perform additional service activities found elsewhere in the documentation, such as RAPs, Removal and Replacement Procedures, and Adjustment Procedures.

Section 2: RAPs

Section 2 of this documentation contains the Repair Analysis Procedures (RAPs) necessary to repair all faults other than image quality faults. The Service Representative will be referred to this section from some other section of this documentation during the service call. When a machine defect or fault has been resolved by using a RAP, the Service Representative should immediately return to the point in the service call from which Section 2 was entered. The RAPs in this section are associated with error or status messages that will be indicated on the eWire LCD during a Jam. The service representative should refer to the appropriate RAP based on the error code indicated on the machine.

Section 3: Book Quality

This section contains the procedures used to correct problems with the quality of the completed book.

Section 4: Repairs and Adjustment Procedures

This section contains all repair and adjustment procedures for the machine. Repairs (REPs) and adjustments (ADJs) are identified by the use of a standard chain prefix number.

Section 5: Parts List

This section contains a list of spare parts for the machine. All parts list page reference numbers begin with the letters "PL", followed by a prefix number, a decimal point, and a sequential number used within the subsystem.

Section 6: General Procedures

This section contains procedures and information of a general nature that apply to the machine. This section is divided into two basic parts: General Procedures and General Information.

Section 7: Wiring Data

This section contains support information to assist in the electrical diagnosis of machine problems and is a central location for electrical wiring diagrams. This section is used in conjunction with other diagnostic or maintenance procedures that are contained in other sections of the service documentation.

Section 8: Installation

This section contains service information that describes the GBC eWire Installation.

Safety Messages in other Languages

GB	<p>WARNING</p> <p>Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.</p>
F	<p>AVERTISSEMENT</p> <p>Ne pas effectuer de réparations avec la machine sous tension ou branchée. Certains composants de la machine peuvent contenir des tensions électriques dangereuses et provoquer une électrocution ou des blessures graves.</p>
E	<p>ADVERTENCIA</p> <p>No realice actividades de reparación con la máquina encendida o conectada a la energía eléctrica. Algunos componentes de la máquina contienen tensiones eléctricas peligrosas que pueden provocar una descarga eléctrica y posibles lesiones graves.</p>
I	<p>AVVERTENZA</p> <p>Non eseguire interventi di riparazione quando la macchina è accesa o viene erogata energia elettrica ad essa. Alcuni componenti della macchina hanno tensioni elettriche pericolose che possono provocare scosse elettriche ed eventuali lesioni serie.</p>
D	<p>WARNUNG</p> <p>Keine Reparaturarbeiten durchführen, wenn die Maschine eingeschaltet oder an die Stromversorgung angeschlossen ist. Einige Maschinenkomponenten führen gefährliche elektrische Spannungen, die zu einem Stromschlag und möglicherweise schweren Verletzungen führen können.</p>
NL	<p>WAARSCHUWING</p> <p>Voer geen herstellingen uit aan het toestel als het aan staat of als de stroom ingeschakeld is. Sommige onderdelen bevatten gevaarlijke elektrische spanning die kan leiden tot elektrische schokken en ernstige letsels.</p>

PT	<p>AVISO</p> <p>Não execute atividades de reparação com a fonte de energia ligada na máquina. Alguns componentes da máquina contêm tensões elétricas perigosas que podem causar choque elétrico e ferimentos graves.</p>
RU	<p>ВНИМАНИЕ</p> <p>Выполнение работ по техническому обслуживанию при включенном устройстве или подключенном источнике питания не допускается. Отдельные узлы устройства находятся под опасным напряжением, что может привести к поражению электрическим током и серьезным травмам.</p>
CHI	<p>警告</p> <p>不得在加电或机器供电情况下执行维修活动。一些机器零部件包含危险电压，可导致电击和可能严重伤亡事故。</p>

GB	Warning: Make sure you disconnect the eWire from its power source before cleaning. Failure to observe this warning could result in death or serious Injury.
F	Avertissement: Assurez-vous que le eWire est débranché de son alimentation électrique avant de le nettoyer. Le non respect de cet avertissement peut provoquer la mort ou de graves blessures.
E	ADVERTENCIA: Asegúrese de desconectar la perforadora EWire de la toma de alimentación antes de limpiarla. El incumplimiento de esta advertencia podría causar lesiones graves o incluso la muerte..
I	Avvertenza: Assicurarsi di aver disconnesso l'EWire dall'alimentazione prima di procedere alla pulizia. La non osservanza di questo avvertimento può avere come conseguenza la morte o lesioni gravi. serie.
D	Warnung: Sicherstellen, dass der EWire vor der Reinigung von seiner Stromversorgung getrennt wird. Die Nichtbeachtung dieses Warnhinweises kann zum Tod oder schweren Verletzungen führen.
NL	Waarschuwing: Trek de stekker van de EWire uit voor u het toestel reinigt. Het niet naleven van deze waarschuwing kan de dood of ernstige letsels tot gevolg hebben.
PT	Aviso: Certifique-se de desligar o EWire da fonte de energia. Se as instruções deste aviso não forem seguidas, poderão ocorrer mortes ou ferimentos graves.
RU	ВНИМАНИЕ: Перед началом работ по очистке необходимо убедиться в том, что устройство отключено от источника питания. Несоблюдение данного предупреждения может привести к получению серьезной травмы или летальному исходу.
CHI	警告: 确保清洁之前把EWire与其电源断开。未能遵守这一点可导致严重伤亡事故。。

GB	WARNING Moving Parts, keep hands clear of nips and the belts when the Interlock is cheater is inserted.
F	AVERTISSEMENT Pièces mobiles, éloignez les mains des contacts et des courroies lorsque la broche de verrouillage est insérée.
E	ADVERTENCIA Piezas móviles, mantenga las manos alejadas y absténgase de tocar las correas para evitar pellizcos cuando el emulador de inter-bloqueo esté insertado.
I	AVVERTENZA Parti in movimento, non toccare i morsetti e le cinghie quando il Regolatore di interblocco è inserito.
D	WARNUNG Bewegliche Teile, Hände von den Walzenspalten und Riemen fernhalten, wenn die Verriegelungsüberbrückung (Interlock Cheater) eingesetzt ist.
NL	WAARSCHUWING Bewegende delen, houd uw handen uit de buurt van de spleten en de riemen als de cheater (stukje om vergrendeling te omzeilen) van de vergrendeling geplaatst is.
PT	AVISO Mantenha as mãos distantes dos estreitamentos e das correias quando o bloqueador for introduzido nas peças móveis.
RU	ВНИМАНИЕ Движущиеся части, не прикасаться к валкам и ремням при вставленном ключе отключения блокировки.
CHI	警告 移动零件时，当插入连锁装置时，请将手远离尖锐凸起和皮带。

GB	Caution – Potential damage to the machine could result unless the specified procedures are followed.
F	Mise en garde – La machine peut subir des dégâts si les procédures indiquées ne sont pas suivies.
E	Precaución – Pueden producirse daños en la máquina a menos que se sigan los procedimientos especificados.
I	Cautela – Se non le procedure specifiche non vengono rispettate, si potrebbe verificare un eventuale danno della macchina.
D	Vorsicht – Die Maschine könnte beschädigt werden, wenn die angegebenen Verfahren nicht eingehalten werden.
NL	Voorzorgsmaatregel – Als men de vermelde procedures niet volgt kan het toestel beschadigd raken.
PT	Advertência – Se os procedimentos específicos não forem seguidos, podem ocorrer possíveis danos à máquina.
RU	Осторожно – Несоблюдение указанных процедур может привести к повреждению устройства.
CHI	当心 – 请务必遵守特定程序，避免机器出现潜在危险。

GB	WARNING Do not touch the open terminals of the power supply or any other connector with the AC power cord connected. The machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.
F	AVERTISSEMENT Ne touchez pas les bornes ouvertes de l'alimentation électrique ni tout autre connecteur si le cordon d'alimentation en c.a. est branché. Les composants de la machine contiennent des tensions électriques dangereuses qui peuvent provoquer une électrocution ou des blessures graves.
E	ADVERTENCIA No toque los terminales de la fuente de alimentación o de cualquier otro conector cuando el cable de alimentación de CA esté conectado. Los componentes de la máquina contienen tensiones eléctricas peligrosas que pueden provocar una descarga eléctrica y posibles lesiones graves.
I	AVVERTENZA Non aprire i terminali aperti dell'alimentazione o di qualsiasi altro connettore se il cavo di alimentazione CA è connesso. I componenti della macchina dispongono di tensioni elettriche pericolose che possono provocare scosse elettriche ed eventuali lesioni gravi.
D	WARNUNG Wenn das Netzkabel angeschlossen ist, keine offenen Klemmen der Stromversorgung oder anderer Verbinder berühren. Die Maschinenkomponenten führen gefährliche elektrische Spannungen, die zu einem Stromschlag und möglicherweise schweren Verletzungen führen können.
NL	WAARSCHUWING Raak geen open terminals van de stroomtoevoer of andere connectoren aan, als de AC voedingskabel is aangesloten. De onderdelen van het toestel bevatten

	gevaarlijke spanning die tot elektrische schokken en ernstige letsels kan leiden.
PT	AVISO Não toque nos terminais abertos da fonte de alimentação ou qualquer outro conector com o cabo de alimentação CA conectado. Os componentes da máquina contêm tensões elétricas perigosas que podem causar choque elétrico e ferimentos graves.
RU	ВНИМАНИЕ Не допускается прикасаться к открытым клеммам источника питания и иным элементам соединения при подключенном шнуре питания переменного тока. Отдельные узлы устройства находятся под опасным напряжением, что может привести к поражению электрическим током и серьезным травмам.
CHI	警告 在连接交流电时不得接触电源开放端子或任何其他接头。机器零部件包含危险电压，可导致电击和可能严重伤亡事故。

GB	CAUTION: Sensor emits High Intensity narrow angle Infrared beam (940nm). It is invisible to naked eye, avoid looking directly at the sensor when the machine is powered ON.
F	MISE EN GARDE: Le capteur émet un faisceau infrarouge de forte intensité et à angle de rayonnement étroit (940 nm). Il est invisible à l'œil nu ; évitez de regarder directement le capteur lorsque la machine est sous tension.
E	PRECAUCIÓN: El sensor emite un rayo infrarrojo angosto de alta intensidad (940 nm). Es invisible a simple vista, evite mirar directamente el sensor cuando la máquina esté encendida.
I	CAUTELA: Il sensore emette un raggio a infrarossi ad angolo stretto e ad alta intensità (940 nm). È invisibile a occhio nudo; evitare quindi di guardare direttamente il sensore quando la macchina è accesa.
D	VORSICHT: Der Sensor gibt einen schmalen Infrarotstrahl hoher Intensität ab (940 nm). Er ist mit bloßem Auge nicht sichtbar. Bei eingeschalteter Maschine nicht direkt in den Sensor schauen.
NL	Voorzorgsmaatregel: De sensor straalt een smalle infraroodstraal (940nm) uit met hoge intensiteit. Deze straal is niet te zien met het blote oog, kijk niet rechtstreeks naar de sensor als het toestel AAN staat.
PT	Advertência: O sensor emite um raio infravermelho com ângulo estreito e de alta intensidade (940nm). Como o raio é invisível a olho nu, evite olhar diretamente para o sensor quando a máquina estiver ligada.
RU	ОСТОРОЖНО: Сенсорный датчик излучает узкий инфракрасный луч высокой интенсивности (940 нм). Луч не виден невооруженным глазом. Необходимо избегать смотреть прямо на датчик при включенном питании устройства.
CHI	当心: 传感器发出高强度窄角红外光束(940nm)。该红外光束肉眼无法看到, 在机器加电时避免直视传感器。

GB	<p>The Use of Caution, Warning, and Note statements Information relative to the completion of a task in a safe or thorough manner will be supplied in the form of a Caution, a Warning, or a Note statement. These statements are found throughout the service documentation. Cautions, Warnings, and Note statements appear before the steps to which they apply. These statements should be read before continuing to the next step in a procedure. Caution - A Caution statement indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of, equipment. Warning - A Warning statement indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in personal injury or loss of life. Note - A Note statement indicates an operating or maintenance problem, practice, or condition that is necessary to accomplish a task efficiently.</p>
F	<p>Utilisation des mises en garde, des avertissements et des remarques Des informations relatives à l'exécution d'une tâche de façon sécurisée et minutieuse sont données sous la forme de déclaration de Mise en garde, Avertissement ou Remarque. Ces déclarations se trouvent dans toute la documentation d'entretien. Les déclarations de Mise en garde, Avertissement et Remarque apparaissent avant les étapes concernées. Ces déclarations doivent être lues avant de passer à l'étape suivante d'une procédure. Mise en garde - Une déclaration de Mise en garde indique une procédure, pratique ou condition d'utilisation et de maintenance qui, si elle n'est pas strictement respectée, peut entraîner des dégâts ou la destruction de l'équipement. Avertissement - Une déclaration d'Avertissement indique une procédure, pratique ou condition d'utilisation et de maintenance qui, si elle n'est pas strictement respectée, peut entraîner des blessures corporelles ou la mort. Remarque - Une déclaration de Remarque indique un problème, une pratique ou une condition de maintenance nécessaires pour exécuter une tâche efficacement.</p>
E	<p>Uso de los avisos de Precaución, Advertencia y Nota La información relativa a la realización de una tarea de una forma segura o cuidadosa se proporcionará en forma</p>

	<p>avisos de Precaución, Advertencia o Nota. Estos avisos se encuentran a través de toda la documentación de servicio. Los avisos de Precaución, Advertencia y Nota aparecen antes de los pasos a los que se aplican. Estos avisos se deben leer antes de continuar con el siguiente paso en el procedimiento. Precaución: Un aviso de Precaución indica un procedimiento operativo o de mantenimiento, una práctica o una condición que, si no se sigue estrictamente, puede producir daños o la destrucción del equipo. Advertencia: Un aviso de Advertencia indica un procedimiento operativo o de mantenimiento, una práctica o una condición que, si no se sigue estrictamente, puede producir lesiones personales o la muerte. Nota: Una Nota indica un problema operativo o de mantenimiento, una práctica o una condición que es necesaria para realizar una tarea en forma eficiente.</p>
I	<p>Uso dei messaggi di Cautela, Avvertenza e Nota Le informazioni relative al completamento del lavoro in modo sicuro e preciso verranno fornite sotto forma di messaggio di Cautela, Avvertenza o Nota. Questi messaggi appaiono in tutta la documentazione di manutenzione. I messaggi di Cautela, Avvertenza e Nota appaiono prima delle fasi alle quali si riferiscono. Questi messaggi dovranno essere letti prima di passare alla fase successiva della procedura. Cautela – Un messaggio di Cautela indica una procedura, pratica o condizione di funzionamento o manutenzione che, se non rigidamente osservato, potrebbe provocare un danno o una distruzione dell'apparecchiatura. Avvertenza – Un messaggio di avvertenza indica una procedura, una pratica o una condizione di funzionamento o manutenzione che, se non rigidamente osservata, potrebbe provocare una lesione personale o la perdita della vita. Nota – Un messaggio di Nota indica un problema, una pratica o una condizione di funzionamento o manutenzione che sono necessari per compiere un lavoro in modo efficiente.</p>
D	<p>Verwendung und Bedeutung der Begriffe Vorsicht, Warnung und Hinweis Informationen, die für die sichere oder ordnungsgemäße Durchführung einer Aufgabe relevant sind, werden durch die Begriffe Vorsicht, Warnung oder Hinweis angezeigt.</p>

	<p>Diese Warn- und Sicherheitshinweise sind in der gesamten Wartungsdokumentation zu finden.</p> <p>Warn- und Sicherheitshinweise (angezeigt durch die Begriffe Vorsicht, Warnung oder Hinweis) erscheinen jeweils vor den betreffenden Schritten. Diese Warn- und Sicherheitshinweise müssen gelesen werden, bevor mit dem nächsten Schritt eines Verfahrens fortgefahren wird.</p> <p>Vorsicht – Bedien- oder Wartungsverfahren, Vorgehensweisen oder Bedingungen, die, wenn sie nicht strikt beachtet werden, zu einer Beschädigung oder Zerstörung eines Geräts führen können, sind durch den Begriff „Vorsicht“ gekennzeichnet.</p> <p>Warnung – Bedien- oder Wartungsverfahren, Vorgehensweisen oder Bedingungen, die, wenn sie nicht strikt beachtet werden, zu Verletzungen oder zum Tod führen können, sind durch den Begriff „Warnung“ gekennzeichnet.</p> <p>Hinweis – Bedien- oder Wartungsverfahren, Vorgehensweisen oder Bedingungen, die zur effizienten Durchführung einer Aufgabe notwendig sind, sind durch den Begriff „Hinweis“ gekennzeichnet.</p>
NL	<p>Het gebruik van de Voorzorgsmaatregelen, Waarschuwingen en Opmerkingen</p> <p>Informatie betreffende de veilige en degelijke uitvoering van taken wordt voorzien in de vorm van Voorzorgsmaatregelen, Waarschuwingen of Opmerkingen. Deze vermeldingen komen vaak terug in de documentatie. Voorzorgsmaatregelen, Waarschuwingen en Opmerkingen staan bij de stappen waarop ze van toepassing zijn. U moet ze lezen voor u overgaat naar de volgende stap in een procedure.</p> <p>Voorzorgsmaatregel – Een Voorzorgsmaatregel geeft een bedienings- of onderhoudsprocedure, een toepassing of situatie aan die, indien deze niet streng wordt gecontroleerd, kan leiden tot schade aan of vernietiging van het toestel.</p> <p>Waarschuwing – Een Waarschuwing geeft een bedienings- of onderhoudsprocedure, een toepassing of situatie aan die, als deze niet streng wordt gecontroleerd, tot lichamelijke letsels of de dood kan leiden.</p> <p>Opmerking – Een Opmerking geeft een bedienings- of onderhoudsprocedure, een toepassing of situatie aan die vereist is om een taak goed uit te voeren.</p>

PT	<p>Declarações de advertência, alerta e observações</p> <p>As informações referentes à conclusão de uma tarefa de forma segura ou completa serão fornecidas na forma de declarações de uma advertência, um alerta ou uma observação. Estas declarações são encontradas em toda a documentação dos serviços.</p> <p>As declarações de advertências, alerta e declarações aparecem antes dos passos a que elas se aplicam. Antes de continuar para a próxima etapa de um procedimento, leia estas declarações.</p> <p>Advertência- Uma declaração de advertência indica que uma operação ou procedimento de manutenção, prática ou uma condição que, se não for rigorosamente respeitada, pode causar dano ou destruição ao equipamento.</p> <p>Alerta - Uma declaração de alerta indica que uma operação ou procedimento de manutenção, prática ou uma condição que, se não for rigorosamente respeitada, pode causar lesões corporais ou a morte.</p> <p>Observação - Uma declaração indica um problema operacional ou de manutenção, prática ou condição que é necessária para a execução de uma tarefa com eficiência.</p>
RU	<p>Использование предупреждающих обозначений техники безопасности</p> <p>Информация в отношении выполнения работ безопасным и эффективным образом предоставлена в виде предупреждающих обозначений «Осторожно», «Опасно» и «Внимание». Данные обозначения используются во всех разделах эксплуатационной документации.</p> <p>Обозначения «Осторожно», «Опасно» и «Внимание» приведены непосредственно перед операциями, к которым они относятся. С данными предписаниями необходимо ознакомиться до того, как приступать к выполнению следующей операции регламента.</p> <p>Осторожно – Предписание «Осторожно» обозначает порядок, правило или режим эксплуатации или технического обслуживания, несоблюдение которого может привести к повреждению или выходу из строя оборудования.</p> <p>Опасно - Предписание «Опасно» обозначает порядок, правило или режим эксплуатации или технического обслуживания, несоблюдение которого может привести к несчастному случаю или летальному исходу.</p>

	Внимание - Предписание «Внимание» обозначает проблему, правило или режим эксплуатации или технического обслуживания, которые следует принять во внимание для выполнения задачи эффективным образом.
CHI	<p>当心、警告和注释声明</p> <p>通过当心、警告和注释声明形式提供了安全、全面地完成任 务的相关信息。可在维修文档中找到这些声明。 在每个适用步骤前面显示当心、警告和注释声明。在执行 程序中后续步骤之前，请仔细阅读这些声明。</p> <p>当心 - 当心声明指示如果不严格遵守操作或维护程序、做 法或条件，可导致设备损坏或破坏。</p> <p>警告 - 警告声明指示如果不严格遵守操作或维护程序、做 法或条件，可导致人员受伤或死亡。</p> <p>注释 - 注释声明指示为有效完成任务而需要的一种运行或 维护问题、做法或条件。</p>

GB	<p>Safety Devices The GBC EWire has several safety devices designed to prevent personal injury when operating the machine.</p> <p>Interlock When you open the Front Door, Book Tray, or Top Cover, a Safety Interlock device automatically disables the drive motors until you close all doors and covers. When a Door or Cover is open, the Operator Panel displays the “CLOSE DOOR” or “CLOSE TRAY” or “CLOSE LID” message on the top line of the interface. When all Doors and Covers are closed, the Operator Panel displays the “READY” message on the top line of the interface.</p> <p>Operational Safety Do not operate the GBC EWire with the interlocks defeated. Use care when a procedure in this Manual instructs you to “insert an Interlock Cheater into Interlock,” in order to test the operation of a component.</p> <p>WARNING Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted. Do not open any panels other than those indicated by this Manual. Pay particular attention to the WARNINGS and CAUTIONS listed in the Operator Manual.</p> <p>Warnings and Cautions Pinch Points</p> <div> </div> <p>WARNING Moving Parts, keep hands clear of moving parts when the covers are removed.</p>
F	<p>Dispositifs de sécurité Le EWire de GBC possède plusieurs dispositifs de sécurité prévus pour éviter les blessures corporelles lorsqu'on utilise la machine.</p> <p>Verrouillage des portes Lorsque vous ouvrez la porte avant, un dispositif de verrouillage de sécurité désactive automatiquement les</p>

	<p>moteurs d'entraînement jusqu'à ce que la porte soit refermée.</p> <p>1. Lorsque la porte avant est ouverte, le panneau de l'opérateur affiche le message « FERMER LA PORTE » sur la ligne du haut de l'interface.</p> <p>Lorsque vous refermez la porte avant, le panneau de l'opérateur affiche le message « PRÊT » sur la ligne du haut de l'interface.</p> <p>Sécurité d'utilisation Ne pas mettre le "eWire" de GBC en marche si les verrouillages ne sont pas en place. Soyez prudent lorsqu'une procédure dans ce manuel vous demande « d'introduire une broche de verrouillage dans le commutateur SW1 de verrouillage de la porte de perforation », pour tester le fonctionnement d'un composant.</p> <p>AVERTISSEMENT Pièces mobiles, éloignez vos mains des contacts et des courroies lorsque la broche de verrouillage est insérée. N'ouvrez aucun autre panneau que ceux indiqués dans ce manuel. Soyez particulièrement attentif aux AVERTISSEMENTS et aux MISES EN GARDE indiqués dans le manuel d'utilisation.</p> <p>Avertissements et mises en garde Points de pincement</p>  <p>AVERTISSEMENT Pièces mobiles, éloignez les mains des courroies lorsque l'ensemble de couvercle arrière est retiré. La courroie du moteur du module de poinçonnement (PL 3.1.) est un point de pincement possible.</p>
E	<p>Dispositivos de seguridad El equipo GBC eWire tiene varios dispositivos de seguridad diseñados para evitar lesiones personales cuando se opera la máquina.</p> <p>Inter-bloqueo de puerta</p>

	<p>Cuando se abre la puerta delantera, un dispositivo de inter-bloqueo de seguridad desactiva automáticamente los motores de tracción hasta que se cierra la puerta delantera. Cuando la puerta delantera está abierta, el Panel de control muestra el mensaje "CLOSE DOOR" (cerrar la puerta) en la línea superior de la interfaz.</p> <p>Cuando la puerta delantera se cierra, el Panel de control muestra el mensaje "READY" (equipo listo) en la línea superior de la interfaz.</p> <p>Seguridad de operación No opere el equipo GBC eWire con los inter-bloqueos desactivados. Tenga cuidado cuando un procedimiento en este manual le indique que "inserte un emulador de inter-bloqueo en el interruptor de bloqueo SW1 de la puerta de la perforadora" para probar el funcionamiento de un componente.</p> <p>ADVERTENCIA Piezas móviles, mantenga las manos alejadas y absténgase de tocar las correas para evitar pellizcos cuando el emulador de inter-bloqueo esté insertado. No abra otros paneles que no sean los indicados en este Manual. Preste especial atención a las ADVERTENCIAS y PRECAUCIONES indicadas en el Manual del operador.</p> <p>Advertencias y Precauciones Puntos de pellizco</p>  <p>ADVERTENCIA Piezas móviles, mantenga las manos alejadas de las correas cuando la cubierta posterior se haya removido. La correa del motor del módulo perforador (PL 3.1) es un punto potencial de pellizco.</p>
I	<p>Dispositivi di sicurezza L'eWire GBC dispone di diversi dispositivi di sicurezza studiati per evitare lesioni personali quando la macchina è in funzione.</p> <p>Interblocco sportello</p>

	<p>Quando si apre lo Sportello frontale, un dispositivo di Interblocco di sicurezza disabilita i motori di alimentazione finché non si richiude lo Sportello frontale.</p> <p>Quando lo Sportello anteriore è aperto, il Pannello operatore mostra il messaggio "CHIUDERE LO SPORTELLLO" sulla linea superiore dell'interfaccia.</p> <p>Quando si chiude lo Sportello frontale, il Pannello operatore mostra il messaggio "PRONTO" sulla linea superiore dell'interfaccia.</p> <p>Sicurezza operativa</p> <p>Non far funzionare l'EWire GBC con gli interblocchi disattivati.</p> <p>Fare attenzione quando una procedura di questo Manuale indica di "inserire un Regolatore di interblocco nell'Interruttore di interblocco dello sportello della punzonatrice SW1," per testare il funzionamento di un componente.</p> <p>AVVERTENZA</p> <p>Parti in movimento, non toccare i morsetti e le cinghie quando il Regolatore di interblocco è inserito.</p> <p>Non aprire alcun pannello diverso da quelli indicati in questo Manuale.</p> <p>Fare particolare attenzione alle AVVERTENZE e CAUTELE elencate nel Manuale operatore.</p> <p>Avvertenze e Cautele</p> <p>Punti critici</p> <div style="text-align: center;">  <div style="display: inline-block; vertical-align: middle; text-align: center;"> <p>CAUTELA</p> <hr/> <p>PUNTI CRITICI NON TOCCARE</p> </div> </div> <p>AVVERTENZA</p> <p>Parti in movimento, non toccare le cinghie quando viene rimosso il Gruppo coperchio posteriore.</p> <p>La Cinghia del motore del modulo di punzonatura (PL 3.1) è un potenziale punto critico.</p>
D	<p>Sicurezzavorrictungen</p> <p>Der GBC EWire verfügt über mehrere Sicherheitsvorrichtungen, die den Bediener vor Verletzungen beim Betrieb der Maschine schützen.</p> <p>Türverriegelung</p> <p>Wenn die Vordertür geöffnet wird, deaktiviert eine Sicherheitsverriegelungsvorrichtung automatisch die</p>

	<p>Antriebsmotoren, bis die Vordertür wieder geschlossen wird.</p> <p>Wenn die Vordertür geöffnet ist, wird auf der Bedienkonsole in der ersten Zeile der Anzeige die Meldung „CLOSE DOOR“ (Tür schließen) angezeigt.</p> <p>Wenn die Vordertür geschlossen wird, wird auf der Bedienkonsole in der ersten Zeile der Anzeige die Meldung „READY“ (bereit) angezeigt.</p> <p>Betriebsicherheit</p> <p>Der GBC EWire darf nicht in Betrieb genommen werden, wenn die Verriegelungen außer Kraft gesetzt wurden.</p> <p>Vorsichtig vorgehen, wenn ein Verfahren in diesem Handbuch zum Testen der Funktion eines Bauteils folgende Anweisung enthält: „eine Verriegelungsüberbrückung (Interlock Cheater) in den Türverriegelungsschalter SW1 des Lochers einsetzen“.</p> <p style="text-align: center;">WARNUNG</p> <p>Bewegliche Teile, Hände von den Walzenspalten und Riemen fernhalten, wenn die Verriegelungsüberbrückung (Interlock Cheater) eingesetzt ist.</p> <p>Keine anderen als die in diesem Handbuch genannten Abdeckungen öffnen.</p> <p>Besonders auf die in diesem Handbuch enthaltenen Warn- und Sicherheitshinweise achten, die mit den Begriffen „WARNUNG“ und „VORSICHT“ gekennzeichnet sind.</p> <p>Warn- und Sicherheitshinweise (Warnung und Vorsicht)</p> <p>Quetschgefahr</p> <div style="text-align: center;">  <div style="display: inline-block; vertical-align: middle; text-align: center;"> <p>VORSICHT</p> <hr/> <p>QUETSCHGEFAHR HÄNDE FERNHALTEN</p> </div> </div> <p style="text-align: center;">WARNUNG</p> <p>Bewegliche Teile, Hände von den Riemen fernhalten, wenn die hintere Abdeckungsbaugruppe entfernt wurde.</p> <p>Am Motorriemen des Stanzmoduls (PL 3.1) besteht die Gefahr von Handverletzungen (Quetschgefahr)</p>
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NL

Veiligheidsinrichtingen

De GBC EWire heeft verschillende veiligheidsinrichtingen om lichamelijke letsels tijdens bediening van het toestel te voorkomen.

Deurvergrendeling

Als u het deurtje aan de voorkant opent dan zal een vergrendelingsinrichting automatisch de motor uitschakelen tot u het deurtje vooraan sluit.

Als het deurtje vooraan open is dan verschijnt het bericht "CLOSE DOOR (SLUIT DEUR)" op de bovenste regel van de interface.

Als u het deurtje vooraan sluit dan verschijnt het bericht "READY (KLAAR)" op de bovenste regel van de interface.

Veiligheidsvoorschriften

Bedien de GBC EWire niet als de vergrendelingen uitgeschakeld zijn.

Wees voorzichtig wanneer een procedure uit deze Handleiding aangeeft dat u "een cheater (stukje om vergrendeling te omzeilen) moet plaatsen op de vergrendelingsschakelaar SW1 van de ponsdeur" om de werking van een onderdeel te testen.

WAARSCHUWING

Bewegende delen, houd uw handen uit de buurt van de spleten en de riemen als de cheater (stukje om vergrendeling te omzeilen) van de vergrendeling geplaatst is.

Open enkel de panelen waarvoor instructie werd gegeven in deze Handleiding.

Let bijzonder goed op de WAARSCHUWINGEN en VOORZORGSMATREGELEN in de Handleiding.

Waarschuwingen en Voorzorgsmaatregelen

Klempunten



WAARSCHUWING

Bewegende delen, houd uw handen op afstand van de riemen als het achterste deksel verwijderd is.

De riem van de ponsmodule (PL 3.1) is een mogelijk klempunt.

PT

Dispositivos de segurança

O GBC EWire tem vários dispositivos de segurança designados para prevenir lesões corporais durante a operação da máquina.

Bloqueio da porta

Ao abrir a porta dianteira, um dispositivo de segurança de bloqueio desativará automaticamente os motores de acionamento até você fechar a porta dianteira.

Quando a porta dianteira estiver aberta, o painel do operador exibirá a mensagem "FECHAR A PORTA" na linha superior da interface.

Ao fechar a porta dianteira, o painel do operador exibirá a mensagem "PRONTO" na linha superior da interface.

Segurança operacional

Não opere o GBC EWire com dispositivos de bloqueio que apresentem problemas.

Tome cuidado quando um procedimento deste manual solicitar para que você "insira o bloqueador no interruptor SW1 de bloqueio da porta de perfuração," para testar o funcionamento de um componente.

AVISO

Mantenha as mãos distantes dos estreitamentos e das correias quando o bloqueador for introduzido nas peças móveis.

Não abra nenhum painel que não seja o indicado por este manual.

Dê atenção especial para os ALERTAS e ADVERTÊNCIAS no Manual do operador.

Alertas e Advertências

Pontos de esmagamento



AVISO

Mantenha as mãos distantes das correias quando o conjunto da tampa traseira for retirado.

A correia do motor do módulo Punch (PL 3.1) é um ponto de esmagamento potencial

RU	<p>Устройства безопасности Перфоратор GBC EWire оснащен рядом устройств безопасности, предназначенных для предотвращения несчастных случаев в ходе эксплуатации устройства.</p> <p>Блокировочное устройство дверцы При открытии передней дверцы предохранительное блокировочное устройство автоматически отключает приводные электродвигатели до тех пор, пока не будет закрыта передняя дверца. При открытой передней дверце на верхней строчке интерфейса панели управления высвечивается сообщение «ЗАКРЫТЬ ДВЕРЦУ». При закрытии передней дверце на верхней строчке интерфейса панели управления высвечивается сообщение «ГОТОВО».</p> <p>Техника безопасности Не допускается использовать перфоратор GBC EWire при неработающих блокировочных устройствах. Соблюдать осторожность, если с целью испытания работоспособности узла какая-либо операция, приведенная в настоящем Руководстве, предусматривает использование вставного ключа отключения блокировки в выключателе блокировки дверцы перфоратора SW1.</p> <p>ВНИМАНИЕ Движущиеся части – не прикасаться к валкам и ремням при вставленном ключе отключения блокировки. Не открывать никакие панели, если это не предусмотрено настоящим Руководством. Обращать особое внимание на предупредительные обозначения ОПАСНО и ОСТОРОЖНО, приведенные в Руководстве по эксплуатации.</p> <p>Предупредительные надписи Места заземления</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">  <p style="text-align: center;">ОСТОРОЖНО</p> <p style="text-align: center;">МЕСТА ЗАЗЕМЛЕНИЯ РУКАМИ НЕ ТРОГАТЬ</p> </div> <p>ВНИМАНИЕ</p>
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	<p>Движущиеся части – не прикасаться к ремням при снятом узле задней крышки. Ремень электродвигателя модуля перфорирования (PL 3.1) является местом возможного защемления.</p>
CHI	<p>安全设备 GBC EWire带有几种安全设备，设计用于防止人员在操作机器时受到伤害。</p> <p>门连锁装置 当您打开前门时，安全连锁装置自动禁用驱动电机，直到您关闭前门为止。 当前门打开时，操作员面板在界面的第一行显示“门关闭”消息。 当前门关闭时，操作员面板在界面的第一行显示“就绪”消息。</p> <p>操作安全性 不得在连锁装置失效情况下操作 GBC EWire。 如果手册中的程序指示“把连锁杆插入冲压机门连锁装置开关SW1”，此时应当心，用于测试零部件的运行情况。</p> <p>警告 移动零件时，当插入连锁装置时，请将手远离尖锐凸起和皮带。 除非本手册中作出规定，否则不得打开任何面板。 请特别注意操作员手册中列出的警告和当心。</p> <p>警告和当心</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">  <p style="text-align: center;">当心</p> <p style="text-align: center;">夹紧点 当心夹手</p> </div> <p>警告 移动零件时，在取下后盖总成时不得将手靠近皮带。 冲压机模块电机皮带 (PL 3.1) 为潜在卡夹点。</p>

Safety Devices

See page number xii for other languages

The GBC eWire has several safety devices designed to prevent personal injury when operating the machine.

Interlocks

When you open the Front Door, Book Tray, or Top Cover, a Safety Interlock device automatically disables the drive motors until you close all doors and covers

When the Front Door is open, the Operator Panel displays the “CLOSE DOOR” message on the top line of the interface.

When the Book Tray is open, the Operator Panel displays the “CLOSE TRAY” message on the top line of the interface.

When the Top Cover is open, the Operator Panel displays the “CLOSE LID” message on the top line of the interface.

When you close all doors and covers, the Operator Panel displays the “READY” message on the top line of the interface.

Operational Safety

Do not operate the GBC eWire with the interlocks defeated.

Use care when a procedure in this Manual instructs you to “insert an Interlock Cheater into the interlock,” in order to test the operation of a component.

WARNING

Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted.

Do not open any panels other than those indicated by this Manual.

- Pay particular attention to the WARNINGS and CAUTIONS listed in the Operator Manual.

Warnings and Cautions

Pinch Points



WARNING

Moving Parts, keep hands clear of moving parts when the covers are removed.

Hazards



Electrical Shock Hazard!

Do not open. No user serviceable parts inside. Refer servicing to qualified service personnel.

The electrical components behind the Rear Cover Assembly are a potential shock hazard.



Hand Crush!

Crush hand if placed in jaws.

Do not place fingers in closer jaws.



Sharp Edge!

Cut Finger with contact.

Do not remove cover or place fingers behind it.



Moving Gears!

Crush fingers if placed in gears.

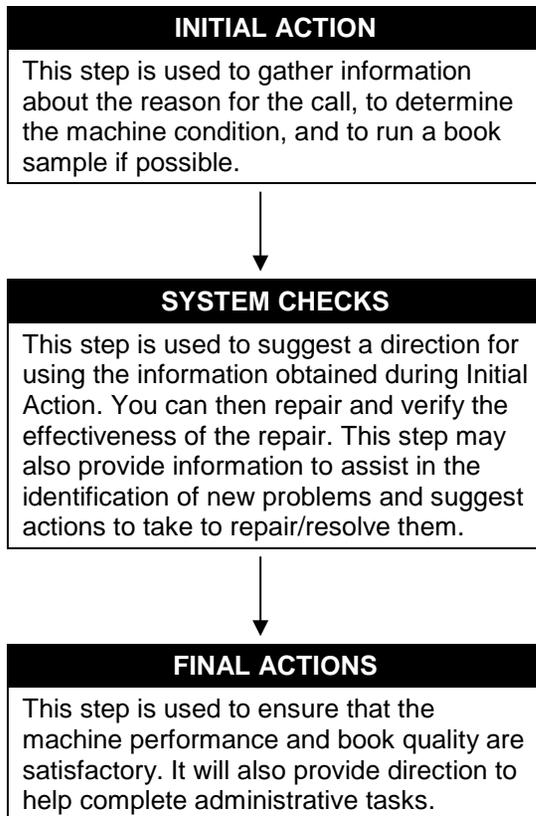
Keep clothing and body parts away from gears.

1. Service Call Procedures

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CALL FLOW



INITIAL ACTION

At the start of every service call, you should perform the following:

- If called for a problem, determine the exact nature of the service complaint. Determine the paper type and quality, especially as it relates to curl. Determine the size and color of twin loop wire being used.
- Identify if any media changes correlate with the emergence of the customer issue.
- Determine if the problem occurs with all element sizes or only specific sizes. If multiple sizes have not been used, try running the eWire using a different wire size.
- Do GP 6.2.7 to note the total machine bind and sheet cycles.
- If possible, run a bind cycle and evaluate the quality of the bound book. Refer to Section 3 of this manual for additional information regarding the book quality.
- Do GP 6.8 and GP 6.7 to replace the supply spool and re-evaluate the performance using the new supply spool.
- Determine the date of the last preventative maintenance performed on the system. Perform preventative maintenance as indicated on page 1-5.
- Vacuum the paper path, element feeder, and book stacking areas. Visually inspect the eWire and clear any scraps/debris.
- Save the system settings to a data file.
- Download a log file to USB. Note any error codes, especially if they occur repeatedly.

SYSTEM CHECKS

Purpose

Direct repair activity for problems found in Initial Action.

PROCEDURE

- Select the appropriate condition from the list below and perform the directed service actions.
 - Replace any obviously broken parts.
 - If there is a Book Quality problem but no Fault Codes or other obvious problems, go to Section 3.
 - If there is a Fault Code, go to Section 2 Table of Contents. Locate and perform the RAP associated with the code.
 - If there is an Operator Message that will not clear, go to Section 2 Table of Contents. Locate and perform the steps in the OPERATOR MESSAGE RAP associated with the Operator Message.
 - If the problem is not repeatable, operate the eWire in the same job conditions the customer used and recheck for a problem in the categories listed here.
 - If the problem is still not reproduced, examine the Machine Service Log and note any repeating faults. Refer to the RAP for those faults in Section 2 to check if the RAP relates to the customer problem. If so, perform the RAP.
 - If general problems occur that are not related to any fault code, repeat the steps in install section.
 - If the problem is not resolved after 2 hours, escalate to Xerox 2nd level support.
 - If none of the above situations apply, go to EVERY CALL ACTIVITIES.
- Verify that the problem is corrected and go to EVERY CALL ACTIVITIES.

EVERY CALL ACTIVITIES

Purpose

List service activities required on every service call.

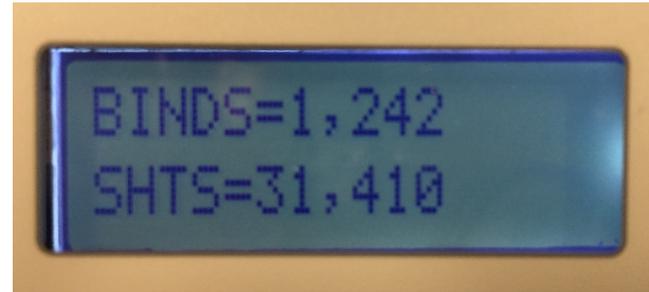
PROCEDURE

- Perform GP 6.10 Internal Inspection.
- Perform GP 6.11 External Cleaning.
- Perform GP 6.12 Internal Cleaning
- Perform GP 6.13 Base Cleaning
- Perform GP 6.15 Optical Sensor Cleaning

SCHEDULED MAINTENANCE

PROCEDURE

- Check the number of Bind Cycles and Sheet Cycles in the eWire Settings. Refer to GP 6.2.7.



- Refer to the eWire Maintenance Schedule on Page 1-5. Perform all scheduled maintenance.
- Replace wear components as indicated in the Periodic Maintenance section of this document.

eWIRE MAINTENANCE SCHEDULE

Customer Maintenance

Area/Unit	Period	Measures	Remarks

Periodic Maintenance

Area/Unit	Period	Measures	Remarks
Drag Finger and Closer Pusher	1M cycles	Inspect and Clean	Alcohol & Cloth
Stacker Module Green Belt	1M cycles	Inspect and Clean	Alcohol & Cloth
Bypass Transfer Idler Rollers	1M cycles	Inspect and Clean	Alcohol & Cloth
Deflector Module Idler Rollers	1M cycles	Inspect and Clean	Alcohol & Cloth
Steering Module Idler Rollers	1M cycles	Inspect and Clean	Alcohol & Cloth
Element Feeder Belt	1M cycles	Inspect	
Gravity Sensor, Element Detect	1M cycles	Inspect and Clean, Ensure Free Movement	Vacuum
Element Spool Feed Region	1M cycles	Clean	Vacuum
Element Alignment at Stack Position	1M cycles	Inspect	
Book Drawer Belt	1M cycles	Inspect	
Kick Downs	1M cycles	Inspect	

Periodic Replacement

Area/Unit	Period	See:	Measures	Remarks
Knife/Anvil	50,000 books	REP 3.15.3	Replacement	
Stacker Module, Kick Downs	4,000K cycles	REP 4.7	Replacement	
Closer Jaw Plates	50,000 books	REP 6.5	Replacement	

FINAL ACTION

This section explains the actions a technician should take at the end of every service call. With each step, verify that the system runs smoothly and jam free.

Purpose

Ensure machine performance and book quality are satisfactory and complete administrative tasks.

Procedure

- Clear the Book Tray and install a Supply Spool of the size the customer was using when the problem initially occurred.
- Install/close all covers and doors.
- Run the eWire using the same settings as the customer was using when the problem occurred. If necessary, run a variety of different paper and spool size configurations to capture different configurations that may have been present during the failure.
- Carefully monitor the machine during the test run and make a note of any unusual observations. Listen for any unusual or excessive noise produced during operation.
- Explain to the customer the service work that was performed and ensure they are satisfied before you close the call.

Service Call Close

- Record your service activities along with the BIND and SHEET counts.

2. Repair Analysis Procedures (RAPS)

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Section 1.02 Introduction

This section contains the Repair Analysis Procedures (RAPs).

Organization

This section lists the Repair Analysis Procedure (RAP) for each Operator Message and Fault Code. In some cases, one Repair Analysis Procedure may apply to several Fault Codes. In those cases, subsequent Fault Codes include a cross reference to the pertinent RAP.

To help you locate each component, the Repair Analysis Procedures include part locators (PL 5.X) that refer to the pertinent page in Section 5, Part List.

Entry RAP

Always do this RAP first.

Attempt to retrieve the number of Bind cycles and Sheet cycles (GP 6.2.7) and note it down.

1. If the customer says that they have a book quality problem, go to Section 3.
2. For the entire printing device- Power off, then power on (POPO). Check that eWire runs properly in all modes.

eWire runs properly.

Y N

| Go to Step 3.

Go to INITIAL ACTION in Section 1.

3. Check the top row of text on the Operator Interface to determine if there is there an operator message.

There is an operator message on line 1.

Y N

| Go to Step 4.

Go to the Table of Contents for Section 2 and locate the RAP for that status message.

4. Check the top row of text on the Operator Interface to determine if there is there an Error Code.

There is an Error Code on line 1.

Y N

| Go to Step 5.

Go to the Table of Contents for Section 2 and locate the RAP for that fault code.

5. Check the top row of text on the Operator Interface to determine if there is there a Fault Code.

There is a Fault Code on line 1.

Y N

| Go to Step 6.

Go to the Table of Contents for Section 2 and locate the RAP for that fault code.

6. Is there a Power Fault (No AC Power, No DC Power, No power to Control Board, Operator Panel Does Not Illuminate)?

There is a Power Fault.

Y N

| Go to Step 7.

Go to the Table of Contents for Section 2 and locate the RAP for that power fault.

7. Can the operator use the Operator Interface to operate the equipment?

The operator can use the Operator Interface to operate the equipment.

Y N

| Check with the customer to determine what symptom they have. Go to the Table of Contents for Section 2 and find the RAP that most closely fits the customer's description of the problem.

Go to INITIAL ACTION in Section 1.

Section 1.03 OPERATOR MESSAGES

The Operator Panel displays status messages and fault codes on two rows of text.

READY
TO BIND

a) Top Row of Text

Message	Description	Action
BOOK TRAY FULL	The Book tray is Full	Empty the Book tray
CLOSE TRAY	The Book tray is pulled out	Insert the Book tray
READY	The eWire is ready for Operation	n/a

b) Bottom Row of Text

Message	Description	Action
ADD ELEMENTS	Element spool is almost empty/ not present	Replace the element spool with a new one.
CLOSE DOOR	Door for Element feeder drawer is opened	Insert the Element feeder drawer and close the door
CLOSE COVER	Top cover is open	Close the Top cover
TO BIND	eWire is in Bind mode	Use eWire in Bind mode

c) Book Tray Full

The BOOK TRAY FULL message indicates that the book tray capacity has been reached and the tray needs to be emptied.

1. Open the Book drawer by pulling the drawer out.
2. Remove all the bound books from the tray. Note that all the books need to be removed to clear this message.
3. Re-insert the book drawer.

This clears the fault code.

Y N

| Go to step 4.

Normal operation.

4. Do GP 6.4 to check Sensor 42 & Sensor 45 Book drawer Full

This clears the fault code.

Y N

| Go to step 5.

Normal operation.

5. Do GP 6.5 to check Motor 19 Drawer elevation motor

This clears the fault code.

Y N

| Go to step 6.

Normal operation.

6. Inspect the pulley lift mechanism for the Book Drawer. Repair or replace any damaged components.

This clears the fault code.

Y N

| Go to step 7.

Normal operation.

7. Do GP 6.3.7 to re-flash the firmware.

This clears the fault code.

Y N

| Go to step 8

Normal operation

8. Replace Control board "B" (REP 11.3)

This clears the fault code.

Y N

| Escalate to second level.

Normal operation.

d) Close Tray

The CLOSE TRAY message indicates that the Book drawer is open or not completely closed.

1. Check that the Book drawer is closed

The Book drawer is closed.

Y N

| Close the Book drawer and return to normal operation.

2. Insert an Interlock Cheater into the Book drawer interlock Switch.

WARNING

Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

3. Check if the Close Tray message is displayed.

The Close Tray message is displayed.

N Y

| Do ADJ 1.7 Book drawer interlock switch adjustment and return to normal operation

Go to Step 4.

4. Do REP 1.5 to remove the Rear Cover and check if the Interlock Cable 7716715 (See Section 7, page 7-3) is connected at J2 at the "B" Main Control Board.

Interlock Cable is connected at J2.

Y N

| Make the connection and return to normal operation.

5. Switch OFF the machine and unplug the Power Cord.

6. Remove the M4 screws that hold the Interlock Switch Bracket (PL 5.25) and inspect the connections at the Interlock Switch (see REP 9.2 Interlock switch replacement for photos of the connections).

Interlock cable is connected at the Interlock switch.

Y N

| Make the connection and return to Normal operation

Go to step 7.

7. Do GP 6.3.7 Firmware Upgrade procedure to re-flash the Firmware
Re-flashing the firmware clears the fault.

Y N

| Go to Step 8.

Return to normal operation.

8. Do REP 9.2 Book drawer Interlock Switch Replacement to replace the Interlock switch.

Replacing the switch clears the fault.

Y N

| Go to Step 9.

Return to normal operation.

9. Replace Interlock Switch Cable 7716715.

Replacing the cable clears the fault.

Y N

| Go to Step 10.

Return to normal operation.

10. Replace the "B" Main Control Board (REP 11.3).

Replacing the board clears the fault.

Y N

| Escalate to second level.

Return to normal operation.

e) Add Elements

This message is displayed when the Element spool is removed from the machine or when the Element spool is low on elements.

Use this procedure when the Add Elements message is displayed when the Element spool containing elements is present in the machine.

1. Open the Element drawer door, remove the Element spool and reinstall the spool.

This clears the fault.

Y N

| Go to Step 2.

Return to normal operation

2. Inspect if the Element spool barcode label is damaged, missing or not centered on the hole

Bar code label is damaged or missing

Y N

| Go to Step 3.

Replace the spool with a new one and return to normal operation

3. Replace the element spool with another one. This is to troubleshoot the error, so try any available size.

Replacing the Element spool clears the fault.

Y N

| Go to Step 3.

Return to normal operation

4. Do GP 6.4 to inspect S26 to S30, and S50

This clears the fault..

Y N

| Escalate to second level

Return to normal operation.

f) Close Door

This message is displayed when the Door for the element feeder module is left open or not properly closed.

1. Open the door, pull out the Element drawer and reinsert firmly.

This clears the fault

Y N

| Go to Step 2.

Return to normal operation

2. Insert an Interlock Cheater into the Book drawer interlock Switch.

WARNING

Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

3. Check if the Close Door message is displayed.

The Close Door message is displayed

N Y

| Do ADJ 1.7 Element Feeder door interlock switch adjustment.

Go to Step 4.

4. Do REP 1.5 to remove the Rear Cover and check if the Interlock cable 7716714 is connected at J9 at the "A" Main control board.

Interlock cable is connected at J9

Y N

| Replace the cable and repeat Step 1.

5. Switch OFF machine and unplug power cord.

6. Remove the M4 screws that hold the Interlock Switch Bracket (PL 5.25) and inspect the connections at the Interlock Switch (see REP 9.2 Interlock switch replacement for photos of the connections).

Interlock cable is connected at the Interlock switch.

Y N

| Make the connection and return to Normal operation

Go to step 7.

7. Do GP 6.3.7 Firmware Upgrade procedure to re-flash the Firmware

Re-flashing the firmware clears the fault.

Y N

| Go to Step 8.

Return to normal operation.

8. Do REP 9.2 Element drawer Interlock Switch Replacement to replace the Interlock switch.

Replacing the switch clears the fault.

Y N

| Go to Step 9.

Return to normal operation.

9. Replace Interlock Switch Cable 7716714.

Replacing the cable clears the fault.

Y N

| Go to Step 10.

Return to normal operation.

10. Do REP 11.1 to replace the Main Control Board A.

Replacing the Main Board clears the fault.

Y N

| Escalate to second level.

Return to normal operation.

g) Close Cover

This message is displayed when the Top Cover is left open or not properly closed.

1. Open the Top cover and close it firmly

This clears the fault

Y N

| Go to Step 2.

Return to normal operation

2. Insert an Interlock Cheater into the Top cover interlock Switch.

WARNING

Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

3. Check if the Close Cover message is displayed.

The Close Cover message is displayed

N Y

| Do ADJ 1.7 Top Cover interlock switch adjustment.

Go to Step 4.

4. Do REP 1.5 to remove the Rear Cover and check if the Interlock cable 7716716 is connected at J16 at the "A" Main control board.

Interlock cable is connected at J16

Y N

| Go to Step 5

5. Switch OFF machine and unplug power cord.
6. Remove the M4 screws that hold the Interlock Switch Bracket (PL 5.25) and inspect the connections at the Interlock Switch (see REP 9.2 Interlock switch replacement for photos of the connections).

Interlock cable is connected at the Interlock switch.

Y N

| Make the connection and return to Normal operation

Go to step 7.

7. Do GP 6.3.7 Firmware Upgrade procedure to re-flash the Firmware
Re-flashing the firmware clears the fault.

Y N

| Go to Step 8.

Return to normal operation.

8. Do REP 9.1 Top cover Interlock Switch Replacement to replace the Interlock switch.

Replacing the switch clears the fault.

Y N

| Go to Step 9.

Return to normal operation.

9. Replace Interlock Switch Cable 7716716.

Replacing the cable clears the fault.

Y N

| Go to Step 10.

Return to normal operation.

10. Do REP 11.1 to replace the Main Control Board A. (PL5.27)

Replacing the Main Board clears the fault.

Y N

| Escalate to second level.

Return to normal operation.

Section 1.04 FAULT CODES

The User Interface displays Fault codes on two rows of text.

PAPER JAM J203
CLEAR 2

The top row of text displays the fault code.

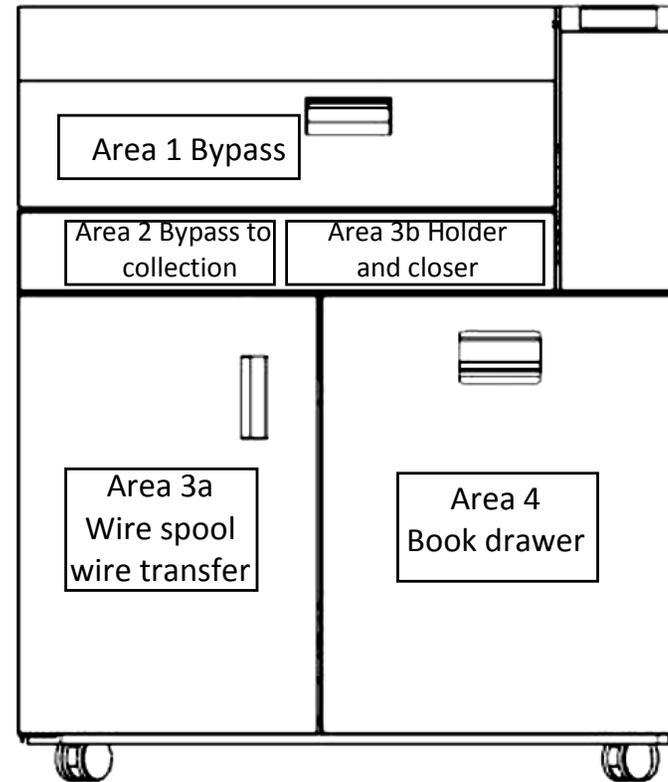
The bottom row of text displays the area of the machine where the error occurred.

a) Fault Code Text

Each Fault code starts with the letter “J” followed by a 3-digit code.

b) Fault Code Areas

Fault Code areas are identified in the image below



Bottom Row of Text	Area	General Location
Clear 1	Area 1	Bypass Section
Clear 2	Area 2	Bypass to Collection tray
Clear 3	Area 3a/3b	Wire spool, transfer, holder or closer
Clear 4	Area 4	Book drawer

c) Jam Code Classification

The following table lists each paper jam type. It lists Jam Type (A, B, C, etc.) and the corresponding description (position of first jammed sheet).

Jam Type	Description	RAP
Jam 1xx	Paper transport jam- Paper transport module	Do RAP 3.x
Jam 2xx	Paper transport jam- Paper transport module	Do RAP 3.x
Jam 32x Jam 33x Jam 35x Jam 36x	Wire jam- Element feeder module	Do RAP 4.x
Jam 37x Jam 38x Jam 39x	Bind jam- Closer module; Holder module	Do RAP 4.x
Jam 4xx	Book drawer jam- Book drawer module	Do RAP 5.x

2 POWER FAULTS

8.

RAP 2.1 No AC Power

Use this RAP when there is no AC power to the eWire. The Operator Panel does not illuminate and the eWire does not operate. Check if the LEDs on the Main Control Board A and Main Control Board B are lit.

1. Ensure the Power is ON for the print engine and eWire. The Power switch is located at the rear side of the machine.

Main Power Switch is in the On (I) position

Y N

| Place the Main Power Switch in the On (I) position.

2. Check that the Power Cord is attached to the AC Filter on the rear of the machine.

Power Cord is attached to AC Filter.

Y N

| Attach the Power Cord.

3. Check that the Power Cord is properly plugged into the wall.

Power Cord is plugged into the wall.

Y N

| Plug in the Power Cord.

4. Disconnect the Power Cord from the power source and check the power source voltage - 110 VAC (60 Hz) or 240 VAC (50 Hz) - at the power receptacle.

AC power is present at correct value at the receptacle.

Y N

| If there is no power at the outlet, ask the customer to call an electrician to restore the AC power.

5. Reconnect the power cord to the eWire.
6. Do REP 1.5 to remove the Rear Cover.
7. Check that Ground Wire 7715525 (See Section 7, page 7-3) is connected to the ground and to the AC Filter.

Ground Wire is connected.

Y N

| Connect Ground Wire.

Go to step 8.

Check that Cable 7716727 (See Section 7, page 7-3) is connected at the AC Filter and the Power switch SW1 at the other end

Cable 7716727 (Black/White) is connected at both ends

Y N

| Connect Cable 7716727

9. Check that Cable 7716729 (See Section 7, page 7-3) is connected to the Power Switch at one end and at the input terminals of the 24 VDC Power Supply at the other end.

Cable 7716729 (Black/White) is connected at both ends

Y N

| Connect Cable 7716729

10. Check that Cable 7716726 (See Section 7, page 7-3) is connected to the 24 VDC power supply and the Main Board A.

Cable 7716726 is connected.

Y N

| Connect Cable 7716726

11. Check for input voltage - 110 VAC (60 Hz) or 240 VAC (50 Hz) - at the AC Filter terminals.

There is AC power at the AC Filter.

Y N

| Replace the AC power cord to the AC Filter.

12. Check for continuity at the AC Power Switch (PL 5.27).

There is continuity at the AC Power Switch.

Y N

| Replace AC Power Switch 7704376 (REP 11.6)

13. Check for voltage - 110 VAC (60 Hz) or 240 VAC (50 Hz) – on Cable 7716728 (See Section 7, page 7-3) at the AC Filter.

There is AC power on Cable 7716728 at the AC Filter.

Y N

| Replace AC FILTER (REP 11.5).

14. Check for voltage - 110 VAC (60 Hz) or 240 VAC (50 Hz) – on Cable 7716729 (See Section 7, page 7-3).

There is AC power on Cable 7716729.

Y N

| Replace Cable 7716729

15. Check for output voltage – 24 VDC on Cable 7716726 at the 24 VDC power supply.

There is DC power on Cable 7716726 at the Power Supply.

Y N

| Replace the 24 VDC power supply (REP 11.4)

Go to RAP 1.2 No DC Power

RAP 2.2 No DC Power

Use this RAP when there is indication of interruption to DC power.

1. Do REP 1.5 to remove the Rear Cover.
2. Plug in the AC power cord and turn ON the AC power switch.

WARNING

Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

3. Check the LEDs on the Control Board.

“A” Main Control board

LED description	ON	OFF
+24V	When there is 24V DC power supply to the board	When there is no 24V DC power supply to the board
+24VI	When all the interlock switches are closed. (Top cover; Element drawer door; Book drawer)	When any one of the three interlock switches is open.
+5VDC	When the 5V DC regulator is working and is providing 5V to the sensors	When 5V DC regulator is not working
+3.3V DC	When the 3.3V DC regulator is working and is providing 3.3V to the processors	When 3.3V DC regulator is not working
OV! (Red color)	When there is over-voltage from 24V DC power supply	24V power supply is providing the correct voltage
REV POL! (Red color)	When the polarity of 24V DC wires is reversed	Polarity of the wires is correct
OK (Green color)	When the polarity of 24V DC wires is correct	Polarity of the wires is not correct

“B” Main control board

LED description	ON	OFF
24V	When there is 24V DC power supply to the board	When there is no 24V DC power supply to the board
24ViA	When all the interlock switches are closed. (Top cover; Element drawer door; Book drawer)	When any one of the three interlock switches is open.
24ViB	When all the interlock switches are closed. (Top cover; Element drawer door; Book drawer)	When any one of the three interlock switches is open.
+5VDC	When the 5V DC regulator is working and is providing 5V to the sensors	When 5V DC regulator is not working
+3.3V DC	When the 3.3V DC regulator is working and is providing 3.3V to the processors	When 3.3V DC regulator is not working

- With the cover/door/drawer closed, there will be (5) LEDs that will be lit on the “A” board and (5) LEDs lit on the “B” board
- With the cover/door/drawer open, there will be (4) LEDs that will be lit on the “A” board and (3) LEDs lit on the “B” board.

The LEDs are lit as indicated.

Y N

If LEDs of “A” board are not lit correctly, go to step 4.

If LEDs of “B” board are not lit, go to step 12.

Go to step 9.

4. If OV! LED (red color) is lit, go to Step 9
5. If REV POL! (red color) is lit, go to Step 7

6. Check for voltage – 110 VAC (60 Hz) or 240 VAC (50 Hz) – on Cable 7716729 (See Section 7, page 7-3) at the 24 VDC Power Supply.

There is AC power on Cable 7716729.

There is line voltage.

Y N

| Go to RAP 2.1 No AC Power.

7. Check the following connections (See Section 7, page 7-3):
- Connection of cable 7716726 at J1 at the Main Control Board.
 - Connection of cable 7716726 at the 24V DC power supply
 - Input; Line “L”- Black wire
 - Input; Neutral “N”- White wire
 - Input; Ground- Green wire
 - Output; +24VDC – Orange wire
 - Output; 0 VDC – Black wire

Connections are good.

Y N

| Make the connections then return to normal operation.

8. Check if the LED in the 24 VDC power supply is lit

LED is lit

Y N

| Go to RAP 1.1 No AC Power.

9. Check for 24 VDC on Cable 7716726 (See Section 7, page 7-3) at Connector J1 on the “A” Main Control board
- Pin 1 = BLK Wire
 - Pin 2 = BLK Wire
 - Pin 3 = BLK Wire
 - Pin 4 = BLK wire
 - Pin 5 = ORG wire
 - Pin 6 = ORG Wire
 - Pin 7 = ORG Wire
 - Pin 8 = ORG Wire

There is 24 VDC at Connector J1 on the Control Board

Y N

| Go to Step 10

Replace 24V DC power supply (REP 11.4)

10. Replace Cable 7716726.

This clears the fault.

Y N

| Go to Step 11

Return to normal operation

11. Check if there is 24V power to any other components like a Solenoid, or a Stepper Motor.

There is no 24V power to any other components

Y N

| Go to Step 12

Replace the “AC” Main Control board (REP 11.1)

12. Check if cable 7716735 is connected at J15 of the “A” Main control board and J1 of the “B” control board

Connections are good

Y N

| Make the connection and return to normal operation

13. Replace “B” Main Control board

This clears the fault.

Y N

| Go to Step 14

Return to normal operation

14. Replace Cable 7716735.

This clears the fault.

Y N

| Go to step 15 if applicable; otherwise escalate to second level

Return to normal operation

15. Determine if you have been directed here from another RAP because there is no 24 VDC power output from the Control Board to another component.

There is no 24 VDC power output from the Control Board to another component.

Y N

| Normal operation.

Replace the Main Control Board (REP 11.1)

RAP 2.3 No Power to Control Board

Use this RAP when there is no power to the Control Board.

1. Do RAP 2.2 No DC Power to check DC power.

RAP 2.4 Operator Panel Does Not Illuminate

Use this RAP when the LCD Display does not illuminate.

1. Power OFF eWire.

2. Wait 20 seconds then power ON the device(s).

The Operator Interface illuminates.

Y N

| Go to step 3.

Normal operation.

3. Open the Front door. Check if the printer screen shows a eWire related fault.

Printer screen shows a eWire related fault

Y N

| Go to step 4.

Do RAP 1.2 No DC Power.

4. Do REP 1.5 to remove the Rear Cover.

5. Plug in the AC Power Cord and turn on the Power Switch.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

6. Check the LEDs on the Control Board.

- With the cover/door/drawer closed, there will be (5) LEDs that will be lit on the "AC" board and (5) LEDs lit on the "B" board
- With the cover/door/drawer open, there will be (4) LEDs that will be lit on the "AC" board and (3) LEDs lit on the "B" board.

The LEDs are lit.

Y N

| Do RAP 2.2 No DC Power.

7. Check that LCD Cable 7716713 is connected at Connector J42 of the "A" Main Control Board (See Section 7, page 7-3).

Cable 7716713 is connected at Connector J42.

Y N

| Connect Cable 7716713 (See Section 7, page 7-3).

Go to step 8.

8. Check that LCD Cable 7716713 (See Section 7, page 7-3) is connected at the LCD Panel on the rear of the User Interface (PL 5.1).

Cable 7716713 is connected at the LCD Panel.

Y N

| Connect Cable 7716713 (See Section 7, page 7-3).

9. Check the condition of LCD Cable 7716713 (See Section 7, page 7-3).

LCD Cable 7716713 is okay.

Y N

| Replace LCD Cable 7716713.

10. Replace the LCD Board 7715527 on the rear of the User Interface (PL 5.1)

This clears the fault

Y N

| Go to Step 11

Return to normal operation

11. Check for 24 VDC on the LCD Cable 7716713 at Connector J42 on the Main Control Board A (See Section 7, page 7-3).

There is 24 VDC at Connector J42.

Y N

| Do the RAP 1.2, No DC Power.

Replace the LCD Display (REP 1.10).

RAP 2.5 Operator Panel Does Not Show Text

Use this RAP when the LCD Display does not show text but illuminates.

1. Power OFF eWire
2. Wait 20 seconds then power ON the device(s).
The Operator Interface illuminates.
Y N
| Go to step 3.
Normal operation.
3. Check that LCD Cable 7716713 is connected at Connector J42 on the Control Board (See Section 7, page 7-3).
Cable 7716713 is connected at Connector J42.
Y N
| Connect Cable 7716713.
4. Check that LCD Cable 7716713 is connected at the LCD Panel on the rear of the User Interface (See Section 7, page 7-3 and PL 2.2).
Cable 7716713 is connected at the LCD Panel.
Y N
| Connect Cable 7716713
5. Upload firmware: Do GP 6.3.7
The Operator Interface shows text.
Y N
| Go to step 6.
Normal operation.
6. Check the condition of LCD Cable 7716713 (See Section 7, page 7-3)
LCD Cable 7716713 is okay.
Y N
Replace LCD Cable 7716713.
Go to Step 7

7. Replace the LCD Board on the rear of the User Interface (REP 1.9)

This clears the fault

Y N
| Go to Step 8
Normal operation.

8. Check LCD for normal operation.

The Operator Interface shows text.

Y N
| Replace Main Control Board A (REP 11.1).
Normal operation.

RAP 2.6 Up, Down, Enter Keys Do Not Respond

Use this RAP when the Up, Down, Enter Keys on the LCD Membrane switch do not respond.

1. Open the Top cover and check that the flat cable from the LCD Panel is connected to the LCD Display (See Section 7, page 7-3).

The Cable is connected.

Y N

Connect the Cable.

Do REP 1.10 LCD Membrane switch replacement.

3 PAPER TRANSPORT JAM CODES- J1xx and J2xx

RAP 3.1 J161- EXCESSIVE SKEW DETECTED

J161 is an optional jam code that can be turned on or off through the service menu. When turned on, J161 will occur when the eWire detects a sheet coming into the machine with more skew than eWire is capable of correcting.

1. If J161 is occurring frequently, there could be misalignment between the eWire and upstream device. Refer to Section 8 Installation and re-check the alignment between eWire and the device feeding sheets to eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to step 2

2. If there are no problems with alignment between eWire and the upstream device, check the upstream device to ensure that sheets being fed from that device do not exceed the skew specifications of eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. Do GP 6.3.6 to access the Functional Tests Menu. From this menu, Skew Jam can be turned on or off. If J161 is occurring when sheets are not entering the eWire with excessive skew, turn Skew Jam option off and evaluate the result.

This clears the fault

Yes- Return to normal operation;

No- Go to the RAP indicated by the new Jam Code.

RAP 3.2 J244- UNBOUND BOOK PRESENT IN COLLECTION TRAY

J244 occurs when a sheet or book is left over in the collection tray after it should have fallen into the book drawer.

1. Go to Section 3 3.3 Sheets not Hooking and go through the instructions there

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level.

RAP 3.3 J260- NO LEAD EDGE AT SKEW SENSOR DETECTED

J260 occurs when a sheet is detected at the entry sensor but not detected by the skew sensor.

1. Perform GP 6.4.2 Sensor check of S6-S10

This clears the fault

Yes- Return to normal operation;

No- Go to step 2

2. Ensure that the eWire is properly aligned with the upstream punch. Refer to Section 8, the installation manual for instructions.

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. Perform RTP 3.5.2

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level.

RAP 3.4 J261- EXCESSIVE ALIGNMENT OFFSET DETECTED

J261 is an optional jam code that can be turned on or off through the service menu. When turned on, J261 will occur when the eWire detects a sheet coming into the machine with more alignment offset than eWire is capable of correcting.

- If J261 is occurring frequently, there could be misalignment between the eWire and upstream device. Refer to Section 8 Installation and re-check the alignment between eWire and the device feeding sheets to eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to step 2

- If there are no problems with alignment between eWire and the upstream device, check the upstream device to ensure that sheets being fed from that device are in line with the sheet alignment markings on eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

- Do GP 6.3.6 to access the Functional Tests Menu. From this menu, Align Jam can be turned on or off. If J261 is occurring when sheets are not entering the eWire with excessive skew, turn Align Jam option off and evaluate the result.

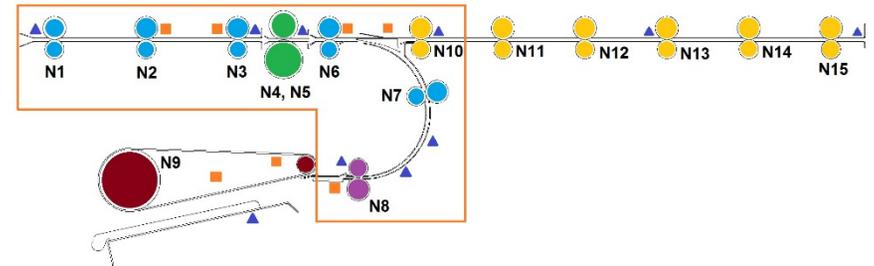
This clears the fault

Yes- Return to normal operation;

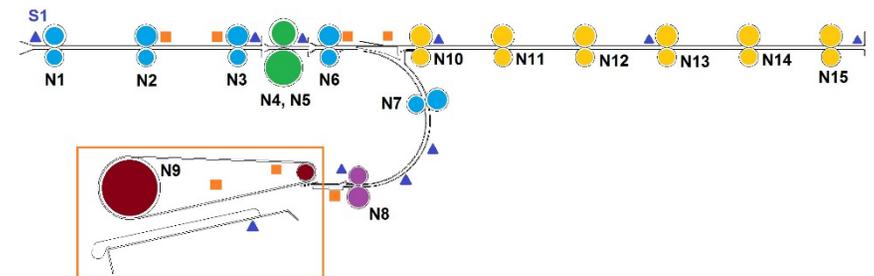
No- Go to the RAP indicated by the new Jam Code.

If a paper transport jam code J1xx or J2xx is displayed that was not listed above, determine the location of the first jammed sheet.

If the first jammed sheet is in the transport section, go to **RAP 2.1**



If the first jammed sheet is in the sheet stacking section, go to **RAP 2.2**

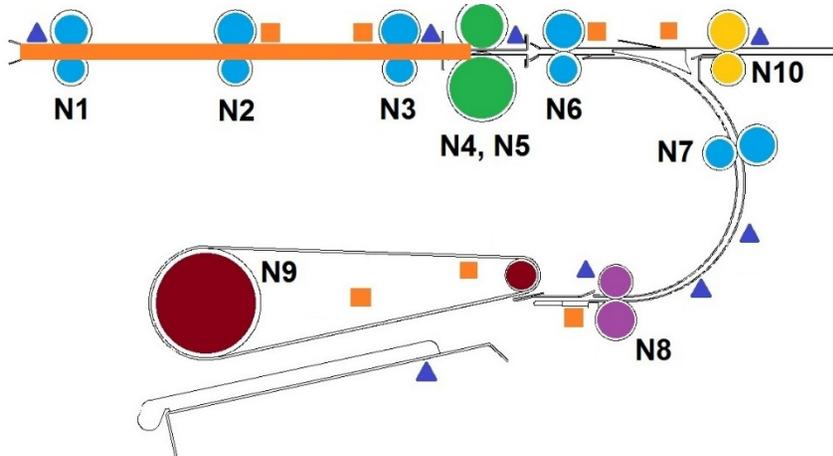


RAP 3.5 Paper jam in Transport section

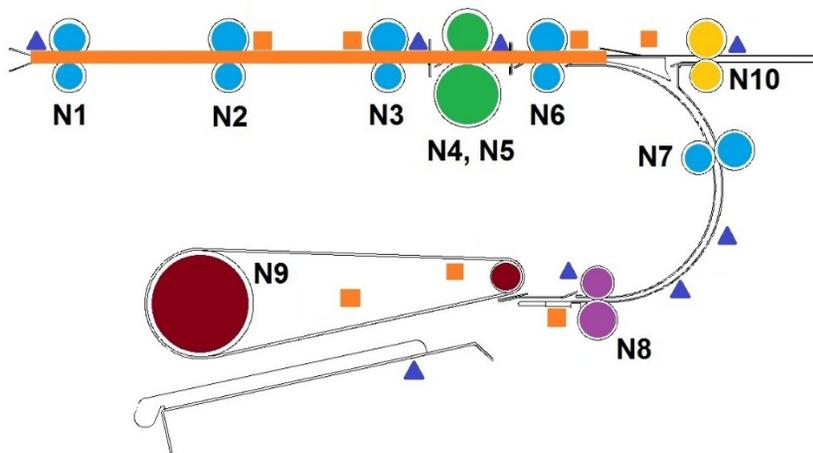
Use this RAP to troubleshoot paper jam in the transport section.

Depending on the location of the first jammed sheet, choose the appropriate RAP

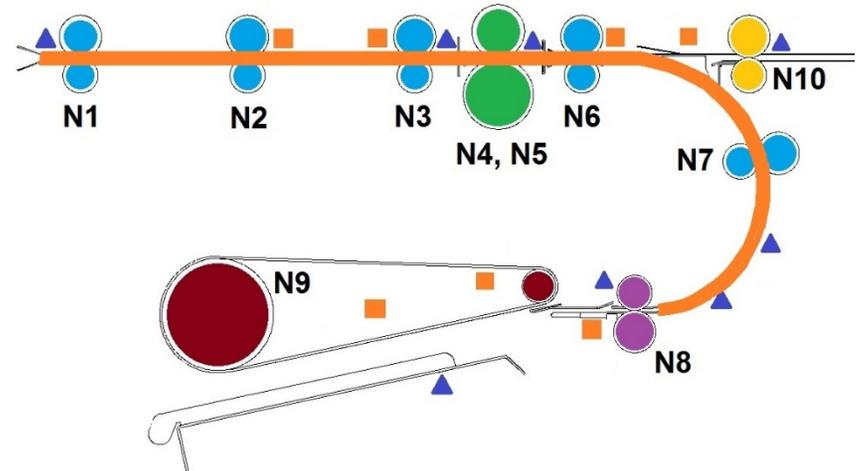
Location of the first jammed sheet is before the Steering module (rollers N4, N5)- Go to **RAP 3.6.1**



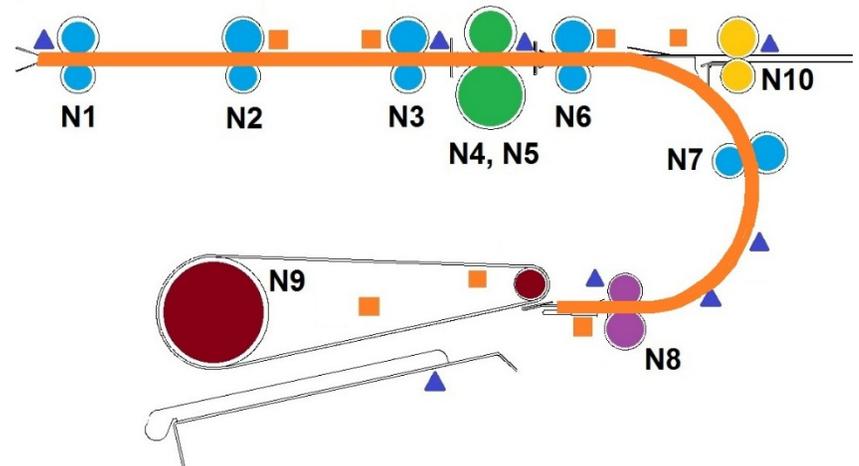
Location of the first jammed sheet is before the Diverter gate- Go to **RAP 3.6.2**



Location of the first jammed sheet is before the roller in the deflector module (N8)- Go to **RAP 3.6.3**

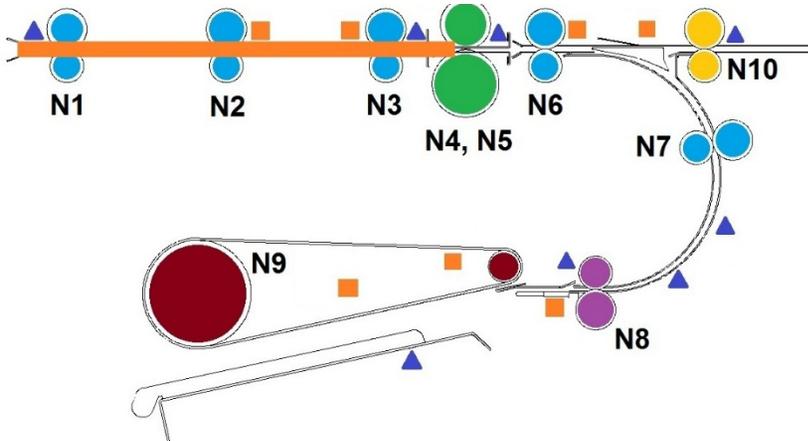
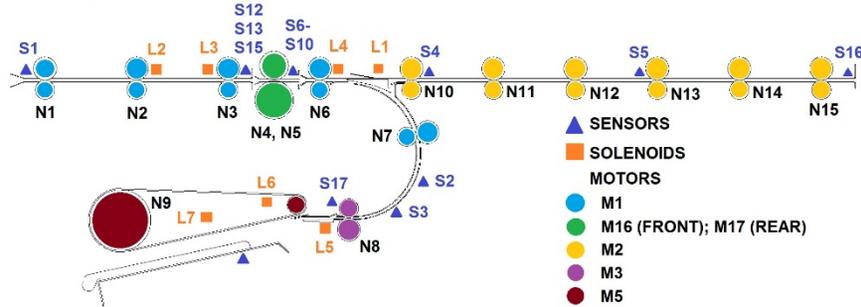


Location of the first jammed sheet is before the stacker module (before the green belt)- Go to **RAP 3.6.4**



RAP 3.6.1 First jammed sheet before Steering module

Follow the below procedure when the first jammed sheet is before the Steering module

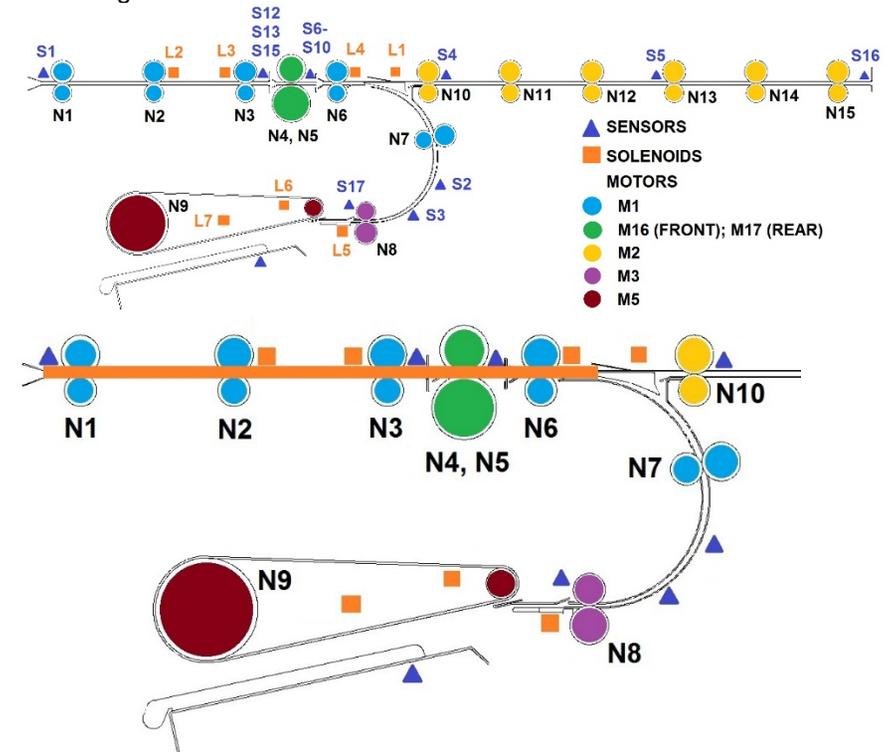


1. Do GP 6.3.1 to check if the line speed is set correctly.
Line speed is set correctly
Yes- Go to Step 2 **No-** Set the correct speed
2. Raise the top cover and check for any obstructions in the paper path leading to the steering module
This clears the fault
Yes- Return to normal operation **No-** Go to Step 3
3. Do GP 6.4.1 to check sensor S1
This clears the fault

4. Do GP 6.5.1 to check transport motor M1, M16 and M17.
This clears the fault
Yes- Return to normal operation **No-** Go to Step 5
5. Inspect Solenoids L2 and L3 (GP 6.6.1)- ensure these solenoids are not disengaging the rollers N2 and N3 when not actuated. The rollers should extend past the metal plate, and should be even with the rest of the idler rollers on the Upper Transport.
Rollers are not disengaged when L2 and L3 are not actuated
Yes- Go to Step 6
No- If N2 does not engage and disengage, replace L2 (REP 2.19)
 If N3 does not engage and disengage, replace L3 (REP 2.19)
6. Inspect rollers N1, N2 and N3- GP 6.14
This clears the fault
Yes- Return to normal operation **No-** Go to Step 7
7. Inspect the paper transport latch, if necessary perform adjustment. Ensure the paper transport is securely closed.
This clears the fault
Yes- Return to normal operation **No-** Go to Step 8
8. Inspect the transition from the entrance section to the Steering module section. The steering module lower panel and the Entrance section lower panel should be in line with each other.
The panels are in line with each other
Yes- Go to Step 9
No- Do REP 2.21 to remove and replace the Steering Module. Inspect the Steering Module for damage, and re-check the Steering Module after installation.
9. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation
No- Escalate to second level

RAP 3.6.2 First jammed sheet before the Diverter gate

Follow the below procedure when the first jammed sheet is before the Diverter gate



1. Inspect Diverter gate solenoid L1- GP 6.18.
This clears the fault
Yes- Return to normal operation **No-** Go to Step 2

2. Do GP 6.3.1 to check if the line speed is set correctly.
Line speed is set correctly
Yes- Go to Step 2 **No-** Set the correct speed

3. Check for any obstructions in the paper path leading to the diverter gate. Remove any obstruction.
This clears the fault
Yes- Return to normal operation **No-** Go to Step 3

- Do GP 6.4 to check sensor S1, S12, 13, 15, 6, 7, 8, 9, 10 and 41.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 4

- Do GP 6.5 to check motors M1, M16, M17 and M18.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 5

- Do GP 6.6 to inspect solenoids L2, L3 and L4.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 7

- Inspect rollers N1, N2, N3, N4, N5 and N6- GP 6.14

This clears the fault

Yes- Return to normal operation **No-** Go to Step 6

- Inspect the paper transport latch, if necessary perform adjustment. Ensure the paper transport is securely closed.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 7

- Inspect the transition from the Steering module section to the subsequent section. The steering module lower panel and transport module lower panel should be in line with each other.

The panels are in line with each other

Yes- Go to Step 7

No- Using REP 6.21 Steering module replacement, make the necessary adjustments.

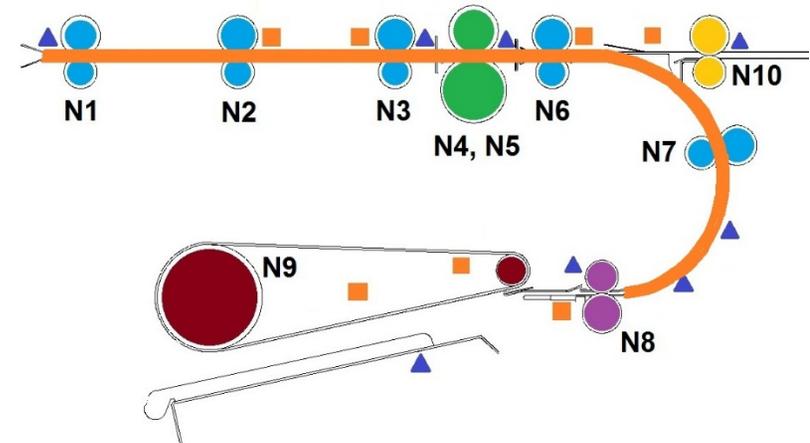
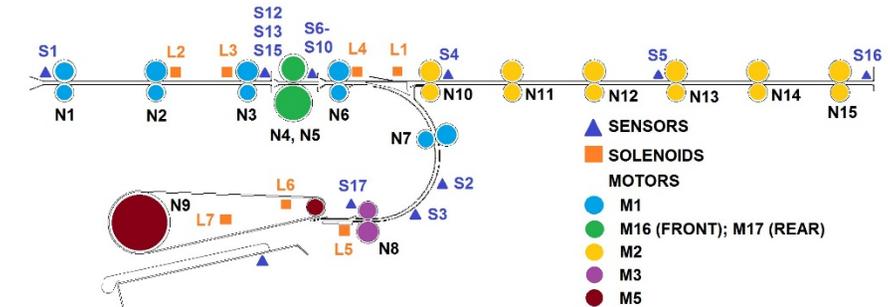
- Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation **No-** Escalate to second level

RAP 3.6.3 First jammed sheet before the deflector module

Follow the below procedure when the first jammed sheet is before the Deflector module



- Check for any obstructions in the paper path leading to the deflector module

This clears the fault

Yes- Return to normal operation **No-** Go to Step 2

- Do GP 6.2.3 to confirm that the paper size setting is set to the sheets being bound.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 3

- Do GP 6.4 to check sensor S1, S12, 13, 15, 6, 7, 8, 9, 10, 41, 2 and 3.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 4

- Do GP 6.5 to check motors M1, M16, M17, M18 and M3.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 5

- Do GP 6.6 to inspect solenoids L2, L3 and L4.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 6

- Inspect rollers N1, N2, N3, N4, N5, N6 and N7- GP 6.14

This clears the fault

Yes- Return to normal operation **No-** Go to Step 7

- Inspect the transition from the transport module section to the deflector module.

The transition from transport module to deflector module is properly aligned

Yes- Go to Step 8

No- Using REP 6.21 Replacing Steering module, make the necessary adjustments.

- Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 9

- Go to Section 3 3.3 Sheets not Hooking and go through the instructions there

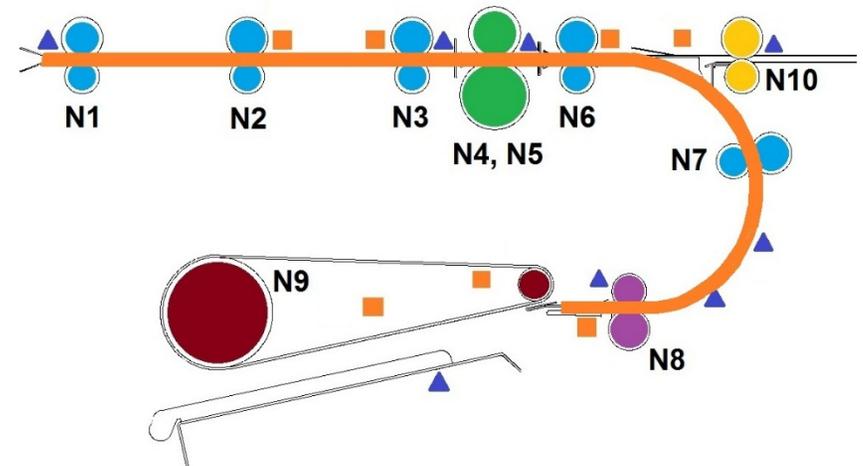
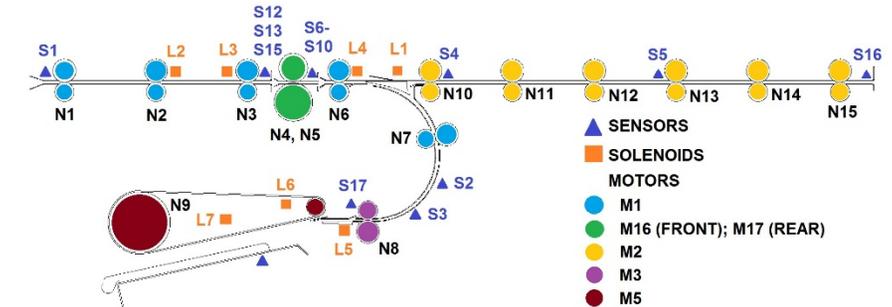
This clears the fault

Yes- Return to normal operation;

No- Escalate to second level.

RAP 3.6.4 First jammed sheet before the Stacker module

Follow the below procedure when the first jammed sheet is before the Stacker module



- Check for any obstructions in the paper path leading to the deflector module

This clears the fault

Yes- Return to normal operation **No-** Go to Step 2

- Do GP 6.5 to check motor M3, M16, M17 and M18.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 3

3. Do GP 6.4 to check sensor S1, S12, 13, 15, 6, 7, 8, 9, 10, 41, 2 and 3.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 4

4. Do GP 6.6 to inspect solenoids L2, L3, L4, and L7.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 5

5. Inspect rollers N8, N1, N2, N3, N4, N5 and N6- GP 6.14

This clears the fault

Yes- Return to normal operation **No-** Go to Step 6

6. Inspect the gap between the deflector and ensure there are no obstructions for smooth paper flow

There are no obstructions

Yes- Go to Step 7

No- Remove the obstruction, replace the Deflector module if necessary REP 5.1.

7. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire

This clears the fault

Yes- Return to normal operation **No-** Go to Step 8

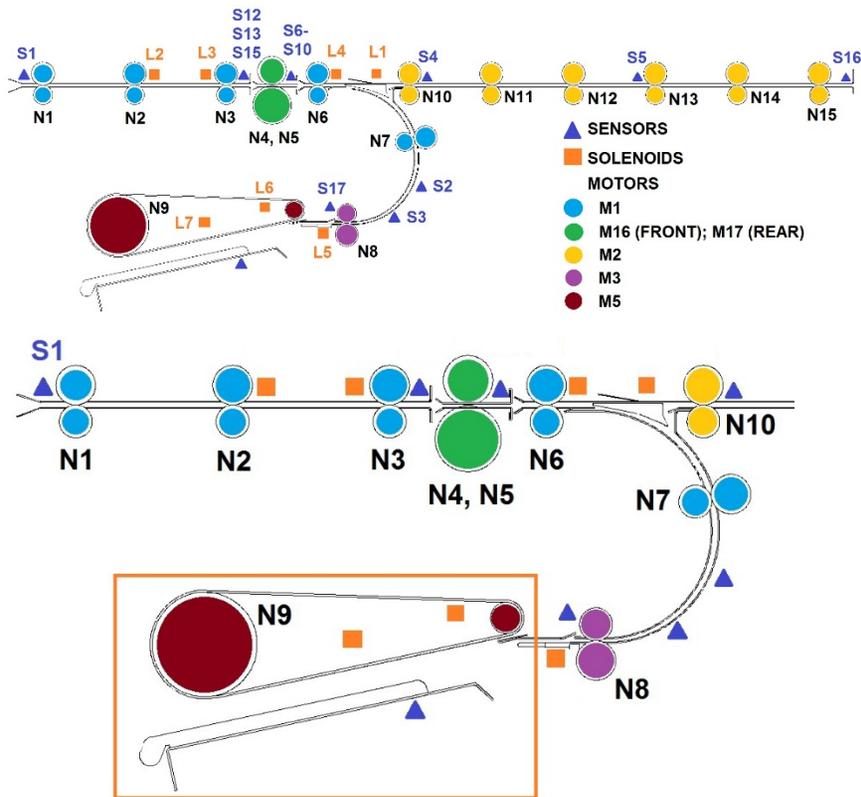
8. Do REP 5.1 to replace the Deflector module

This clears the fault

Yes- Return to normal operation **No-** Escalate to second level

RAP 3.6 Jammed sheets in the Stacker module

Use the below procedure if the first jammed sheet is in the Stacker module



1. Refer to Section 3 to check if the holes are punched correctly by AdvancedPunch Pro. If there is a hole punch issue, refer to AdvancedPunch Pro troubleshooting to resolve it.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 2

2. Check for any obstructions in the paper path leading to the stacker module

This clears the fault

Yes- Return to normal operation **No-** Go to Step 3

3. Do GP 6.4 to check sensor S2, S3, S12, S13, S15, S6, S7, S8, S9, S10 and S44.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 4

4. Do GP 6.5 to check motors M5, M3, M16, M17, M18 and M1.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 5

5. Do GP 6.6 to inspect solenoids L5, L6, L7, L2, L3 and L4.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 6

6. Make sure there is no damage to the element spool. If the element spool is damaged/deformed, the element tip will not be in the correct position for stacking. If necessary, do GP 6.7 to install a new spool.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 7

7. Inspect rollers N9, N8, N4, N5, N1, N2, N3 and N6- GP 6.14

This clears the fault

Yes- Return to normal operation **No-** Go to Step 8

8. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation **No-** Go to Step 9

9. Go to Section 3 3.3 Sheets not Hooking and go through the instructions there

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level.

4 WIRE JAM CODES

RAP 4.1 J320- S20 SPOOL ELEMENT SLACK TIMEOUT

S20 Element Slack time out is the maximum time to wait for S20_Element_Slack sensor to detect a wire.

1. Check if the rewind paper from the spool has been cut/damaged/slipped.
Rewind paper appears to be damaged/cut
Yes- Clear the Rewind Spool and reinsert the rewind paper;
No- Go to Step 2
2. Reinstall the Supply Spool.
Replacing the spool with a new one fixes the problem
Yes- Reinstall the correct size spool and continue operation;
No- Go to Step 3
3. Perform GP 6.13 to clean the base of the Element feeder. Ensure that the slack detect mechanism moves freely without any obstruction.
This clears the fault
Yes- Return to normal operation;
No- Go to step 4
4. Do GP 6.4 to check S20 Element slack sensor.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 5
5. Do GP 6.5 to check M8 Spool rewind motor.
This clears the fault
Yes- Return to normal operation;
No- Go to step 6
6. Check the Rewind Belt Pulley (Green Belt)
Pulley is intact and has proper tension
Yes- Go to Step 7;
No- Do REP 3.9 to replace the Pulley Assembly

7. Perform ADJ 1.2 Element Slack Detection Adjust.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

8. Check the condition of Element slack detect sub-assembly (PL 5.10)

Element slack detect sub-assembly is in good condition

Yes- Go to Step 9;

No- Replace Element slack detect sub-assembly

9. Do GP 6.3.7 *FIRMWARE UPGRADE Procedure* to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.2 J321- S21 LEAD EDGE DETECT TIMEOUT

S21 Lead edge detect time out is the maximum time to wait for the lead edge of the element to reach the Knife.

Ensure that the element is placed properly onto the Element Feed Track. Use the label on the knife cover to position it.

Element is located properly on the Element Feed Sprocket

Yes- Go to Step 2

No- Load the element spool properly (GP 6.7)

1. Ensure that the element moves freely on the Element Feed Track when the Knob is turned by hand. If necessary, do GP 6.3.6 Functional Tests and run the Feed Element function. Ensure that the element moves feely on the Element Feed Track with no burrs or obstructions.

Element moves freely on the Element Feed Track

Yes- Go to Step 3

No- Remove the obstruction, or do REP 3.10 to replace the Element Feed Track. Properly load the spool with a fresh element if necessary.

2. Do GP 6.4 to check S21 Element Detect at Knife sensor

This clears the fault

Yes- Return to normal operation

No- Go to step 4

3. Do GP 6.5 to check M9 Element feed sprocket motor

This clears the fault

Yes- Return to normal operation

No- Go to Step 5

4. Perform the steps in RAP 4.1 J320- S20 Spool Element Slack Timeout

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

RAP 4.3 J322- S22 ELEMENT AT PYRAMID TIMEOUT

S22 Element at Pyramid time out is the maximum time to wait for the lead edge of the element to reach the Element Detect at Pyramid sensor

1. Check if the element spool is loaded properly.

Element spool is loaded properly

Yes- Go to Step 2

No- Remove the element spool and reinsert it properly

2. Do GP 6.4 to check S22 Element Detect at Pyramid sensor

This clears the fault

Yes- Return to normal operation

No- Go to step 3

3. Check the condition of the Element belt (PL 5.8). Check for missing or loose teeth in the belt

Element belt is in good condition

Yes- Go to Step 4

No- Replace the belt (REP 3.6)

4. Perform ADJ 1.5 to adjust the Element belt

This clears the fault

Yes- Return to normal operation

No- Go to Step 5

5. Do GP 6.5 to check M10 Element feed belt Motor.

This clears the fault

Yes- Return to normal operation

No- Go to step 6

6. Go GP 6.4 to check S25 Belt Home sensor

This clears the fault

Yes- Return to normal operation

No- Go to step 7

7. Check the condition of the Element feed track assembly (PL 5.9)

Element feed track assembly is in good condition

Yes- Go to Step 8

No- Replace Element feed track assembly (REP 3.10)

8. Check the condition of the Element feed belt idler assembly (PL 5.9)

Element feed belt idler assembly is in good condition

Yes- Go to Step 9

No- Replace Element feed track assembly (REP 3.10)

9. Check the condition of the Element engagement guide (PL 5.9)

Element engagement guide is in good condition

Yes- Go to Step 10

No- Replace Element engagement guide (REP 3.13)

10. Check the condition of the Element belt idler (PL 5.9)

Element belt idler is in good condition

Yes- Go to Step 11

No- Replace Element belt idler (REP 3.11)

11. Check the condition of the Element sprocket nose sub-assembly (PL 5.9)

Element sprocket nose sub-assembly is in good condition

Yes- Go to Step 12

No- Replace Element sprocket nose sub-assembly (REP 3.12)

12. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.4 J323- S23 KNIFE HOME TIMEOUT

S23 Knife home time out is the maximum time to wait for the Knife to reach home.

1. Do GP 6.4 to check S23 Knife Home sensor.

This clears the fault

Yes- Return to normal operation

No- Go to Step 2

2. Do GP 6.5 to check M11 Knife Motor

This clears the fault

Yes- Return to normal operation

No- Go to step 3

3. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 4

4. Replace the Knife module (REP 3.15)

This clears the fault

Yes- Return to normal operation

No- Go to Step 5

5. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.5 J324- S24 PUSHOVER HOME TIMEOUT

S24 Pushover home time out is the maximum time to wait for the Element transfer pushover assembly to reach home.

1. Do GP 6.4 to check S24 Pushover Home sensor.

This clears the fault

Yes- Return to normal operation

No- Go to Step 2

2. Do GP 6.5 to check M12 Element Pushover Motor

This clears the fault

Yes- Return to normal operation

No- Go to step 3

3. Inspect Pushover cams for signs of wear (PL 5.13)

Pushover cam shows sign of wear

Yes- Replace Element Pushover cams (REPs 3.16.5 and 3.16.6)

No- Go to Step 4

4. Inspect Element Pushover springs, ensure they are installed properly (PL 5.13)

Element Pushover springs shows sign of wear

Yes- Replace Element pushover springs (REP 3.15.12)

No- Go to Step 5

5. Inspect the Element Pushover for obstructions. Remove any debris or parts that may have fallen into the cavity.

Element Pushover is free of obstructions

Yes- Go to Step 6

No- Clear the area and re-test

6. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation; **No-** Go to Step 6

7. Replace the Element transfer module (REP 3.15)

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

8. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 7

RAP 4.6 J325- S25 FEED BELT HOME TIMEOUT

S25 Feed belt home time out is the maximum time to wait for the Element belt home sensor to detect the belt tooth.

1. Do GP 6.4 to check S25 Element belt home sensor

This clears the fault

Yes- Return to normal operation

No- Go to step 2

2. Do GP 6.5 to check M10 Element feed belt motor

This clears the fault

Yes- Return to normal operation

No- Go to step 3

3. Inspect the Element belt (PL 5.8). Check for missing teeth or any other damages

Element belt is in good condition

Yes- Go to Step 4

No- Replace the Element belt (REP 3.6)

4. Do ADJ 1.6 Element feed belt tension adjustment

This clears the fault

Yes- Return to normal operation;

No- Go to Step 5

5. Inspect Element feed belt idler for any damages or signs of wear (PL 5.9)

Element feed belt idler is in good condition

Yes- Go to Step 6

No- Replace Element feed belt idler (REP 3.11)

6. Inspect Element belt idlers (2x) (PL 5.9)

Element belt idlers are in good condition

Yes- Go to Step 7

No- Replace Element belt idler (REP 3.11)

7. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

8. Replace the Element feed belt (REP 3.6)

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

9. Do REP 11.1 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 7

RAP 4.7 J332- S32 EXPAND T HOME TIMEOUT

S32 Expand T Home timeout is the maximum time to wait for the Expand T to reach its home position

1. Do GP 6.4 to check S32 Expanding T Home sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.5 to check M13 Expanding T motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. Inspect the Expanding T cam assembly (PL 5.13). Check for the tightness of set screw in the motor shaft; signs of wear on the cam surface.

Expanding T cam is secured tightly with the set screw, and the cam surface is in good condition

Yes- Go to Step 4;

No- If the set screw is loose, tighten it. If the cam surface is worn, replace the cam assembly. Refer to ARP 3.15.9

4. Inspect Expanding T springs (PL 5.13).

Expanding T arms are straight and in good condition

Yes- Go to Step 5;

No- Replace Expanding T springs (ARP 3.15.10)

5. Inspect Expanding T arms (PL 5.13).

Expanding T springs are in good condition

Yes- Go to Step 6;

No- Replace Expanding T springs (ARP 3.15.10)

6. Inspect Element transfer racks (PL 5.13)

Element transfer racks are in good condition

Yes- Go to Step 7;

No- Replace Element transfer racks (ARP 3.15.4)

7. Inspect Element transfer gears (PL 5.13)
Element transfer gears are in good condition
Yes- Go to Step 8;
No- Replace Element transfer gears (ARP 3.15.4)
8. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 9
9. Replace the Element transfer module (ARP 3.15)
This clears the fault
Yes- Return to normal operation;
No- Go to Step 10
10. Do ARP 11.3 "B" Main Control Board Replacement.
This clears the fault
Yes- Return to normal operation;
No- Escalate to second level

RAP 4.8 J333- S33 EXPAND T OUT TIMEOUT

S33 Expand T Out timeout is the maximum time to wait for the Expand T to reach its home position

1. Do GP 6.4 to check S33 Expanding T Out sensor
This clears the fault
Yes- Return to normal operation;
No- Go to Step 2
2. Do GP 6.5 to check M13 Expanding T motor
This clears the fault
Yes- Return to normal operation;
No- Go to step 3
3. Inspect the Expanding T cam assembly (PL 5.13). Check for the tightness of set screw in the motor shaft; signs of wear on the cam surface.
Expanding T cam is secured tightly with the set screw, and the cam surface is in good condition
Yes- Go to Step 4;
No- If the set screw is loose, tighten it. If the cam surface is worn, replace the cam assembly. Refer to ARP 3.15.9
4. Inspect Expanding T arms (PL 5.13).
Expanding T arms are straight and in good condition
Yes- Go to Step 5;
No- Replace Expanding T springs (ARP 3.15.12)
5. Inspect Expanding T springs (PL 5.13).
Expanding T springs are in good condition
Yes- Go to Step 6;
No- Replace Expanding T springs (ARP 3.15.12)

6. Inspect Element transfer racks for obstructions. Inspect the Expanding T Mechanism for loose parts or obstructions. (PL 5.13)
Element transfer mechanism is clear and in good condition
Yes- Go to Step 7;
No- Replace Element transfer racks (ARP 3.15.4)
7. Inspect Element transfer gears (PL 5.13)
Element transfer racks are in good condition
Yes- Go to Step 8;
No- Replace Element transfer gears (ARP 3.15.4)
8. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 9
9. Replace the Element transfer module (ARP 3.15)
This clears the fault
Yes- Return to normal operation;
No- Go to Step 10
10. Do ARP 11.3 "B" Main Control Board Replacement.
This clears the fault
Yes- Return to normal operation;
No- Escalate to second level

RAP 4.9 J334- FEED BELT JAM

Feed belt jam is reported when the Element home sensor does not change state within the allowed time.

1. Check if the element spool is loaded properly.
Element spool is loaded properly
Yes- Go to Step 2;
No- Remove the element spool and reinsert it properly
2. Inspect the Element belt (PL 5.8). Check for missing teeth or any other damages
Element belt is in good condition
Yes- Go to Step 3;
No- Replace the Element belt (REP 3.6)
3. Do GP 6.4 to check S25 Element belt home sensor
This clears the fault
Yes- Return to normal operation;
No- Go to step 4
4. Do ADJ 1.7 Element feed belt tension adjustment
This clears the fault
Yes- Return to normal operation;
No- Go to Step 5
5. Inspect Element feed belt idler for any damages or signs of wear (PL 5.8)
Element feed belt idler is in good condition
Yes- Go to Step 6;
No- Replace Element feed belt idler (REP 3.11)
6. Inspect Element belt idlers (2x) (PL 5.9)
Element belt idlers are in good condition
Yes- Go to Step 7;
No- Replace Element belt idler (REP 3.11)

7. Do GP 6.5 to check M10 Element feed belt motor
This clears the fault
Yes- Return to normal operation;
No- Go to step 8
8. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 9
9. Replace the Element feed belt (REP 3.6)
This clears the fault
Yes- Return to normal operation;
No- Go to Step 10
10. Do REP 11.3 “B” Main Control Board Replacement.
This clears the fault
Yes- Return to normal operation;
No- Escalate to second level

RAP 4.10 J350- SPOOL NEAR EMPTY

J350 is displayed when the Element spool does not have sufficient elements to make books. Follow this procedure if the machine erroneously displays this message with an element spool with at least one full row of elements

1. Check if the element spool is loaded properly, and if it contains at least one row of elements. Try loading a fresh spool and repeating the process.
Element spool is loaded properly, it contains at least one row of elements. The problem exists with more than one spool
Yes- Go to Step 2;
No- Refer to GP 6.7 to properly install the spool.
2. Do GP 6.4 to check S50 Spool Near Empty sensor
This clears the fault
Yes- Return to normal operation;
No- Go to step 3
3. Inspect spool spindle sub-assembly, replace if necessary
Spool spindle sub-assembly is in good condition
Yes- Go to Step 4;
No- Replace Spool spindle sub-assembly.
4. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 5
5. Do REP 11.3 “B” Main Control Board Replacement.
This clears the fault
Yes- Return to normal operation;
No- Escalate to second level

RAP 4.11 J351- S32 & S33 BOTH BLOCKED

J351 will occur when the S32 and S33 sensors are both blocked at the same time. S32 and S33 sensors are both used on the Pushover mechanism.

1. Open the Element Feeder drawer. Inspect the pushover mechanism area for any debris or obstruction. Inspect the 4 Cams for damage. Remove any foreign object that may be obstructing the area.

This clears the fault

Yes- Return to normal operation;

No- Go to step 2

2. Do GP 6.4.3 to check the S32 and S33 sensors.

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. Do GP 6.5.7 to check the function of Motor 12 and Motor 13.

This clears the fault

Yes- Return to normal operation;

No- Go to step 4

4. Do REP 3.15 to remove the Expanding T mechanism from the eWire. Thoroughly inspect and ensure no foreign objects are stuck in the Expanding T. Replace the module and repeat steps 2 and 3.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level.

RAP 4.12 J361- RESIDUAL ELEMENT ERROR

J361 is displayed when there is a residual element on the Element belt somewhere between S21 Element detect at Knife and S22 Element detect at Pyramid. Follow this procedure when this message is displayed erroneously (i.e. when there is no element present on the belt)

1. Do GP 6.4 to check S21 Element Detect at Knife sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.4 to check S22 Element Detect at Pyramid sensor

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. Replace the Element Feed Belt (ARP 3.6)

This clears the fault

Yes- Return to normal operation;

No- Go to step 4

4. Check the Element Feed Belt area for dust and debris. Use compressed air to clean the areas around S21 and S22

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.13 J362- ELEMENT FAILED TO CUT

J362 is displayed when the S21 Element detect at Knife sensor does not detect that the wire has been cut.

5. Do GP 6.4 to check S21 Element Detect at Knife sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

6. Do GP 6.5.6 to check the Knife function.

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

7. Do GP 6.3.6 and run the Feed Element functional test. Determine if the Knife actually cuts the Element. The cut should be clean, with no excess material remaining after cutting.

Does the Knife cut the Element cleanly?

Yes- Go to Step 4;

No- Go to step 6

8. When doing the Feed Element test, determine if there is a gap between the cut section of wire and the remaining wire. If the wire is "bunched up," this can cause erroneous J362 errors.

Is there a visible gap between the cut wire and remaining wire immediately after cut?

Yes- Go to Step 6;

No- Go to Step 5

9. Adjust the Feed Belt Home Position. Refer to ADJ 1.4 for additional detail. Adjust the Feed Belt Home in increments of -1 and repeat Step 2. The Belt tooth should mesh easily with the wire, and a small gap should be observed immediately after the wire is cut by the Knife.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 5

10. Do REP 3.14.3 to replace the Knife Blade.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 7

11. Do REP 3.14 to replace the Knife Module.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.14 J363- FEED BELT HOME STEPS TIMEOUT

J363 is triggered when it takes longer than specified time for the Element belt to feed the element. This can be caused due a jammed Element along the Element belt path

1. Ensure there are no obstructions or residual fragment of the element on the belt.

The Element belt is free of obstructions

Yes- Go to Step 2

No- Remove the obstructions and ensure smooth travel of the belt.

2. Manually rotate the Element belt and ensure smooth operation

The Element belt moves smoothly without any binding

Yes- Go to Step 4.

No- Go to Step 3

3. Inspect closely to determine where the binding occurs. Binding is most likely to occur on the Element engagement guide, or the Track assembly (PL 5.9).

Belt operates smoothly

Yes- Go to Step 4

No- Replace affected parts (PL 5.9)

4. Check if the element spool is loaded properly.

Element spool is loaded properly

Yes- Go to Step 5

No- Remove the element spool and reinsert it properly

5. Inspect the Element belt (PL 5.8.) Check for missing teeth or any other damages

Element belt is in good condition

Yes- Go to Step 6

No- Replace the Element belt (REP 3.6)

6. Do GP 6.4 to check S25 Element belt home sensor

This clears the fault

Yes- Return to normal operation;

No- Go to step 7

7. Do ADJ 1.6 Element feed belt tension adjustment

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

8. Inspect Element feed belt idler for any damages or signs of wear (PL 5.9)

Element feed belt idler is in good condition

Yes- Go to Step 9;

No- Replace Element feed belt idler (REP 3.11)

9. Inspect Element belt idlers (2x) (PL 5.9)

Element belt idlers are in good condition

Yes- Go to Step 10;

No- Replace Element belt idler (REP 3.11)

10. Do GP 6.5 to check M10 Element feed belt motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 11

11. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 12

12. Replace the Element feed belt (REP 3.6)

This clears the fault

Yes- Return to normal operation;

No- Go to Step 13

13. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.15 J364- M9 ELEMENT BACKUP STEPS TIMEOUT

J364 is triggered when it takes longer than specified time for M9 Element sprocket motor to back up the element.

1. Ensure that the element is not tangled on the sprocket of the feed section.
The Element is not tangled on the sprocket
Yes- Go to Step 2
No- Remove the damaged element and reinstall the spool.
2. Check if the element spool is loaded properly.
Element spool is loaded properly
Yes- Go to Step 3
No- Remove the element spool and reinsert it properly
3. Manually rotate the Element sprocket and ensure smooth operation.
Element tip does not catch corners when moved using the sprocket
Yes- Go to Step 4
No- If the edge of an element catches a corner, trim the edge.
Resume normal operation
4. Ensure there are no obstructions or residual fragment of the element on the belt.
The Element belt is free of obstructions
Yes- Go to Step 5
No- Remove the obstructions and ensure smooth travel of the belt.
5. Manually rotate the Element belt and ensure smooth operation
The Element belt moves smoothly without any binding
Yes- Go to Step 6.
No- Go to Step 7
6. Do GP 6.5 to check M9 Element feed sprocket motor
This clears the fault
Yes- Return to normal operation;
No- Go to step 5

7. Inspect the Element sprocket nose sub-assembly for any damage.
Element sprocket nose sub-assembly is damaged.
Yes- Replace the Sprocket Nose sub-assembly (REP 3.13);
No- Go to Step 6
8. Do GP 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 9
9. Do REP 11.3 "B" Main Control Board Replacement.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 10

RAP 4.16 J365- M9 MESH STEPS TIMEOUT

J365 is triggered when it takes longer than specified time for the element to lead edge to mesh with the Element belt.

1. Ensure that the element is not tangled on the sprocket of the feed section.
The Element is not tangled on the sprocket
Yes- Go to Step 2
No- Untangle the element and resume normal operation
2. Manually rotate the Element sprocket and ensure smooth operation.
Element tip does not catch corners when moved using the sprocket
Yes- Go to Step 3
No- If the edge of an element catches a corner, trim the edge. Resume normal operation
3. Check if the element spool is loaded properly.
Element spool is loaded properly
Yes- Go to Step 4
No- Remove the element spool and reinsert it properly
4. Do GP 6.5 to check M9 Element feed sprocket motor
This clears the fault
Yes- Return to normal operation **No-** Go to step 5
5. Inspect the Element sprocket nose sub-assembly for any damage.
Element sprocket nose sub-assembly is damaged
Yes- Replace the Sprocket Nose sub-assembly (ARP 3.13)
No- Go to Step 6
6. Do ADJ 1.4 Element Feed Belt Home Position.
This clears the fault
Yes- Return to normal operation
No- Go to Step 7

7. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation; **No-** Go to Step 8

8. Do ARP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation; **No-** Escalate to level two

RAP 4.17 J366- ELEMENT AT PUSHOVER STEPS TIMEOUT

J366 is triggered if it takes longer than specified time for motor M10 to complete the necessary number of steps from the S22 Element Detect at Pyramid to the position for Pushover.

Follow the procedure in **RAP 4.12**

RAP 4.18 J367- ELEMENT STEPS TIMEOUT

J367 is triggered if it takes longer than specified time for motor M9 to run the number of steps to feed the correct length of element based on the sheet size of books.

Follow the procedure in **3.14**

RAP 4.19 J368- PUSHOVER FWD ENCODER TIMEOUT

J368 is triggered if it takes longer than specified time to count the encoder steps needed for the Pushover to go in the forward direction.

1. Do GP 6.4 to check S31 Pushover encoder sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.5 to check M12 Element pushover motor

This clears the fault

Yes- Return to normal operation;

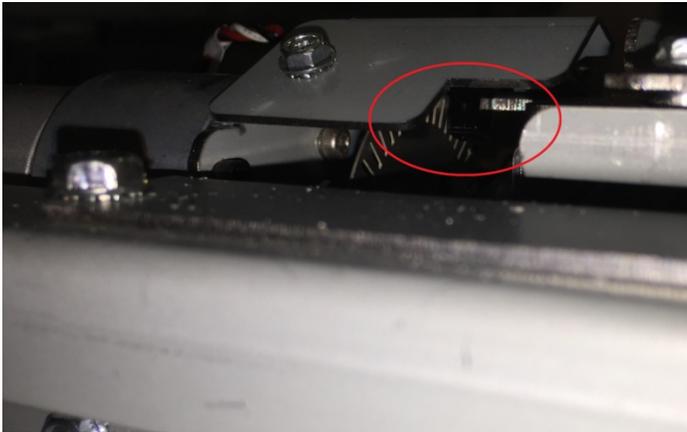
No- Go to Step 3

3. Replace the Pushover Motor Assembly (PL 5.13)

This clears the fault

Yes- Return to normal operation;

No- Go to Step 4



4. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 5

5. Do REP 11.3 “B” Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 4.20 J369- PUSHOVER REV ENCODER TIMEOUT

J368 is triggered if it takes longer than specified time to count the encoder steps needed for the Pushover to go in the reverse direction.

Follow the procedure in **RAP 4.17**

5 BIND JAM CODES

RAP 5.1 J370- HOLDER AT S37 TIMEOUT

J370 is triggered if it takes longer than specified time for the Holder to reach S37. The holder then moves forward a set number of motor steps for Stacking position

1. J370 may be triggered by an oversized book preventing the holder from moving. Confirm that the book being run does not exceed listed in the Book Quality Section of this manual.

Book was oversized

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.4 to check S37 Holder Stack position sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 3

3. Check the Condition of the Holder linear drive belt- Front and Rear (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 4;

No- Replace the damaged timing belt (ARP 2.8, 2.9) and resume operation

4. Check the tension of the Holder linear drive belt tension- Front and Rear (ADJ 1.6)

The tension of the timing belts is good

Yes- Go to Step 5

No- Do to ADJ 1.6 to set the belt tension and resume operation

5. Visually check if the rollers of the Holder are centered in the cam tracks.

The rollers are centered in the cam tracks

Yes- Go to Step 6

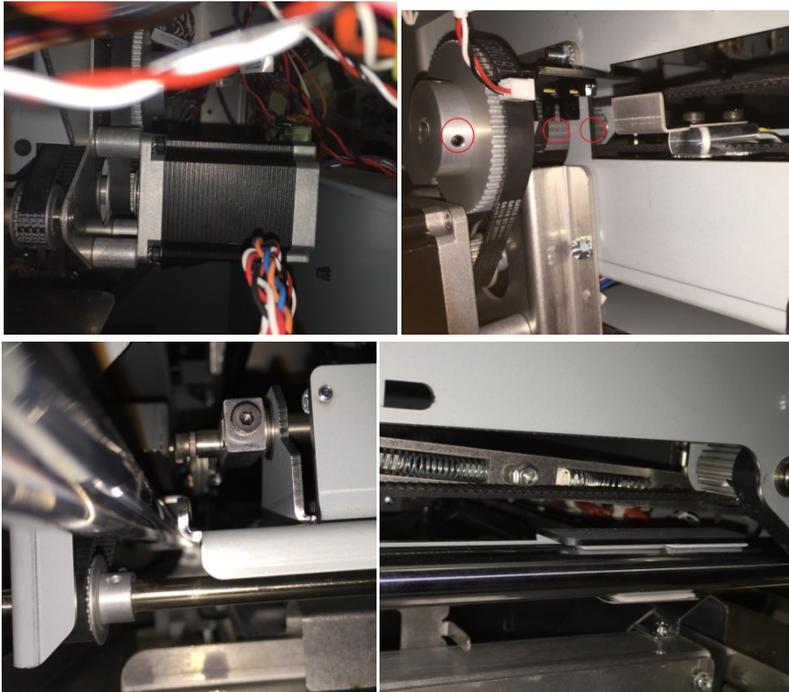
No- Escalate to a Specialist

6. Check if the set screws on all the six pulleys associated with the Holder linear drive are tight

The set screws are tight

Yes- Go to Step 7

No- Tighten the loose set screw(s) and resume operation

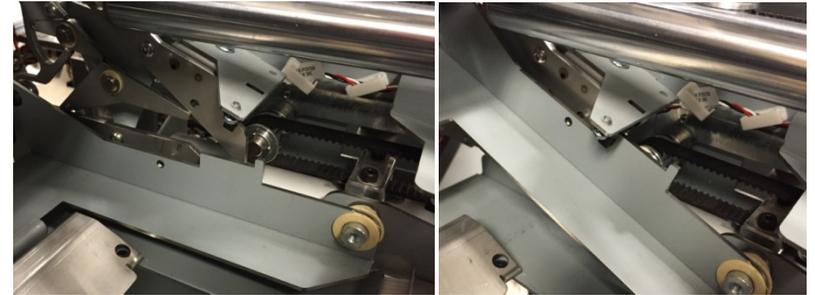


7. Manually move the Holder linear mechanism and watch if the sheet metal feature blocks/unblocks S37 Holder Stack position sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 8;

No- Escalate to second level



8. Do GP 6.5 to check M15 Holder linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 9

9. Inspect the springs for the Holder gates (PL 5.21).

Holder gates springs are present and not damaged

Yes- Go to Step 10;

No- Replace the missing/damaged spring

10. Do 6.3.6 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 11

11. Do ARP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Resume operation;

No- Escalate to second level

RAP 5.2 J371- S38 HOLDER POSITION ELEMENT TIMEOUT

J371 is triggered if it takes longer than specified time for the Holder to reach S38 Holder at Element position sensor

1. Do GP 6.4 to check S38 Holder Element position sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Holder linear drive belt- Front and Rear (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.11, 8.12) and resume operation

3. Check the tension of the Holder linear drive belt tension- Front and Rear (ADJ 1.6)

The tension of the timing belts is good

Yes- Go to Step 4;

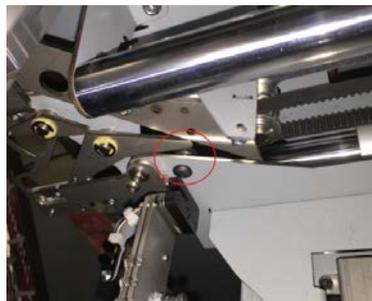
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Visually check if the rollers of the Holder are centered in the cam tracks.

The rollers are centered in the cam tracks

Yes- Go to Step 5;

No- Loosen the cam track assembly and bring the roller inside the cam track. Resume operation

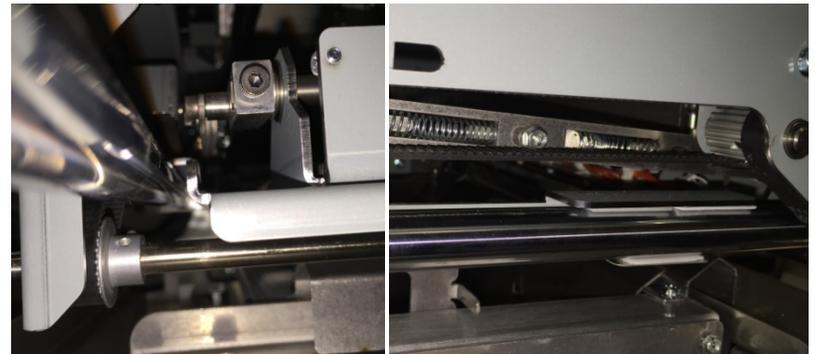
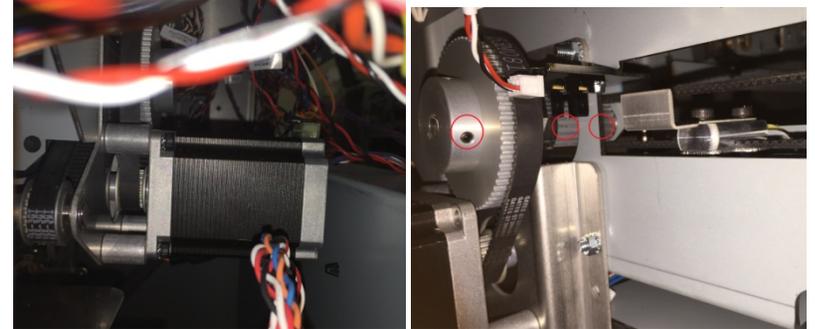


5. Check if the set screws on all the six pulleys associated with the Holder linear drive are tight

The set screws are tight

Yes- Go to Step 6;

No- Tighten the loose set screw(s) and resume operation



6. Manually move the Holder linear mechanism and watch if the sheet metal feature blocks/unblocks S38 Holder Stack position sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 7;

No- Escalate to second level



7. Do GP 6.5 to check M15 Holder linear drive motor
This clears the fault
Yes- Return to normal operation;
No- Go to step 8

8. Inspect the springs for the Holder gates (PL 5.21).
Holder gates springs are present and not damaged
Yes- Go to Step 9;
No- Replace the missing/damaged spring

9. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 10

10. Do REP 11.3 "B" Main Control Board Replacement.
This clears the fault
Yes- Resume operation;
No- Escalate to second level

RAP 5.3 J372- S39 DETECT AT REV GATE TIMEOUT

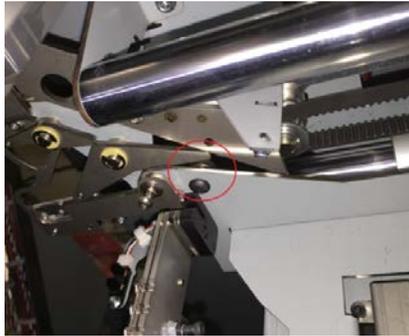
J372 is triggered if it takes longer than specified time for the Holder to reach S39 Holder at Reverse Gate sensor

1. Do GP 6.4 to check S39 Holder at Reverse gate sensor
This clears the fault
Yes- Return to normal operation;
No- Go to Step 2

2. Check the Condition of the Holder linear drive belt- Front and Rear (PL 5.21)
The timing belt is in good condition. There are no missing teeth and the belt is not frayed
Yes- Go to Step 3;
No- Replace the damaged timing belt (REP 8.11, 8.12) and resume operation

3. Check the tension of the Holder linear drive belt tension- Front and Rear (ADJ 1.6)
The tension of the timing belts is good
Yes- Go to Step 4;
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Visually check if the rollers of the Holder are centered in the cam tracks.
The rollers are centered in the cam tracks
Yes- Go to Step 5;
No- Loosen the cam track assembly and bring the roller inside the cam track. Resume operation

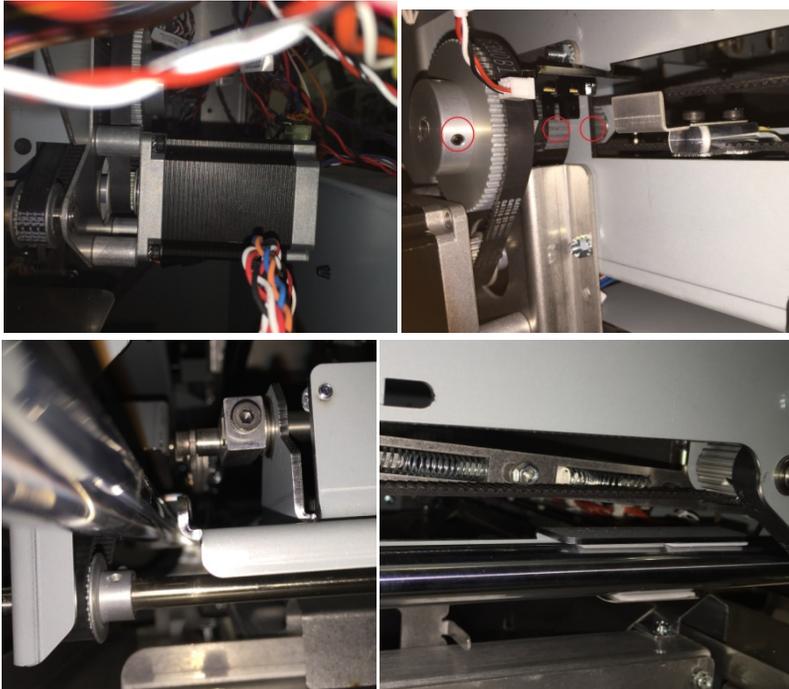


5. Check if the set screws on all the six pulleys associated with the Holder linear drive are tight

The set screws are tight

Yes- Go to Step 6;

No- Tighten the loose set screw(s) and resume operation

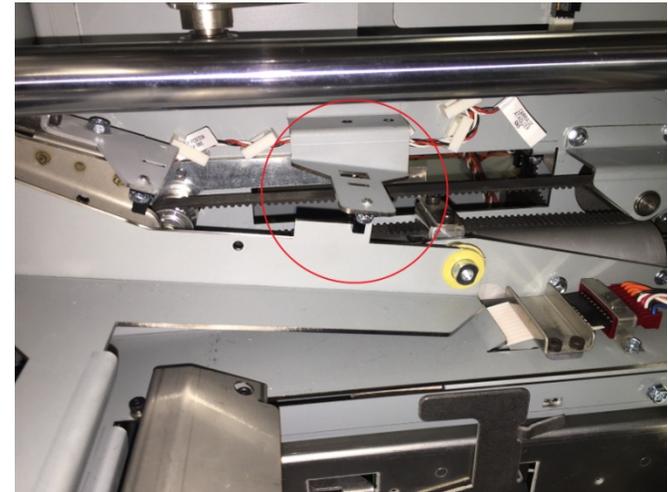


6. Manually move the Holder linear mechanism and watch if the sheet metal feature blocks/unblocks S39 Holder at Reverse Gates sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 7;

No- Escalate to second level



7. Do GP 6.5 to check M15 Holder linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 8

8. Inspect the springs for the Holder gates (PL 5.21).

Holder gates springs are present and not damaged

Yes- Go to Step 9;

No- Replace the missing/damages spring

9. Go to RAP 5.20, Step 5 and 6 to ensure the Holder rotate components are in good order.

Holder rotate components are in good order

Yes- Go to Step 10;

No- Follow steps in RAP 5.20 to take the necessary corrective action

10. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 10

11. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.4 J373- S40 AT BOOK DROP POSITION TIMEOUT

J373 is triggered when it takes longer than specified time for the Holder to reach S40 Holder at Element feeder sensor from the book drop position.

1. Do GP 6.4 to check S40 Holder at Element Feeder sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Holder linear drive belt- Front and Rear (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.11, 8.12) and resume operation

3. Check the tension of the Holder linear drive belt tension- Front and Rear (ADJ 1.6)

The tension of the timing belts is good

Yes- Go to Step 4;

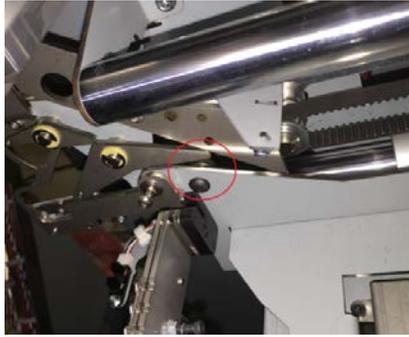
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Visually check if the rollers of the Holder are centered in the cam tracks.

The rollers are centered in the cam tracks

Yes- Go to Step 5;

No- Loosen the cam track assembly and bring the roller inside the cam track. Resume operation

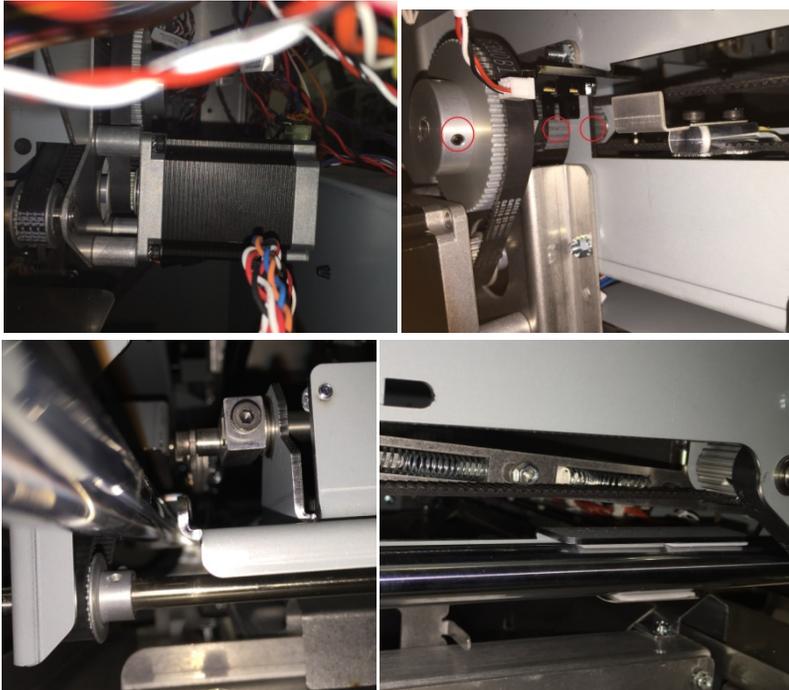


5. Check if the set screws on all the six pulleys associated with the Holder linear drive are tight

The set screws are tight

Yes- Go to Step 6;

No- Tighten the loose set screw(s) and resume operation

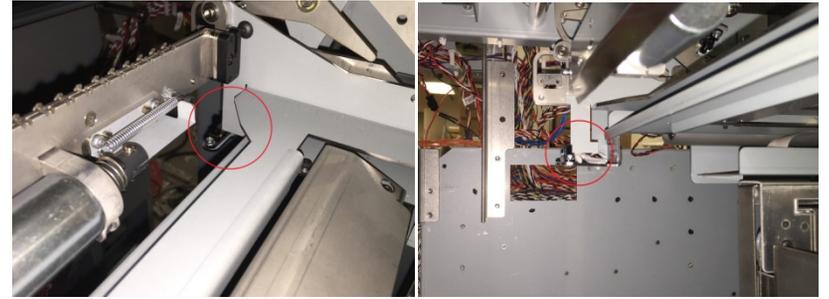


6. Manually move the Holder linear mechanism and watch if the sheet metal feature blocks/unblocks S40 Holder at Element feeder sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 7;

No- Escalate to second level



7. Do GP 6.5 to check M15 Holder linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 8

8. Inspect the springs for the Holder gates (PL 5.21).

Holder gates springs are present and not damaged

Yes- Go to Step 9;

No- Replace the missing/damaged spring

9. Go to RAP 5.20, Step 5 and 6 to ensure the Holder rotate components are in good order.

Holder rotate components are in good order

Yes- Go to Step 10;

No- Follow steps in RAP 5.20 to take the necessary corrective action

10. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 11

11. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.5 J374- S46 BOOK DROP TIMEOUT

J374 is triggered when it takes longer than specified time for the Closer to reach S46 Closer Home sensor after the bound book is ejected from the closer.

1. Do GP 6.4 to check S46 Closer Home Sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Closer linear drive belt (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.10) and resume operation

3. Check the tension of the Closer linear drive belt (ADJ 1.6)

The tension of the timing belt is good

Yes- Go to Step 4;

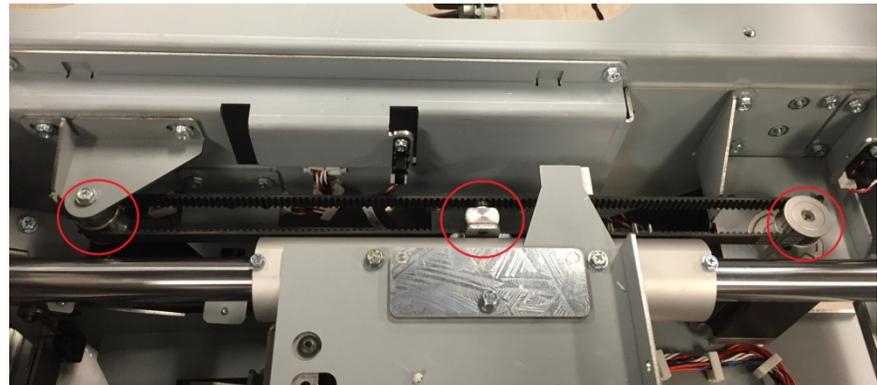
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Check if the set screw on the Closer motor pulley and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 5;

No- Tighten the loose set screw(s) and resume operation



5. Manually move the Closer linear mechanism and watch if the sheet metal feature blocks/unblocks S46 Closer Home sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 6;

No- Escalate to second level



6. Do GP 6.5 to check M21 Closer linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 7

7. Inspect the Closer drive mechanism on the Front side for any loose objects preventing smooth operation. Check if there are any loose screws on the mechanism.

The drive system is free of obstructions

Yes- Go to Step 8;

No- Clear the obstruction/ fasten loose fasteners



8. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 9

9. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

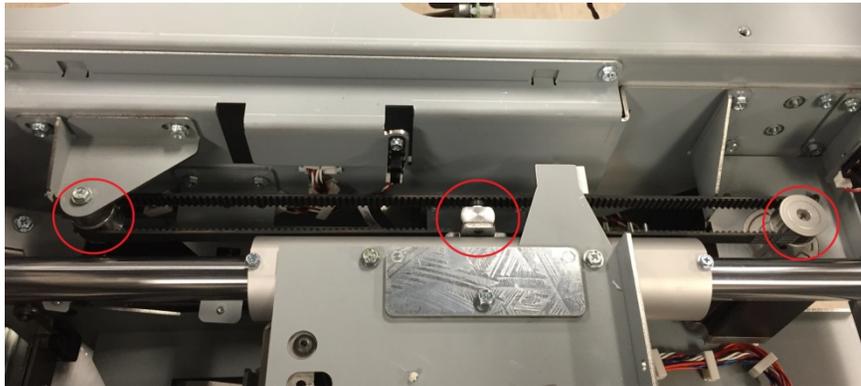
Yes- Return to normal operation;

No- Escalate to second level

RAP 5.6 J375- BOOK DROP POSITION TIMEOUT

J375 is triggered when it takes longer than specified time for the Closer to move to Book Drop position from the Partial Close position.

1. Check the Condition of the Closer linear drive belt (PL 5.21)
The timing belt is in good condition. There are no missing teeth and the belt is not frayed
Yes- Go to Step 2;
No- Replace the damaged timing belt (REP 8.10) and resume operation
2. Check the tension of the Closer linear drive belt (ADJ 1.6)
The tension of the timing belts is good
Yes- Go to Step 3;
No- Do to ADJ 1.6 to set the belt tension and resume operation
3. Check if the set screw on the Closer motor pulley and the screws in the drive components are sufficiently tight.
The screws are tight
Yes- Go to Step 4;
No- Tighten the loose set screw(s) and resume operation



4. Manually move the Closer linear mechanism and watch if the sheet metal feature blocks/unblocks S46 Closer Home sensor.
The sensor is blocked/unblocked properly
Yes- Go to Step 5;
No- Escalate to second level



5. Do GP 6.4 to check S46 Closer Home Sensor
This clears the fault
Yes- Return to normal operation;
No- Go to Step 6
6. Do GP 6.4 to check S49 Closer Staged Sensor
This clears the fault
Yes- Return to normal operation;
No- Go to Step 7
7. Do GP 6.5 to check M21 Closer linear drive motor
This clears the fault
Yes- Return to normal operation;
No- Go to step 8
8. Inspect the Closer drive mechanism on the Front side for any loose objects preventing smooth operation.
The drive system is free of obstructions
Yes- Go to Step 9;
No- Clear the obstruction/ fasten loose fasteners



9. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 10

10. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.7 J376- CLOSER AT HOLDER STEPS TIMEOUT

J376 is triggered when it takes longer than specified time for the Closer to move to Holder position from its staged position

1. Do GP 6.4 to check S49 Closer Staged Sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Closer linear drive belt (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.10) and resume operation

3. Check the tension of the Closer linear drive belt (ADJ 1.6)

The tension of the timing belt is good

Yes- Go to Step 4;

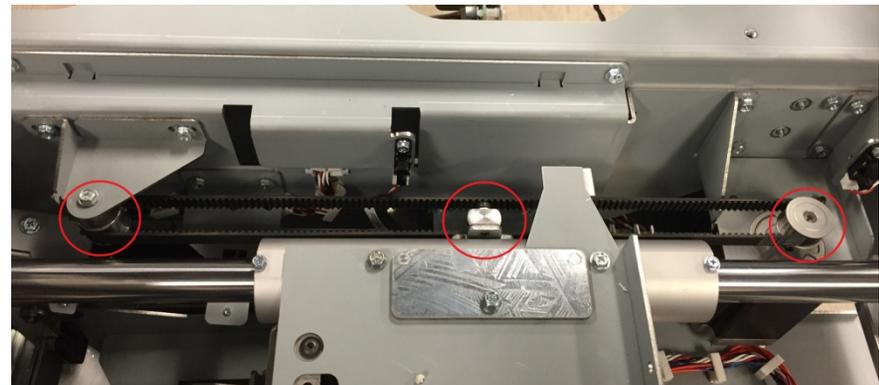
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Check if the set screw on the Closer motor pulley and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 5;

No- Tighten the loose set screw(s) and resume operation



5. Manually move the Closer linear mechanism and watch if the sheet metal feature blocks/unblocks S46 Closer Home sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 6 ;

No- Escalate to second level



6. Do GP 6.5 to check M21 Closer linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 7

7. Inspect the Closer drive mechanism on the Front side for any loose objects preventing smooth operation.

The drive system is free of obstructions

Yes- Go to Step 8;

No- Clear the obstruction/ fasten loose fasteners



8. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 9

9. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.8 J377- CLOSER CARRIAGE HOME TIMEOUT

J377 is triggered when it takes longer than specified time for the Closer to reach S46 Closer Home sensor after the bound book is ejected from the closer.

Do the steps in RAP 4.5

RAP 5.9 J379- CLOSER JAWS HOME ENCODER TIMEOUT

J379 is triggered when it takes longer than specified time for the Closer jaws to move certain number of encoder steps.

1. Ensure that there are no residual elements or foreign objects in the closer jaws.

Closer jaws are free of foreign materials

Yes- Go to Step 2

No- Remove the object(s) and resume normal operation

2. Do GP 6.4 to check S48 Closer encoder sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 3

3. Do GP 6.5 to check M20 Element Closer motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 4

4. Do REP 6.1 to remove the Closer module.

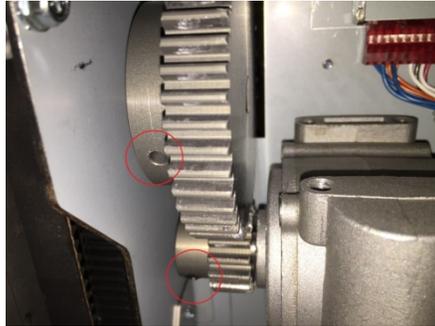
If the closer jaws are jammed-The closer cam drive for the closer jaws is difficult to rotate manually by hand. The easiest way to clear a jammed closer jaw mechanism is by removing (5) M5 screws of the Closer motor, removing the closer motor and manually turning the mechanism. Do not leave the cam in the dwell position, any other position is acceptable.

5. Check if the set screw on the Closer motor gear and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 6;

No- Tighten the loose set screw(s) and resume operation



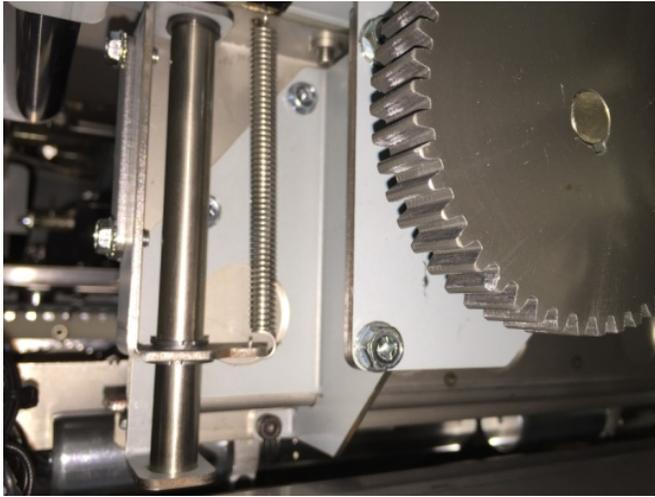
6. Check the Condition of the Closer cam chain.
7. **The chain is in good condition.**
Yes- Go to Step 7;
No- Replace the damaged timing belt (REP 2.8, 2.9) and resume operation
8. Inspect the cam follower. If it appears to be damaged or missing, replace it.
Cam follower is in good condition
Yes- Go to Step 8
No- Replace the damaged part.



9. Ensure the encoder disc is properly positioned in relation to S48 Closer encoder sensor
The encoder disc is positioned properly
Yes- Go to Step 9
No- Position the disc correctly



10. Inspect the closer jaw springs and ensure they are positioned correctly.
The closer jaw springs are in good condition and positioned correctly
Yes- Go to Step 10;
No- Replace closer jaw springs if necessary (REP 6.6)



- Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 11

- Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.10 J380- CLOSER JAWS HOME TIMEOUT

J380 is triggered if it takes longer than specified time for Closer jaws to move to home position and change the state of S47 Closer Full open sensor

- Do GP 6.4 to check S47 Closer full open sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

- Do GP 6.5 to check M20 Element Closer motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

- Do REP 6.1 to remove the Closer module.

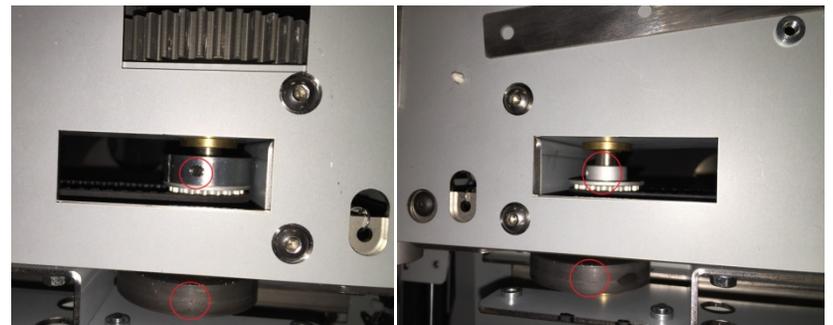
If the closer jaws are jammed-The closer cam drive for the closer jaws is difficult to rotate manually by hand. The easiest way to clear a jammed closer jaw mechanism is by removing (5) M5 screws of the Closer motor, removing the closer motor and manually turning the mechanism. Do not leave the cam in the dwell position, any other position is acceptable.

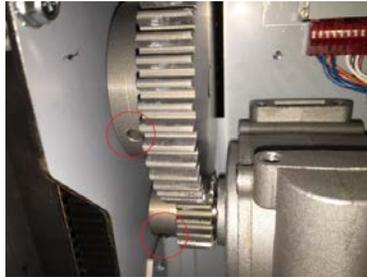
- Check if the set screw on the Closer motor gear and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 5;

No- Tighten the loose set screw(s) and resume operation





5. Check the Condition of the Closer cam drive chain.

The chain is in good condition.

Yes- Go to Step 6;

No- Replace the damaged chain(ARP 2.8, 2.9) and resume operation

6. Inspect the cam follower. If it appears to be damaged or missing, replace it.

Cam follower is in good condition

Yes- Go to Step 7;

No- Replace the damaged part.

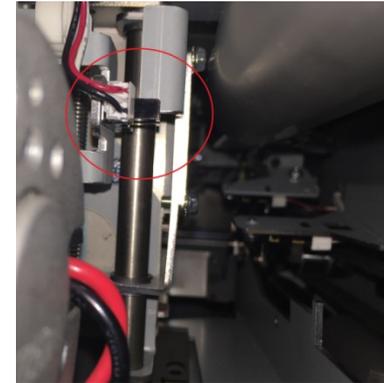


7. Ensure the sheet metal feature properly blocks/unblocks S47 Closer full open sensor

The sheet metal feature properly blocks/unblocks the sensor

Yes- Go to Step 8;

No- Position the disc correctly

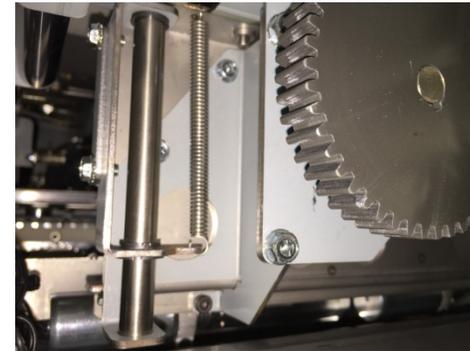


8. Inspect the closer jaw springs and ensure they are positioned correctly.

The closer jaw springs are in good condition and positioned correctly

Yes- Go to Step 9;

No- Replace closer jaw springs if necessary (REP 6.6)



9. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 9

10. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.11 J381- CLOSER STAGED TIMEOUT

J381 is triggered when it takes longer than specified time for the Closer to reach S49 Closer Staged position sensor

1. Do GP 6.4 to check S49 Closer staged position sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Closer linear drive belt (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.10) and resume operation

3. Check the tension of the Closer linear drive belt tension (ADJ 1.6)

The tension of the timing belts is good

Yes- Go to Step 4;

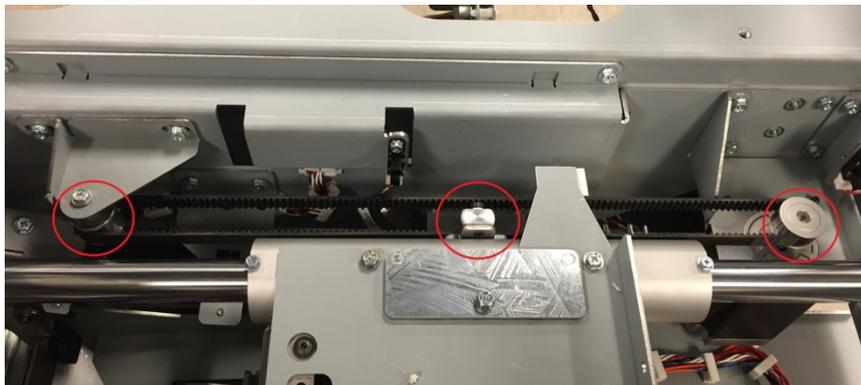
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Check if the set screw on the Closer motor pulley and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 5;

No- Tighten the loose set screw(s) and resume operation



5. Do GP 6.5 to check M21 Closer linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 7

6. Inspect the Closer drive mechanism on the Front side for any loose objects preventing smooth operation.

The drive system is free of obstructions

Yes- Go to Step 8;

No- Clear the obstruction/ fasten loose fasteners



7. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 9

8. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.12 J382- FULL CLOSE TIMEOUT

J382 is triggered when it takes longer than specified time for the encoder counts to reach count for closer jaws to be at closed position.

1. Ensure that there are no residual elements or foreign objects in the closer jaws.

Closer jaws are free of foreign materials

Yes- Go to Step 2

No- Remove the object(s) and resume normal operation

2. Do GP 6.4 to check S48 Closer encoder sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 3

3. Do GP 6.5 to check M20 Element Closer motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 4

4. Do REP 6.1 to remove the Closer module.

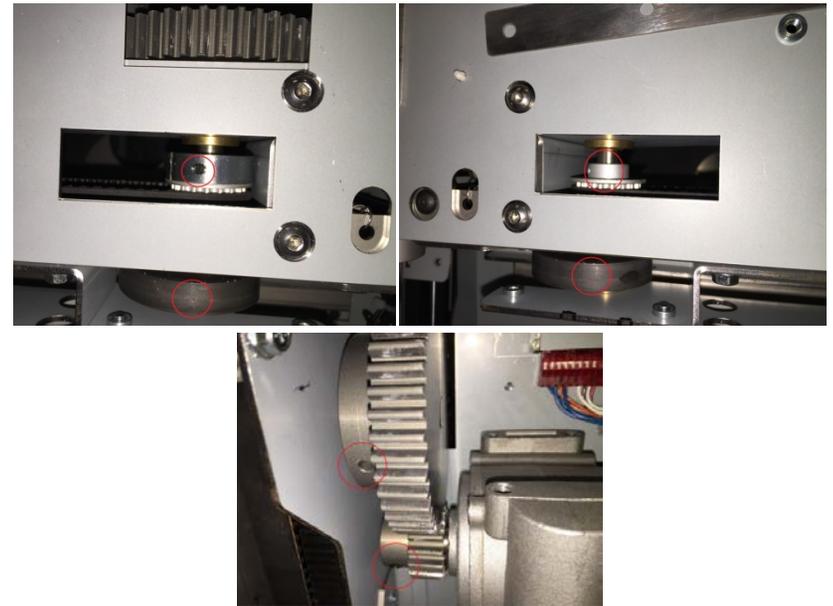
If the closer jaws are jammed-The closer cam drive for the closer jaws is difficult to rotate manually by hand. The easiest way to clear a jammed closer jaw mechanism is by removing (5) M5 screws of the Closer motor, removing the closer motor and manually turning the mechanism. Do not leave the cam in the dwell position, any other position is acceptable.

5. Check if the set screw on the Closer motor gear and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 6;

No- Tighten the loose set screw(s) and resume operation



6. Check the Condition of the Closer cam chain.

The chain is in good condition.

Yes- Go to Step 7;

No- Replace the chain and resume operation

7. Inspect the cam follower. If it appears to be damaged or missing, replace it.

Cam follower is in good condition

Yes- Go to Step 8;

No- Replace the damaged part.



8. Ensure the encoder disc is properly positioned in relation to S48 Closer encoder sensor

The encoder disc is positioned properly

Yes- Go to Step 9;

No- Position the disc correctly

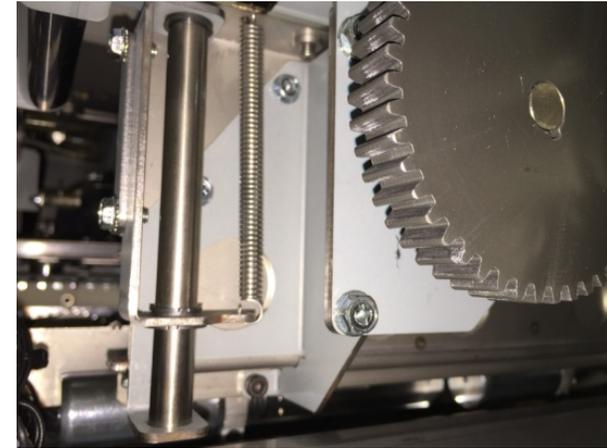


9. Inspect the closer jaw springs and ensure they are positioned correctly.

The closer jaw springs are in good condition and positioned correctly

Yes- Go to Step 10;

No- Replace closer jaw springs if necessary (REP 6.6)



10. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 11

11. Replace the Closer Module

This clears the fault

Yes- Return to normal operation;

No- Go to Step 12

12. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.13 J383- FULL OPEN TIMEOUT

J383 is triggered if it takes longer than specified time for a change of state at S47 Closer Full open sensor to indicate the closer jaws are fully open just before book eject.

1. Do GP 6.4 to check S47 Closer full open sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.5 to check M20 Element Closer motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. Do REP 6.1 to remove the Closer module.

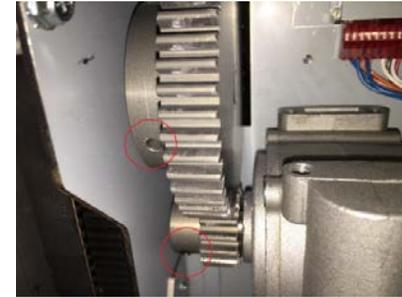
If the closer jaws are jammed-The closer cam drive for the closer jaws is difficult to rotate manually by hand. The easiest way to clear a jammed closer jaw mechanism is by removing (5) M5 screws of the Closer motor, removing the closer motor and manually turning the mechanism. Do not leave the cam in the dwell position, any other position is acceptable.

4. Check if the set screw on the Closer motor gear and the screws in the drive components are sufficiently tight.

The screws are tight

Yes- Go to Step 5;

No- Tighten the loose set screw(s) and resume operation



5. Check the Condition of the Closer cam chain.

The chain is in good condition.

Yes- Go to Step 6;

No- Replace the damaged chain and resume operation

6. Inspect the cam follower. If it appears to be damaged or missing, replace it.

Cam follower is in good condition

Yes- Go to Step 7;

No- Replace the Closer Module REP 6.1



7. Ensure the sheet metal feature properly blocks/unblocks S47 Closer full open sensor

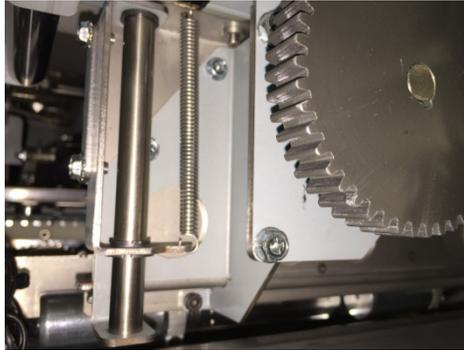
The sheet metal feature properly blocks/unblocks the sensor

Yes- Go to Step 8;

No- Position the disc correctly



8. Inspect the closer jaw springs and ensure they are positioned correctly.
The closer jaw springs are in good condition and positioned correctly
Yes- Go to Step 9;
No- Replace closer jaw springs if necessary (REP 6.6)



9. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.
This clears the fault
Yes- Return to normal operation;
No- Go to Step 10

10. Replace Closer Module
This clears the fault
Yes- Return to normal operation;
No- Go to Step 11
11. Do REP 11.3 "B" Main Control Board Replacement.
This clears the fault
Yes- Return to normal operation;
No- Escalate to second level

RAP 5.14 J384- HOLDER AT CLOSER STEPS TIMEOUT

J384 is triggered when it takes longer than specified time for the holder to get to S36 Holder at Closer sensor.

Follow the procedure in **RAP 5.16**

RAP 5.15 J385- HOLDER DETECT AT GATE TIMEOUT

J385 is triggered when it takes longer than specified time for the Holder to reach S39 Holder detect at Reverse Gate when the holder linear motor M15 moves in the reverse direction.

1. Do GP 6.4 to check S39 Holder at Reverse gate sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Holder linear drive belt- Front and Rear (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.11, 8.12) and resume operation

3. Check the tension of the Holder linear drive belt tension- Front and Rear (ADJ 1.6)

The tension of the timing belts is good

Yes- Go to Step 4;

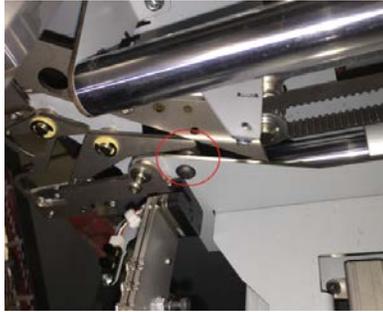
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Visually check if the rollers of the Holder are centered in the cam tracks.

The rollers are centered in the cam tracks

Yes- Go to Step 5;

No- Loosen the cam track assembly and bring the roller inside the cam track. Resume operation

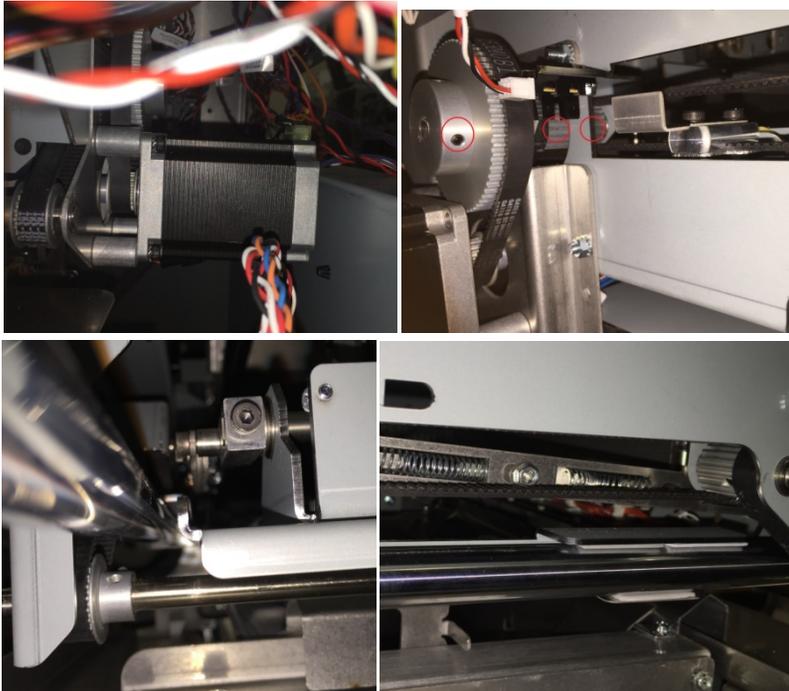


5. Check if the set screws on all the six pulleys associated with the Holder linear drive are tight

The set screws are tight

Yes- Go to Step 6;

No- Tighten the loose set screw(s) and resume operation

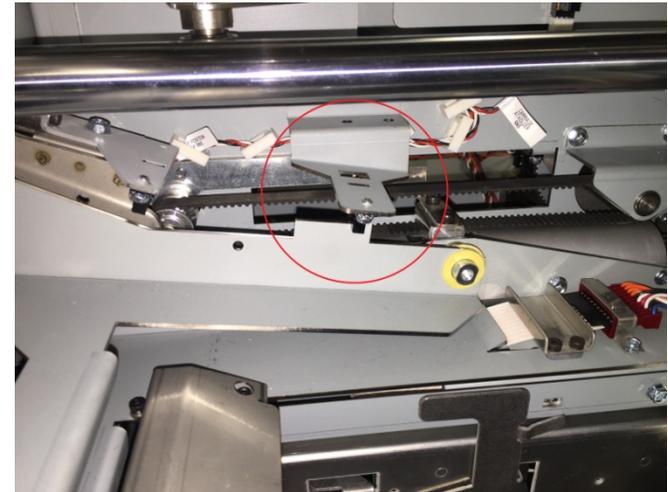


6. Manually move the Holder linear mechanism and watch if the sheet metal feature blocks/unblocks S39 Holder at Reverse Gates sensor.

The sensor is blocked/unblocked properly

Yes- Go to Step 7;

No- Escalate to second level



7. Do GP 6.5 to check M15 Holder linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 8

8. Inspect the springs for the Holder gates (PL 5.21).

Holder gates springs are present and not damaged

Yes- Go to Step 9;

No- Replace the missing/damages spring

9. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 10

10. Do REP 11.1 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.16 J386- HOLDER FULL RIGHT TIMEOUT

J386 is triggered when it takes longer than specified time for the Holder to reach S36 Holder position at closer sensor.

1. Do GP 6.5 to check S36 Holder at Closer position sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the Condition of the Holder linear drive belt- Front and Rear (PL 5.21)

The timing belt is in good condition. There are no missing teeth and the belt is not frayed

Yes- Go to Step 3;

No- Replace the damaged timing belt (REP 8.11, 8.12) and resume operation

3. Check the tension of the Holder linear drive belt tension- Front and Rear (ADJ 1.6)

The tension of the timing belts is good

Yes- Go to Step 4

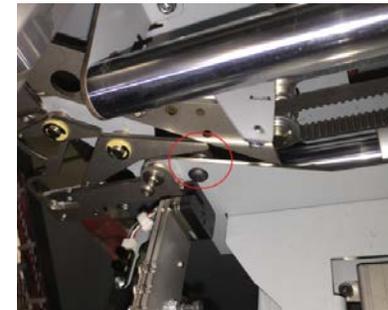
No- Do to ADJ 1.6 to set the belt tension and resume operation

4. Visually check if the rollers of the Holder are centered in the cam tracks.

The rollers are centered in the cam tracks

Yes- Go to Step 5

No- Loosen the cam track assembly and bring the roller inside the cam track. Resume operation

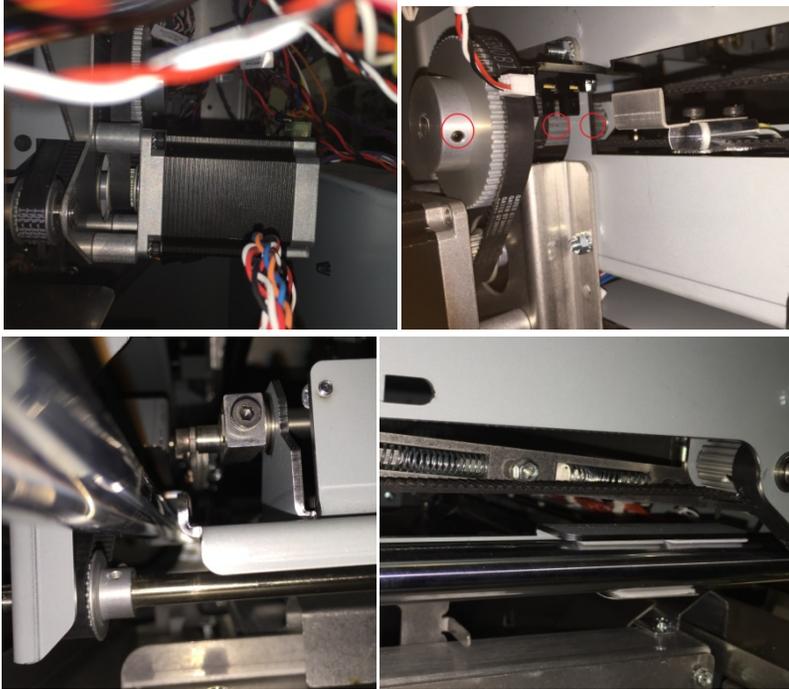


5. Check if the set screws on all the six pulleys associated with the Holder linear drive are tight

The set screws are tight

Yes- Go to Step 6

No- Tighten the loose set screw(s) and resume operation

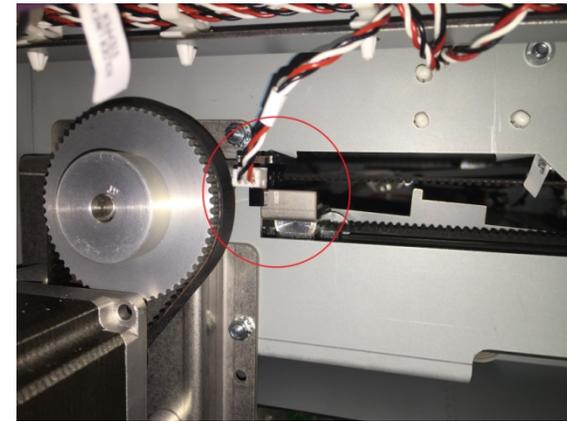


6. Manually move the Holder linear mechanism and watch if S36 Holder at Closer position sensor is properly blocked/unblocked.

The sensor is blocked/unblocked properly

Yes- Go to Step 7;

No- Escalate to second level



7. Do GP 6.5 to check M15 Holder linear drive motor

This clears the fault

Yes- Return to normal operation;

No- Go to step 8

8. Inspect the springs for the Holder gates (PL 5.21).

Holder gates springs are present and not damaged

Yes- Go to Step 9;

No- Replace the missing/damaged spring

9. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 10

10. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.17 J387- HOLDER HOME TIMEOUT

J387 is triggered when it takes longer than specified time for the Holder to reach S40 Holder near Element Feeder.

Follow the procedure in **RAP 5.4**

RAP 5.18 J388- HOLDER NOT HOME TIMEOUT

J388 is triggered when it takes longer than specified time for the Holder to reach S40 Holder near Element Feeder.

Follow the procedure in **RAP 5.4**

RAP 5.19 J389- HOLDER PAST HOME TIMEOUT

J387 is triggered when it takes longer than specified time for the Holder to reach S40 Holder near Element Feeder.

Follow the procedure in **RAP 5.4**

RAP 5.20 J390- HOLDER ROTATE HORIZONTAL TIMEOUT

J390 is triggered if it takes longer than specified time for S35 Holder Rotate horizontal sensor to get covered, to indicate Holder rotate is in horizontal position.

1. Do GP 6.4 to check S35 Holder Rotate Horizontal sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.5 to check M14 Holder Rotate motor

This clears the fault

Yes- Return to normal operation;

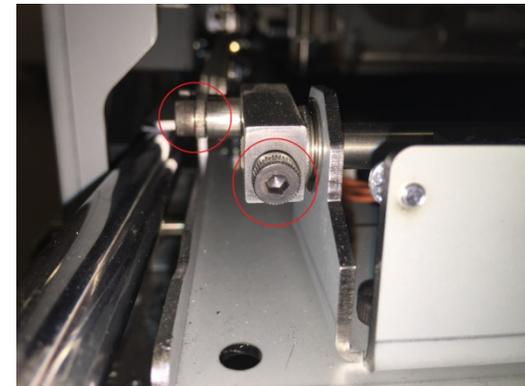
No- Go to step 3

3. Check the presence and tightness of the two socket head screws on the holder rotate crank

Screws are present and sufficiently tight

Yes- Go to Step 4;

No- Tighten the screw and resume normal operation

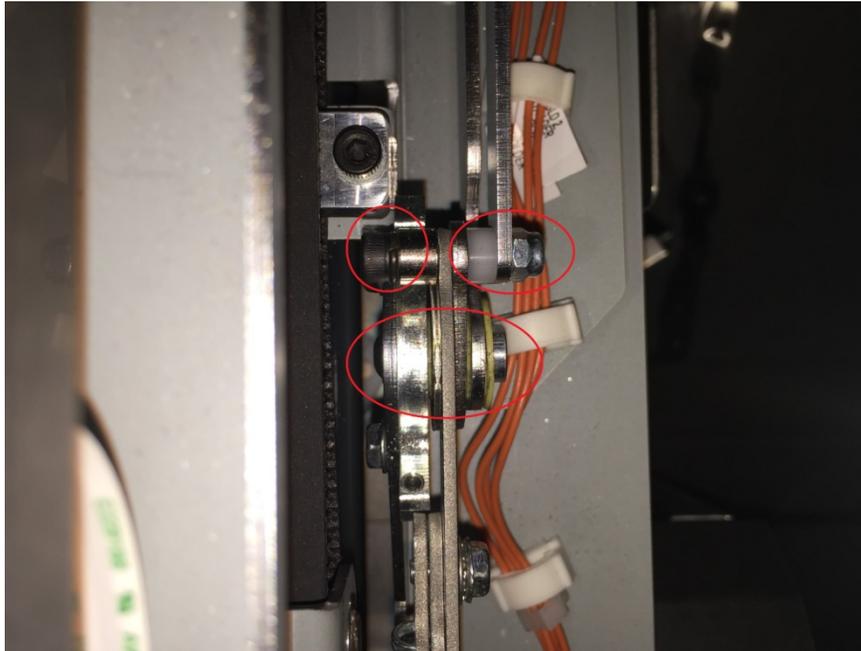


4. Check for the presence and tightness of the fasteners shown in the below image at the Holder rotate pivot

The fasteners are sufficiently tight

Yes- Go to Step 5;

No- Tighten the fasteners and resume normal operation

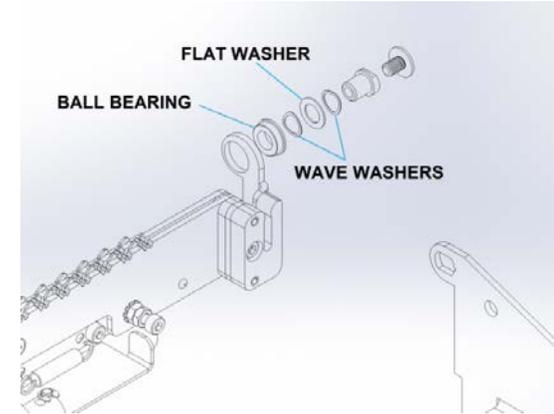
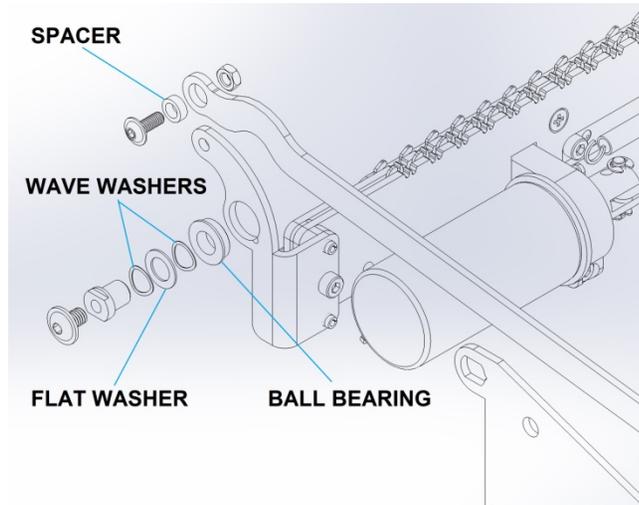


5. Ensure the Front and Rear hinge brackets are positioned properly. See below for the hardware

Brackets are secured correctly

Yes- Go to Step 6;

No- Replace the missing or damaged components.

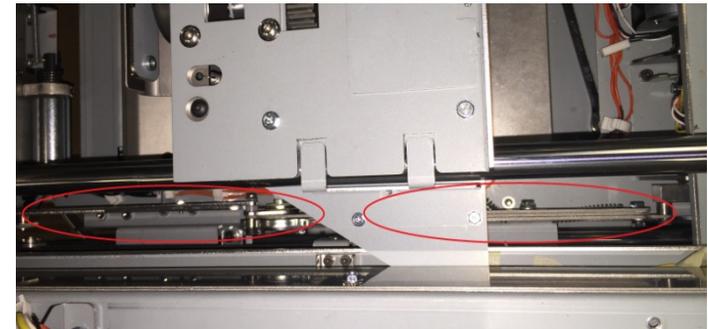


6. Ensure the linkages are not bent/damaged.

The linkages are not damaged

Yes- Go to Step 7

No- Replace the damaged linkage (REP 8.18)



7. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

8. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

RAP 5.21 J391- HOLDER ROTATE VERTICAL TIMEOUT

J391 is triggered if it takes longer than specified time for S34 Holder Rotate vertical sensor to get covered, to indicate Holder rotate is in vertical position.

1. Do GP 6.4 to check S34 Holder Rotate Vertical sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Do GP 6.5 to check M14 Holder Rotate motor

This clears the fault

Yes- Return to normal operation;

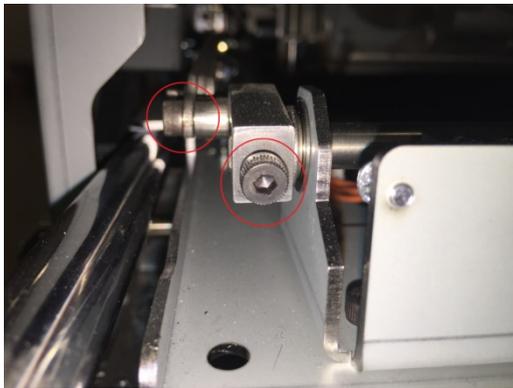
No- Go to step 3

3. Check the presence and tightness of the two socket head screws on the holder rotate crack

Screws are present and sufficiently tight

Yes- Go to Step 4;

No- Tighten the screw and resume normal operation

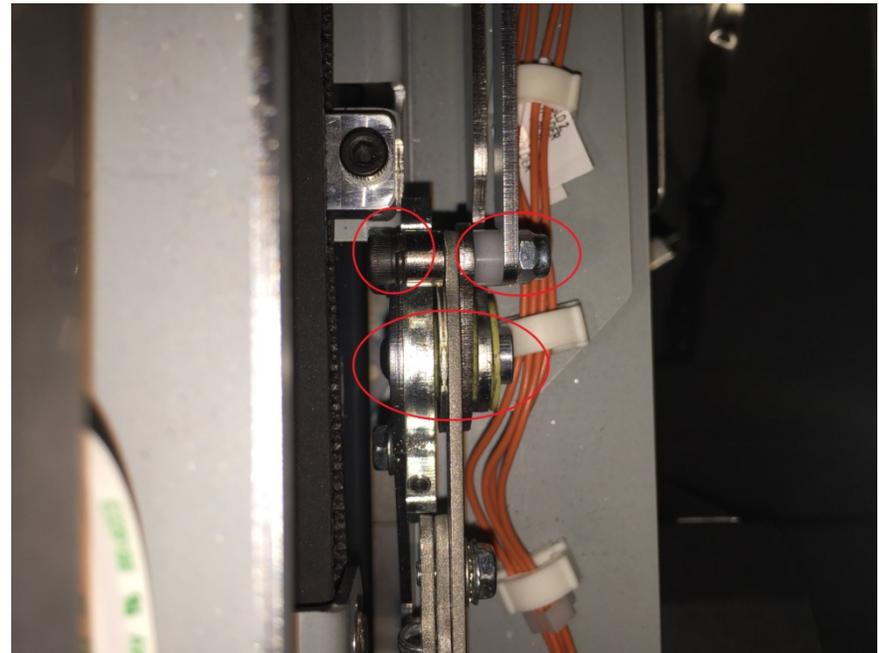


4. Check for the presence and tightness of the fasteners shown in the below image at the Holder rotate pivot

The fasteners are sufficiently tight

Yes- Go to Step 5;

No- Tighten the fasteners and resume normal operation

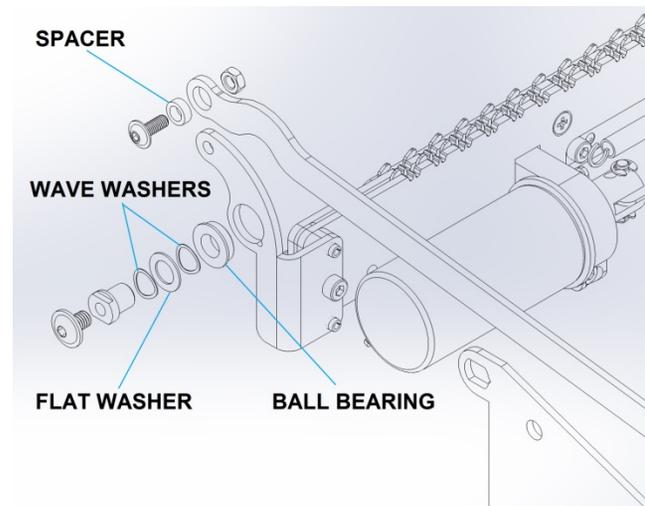


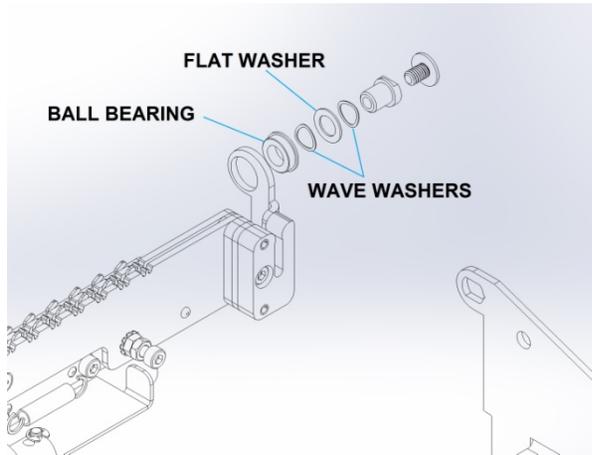
5. Ensure the Front and Rear hinge brackets are positioned properly. See below for the hardware

All the hardware is present

Yes- Go to Step 6;

No- Replace the missing components





RAP 5.22 J392- HOLDER STACK POSITION STEPS TIMEOUT

J392 is triggered when it takes longer than specified time for the holder to go to stack position as it moves past S37 Holder Stack position sensor

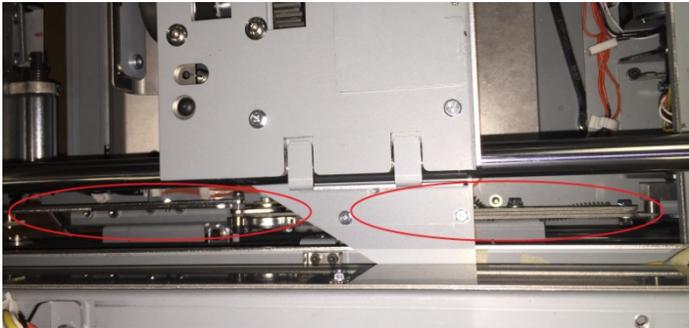
Follow the Procedure in RAP 5.1

6. Ensure the linkages are not bent/damaged.

The linkages are not damaged

Yes- Go to Step 7

No- Replace the damaged components (REP 8.18)



7. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

8. Do REP 11.3 "B" Main Control Board Replacement.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 5.23 J393- HOLDER WAIT VERTICAL TIMEOUT

J393 is triggered when it takes longer than specified time for the holder rotate to reach the vertical position.

Follow the procedure in **RAP 5.21**

RAP 5.24 J394- PARTIAL CLOSE TIMEOUT

J394 is triggered when it takes longer than specified time for the Closer jaws to reach the Partial Close position. This is determined by the number of encoder steps through S48 Closer Encoder sensor.

Follow the Procedure in **RAP 5.9**

RAP 5.25 J395- S28 MOTOR STEPS TIMEOUT

J395 is triggered when it takes longer than specified time for the Holder to go to S38 Holder Element position sensor.

Follow the Procedure in **RAP 5.2**

RAP 5.26 J396- CLOSER RE-HOME ENCODER TIMEOUT

J396 occurs when the Closer Encoder Home is not reached after a second attempt. J396 occurs when both attempts to reach home are not successful. The procedure for troubleshooting this jam is identical to the procedure for Closer Home Timeout.

Follow the procedure for J379.

6 BOOK DRAWER FAULT CODES

RAP 6.1 J442- DRAWER FULL UP TIMEOUT

J442 is triggered if it takes longer than specified time for the Book drawer to reach its Full Up position (blocking S42 Book drawer Full up position)

1. Do GP 6.4 to check S42 Book Drawer Full Up sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

2. Check the condition of the Book Drawer Lift Belt. Ensure that the belt is not frayed or missing any teeth. Ensure that all screws are tight and no parts are loose in the belt mechanism

Belt and Pulleys are in good condition

Yes- Go to Step 3

No- Replace the Book Drawer Belt or Pulley.

3. Inspect the Book Tray Drive Motor Belt (PL 5.24). Ensure that the belt is not frayed or missing any teeth. Check the set screws on the Drive Belt Pulleys to ensure all set screws are tight.

Belt and Pulleys are in good condition

Yes- Go to Step 4

No- Replace the Book Tray Drive Motor Belt

4. Do GP 6.5 to check M19 Book drawer elevation motor

This clears the fault

Yes- Resume normal operation;

No- Go to Step 5

5. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

6. Do REP 11.1 Main Control Board A Replacement

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 6.2 J443- DRAWER FULL DOWN TIMEOUT

J443 is triggered if it takes longer than the specified time for S43 a & b to become unblocked when the book drawer is going down.

7. Do GP 6.4 to check S43 Book Drawer Full Down sensor

This clears the fault

Yes- Return to normal operation;

No- Go to Step 2

8. Check the condition of the Book Drawer Lift Belt. Ensure that the belt is not frayed or missing any teeth. Ensure that all screws are tight and no parts are loose in the belt mechanism

Belt and Pulleys are in good condition

Yes- Go to Step 3

No- Replace the Book Drawer Belt or Pulley.

9. Inspect the Book Tray Drive Motor Belt (PL 5.24). Ensure that the belt is not frayed or missing any teeth. Check the set screws on the Drive Belt Pulleys to ensure all set screws are tight.

Belt and Pulleys are in good condition

Yes- Go to Step 4

No- Replace the Book Tray Drive Motor Belt

10. Do GP 6.5 to check M19 Book drawer elevation motor

This clears the fault

Yes- Resume normal operation;

No- Go to Step 5

11. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation;

No- Go to Step 8

12. Do REP 11.1 Main Control Board A Replacement

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level

RAP 6.3 J445- BOOK DRAWER FULL

The maximum number of books for each element size is predetermined in the firmware. As the system processes every book, the counter keeps increasing and when it reaches the max count, the LCD screen displays J445 BOOK DRAWER FULL.

When the book drawer full message is displayed, every book in the book drawer must be removed to clear the message. For example, if there are 10 books in the drawer, all 10 books will have to be removed to clear the message.

Every time the book drawer is opened and closed, the system checks for the presence of residual books. If there are no books present (which could also include the case of the operator emptying the book drawer prior to the Full message being displayed), the count is reset and the machine will process books to the maximum capacity.

Book drawer Full message is also displayed if S42 Book Drawer Full Up sensor AND S43 Book Drawer Full Down sensor are covered at the same time.

If the Book drawer message is displayed erroneously, follow the below procedure for troubleshooting:

1. Do GP 6.4 to check S45 Book Drawer Empty sensor

This clears the fault.

Yes- Return to normal operation; **No-** Go to Step 2

2. Do 6.3.7 FIRMWARE UPGRADE Procedure to Re-flash the firmware for eWire.

This clears the fault

Yes- Return to normal operation; **No-** Go to Step 3

3. Do REP 11.1 Main Control Board A Replacement.

This clears the fault

Yes- Return to normal operation **No-** Escalate to second level

RAP 6.4 J451- S42 & S43 BLOCKED AT SAME TIME

J451 is triggered if S42 Book Drawer Full Up sensor AND S43 Book Drawer Full Down sensor are covered at the same time.

Follow the procedure in **RAP 5.1 and 5.2**

RAP 6.5 J452- BOOK DRAWER OPENED DURING JOB

J452 will occur when the Book Tray is opened during operation.

1. Firmly close the Book Tray and restart the Job.

This clears the fault

Yes- Return to normal operation;

No- Go to step 2

2. If the Close Tray message occurs erroneously even when the tray is shut, refer to ADJ 1.7 to adjust the Book Tray interlock flag.

This clears the fault

Yes- Return to normal operation;

No- Go to step 3

3. If Close Tray occurs continuously, refer to RAP 1.03, Section 3.

This clears the fault

Yes- Return to normal operation;

No- Escalate to second level.

7 ELECTRICAL FAULT CODES

RAP 7.1 E501 – LOW VOLTAGE FOR 3.3V

E501 occurs when the 3.3V supply generated in the AC board is below 3.0V

RAP 7.2 E502 – LOW VOLTAGE FOR 5V

E502 occurs when the 5V supply generated in the AC board is below 4.5V

RAP 7.3 E503 – LOW VOLTAGE FOR 24V

E503 occurs when the 24V supply generated from the power supply is below 23V

RAP 7.4 E504 – INTERLOCK OPEN

This is triggered when the board has 24V power when the interlock is closed. If this problem persists despite powering on and off the eWire, perform the following operation.

1. Perform ADJ 1.7 Interlock Flag Adjustment on all three covers to ensure that they properly engage the interlock when the covers are closed

The error does not reoccur

Yes- Return to normal operation;

No- Go to step 2.

2. Open all 3 covers and perform GP 6.3.19 and Check if both 24 and 24i are reading at least 24V.

With all covers open both 24 and 24i display at least 24 volts

Yes- Perform REP 11.1 to replace AC Board

No- Perform REP 9.1 and 9.2 to replace all 3 interlocks.

Notes:

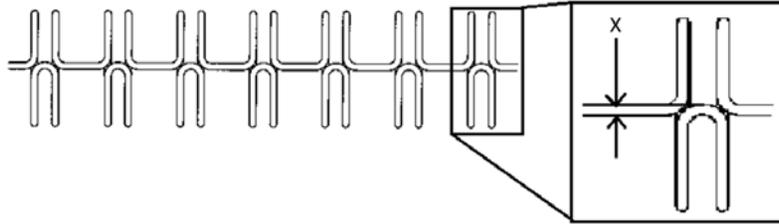
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3.1 Element Closing

Use the following procedure to correct books that are over-closed or under-closed by the eWire. To determine if an element is over-closed or under-closed, refer to the diagram below.



Dimension X Max.	2.00mm
Dimension x Min.	0.25mm

3.1.1 Element Unevenly Closed

The element is considered unevenly closed when The “X” dimension on one side of the binding varies from the “X” dimension on the other side of the binding. Often one side will be properly closed while the other is either insufficiently closed or overly closed.

1. Do ADJ 1.11 Closer Chain Tension Adjustment

3.1.2 Element Insufficiently Closed

The element is considered under-closed if it is possible to pull a sheet out of the twin loop binding by tugging on the end of the sheet. An element is also considered under-closed if dimension “X” above is less than 0.25 mm. The primary cause of under-closed books is insufficient travel of the Closer jaws. To correct under-closure, follow the steps below.

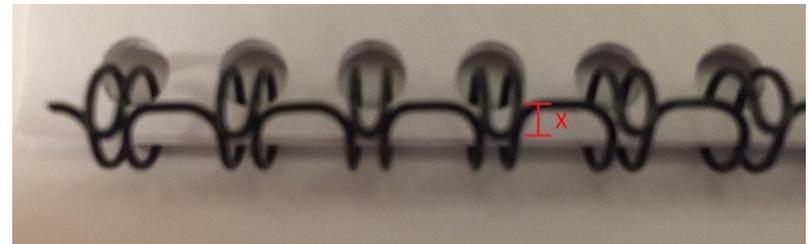
1. DO GP 6.2.2 to access the CLOSING menu. Note the current value.
2. Increase the value by one and exit the Settings Menu.
3. Run another set of books and re-measure the wire loop overlap. If the new book meets the spec, return to normal operation.
4. If the new book is still under-closed, repeat Steps 2 and 3.

3.1.3 Element Over Closed

The element is considered over-closed if Dimension X in the diagram above exceeds 2 mm. An over-closed element may also appear to be oval shaped, instead of round. The primary cause of an over-closed book is if the Closer jaws travel too far during book closing. To correct over-closure, follow the steps below.

1. DO GP 6.2.2 to access the CLOSING menu. Note the current value.
2. Decrease the value by one and exit the Settings Menu.
3. Run another set of books and re-measure the wire loop overlap. Visually inspect the loops to ensure that they are round. If the new book meets the spec, return to normal operation.
4. If the new book is still over-closed, repeat Steps 2 and 3.

Example of Over-Closed Book:



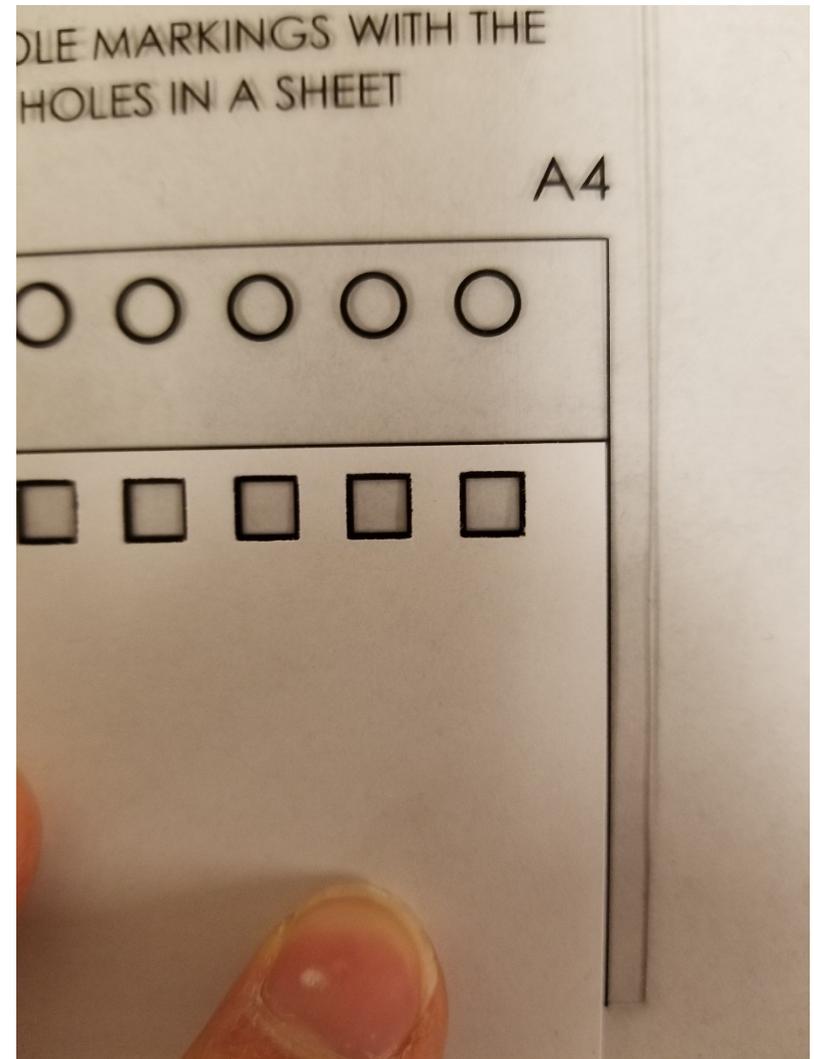
Example of Oval-Shaped Loops due to Over Closure:



3.2 Punched Sheet Quality

All sheets must be punched by the GBC AdvancedPunch Pro prior to being bound into books by the eWire. If punch alignment, skew, or backgauge does not meet the specification in Section 3.2.1, it may be necessary to make adjustments to the AdvancedPunch Pro in order to ensure proper function of eWire. Use the following procedure to check the positions of the punched holes.

1. Run a sheet through the punch without binding.
2. Place the sheet on the Punched Hole Position Check Tool found on the inside of the Feeder Door or in the following pages.
3. Position the corner of the sheet on the Punched Hole Position Check Tool as shown depending on what size paper you are printing with (A4 align with right corner, LTR align with left corner). The following image shows a square punched sheet. If you are using a circular punch use the appropriate markings above. Position the edge of a sheet so that the horizontal and vertical black lines are completely visible, and check if the black circles or squares are completely visible through the punched holes.

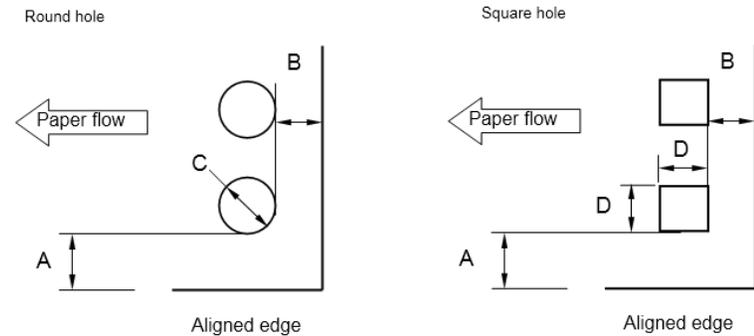


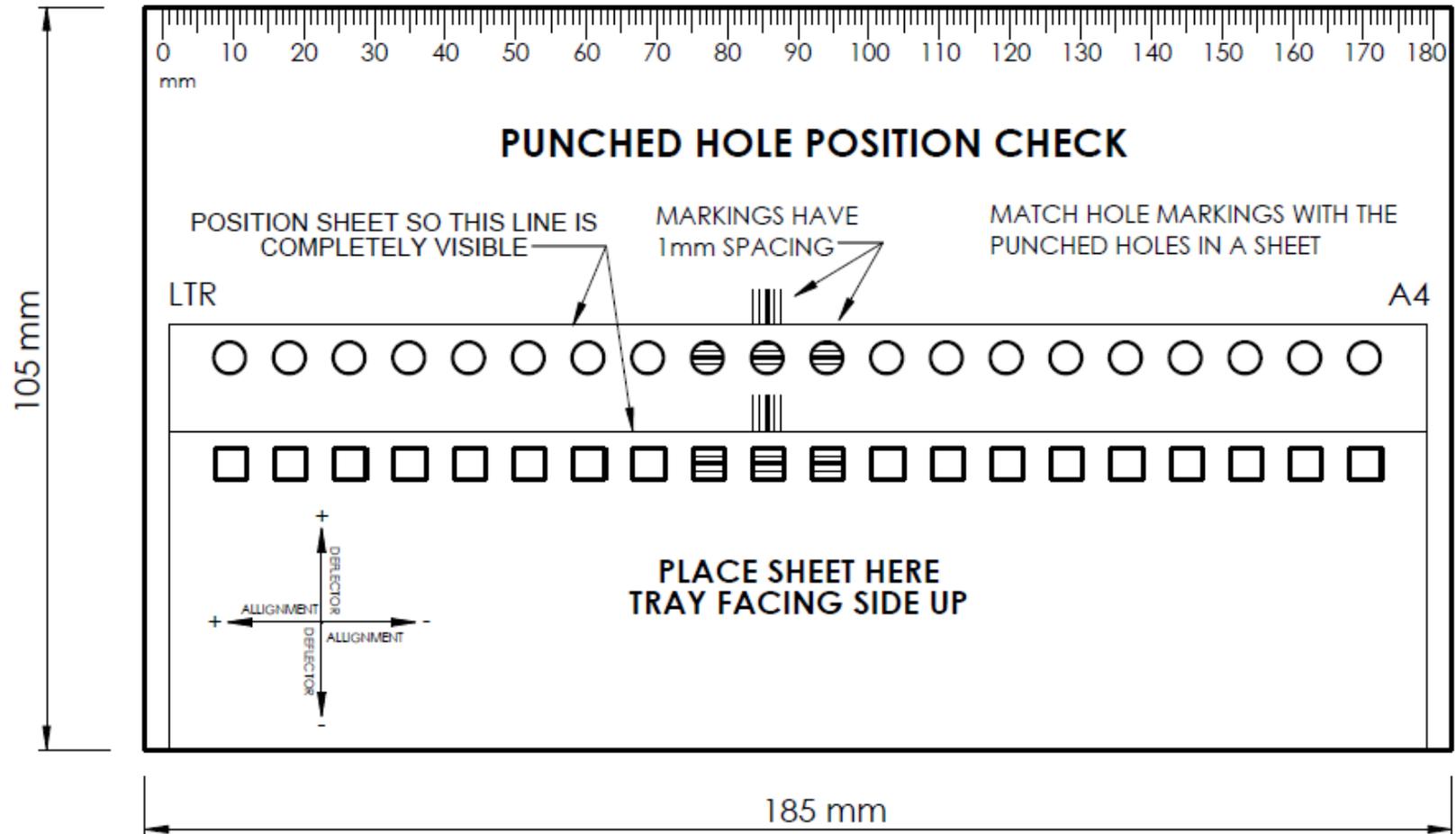
4. It should be obvious if the punch backgauge, alignment, or skew are not set correctly or if the holes have fuzzy edges or chads. Refer to the AdvancedPunch Pro Service Manual to correct these issues before proceeding.

5. If sheets are being fed from a separate device downstream of the printer (i.e. an inserter), verify correct punched hole positions on those sheets as well. Refer to the AdvancedPunch Pro Service Manual to correct any issues before proceeding.
6. If using tabs or clear covers, verify correct punched hole positions on those sheets as well. Refer to the AdvancedPunch Pro Service Manual to correct any issues before proceeding.
7. If the backgauge, alignment, and skew are set correctly on the AdvancedPunch Pro for all media being used return to the troubleshooting procedure that guided you here. Note that if a different die is used or if the docking position of the AdvancedPunch Pro is changed these steps may need to be repeated.

3.2.1 Punched Hole Specifications

- A) A4 Alignment = 6.3mm
LTR Alignment = 6.0mm
- B) Back gage = 1.85mm
- C) Hole Diameter = 5mm
- D) Hole length and width = 5mm





Print at 100% Scale and cut along the thick black line. Measure outer dimensions as 185 x 105mm to verify proper printing.

3.3 Sheets not Hooking

3.3.1 Introduction

The core function of eWire is the hooking of punched sheets onto a wire loop, and then closing the wire loop to create a bound book. This section will lay out the troubleshooting steps for when sheets are not accurately being hooked on the twin loop wire tips.

A problem with hooking will result in poor book quality. In some cases, it will also create a Jam code. J244 (Sheets left in stack area) or J202/J203 (Stay Jam Area 2) are the most likely Jams to be caused as a result of poor hooking.

Note that there are multiple Jam codes that could be triggered by an unsuccessful hooking operation. If a Jam code is repeatedly seen that does not have an obvious root cause, following the steps in this section may help lead to a resolution.

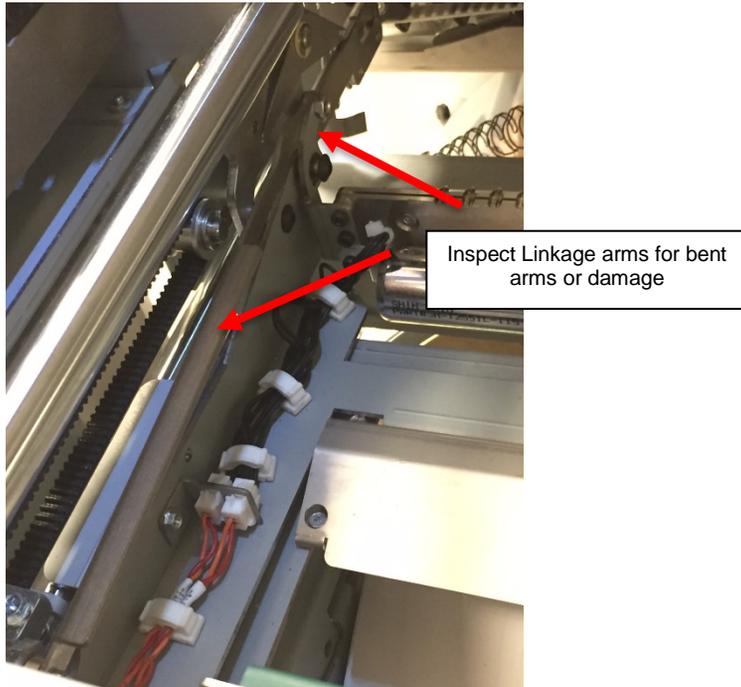
3.3.2 Troubleshooting Steps

Follow the procedure below to correct a 'not hooking' issue on eWire. If a change to eWire is made as a result of one of the troubleshooting steps below, run additional books to determine if the change has resolved the problem.

1. Verify that the eWire is properly docked to the upstream device and that there is no misalignment between the devices. Confirm that the sheets being fed into the eWire are aligned with the sheet location marks on eWire. Refer to Section 8 Installation for more detail.
2. Check the printed sheets for excessive curl. Refer to Section 3.5.2. If the curl is too large, eWire will be unable to properly stack and hook the sheets. If necessary, adjust printer settings to reduce curl.
3. Do the steps in Section 3.2 to verify that the punched holes' positions are accurate and precise and that the holes are punched cleanly.
4. Poor hooking can occur when the sheet quantity is too high or paper stock is too heavy or too light. Refer to Section 3.5 for the maximum allowable number of sheets in each element size and allowable media.
5. Do GP 6.4 to check S3, S18, and S19

6. Do GP 6.5 to check M5 to M7
7. Do GP 6.6 to check L5 to L8
8. Install a new, unopened spool of the same size element. If this solves the issue, visually inspect the wire on the spool that was removed for damage or defects; refer to Section 3.3.3.
9. Do ADJ 1.8 to verify the Deflector timing and eWire Alignment and Skew settings.

For steps 10 to 13, if a change is made, ADJ 1.8 will need to be repeated to correct the Deflector timing and eWire Alignment and Skew settings.
10. Do the steps in ADJ 1.3 to verify the mating of the Holder module to Element Feeder. The Holder and Element Feeder should mate together smoothly, with no gap between the faces.
11. Visually inspect the Holder Rotate Linkage. Ensure that no parts in the linkage are damaged, loose, or bent. Refer to ADJ 1.9 for info on checking the Holder Rotate function.



12. Do ADJ 1.10 to verify the Element wire tip position is correct.
13. Return to the RAP that directed you here.

3.3.3 Common Spool Damage

The wire on the spool may become damaged when not properly handled. This may cause jams in eWire. In this section there are examples of common issues you may see on a spool. Any damaged wire must be removed using the wire cutters provide. They are located on the inside of the element feeder door. When cutting the wire, cut the wire in the center of the larger loop as shown below. Excess paper can then be removed, leaving 12 inches (30 cm) past the new end of the wire. The spool can then be reinstalled.

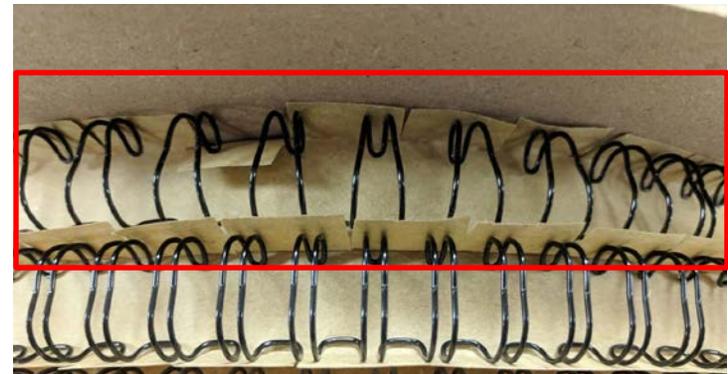
Cutting Wire

When part of the spool of wire is damaged, it must be removed using the wire cutters provide. They are located on the inside of the element feeder door. When cutting the wire, cut the wire in the center of the larger loop as shown below. Excess paper can then be removed, leaving 12 inches (30 cm) past the new end of the wire.



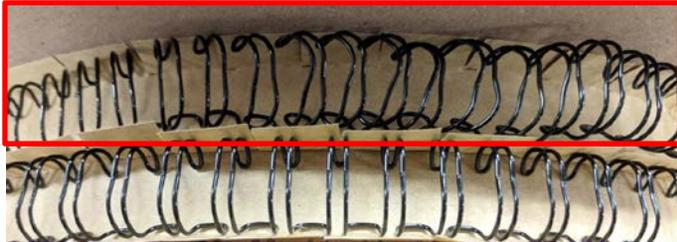
Stretched Wire

Wire can become stretched when installing or removing a spool from the machine, it may also become stretched due to wire jams. If any length of wire is stretched like shown below, use the wire cutters provided to cut that section off. Wire is considered stretched if the loops are no longer parallel to each other. The wire outlined in red is an example of stretched wire.



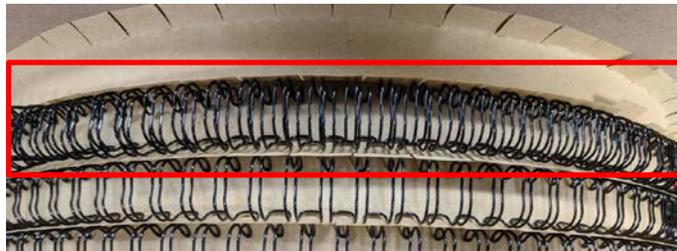
Crushed Wire

Wire can become crushed when the spool is miss handled. Below is an example of a crushed length of wire. Crushed wire must be cut off and discarded.



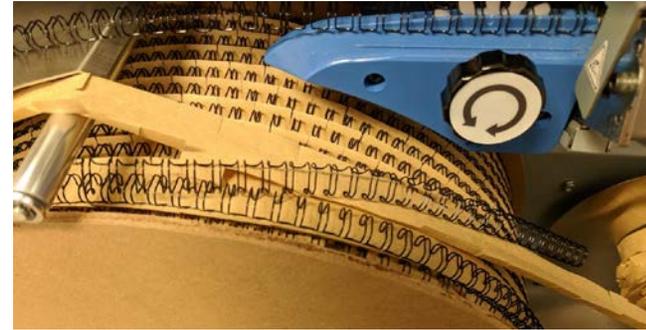
Tangled Wire

If the spool is stored without the wire properly secured with the magnet strips, the wire may become entangled. This can be fixed by carefully separating the entangled rows. Once untangled, check that no other damage is present before using this spool. The most common damage occurring from this is a stretched wire (see above).



Loose Element

The eWire™ will prompt the user to clear extra elements from 3b after a stoppage occurs. If this is not done the element may fall into the element feeder area and cause a wire jam to occur. The wire could fall on top of the spool as shown below.



The wire may fall to the bottom of the element drawer.

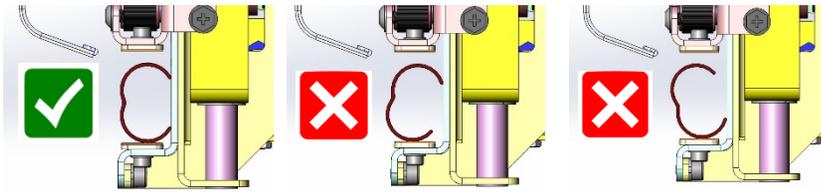


If this occurs, carefully remove the loose element/s and check the spool for damage. The most common damage occurring from this is stretched wire (see above).

3.4 Element Roundness

3.4.1 Theory of Operation

For good roundness to be achieved, the tips of the element wire must be in contact with the rear face of the Closer during closing operation. If the wire tips are skewed or offset from the wall prior to closing, poor roundness can occur.



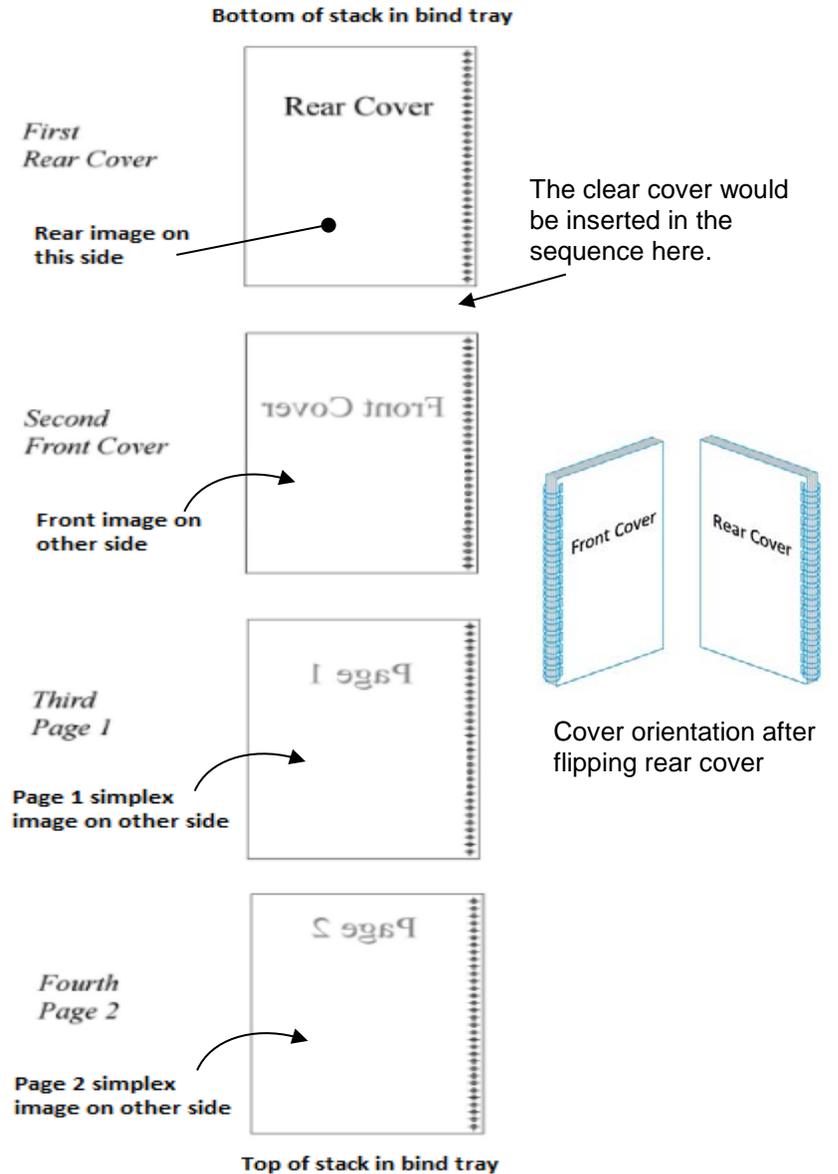
3.4.2 Troubleshooting Steps

1. Roundness problems can be caused by an over-closed element. If it seems that the Element may be over-closed, refer to the steps in 3.1 correct it.
2. Confirm that you are not sending too many sheets. Try sending a book with the number of sheets indicated in Section 3.3.2, Step 2. See if the problem still occurs.
3. Check the printed sheets for excessive curl. If the curl is too large, eWire will be unable to properly process the sheets. If necessary, adjust printer settings to reduce curl.
4. Roundness problems can also occur if all sheets on the book are not hooked properly. If there are both hooking and roundness issues, refer to the steps in 3.3 to correct the hooking issues before proceeding to the next steps.
5. If the sandpaper on the Closer jaws appears to be worn, replace the sandpaper plates.
6. While making a book, watch the machine carefully, and open the top cover after the Holder has transferred the element to the Closer, but before the close cycle is completed. By doing so, you should be able to look from the front and back to identify if the wire tips are not touching the back wall of the Closer.

7. If the element tips are not touching the back wall of the Closer, it is possible to increase the distance the Closer travels to pick up the element from the holder. Do GP 6.1.6 to adjust the Closer to Holder value and increment by 10.
8. If incrementing the Closer to Holder value by 10 made a small improvement but it is still not round, try incrementing by an additional 10. If incrementing the value made the problem worse, try a -10 adjustment from the original value.
9. Repeat Steps 6-8 to identify the best possible value for Closer to Holder value.
10. If the element appears to be angled prior to close (See pictures in 3.4.1), it may be necessary to adjust the Holder horizontal position. Refer to ADJ 1.9 for instructions on how to adjust the Holder.
11. Return to the RAP that directed you here.

3.5 Book Composition

Cover-sheet order		Rear Cover (Clear cover) Front Cover Sheets 1-N
Paper weight	Plain	75gsm – 300gsm (20lb bond – 100lb cover)
	Coated	115gsm – 300gsm (32lb bond – 110lb cover)
	Tabs	176gsm – 216gsm
Sheet size	Clear Cover	7 mil anti-static material
	US sizes	LTR 8.5 x 11 in
	ISO sizes	A4 297 x 210 mm
Tabbed stock weight	US sizes	LTR - 3,5,8,10 tabs
	ISO sizes	A4 - 5,10 tabs
Tab width		Maximum 13mm
Tabbed stock orientation		Tabs must be leading on long edge
Sheet size tolerance		±0.75mm (0.03")



3.5.1 Book Size

Element Size	Sheet Capacity*	Max Document Thickness (mm)
A	15-30	3
B	31-50	5
C	51-60	6
D	61-70	7
E	71-80	8

*Sheet capacity based on 20 lb. (75/80gsm) paper, subtract 10 sheets to accommodate front and rear covers of max 300gsm

3.5.2 Curl

When laid on a flat surface, no edge of the paper should be higher than 3/8in (10mm) dimension y below.



4. Repairs/Adjustments

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REPLACEMENTS

1. External Covers

REP 1.1 Top Cover Replacement

PARTS LIST ON PL 5.28

Use this procedure to remove and install the Top Cover Assembly.

Warning: Top Cover Assembly is very heavy. Use two people to remove and use caution when removing the Top Cover Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to entire eWire.
2. Disconnect the Power Cord from eWire.
3. Raise the Upper Transport by releasing the latch.
4. Remove the Socket Head Screws (2) that secure the front half of the Top Cover. There is a screw on each side of the Frame.



5. Remove the Socket Head Screws (2) that secure the back half of the Top Cover. There is a screw on each arm.



6. Slowly lower the Upper Transport down with cover still resting in place.
7. Carefully lift the entire top cover up and off the machine.

Installation Procedure

Use this procedure to install the top cover assembly

1. Switch power OFF to eWire.
2. Disconnect the Power Cord from eWire.
3. Lower the Upper Transport until the latch engages.
4. Lower the Top Cover Assembly onto the Upper Transport.
5. Lift up the Upper Transport by releasing the latch, while holding the Top Cover in place on the Transport Frame.
6. Line up the screw holes in the frame with the threaded holes in the Top Cover mounting brackets.
7. Install and tighten the Socket Head Screws (4) through the holes in the frame.
8. Connect the Power Cord.
9. Switch power ON the eWire

REP 1.2 Element Feeder Door Replacement

PARTS LIST ON PL 5.28

Use this procedure to remove and install the Element Feeder Door Assembly

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do [REP 1.8 Front Cover Replacement](#) to remove the Front Cover.
4. Remove the M4 Screws (2) from the Upper Hinge Bracket while holding the door with your free hand to prevent movement. Remove the Upper Hinge Bracket while still supporting the weight of the door.



5. Lift the Door up off the pin on the lower hinge bracket.
6. Remove the Element Feeder Door.

Installation Procedure

1. Place the Element Feeder Door in position so the pin on the lower hinge bracket fits into the hole in the bottom of the door.
2. Place the upper mounting bracket onto the pin at the top of the door and use M4 Screws (2) to attach the upper mounting bracket to the machine frame. Align the mounting bracket with the marks made before disassembly.
3. Do [ADJ 1.7](#) to adjust the Interlock Flag if necessary.
4. Plug in the Power Cord.
5. Switch power ON to the eWire

REP 1.3 Door Bottom Hinge Bracket Replacement

Use this procedure to remove and install the Door Bottom Hinge Bracket.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.2 [Element Feeder Door Replacement](#) to remove the Element Feeder Door.
4. Do REP 1.6 [Side Cover Replacement](#) to remove the Side Cover.
5. Use a nut driver to remove the Screws (2) securing the Door Bottom Hinge Bracket to the machine.

Installation Procedure

1. Use a nut driver to tighten the Screws (2) mounting the new Door Bottom Hinge Bracket to the machine. Use the markings from the old Hinge Bracket as a guide to find the correct location.
2. Do REP 1.2 [Element Feeder Door Replacement](#) to install the Element Feeder Door.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 1.4 Door Top Hinge Bracket Replacement

Use this procedure to remove and install the Door Top Hinge Bracket.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.2 [Element Feeder Door Replacement](#) to remove the Element Feeder Door.
4. Use a nut driver to remove the Screws (2) mounting the Door Top Hinge Bracket to the machine.



Installation Procedure

1. Use a nut driver to tighten the Screws (2) mounting the new Door Top Hinge Bracket to the machine.
2. Do REP 1.2 [Element Feeder Door Replacement](#) to install the Element Feeder Door.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 1.5 Back Cover Replacement

PARTS LIST ON PL 5.28

Use this procedure to remove and install the Back Cover.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire
2. Disconnect the Power Cord.
3. Hold the Back Cover in place so it doesn't fall as you remove the M4 Screws (2) from the Back Cover.



4. Carefully tilt the Back Cover back and then lift the Back Cover out of the tabs in the machine frame.

Installation Procedure

1. Lift the Back Cover assembly and align the tabs with the slots in the machine frame.
2. Carefully lower the cover tabs into the appropriate slots. Lean the cover forward until it is flush with the back of the frame.



3. Tighten the M4 Screws (2) to secure the Back Cover.
4. Connect the Power Cord.
5. Switch power ON to eWire.

REP 1.6 Side Cover Replacement

PARTS LIST ON PL 5.28

Use this procedure to remove and install the Side Covers (2).

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire
2. Disconnect the Power Cord.
3. Hold the Side Cover in place so it doesn't fall as you remove the M4 Screws (2) from the Side Cover.
4. Carefully tilt the Side Cover back and then lift the Side Cover out of the tabs in the machine frame.

Installation Procedure

1. Lift the Side Cover assembly and align the tabs with the slots in the machine frame.
2. Carefully lower the cover tabs into the appropriate slots. Lean the cover forward until it is flush with the side of the frame.
3. Tighten the M4 Screws (2) to secure the Side Cover.
4. Connect the Power Cord.
5. Switch power ON to eWire.

REP 1.7 Book Tray Door Replacement

PARTS LIST ON PL 5.28

Use this procedure to remove and install the Book Tray Door.

Removal Procedure

WARNING

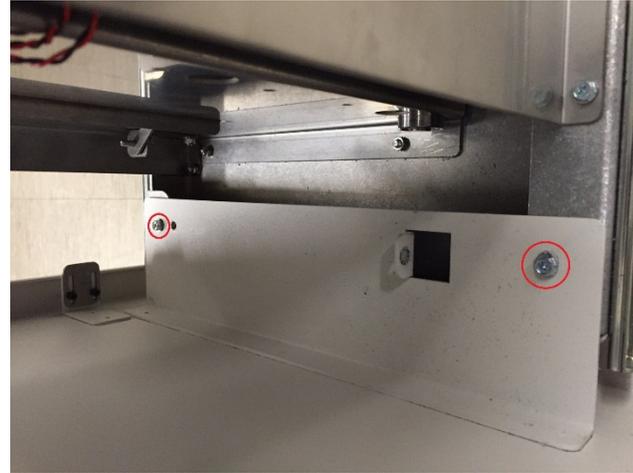
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Slide out the Book Tray by pulling on the handle.
4. Remove the M4 Screws (3) from the left side cover plate, while holding the cover secure with your free hand. Remove the cover plate and set it aside.



5. Remove the M4 Screws (3) from the right side cover plate, while holding the cover plate secure with your free hand. Remove the cover plate and set it aside.

6. Remove the M4 Screws (2) from the lower half of the Book Tray Door.



7. While securing the door with your free hand, remove the M4 Screws (2) from the upper half of the Book Tray Door. One screw is on each side of the door. Carefully slide the Door off the Book Drawer and away from the eWire.



8. Lift the Door up off the mounting brackets and remove from the machine.

Installation Procedure

1. Place the Book Tray Door in position so the M4 holes on the upper and lower mounting holes are aligned with the corresponding screw holes on the Book Drawer. Tighten the M4 Screws (4) to secure the Book Tray Door.
2. Tighten the M4 Screws (3) to secure the left side cover plate.
3. Tighten the M4 Screws (3) to secure the right side cover plate.
4. Do ADJ 1.7 to adjust the Interlock Flag.
5. Plug in the Power Cord.
6. Switch power ON to the eWire

REP 1.8 Front Cover Replacement

PARTS LIST ON PL 5.28

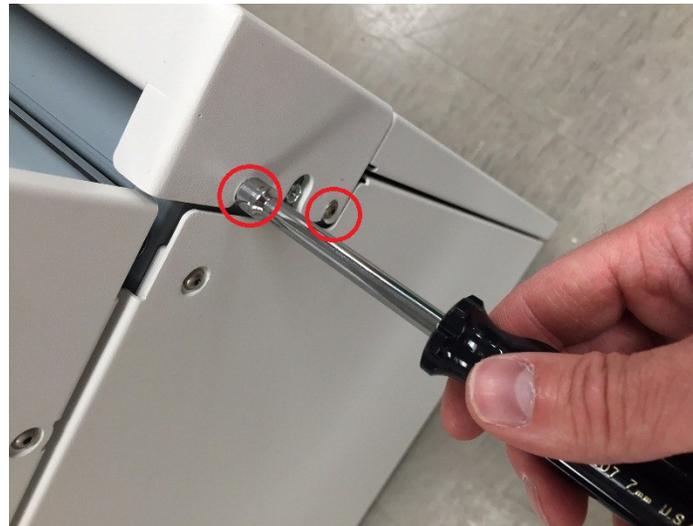
Use this procedure to remove and install the Front Cover.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Transport Assembly by releasing the latch on the Top Cover.
4. Loosen, but do not remove completely the M4 Screws (2) on the side of the Front Cover.



5. Remove the M4 Screws (2) from the top of the Front Cover.



6. Slide the Front Cover off the eWire.

Installation Procedure

1. Tighten the M4 Screws (4) to install the Front Cover to the frame. Press the Front Cover securely against the frame while tightening to ensure proper alignment. Refer to Removal Procedure for details.
2. Lower the Upper Transport.
3. Plug in the Power Cord.
4. Switch power ON to the eWire

REP 1.9 LCD Display Replacement

PARTS LIST ON PL 5.1

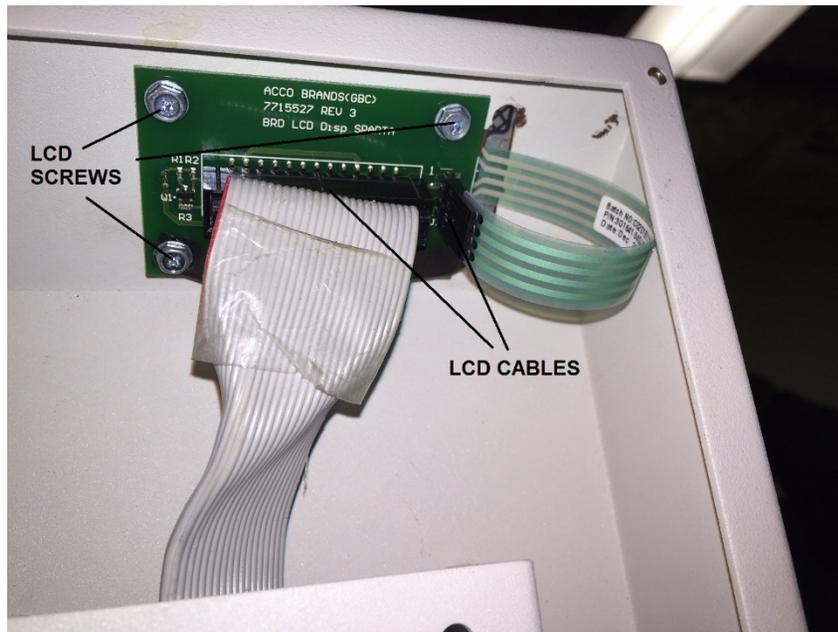
Use this procedure to remove and install the LCD Display.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Transport Assembly.
4. Remove the LCD back panel by removing the M4 Screws (3).
5. Disconnect the Cables from the LCD Display.
6. Remove the M3 Screws (3) holding the LCD Display to the Top Cover. Note the location of the black ground strap that is attached to one of the screws.



7. Remove the LCD Display.

Installation Procedure

1. Place the new LCD Display Panel in position.
2. Tighten the Screws (3) holding the LCD Display to the LCD Panel. Attach the ground strap using one of the 3 screws.
3. Connect the Cables (2) to the LCD Display Panel.
4. Lower the Upper Transport assembly.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 1.10 LCD Membrane Switch Panel Replacement

PARTS LIST ON PL 5.1

Use this procedure to remove and install the LCD Membrane Switch Panel.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire
2. Disconnect the Power Cord.
3. Raise the Upper Transport.
4. Disconnect the LCD Membrane Switch Connector from the LCD Display.



5. Remove the M3 Screw that secures the ground strap.
6. Using a straight edge, peel off the old LCD Membrane. Carefully remove any adhesive residue from the panel.

Installation Procedure

1. Insert the LCD cables through the slot on the panel surface
2. Install the new Membrane to the panel surface of the LCD Panel using the adhesive. Carefully align the new Membrane to the LCD display opening. You may be able to use the outline of the old LCD Membrane as a guide.



3. Connect the LCD Membrane Switch Connector to the LCD Display.
4. Secure the ground strap by tightening the M3 mounting Screw.
5. Connect the Power Cord.
6. Power ON the eWire

REP 1.11 Caster Replacement

PARTS LIST ON PL 5.1

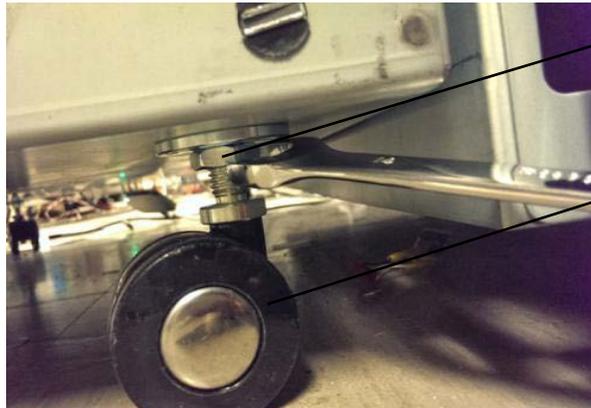
Use this procedure to replace the Caster Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire
2. Disconnect the Power Cord.
3. Carefully lift the corner of the eWire nearest the Caster. Support the eWire so that the machine is secured when Caster is removed.
4. Do REP 1.6 [Side Cover Replacement](#) to remove the Side Cover nearest the Caster.
5. Loosen the Jam Nut



Jam Nut

Caster

6. Remove the M5 Mounting Screws (4) to remove the Caster Plate. The Caster Assembly can be lifted up through the Frame.



7. Place the new Caster in position and screw it in.
8. Tighten the Jam Nut.
9. Lower the eWire
10. Do REP 1.6 [Side Cover Replacement](#) to install the Side Cover.
11. Connect the Power Cord.
12. Power ON the eWire.

2. Paper Transport

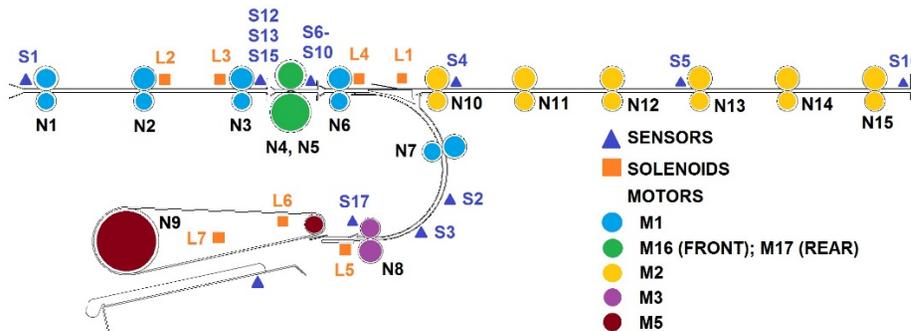
REP 2.1 Drive Roller Replacement – Paper Path

PARTS LIST ON PL 5.5

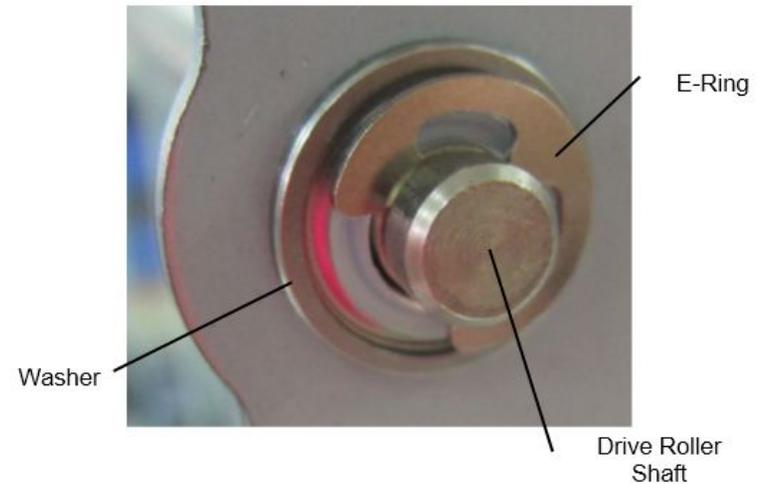
Use this procedure to remove and install the Drive Roller Assembly (Part # 7715093) used in Nips N1 – N3, N6 - N7, and N10 - N15.

Removal Procedure

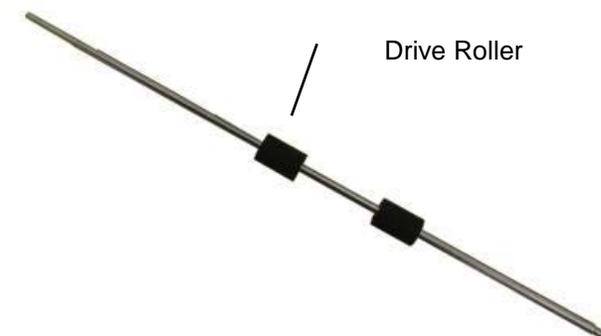
1. Switch power OFF to eWire.
2. Do [REP 1.1 Top Cover Replacement](#) to remove the Top Cover.
3. Raise the Upper Bypass Panel.
4. Locate the appropriate Drive Roller.



5. Do [REP 2.8](#) (Nips N1 – N3) or [REP 2.9](#) (Nips N10 – N15) to remove the Belt from the appropriate Drive Roller Shaft.
6. Do [REP 2.7 Belt Drive Timing Pulley Replacement](#) to remove the Pulley from the appropriate Drive Roller Shaft.
7. Remove the E-Ring and the Washer from the end of the Drive Roller Shaft at the front of the machine.



8. Remove the Bearing from the front of the machine.
9. Remove the Bearing from the rear of the machine.
10. Remove the Drive Roller.



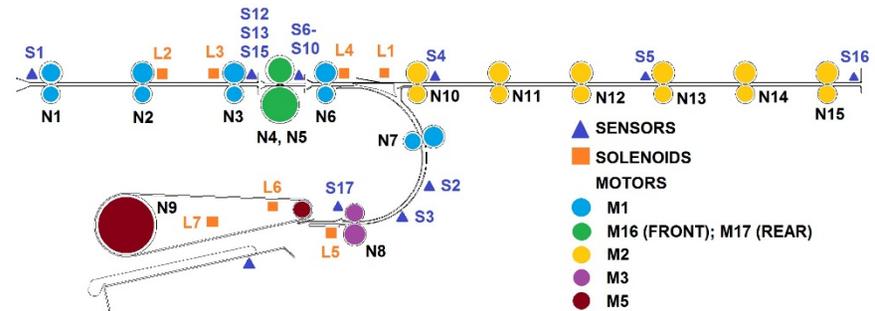
Installation Procedure

1. Place the Drive Roller in position
2. Install the Bearing at the front of the machine.
3. Install the Bearing at the rear of the machine.
4. Replace the Washer and E-Ring at the front of the machine.
5. Do REP 2.7 [Belt Drive Timing Pulley Replacement](#) to install Drive Roller Pulley.
6. Do [REP 2.8](#) (Nips N1 – N3) or [REP 2.9](#) (Nips N10 – N15) to install the Timing Belt. Do this after all Drive Rollers you plan to replace have been replaced.
7. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
8. Connect the Power Cord.
9. Power ON the eWire.

REP 2.2 Drive Roller Replacement – Steering Module

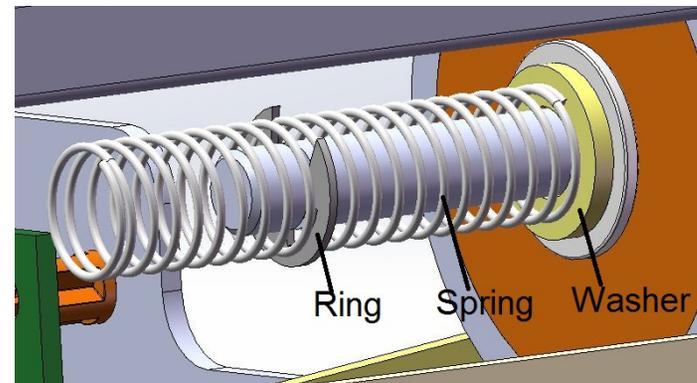
PARTS LIST ON PL 5.5

Use this procedure to remove and install the Steering Module Drive Roller Assembly, Nips **N4** and **N5**.

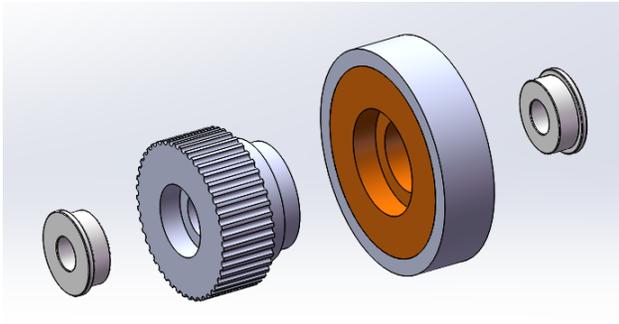


Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Bypass Panel
4. Do REP 2.21 [Steering Module Replacement](#) to remove the Steering Module from the Machine.
5. Remove the Panel Assembly by removing the M3 Nuts (4) on the underside of the Panel Assembly, located just above the rollers.
6. Remove the Drive Panel assembly by removing the M3 Nuts (4). Set the Idler and Drive Panel assemblies aside.
7. Remove the E-Ring, Compression Spring, and Washer from the Steering Drive Roller Shaft.



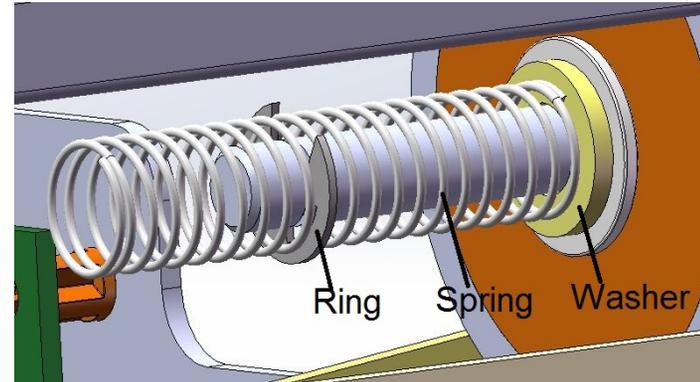
8. Loosen the M3 Screws on the Steering Module Stepper Motor to relieve tension on the Drive Belt.
9. Slide the Steering Drive Roller Sub-Assembly (roller, pulley and bearings) off the Drive Shaft.



10. Repeat the process for the opposite side.

Installation Procedure

1. Install the Bearing and the Steering Drive Pulley onto the Steering Drive Shaft. Ensure that an M6 washer is placed between the bearing and the motor bracket. Refer to PL 5.5.
2. Install the Steering Drive Roller assembly and bearing onto the shaft.
3. Install the M6 Washer, Compression Spring, and E-Ring onto the shaft.



4. Repeat the procedure for the opposite side.
5. Re-attach the drive panel assembly by securing the M3 nuts (4).
6. Do REP 2.21 [Steering Module Replacement](#) to replace the Steering Module.
7. Connect the Power Cord.
8. Power ON the eWire.

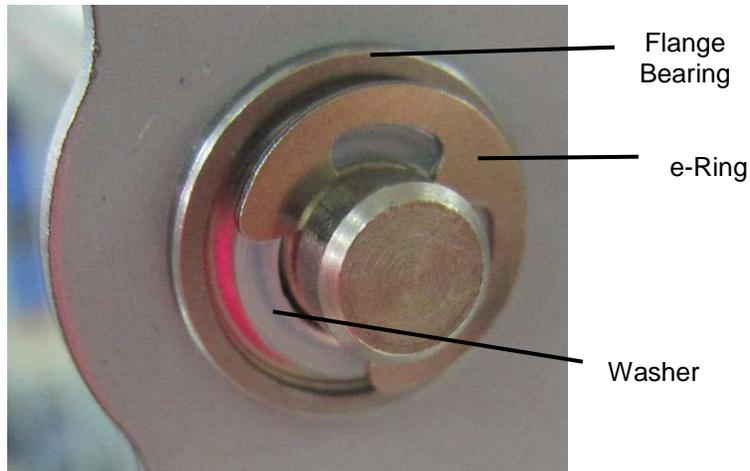
REP 2.3 Drive Roller Bearing Replacement

PARTS LIST ON PL 5.5

Do the following to replace the Drive Roller Bearings

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Locate the Flange Ball Bearing.



5. For Bearings on front of machine, remove the E-Ring and Washer.
6. For Bearings on rear of machine, do [REP 2.8](#) (Nips N1 – N3) or [REP 2.9](#) (Nips N10 – N15) to remove the Belt from the appropriate Drive Roller Shaft.
7. For Bearings on rear of machine, do REP 2.7 [Belt Drive Timing Pulley Replacement](#) to remove the Pulley from the appropriate Drive Roller Shaft.
8. Remove the Flange Ball Bearing.

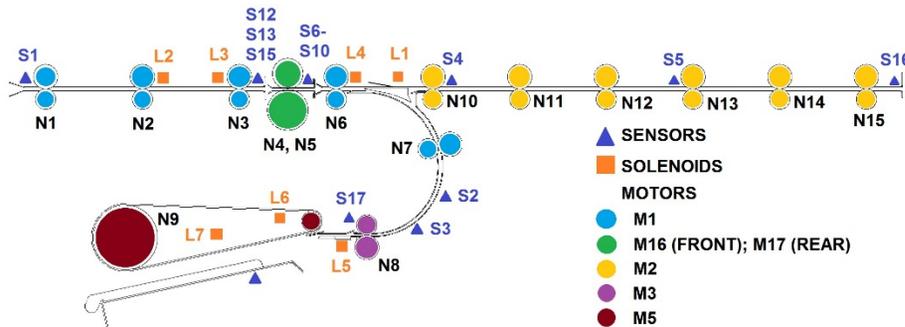
Installation Procedure

1. Place the new Flange Ball Bearing in position.
2. For Bearings on front of machine, re-install the washer and E-Ring.
3. For Bearings on rear of machine, reverse steps in Removal Procedure to re-install the Belt and Pulley.
4. If the Timing Belt was replaced, double check the belt tension. Adjust tension using the Belt Tensioner if needed. Refer to PL 5.4.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 2.4 Idler Roller Replacement, Paper Path

PARTS LIST ON PL 5.5

Use this procedure to remove and install the Idler Rollers on the following Nips: **N1 - N3, N6, N7, and N10 – N15**



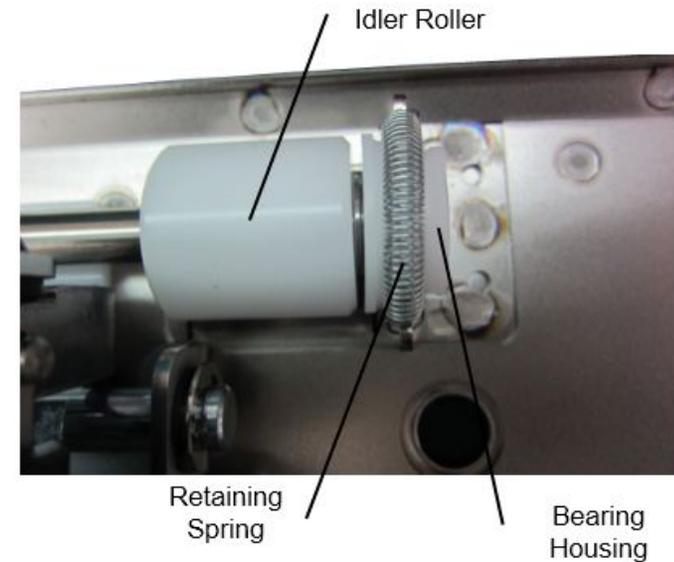
Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. For Rollers on Nip N7 only, raise the Lower Bypass Panel. The idler roller is located on the surface of the curved plate under the panel.

5. Lift the Extension Spring (2) up off the Bearing Housing (2) at each end of the Idler Roller Shaft. Unhook the ends of the extension spring from the Bushing Forks.



6. Remove the Idler Roller with the Bearing Housings (2) from the Bushing Forks.



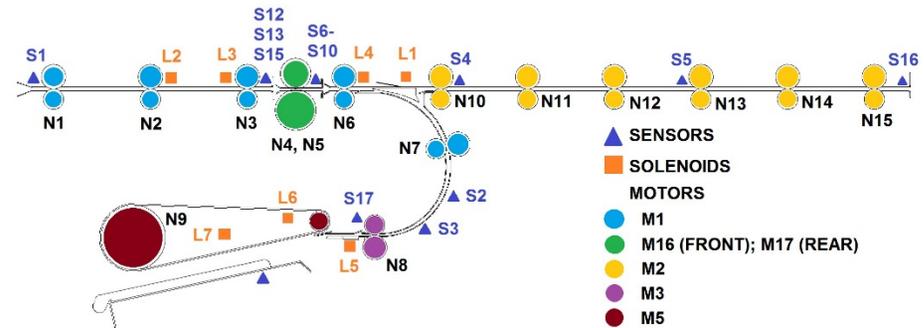
Installation Procedure

1. Place the new Idler Roller with Bearing Housings into the Bushing Forks.
2. Make sure the flat surface of the bushing aligns in the fork.
3. Rollers are non-directional so it does not matter which end goes in each fork.
4. After the assembly is in place, gently pull the assembly outward and release to ensure it moves freely in the fork.
5. Place the Extension Spring (2) over the Bearing Housings (2).
6. Place the hooks on the ends of the Extension Springs (2) on the notches at the top of the Bushing Forks (2).
7. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
8. Connect the Power Cord.
9. Power ON the eWire.

REP 2.5 Idler Roller Replacement, Steering Module

PARTS LIST ON PL 5.5

Use this procedure to remove and install the Idler Rollers on the following Nips: **N4 and N5**



Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Bypass Panel
4. Remove the Extension Spring (2) by unhooking the spring ends from the hooks on the mounting bracket.



5. Slide the Idler Roller Assembly out of the Steering Module by lifting the bearings out of the bearing mount brackets

Installation Procedure

1. Place the new Steering Idler Roller Assembly into the Bearing Mount Brackets on the Steering Module.
2. Make sure the flat faces of the Bearings align with the slot on the Bearing Mount Brackets.
3. Rollers are non-directional so it does not matter which end goes in which bracket.
4. After the assembly is in place, gently pull the assembly outward and release to ensure it moves freely in the housing.
5. Place the Extension Spring (2) over the Bearing hub (2).
6. Place the hooks on the ends of the Extension Springs (2) into the mounting holes on the Bearing Mount Brackets.
7. Lower the Upper Bypass Panel
8. Connect the Power Cord.
9. Power ON the eWire.

REP 2.6 Belt Drive Idler Pulley Replacement

PARTS LIST ON PL 5.4

Use this procedure to remove and install the Belt Drive Idler Pulleys (7715383) on the rear of the Upper Transport.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do REP 2.8 [Bypass Timing Belt #1 Replacement](#) or [REP 2.9](#) to remove the Timing Belt.
5. Remove the E-Ring and the Spacer.
6. Slide the old Idler Pulley from the Standoff.



Installation Procedure

1. Place the new Idler Pulley onto the standoff.
2. Install the Washer and the E-Clip.
3. Do REPS 2.8 or 2.9 [Bypass Timing Belt #1 Replacement & Bypass Timing Belt #2 Replacement](#) to replace the Timing Belt.
4. Do REP 1.1 [Top Cover Replacement](#) to replace the Top Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 2.7 Belt Drive Timing Pulley Replacement

PARTS LIST ON PL 5.4

Use this procedure to remove and install the Timing Pulley.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do [REP 2.8](#) or [REP 2.9](#) to remove the Timing Belt.
5. Remove the retaining ring from the roller shaft.



6. Remove the Timing Pulley by sliding it off the shaft.



Installation Procedure

1. Place the Timing Pulley in position on the Shaft and install the retaining ring.
2. Do REPs 2.8 & 2.9 [Bypass Timing Belt #1 Replacement & Bypass Timing Belt #2 Replacement](#) to install the appropriate Timing Belts.
3. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

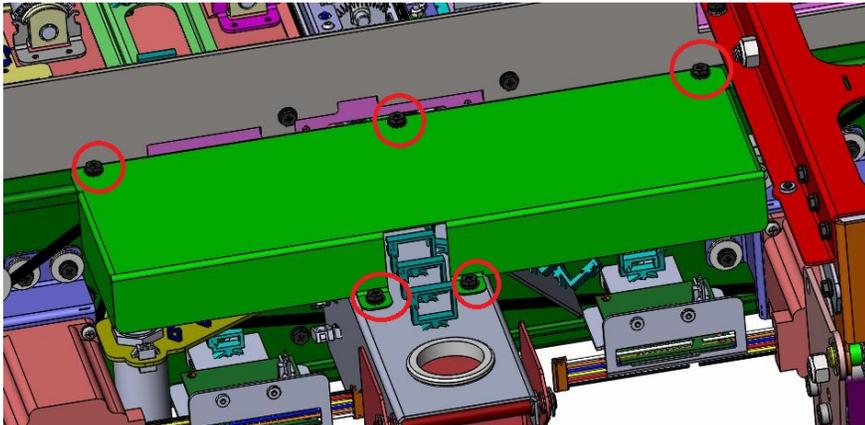
REP 2.8 Bypass Timing Belt #1 Replacement

There are two timing belts used at the rear of the eWire Upper Bypass Assembly. The procedure below can be used for the upstream (paper entry side) Belt.

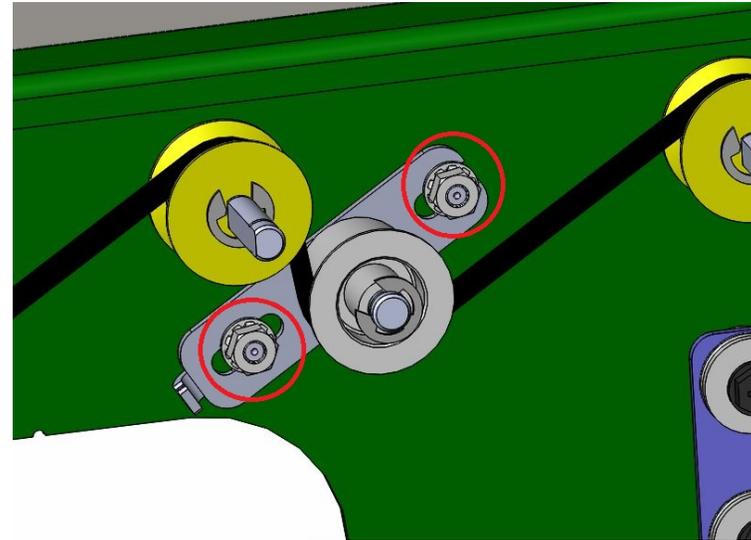
Type of Belt	Location	Motor
Belt, 502T, 2MM 2GT	Upstream	M1
Belt, 555T, 2MM 2GT	Downstream	M2

Removal Procedure

1. Turn power OFF to the eWire.
2. Remove the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do REP 2.18 [Solenoid Replacement, Diverter Solenoid \(L1\)](#) to remove the Diverter Solenoid
5. Remove the Rear Electrical Cover by removing the M4 Screws (5).



6. Relieve tension on the Belt by loosening the M4 screws (2) on the Belt Tensioner.



7. Disconnect the cables running through the cable control bracket by disconnecting it at the header.
8. Remove the wire control bracket from the frame by loosening the M4 Screws (3).
9. Carefully remove the Belt by lifting it off of the Idler Pulleys and Drive Pulleys and remove the old belt.

Installation Procedure

1. Carefully place the new Belt into position around the Driver and Idler Pulleys.
2. Adjust the Belt tension.
3. Replace the Wire Control Bracket.
4. Replace all Cables moved during the Belt Removal process.
5. Do REP 2.18 [Solenoid Replacement, Diverter Solenoid \(L1\)](#) to Install the Diverter Solenoid.
6. Do REP 1.1 [Top Cover Replacement](#) to replace the Top Cover.
7. Connect the Power Cord.
8. Power ON the eWire.

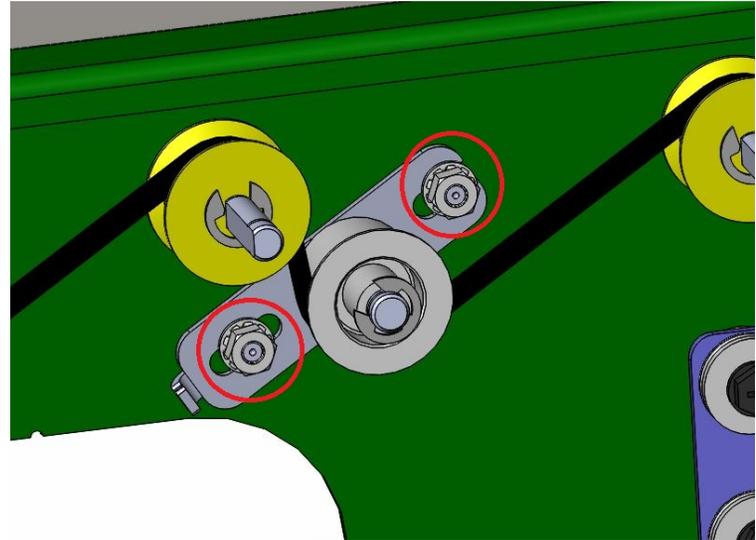
REP 2.9 Bypass Timing Belt #2 Replacement

There are two timing belts used at the rear of the eWire Upper Bypass Assembly. The procedure below can be used for the downstream (paper exit side) Belt.

Type of Belt	Location	Motor
Belt, 502T, 2MM 2GT	Upstream	M1
Belt, 555T, 2MM 2GT	Downstream	M2

Removal Procedure

1. Turn power OFF to the eWire.
2. Remove the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do REP 2.18 [Solenoid Replacement, Diverter Solenoid \(L1\)](#) to remove the Diverter Solenoid
5. Disconnect the wires from the M2 Bypass Stepper Motor.
6. Relieve tension on the Belt by loosening the M4 screws (2) on the Belt Tensioner.



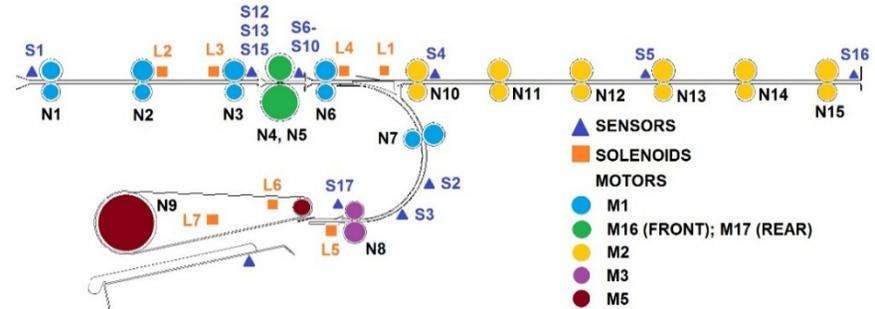
7. Carefully remove the Belt by lifting it off of the Idler Pulleys and Drive Pulleys and remove the old Belt.

Installation Procedure

1. Place the new Belt into position around the Driver and Idler Pulleys.
2. Adjust the Belt tension. The belt should be taut but still be able to flex approximately 1" when you press on it.
3. Replace the M2 Stepper Motor cable.
4. Do REP 1.1 [Top Cover Replacement](#) to replace the Top Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 2.10 Stepper and Mount Assembly Replacement PARTS LIST ON PL 5.3

Use this procedure to remove and install the Bypass 1 (M1) and Bypass 2 (M2) stepper motors.



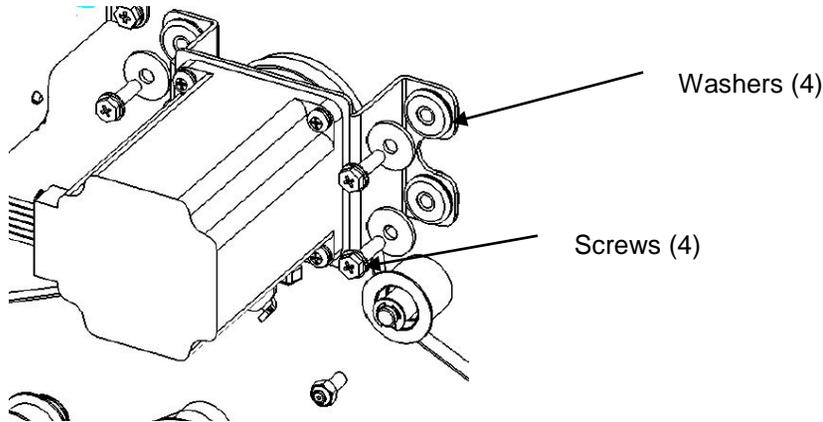
Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Locate the affected Motor.
5. Disconnect the Motor Connector from the corresponding Motor Driver.
6. Remove tension from the Belt by loosening the Belt Tensioner.

7. Remove the Screws and Washers (4) and remove the Stepper Mount Bracket from the Frame.



8. Remove the Motor Timing Pulley from the Motor shaft by pulling it off of the shaft.
9. Remove the Stepper Motor from the Motor Bracket by removing the M4 screws (4)

Installation Procedure

1. Install the Stepper Motor Pulley onto the Motor shaft
2. Install the Motor onto the Motor Bracket by tightening the M4 Screws (4). Note the directional orientation of the motor cable.
3. Place the Motor Bracket Assembly in position and tighten the Screws (4).
4. Connect the Motor Connector.
5. Adjust the Belt tension. The belt should be taut but still be able to flex approximately 1" when you press on it.
6. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 2.11 Stepper Motor Pulley Replacement

PARTS LIST ON PL 5.4

Use this procedure to remove and install the Stepper Motor Pulley (7715201). The Stepper Motor Pulley is used with Stepper Motors M1 and M2.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do REP 2.17 [Motor Driver \(Stepper Driver\) Replacement, M1 and M2](#) to remove the appropriate Stepper Motor and Mount.
5. Slide the Stepper Motor Pulley off the Motor shaft.

Installation Procedure

1. Press the new Stepper Motor Pulley onto the shaft of the Stepper Motor.
2. Do REP 2.17 [Motor Driver \(Stepper Driver\) Replacement, M1 and M2](#) to replace the Stepper Motor and Mount.
3. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 2.12 Timing Belt Tensioner Replacement

PARTS LIST ON PL 5.4

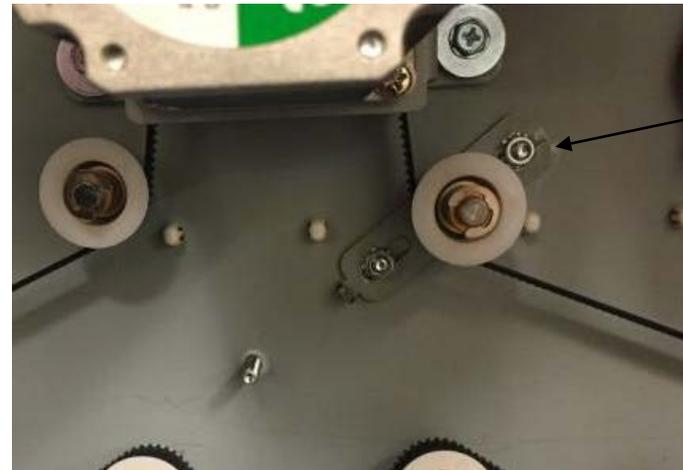
Use this procedure to remove and install the Timing Belt Tensioner Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Remove the M4 Nuts on the Tensioner and carefully remove the Tensioner Assembly from the Bypass Panel.



Tensioner

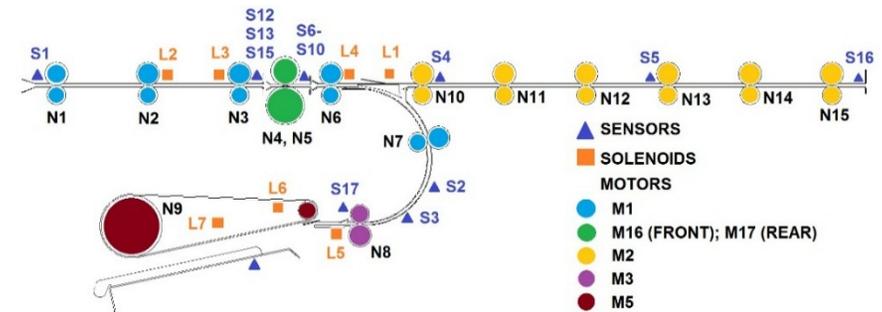
Installation Procedure

1. Place the new Tensioner Assembly onto the M4 studs and loosely attach the M4 nuts. Ensure the Idler Pulley on the Tensioner Assembly is lightly pressing the Timing Belt.
2. Adjust the Belt tension. The belt should be taut but still be able to flex approximately 1" when you press on it.
3. Tighten the Tensioner mounting bolts when you have achieved correct Belt tension.
4. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 2.13 Bypass Sensor Replacement, S1, S4, S5 & S16

PARTS LIST ON 5.2

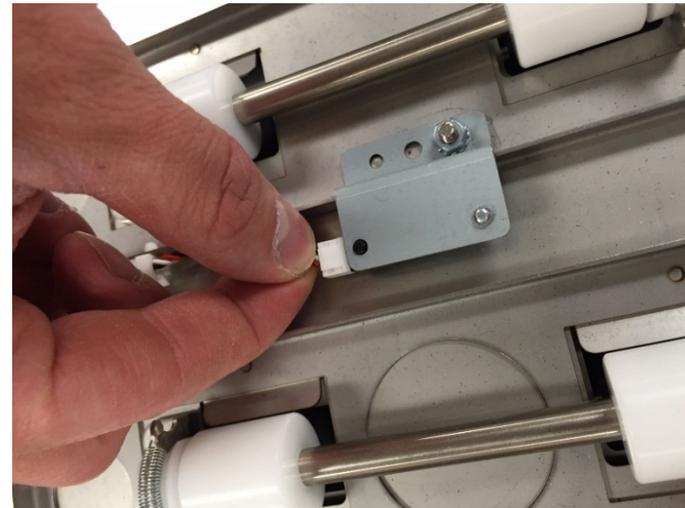
Use this procedure to remove and install the Bypass Sensors (S1, S4, S5, and S16)



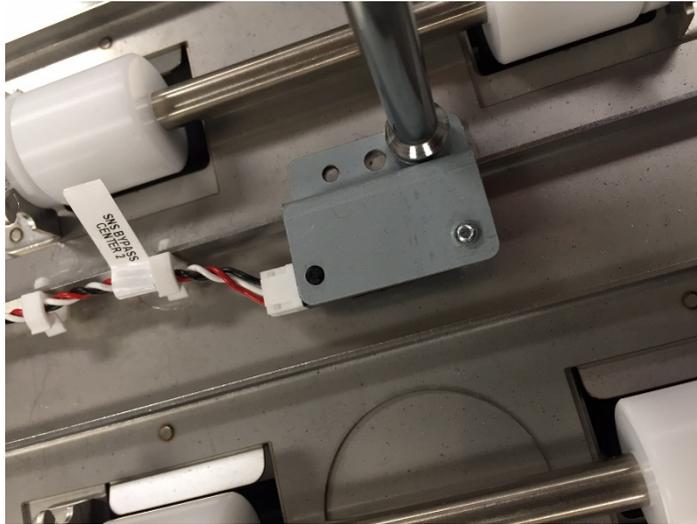
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Locate the appropriate sensor on the Bypass Panel.
5. Disconnect the Sensor Connector at the Sensor.



- Remove the Sensor Bracket by removing the M4 Nut.



- Remove the old sensor from the Sensor Bracket by removing the M3 Screw.

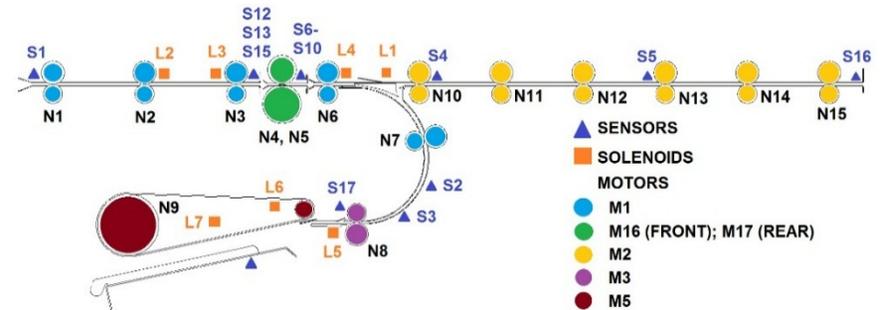
Installation Procedure

- Place the Sensor in position, then install and tighten the Screw.
- Connect the Sensor Connector.
- Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
- Connect the Power Cord.
- Power ON the eWire.

REP 2.14 Skew Measurement Sensor Replacement, S6-S10

PARTS LIST ON PL 3.7

Use the following procedures to remove and install the Skew Sensors, S6-S10. The Skew Sensors are located on the Skew Sensor PCB (7715692).

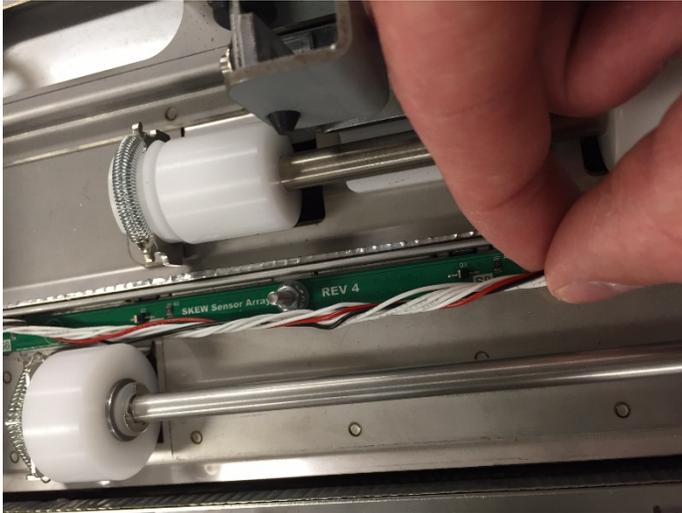


WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

- Switch power OFF to eWire.
- Disconnect the Power Cord.
- Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
- Locate the Skew Sensor PCB on the Bypass Panel.
- Disconnect the Connector from the PCB.
- Remove the Cover from the Steering Module by removing the M3 Screws.
- Release the Skew Sensor Cable from the cable clips on the Cover Support Bracket.

8. Disconnect the Cable from the Skew Sensor Array PCB.



9. Release the Skew Sensor PCB by removing the M3 Nuts (4)



10. Remove the old Skew Sensor PCB from the Upper Bypass.

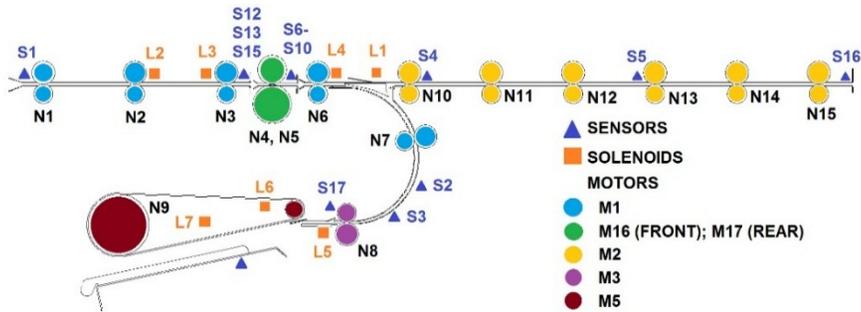
Installation Procedure

1. Place the new Skew Sensor PCB onto the Upper Bypass by aligning it with the M3 studs. Ensure that S6 is oriented at the rear of the machine and S10 is oriented at the front of the machine.
2. Tighten the M3 Nuts to secure the PCB.
3. Connect the Sensor Cable to the PCB.
4. Install the Skew Sensor Cable into the cable clamps.
5. Install the Skew Sensor Cover by securing the M3 Screws.
6. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 2.15 Alignment Sensor Replacement, S12, S13 & S15

PARTS LIST ON PL 5.2

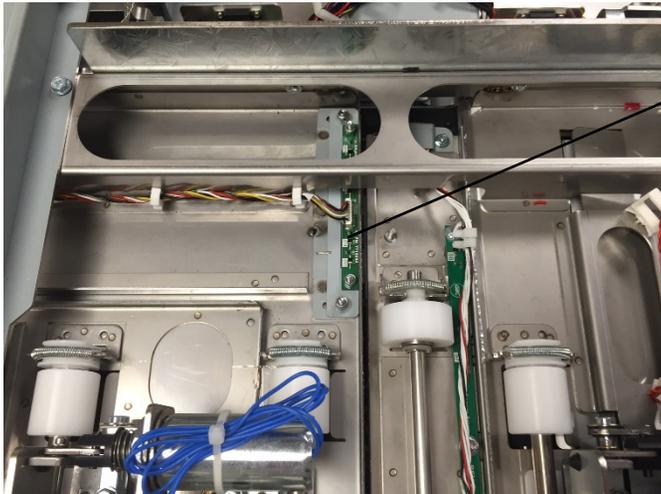
Use the following procedures to remove and install the Alignment Sensors (S12, S13, and S15). The Alignment Sensors are located on the Alignment Sensor PCB (7715694).



WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Locate the Alignment Sensor PCB on the Bypass Panel.

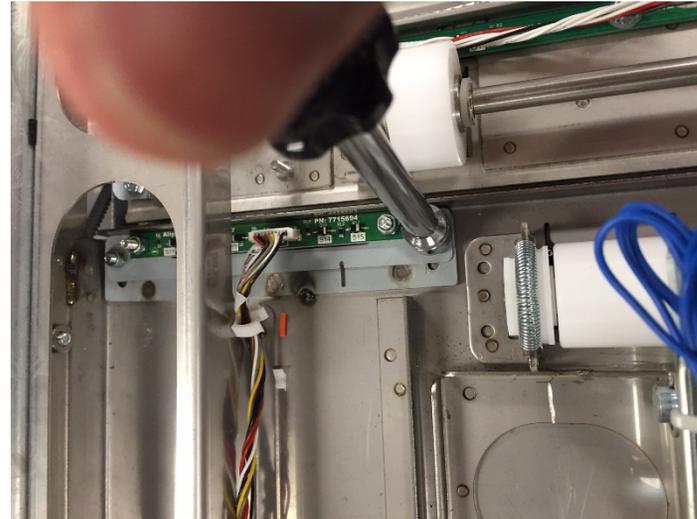


Alignment PCB

5. Disconnect the Cable Connector from the PCB.



6. Release the Alignment Sensor PCB by removing the M3 Nuts (2)



7. Remove the old Alignment Sensor PCB from the Upper Bypass.

Installation Procedure

1. Place the new Alignment Sensor PCB onto the Upper Bypass by aligning it with the M3 studs. Ensure that S12 is oriented at the rear of the machine and S15 is oriented at the front of the machine.
2. Use the notches on the Alignment Sensor PCB and its mounting bracket to locate the Alignment Sensor.
3. Tighten the M3 Nuts to secure the PCB.
4. Connect the Sensor Cable to the PCB.
5. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 2.16 Alignment Sensor Replacement, S41

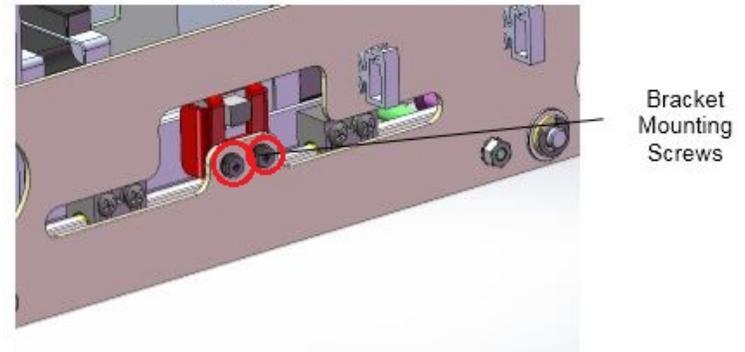
PARTS LIST ON PL 5.2

Use the following procedures to remove and install the Alignment Carriage Home Sensor, S41.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Bypass Lid.
4. Do REP 2.21 [Steering Module Replacement](#) to remove the Steering Module.
5. Remove the Sensor Bracket from the Steering Module by removing the M3 Screws (2).



6. Disconnect the Cable Connector from the Sensor
7. Remove the Sensor from the Sensor Bracket by removing the M3 Screw.

Installation Procedure

1. Place the new Align Home Sensor into the Sensor Mounting Bracket, using the tabs to align the sensor.
2. Connect the Sensor Cable to the new Sensor.
3. Re-attach the Sensor Mounting Bracket by tightening the M3 Screws.
4. Do REP 2.21 [Steering Module Replacement](#) to replace the Steering Module.
5. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
6. Connect the Power Cord.
7. Power ON the eWire.

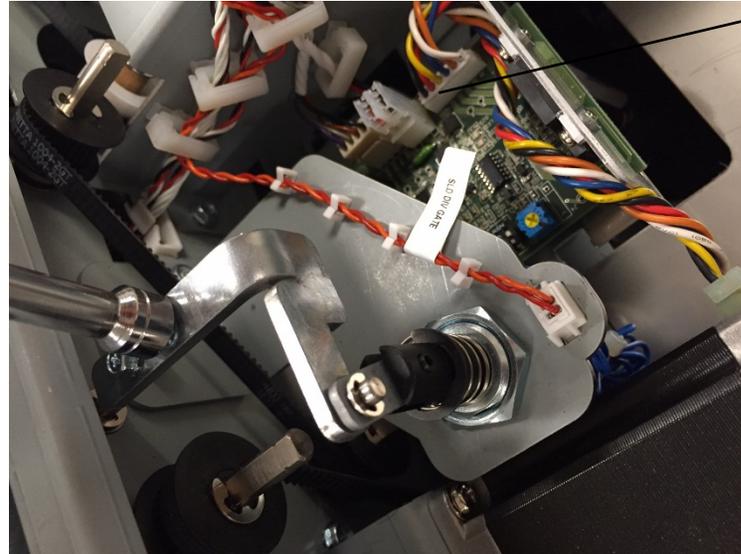
REP 2.17 Motor Driver (Stepper Driver) Replacement, M1 and M2 PARTS LIST ON PL 5.4

Use this procedure to remove and install a Motor Driver (7715275) for the Bypass 1 and Bypass 2 Stepper Motors.

WARNING

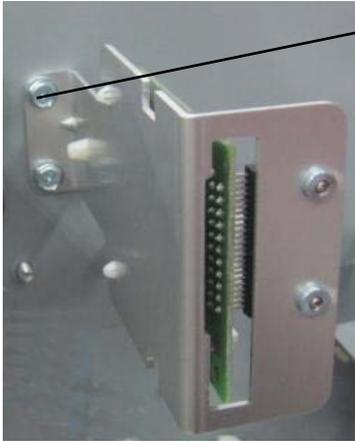
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Locate the appropriate Motor Driver (see PL 5.4).
5. Disconnect the Connectors (3)



Connectors
(3)

6. Remove the M4 Screws (2) and the Driver and Bracket Assembly.

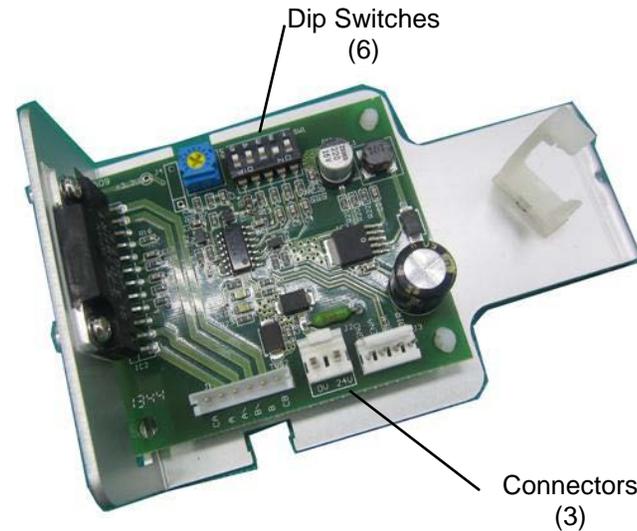


Screws (2)

7. Remove the M2.5 Screws (2) from the vertical connector on the Stepper Driver. Remove the Stepper Driver by releasing it from the plastic standoffs.

Installation Procedure

1. Place the new Stepper Driver onto the standoffs and snap it into place. Note the orientation of the Driver PCB.
2. Tighten the M2.5 Screws (2) to secure the vertical portion of the Driver.
3. Attach the Driver PCB Bracket into the Frame by securing the M4 Screws (2).
4. Set the Dip switches (6) on the new Motor Driver, using the correct settings for the Stepper Motor in question. Refer to GP 6.5 for DIP Switch settings.



5. Connect the Connectors (3).
6. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 2.18 Solenoid Replacement, Diverter Solenoid (L1)

PARTS LIST ON PL 5.3

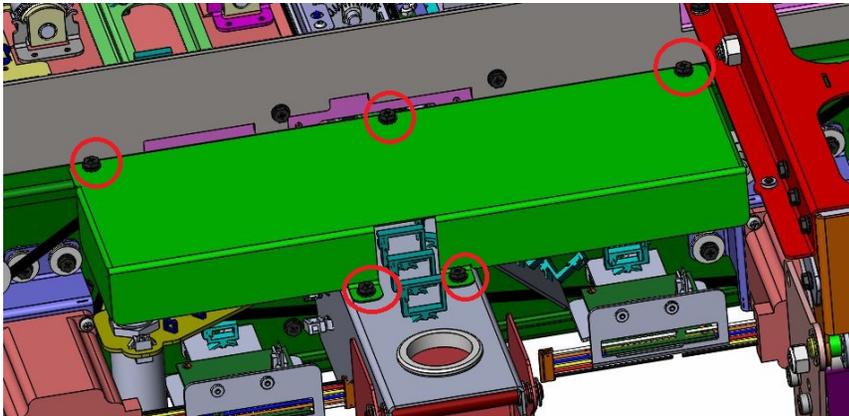
Use this procedure to remove and install the Diverter Solenoid Assembly.

Removal Procedure

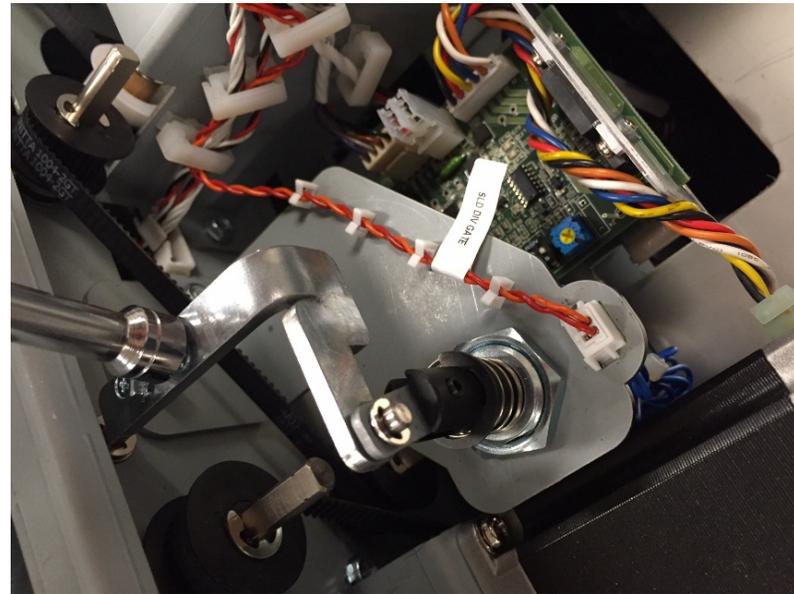
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

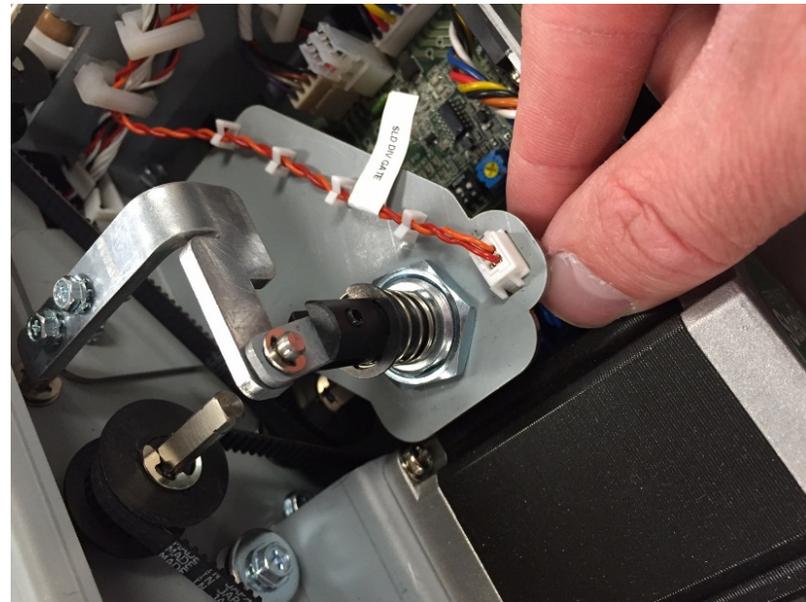
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Remove the M4 Screws (5) to remove the Lower Bypass Rear Cover.



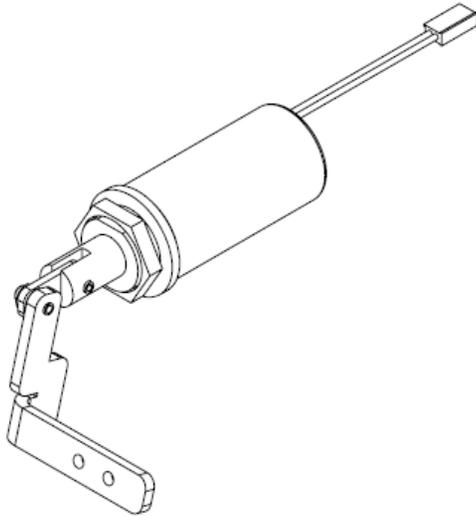
5. Remove M4 Screws (2) connecting the Solenoid linkage to the Diverter shaft.



6. Disconnect the solenoid wires at the header



7. Remove the M4 Nuts (2) from the Diverter Solenoid Mount Bracket and partially remove the Bracket.
8. Using an adjustable wrench, remove the Nut securing the Solenoid to the Diverter Solenoid Mount Bracket.
9. Slide the Diverter Solenoid Sub-Assembly through the mounting hole and out of the Mounting Bracket.



Installation Procedure

1. Remove the Nut from the new Diverter Solenoid Linkage Assembly.
2. Thread the linkage through the mounting hole and place the Solenoid body into place on the Mounting Bracket. Loosely tighten the Solenoid Nut to the Solenoid threads.
3. Align the Diverter Solenoid Mounting Bracket onto the studs on the Bypass frame. Tighten the M4 nuts to secure the Solenoid Mounting Bracket.
4. Tighten the M4 Screws (2) to secure the linkage to the Diverter Shaft, rotating the Solenoid body as necessary to achieve alignment.
5. Tighten the Solenoid Nut to secure the Solenoid Body.
6. Connect the Solenoid Cables, threading the wires through the cable clamps.
7. Re-install the Lower Bypass Rear Cover.
8. Do REP 1.1 [Top Cover Replacement](#) to replace the Top Cover.
9. Connect the Power Cord
10. Turn ON the eWire.

REP 2.19 Solenoid Replacement, Disengaging Roller #1 and #2 (L2 & L3)

PARTS LIST ON PL 5.3

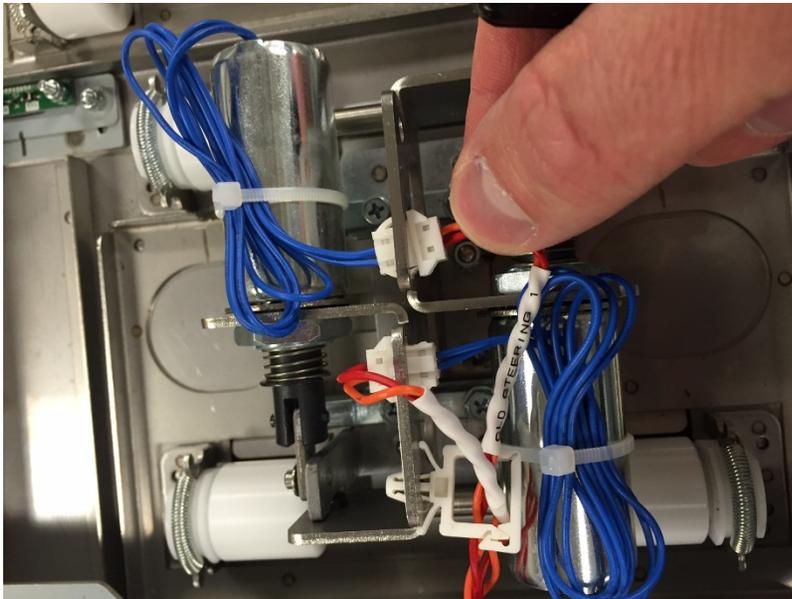
Use this procedure to remove and install the Disengaging Roller #1 and #2 Solenoids. Solenoids L2 and L3 are part of the same sub-assembly (7717125) and must be replaced together.

Removal Procedure

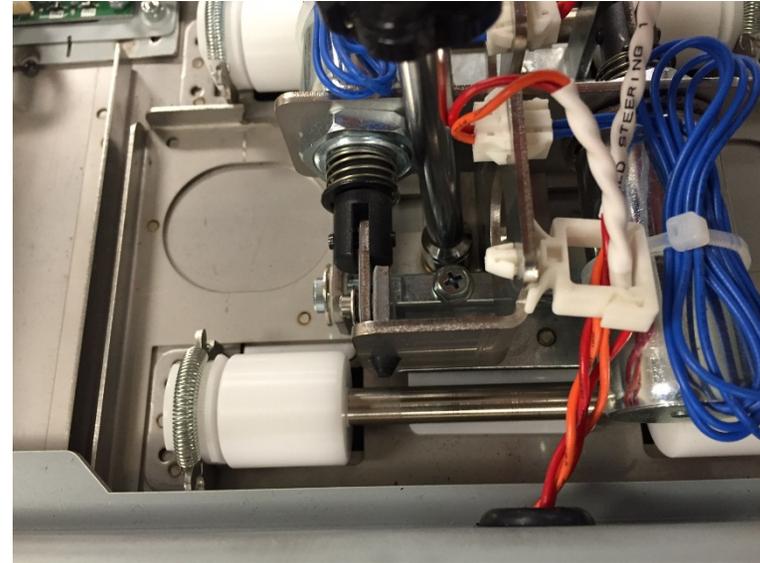
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

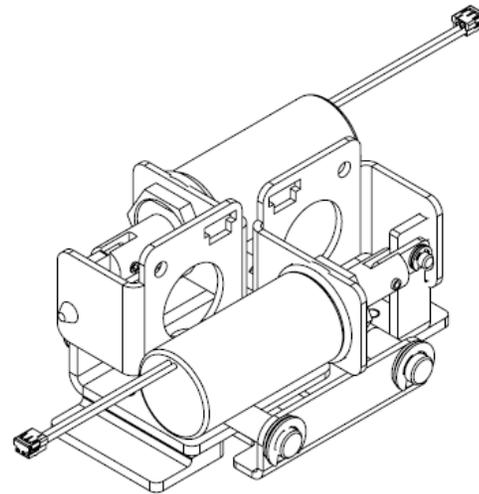
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do REP 2.4 [Idler Roller Replacement, Paper Path](#) to remove the Idler Roller Assembly on the left and right side of the Disengaging Roller #1 and #2 sub-assembly (7717125).
5. Disconnect the Cables at the header and remove Cables from the wire clamps on the sub-assembly.



6. Remove the M4 Nuts (2) from the sub-assembly.



7. Remove the sub-assembly.



Installation Procedure

1. Place the new 7717125 sub-assembly onto the appropriate mounting studs on the panel surface.
2. Tighten the M4 nuts (2) to secure the sub-assembly.
3. Do [REP 2.4 Idler Roller Replacement](#) to install the Idler Roller Assemblies (2).
4. Install the Solenoid Cables to the headers on the new sub-assembly, and secure the cables using wire clamps.
5. Do REP 1.1 [Top Cover Replacement](#) to replace the Top Cover.
6. Connect the Power Cord
7. Turn on the eWire.

REP 2.20 Solenoid Replacement, Disengaging Roller #3 (L4) PARTS LIST ON PL 5.3

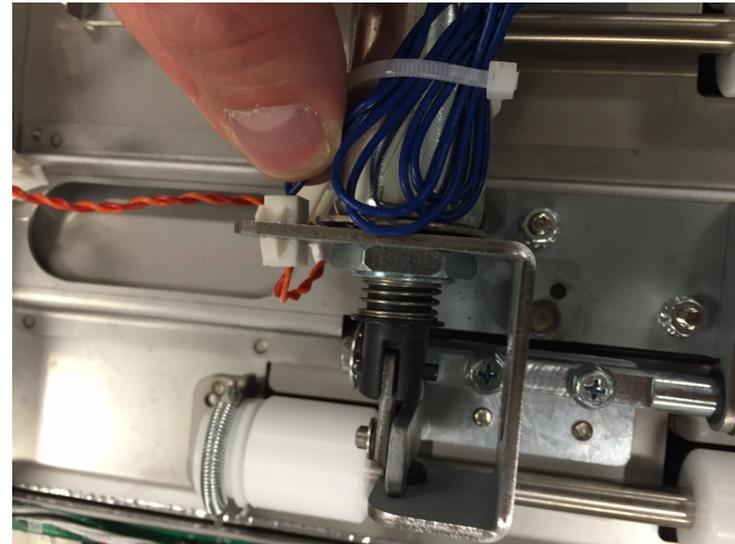
Use this procedure to remove and install the Disengaging Roller #3 Assembly (7717128)

Removal Procedure

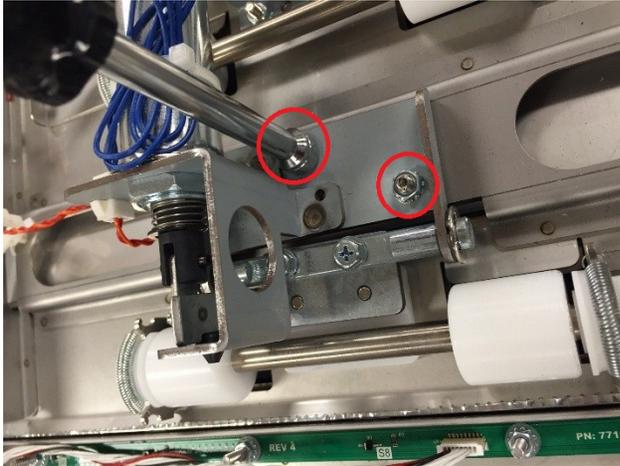
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

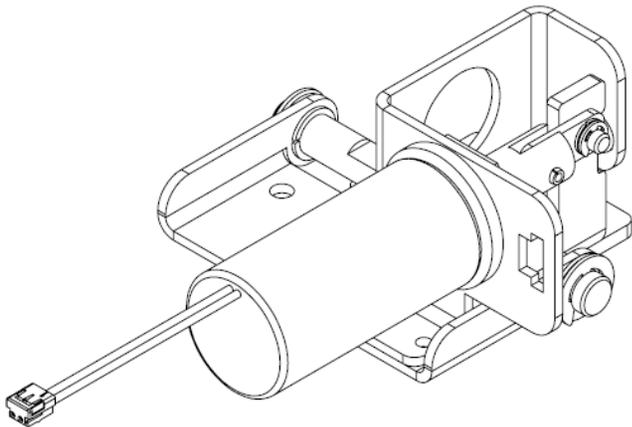
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Do REP 2.4 [Idler Roller Replacement, Paper Path](#) to remove the Idler Roller Assembly from the Disengaging Roller Assembly.
5. Disconnect the Cable at the header.



6. Remove the M4 Nuts (2) mounting the sub-assembly



7. Remove the entire Disengaging Roller #3 sub-assembly



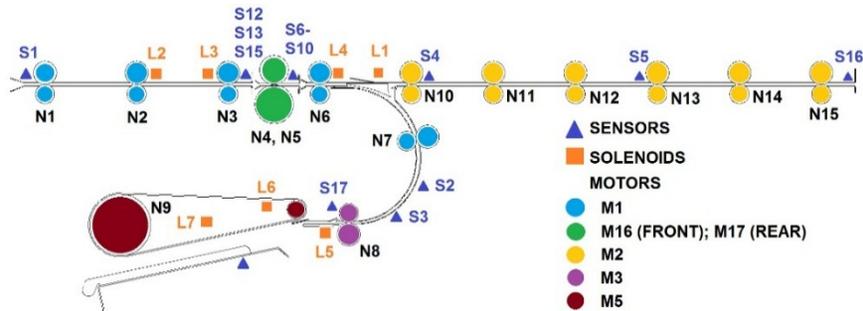
Installation Procedure

1. Place the new 7717128 sub-assembly onto the appropriate mounting studs on the panel surface.
2. Tighten the M4 nuts (2) to secure the sub-assembly.
3. Do REP 2.4 [Idler Roller Replacement, Paper Path](#) to install the Idler Roller Assembly.
4. Install the Cable to the headers on the new sub-assembly.
5. Do REP 1.1 [Top Cover Replacement](#) to replace the Top Cover.
6. Connect the Power Cord
7. Turn ON the eWire.

REP 2.21 Steering Module Replacement

PARTS LIST ON PL 5.6

Use the following procedures to remove and install the Steering Module, containing Nips N4 and N5.

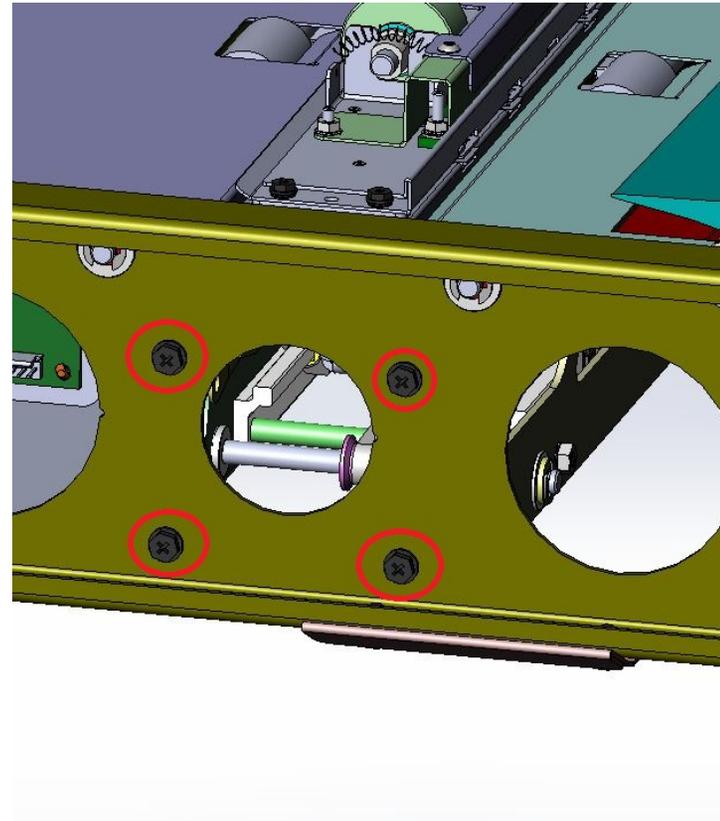


WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Bypass Lid
4. Disconnect the Grounding Strap from the Frame by removing the M3 Screw
5. Disconnect the Cables from the Steering Module, located on the rear of the module.

6. Disconnect the Steering Module Assembly by removing the M4 Screws from the front of the frame (4) and the back of the frame (3). Support the Steering Module with your free hand while removing the last screws.



7. Carefully slide the Steering Module out of the Lower Bypass.

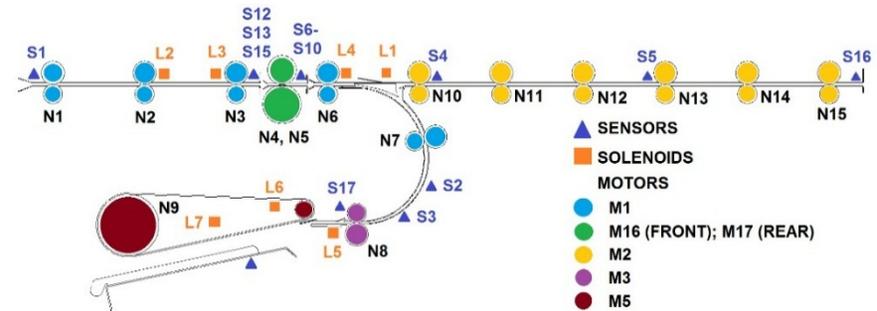
Installation Procedure

1. Slide the new Steering Module Assembly into the Lower Bypass, aligning the M4 screw holes.
2. Tighten the M4 Screws on the front frame (4) and rear frame (3) to secure the Steering Module.
3. Re-connect the cables to the Steering Module.
4. Re-connect the Ground Strap.
5. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 2.22 Steering Motor Replacement, M16 and M17

PARTS LIST ON PL 5.3

Use the following procedures to remove and install the Steering Stepper Motors (M16 and M17)



WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 2.21 [Steering Module Replacement](#) to remove the Steering Module.
4. Do REP 2.2 [Drive Roller Replacement – Steering Module](#) to remove the Steering Drive Roller corresponding to the motor you are replacing.
5. Remove the Pulley from the motor shaft by loosening the set screw. Set aside the Pulley and Drive Belt.
6. Disconnect the Motor Cable from the corresponding Stepper Driver Board.
7. Disconnect the Motor by removing the M3 Screws (4), and remove the Motor from the Steering Module.

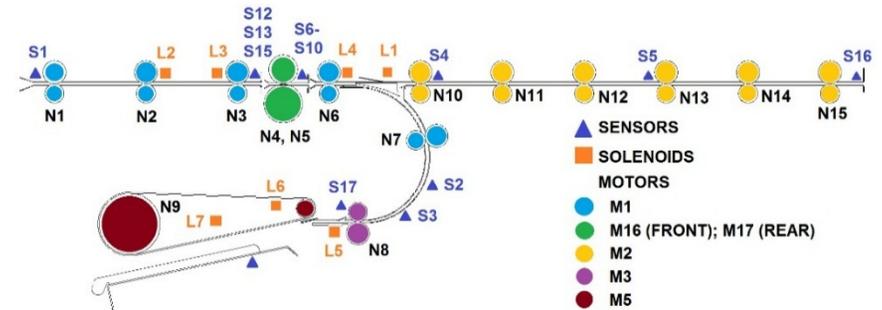
Installation Procedure

1. Insert the new Stepper Motor into the Frame and secure it using the M3 Screws (4).
2. Connect the Motor Cable to the corresponding Stepper Driver Board.
3. Slide the Pulley and Belt onto the Motor shaft and secure the Pulley using the set screw.
4. Do REP 2.2 [Drive Roller Replacement – Steering Module](#) to replace the Steering Drive Roller Assembly.
5. Do REP 2.21 [Steering Module Replacement](#) to replace the Steering Module.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 2.23 Alignment Motor Replacement, M18

PARTS LIST ON PL 5.3

Use the following procedures to remove and install the Alignment Stepper Motor (M18). The Alignment Stepper Motor moves the entire Steering Module.



WARNING

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1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 2.21 [Steering Module Replacement](#) to remove the Steering Module.
4. Remove the Motor Cable from the corresponding Stepper Driver Board.
5. Loosen the M4 Screws (4) securing the Alignment Motor, and shift the motor towards the center of the Steering Module to reduce tension on the Motor Belt.
6. Remove the Pulley from the Motor shaft by loosening the set screw and sliding the Pulley off the shaft.
7. Disconnect the Motor by removing the M3 Screws (4), and remove the Motor from the Steering Module.

Installation Procedure

1. Insert the new Stepper Motor into the Frame and secure it loosely using the M3 Screws (4).
2. Slide the Pulley and Belt onto the Motor shaft and secure the Pulley using the set screw.
3. Shift the Stepper Motor away from the center of the Steering Module to provide appropriate tension on the Drive Belt. Secure the Stepper Motor using the M3 Screws (4).
4. Connect the Motor cable to the corresponding Stepper Driver Board.
5. Do REP 2.21 [Steering Module Replacement](#) to replace the Steering Module.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 2.24 Motor Driver (Stepper Driver) Replacement, M16, M17, and M18

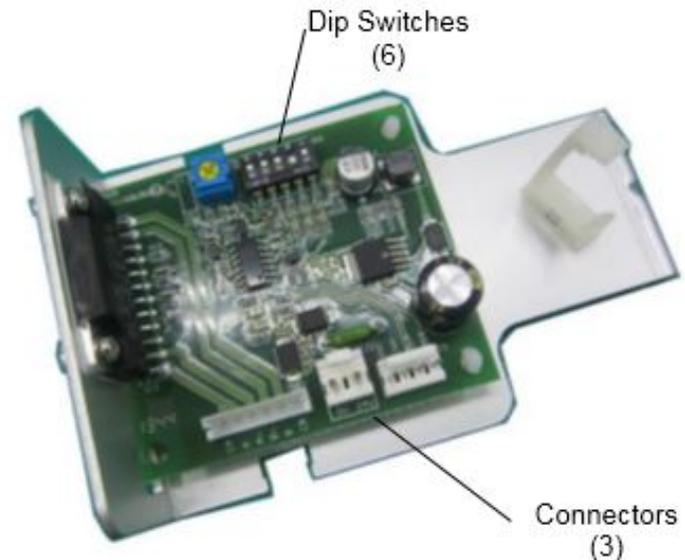
PARTS LIST ON PL 5.6

Use this procedure to remove and install a Motor Driver (7715275) for the Steering and Alignment Stepper Motors.

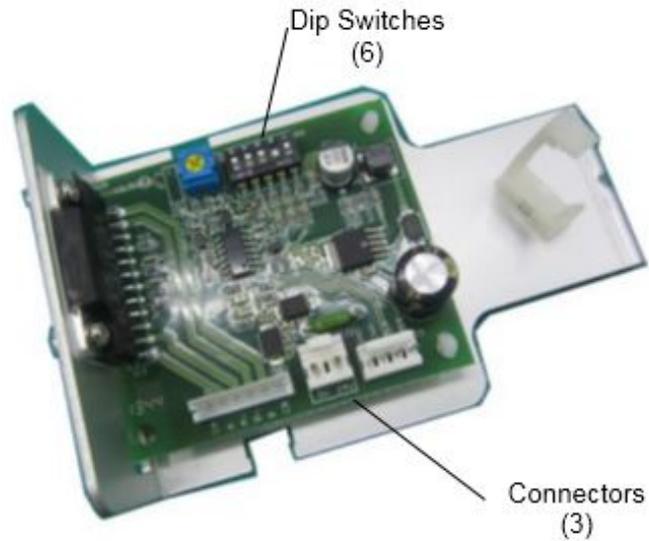
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 2.21 [Steering Module Replacement](#) to remove the Steering Module.
4. Locate the appropriate Motor Driver.
5. Disconnect the Connectors (3)



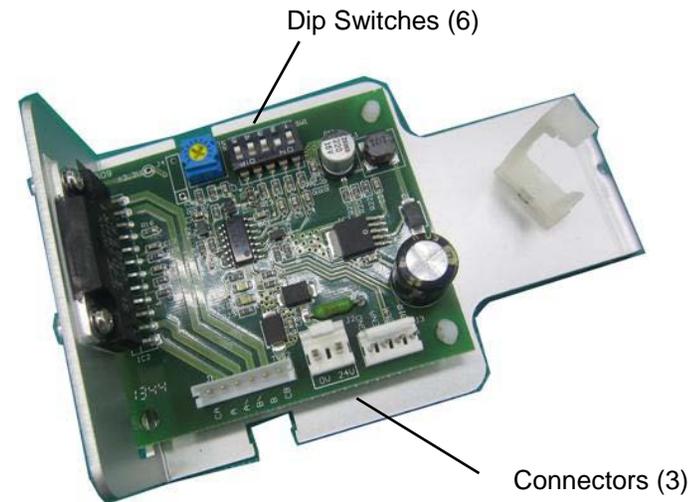
6. Remove the M4 Screws (2) and the Driver and Bracket Assembly.



7. Remove the M2.5 Screws (2) from the vertical connector on the Stepper Driver. Remove the Stepper Driver by releasing it from the plastic standoffs.

Installation Procedure

1. Place the new Stepper Driver onto the standoffs and snap it into place.
2. Tighten the M2.5 Screws (2) to secure the vertical portion of the Driver.
3. Attach the Driver PCB Bracket into the Frame by securing the M4 Screws (2).
4. Connect the Connectors (3).
5. Set the Dip switches (6) on the new Motor Driver in accordance with the DIP Switch values indicated in GP 6.5.



6. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 2.25 Anti-Static Brush Replacement

PARTS LIST ON PL 5.4

Use this procedure to remove and install the Anti-Static Brush to the Paper Transport.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. Using a straight edge razor, peel up the edge of the Anti-Static Brush and carefully remove it from the metal surface.



5. Use a cloth and alcohol to remove any adhesive residue from the surface.

Installation Procedure

1. Ensure the mounting surface is clean and free of residue. If necessary, clean the surface with a cloth.
2. Peel the backing away from the new Brush and position it on the metal surface. Apply pressure along the length of the Brush to adhere it to the surface.
3. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 2.26 Upper Transport Latch Replacement

PARTS LIST ON PL 5.4

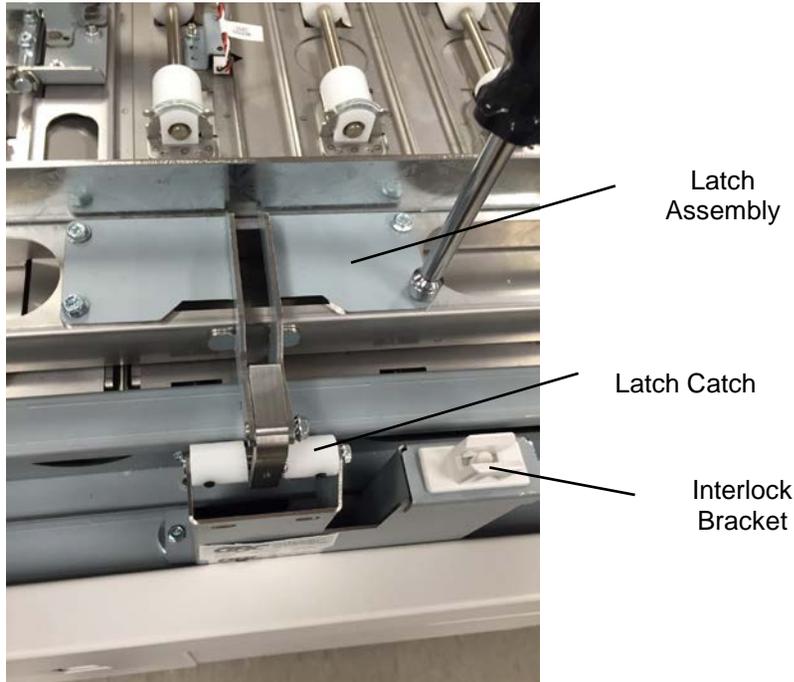
Use this procedure to remove and install the latch on the Upper Bypass Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Top Cover Replacement](#) to remove the Top Cover.
4. While supporting the upper transport with your free hand, release the latch by pressing down on the pivot arm. Raise the Upper Bypass carefully, it will rise quickly without the weight of the cover.
5. Remove the old Latch Assembly by removing the M4 Screws (4)



Installation Procedure

1. Place the new Latch onto the Upper Transport surface and secure it with the M4 Screws (4).
2. Lower the Upper Bypass and check the alignment of the new latch to the Latch Catch. If necessary, loosen the M4 Screws (2) securing the Interlock Bracket to the Frame and shift the Interlock Bracket until the Latch Catch is centered on the Latch Hook. If horizontal adjustment of the Interlock Bracket is required, do REP 1.8 [Front Cover Replacement](#) to remove the Front Cover.



3. Close the latch by lowering the Upper Bypass Assembly fully. Ensure that the latch engages properly with the Catch. If necessary, adjust the vertical position of the Catch by loosening the Screws on the Catch Bracket and adjusting the position.
4. Do REP 1.1 [Top Cover Replacement](#) to install the Top Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 2.27 Lower Transport Latch Replacement

PARTS LIST ON PL 5.4

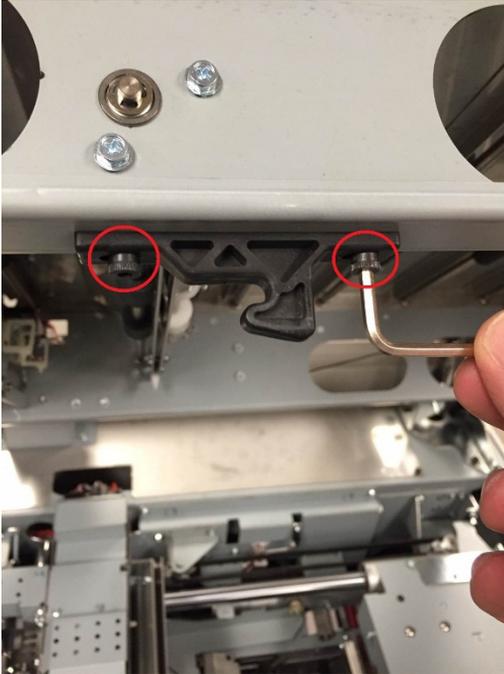
Use this procedure to remove and install the latch on the Lower Bypass Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

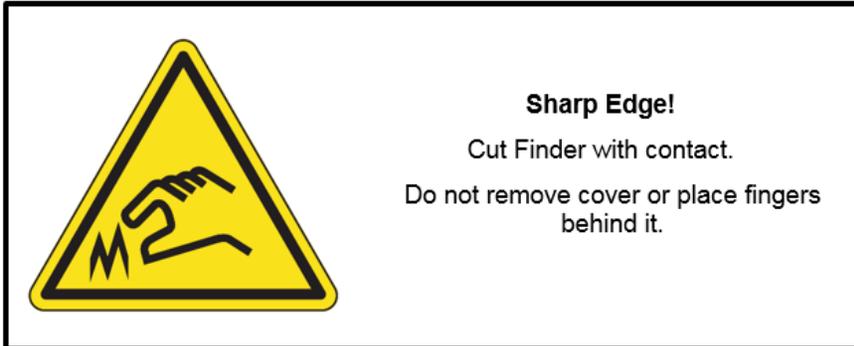
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Upper Bypass and Lower Bypass.
4. Remove the old Latch by removing the M4 Screws (2)



Installation Procedure

1. Place the new Latch onto the Lower Transport surface and secure it with the M4 Screws (2).
2. Close the Lower Transport and ensure that the latch mates easily with housing. If necessary, loosen the screws on the latch hook or mating housing and adjust the position to ensure proper fit.
3. Connect the Power Cord.
4. Power ON the eWire.

3. Element Feeder



REP 3.1 Element Slack Sensor Replacement – S20

PARTS LIST ON PL 5.7

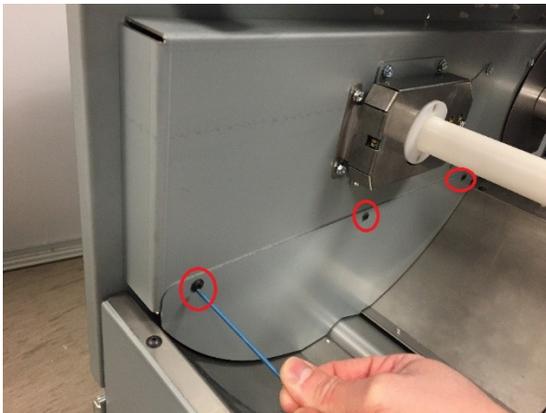
Use this procedure to remove and install the Element Slack Sensor.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

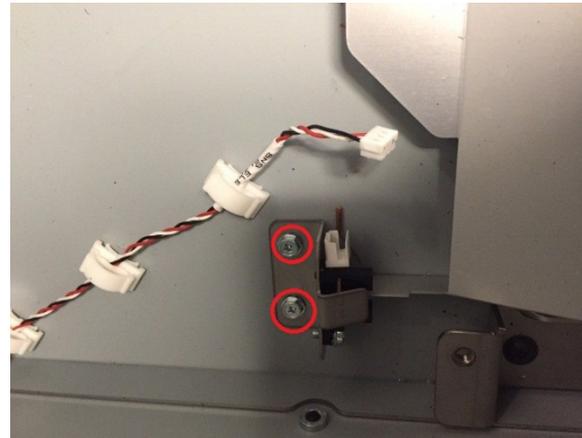
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Spool Detect Cover by removing the M4 Screws (3).



6. Remove the curved Rear Baffle by removing the M4 Screws (6)



7. Disconnect the Sensor Cable.
8. Remove the Sensor Bracket by removing the M3 Screws (2)



9. Using a wrench or screwdriver, remove the Sensor from the Sensor Bracket by removing the M3 Screw.

Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Connect the Power Cord.
3. Power ON the eWire.

REP 3.2 Element Detect at Pyramid Sensor Replacement – S22 PARTS LIST ON PL 5.7

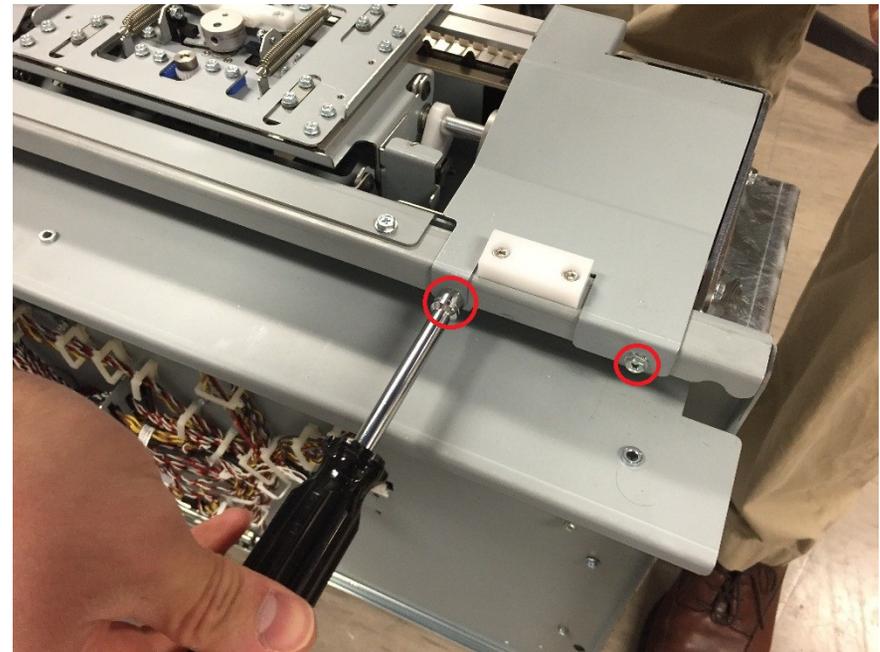
Use this procedure to remove and install the Element Detect at Pyramid Sensor. Note: The S22 Sensor consists of two parts – an Emitter and a Receiver.

WARNING

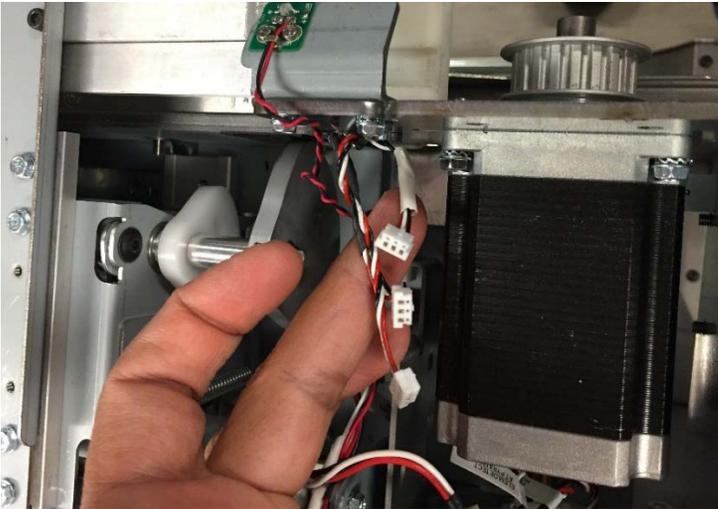
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

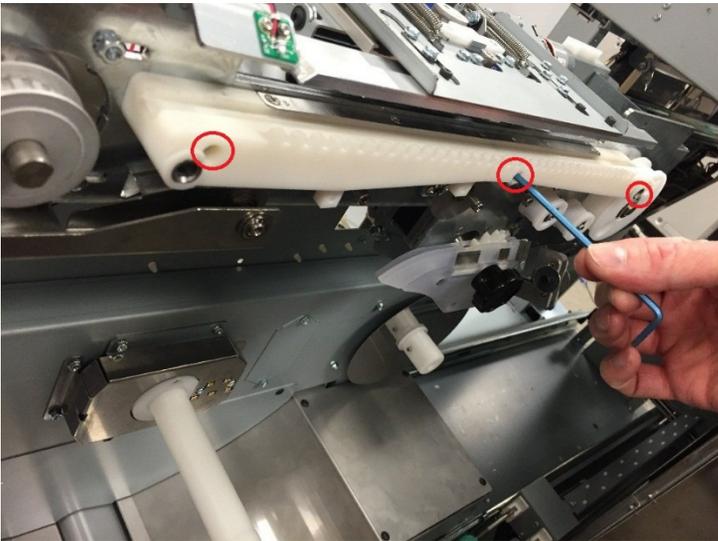
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Do REP 3.6 [Element Feeder Belt Replacement](#) to remove the Element Feed Belt.
6. Remove the Sensor Cover by removing the M4 Screws (2)



7. Disconnect the 4 Sensor Cables that run to the Element Feed Track Assembly. Note that the Header is fixed and the Sensor Cables can be removed from the Header by tugging gently on the cables.



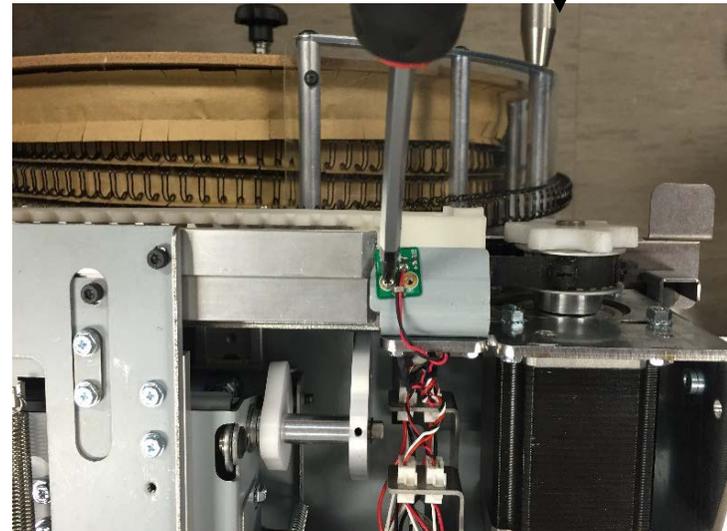
8. Remove the Feed Track from the Element Feeder by removing the M4 Screws (3).



9. Locate the Receiver PCB on the back of the Track Assembly. Remove the M2 Screws (2) to remove the Receiver PCB.



10. Remove the M2 Screws (2) to remove the Emitter PCB.



Installation Procedure

1. Use caution when handling the new Emitter and Receiver PCBs as the wires could be damaged if too much force is applied.
2. Using the M2 Screws, mount the new Emitter PCB to the Mounting Plate.
3. Using the M2 Screws, mount the new Receiver PCB to the Feed Track Assembly.
4. Reverse the steps in the Removal Procedure to reinstall the rest of the Element Feeder components.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 3.3 Element Belt Home Sensor Replacement – S25

PARTS LIST ON PL 5.7

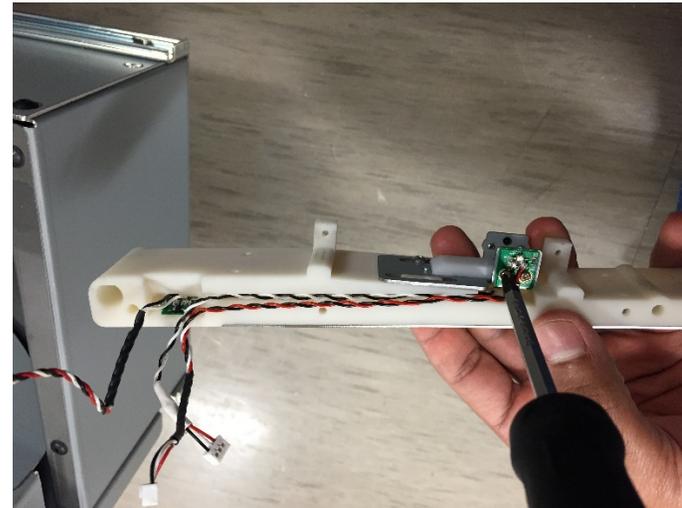
Use this procedure to remove and install the Element Belt Home Sensor.
Note: the S25 Sensor consists of two parts – an Emitter and a Receiver.

WARNING

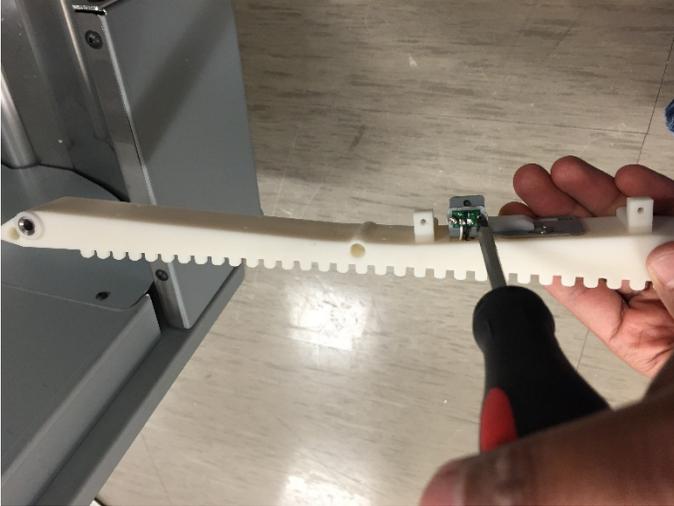
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

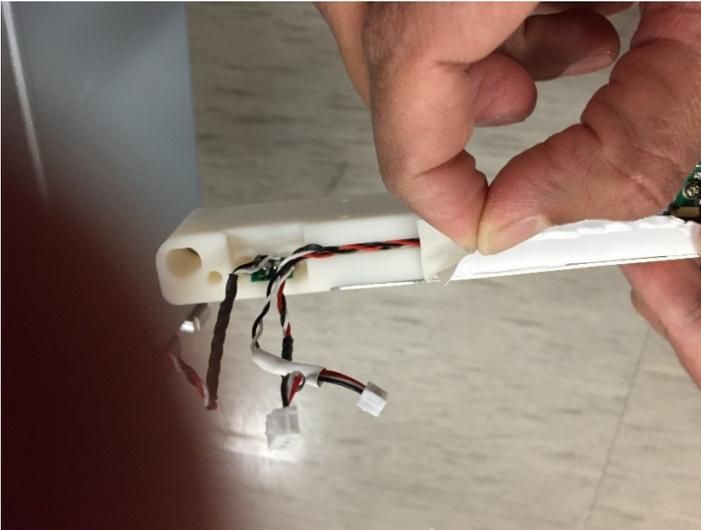
1. Do Step 1 through Step 8 of [REP 3.2](#), Element Detect at Pyramid Sensor Replacement.
2. Locate the Belt Detect Sensor Bracket on the bottom side of the Element Feed Track Assembly. Note: it is not recommended to remove the Sensor Bracket, in order to maintain the same location for the new Sensors.
3. Remove the M2 Screws (2) to remove the Emitter PCB.



4. Remove the M2 Screws (2) to remove the Receiver PCB.



5. Peel back the Protective Tape holding the Sensor Cables to the rear of the Track and remove the Cables.



Installation Procedure

1. Take care when handling the Emitter and Receiver PCBs as the wires can be damaged if too much force is applied.
2. Install the new Receiver and Emitter PCBs onto the Element Home Sensor Mounting Bracket by using the M2 Screws.
3. Run the Sensor Cables along the back of the Track and hold the cables in place using protective Tape.
4. Reverse the steps from the Removal Procedure to install the remaining Element Feeder parts.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 3.4 Spool Detect Sensor Replacement – S26-S30

PARTS LIST ON PL 5.7

Use this procedure to remove and install the Spool Detect Sensor(s). Note that the Spool Detect Sensors are located on the Spool Detect PCB 7717206.

WARNING

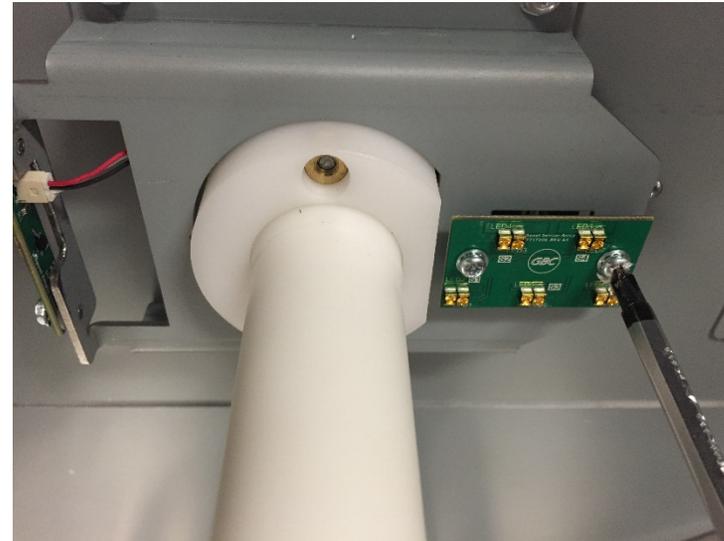
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Spool Detect Sensor Cover by removing the M4 Screws (2).



6. Remove the M3 Screws (2) and remove the Spool Detect Sensor PCB from its mounting bracket.



7. Disconnect the Sensor Cable from the back side of the PCB, and remove the Spool Detect Sensor PCB.

Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Connect the Power Cord.
3. Power ON the eWire.

REP 3.5 Spool Near-Empty Sensor Replacement – S50

PARTS LIST ON PL 5.7

Use this procedure to remove and install the Spool Near-Empty Detect Sensor. Note that the Sensor is located on the Spool Empty PCB 7717479.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Spool Detect Sensor Cover by removing the M4 Screws (2).



6. Remove the M3 Screws (2) and remove the Spool Empty PCB from its mounting bracket.



7. Disconnect the Sensor Cable from the back side of the PCB.

Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Connect the Power Cord.
3. Power ON the eWire.

REP 3.6 Element Feeder Belt Replacement

PARTS LIST ON PL 5.8

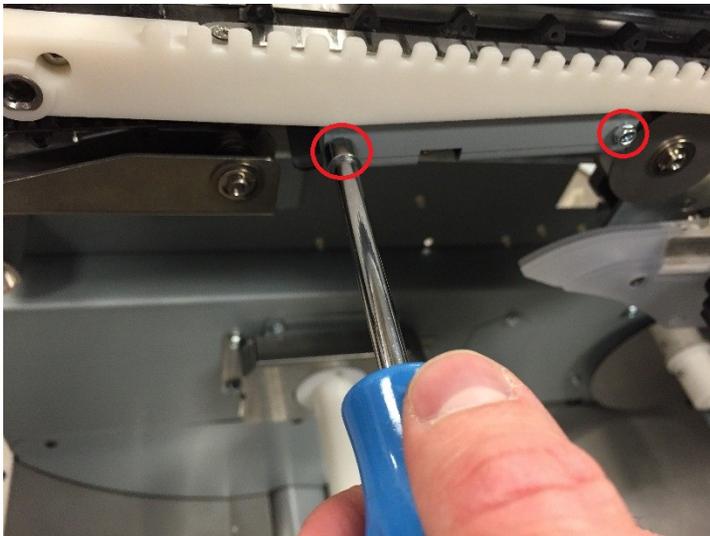
Use this procedure to remove and install the Element Feeder Belt.

WARNING

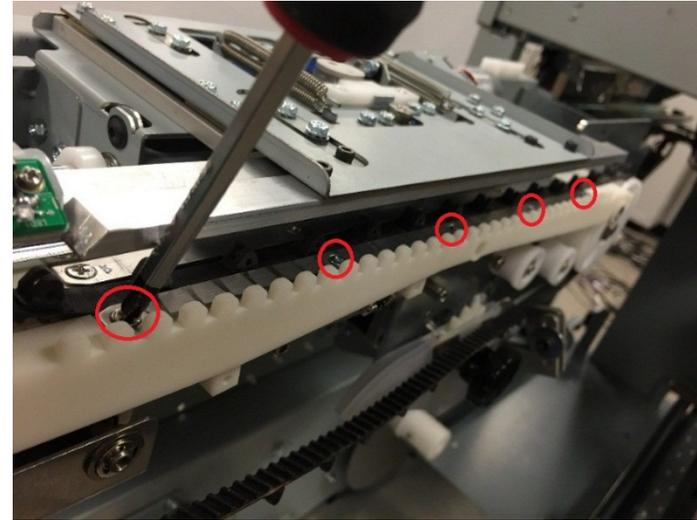
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Element Belt Guard by removing the M3 Screws (2).



6. Do REP 3.11 [Element Feed Belt Idler Replacement](#) to remove the Element Feed Belt Idler Assembly.
7. Remove the M3 Flat Head Screws (4) securing the Belt Retainer Plate.



8. Remove the Belt Retainer.
9. Do REP 3.13 to remove the Element Engagement Guide Assembly
10. Carefully slide the Element Feed Belt off the Pulleys and out of the Element Feeder.



11. Remove the Element Feeder Belt.



Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Do GP 6.8 to install the supply spool.
3. Connect the Power Cord.
4. Power ON the eWire.

**REP 3.7 Element Feed Belt Motor Replacement, M10
PARTS LIST ON PL 5.8**

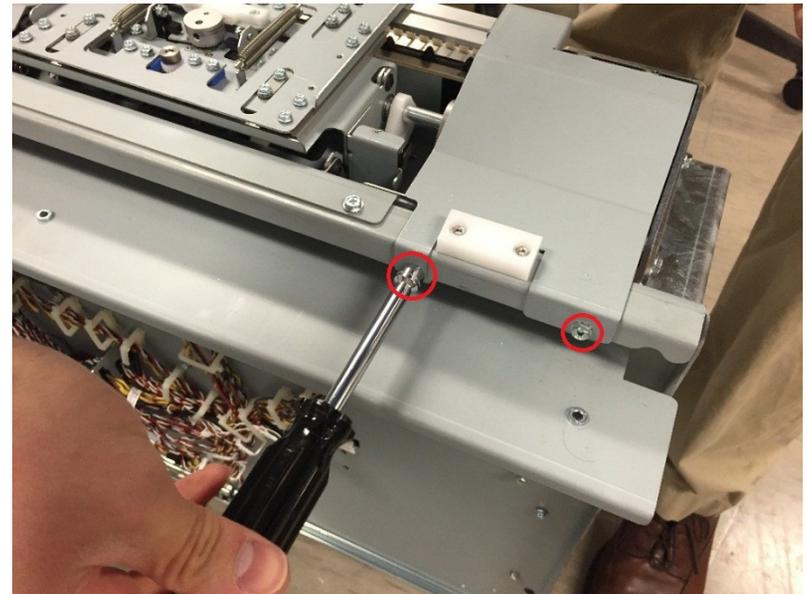
Use this procedure to remove and install the Element Feed Belt Stepper Motor.

WARNING

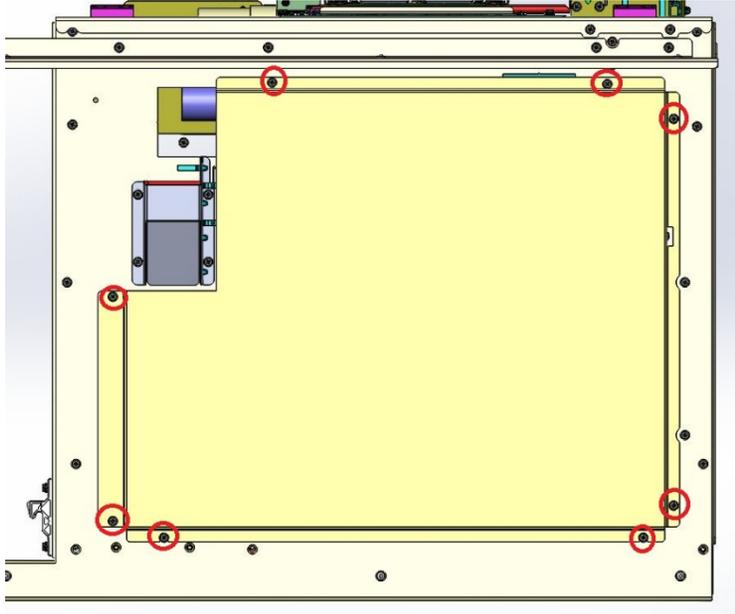
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

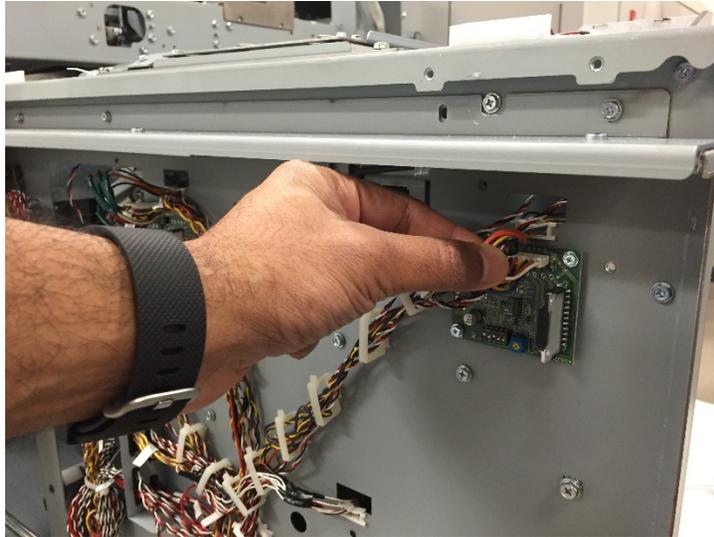
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Upper Element Feeder Cover by removing the M4 Screws (2)



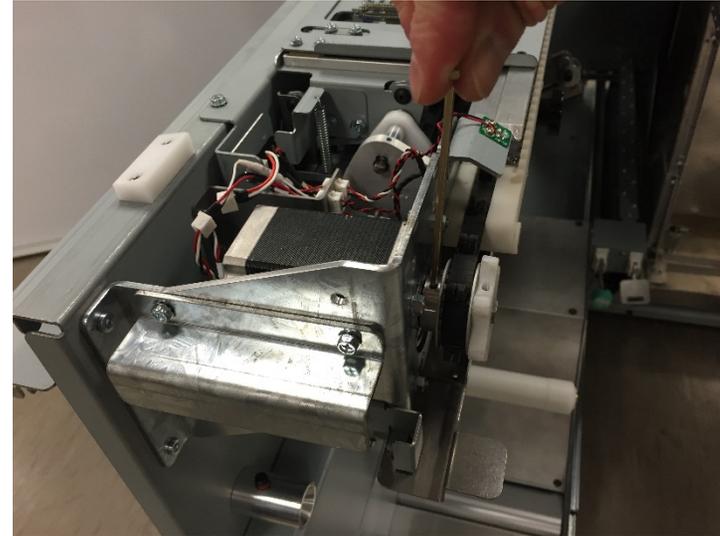
6. Remove the Rear Cover by removing the M4 Screws (8)



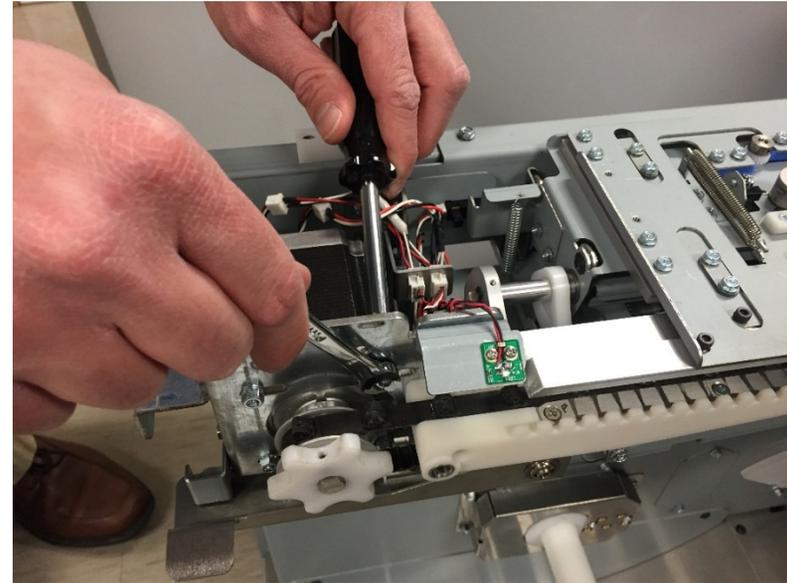
7. Disconnect the Motor Cable from the Stepper Motor Driver.



8. Loosen the set screw on the Element Belt Pulley.



9. Remove the M4 Nuts (4) securing the Motor to the frame, and remove the Motor.



Installation Procedure

1. Insert the new Motor into the slots on the frame, and loosely attach the M4 nuts (4) to secure it.
2. Slide the pulley onto the motor shaft, and adjust the pulley position until the belt has proper tension. Tighten the mounting screws to secure the motor.
3. Tighten the Pulley to the motor shaft by securing the set screw.
4. Connect the Motor cables to the Stepper Motor Driver.
5. Re-attach all covers by reversing the steps in the Removal Procedure.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 3.8 Element Feed Sprocket Motor Replacement, M9

PARTS LIST ON PL 5.8

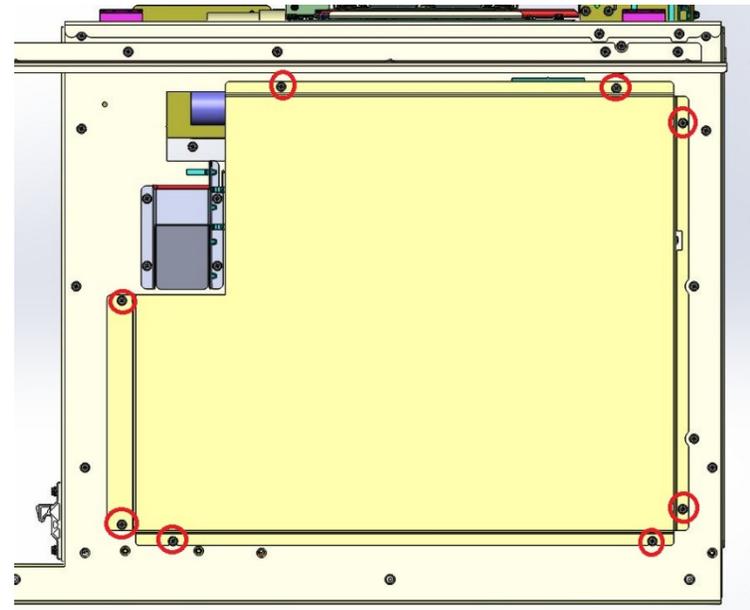
Use this procedure to remove and install the Element Feed Belt Sprocket Stepper Motor.

WARNING

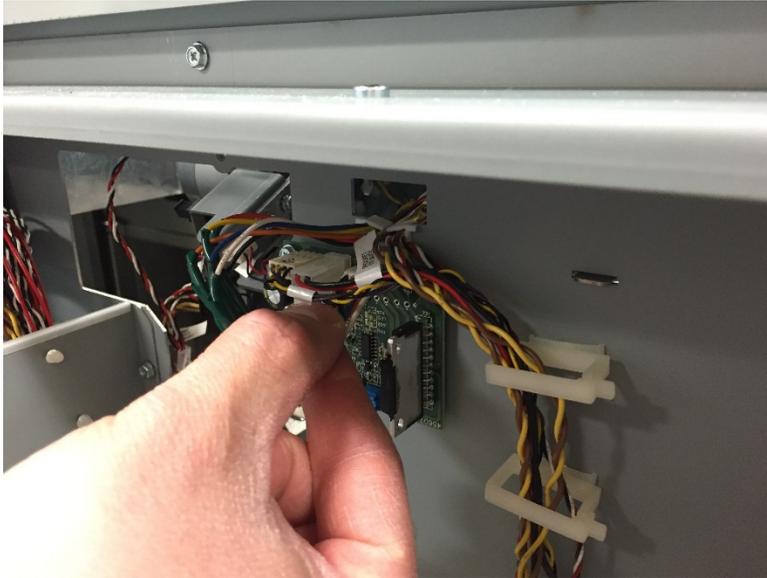
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Rear Cover by removing the M4 Screws (8)



6. Disconnect the Motor Cable from the Stepper Motor Driver.

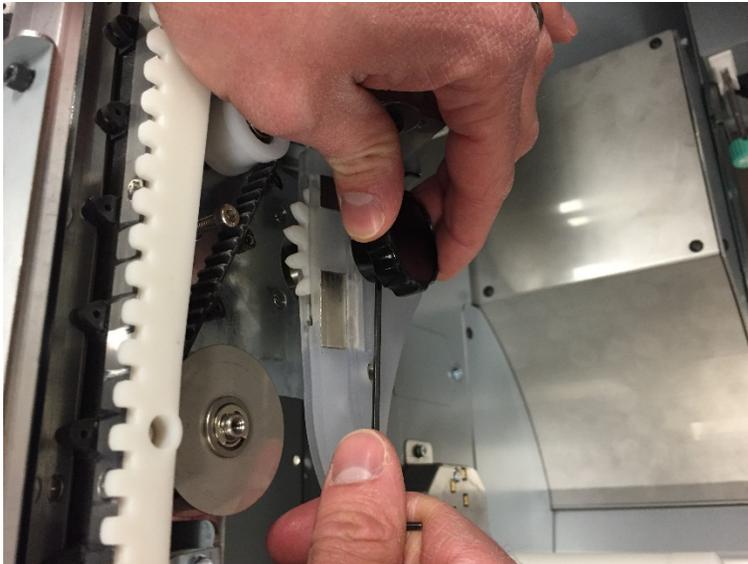


8. Do REP 3.13 [Element Sprocket Nose Replacement](#) to remove the Element Sprocket Nose Assembly.
9. While supporting the Motor with your free hand, remove the M3 Screws (4) mounting the Stepper Motor.
10. Remove the Motor.

Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Connect the Power Cord.
3. Power ON the eWire.

7. Loosen the set screw and remove the Element Sprocket Knob.



REP 3.9 Spool Rewind Drive Assembly Replacement, M8 PARTS LIST ON PL 5.8

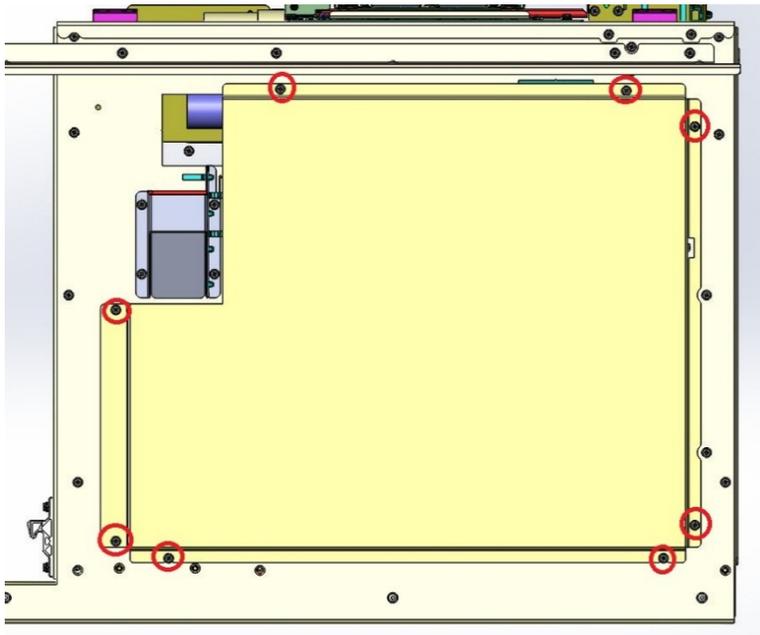
Use this procedure to remove and install the Spool Rewind Drive Assembly. The Spool Rewind Motor (M8) and Spool Rewind Belt are included as part of this assembly.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

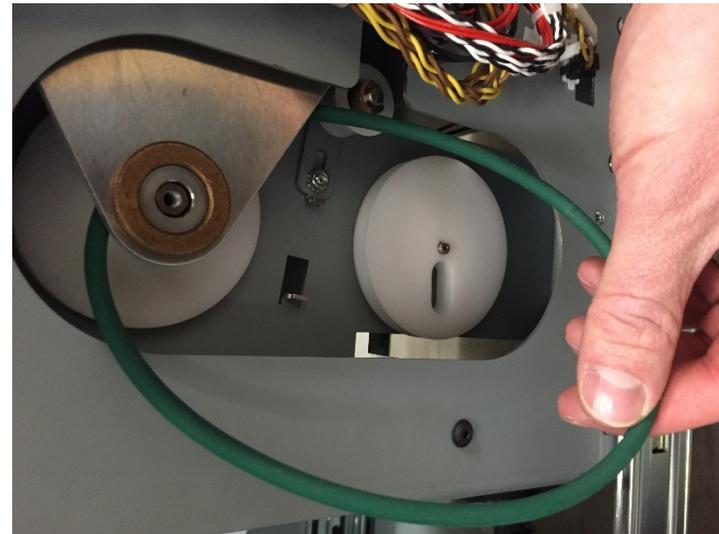
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Element Feeder Rear Cover by removing the M4 Screws (8). The bottom screws can be used as a pivot to aid removal.



6. Loosen the M4 Screws on the Belt Tensioner and slide the Tensioner forward to relieve tension on the Spool Rewind Belt.



7. Slide the Belt off of the Drive Pulley.



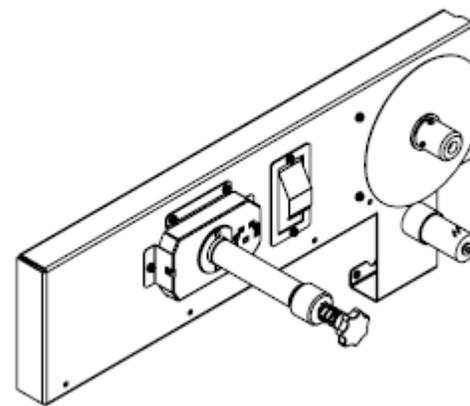
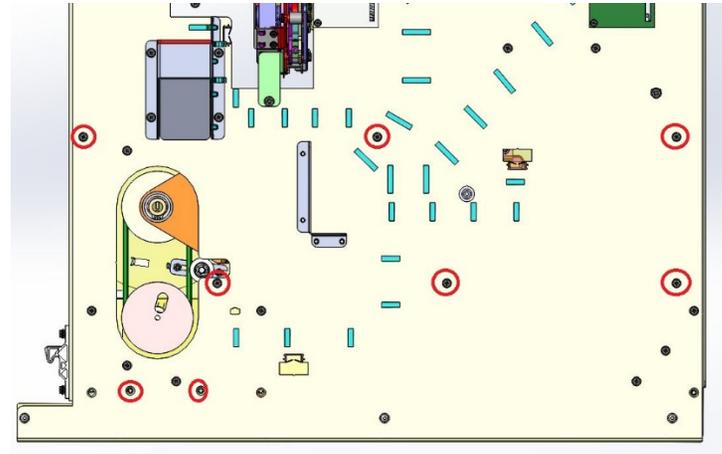
8. Remove the Spool Detect Cover by removing the M4 Screws (3).



9. Remove the curved Rear Baffle by removing the M4 Screws (6)



10. Remove the M4 Screws (8) securing the Spindle Frame Assembly to the Element Feeder. Carefully tilt the Spindle Frame Assembly forward to remove it from the Element Feeder Body.



Spindle Frame Assembly

11. Disconnect the Motor Cable at the header.



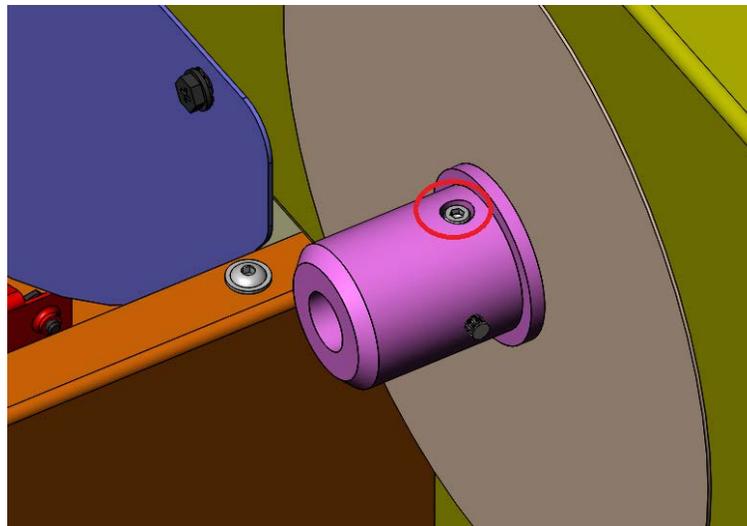
12. Remove the Retaining Ring and Washer from rear side of the Rewind Hub.



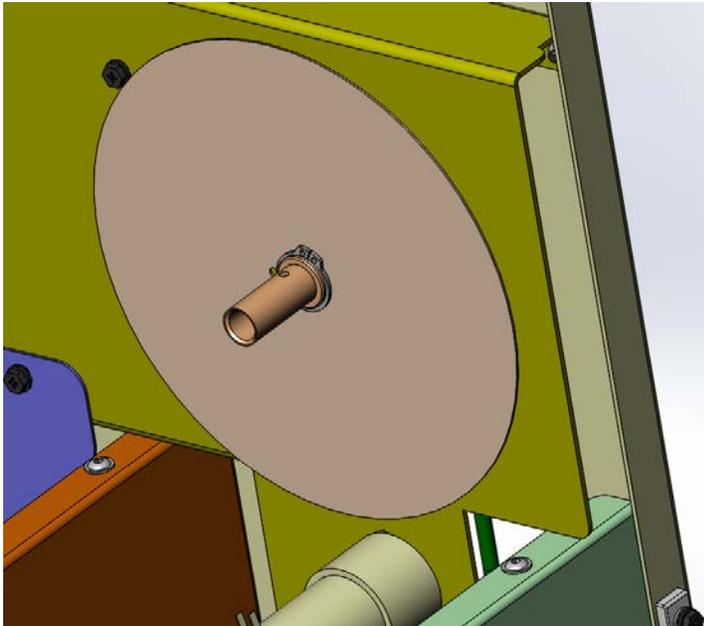
13. Loosen the M4 Set Screw securing the Idler Pulley to the Rewind Spool Shaft, and slide the Idler Pulley off of the Shaft.



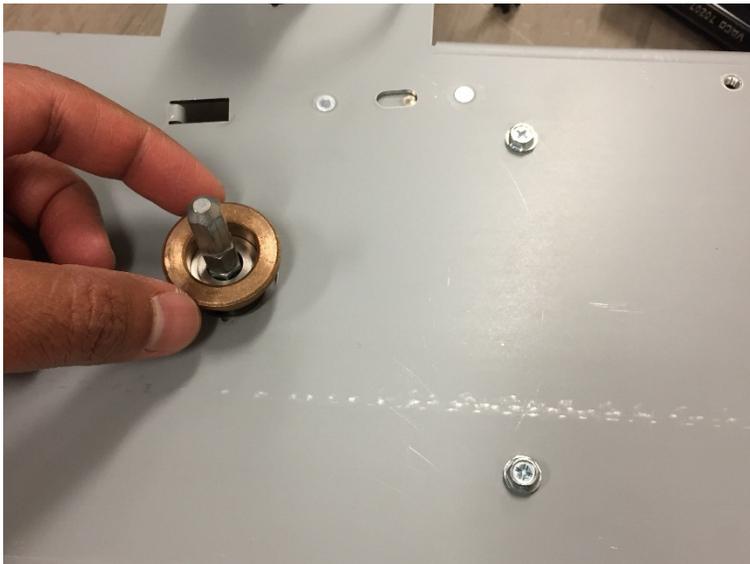
14. Remove the M3 Screw securing the Liner Tube to the Spool Rewind Hub.



15. Remove the retaining ring from the Spool Rewind Hub and slide the flange off of the shaft.



16. Remove the flanged bearings and slide the Rewind Hub out of the assembly. Slide the Idler Pulley off of the Rewind Hub from the opposite side of the assembly and remove it.



17. Loosen the M4 Set Screw securing the Drive Pulley to the Motor shaft and remove the Drive Pulley



18. Remove the Spool Rewind Motor M8 by removing the #4-40 Screws securing it to the Element Feeder.



Installation Procedure

1. Reverse the steps found in the Removal Procedure.
2. Connect the Power Cord.
3. Power ON the eWire.

REP 3.10 Element Feed Track Assembly Replacement

PARTS LIST ON PL 5.9

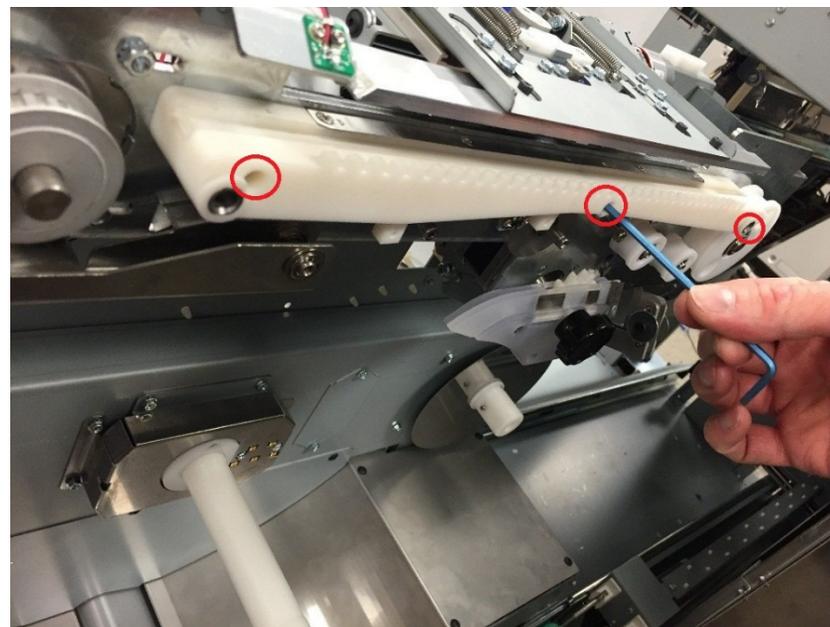
Use this procedure to remove and install the Element Feed Track Assembly 7716577.

WARNING

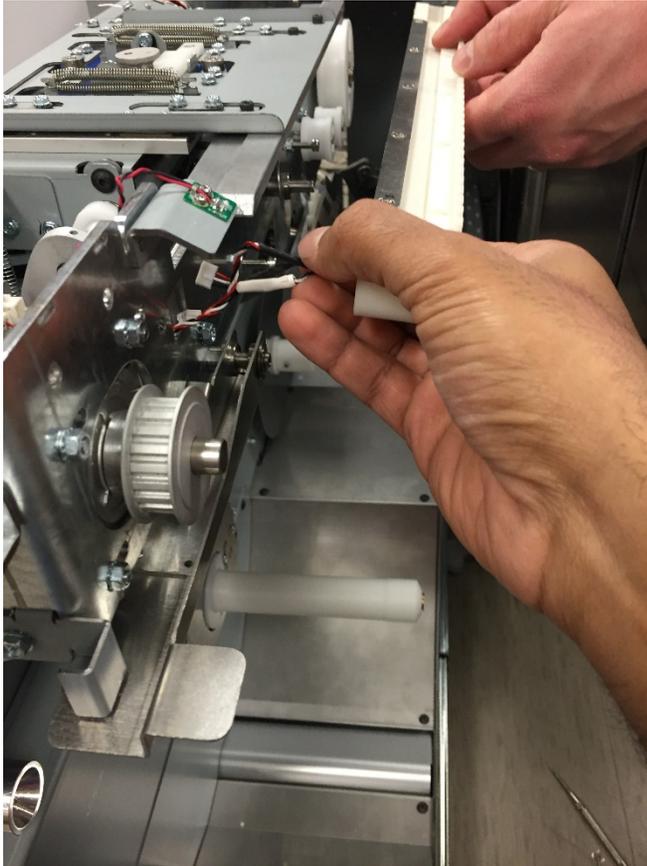
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Do REP 3.6 [Element Feeder Belt Replacement](#) to remove the Element Feed Belt.
6. Do [REP 3.2](#) and [REP 3.3](#) to remove sensors S22 and S25.
7. Remove the M4 Screws (3) securing the Element Feed Track Assembly to the frame.



8. Remove the Element Feed Track Assembly.



Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Connect the Power Cord.
3. Power ON the eWire.

REP 3.11 Element Feed Belt Idler Replacement

PARTS LIST ON PL 5.9

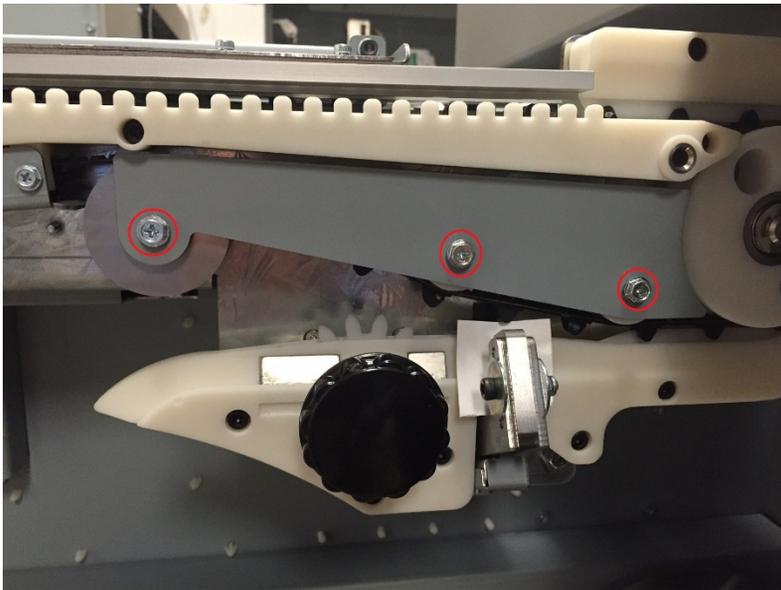
Use this procedure to remove and install the Element Feed Belt Idler.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

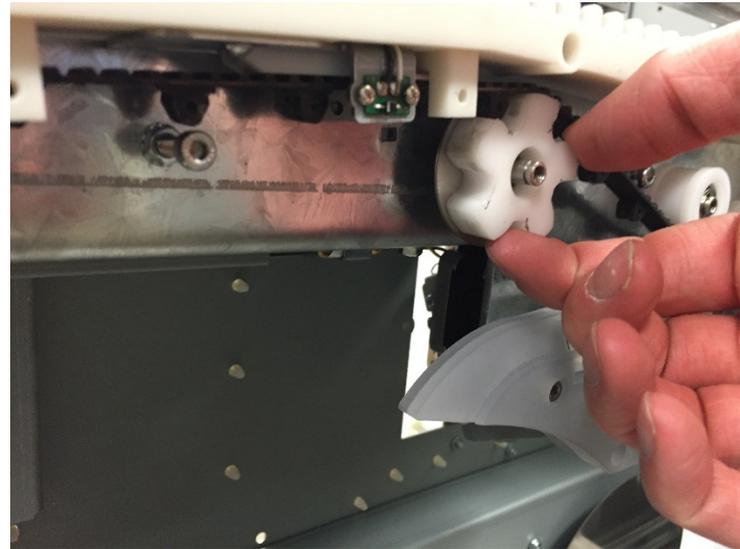
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Remove the Element Feeder Belt Cover by removing the M4 Screws (3).



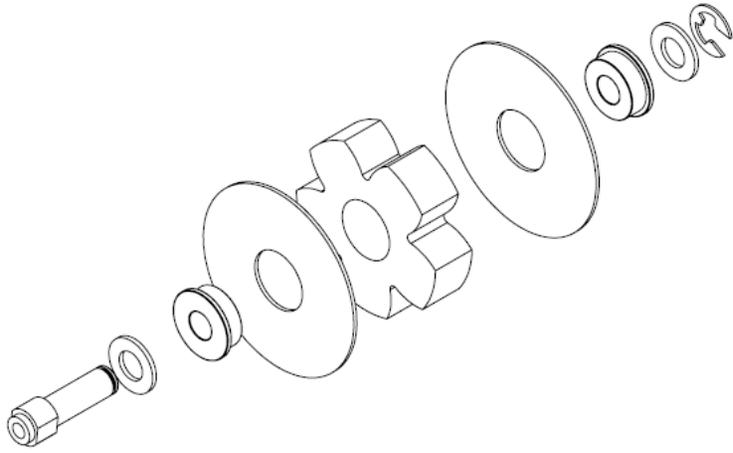
6. Using a screwdriver, remove the e-ring from the end of the Idler shaft.



7. Slide the outermost Flange and Bearing off of the shaft and set it aside. Gently slide the plastic Idler Pulley off the shaft, carefully disengaging it from the Belt.



8. Slide the Belt off the Idler Hub and allow the belt to hang down to relieve tension on the Belt. Remove the inner Bearing, Flange, and Washer.



Idler Assembly

Installation Procedure

1. Reverse the steps in the Removal Procedure to install the new Idler Pulley Assembly. Note the orientation of the plastic idler component when installing.
2. Do GP 6.8 to install the Supply Spool.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 3.12 Element Sprocket Nose Replacement

PARTS LIST ON PL 5.9

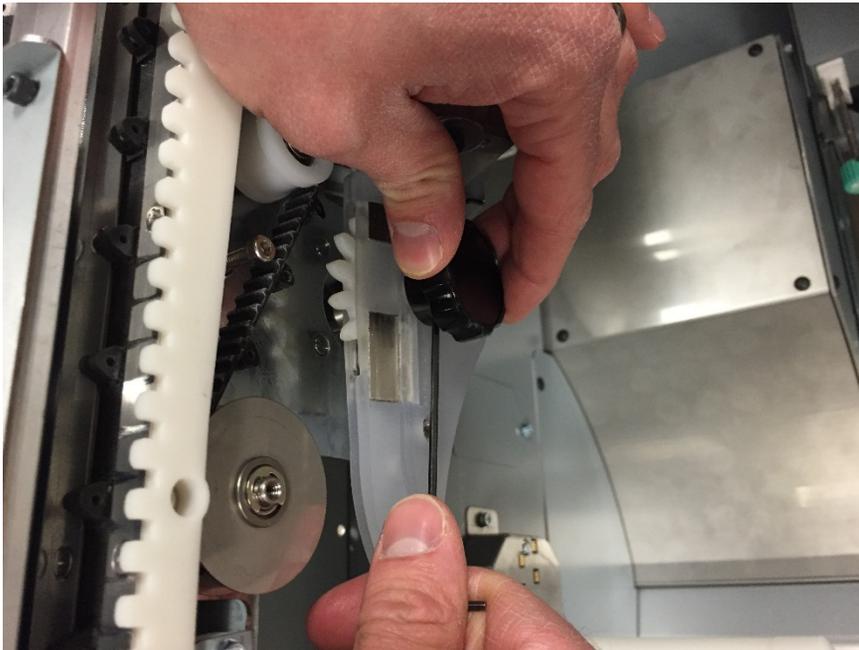
Use this procedure to remove and install the Element Sprocket Nose Assembly, 7718110.

WARNING

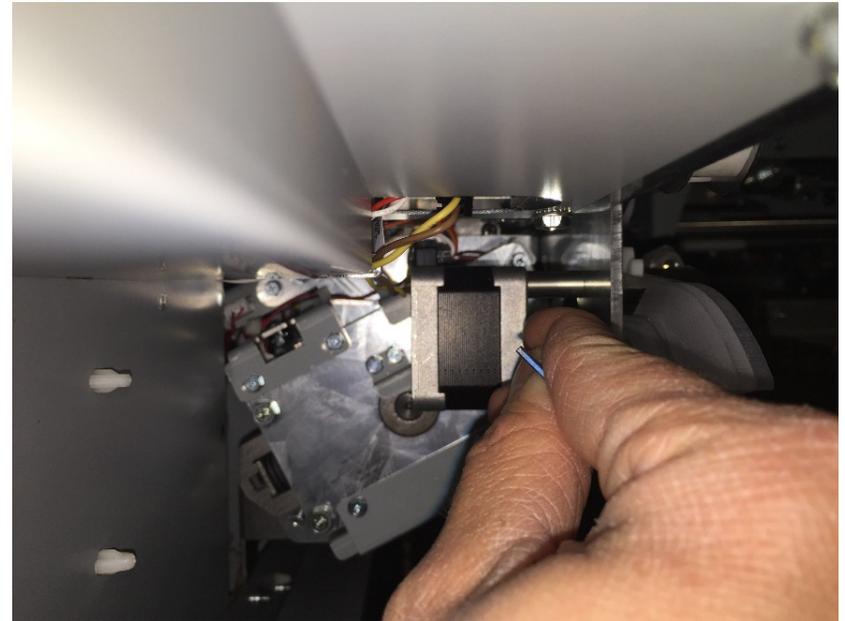
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and slide out the Element Feeder drawer.
4. Do GP 6.8 to remove the Supply Spool.
5. Loosen the Set Screw and remove the plastic Knob from the Element Sprocket Shaft.



6. Loosen the Set Screw to allow the Sprocket Feed Shaft to be removed from the stepper motor.



7. Remove the M4 Screws (3) securing the Sprocket Nose Sub-Assembly to the Element Feeder



8. Remove the Sprocket Nose Sub-Assembly from the Element Feeder.

Installation Procedure

1. Slide the new Element Sprocket Nose Assembly onto the housing and align it to the Element Feeder frame.
2. Secure the new Element Sprocket Nose Assembly to the frame using the M4 Screws (3).
3. Tighten the Set Screw to secure the Sprocket Feeder Shaft to the Stepper Motor.
4. Install the plastic Knob onto the Sprocket Feeder Shaft and secure it using the Set Screw.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 3.13 Element Engagement Guide Replacement

PARTS LIST ON PL 5.9

Use this procedure to remove and install the Element Engagement Guide Assembly.

WARNING

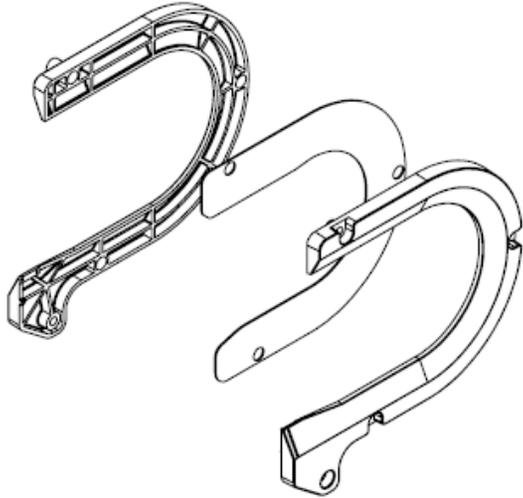
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Front Door and Slide the Element Feeder out.
4. Remove the M4 Screws (4) securing the Element Engagement Guide to the Element Feeder.
5. Slide the Element Engagement Guide towards the back of the machine to remove it. Take care not to damage the Feeder Belt teeth. The middle plate on the Element Engagement Guide runs in the center gap of the Belt Teeth.

Installation Procedure

1. Slide the new Element Engagement Guide onto the Element Feeder, installing it by sliding it in from the rear.



Element Engagement Guide Assy

2. Carefully align the Element Engagement Guide to the Belt, making sure the Element Engagement Guide does not interfere with the Belt teeth.
3. Secure the new Element Engagement Guide by tightening the M4 Screws (4).
4. Connect the Power Cord.
5. Power ON the eWire.

REP 3.14 Knife Module Replacement

PARTS LIST ON PL 5.11

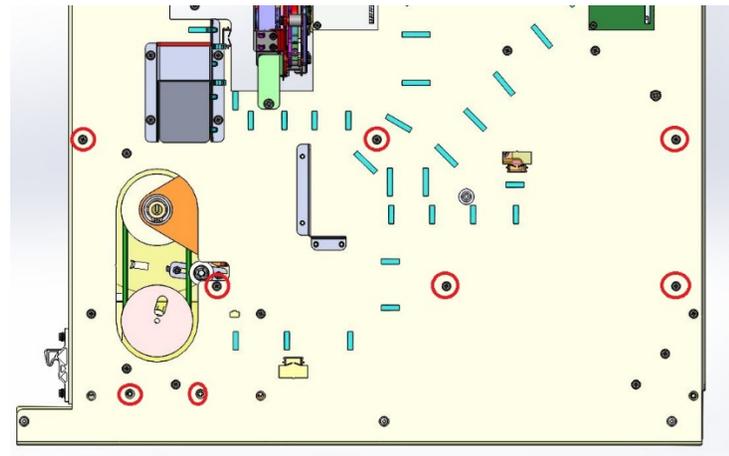
Use this procedure to remove and install the Knife Module

WARNING

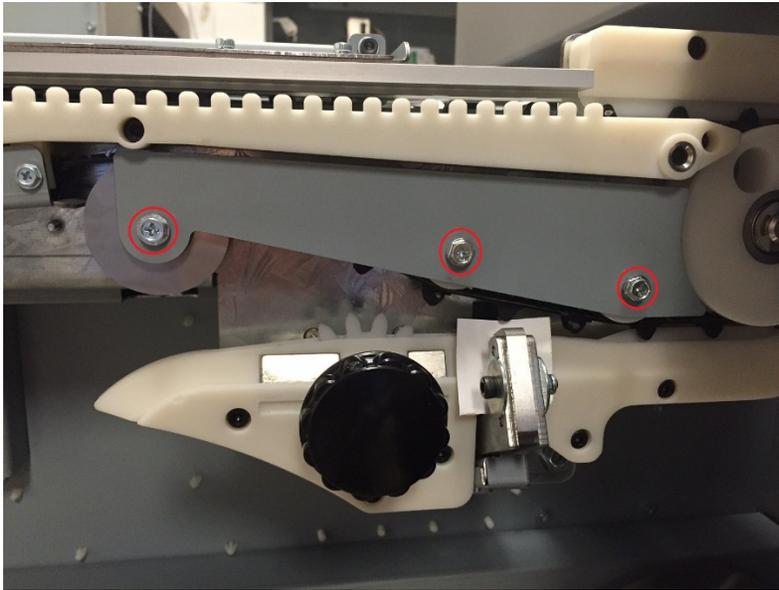
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

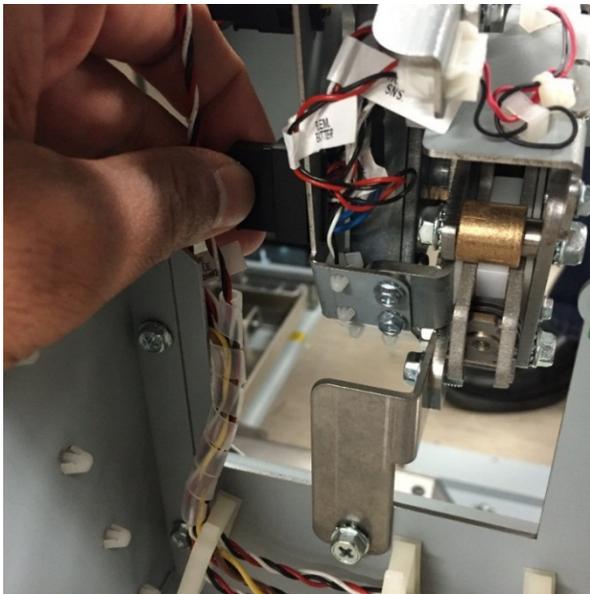
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. **NOTE: Handle the Knife Module carefully and keep fingers clear of the knife blade.**
4. Open the Front Door and slide out the Element Feeder drawer.
5. Do GP 6.8 to remove the Supply Spool.
6. Remove the Element Feeder Back Cover by removing the M4 Screws (8).



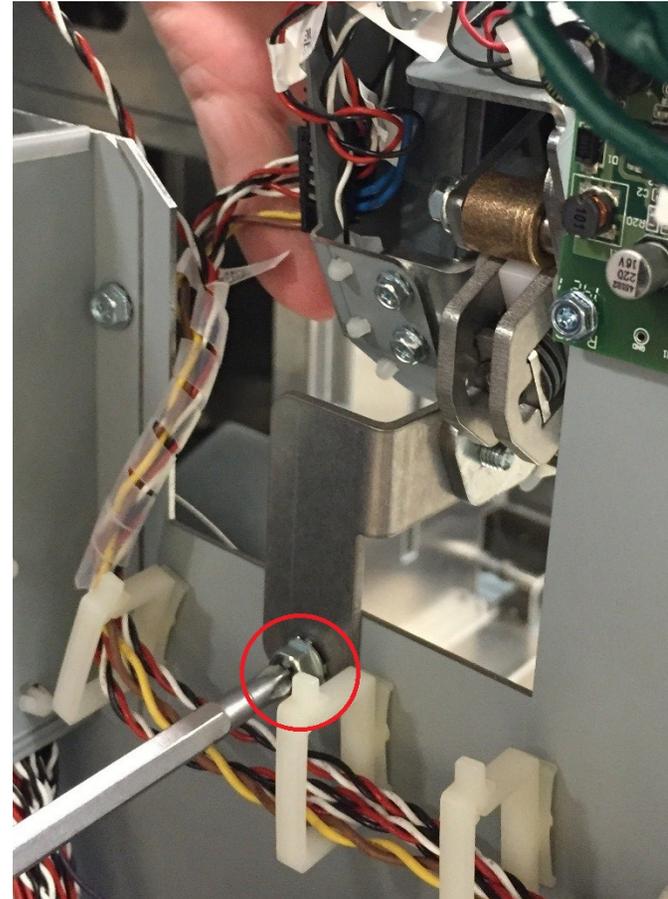
7. Remove the Element Feeder Belt Cover by removing the M4 Screws (3)



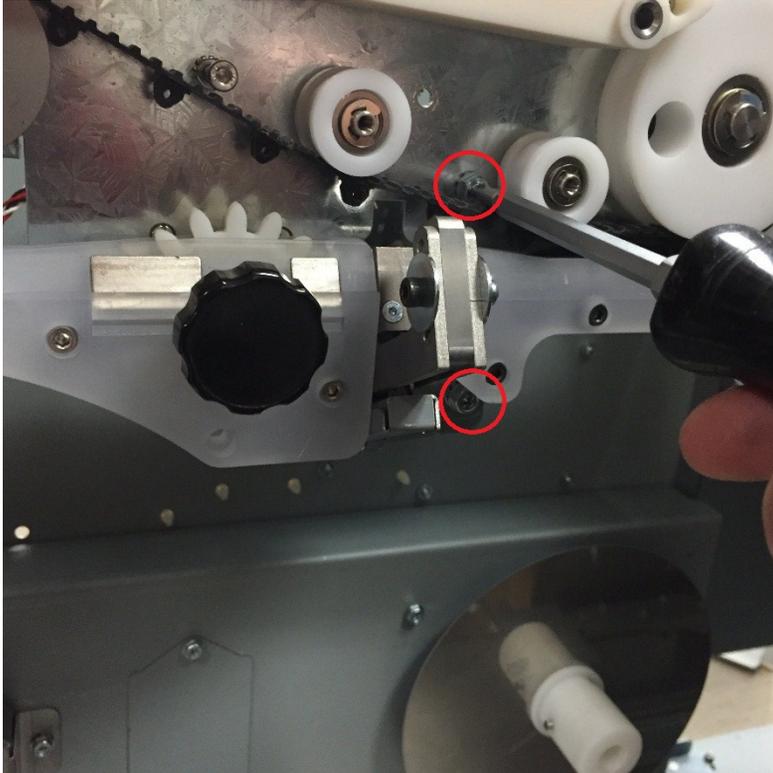
8. Unplug the Knife Module harness at the wire header.



9. Remove the M5 Screw securing the rear of the Knife Module.



10. While supporting the sub-assembly, remove the M5 Screws (2) securing the front of the Knife Module and carefully remove the Knife Module from the Element Feeder.



Installation Procedure

1. Carefully slide the new Knife Module into position on the Element Feeder. Line up the M5 screw holes with the appropriate threads on the frame.
2. Secure the new Knife Module by tightening the M5 Screws (2 front, 1 back).
3. Connect the Knife cable at the header.
4. Replace the Element Feeder Back Cover by Securing the M4 Screws (8). The bottom screws can be used as a support to help position the cover.
5. Do GP 6.8 to replace the Element Spool.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 3.14.1 Element Detect at Knife Sensor Replacement S21

PARTS LIST ON PL 5.11

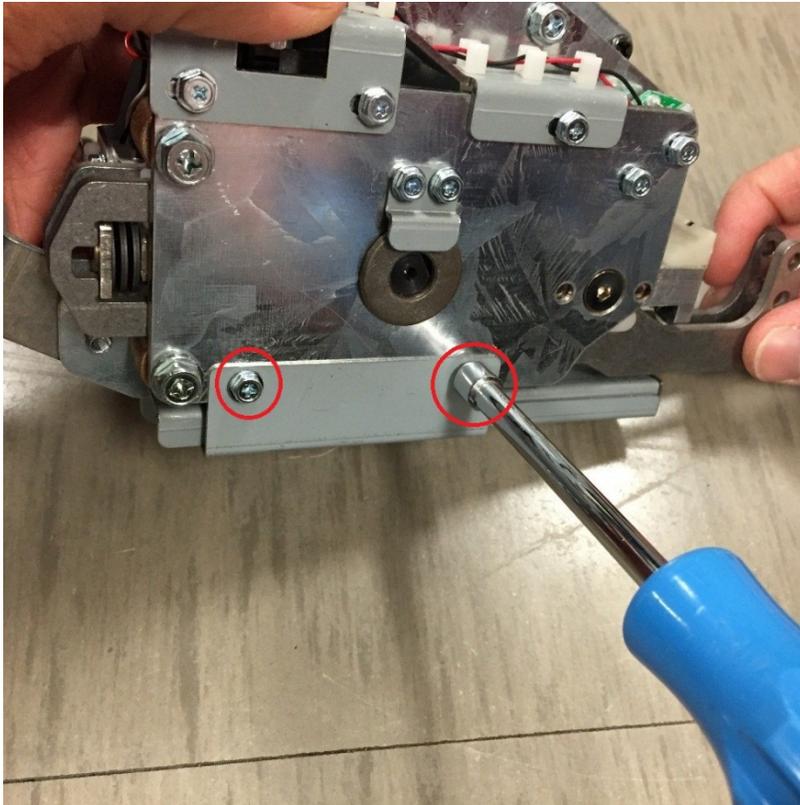
Use this procedure to remove and install the Sensor for Element Detect at Knife, S21.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Knife Module Replacement](#) to remove the Knife Module
4. Remove the Bottom Cover by removing the M3 Screws (2)



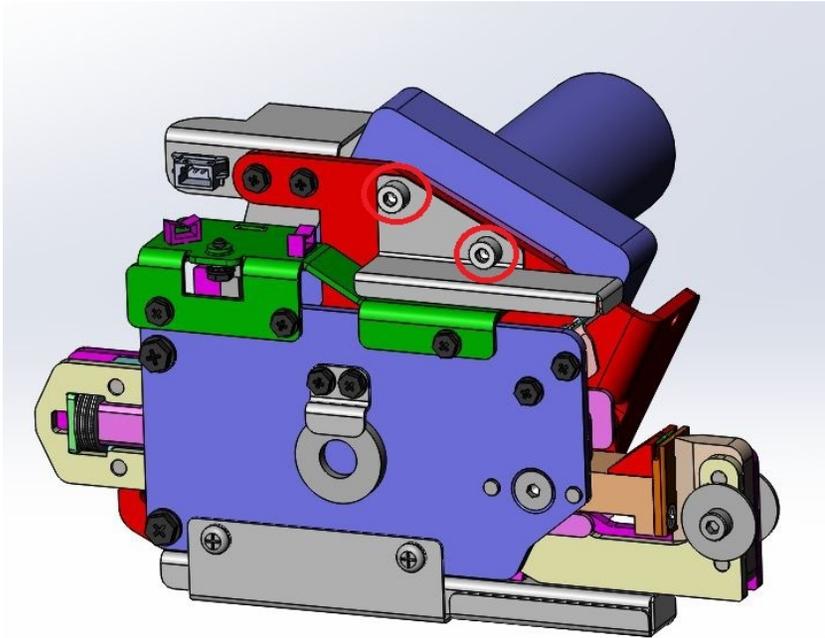
5. Remove the sensor wires connector at the header.



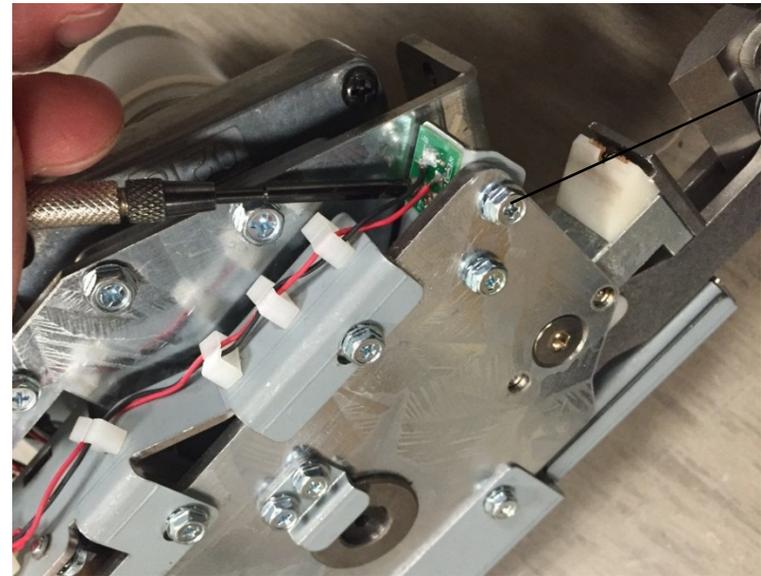
6. Remove the M2 Screw from the underside of the Sensor Mounting Block.
7. Remove the Sensor Mounting Block by pulling up on the block. Remove the Sensor by sliding it out of the Sensor Mounting Block.



8. Remove the Upper Cable Cover by removing the M3 Screws (2).

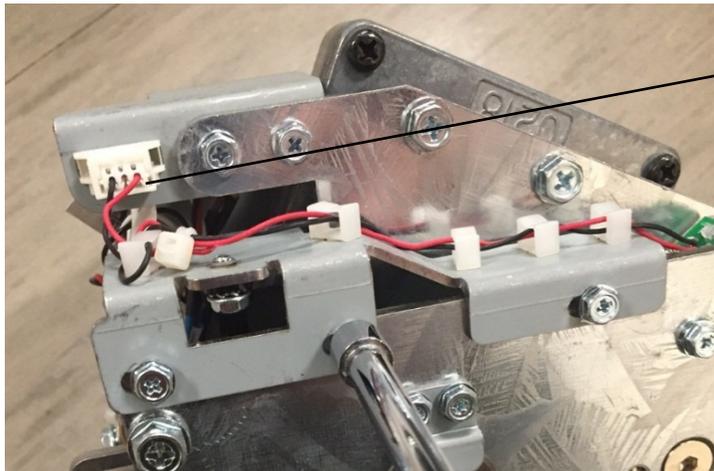


10. Remove the M2 mounting Screws from the Emitter PCB and remove the Emitter PCB.



Emitter Mounting Screws

9. Disconnect the Emitter Cable at the cable header.



Emitter Cable Connection

Installation Procedure

1. Align the new Emitter PCB on the mounting bracket and secure it using the M2 Screws.
2. Connect the Emitter cable at the header and run the cable through the wire clamps.
3. Attach the Upper Wire Cover using the M3 Screws (2).
4. Slide the new Receiver PCB into the Sensor Housing Assembly.
5. Run the Sensor cable through the opening and slide the Sensor Housing Assembly into place. Secure the Sensor Housing Assembly using the M2 Screw.
6. Install the Cable Conduit by tightening the M3 Screws (2).
7. Run the Receiver Cable through the cable clamps on the Cable Conduit and connect it at the Cable Header.
8. Install the Lower Cable Cover using the M3 Screws (2).
9. Do REP 3.15 [Knife Module Replacement](#) to install the Knife Module.
10. Connect the Power Cord.
11. Power ON the eWire.

REP 3.14.2 Knife Home Sensor Replacement S23

PARTS LIST ON PL 5.11

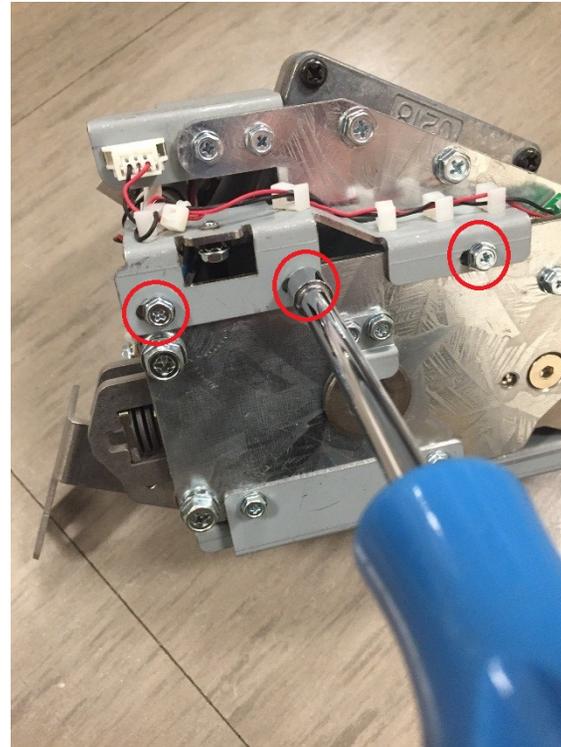
Use this procedure to remove and install the Knife Home Sensor

WARNING

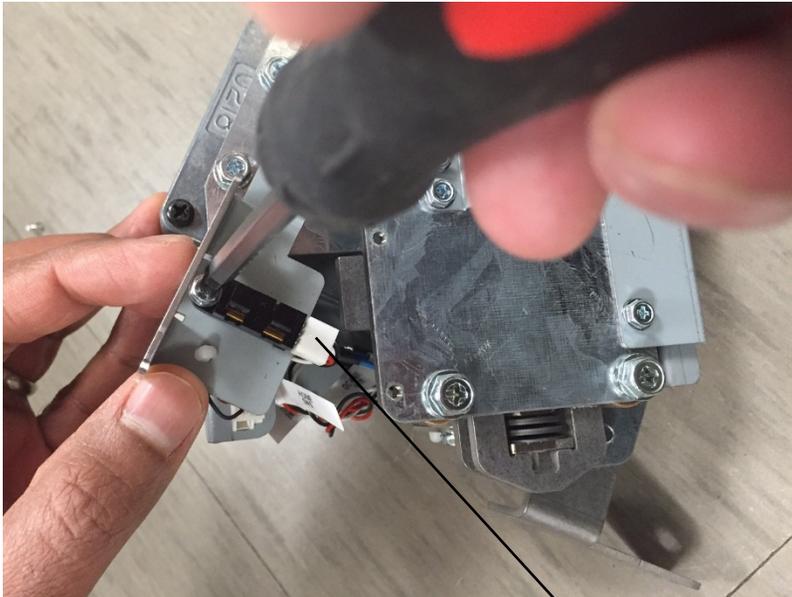
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Knife Module Replacement](#) to remove the Knife Module
4. Remove the Upper Cable Cover by removing the M3 Screws (2).
5. Remove the Sensor Bracket by removing the M3 Screws (3).



6. Disconnect the Sensor Cable from the Sensor.
7. Remove the M3 Screw securing the sensor and remove the old Sensor.



Sensor Cable
Connection

Installation Procedure

1. Align the new Sensor on the Sensor Bracket using the tab. Secure the new Sensor to the Sensor Bracket using the M3 Screw.
2. Connect the Sensor Cable to the Knife Home Sensor.
3. Secure the Sensor Bracket by using the M3 Screws (3).
4. Secure the Upper Cable Cover by tightening the M3 Screws (2).
5. Do REP 3.15 [Knife Module Replacement](#) to install the Knife Module.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 3.14.3 Knife Anvil and Blade Replacement

PARTS LIST ON PL 5.11

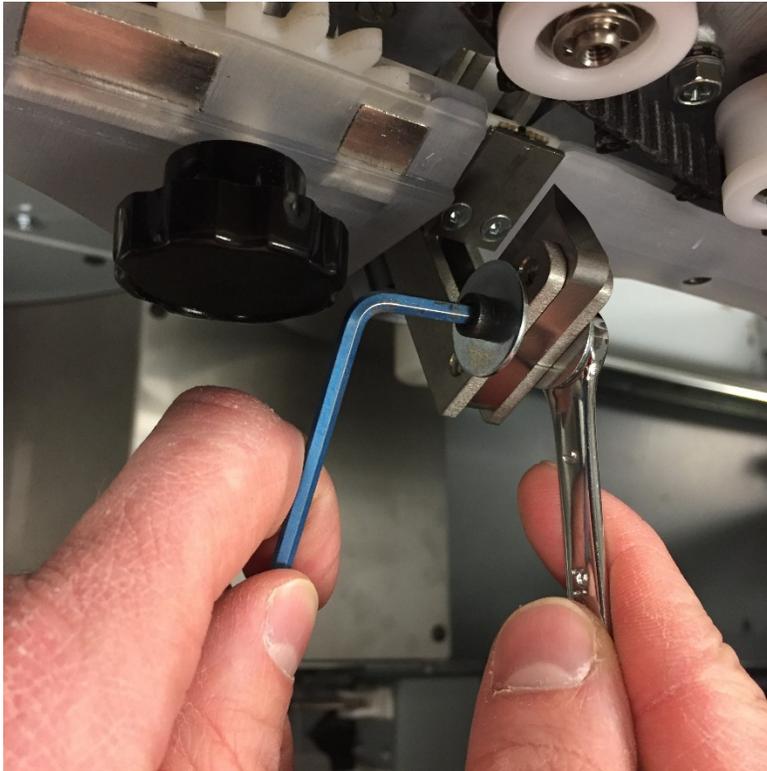
Use this procedure to remove and install the Knife Anvil and Blade

WARNING

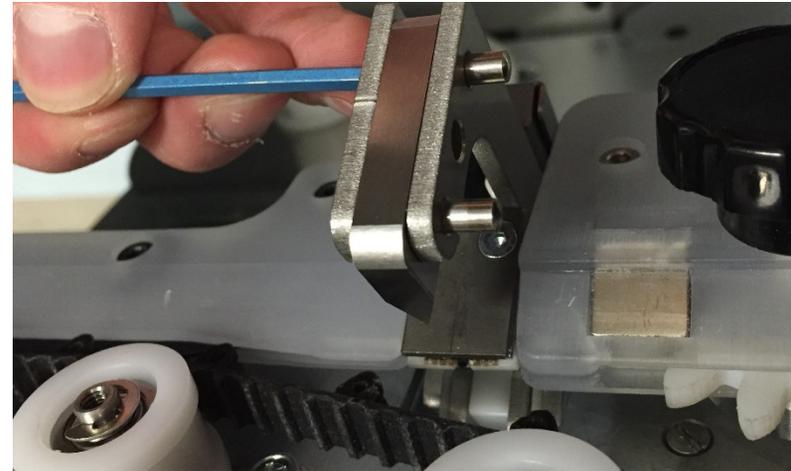
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

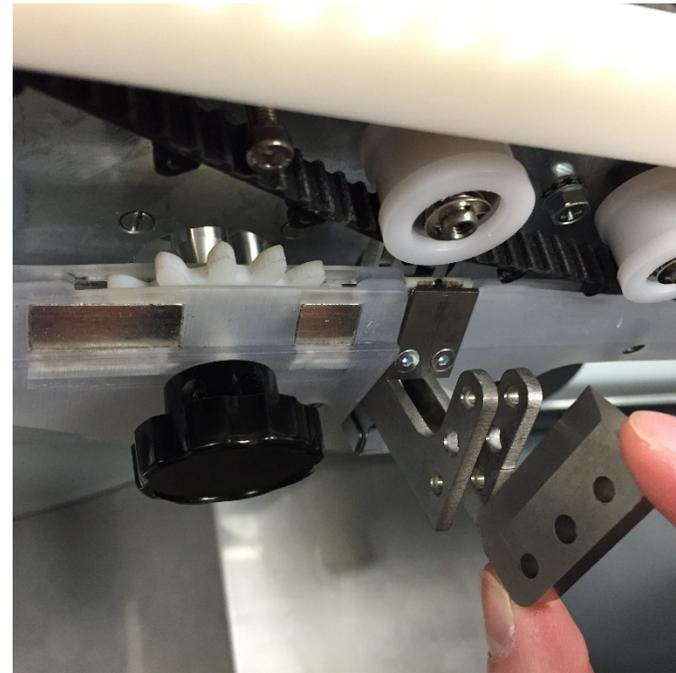
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. **NOTE: Handle the Knife Module carefully and keep fingers clear of the knife blade edge.**
4. Remove the M4 Screw and Nut securing the Knife Blade to the Knife Module Arm. Set aside the Screw, Nut, and Washers.



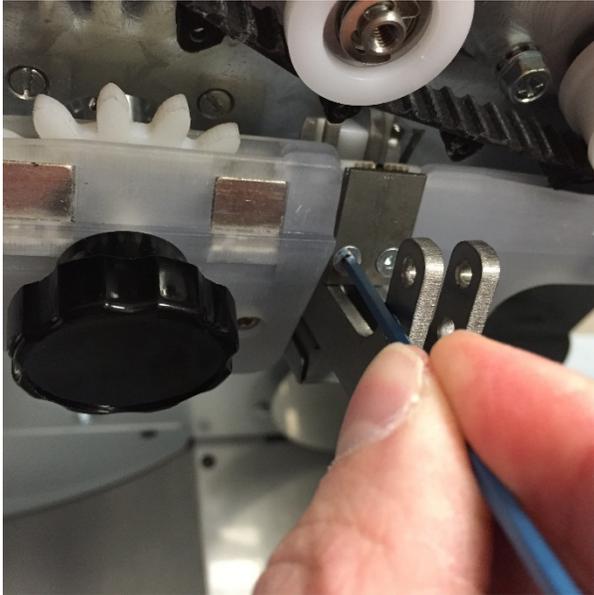
5. While securing the Knife Blade, press the Alignment Pins out of the Knife Blade by pushing them through the opening.



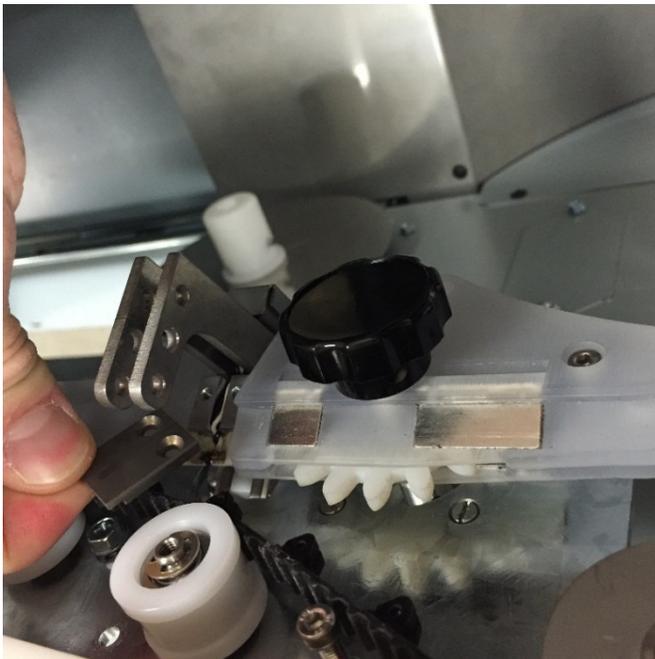
6. Remove the Knife Blade.



7. Remove the M3 Flat Head Screws securing the Knife Anvil.



8. Remove the Knife Anvil



Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Do REP 3.15 [Knife Module Replacement](#) to install the Knife Module.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 3.15 Element Transfer Module Replacement

PARTS LIST ON PL 5.12

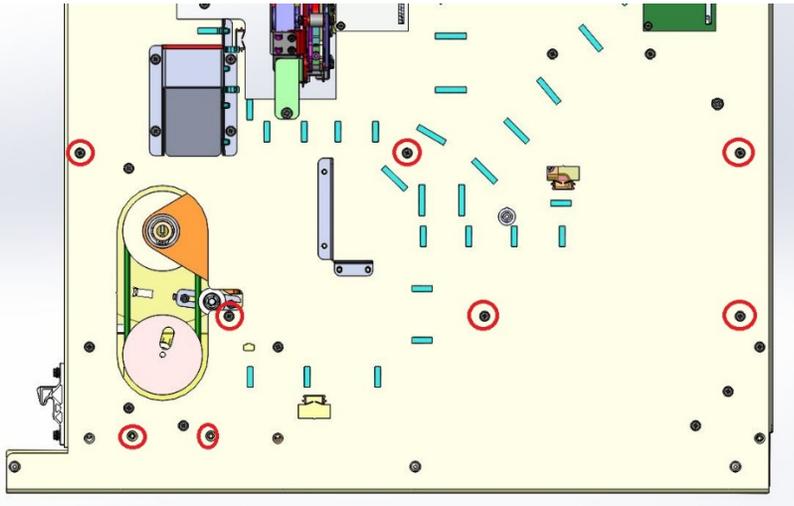
Use this procedure to remove and install the Element Transfer Module, which also carries the Expanding T Module.

WARNING

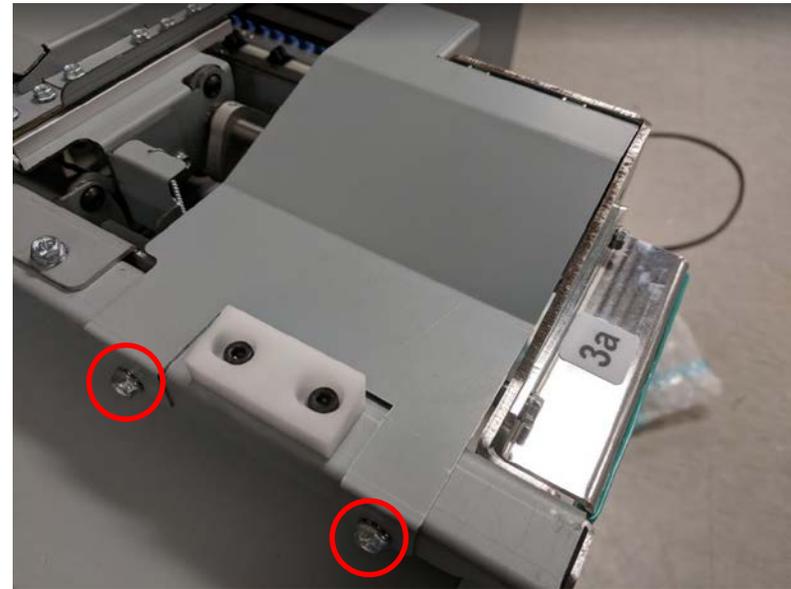
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

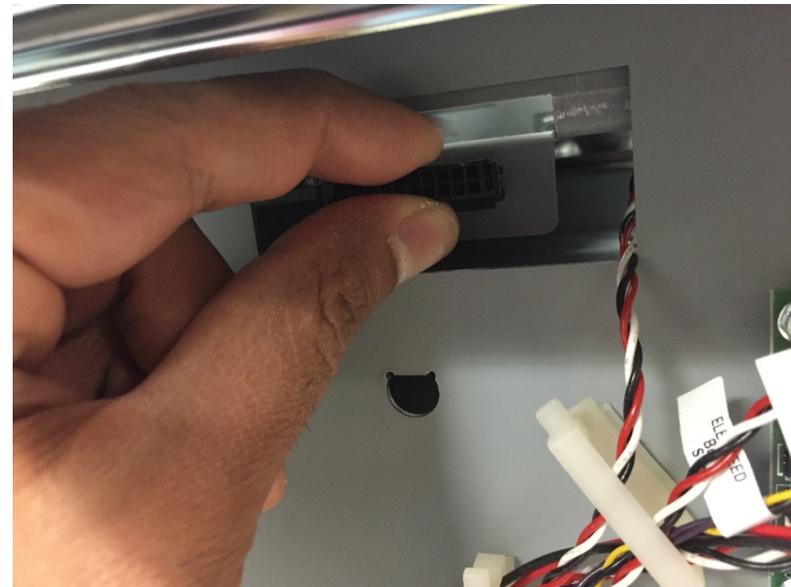
5. Switch power OFF to eWire.
6. Disconnect the Power Cord.
7. Open the Front Door and slide out the Element Feeder drawer.
8. Do GP 6.8 to remove the Supply Spool.
9. Remove the Element Feeder Rear Panel by removing the M4 Screws (8). The bottom 2 screws can be used as a pivot to aid assembly.



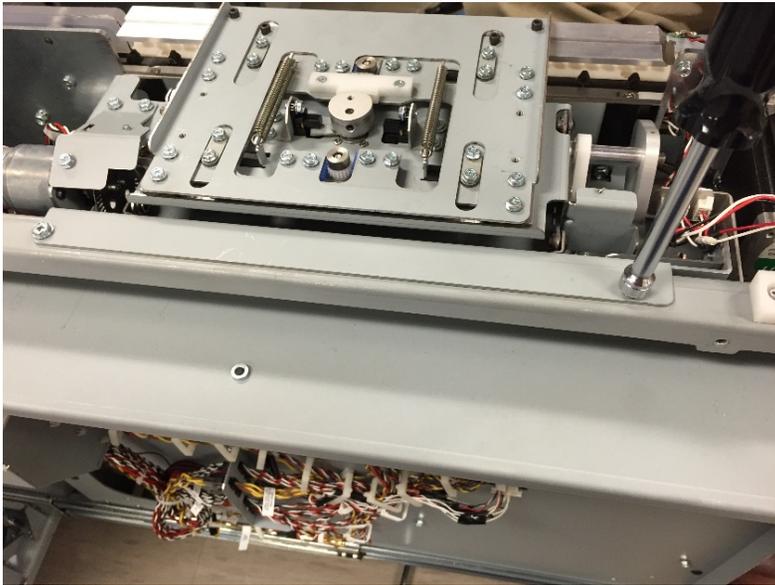
10. Remove the M4 Screws (2) securing the Upper Element Feeder Cover



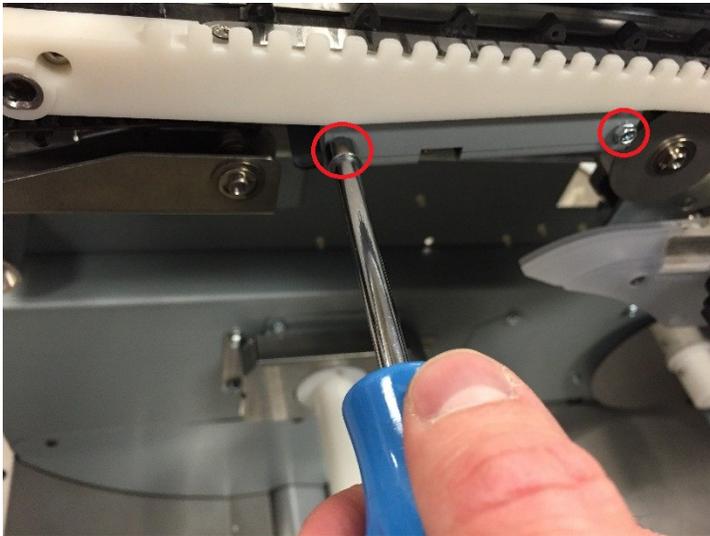
11. Disconnect the cable to the Element Transfer Module at the header.



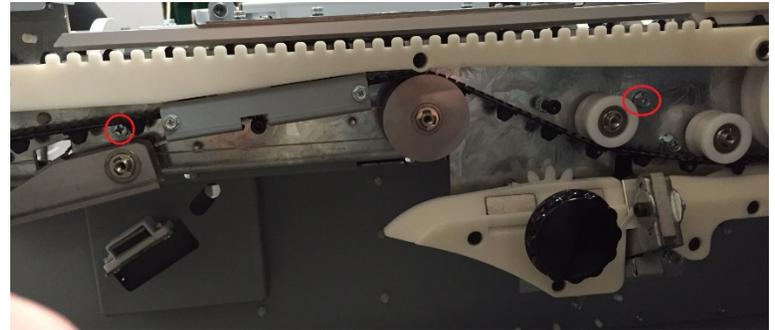
12. Remove the M4 Screws (2) supporting the upper portion of the Element Transfer Module.



13. Remove the Element Feeder Belt Cover by removing the M4 Screws (2).



14. Remove the M4 Screws supporting the front of the Element Transfer Module.



15. Remove the Element Transfer Module by lifting it straight up out of the Element Feeder.

Installation Procedure

16. Carefully slide the Element Transfer Module into position on the Element Feeder. Secure the Element Transfer Module using M4 Screws (4).
17. Replace the Element Feeder Belt Cover.
18. Replace the Element Feeder Back Cover by Securing the M4 Screws (8). The bottom screws can be used as a support to help position the cover.
19. Replace the Element Feeder Upper Cover
20. Connect the Power Cord.
21. Power ON the eWire.

REP 3.15.1 Element Pushover Encoder Sensor Replacement S31
PARTS LIST ON PL 5.12

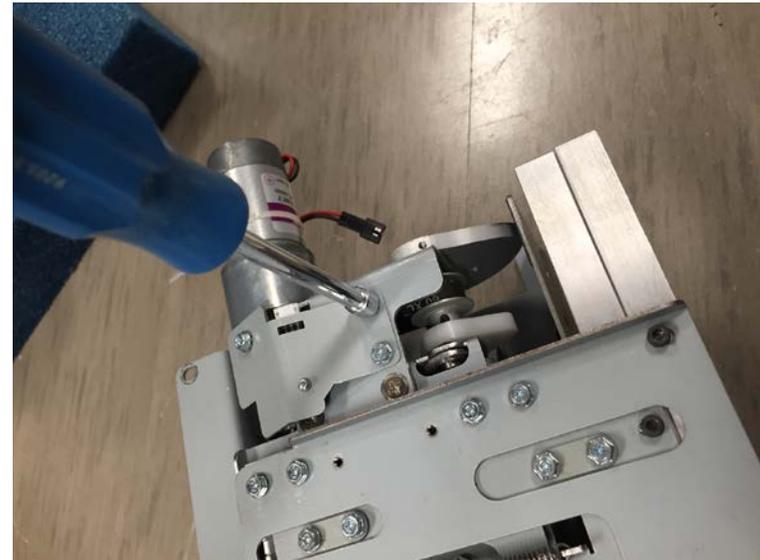
Use this procedure to remove and install the Pushover Encoder Sensor on the Element Transfer Module.

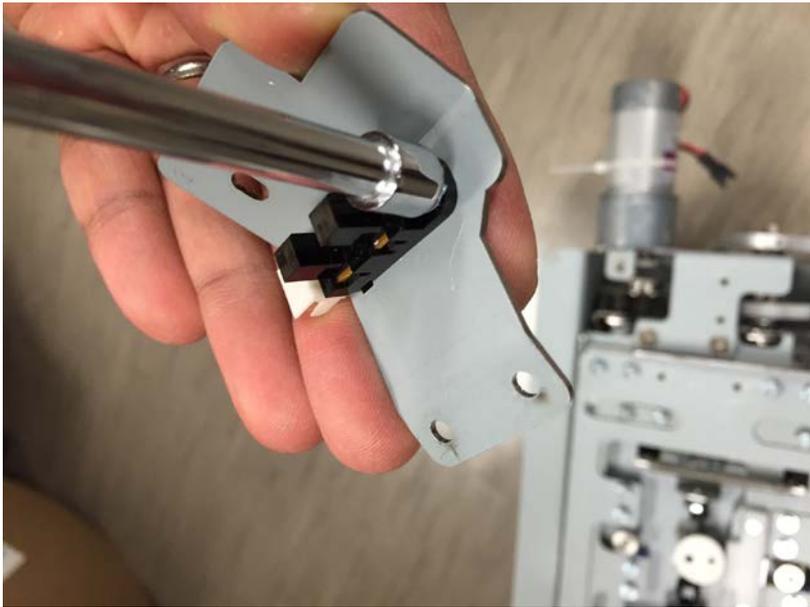
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Disconnect the Sensor Cable from the Pushover Encoder Sensor.
4. Remove the Encoder Sensor Bracket by removing the M3 Screws (2).
5. Remove the old sensor by removing the M3 Screw.





Installation Procedure

1. Place the new Sensor onto the Encoder Sensor Bracket and align it using the tab. Secure the Sensor using an M3 Screw.
2. Install the Encoder Sensor Bracket.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 3.15.2 Pushover Home Sensor Replacement S24
PARTS LIST ON PL 5.12

Use this procedure to remove and install the Pushover Home Sensor.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Disconnect the Sensor Cable from the Pushover Home Sensor.
5. Remove the Pushover Home Sensor by removing the M3 Screw. Slide the old Sensor up and out of the machine.



Installation Procedure

1. Place the new Sensor onto the mounting bracket and align it using the tab. Secure the Sensor using an M3 Screw.
2. Connect the Sensor Cable to the new Sensor.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to install the Element Transfer Module.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 3.15.3 Expanding T Home and Out Sensor Replacement S32 & S33

PARTS LIST ON PL 5.12

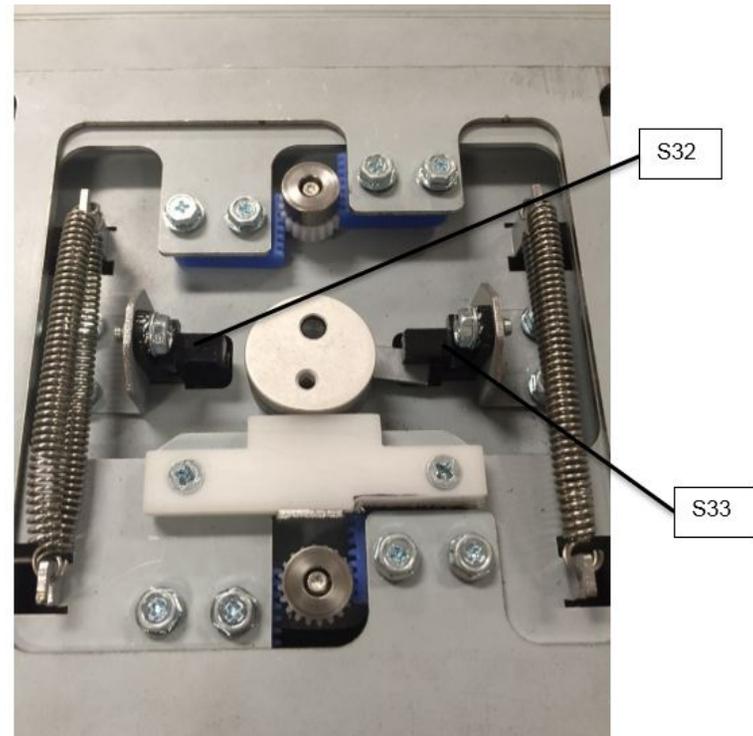
Use this procedure to remove and install the Expanding T Home Sensor S32 and the Expanding T Out Sensor S33. S32 and S33 can be replaced using the same general procedure.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Remove the Expanding T top cover by removing the M3 Screws (4).
4. Remove the Sensor by removing the M3 Screw. Carefully pull the sensor up through the opening in the module.



5. Disconnect the Sensor Cable. Secure the cable end with tape so it does not fall back through the opening.
6. Repeat the procedure for the opposing sensor if necessary.

Installation Procedure

1. Connect the Sensor Cable to the new Sensor.
2. Align the new Sensor with the appropriate mounting bracket using the tab for alignment.
3. Secure the new Sensor using the M3 screw.
4. Repeat the procedure for the opposing sensor if necessary.
5. Replace the Element Transfer Top Cover.
6. RConnect the Power Cord.
7. Power ON the eWire.

REP 3.15.4 Element Transfer Rack Replacement

PARTS LIST ON PL 5.13

Use this procedure to replace the rack component on the Element Transfer module. There are a total of 4 Rack parts on the Element Transfer Module.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Remove the Expanding T top cover by removing the M3 Screws (4).
4. Remove the M3 Screws (2) securing the Rack to the frame.



5. Carefully remove the Rack by sliding it out of the module.
6. Repeat the procedure for the remaining Rack parts if necessary.

Installation Procedure

1. Slide the rack under the mounting plate and align it to the mounting holes on the module.
2. Secure the new Rack using the M3 screws.
3. Repeat the procedure for the remaining Rack Components if necessary.
4. Replace the Element Transfer Top Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 3.15.5 Horizontal Pushover Cam Replacement

PARTS LIST ON PL 5.13

Use this procedure to remove and install the Horizontal Pushover Cam. There are 2 Horizontal Cams, which are the larger and outermost Cam components.

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Note the orientation of the Horizontal Cam.
5. Remove the retaining ring securing the Horizontal Cam to the shaft.



6. Loosen the set screw securing the Cam to the Shaft.



7. Slide the Cam and Washers off the shaft.

Installation Procedure

1. Slide the Washer and the new Cam onto the Shaft.
2. Install the Retaining Ring on the end of the Shaft
3. Tighten the Set Screw to secure the Cam to the shaft.
4. Repeat the procedure for the opposite Cam.
5. Do REP 3.15 [Element Transfer Module Replacement](#) to install the Element Transfer Module.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 3.15.6 Vertical Pushover Cam Replacement

PARTS LIST ON PL 5.13

Use this procedure to remove and install the Vertical Pushover Cam. There are 2 identical Vertical Cams, one on the drive side of the Expanding T and one on the idler side.

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Do REP 3.15.5 [Horizontal Pushover Cam Replacement](#) to remove the Horizontal Cams.
5. Loosen the set screw.
6. Remove the idler side Cam by sliding the spacer off the shaft and removing the Cam and Washers.



7. Do REP 3.15.7 [Expanding T Motor Replacement M13](#) to remove the Pushover Motor Assembly.

8. Loosen the M3 Set Screws (2) securing the Drive Shaft Timing Pulley. Slide the Timing Pulley off the Shaft.
9. Remove the drive side Cam by sliding it and the washers off of the drive shaft.

Installation Procedure

1. Slide the Washer and the new Cam onto the Shaft.
2. For the idler side cam, install the Spacer and do REP 3.15.5 [Horizontal Pushover Cam Replacement](#) to replace the Horizontal Cam on the idler side.
3. For the drive side Cam, slide the new Cam and Washers onto the Drive Shaft. Slide the Timing Pulley onto the drive shaft and secure it using the M3 Set Screws.
4. Do REP 3.15.7 [Expanding T Pushover Motor Replacement M12](#) to replace the Expanding T Pushover Motor Bracket Assembly.
5. Do REP 3.15.5 [Horizontal Pushover Cam Replacement](#) to replace the Horizontal Cam on the drive side.
6. Do REP 3.15 [Element Transfer Module Replacement](#) to install the Element Transfer Module.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 3.15.7 Pushover Motor Assy Replacement M12

PARTS LIST ON PL 5.13

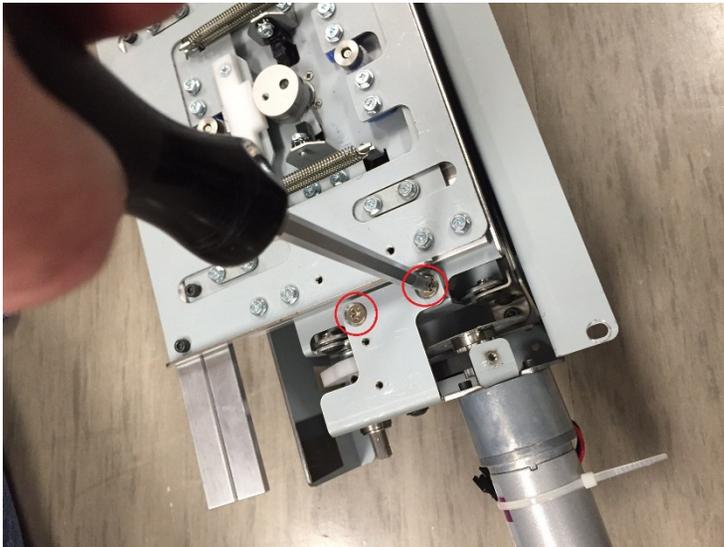
Use this procedure to remove and install the Expanding T Pushover Motor Subassembly.

WARNING

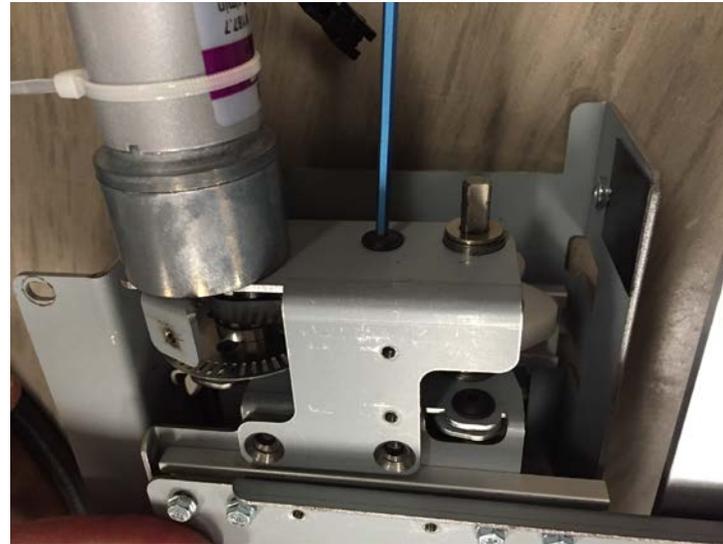
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Do REP 3.15.1 [Element Pushover Encoder Sensor Replacement S31](#) to remove the Pushover Encoder Sensor and the Encoder Sensor mounting bracket.
5. Do REP 3.15.5 [Horizontal Pushover Cam Replacement](#) to remove the Horizontal Pushover Cam on the drive side.
6. Remove the M4 Flat Head Screws securing the top of the Pushover Motor Bracket Assembly.



7. Remove the M3 Screw securing the side of the Pushover Motor Bracket Assembly.



8. Carefully remove the Pushover Motor Bracket Assembly from the frame.
9. Remove the flanged bearing from the drive shaft and remove the Timing Belt from the Motor Drive Pulley. Set the parts aside.

Installation Procedure

1. Install the flanged bearing into the opening on the new Pushover Motor Bracket Assembly.
2. Loosely install the Timing Belt around the Timing Pulley.
3. Place the Wave Spring onto the drive shaft.
4. Slide the Flanged Bearing and the Motor Bracket Assembly onto the Drive shaft, and slide the new Motor Bracket Assembly into place.
5. Adjust the Timing Belt to ensure it is seated properly on the Motor and Drive shaft timing pulleys.
6. Secure the Pushover Motor Bracket Assembly using (2) M4 Flat Head Screws on the top and (1) M3 Screw on the side.
7. Do REP 3.15.5 [Horizontal Pushover Cam Replacement](#) to install the Horizontal Pushover Cam.
8. Do REP 3.15.1 [Element Pushover Encoder Sensor Replacement S31](#) to install the Pushover Encoder Sensor and the Encoder Sensor mounting bracket.
9. Do REP 3.15 [Element Transfer Module Replacement](#) to install the Element Transfer Module.
10. Connect the Power Cord.
11. Power ON the eWire.

REP 3.15.8 Expanding T Motor Replacement M13

PARTS LIST ON PL 5.13

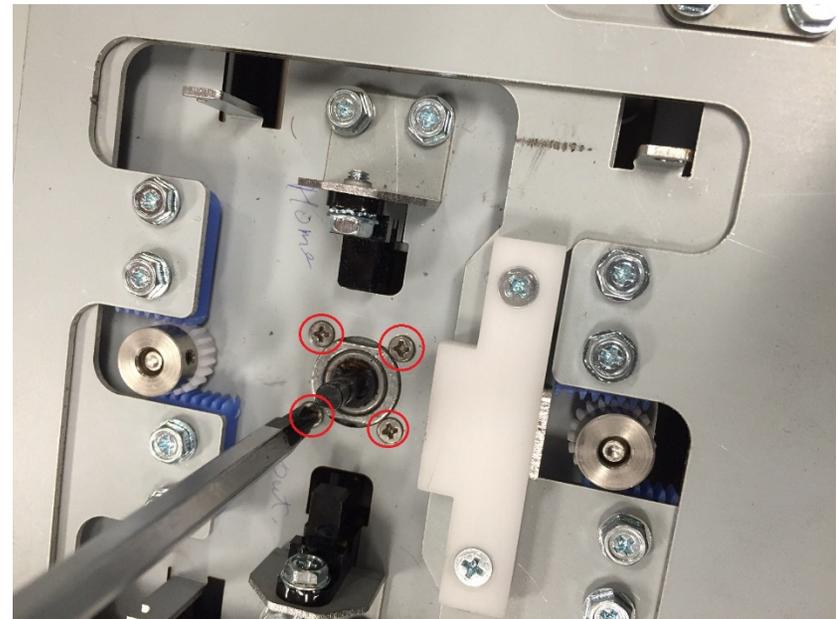
Use this procedure to remove and install the Expanding T Motor, M13

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Remove the Expanding T top cover by removing the M3 Screws (4).
5. Do REP 3.15.9 [Expanding T Cam Replacement](#) to remove the Expanding T Cam.
6. Remove the M2 Screws securing the Expanding T Motor. Support the motor while removing the Screws so it does not fall.



7. Remove the Expanding T Motor by sliding it out of the bottom of the module.

Installation Procedure

1. Secure the new Motor to the frame using the M2 Screws (4).
2. Do REP 3.15.9 [Expanding T Cam Replacement](#) to install the Expanding T Cam.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to install the Element Transfer Module.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 3.15.9 Expanding T Cam Replacement

PARTS LIST ON PL 5.13

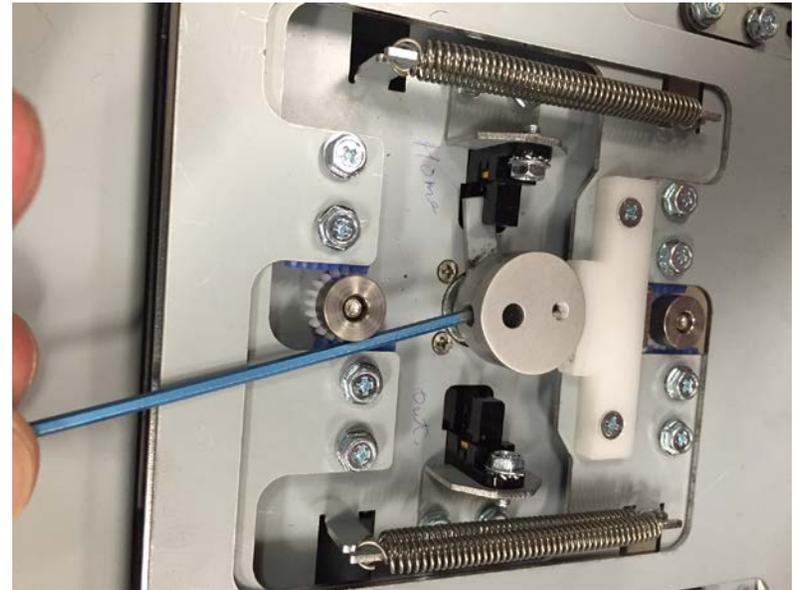
Use this procedure to remove and install the Expanding T Cam.

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Remove the Expanding T top cover by removing the M3 Screws (4).
5. Loosen the M3 Set Screw securing the Cam to the motor shaft. Slide the Cam Assembly off the motor shaft.



6. Remove the Expanding T flag from the Cam by removing the M3 Flat Head Screw. Set aside the flag.

Installation Procedure

1. Secure the Expanding T flag to the new Expanding T Cam by tightening the M3 Flat Head Screw.
2. Slide the new Expanding T Cam onto the Motor shaft.
3. Secure the new Cam by tightening the Set Screw.
4. Replace the Expanding T Top Cover.
5. Do REP 3.15 [Element Transfer Module Replacement](#) to install the Element Transfer Module.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 3.15.10 Expanding T Spring Replacement

PARTS LIST ON PL 5.13

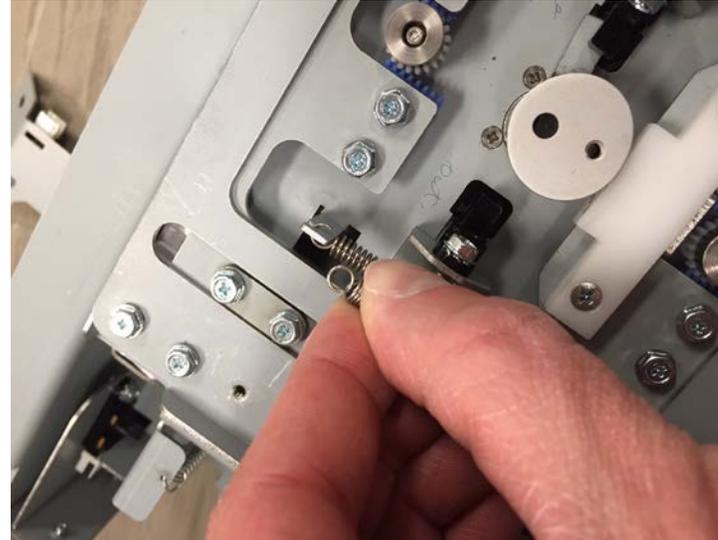
Use this procedure to remove and install the Expanding T Spring. There are 2 springs on each side of the module, for a total of 4.

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Remove the Expanding T top cover by removing the M3 Screws (4).
4. Remove the old spring by pulling the loop up and off the hook.



5. Repeat the procedure for the remaining springs.

Installation Procedure

1. Secure the new spring to the Expanding T by placing the loops on each end of the spring onto the appropriate hooks on the Element Transfer and Expanding T.
2. Repeat the process for the remaining springs.
3. Replace the Expanding T Top Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 3.15.11 Expanding T Motor Counterbalance Spring Replacement PARTS LIST ON PL 5.13

Use this procedure to remove and install the Expanding T Motor Counterbalance Spring.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Element Feeder door and slide out the Element Feeder drawer.
4. Remove the old spring by pulling the end of the spring off the mounting hole. Repeat for the other end of the spring.



Installation Procedure

1. Loop the new spring onto the upper mounting hole. Stretch the spring and secure the opposite end to the lower mounting hole.
2. Connect the Power Cord.
3. Power ON the eWire.

REP 3.15.12 Expanding T Pushover Spring Replacement

PARTS LIST ON PL 5.13

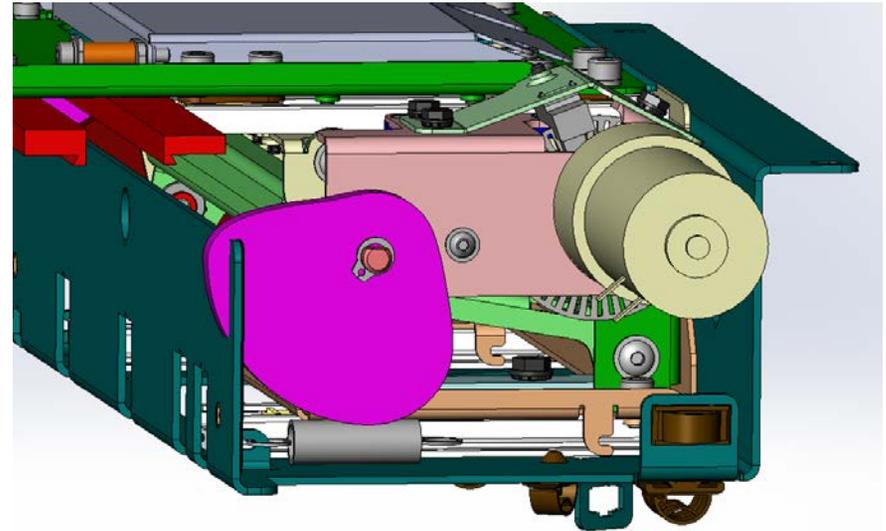
Use this procedure to remove and install the Expanding T Pushover Spring.

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 3.15 [Element Transfer Module Replacement](#) to remove the Element Transfer Module.
4. Loosen the old spring by unhooking the loop at the end of the spring, and remove the spring from the module.
5. Repeat the procedure for the spring on the opposite side.



Installation Procedure

1. Loop the new spring onto the hook. Stretch the spring and secure the opposite end to the other hook.
2. Repeat the process for the spring on the opposite side.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 3.15.13 Expanding T, Leading and Trailing Replacement

PARTS LIST ON PL 5.13

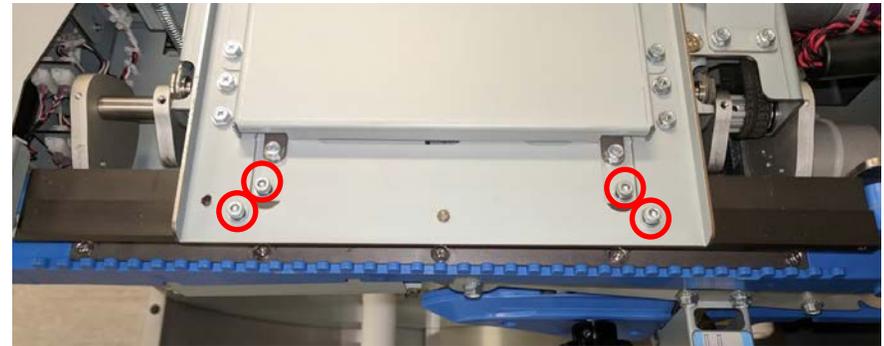
Use this procedure to remove and install the Expanding T Pickup Arms, Leading and Trailing.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

5. Switch power OFF to eWire.
6. Disconnect the Power Cord.
7. Remove the M3 Screws (2) securing the Expanding T Leading Plate.



8. Remove the Leading Plate from the Expanding T module.
9. Remove the M3 Screws (2) securing the Trailing Expanding T Plate.
10. Remove the Trailing Expanding T Plate.

Installation Procedure

11. Align the new Expanding T Trailing Plate to the module and secure it using the M3 Screws (2).
12. Align the new Expanding T Leading Plate to the module and secure it using the M3 Screws (2).
13. Connect the Power Cord.
14. Power ON the eWire.

4. Vacuum Stacker Module

REP 4.1 Vacuum Stacker Module Replacement

PARTS LIST ON PL 3.5

Use this procedure to remove and replace the Vacuum Stacker.

Removal Procedure

WARNING

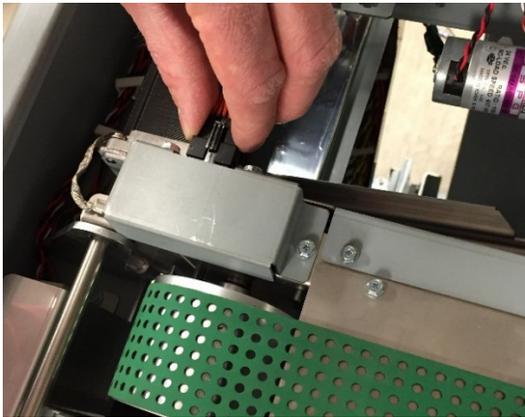
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

15. Turn off Power to the eWire.

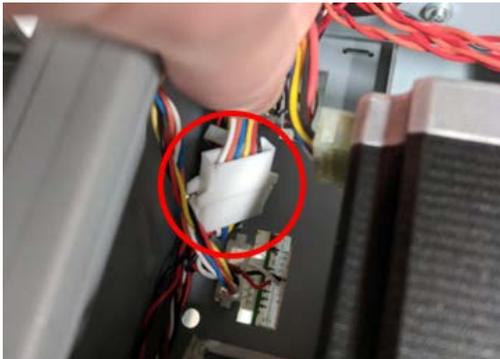
16. Disconnect the Power Cord.

17. Raise the Lid.

18. Disconnect the cable from the Vacuum Stacker.



19. Disconnect the motor from the Driver Board Extension Cable



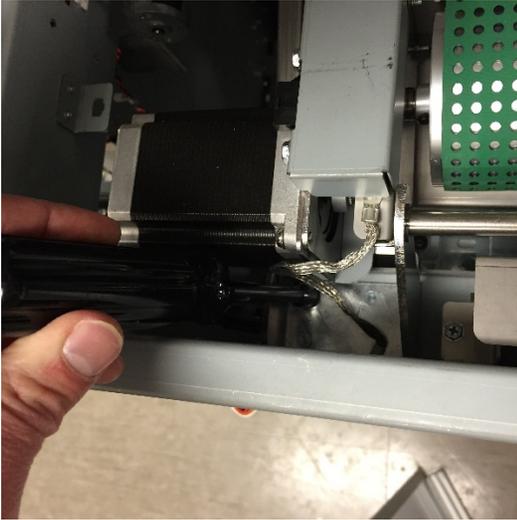
20. Remove the M5 Screws (2) and Hinge Pivots (2) securing the Paper Tray and remove it from the machine.



21. Remove the M4 screws (2) from the front hinge bracket.

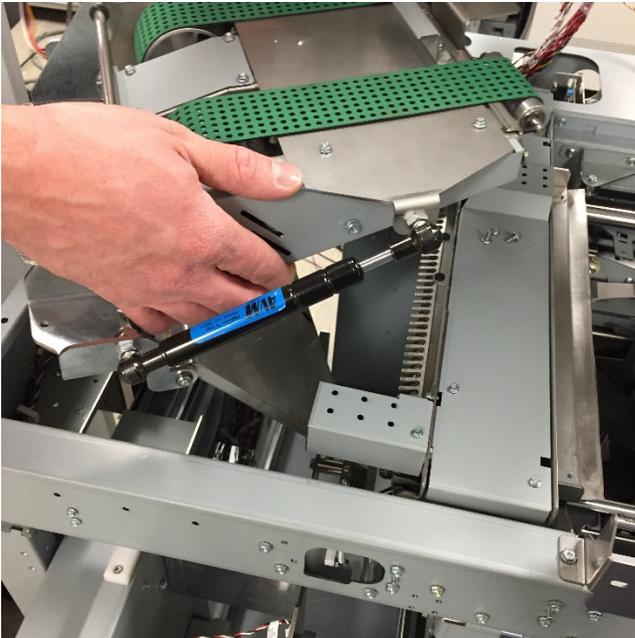


22. Repeat the procedure to remove the M4 Screws (2) from the rear hinge bracket.



23. Disconnect the Ground Strap from the frame by removing the M4 Screw.

24. Carefully lift the Vacuum Stacker out of the machine.



Installation Procedure

1. Reverse Steps for Installation.

REP 4.2 Solenoid Replacement, Kickdown Solenoid, Rear (L7) PARTS LIST ON PL 5.14

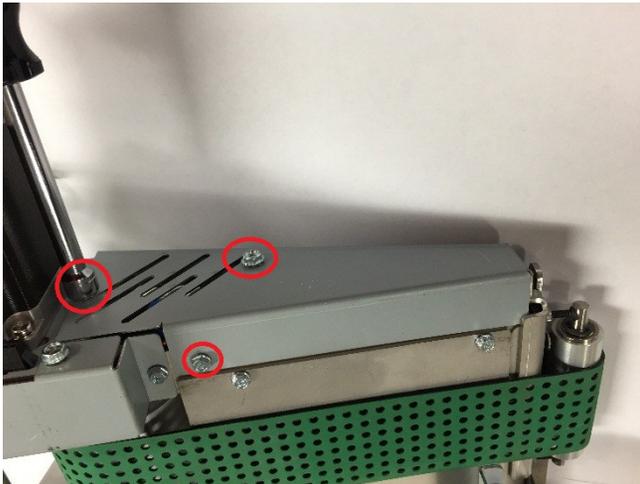
Use this procedure to remove and install the rear Kickdown Solenoid Assembly.

Removal Procedure

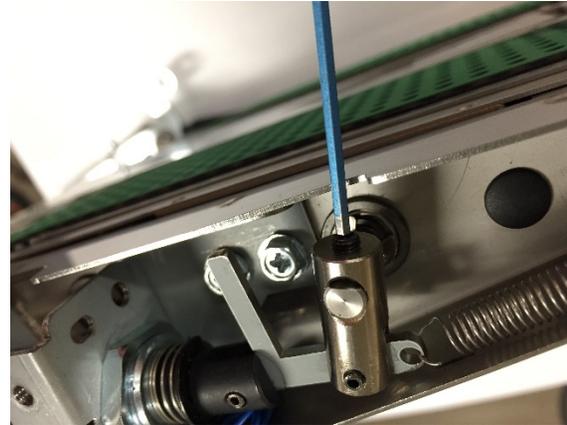
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

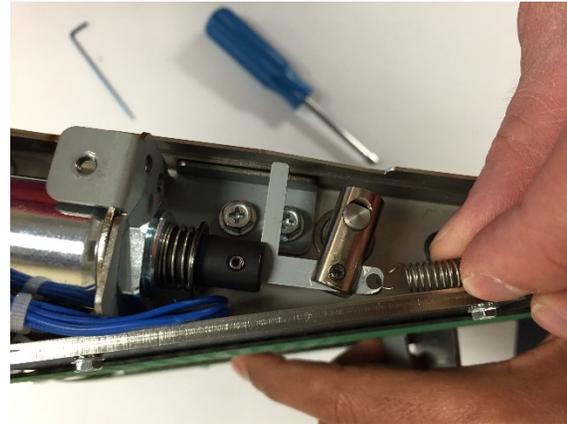
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Remove (3) M3 Screws securing the rear cover and remove the cover.



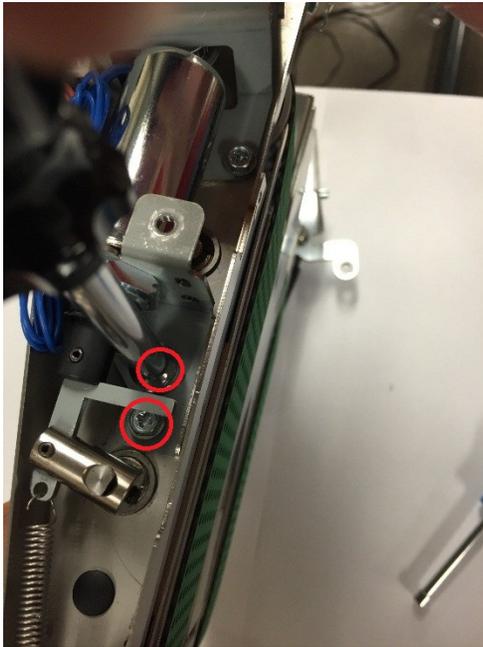
5. Disconnect the solenoid wires at the header
6. Loosen the set screw securing the clevis to the rotating shaft.



7. Disconnect the extension spring from the kick-down solenoid assembly.



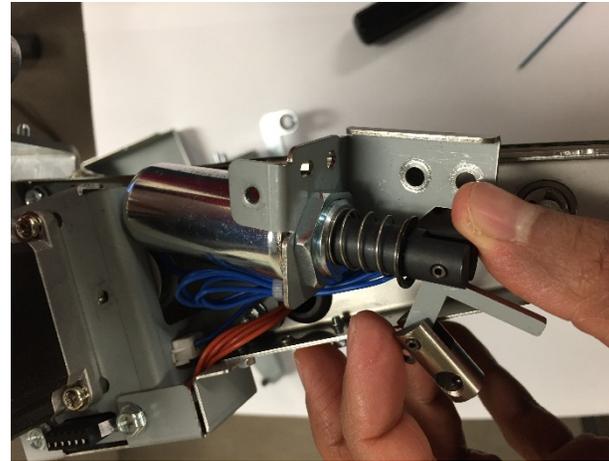
8. Loosen and remove the M4 Screws (2) securing the kick-down solenoid mounting bracket, and remove the Solenoid Assembly.



9. Use an adjustable wrench to loosen the nut securing the Solenoid to the bracket.



10. Remove the Kick-Down Solenoid Assembly from the Vacuum Stacker.



Installation Procedure

1. Reverse the steps from the Removal Procedure.
2. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
3. Connect the Power Cord
4. Turn on the eWire.

REP 4.3 Solenoid Replacement, Kickdown Solenoid, Front (L7) PARTS LIST ON PL 5.14

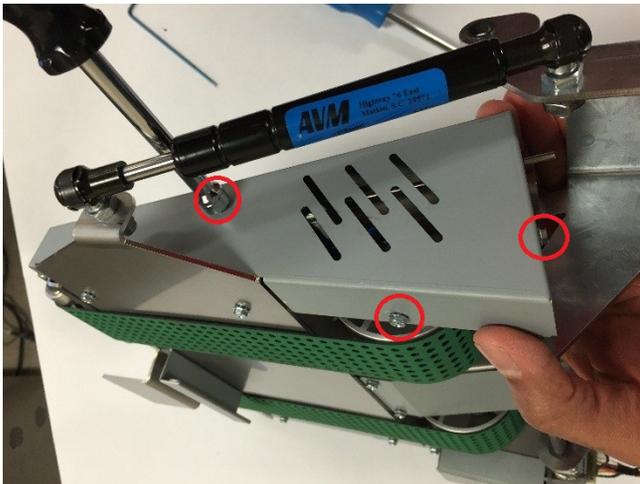
Use this procedure to remove and install the front Kickdown Solenoid.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

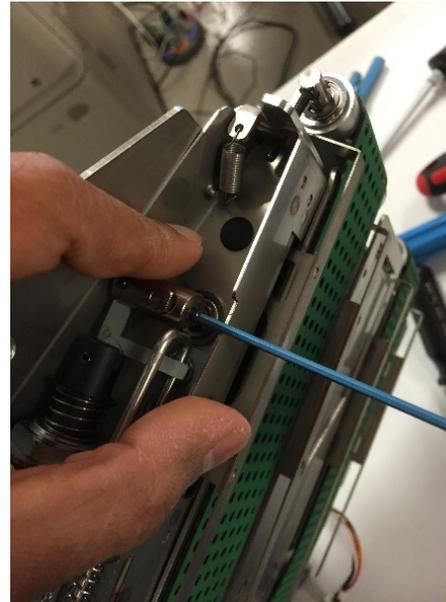
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Remove (3) M3 Screws securing the front cover and remove the front cover.



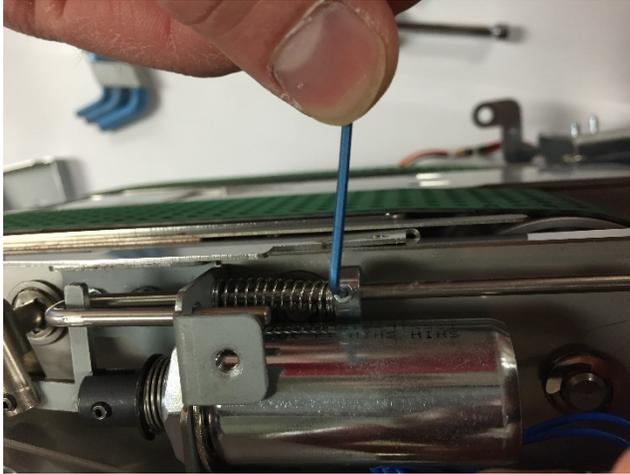
5. Disconnect the solenoid wires from the Vacuum Stacker.
6. Disconnect the extension spring from the kick-down solenoid assembly.



7. Loosen the set screw securing the clevis to the rotating shaft.



8. Using a screwdriver, remove the e-ring providing tension to the kick-down retract spring. (Note: Spring retainer differs from picture below). Loosen the kick-down retract spring.



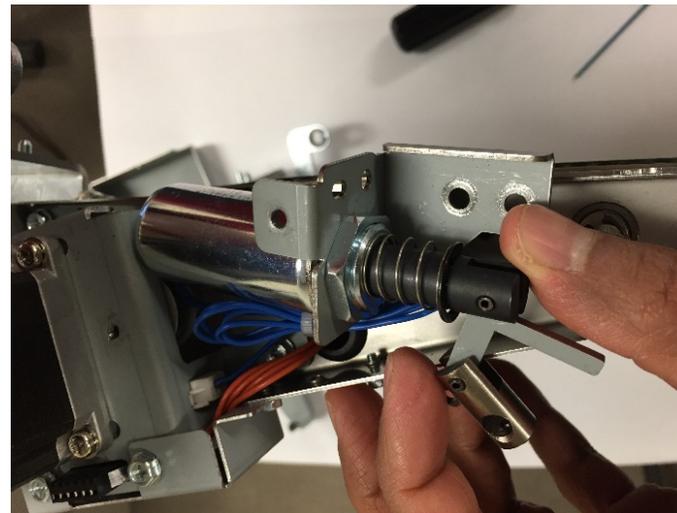
9. Loosen and remove the M4 Screws (2) securing the kick-down solenoid mounting bracket, and remove the bracket from the module.



10. Use an adjustable wrench to loosen the nut securing the Solenoid to the bracket.



11. Remove the Kick-Down Solenoid Assembly from the Vacuum Stacker.



Installation Procedure

1. Reverse the steps from the Removal Procedure. Ensure that the kick-down retract rod is installed around the leg on the Kick-Down Solenoid Assembly.
2. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
3. Connect the Power Cord
4. Turn on the eWire.

REP 4.4 Solenoid Replacement, Drag Finger Solenoid (L6) PARTS LIST ON PL 5.14

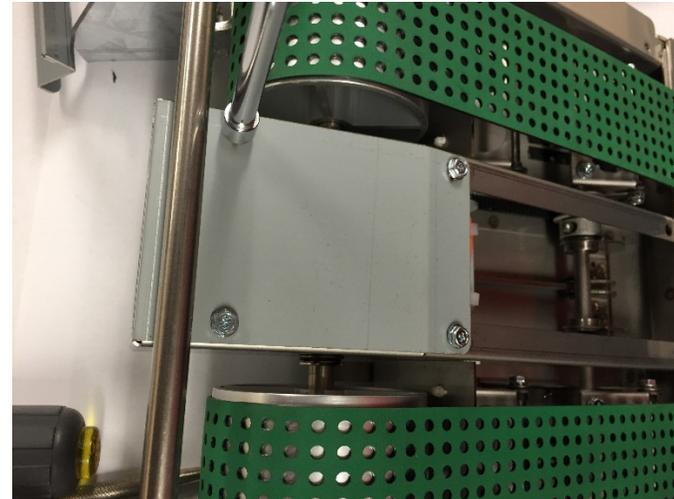
Use this procedure to remove and install the Drag Finger Solenoid

Removal Procedure

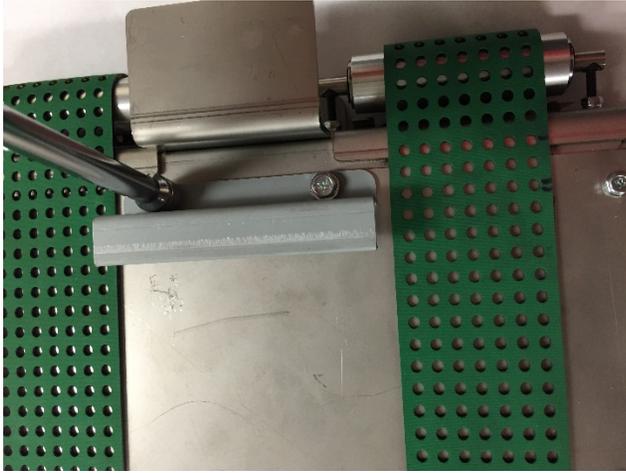
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

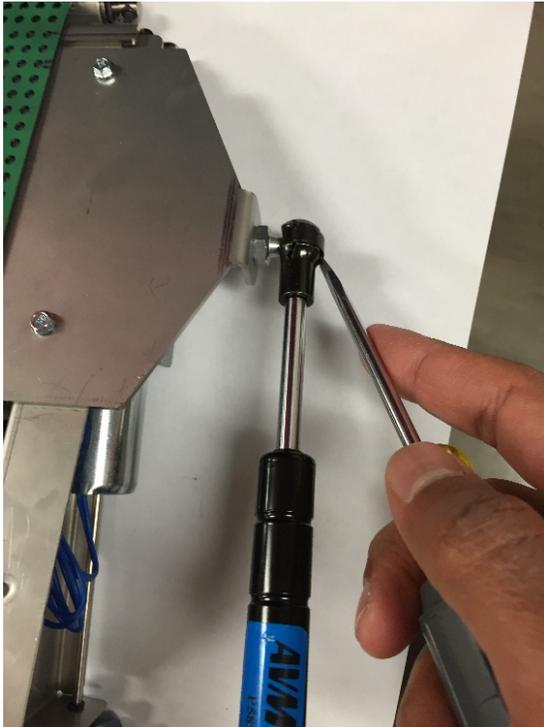
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Loosen (4) M3 Screws securing the Port Cover and remove it.



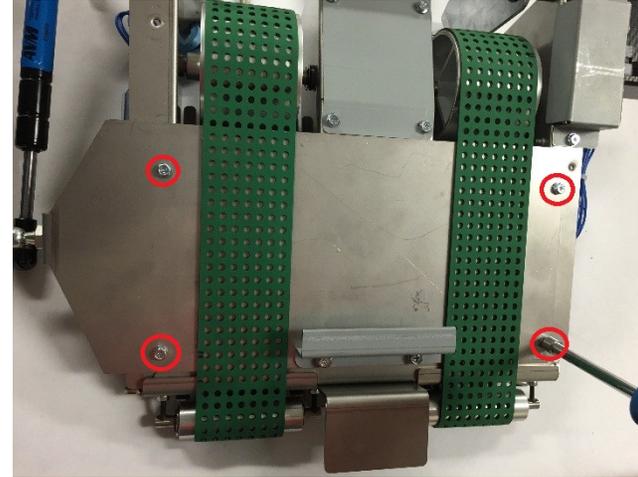
5. Loosen the M3 Screws (2) and remove the lift handle.



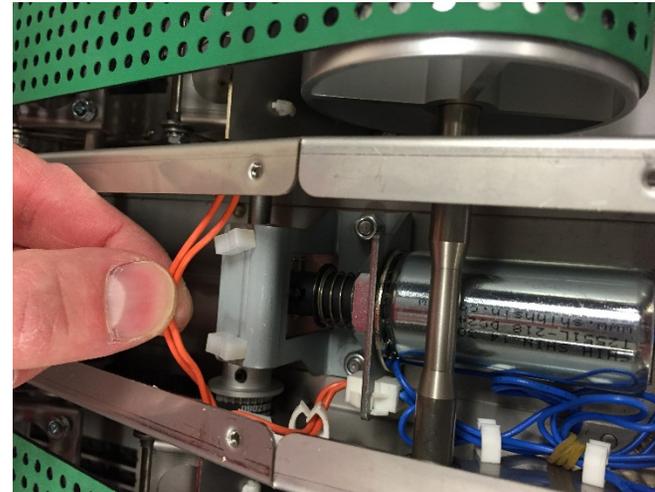
6. Using a flat head screwdriver, loosen and remove the gas spring socket from the top cover.



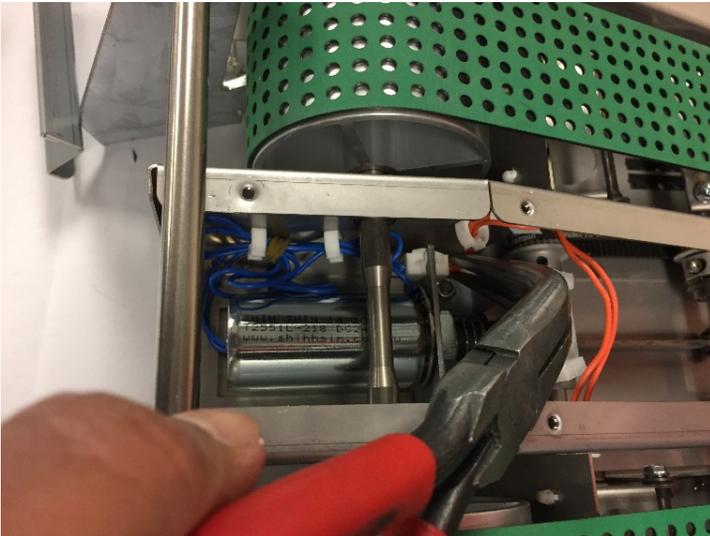
7. Loosen and remove the M3 Screws (4) securing the top cover and remove the top cover. Carefully slide the top cover out under the green belts.



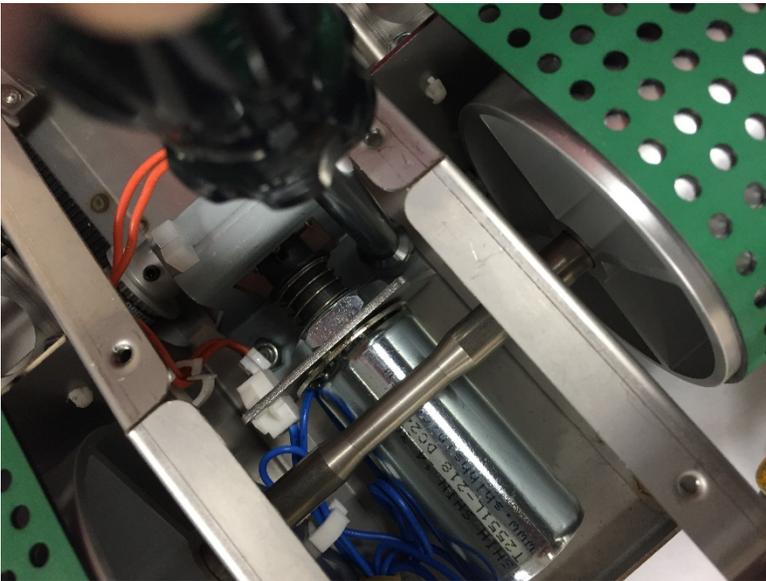
8. Unclip the wires from the cable connectors on the solenoid mounting bracket.



9. Disconnect the solenoid wires from the header. It may be necessary to use long-nose pliers to reach the cable connection.



10. Loosen the M4 nuts (2) securing the Solenoid Mounting Bracket and loosen the mounting bracket. Do not remove it completely.



11. Using Pliers or a screwdriver, remove the e-rings securing the drag finger link pin. Remove the link pin.
12. Use an adjustable wrench to loosen the nut connecting the solenoid to the solenoid mounting bracket.
13. Remove the Solenoid from the module.

Installation Procedure

1. Reverse the steps from the Removal Procedure.
2. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
3. Connect the Power Cord
4. Turn on the eWire.

REP 4.5 Motor Replacement, Vacuum Stacker Drive (M5) PARTS LIST ON PL 5.14

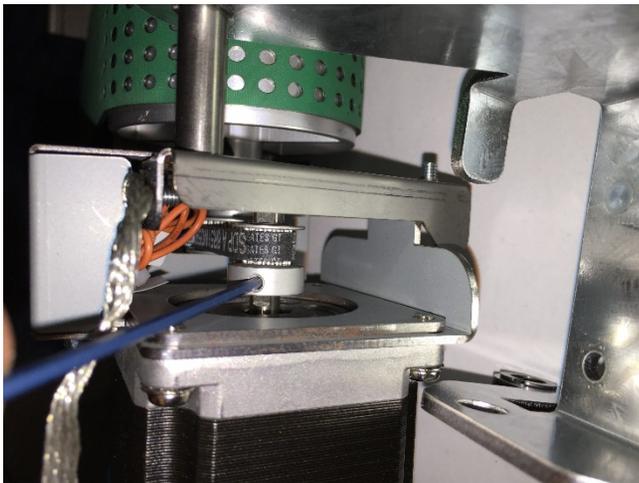
Use this procedure to remove and install the Vacuum Stacker stepper motor.

Removal Procedure

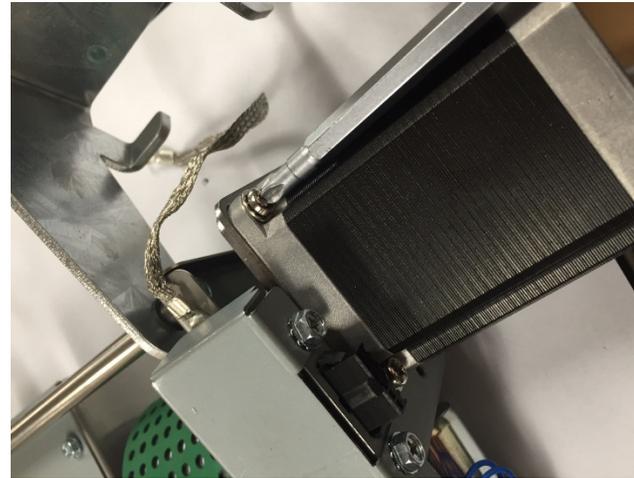
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Disconnect the motor cables from the header.
5. Remove the motor top cover by loosening the M3 screws (3).
6. Use an Allen wrench to loosen the set screw securing the belt drive pulley.



7. Remove the M4 Screws securing the motor and remove the motor from the Vacuum Stacker.



Installation Procedure

1. Reverse the steps from the Removal Procedure. Ensure that the drive belt has proper tension after motor installation.
2. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
3. Connect the Power Cord
4. Turn on the eWire.

REP 4.6 Idler Pulley Assembly Replacement

PARTS LIST ON PL 5.15

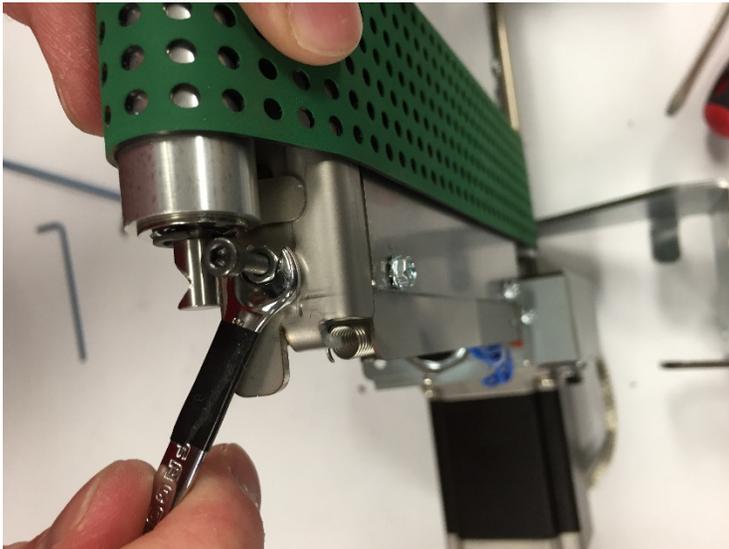
Use this procedure to remove and install the Vacuum Stacker Idler Pulley Sub-Assembly

Removal Procedure

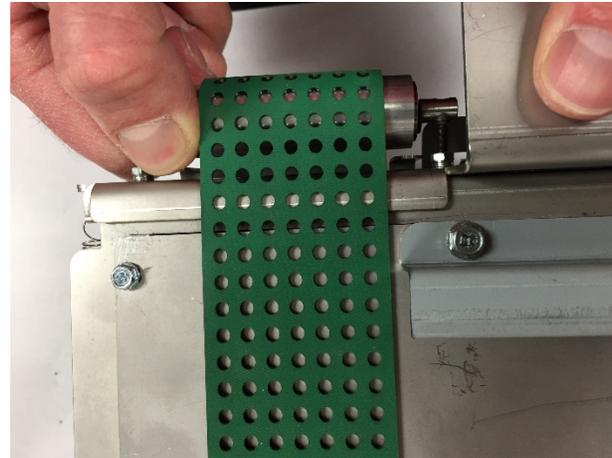
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

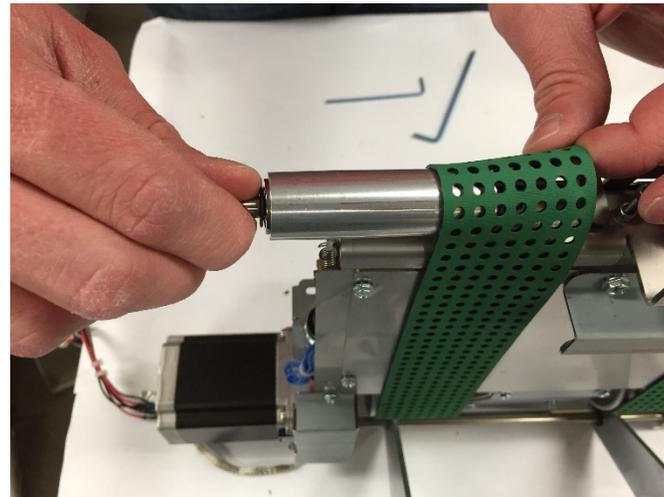
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Release the lock nut on the idler pulley tensioning screw and tighten the screw into the Vacuum Stacker to loosen the belt tension on the idler pulley.



5. Lift the Idler Pulley Assembly up and off the tension adjustment screws. If removing the Pulley Assembly is too difficult, tighten the tension screws further by repeating the procedure in Step 4.



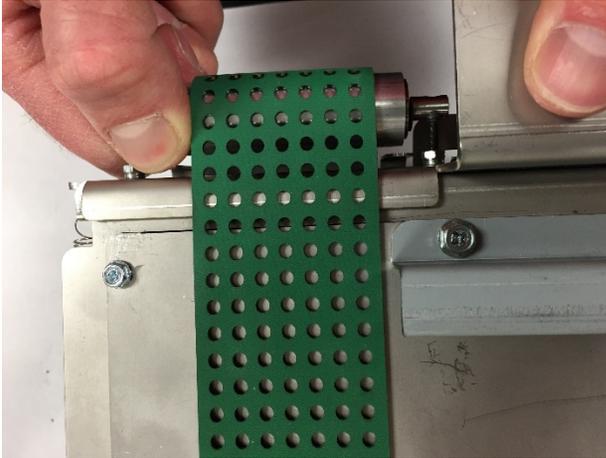
6. Carefully slide the Idler Pulley Sub-Assembly away from the belt and free of the machine. Take care to avoid damaging the Belt.



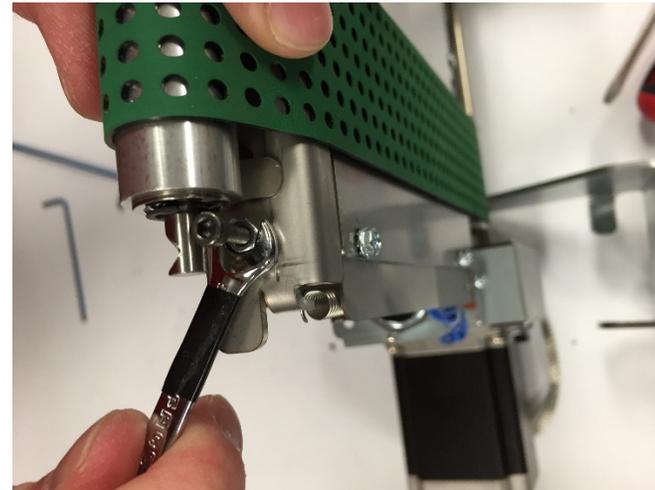
7. Repeat the procedure for the other side.

Installation Procedure

1. Slide the new Idler Pulley Assembly between the machine frame and the Vacuum Stacker belt.
2. Carefully lift the Idler Pulley, applying light tension to the belt. Place the counter-bored holes on each end of the Idler Pulley shaft onto the heads of the tensioning screws. If it is too difficult to lift the Idler Pulley shaft onto the tensioning screws, reduce the screw height by tightening the tensioning screws.



3. With the Idler Pulley Assembly in place, loosen the tensioning screws until proper tension is achieved on the Vacuum Stacker Belt. Refer to REP 4.8 [Vacuum Stacker Belt Replacement](#) for additional detail on belt replacement.



5. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
6. Connect the Power Cord
7. Turn on the eWire.

4. Tighten the lock nuts to secure the Idler Pulley Assembly.

REP 4.7 Kickdown Weldment Replacement

PARTS LIST ON PL 5.15

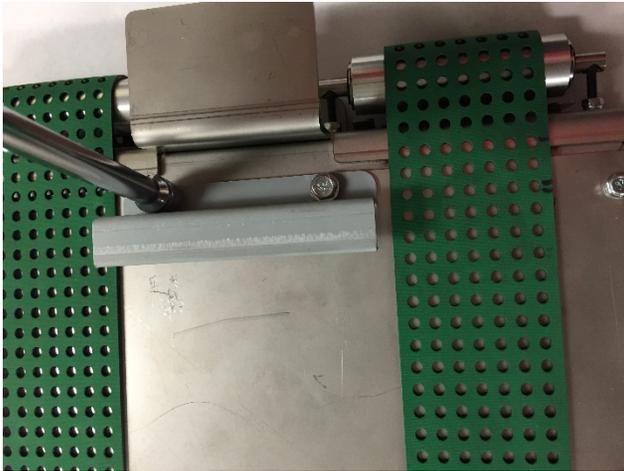
Use this procedure to remove and install the Kick-down weldments.

Removal Procedure

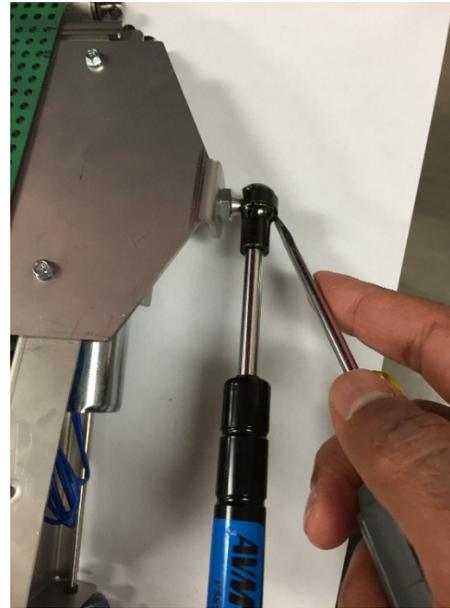
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

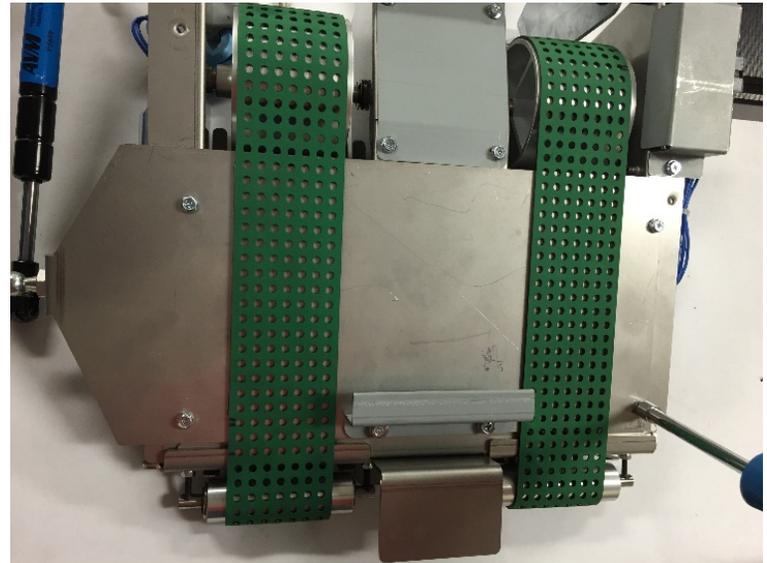
8. Switch power OFF to eWire.
9. Disconnect the Power Cord.
10. Do ARP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
11. Loosen the M3 Screws (2) and remove the lift handle.



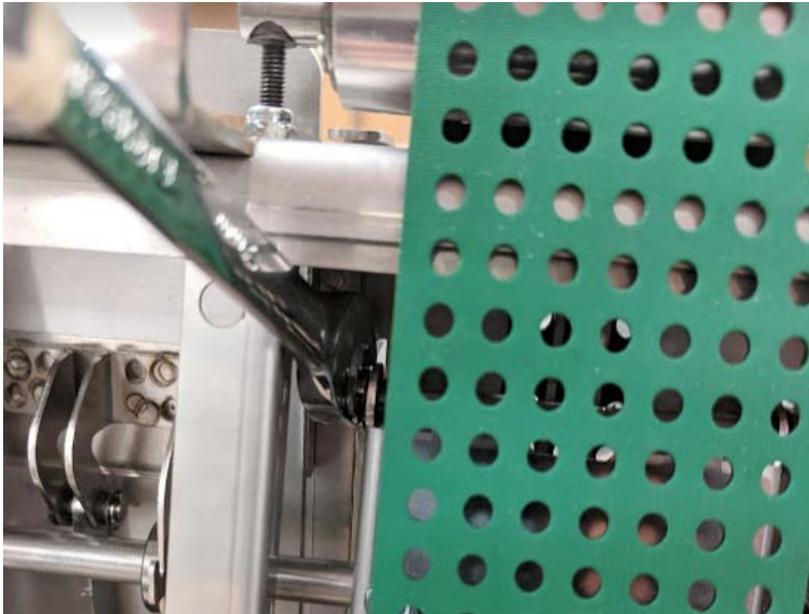
12. Using a flat head screwdriver, loosen and remove the gas spring socket from the top cover.



13. Loosen and remove the M3 Screws (4) securing the top cover and remove the top cover. Carefully slide the top cover out under the green belts.



- Loosen but do not remove the M3 Nuts (2) securing the Kick-Down Weldment to the kick-down link shaft.



- Slide the Kick-Down Weldment out through the bottom of the Vacuum Module.
- For the outer Kick-Down Weldment parts, remove the side cover(s) by loosening the M3 screws (3) and remove the Plug to access the screws to attach the Kick-Down Weldment.

Installation Procedure

- Reverse steps 7-9 of the Removal Procedure
- After installing all 4 kick-downs, ensure that the flats of the skis are in plane with each other when in the down position. If any are out of plane, loosen the M3 Nuts securing it and reseal it in line with the others.



- Also ensure that when retracted, the kick-downs are below the plane of the belts. If any are not, loosen the M3 Nuts holding the protruding kick-down and reseal it.



- Reverse steps 1-6 from the Removal Procedure.
- Do ARP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
- Connect the Power Cord
- Turn on the eWire.

REP 4.8 Vacuum Stacker Belt Replacement

PARTS LIST ON PL 5.15

Use this procedure to remove and install the Vacuum Stacker Belt.

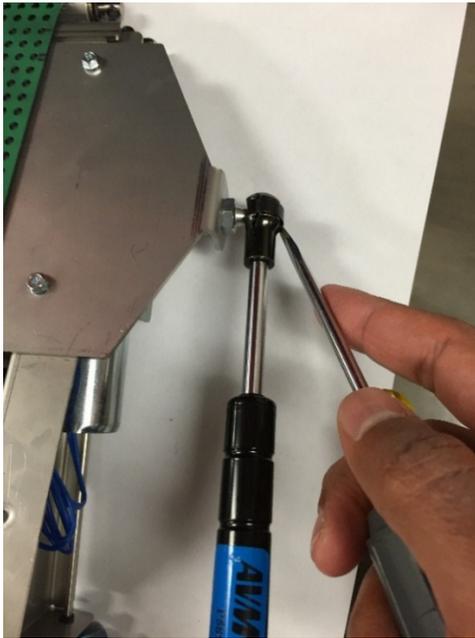
Removal Procedure

WARNING

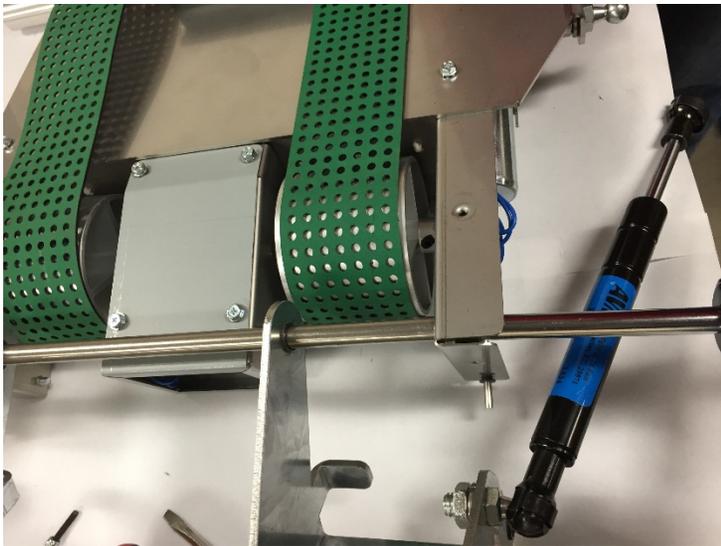
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Loosen the M3 Screws (3) and remove the side cover. Repeat the process for the opposite side cover.
5. Using a flat head screwdriver, loosen and remove the gas spring socket from the top cover.

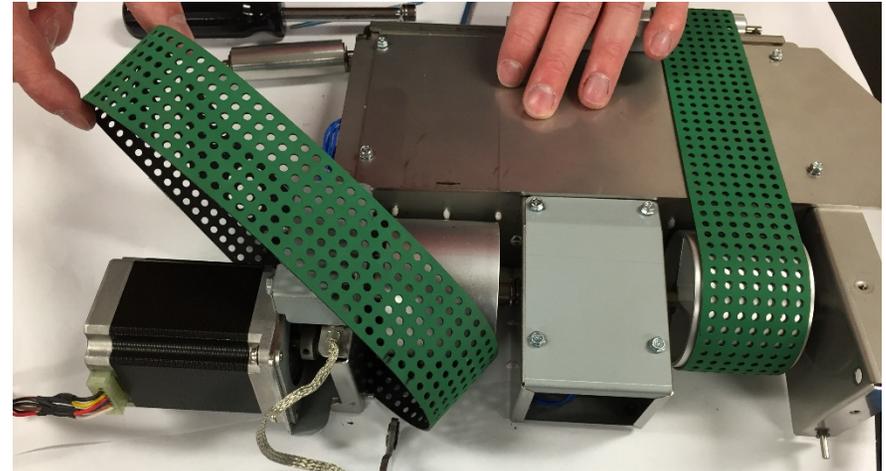




6. Loosen and remove the M5 Screws (2) securing the Vacuum shaft rod. Remove the Hinge Brackets from the Vacuum Stacker.



7. Do REP 4.6 [Idler Pulley Assembly Replacement](#) to remove the Idler Pulley Sub-Assembly (2).
8. Lift the Vacuum Drive Belt off the Idler Pulley and carefully slide around and off the Vacuum Stacker.



9. Repeat the process to remove the other Vacuum Drive Belt.

Installation Procedure

1. Reverse the steps from the Removal Procedure.
2. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to install the Vacuum Stacker.
3. Connect the Power Cord
4. Turn on the eWire.

REP 4.9 Stacker Drive Belt Replacement

PARTS LIST ON PL 5.15

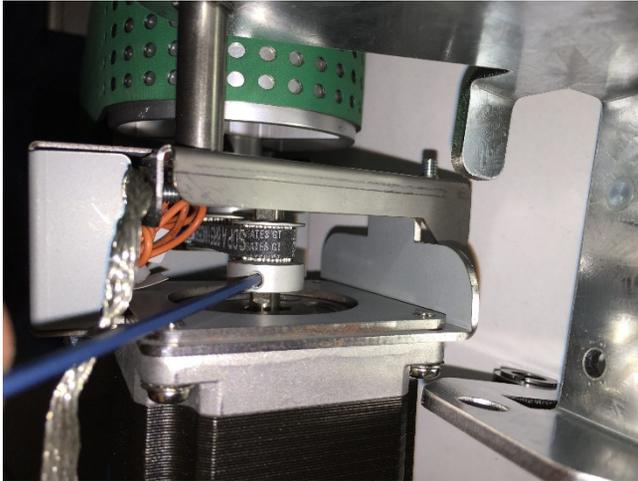
Use this procedure to remove and install the Vacuum Stacker Drive Belt.

Removal Procedure

WARNING

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1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Do REP 4.5 [Motor Replacement, Vacuum Stacker Drive \(M5\)](#) to remove the Vacuum Stacker Drive Motor.
5. Slide the Drive Belt off the Pulley and remove from the module.



Installation Procedure

1. Place the new Belt around the Shaft Pulley and loosely wrap it around the Motor pulley.
2. Do REP 4.5 [Motor Replacement, Vacuum Stacker Drive \(M5\)](#) to install the Vacuum Stacker Motor.
3. Check the belt tension on the Drive Belt and adjust if necessary.
4. Ensure all Pulley set screws are tightened.
5. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to replace the Vacuum Stacker.
6. Connect the Power Cord
7. Turn on the eWire.

REP 4.10 Drag Finger Adhesive Grip Replacement

PARTS LIST ON PL 5.15

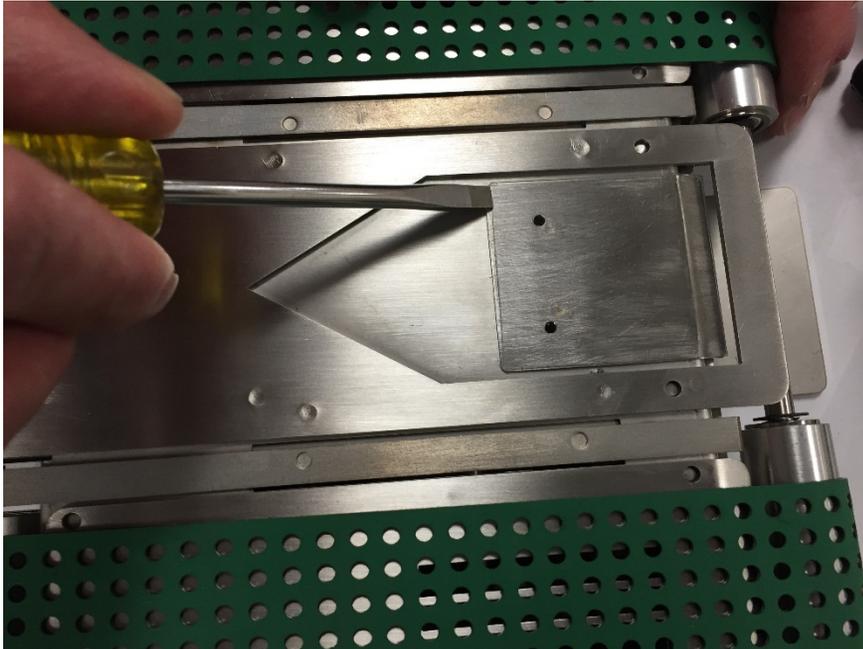
Use this procedure to remove and install the Vacuum Stacker Drive Belt.

Removal Procedure

WARNING

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1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Using a flat head screwdriver or knife, carefully peel up one corner of the Drag Finger Adhesive Grip. Then remove the remaining material by peeling it away from the surface of the Vacuum Stacker.



Installation Procedure

1. Clean the adhesion surface, removing all material left over from the previous Adhesive Grip part. Wipe the surface clean with a rag and alcohol.
2. Remove the paper backing from the adhesive side of the Adhesive Grip material.
3. Carefully Align the Drag Finger Adhesive Grip to the mating surface, using the outline from the previous material if possible.
4. Press the new Drag Finger Adhesive Grip to the material and press it down flat.
5. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to replace the Vacuum Stacker.
6. Connect the Power Cord
7. Turn on the eWire.

5. Deflector Module

REP 5.1 Deflector Module Replacement

PARTS LIST ON PL 5.16

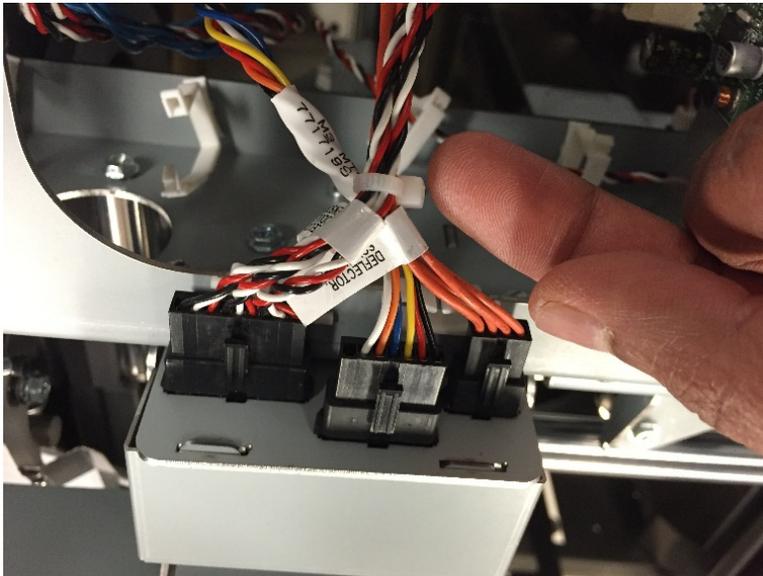
Use this procedure to remove and install the Deflector Module

Removal Procedure

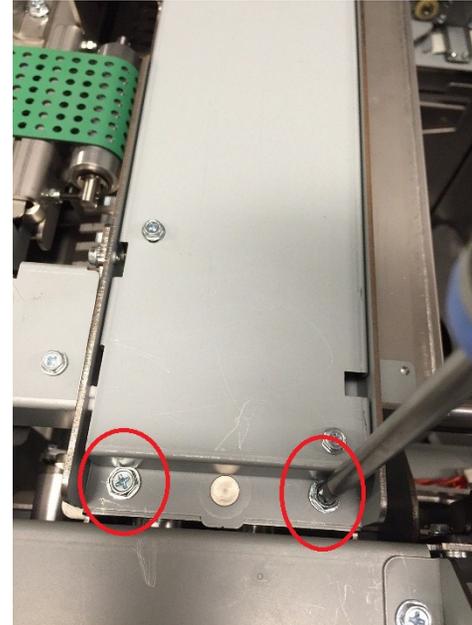
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the lid.
4. Disconnect the Deflector Cables by detaching the 3 cable headers.



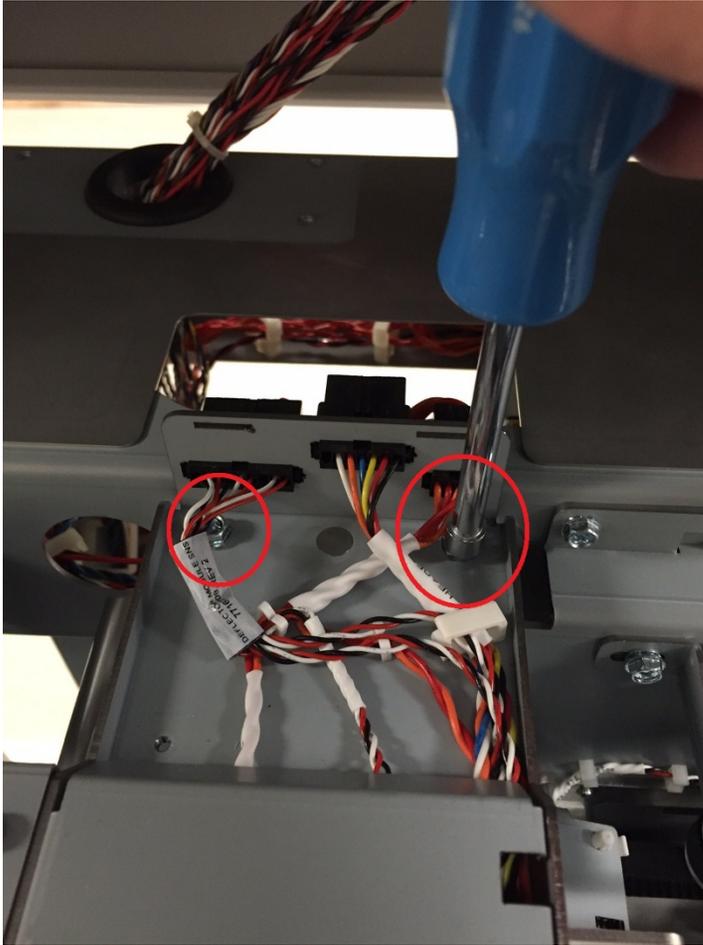
5. Remove the M4 Screws (2) from the front of the Deflector Module



6. Remove the M3 Screw and remove the cable cover plate from the rear side of the Deflector



7. Remove the M4 Screws (2) from the back of the Deflector



8. Carefully lift the Deflector out of the eWire to remove it.

Installation Procedure

1. Place the Deflector Module onto the eWire. Use the pins on the bottom of the Deflector to align the module.
2. Reattach the Deflector Module to the Frame by securing the M4 Screws (4).
3. Reattach the deflector cable cover and secure it using the M3 Screw.
4. Reconnect the Deflector cables to the headers on the back of the Deflector.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 5.2 Sensor Replacement, Deflector Position S17

PARTS LIST ON PL 5.16

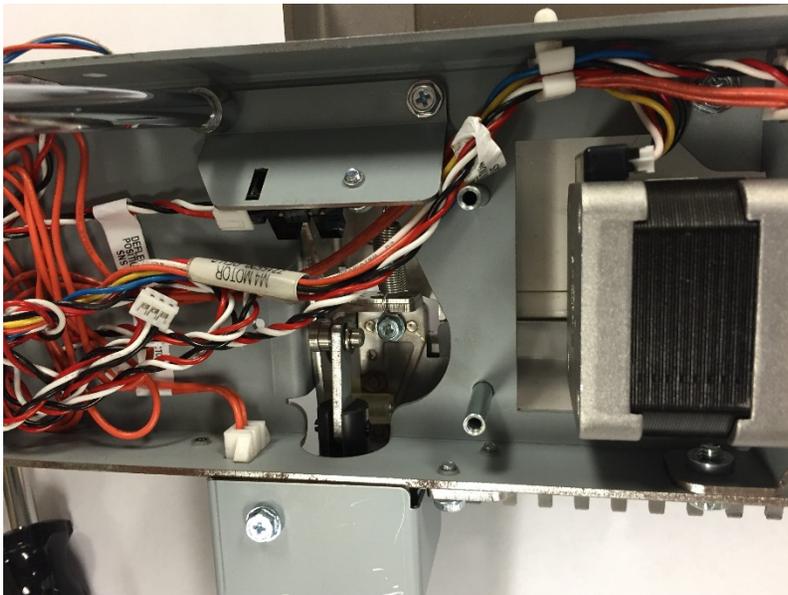
Use this procedure to remove and install Deflector Position Sensor

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Locate the Deflector Position Sensor S17
5. Remove the Sensor Bracket by loosening the M3 Screws (2)



6. Disconnect the Sensor Cable
7. Remove the old Sensor by removing the M3 Screw (1)

Installation Procedure

1. Install the new Sensor into the Sensor Bracket. Use the cutout to align the sensor
2. Attach the Sensor Bracket to the Deflector.
3. Connect the Sensor Cable to the new Sensor.
4. Ensure that the sensor flag is aligned with the Sensor detection opening
5. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
6. Connect the Power Cord.
7. Power ON the eWire.
8. Do GP 6.3.2 to verify sensor function.

REP 5.3 Sensor Replacement, Bind Kick Downs S2

PARTS LIST ON PL 5.16

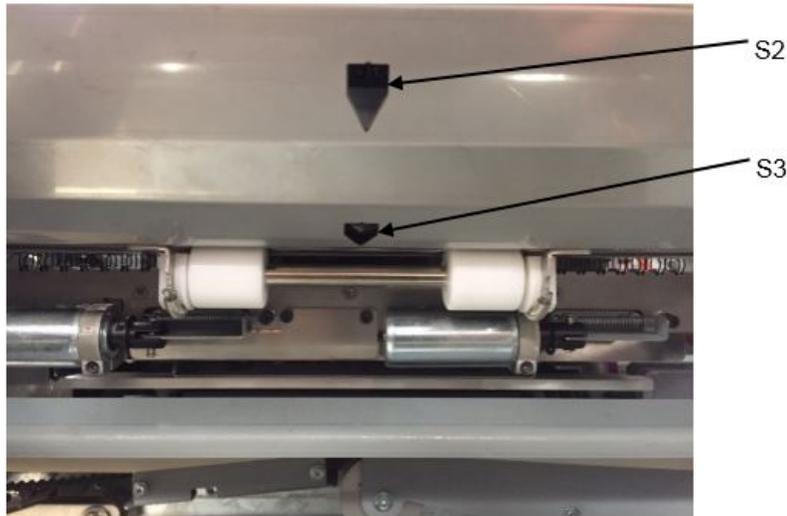
Use this procedure to remove and install Bind Kick Downs Position Sensor

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Locate the Bind Kick Downs Sensor S2. The sensor is located between the Deflector frame plate and the curved baffle plate.



5. Disconnect the Sensor Cable.
6. Remove the Sensor Bracket by loosening the M3 Screws (2)
7. Remove the old Sensor by removing the M3 mounting screw.

Installation Procedure

1. Install the new Sensor into the Sensor Bracket. Use the cutout to align the sensor.
2. Attach the Sensor Bracket to the Deflector.
3. Connect the Sensor Cable to the new Sensor.
4. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
5. Connect the Power Cord.
6. Power ON the eWire.
7. Do GP 6.3.2 to verify sensor function.

REP 5.4 Sensor Replacement, Bind Deflect S3

PARTS LIST ON PL 5.16

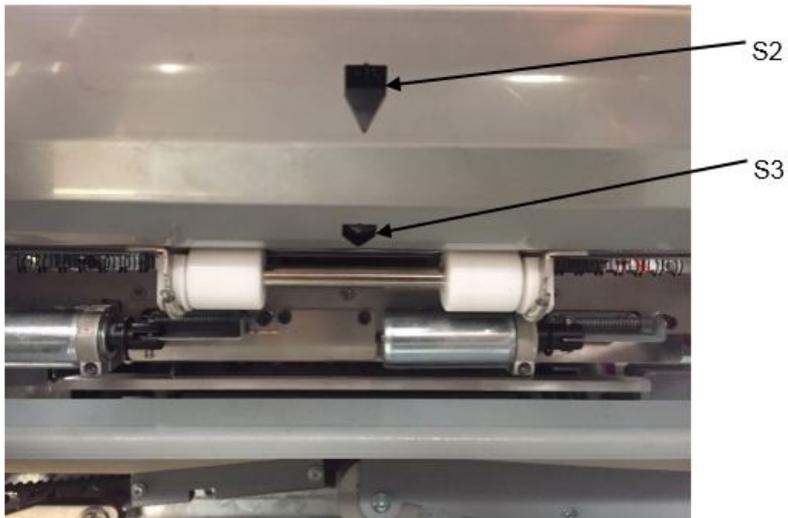
Use this procedure to remove and install Deflector Bind Deflect Sensor

WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Locate the Bind Deflect Sensor S3. The sensor is located in a cutout near the center of the Deflector Frame.



5. Disconnect the Sensor Cable.
6. Remove the Sensor Bracket by loosening the M3 Screws (2)
7. Remove the old Sensor by removing the M3 mounting screw.

Installation Procedure

1. Install the new Sensor into the Sensor Bracket. Use the cutout to align the sensor.
2. Attach the Sensor Bracket to the Deflector.
3. Connect the Sensor Cable to the new Sensor.
4. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
5. Connect the Power Cord.
6. Power ON the eWire.
7. Do GP 6.3.2 to verify sensor function.

REP 5.5 Bind Path Motor Replacement M3

PARTS LIST ON PL 5.16

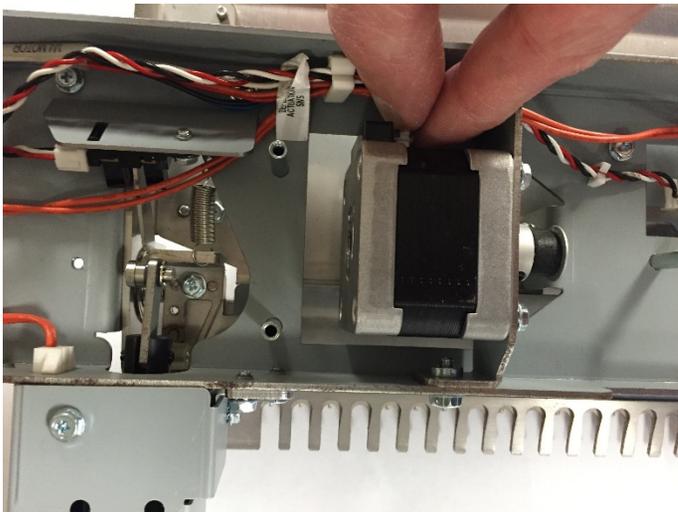
Use this procedure to remove and install Bind Path Motor

WARNING

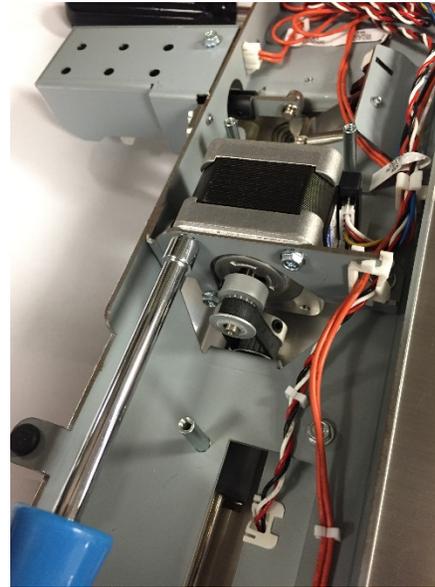
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Loosen the Set Screw on the Motor Pulley.
5. Disconnect the Motor Cable.



6. Disconnect the stepper motor by loosening the M3 Screws (4). Remove the Pulley from the Motor shaft and remove the old Motor.



Installation Procedure

1. Position the motor in place on the Motor Bracket and slide the Pulley onto the Motor shaft.
2. Tighten the M3 Screws (4) to attach the motor.
3. Tighten the set screw to secure the Pulley
4. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 5.6 Deflector Module Timing Belt Replacement

PARTS LIST ON PL 5.16

Use this procedure to remove and install Deflector Timing Belt

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Do REP 5.5 [Bind Path Motor Replacement](#) to remove the Motor.
5. Slide the old Timing Belt off of the Drive Pulley and remove it.

Installation Procedure

1. Loosely slide the new Timing Belt around the Drive Pulley
2. Do [REP 5.5](#) to reinstall the Motor.
3. Check the Belt tension. If necessary, increase or decrease tension in the Belt by reseating the Motor.
4. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 5.7 Deflector Solenoid Replacement L5

PARTS LIST ON PL 5.16

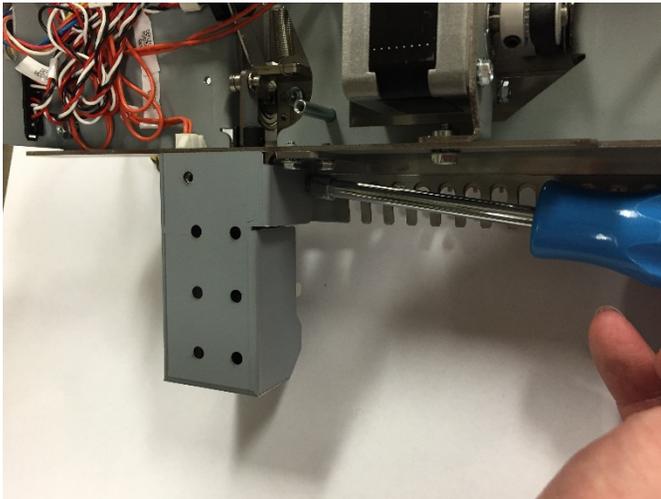
Use this procedure to remove and install the Deflector Solenoid(s). Note that the same procedure can be used to remove the Solenoids on each side of the Deflector Module.

WARNING

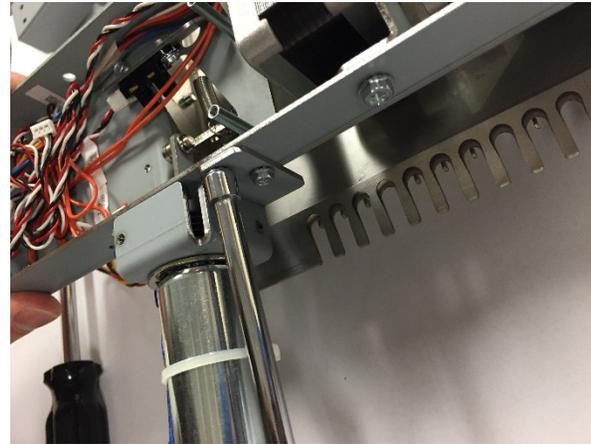
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

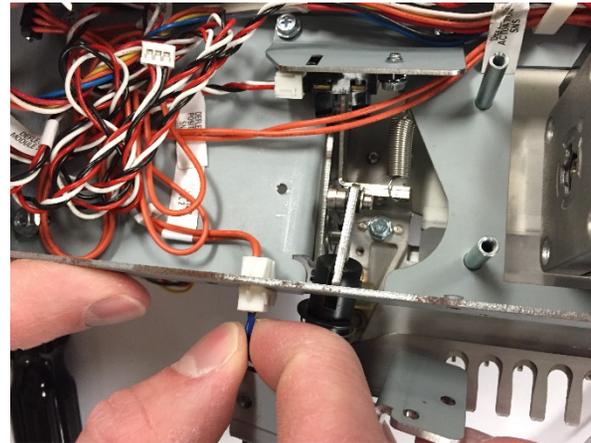
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Remove the Solenoid cover by removing the M3 Screws (2)



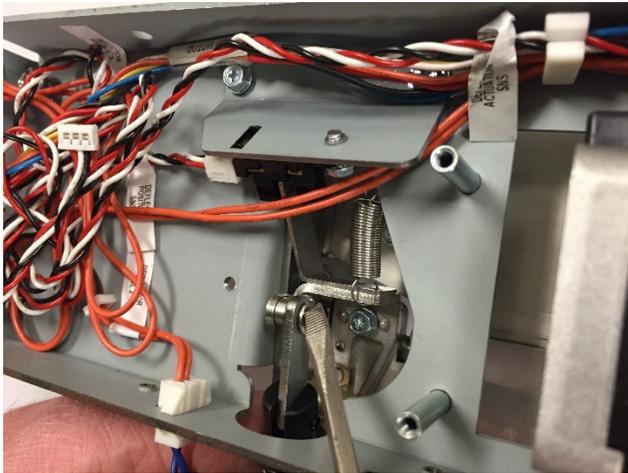
5. Remove the Solenoid Mounting Bracket by removing the M3 Screws (3)



6. Disconnect the Solenoid cable at the appropriate cable header.



7. Using a flat head screwdriver, remove the E-Ring securing the Solenoid Linkage Pin.



8. Using an adjustable wrench, loosen the nut securing the Solenoid to the Solenoid Mounting Bracket and remove the Solenoid linkage.

Installation Procedure

1. Install the Solenoid to the Solenoid Mounting Bracket by tightening the nut. Note the orientation of the linkage assembly relative to the link pin on the Deflector.
2. Position the Solenoid Bracket in place and connect the Solenoid Linkage to the Link Pin using the E-Ring.
3. Tighten the M3 Screws (3) to attach the Solenoid Mount Bracket to the Deflector Frame.
4. Connect the Solenoid Cable.
5. Install the Solenoid Cover Plate by securing the M3 Screws (3).
6. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 5.8 Deflector Springs Replacement

PARTS LIST ON PL 5.16

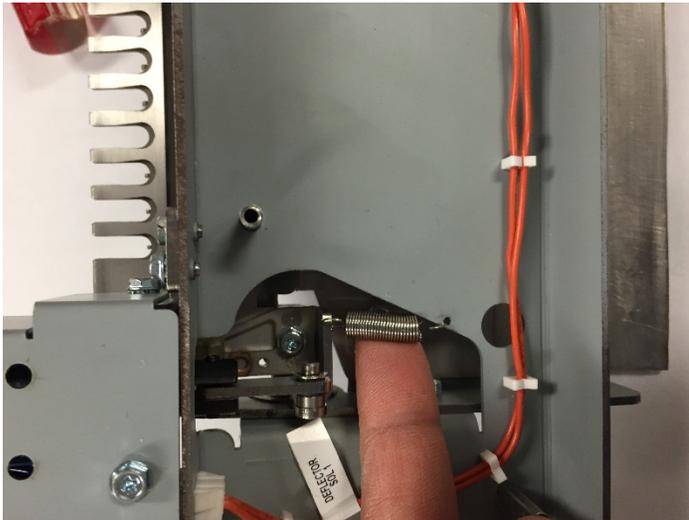
Use this procedure to remove and install Extension Springs on the Deflector. Note that the same procedure can be used for springs on each side of the Deflector.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Locate the appropriate Deflector Springs.



5. Remove the spring by unhooking it from the mounting holes on each end. If necessary, loosen the M3 Screws (2) on the Spring Bracket.

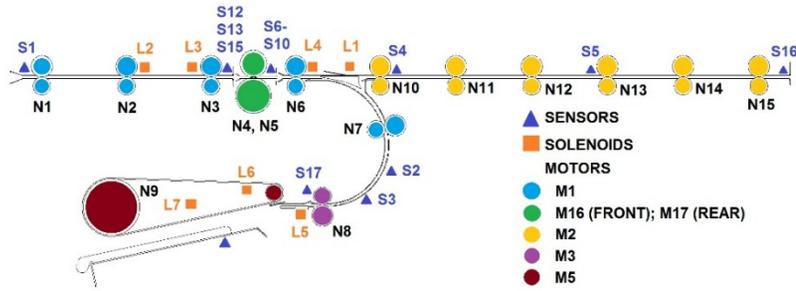
Installation Procedure

1. Attach one end of the Deflector Spring to the hole on the Spring Bracket and attach the other end to the hole on the Kickdown Linkage.
2. Secure the Screws on the Spring Bracket.
3. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 5.9 Deflector Drive Roller Assembly Replacement

PARTS LIST ON PL 5.16

Use this procedure to remove and install the Deflector Drive Roller Assembly, Nip N8.



WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Remove the Outer Baffle Assembly by removing the M3 Screws (4).
5. Remove the Inner Baffle Assembly by removing the M3 Screws (4). Set aside the right and left Baffle Mounting Brackets, noting the orientation for re-assembly.
6. Do REP 5.5 [Bind Path Motor Replacement M3](#) to remove the Motor (M3).
7. Loosen the set screw on the Drive Shaft Pulley, and remove the Pulley and Timing Belt.
8. Using a flat head screwdriver, remove the E-Ring and Washer from both sides of the Drive Roller Assembly.
9. Remove the Bearings from each side of the Drive Roller Assembly.
10. Remove the Drive Roller Assembly.

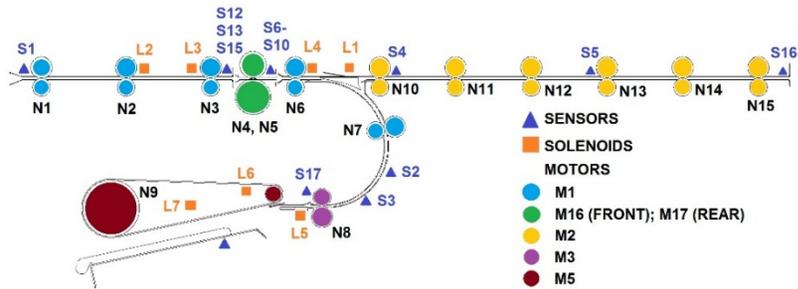
Installation Procedure

1. Position the new Drive Roller Assembly into the brackets on the Deflector Frame and install the Bearings.
2. Secure the Drive Roller Assembly by installing Washers and E-Rings to each side.
3. Slide the Drive Pulley onto the end of the Drive Roller Shaft and secure using the set screw.
4. Do REP 5.5 [Bind Path Motor Replacement M3](#) to install the Motor.
5. Reverse the steps from the Removal Procedure to install the Inner Baffle and Outer Baffle.
6. Do REP 5.1 [Deflector Module Replacement](#) to Install the Deflector Module.
7. Connect the Power Cord.
8. Power ON the eWire.

REP 5.10 Deflector Idler Roller Assembly Replacement

PARTS LIST ON PL 5.16

Use this procedure to remove and install the Deflector Idler Roller Assembly, Nip N8.

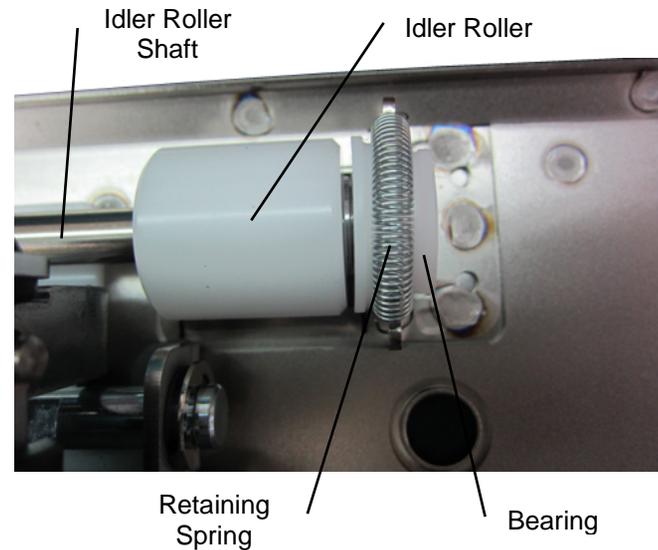


WARNING

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Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 5.1 [Deflector Module Replacement](#) to remove the Deflector Module.
4. Lift the Extension Spring (2) up off the Bearing Housing (2) at each end of the Idler Roller Shaft. Unhook the ends of the extension spring from the Bushing Forks.



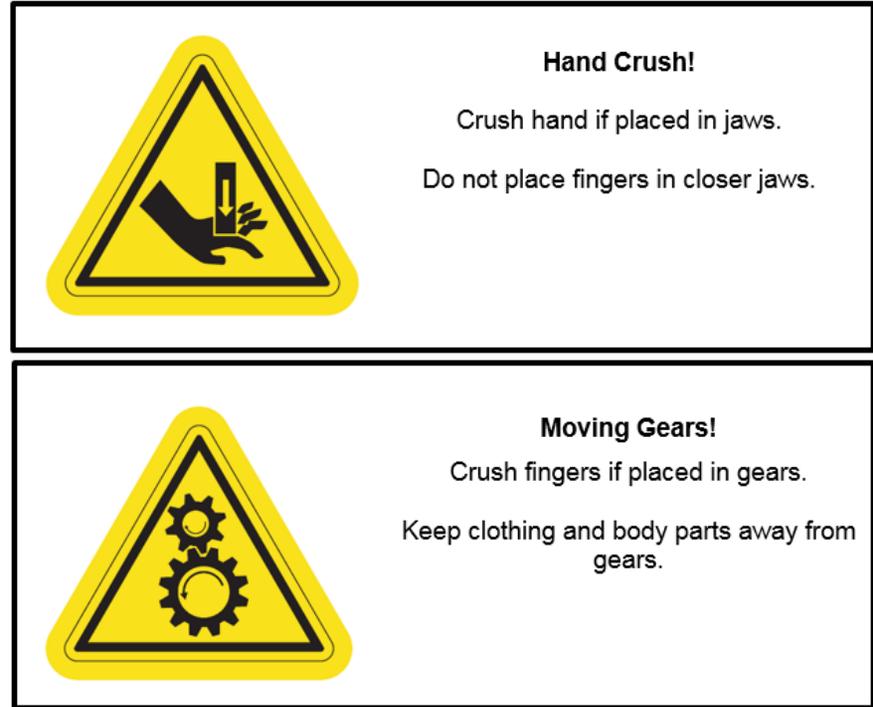
5. Remove the Idler Roller with the Bearing Housings (2) from the Bushing Forks.



Installation Procedure

1. Place the new Idler Roller with Bearing Housings into the Bushing Forks.
2. Make sure the flat surface of the bushing aligns in the fork.
3. Rollers are non-directional so it does not matter which end goes in each fork.
4. After the assembly is in place, gently pull the assembly outward and release to ensure it moves freely in the fork.
5. Place the Extension Spring (2) over the Bearing Housings (2).
6. Place the hooks on the ends of the Extension Springs (2) on the notches at the top of the Bushing Forks (2).
7. Do REP 5.1 [Deflector Module Replacement](#) to install the Deflector Module.
8. Connect the Power Cord.
9. Power ON the eWire.

6. Closer Module



REP 6.1 Closer Module Replacement

PARTS LIST ON PL 5.19

Use this procedure to remove and install the Closer Module

Removal Procedure

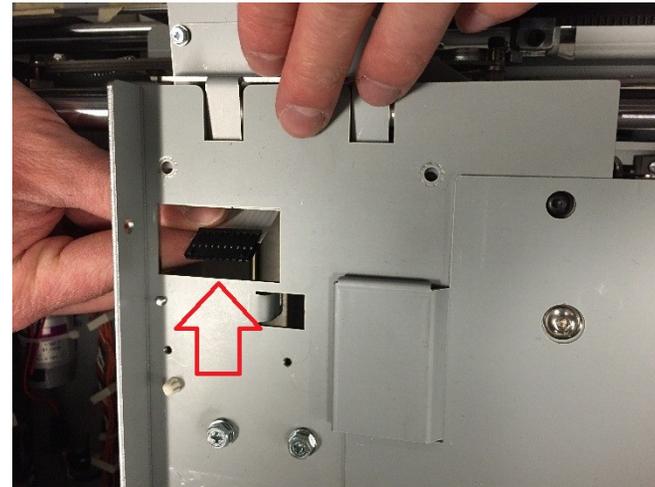
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

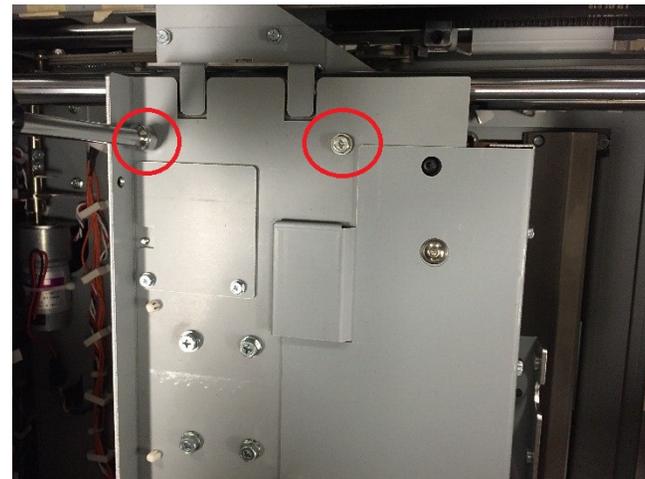
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the lid.
4. Remove the Cable Access Cover by removing the M3 Screws (2).



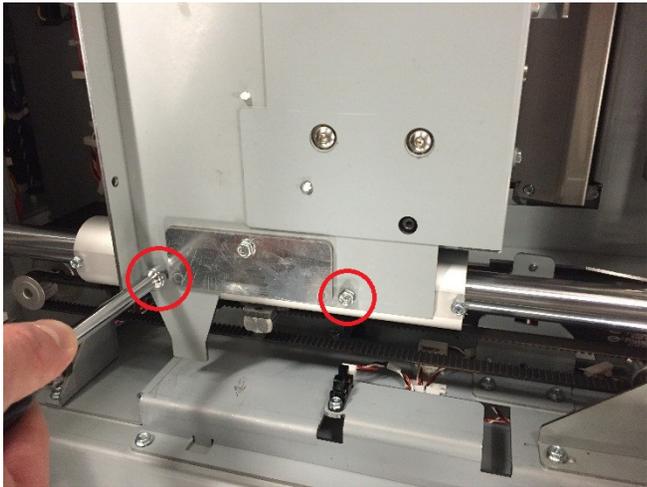
5. Disconnect the Closer Cable. The closer cable is located underneath the closer top plate, as seen through the rectangular opening.



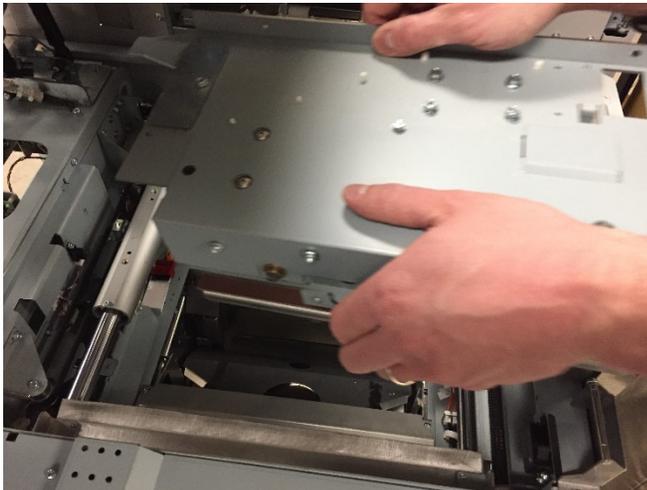
6. Remove the Closer M4 mounting screws (2) from the front of the module.



7. Remove the M4 mounting screws (2) from the back of the module.



8. Remove the Closer Module.



Installation Procedure

1. Position the Closer module in place in the eWire. Use the pins to align the Closer to the Tube Bushing Assembly.
2. Secure the Closer by tightening the M4 Screws (4)
3. Re-attach the Closer cable.
4. Install the Cable Access Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 6.2 Closer Encoder Sensor Replacement S48

PARTS LIST ON PL 5.19

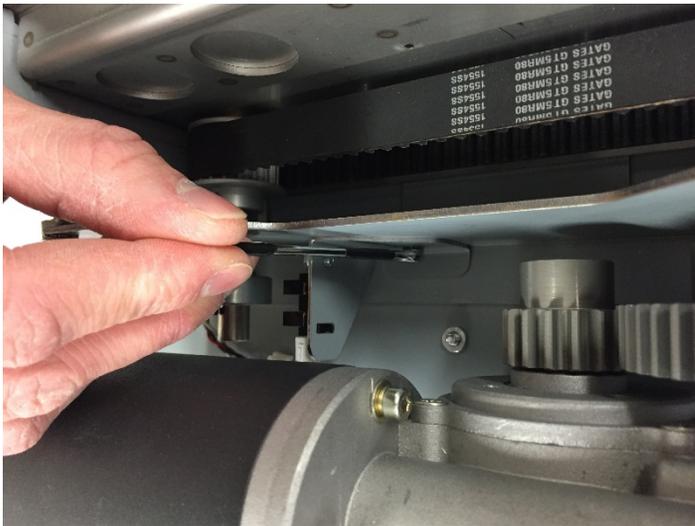
Use this procedure to remove and install the Closer Motor Encoder Sensor.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 6.1 [Closer Module Replacement](#) to remove the Closer.
4. Locate the Encoder Sensor, near the disk encoder. Remove the M4 Screw to remove the Sensor Bracket.



5. Disconnect the Sensor Cable.
6. Remove the Sensor from the Sensor Bracket by removing the M3 screw.

Installation Procedure

1. Attach the new Sensor to the Sensor Bracket using the M3 Screw. Use the cutout in the bracket to align the sensor.
2. Secure the Sensor Bracket into place by tightening the M4 Screw. Ensure that the Encoder is centered with the Sensor.
3. Connect the Sensor Cable
4. Do Rep 6.1 [Closer Module Replacement](#) to Install the Closer Module.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 6.3 Closer Full Open Sensor Replacement S47

PARTS LIST ON PL 5.19

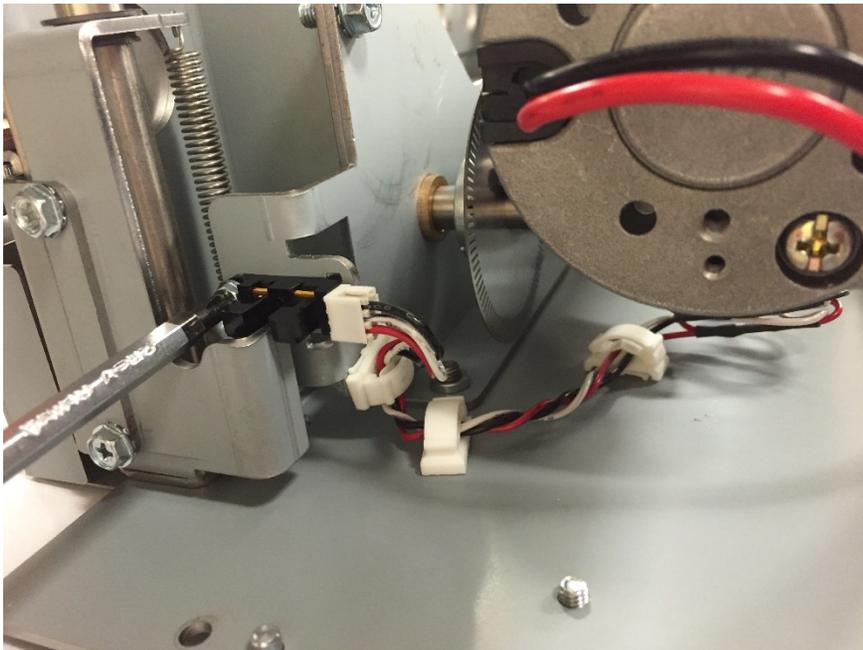
Use this procedure to remove and install the Closer Module Open Sensor

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 6.1 [Closer Module Replacement](#) to remove the Closer.
4. Locate the Closer Open Sensor at the rear of the Closer Module.
5. Remove the Sensor Cable
6. Remove the Sensor by loosening the M3 Screw.



Installation Procedure

1. Attach the new Sensor to the Sensor Bracket using the M3 Screw. Use the cutout in the bracket to align the sensor.
2. Connect the Sensor Cable
3. Do Rep 6.1 [Closer Module Replacement](#) to Install the Closer Module.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 6.4 Closer Motor Replacement M20

PARTS LIST ON PL 5.19

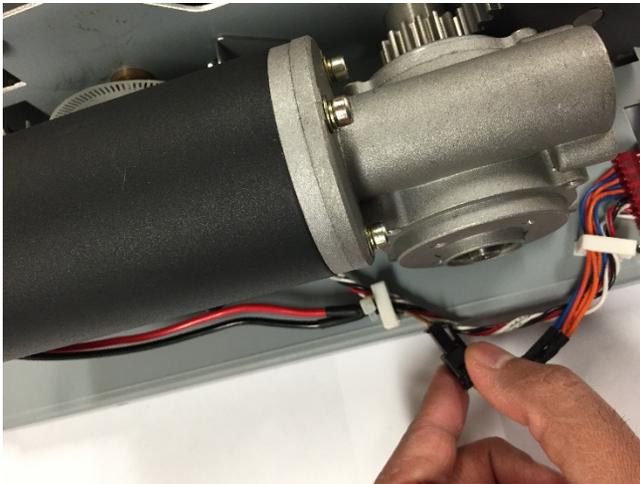
Use this procedure to remove and install the Closer Motor M20

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 6.1 [Closer Module Replacement](#) to remove the Closer.
4. Disconnect the Motor Cable at the header.



5. Disconnect the Motor from the Frame by removing the M5 Screws (4)



6. Slide the Motor out of the Closer.
7. Remove the Gear from the Motor by loosening the set screw and sliding the Gear off the shaft.

Installation Procedure

1. Install the Gear onto the Motor shaft and secure it using the set screw.
2. Position the Motor into the Closer Module and secure it using the M5 Screws (4)
3. Check the alignment of the Pinion Gear on the Motor to the larger Drive Gear on the Closer. If necessary, adjust the Pinion Gear position to ensure proper alignment.
4. Connect the Motor Cable.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 6.5 Closer Jaw Insert Replacement

PARTS LIST ON PL 5.19

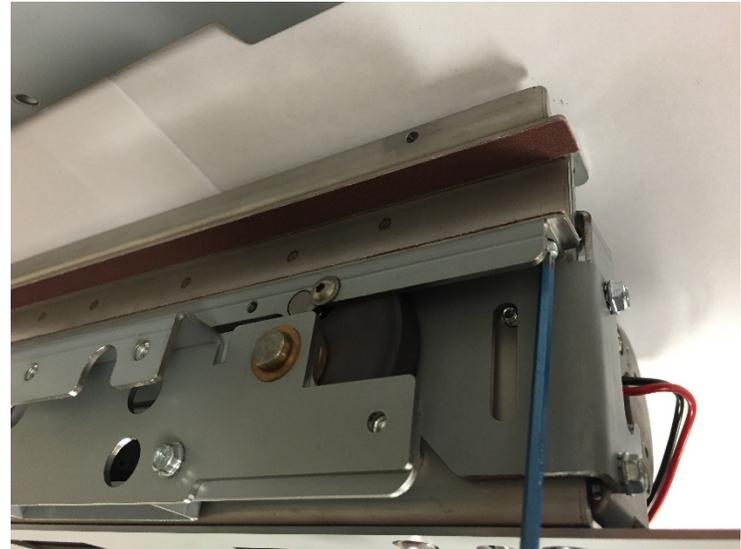
Use this procedure to remove and install the Closer Jaw Insert. Note that the same procedure is used to replace the Upper and Lower Closer Jaws.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 6.1 [Closer Module Replacement](#) to remove the Closer.
4. Using an Allen wrench, remove the M3 SHCS (2) to release the Jaw Insert.



5. Repeat the process for the opposite Jaw Insert.

Installation Procedure

1. Position the Jaw Insert in place and secure it using the M3 SHCS (2)
2. Repeat the process for the opposite Jaw Insert.
3. Do REP 6.1 [Closer Module Replacement](#) to install the Closer Module.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 6.6 Closer Spring Replacement

PARTS LIST ON PL 5.19

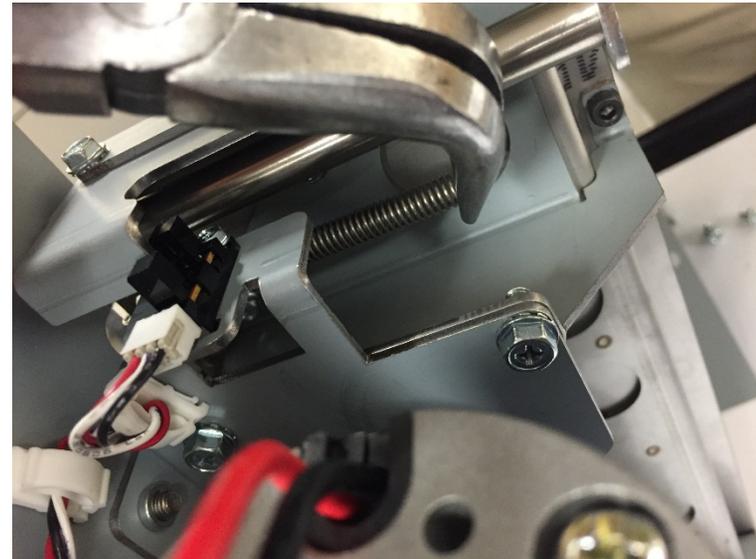
Use this procedure to remove and install the Closer Extension Springs. Note that the same procedure can be used for springs on each side of the Closer.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 6.1 [Closer Module Replacement](#) to remove the Closer.
4. Remove the Extension Spring by disconnecting each end. The top of the spring can be accessed from the window in the upper plate.



5. Repeat the process for the opposite spring.

Installation Procedure

1. Position the spring in the Closer and attach each end to the corresponding mounting hole.
2. Repeat the process for the opposite Spring
3. Do REP 6.1 [Closer Module Replacement](#) to install the Closer Module.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 6.7 Closer Release Solenoid Replacement

PARTS LIST ON PL 5.19

Use this procedure to remove and install the Closer Release Solenoid.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 6.1 [Closer Module Replacement](#) to remove the Closer.
4. Using an Allen wrench, remove the Shoulder Screws (3) securing the Ejector Plate to the Closer Ejector Bracket.
5. Remove the Compression Spring from the Closer Ejector Plate.
6. Remove the Closer Ejector Plate from the Closer by pushing it forward through the Closer Jaws.
7. Disconnect the Solenoid cable from the appropriate cable header.
8. Remove the Ejector Bracket from the Closer by loosening the M4 Screws (2).
9. Using an adjustable wrench, remove the Solenoid from the Ejector Bracket.

Installation Procedure

1. Reverse the steps from the removal procedure.
2. Do REP 6.1 [Closer Module Replacement](#) to install the Closer Module.
3. Connect the Power Cord.
4. Power ON the eWire.

7. Tappers

REP 7.1 Front Tapper Assembly Replacement

PARTS LIST ON PL 5.17

Use this procedure to remove and replace the front Tapper Assembly.

Removal Procedure

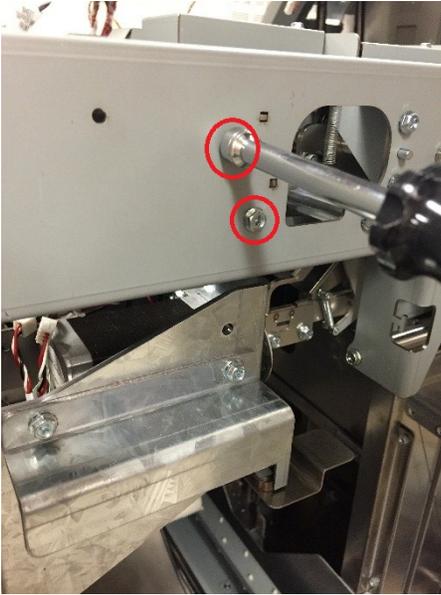
WARNING

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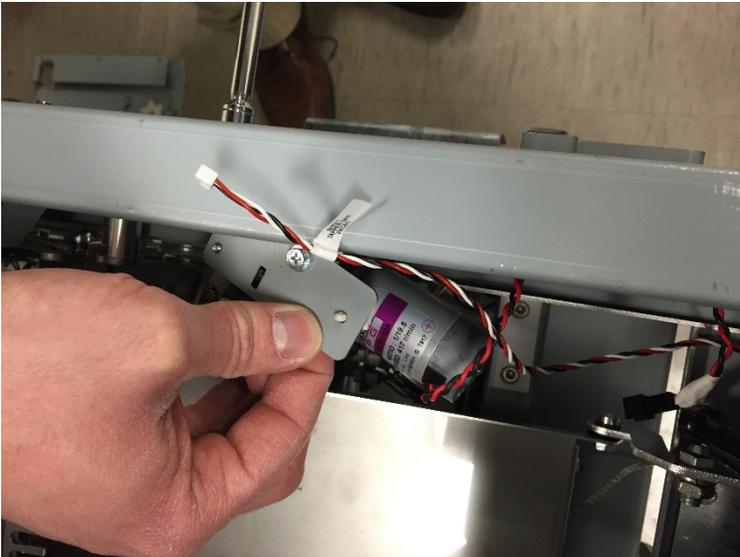
1. Turn off Power to the eWire.
1. Disconnect the Power Cord.
2. Raise the Lid.
3. Do REP 1.8 [Front Cover Replacement](#) to remove the Front Cover.
4. Locate the Front Tapper Assembly.
5. Disconnect the Tapper Sensor Cable and Tapper Motor Cable from the corresponding headers.



6. Remove the M4 screws (2) securing the Tapper to the eWire Frame



7. Carefully Remove the Tapper Assembly from the eWire



Installation Procedure

1. Place the Tapper Assembly into place on the eWire Frame. Two tabs are used to align the Front Tapper Assembly.
2. Secure the Front Tapper with the M4 Screws (2)
3. Connect the Sensor Cable and Motor Cable.
4. Do REP 1.1 [Top Cover Replacement](#) to replace the Front Cover.
5. Connect the Power Cable
6. Turn power ON to the eWire.

REP 7.2 Tapper Motor Replacement M6 & M7

PARTS LIST ON PL 5.17

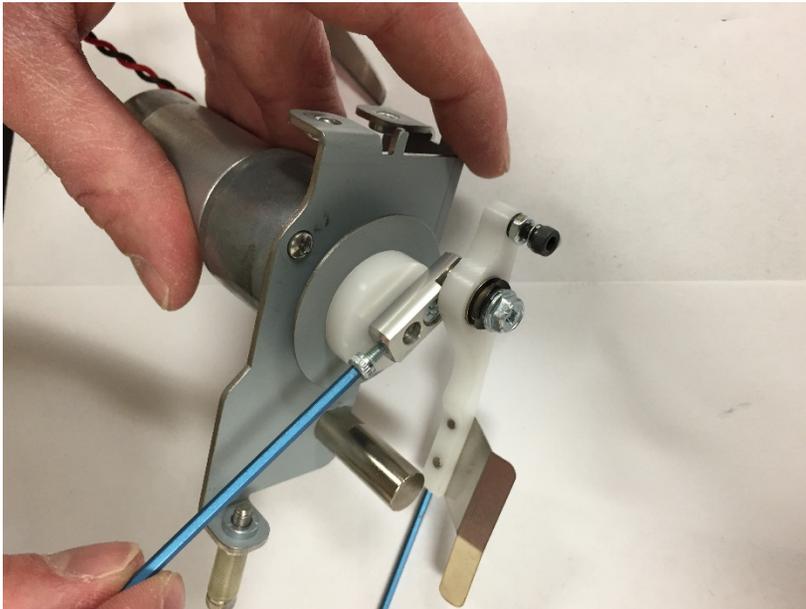
Use this procedure to remove and install the Motor on the Front Tapper Assembly, Motor M6. Note: The same procedure can be used to replace Motor M7 on the Rear Tapper Assembly.

Removal Procedure

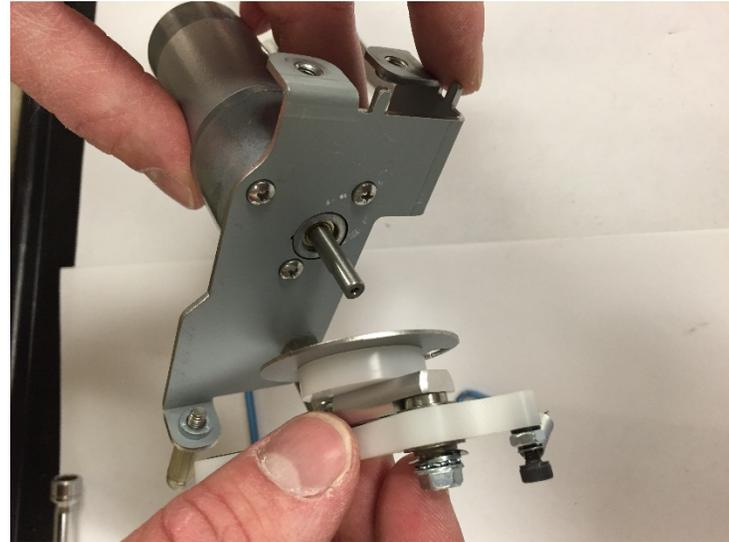
WARNING

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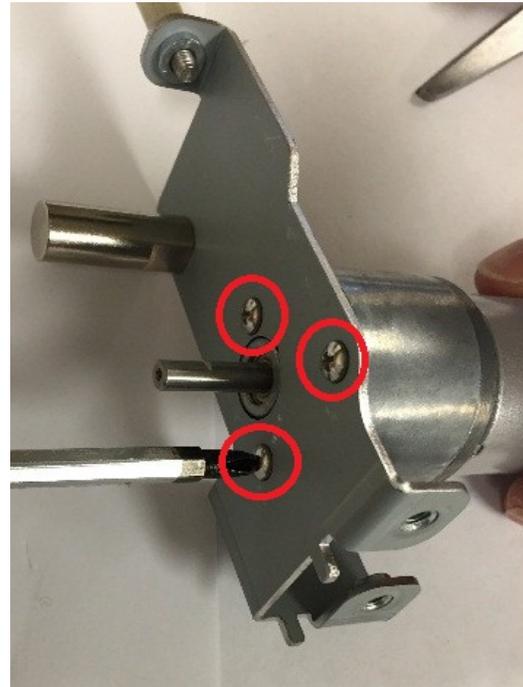
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 7.1 [Front Tapper Assembly Replacement](#) to remove the Front Tapper Assembly.
4. Disconnect the Front Tapper Spring by lifting it off the notch on the Tapper Frame.
5. Loosen the Set screw securing the Tapper hub to the Motor shaft.



6. Remove the Tapper hub from the Motor.



7. Remove the #4-40 Screws (3) to remove the Tapper Motor from the Tapper Frame.



Installation Procedure

1. Insert the new Motor into the Tapper Frame and secure it using the #4-40 Screws (3)
2. Slide the Tapper Hub onto the Motor Shaft and secure it using the set screw. Ensure that the Tapper Finger Arm rests on top of the Standoff as shown.



3. Ensure that the Disk Encoder is approximately centered in the Tapper Front Sensor. If it is not centered, loosen the set screw and adjust the Hub until it reaches the correct position and re-tighten the set screw.
4. Attach the Tapper Spring to the notch on the Tapper Frame.
5. Do REP 7.1 [Front Tapper Assembly Replacement](#) to Install the Front Tapper Assembly
6. Connect the Power Cord
7. Turn on the eWire.

REP 7.3 Tapper Sensor Replacement S18 & S19

PARTS LIST ON PL 5.17

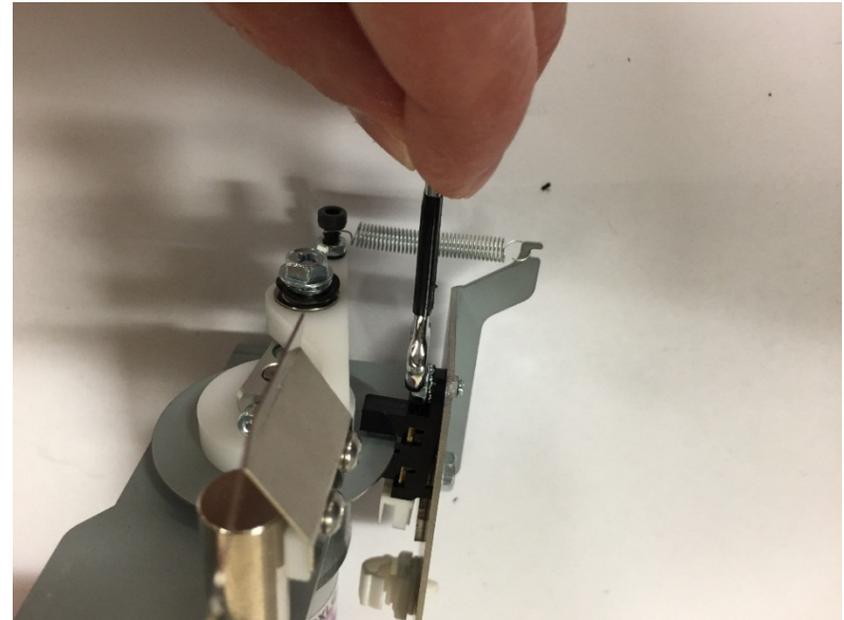
Use this procedure to remove and install the Sensor on the Front Tapper Assembly, S18. Note: The same procedure can be used to replace the Sensor S19, on the Rear Tapper Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 7.1 [Front Tapper Assembly Replacement](#) to remove the Front Tapper Assembly
4. Remove the Sensor Cable from the Front Tapper Sensor.
5. Remove the Sensor from the Tapper Frame by removing the M3 Screw.



Installation Procedure

1. Place the new Sensor onto the Tapper Frame, using the cutout for alignment.
2. Secure the sensor by tightening the M3 screw
3. Connect the Sensor Cable.
4. Do REP 7.1 [Front Tapper Assembly Replacement](#) to install the Front Tapper Assembly.
5. Connect the Power Cord
6. Turn on the eWire.

REP 7.4 Front Tapper Spring Replacement

PARTS LIST ON PL 5.17

Use this procedure to remove and install the Extension Spring on the Front Tapper Assembly. Note: The same procedure can be used to replace the spring on the Rear Tapper Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 7.1 [Front Tapper Assembly Replacement](#) to remove the Front Tapper Assembly
4. Remove the Spring by removing one end from the notch on the Tapper Frame and the other end from the mounting Screw on the Tapper Finger Assembly



Installation Procedure

1. Reverse the steps from the Removal Procedure.

REP 7.5 Tapper Finger Replacement

PARTS LIST ON PL 5.17

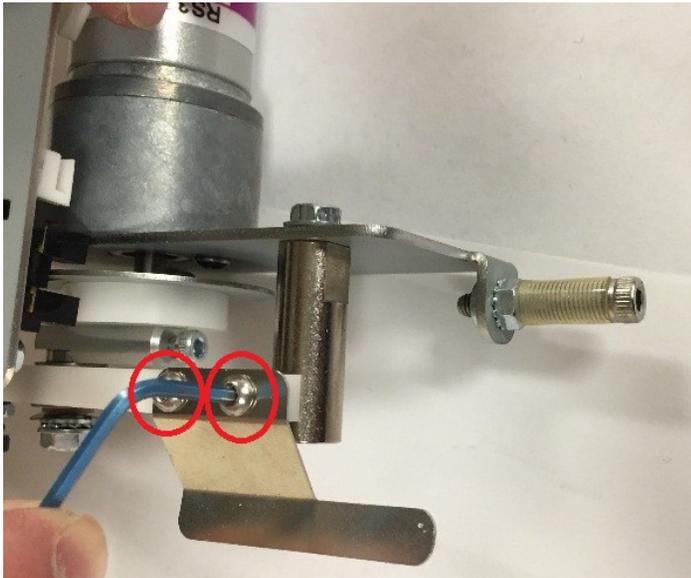
Use this procedure to remove and install the Finger on the Front Tapper Assembly. Note: The same procedure can be used to replace the Finger on the Rear Tapper Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 7.1 [Front Tapper Assembly Replacement](#) to remove the Front Tapper Assembly.
4. Remove (2) M3 Screws securing the Finger to the Tapper Arm and remove the Finger.



Installation Procedure

1. Reverse the steps from the Removal Procedure.

REP 7.6 Rear Tapper Assembly Replacement

PARTS LIST ON PL 5.18

Use this procedure to remove and install the Rear Tapper Assembly

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to Remove the Back Cover.
4. Disconnect the Tapper Sensor Cable and Tapper Motor Cable from the appropriate headers.
5. Using a long screwdriver, remove the M4 Screws (2) securing the Rear Tapper to the Frame. Use the access hole in the Frame to access the screws.
6. Remove the Rear Tapper from the Frame.

Installation Procedure

1. Reverse the steps from the Removal Procedure.
2. Connect the Power Cord
3. Turn on the eWire.

8. Holder Module

REP 8.1 Closer Staged Sensor and Closer Home Sensor S46 & S49 PARTS LIST ON PL 5.20

Use this procedure to remove and replace the Closer Staged and Closer Home Sensors

Removal Procedure

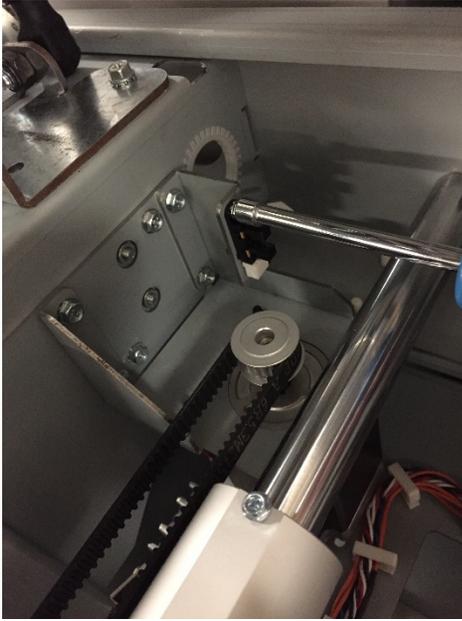
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Raise the Lid and Lower Bypass.
4. If necessary, manually move the Closer forward or back to access the sensors.
5. Locate the appropriate Sensor, S46 or S49. Refer to PL 5.20, or GP 6.4.3.
6. Disconnect the Sensor Cable from the Sensor
7. Remove the Closer Staged Sensor S49 by removing the M3 Screw.



8. Remove the Closer Home Sensor S46 by removing the M3 Screw.



Installation Procedure

1. Install the new Sensor by tightening the M3 Screw. Use tab for alignment.
2. Connect the Sensor Cable.
3. Close the Lid
4. Connect the Power Cable
5. Turn power ON to the eWire.

REP 8.2 Closer Rotate Horizontal and Vertical Sensor S34 & S35 PARTS LIST ON PL 5.22

Use this procedure to remove and replace the Closer Rotate Sensors, horizontal and vertical.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Raise the Lid and Lower Bypass.
4. If necessary, manually move the Closer forward to access the sensors.
5. Disconnect the Sensor Cables.
6. Remove the Sensor removing the M3 Screw.



Installation Procedure

1. Install the new Sensor by tightening the M3 Screw. Use tabs for alignment.
2. Connect the Sensor Cable.
3. Close the Lid
4. Connect the Power Cable
5. Turn power ON to the eWire.

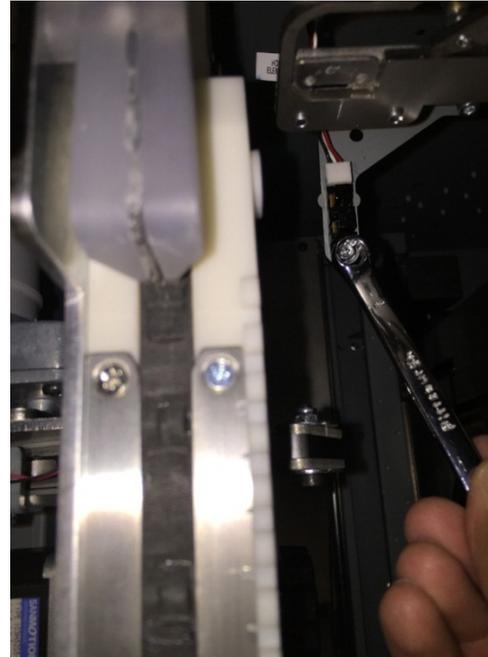
Use this procedure to remove and replace the Holder Position Near Element Sensor, S40

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Raise the Lid and Lower Bypass.
4. Locate the Holder Position Near Element Sensor, at the forward edge of the Holder module, near the Deflector and Element Feeder. Refer to PL 5.20 and GP 6.4.3.
5. Disconnect the Sensor Cable.
6. Remove the Sensor by removing the M3 Screw.



Installation Procedure

REP 8.3 Holder Position near Element Sensor S40

PARTS LIST ON PL 5.20

GBC eWire

01/26/2018
4-145

Repairs/Adjustments

1. Install the new Sensor by tightening the M3 Screw. Use tab for alignment.
2. Connect the Sensor Cable.
3. Close the Lid
4. Connect the Power Cable
5. Turn power ON to the eWire.

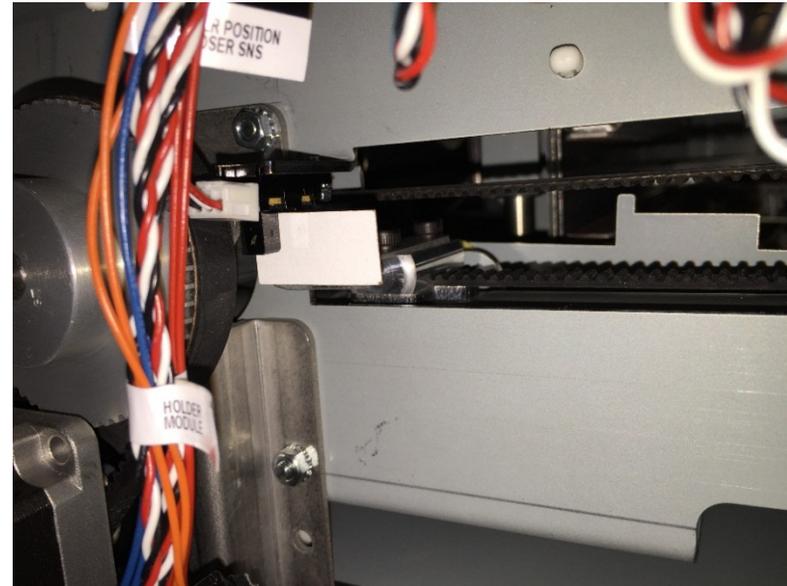
Use this procedure to remove and replace the Holder Position Element Sensor S38, and the Holder Position Closer Sensor S36.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Locate the Holder Position Closer Sensor, located on the rear of the Holder near the Drive Pulley. Refer to PL 5.20 and GP 6.4.3.
5. Locate the Holder Position Element Sensor, located on the rear of the Holder at the other side of the cutout. Refer to PL 5.20 and GP 6.4.3.
6. Disconnect the Sensor Cable.
7. Remove the Holder Position Closer Sensor by removing the M3 Screw.



8. Remove the Holder Position Element Sensor by removing the M3 Screw.

REP 8.4 Holder Position Closer and Holder Position Element Sensor S36 and S38

PARTS LIST ON PL 5.20



Installation Procedure

1. Install the new Sensor by tightening the M3 Screw. Use tab for alignment.
2. Connect the Sensor Cable.
3. Do REP 1.5 [Back Cover Replacement](#) to install the Back Cover.
4. Connect the Power Cable
5. Turn power ON to the eWire.

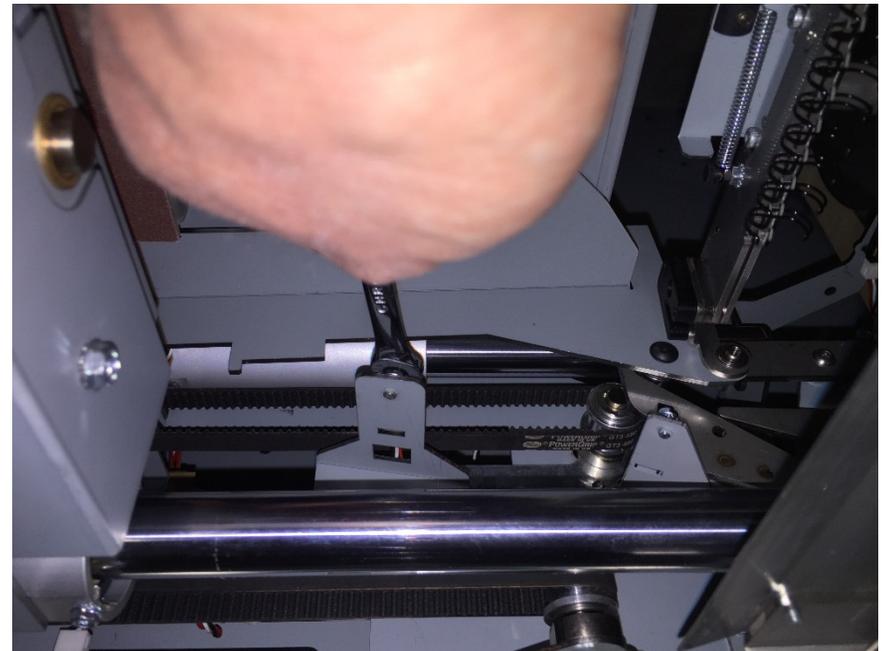
Use this procedure to remove and replace the Holder at Reverse Gate Sensor S39.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Raise the Lid and Lower Bypass.
4. Locate the Holder at Reverse Gate Sensor. Refer to PL 5.20 and GP 6.4.3.
5. Disconnect the Sensor Cable.
6. Remove the Sensor by removing the M3 Screw.



Installation Procedure

REP 8.5 Holder at Reverse Gate Sensor S39

PARTS LIST ON PL 5.20

GBC eWire

01/26/2018
4-147

Repairs/Adjustments

1. Install the new Sensor by tightening the M3 Screw. Use tab for alignment.
2. Connect the Sensor Cable.
3. Close the Lid
4. Connect the Power Cable
5. Turn power ON to the eWire.

REP 8.6 Holder Position Stack Sensor S37

PARTS LIST ON PL 5.20

Use this procedure to remove and replace the Holder Position Stack Sensor S37.

DO NOT REPLACE OR ADJUST THIS SENSOR UNLESS DIRECTION TO VIA AN ESCALATION

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Raise the Lid and Lower Bypass.
4. Locate the Holder Position Stack Sensor. Refer to PL 5.20 and GP 6.4.3.
5. Disconnect the Sensor Cable.
6. Remove the Sensor by removing the M3 Screw. **DO NOT REMOVE THE SCREW MARKED WITH ORANGE PAINT**



Installation Procedure

1. Install the new Sensor by tightening the M3 Screw. Use tab for alignment.
2. Connect the Sensor Cable.
3. Close the Lid
4. Connect the Power Cable
5. Turn power ON to the eWire.

REP 8.7 Holder Linear Motor Replacement M15

PARTS LIST ON PL 5.21

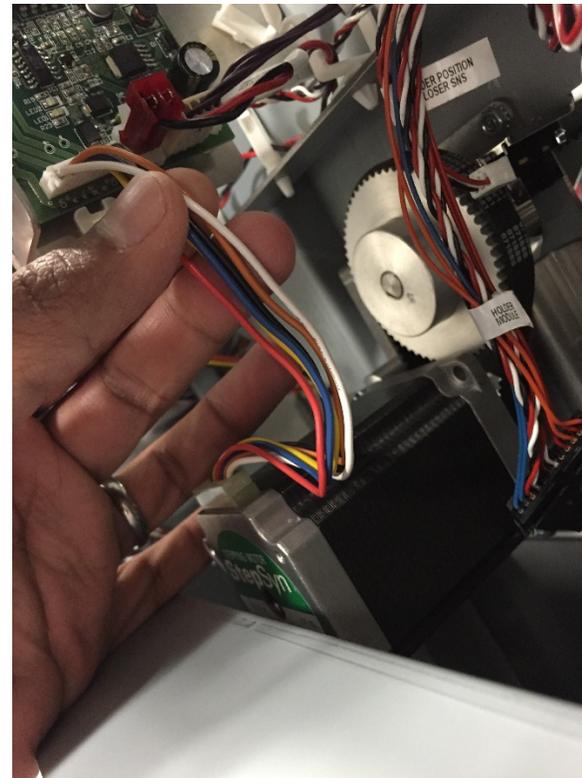
Use this procedure to remove and install the Holder Linear Motor, M15

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Loosen the Set screw securing the Drive Pulley to the Motor shaft.
5. Disconnect the Motor Cable from the Stepper Driver Board.



- Remove the M4 Screws (4) to remove the Holder Linear Motor from the Standoffs.



- Slide the Motor out of the pulley shaft and remove the motor.

Installation Procedure

- Reverse the steps in the Removal Procedure.

REP 8.8 Holder Linear Motor Replacement M21

PARTS LIST ON PL 5.21

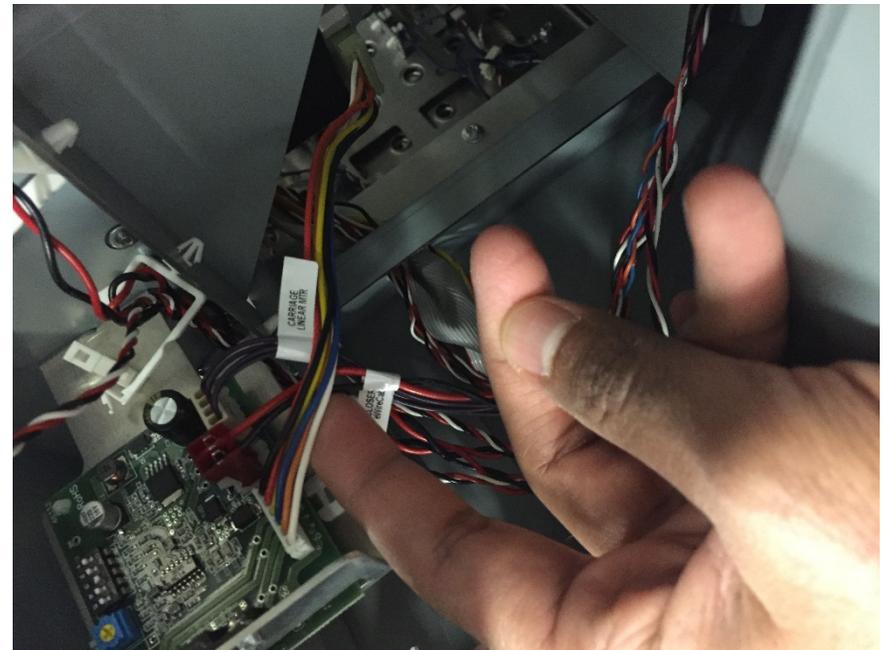
Use this procedure to remove and install the Closer Linear Motor, M21

Removal Procedure

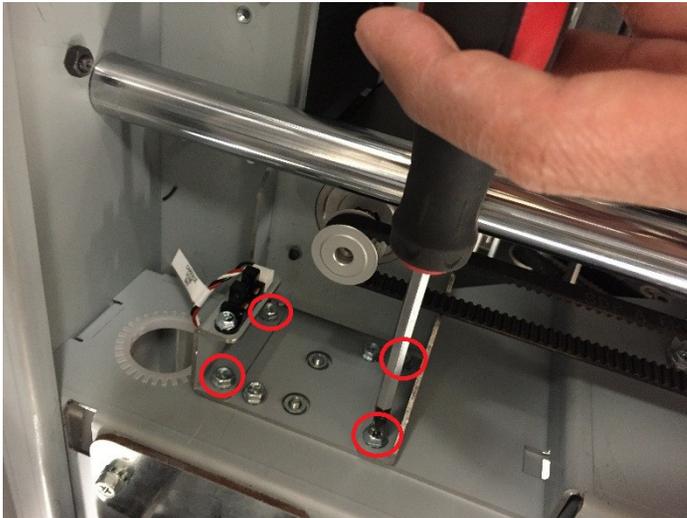
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

- Switch power OFF to eWire.
- Disconnect the Power Cord.
- Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
- Do REP 1.6 [Side Cover Replacement](#) to remove the downstream Side Cover.
- Loosen the Set screw securing the Drive Pulley to the Motor shaft.
- Disconnect the Sensor Cable from the Closer Home Sensor S46 (refer to REP 8.1 [Closer Staged Sensor and Closer Home Sensor S46 & S49](#)).
- Disconnect the Motor Cable from the Stepper Driver Board.



- Remove the M4 Screws (4) to remove the Motor Mounting Bracket from the Holder



- Remove the Pulley and remove the Motor Bracket Assembly from the Holder.
- Remove the M4 Screws (4) to remove the Motor from the Mounting Bracket.

Installation Procedure

- Attach the new Motor to the Mounting Bracket using the M4 Screws (4).
- Position the Mounting Bracket Assembly within the Holder and secure it using the M4 Screws (4).
- Attach the Pulley and Belt to the Motor shaft and tighten the set screw.
- Attach the Sensor Cable to the S46 Sensor and secure the cables using the cable clamps on the Motor Bracket.
- Connect the Motor Cable to the appropriate Stepper Driver.
- Replace the Back and Side cover.
- Connect the Power Cord and resume operation.

REP 8.9 Holder Rotate Motor Replacement M14 PARTS LIST ON PL 5.21

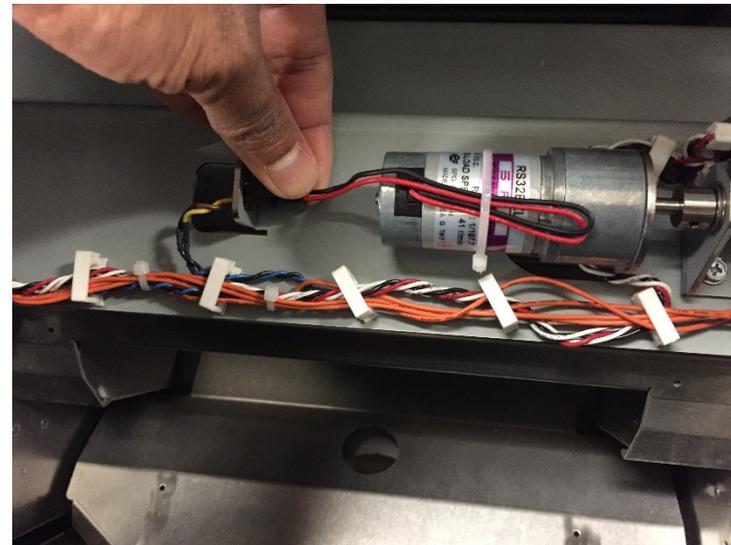
Use this procedure to remove and install the Holder Rotate Motor, M14

Removal Procedure

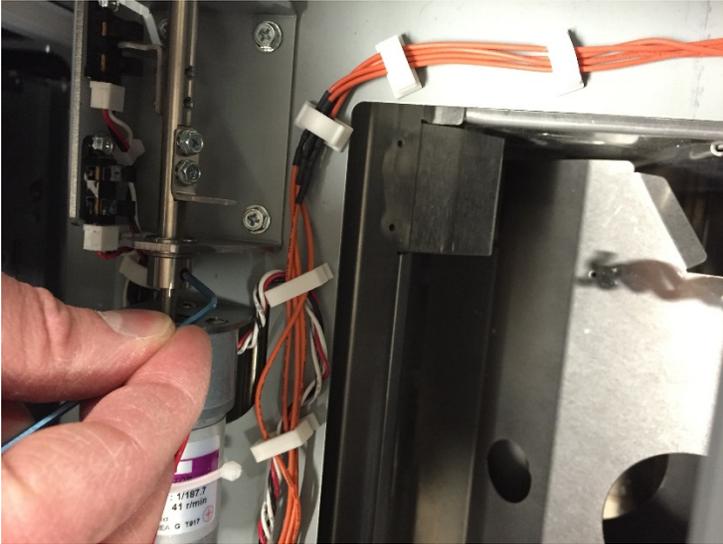
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

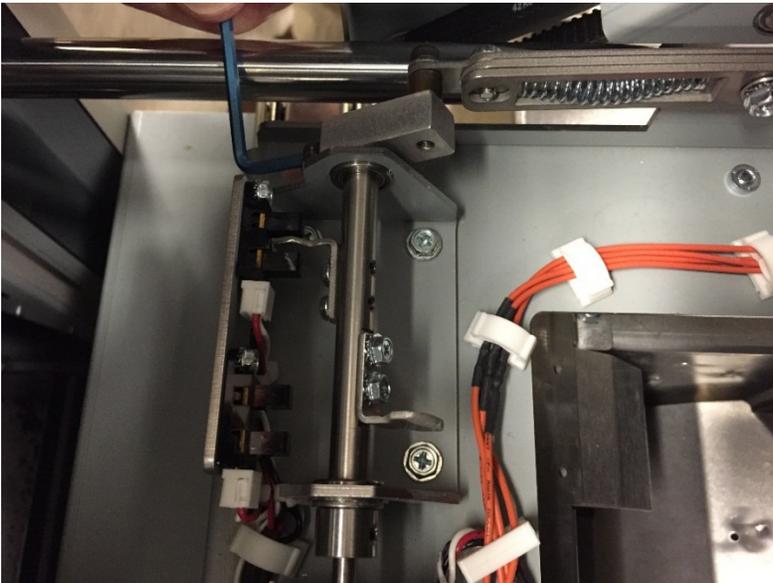
- Switch power OFF to eWire.
- Disconnect the Power Cord.
- Raise the Lid and Lower Transport Assembly.
- Locate the Holder Rotate Motor on the Holder Frame.
- Disconnect the Motor Cables at the header.



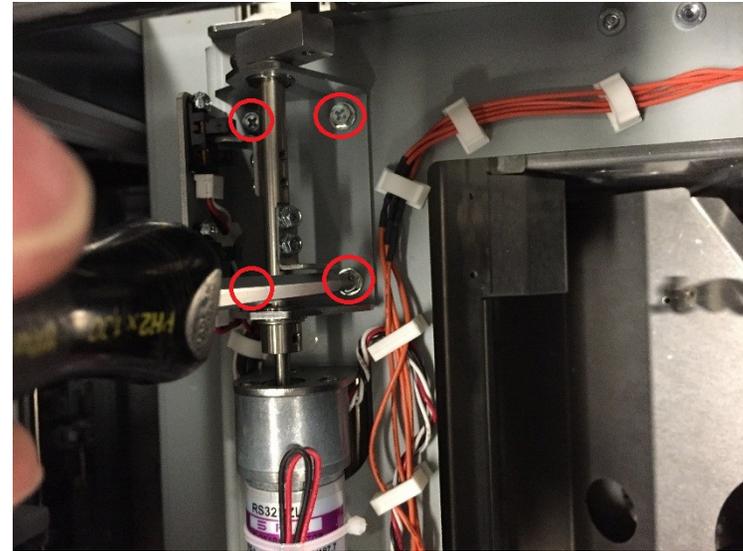
6. Loosen the Set Screw securing the Pulley to the Motor Shaft.



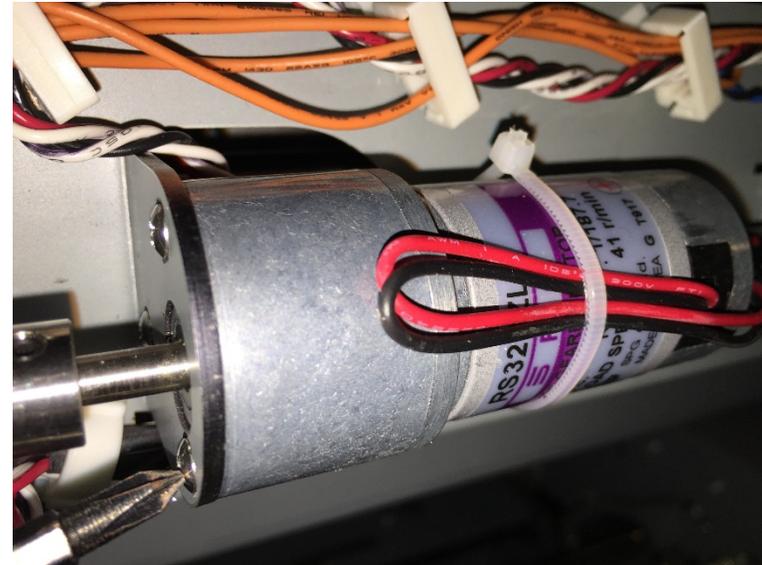
7. Loosen the Screw securing the Crank Block to the Shaft, and remove the Screw and Spacer.
8. Disconnect the Sensor Cables at the Holder Rotate Horizontal and Holder Rotate Vertical Sensors. Refer to REP 8.2 [Closer Rotate Horizontal and Vertical Sensor S34 & S35](#)



9. Loosen the M4 Screws (4) and remove the Holder Rotate Assembly from the Holder.



10. Remove the #4-40 Screws (3) securing the Motor and remove the Motor from the Holder Rotate Base.



Installation Procedure

1. Attach the new Motor to the Holder Rotate Assembly using the #4-40 Screws (4).
2. Tighten the set screw to secure the Rotate Shaft to the Motor Shaft.
3. Position the Holder Rotate Assembly within the Holder.
4. Attach the Crank Block to the Holder Rotate Shaft using the M4 Screw and Spacer.
5. Secure the Holder Rotate Assembly to the Holder frame using the M4 Screws (4).
6. Attach the Sensor Cables.
7. Connect the Motor Cable.
8. Connect the Power Cord and resume operation.

REP 8.10 Closer Linear Drive Belt Replacement

PARTS LIST ON PL 5.21

Use this procedure to remove and install the Closer Linear Drive Belt.

Removal Procedure

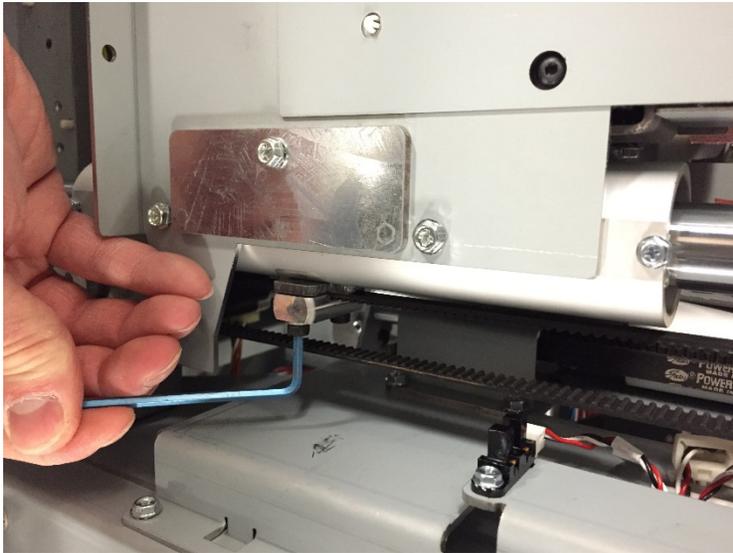
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Loosen the M4 Screws (2) securing the Timing Belt Bracket and adjust the Bracket to relieve tension on the Belt.



5. Remove the M4 Screws securing the Timing Belt Clamp, and remove the Timing Belt Clamp.



6. Slide the Timing Belt off the Pulleys and remove the Timing Belt.

Installation Procedure

1. Place the new Timing Belt in position and align it to the Pulleys.
2. Secure the Timing Belt Clamp using the M4 Screws to secure the Belt to the Closer.
3. Adjust the Timing Belt Bracket to appropriate belt tension and secure the Timing Belt Bracket by tightening the Screws.
4. Connect the Power Cord
5. Turn power ON to eWire.

REP 8.11 Holder Linear Drive Belt – Front Replacement PARTS LIST ON PL 5.21

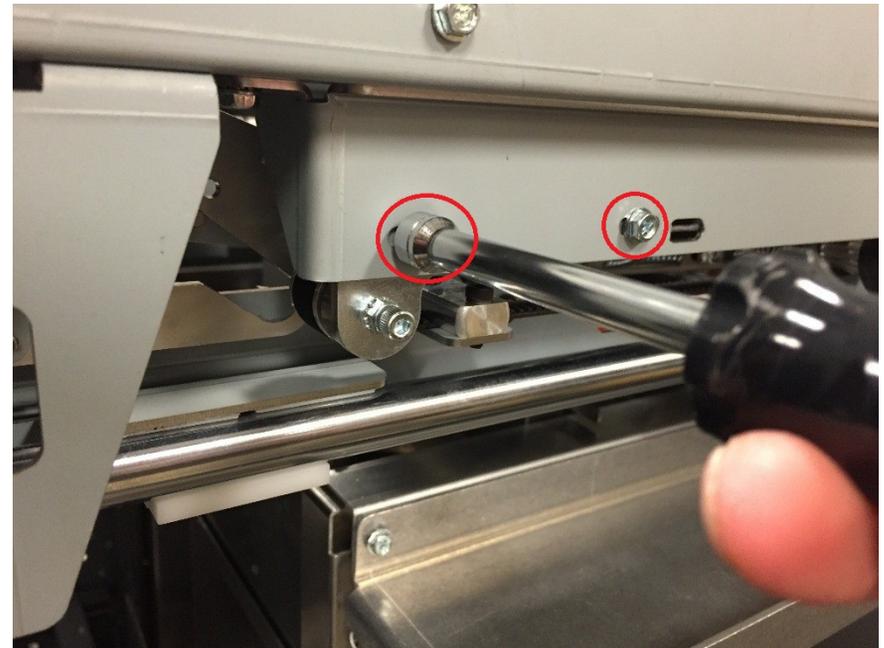
Use this procedure to remove and install the Holder Linear Drive Belt, Front. Note that the same belt is also used on the rear side of the Holder.

Removal Procedure

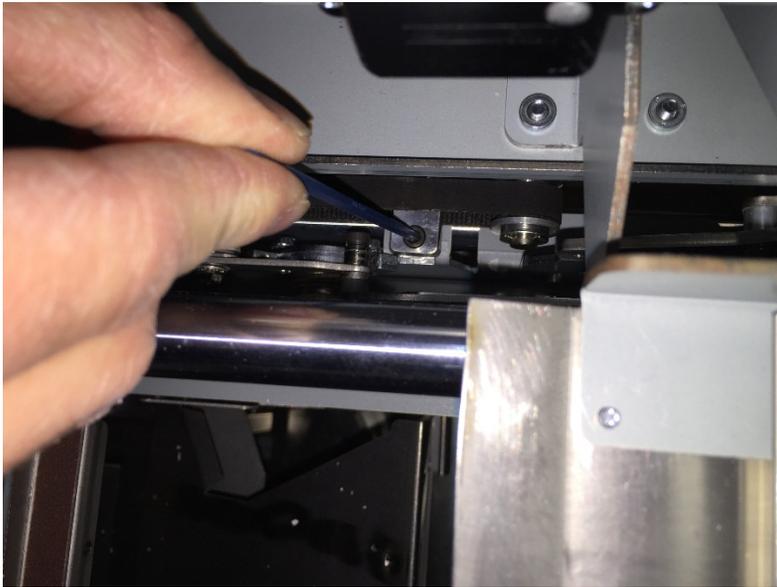
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Loosen the M4 Screws securing the Timing Belt Bracket and adjust the Bracket to relieve tension on the Belt.



5. Remove the M4 Screws securing the Timing Belt Clamp, and remove the Timing Belt Clamp.



6. Slide the Timing Belt off the Pulleys and remove the Timing Belt.

Installation Procedure

1. Place the new Timing Belt in position and align it to the Pulleys.
2. Secure the Timing Belt Clamp using the M4 Screws to secure the Belt to the Closer.
3. Adjust the Timing Belt Bracket to appropriate level of belt tension and secure the Timing Belt Bracket by tightening the Screws.
4. Connect the Power Cord
5. Turn power ON to eWire.

REP 8.12 Holder Linear Drive Belt – Rear Replacement PARTS LIST ON PL 5.21

Use this procedure to remove and install the Holder Linear Drive Belt, Rear. Note that the same belt is also used on the front side of the Holder.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.1 [Back Cover Replacement](#) to remove the Back Cover.
4. Loosen the M4 Screws securing the Timing Belt Bracket and adjust the bracket to relieve tension on the belt.
5. Remove the M4 Screws securing the Timing Belt Clamp, and remove the Timing Belt.



6. Slide the Timing Belt off the Pulleys and remove the Timing Belt.

Installation Procedure

1. Position the new Timing Belt around the Pulleys and align it to the Pulleys.
2. Secure the Timing Belt Clamp using the M4 Screws to secure the Belt to the Closer.
3. Adjust the Timing Belt Bracket to appropriate level of belt tension and secure the Timing Belt Bracket by tightening the Screws.
4. Connect the Power Cord
5. Turn power ON to eWire.

Timing Belt Bracket
Tensioning Screw

Timing Belt
Clamp

REP 8.13 Holder Gates Spring Lower Replacement

PARTS LIST ON PL 5.21

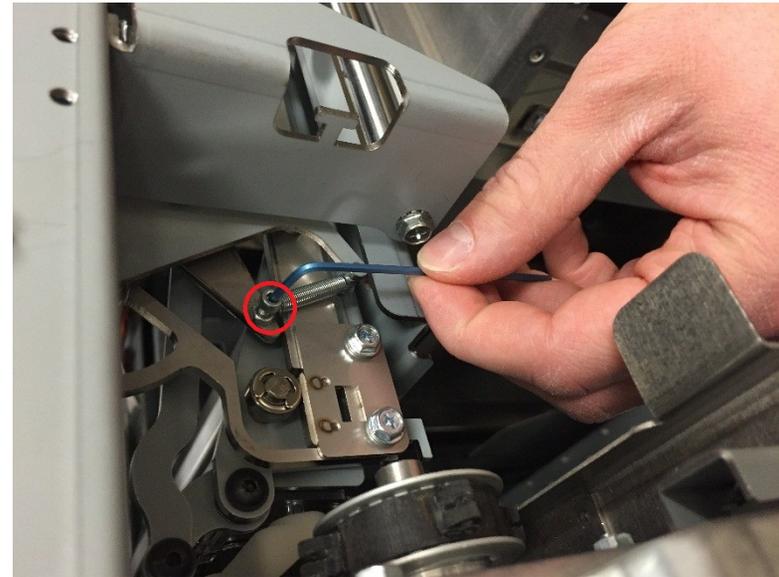
Use this procedure to remove and install the Holder Gates Spring, Lower. Note that this procedure applies to the extension springs on the front and rear sides of the Holder.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Remove the M3 Screw and Nut to release the end of the extension spring.



5. Repeat the procedure to remove the M3 Screw and Nut at the opposite end of the extension spring. Remove the old spring.
6. If necessary, use the same process to remove the Holder Gates Lower Spring on the opposite side of the Holder.

Installation Procedure

1. Thread the M3 Screw and Nut through the end of the extension spring and attach the Screw to the Holder. Secure it using the M3 Nut.
2. Repeat the Procedure to secure the opposite end of the spring.
3. If necessary, use the same process to replace the Holder Gates Spring Lower on the opposite side of the Holder.
4. Connect the Power Cord
5. Turn power ON to eWire.

REP 8.14 Holder Gates Spring Upper Replacement

PARTS LIST ON PL 5.21

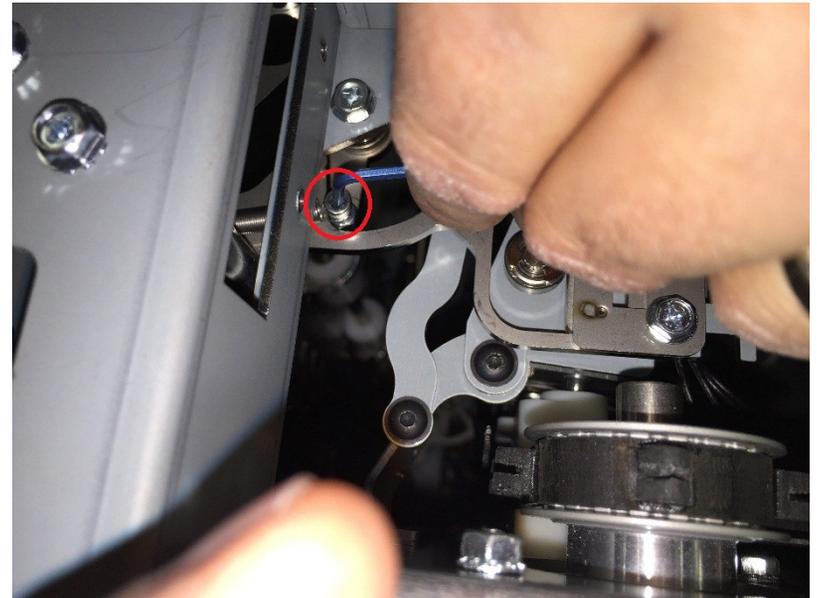
Use this procedure to remove and install the Holder Gates Spring Upper. Note that this procedure applies to the extension springs on the front and rear sides of the Holder.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Remove the M3 Screw and Nut to release the end of the extension spring.



5. Repeat the procedure to remove the M3 Screw and Nut at the opposite end of the extension spring. Remove the old spring.
6. If necessary, use the same process to remove the Holder Gates Upper Spring on the opposite side of the Holder.

Installation Procedure

1. Thread the M3 Screw and Nut through the end of the extension spring and attach the Screw to the Holder. Secure using the M3 Nut.
2. Repeat the Procedure to secure the opposite end of the spring.
3. If necessary, repeat the procedure for the Holder Gates Upper Spring on the opposite side of the Holder.
4. Connect the Power Cord
5. Turn power ON to eWire.

REP 8.15 Linear Spring Plate Assembly

PARTS LIST ON PL 5.21

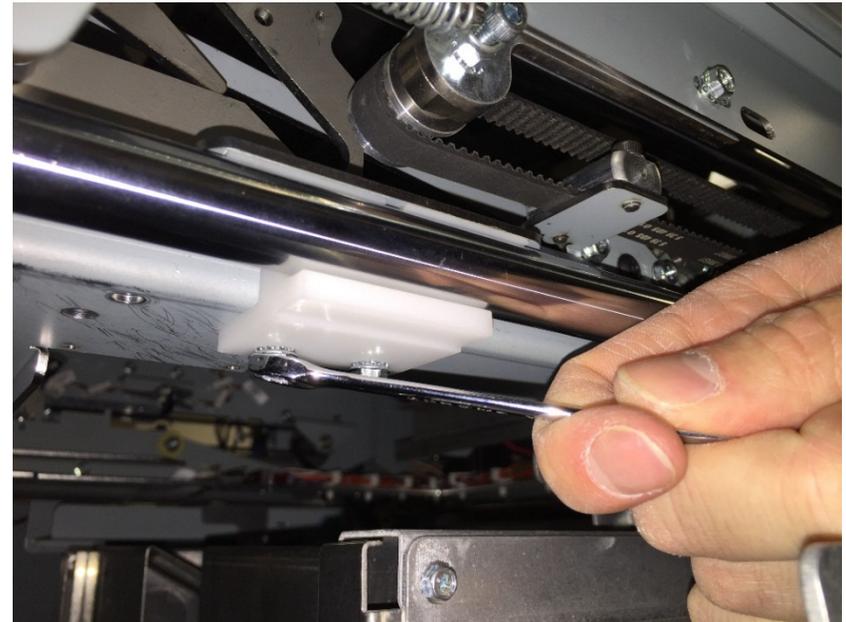
Use this procedure to remove and install the Linear Spring Plate Assembly

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Open the Book Tray Door and locate the Linear Spring Plate Assembly on the bottom side of the Holder.
5. Remove the M4 Screws (2) and remove the Linear Spring Plate



6. If necessary, repeat this procedure for the second Linear Spring Plate Assembly.

Installation Procedure

1. Reverse the steps in the Removal Procedure.
2. Connect the Power Cord
3. Turn power ON to eWire.

Use this procedure to remove and install the Holder Lock Solenoid L8. Note that this procedure applies to both solenoids on the Holder.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Locate the Holder Lock Solenoid(s) on the Holder Lock Sub-Assembly.
5. Disconnect the Solenoid Cables at the header.



REP 8.16 Holder Lock Solenoid, L8

PARTS LIST ON PL 5.22

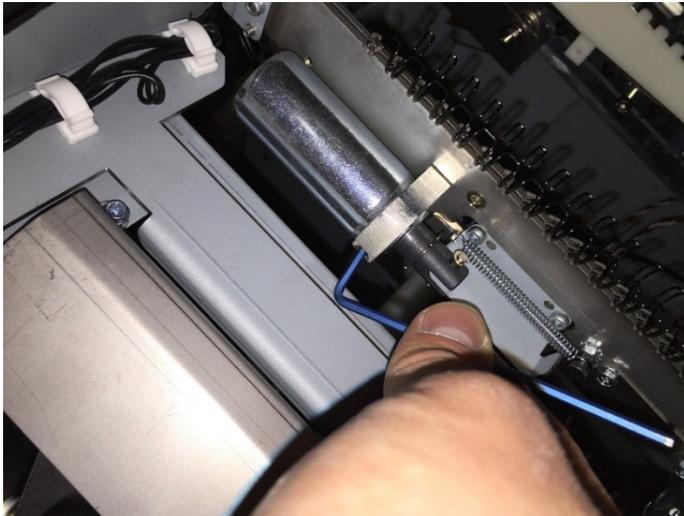
GBC eWire

6. Using a flat head screwdriver, remove the E-Ring securing the Link Pin. Remove the Link Pin from the Solenoid Assembly.



1. Insert the new Solenoid into the Solenoid Clamp and position it to the Holder Lock Assembly. Secure the Solenoid Clamp using the M3 Screw.
2. Thread the Link Pin through the Solenoid plunger and the Holder Lock Sub-Assembly bracket. Secure the Link Pin by attaching the E-Ring.
3. Connect the Solenoid Cable and secure the wires using the cable clamps.
4. Repeat the Process to install the second L8 Solenoid.
5. Connect the Power Cord
6. Turn power ON to eWire.

7. Remove the M3 Screw securing the Solenoid Clamp to the Holder Lock Sub-Assembly.



8. Remove the Solenoid.
9. Repeat the same procedure for the second L8 Solenoid.

Installation Procedure

REP 8.17 Holder Lock Sub-Assembly Replacement

PARTS LIST ON PL 5.22

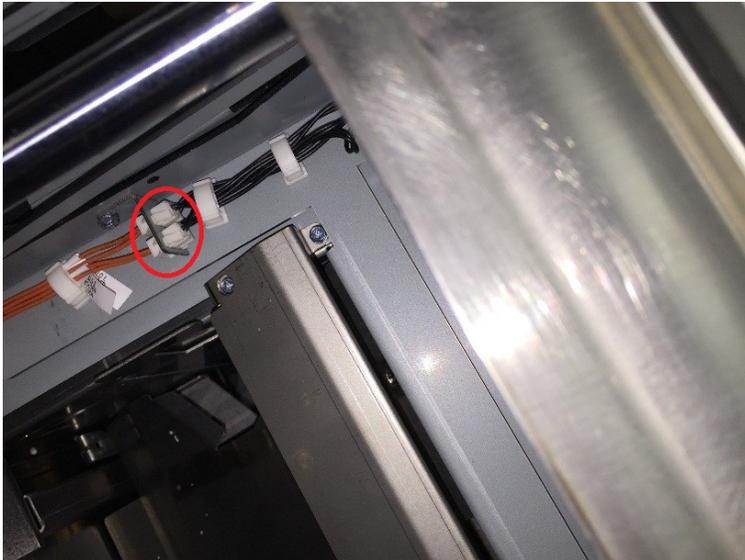
Use this procedure to remove and install the Holder Lock Sub-Assembly

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Lid and Lower Bypass.
4. Locate the Holder Lock Sub-Assembly.
5. Disconnect the Solenoid Cables at the header.



6. Remove the M4 Screw securing the Rear Hinge of the Holder Lock Sub-Assembly to the Holder Frame. While supporting the Holder Lock Sub-Assembly, remove the screw, washers, flange and stud.
7. Remove the M3 Screw securing the Upper Link of the Holder to the Holder Lock Sub-Assembly Front Hinge.

8. Remove the M4 Screw securing the Holder Frame to the Front Hinge of the Holder Lock Sub-Assembly. While supporting the Holder Lock Sub-Assembly, remove the screw, washers, flange and stud.
9. Remove the Holder Lock Sub-Assembly from the Holder.

Installation Procedure

1. Reverse the Steps found in the Removal Procedure
2. Connect the Power Cord
3. Turn power ON to eWire.

REP 8.18 Holder Link Replacement

PARTS LIST ON PL 5.21

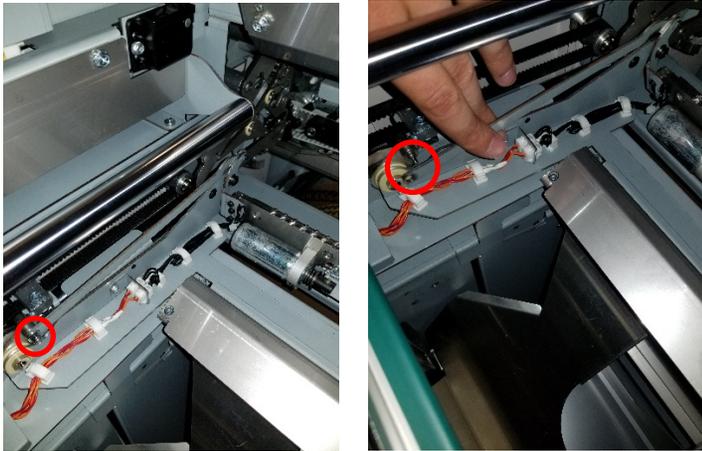
Use this procedure to replace the Holder Link.

Removal Procedure

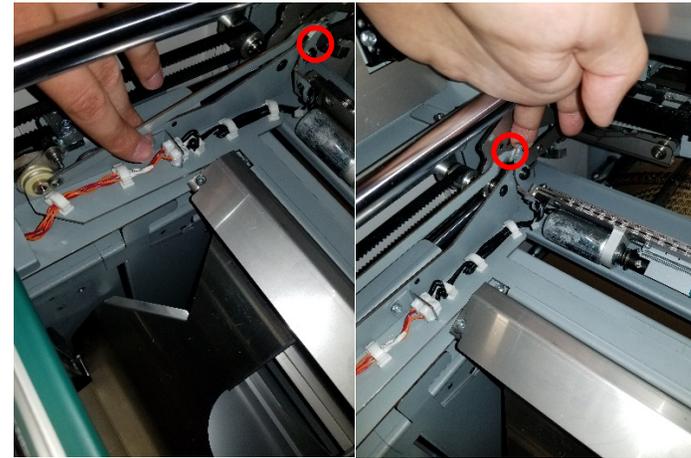
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

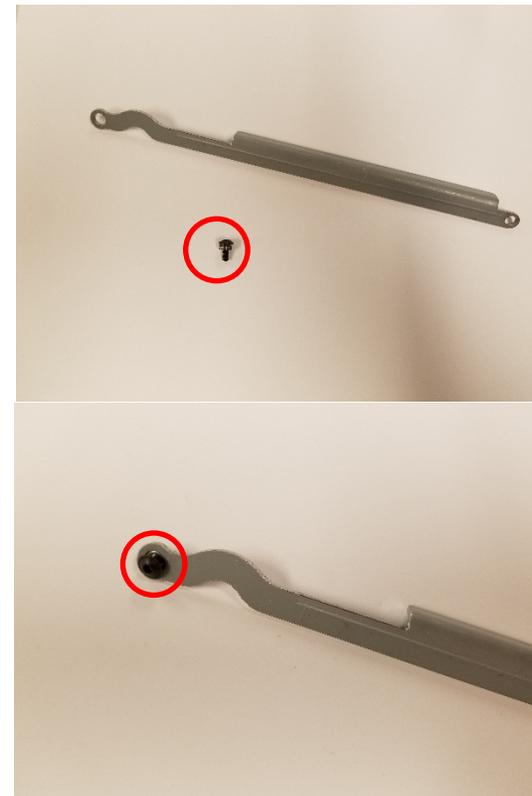
10. Switch power OFF to eWire.
11. Disconnect the Power Cord.
12. Open the Lid and Lower Bypass.
13. Remove the M3 Nylock Hex Nut and washer securing the Holder Link to the Holder Rotate Mandrel to release one end of the link.



14. Remove the M4 Hex Nut, Screw and Spacer securing the Holder Link to the Front Element Holder Hinge. Hold the top of the screw head with an Allen wrench or a finger when loosening the nut to prevent the screw and spacer from falling into the machine.



15. Remove the old Holder link from the machine and install the M4 Screw and Spacer into the new Holder link as shown.



Installation Procedure

1. Reverse the Steps found in the Removal Procedure
2. Connect the Power Cord
3. Turn power ON to eWire.

9. Frame

REP 9.1 Interlock Switch Replacement, Top Cover

PARTS LIST ON PL 5.25

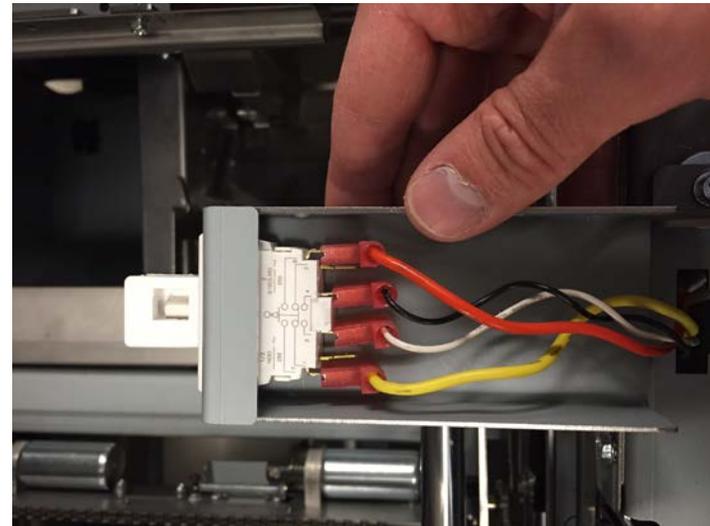
Use this procedure to remove and install the Interlock Switch for the Top Cover.

Removal Procedure

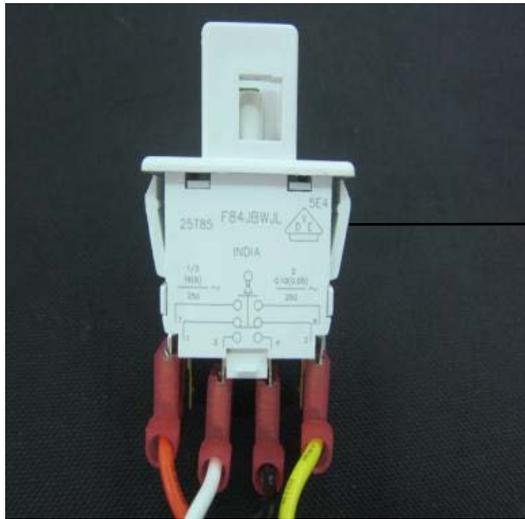
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Raise the Top Cover.
4. Remove the M4 Screws (2) to remove the Interlock Bracket.
5. Disconnect the Cables to the Interlock Switch. Note the orientation of the Cables as they need to be re-installed in the same configuration.



6. Remove the old interlock by depressing the tabs on the interlock and removing it from the cutout in the bracket.



Tabs

Installation Procedure

1. Install the new Interlock by pressing it into the Interlock Bracket until the tabs snap into place.
2. Reattach the wires, being careful to maintain the correct wire orientation.
3. Position the interlock switch on the Frame and secure it using the M4 Screws and Washers (2).
4. If necessary, adjust the Interlock Switch position so that the Interlock Flag is centered in the Interlock Switch.
5. Connect the Power Cord
6. Turn power ON to eWire.

REP 9.2 Interlock Switch Replacement, Doors

PARTS LIST ON PL 5.25

Use this procedure to remove and install the Element Feeder Door and Book Tray Door Interlock Switches.

WARNING

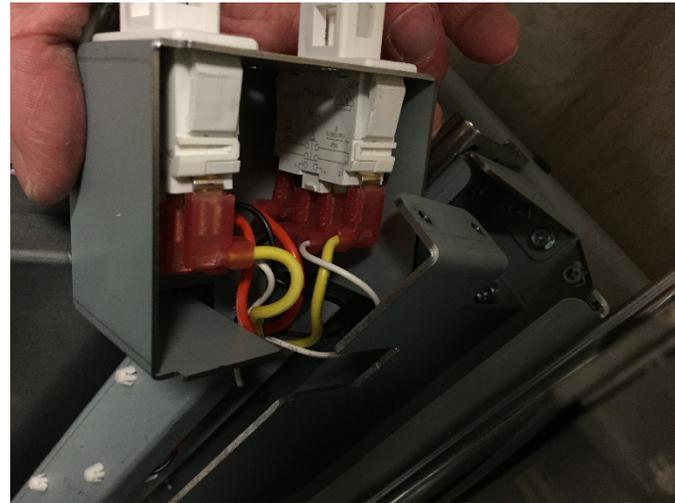
Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

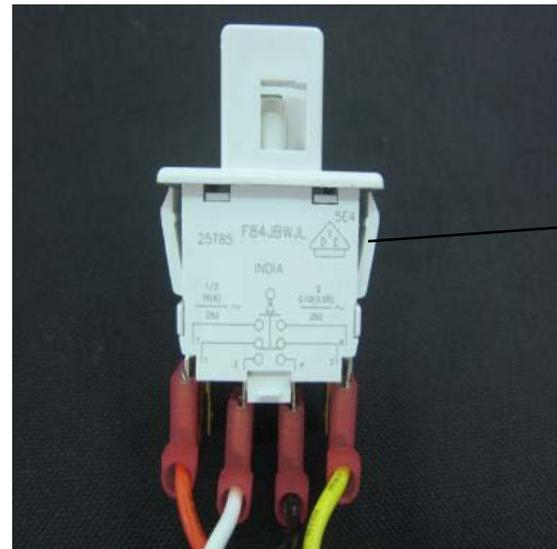
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Open the Element Feeder and Book Tray Doors.
4. Remove the M4 Screws (2) and remove the Interlock Switch Bracket. Remove the Bracket carefully to avoid damaging the wires.



5. Remove the wires from the appropriate Interlock Switch. Note the orientation of the wires before disconnecting.



6. Remove the old interlock by depressing the tabs on the interlock and removing it from the cutout in the bracket.



Tabs

Installation Procedure

1. Install the new Interlock by pressing it into the Interlock Bracket until the tabs snap into place.
2. Reattach the wires, being careful to maintain the correct wire orientation.
3. Position the Interlock Bracket on the Frame and secure it using the M4 Screws (2).
4. Do ADJ 1.7 to adjust the Interlock Flag position on the Element Feeder Door and/or Book Tray Door.
5. Connect the Power Cord
6. Turn power ON to eWire.

REP 9.3 Upper Bypass Latch Replacement

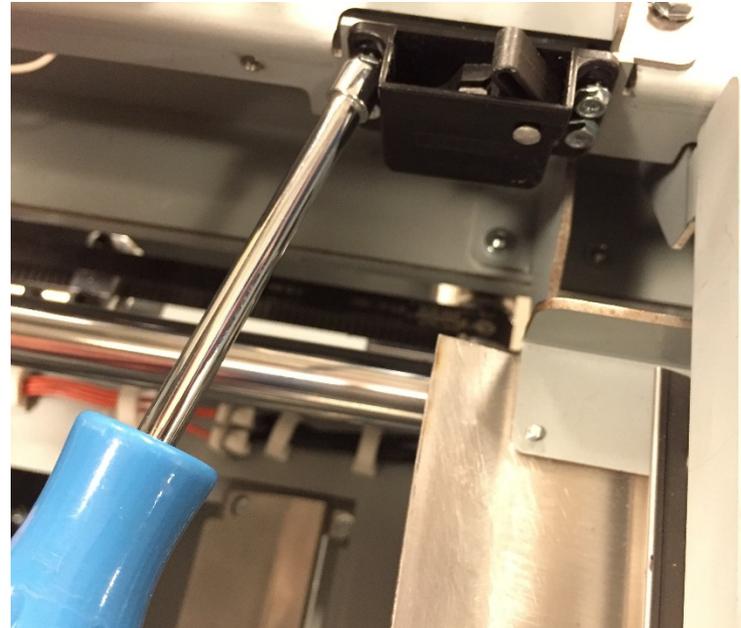
PARTS LIST ON PL 5.27

Use this procedure to remove and install the Upper Bypass Latch. Refer to REP [2.27](#) Upper Bypass Latch Replacement to replace the male portion of the latch.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Remove the M3 Screws (4) from the Latch Housing, and remove the old latch.



Installation Procedure

1. Install the new Latch Housing by attaching the M3 Screws (4).
2. Ensure that the Lower Bypass closes easily. If necessary, adjust the position of the Latch on the Lower Bypass.
3. Connect the Power Cord.
4. Power ON the eWire.

REP 9.4 Book Tray Latch Replacement

PARTS LIST ON PL 5.27

Use this procedure to remove and install the Latch for the Book Tray Drawer. Note that the latch is in two parts, on the drawer and frame.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Locate the male half of the Latch on the back of the drawer. Remove the Latch by removing the M4 Screws (2) and Washers.



4. Locate the female half of the Latch on the bottom of the Frame. Remove the Latch by removing the M3 Screws (4).



Installation Procedure

1. Install the new Latch to the frame and secure it using the M3 Screws (4). Install the new Latch to the Book Drawer and secure it using the M4 Screws (2) and Washers.
2. Adjust the latch position so that the latch fits together easily. Tighten the screws when latch is properly located.
3. Connect the Power Cord.
4. Turn on power to the eWire.

REP 9.5 Element Feeder Drawer Latch Replacement

PARTS LIST ON PL 5.27

Use this procedure to remove and install the Latch for the Element Feeder Drawer. Note that the latch is in two parts, on the drawer and frame.

Removal Procedure

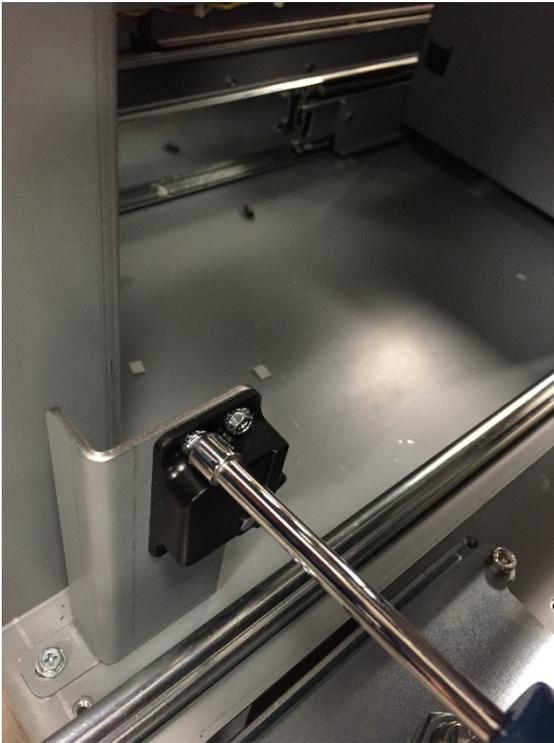
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Locate the male half of the Latch on the back of the drawer. Remove the Latch by removing the M4 Screws (2) and Washers.



4. Locate the female half of the Latch on the bracket near the back of the Frame. Remove the Latch by removing the M3 Screws (4).



Installation Procedure

1. Install the new Latch to the frame and secure it using the M3 Screws (4). Install the new Latch to the Element Feeder Drawer and secure it using the M4 Screws (2).
2. Adjust the latch position so that the latch fits together easily. Tighten the screws when latch is properly located.
3. Connect the Power Cord.
4. Turn on power to the eWire.

REP 9.6 Stepper Driver Boards Replacement, M3, M5, M15 & M21

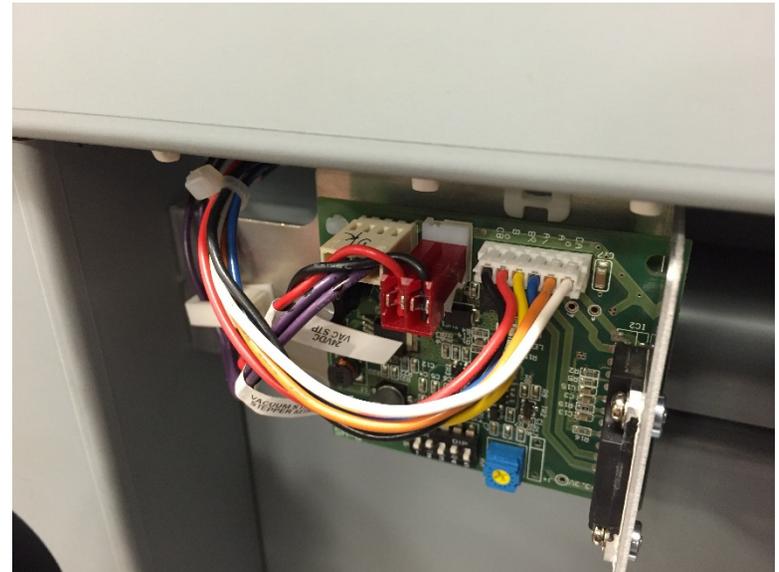
Use this procedure to remove and install the Stepper Driver Boards for motors M3, M5, M15 and M21.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Press the Power switch to OFF position.
2. Disconnect the Power Cord.
3. For M3, M15 and M21, do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover. For M5, do REP 1.6 [Side Cover Replacement](#) to remove the Side Cover.
4. Note the wire connection locations on the back of the Switch.
5. Disconnect the Cables from the appropriate Stepper Driver.



- Remove the Stepper Driver bracket by removing the M4 Screws (2), and remove the Stepper Driver Bracket.



- Remove the Stepper Driver from the mounting bracket by removing the M3 Screws (2) and depressing the tabs on the Standoff

Installation Procedure

- Attach the new Stepper Driver to the mounting bracket by securing it to the plastic Standoffs. Secure the Stepper Driver by tightening the M3 Screws.
- Set the Stepper Driver Dip Switches to the appropriate values, referring to the table below.
- Install the Stepper Driver Bracket using the M4 Screws (2).
- Re-connect the Stepper Driver Cables.
- Do REP 1.5 [Back Cover Replacement](#) to install the Back Cover, or REP 1.6 [Side Cover Replacement](#) to install the Side Cover.
- Connect the Power Cord.
- Power ON the eWire.

		1	2	3	4	5
Bind Path Motor	M3	OFF	ON	OFF	ON	ON
Vacuum Drive Motor	M5	OFF	ON	OFF	ON	OFF
Holder Linear Motor	M15	OFF	OFF	ON	OFF	OFF
Closer Linear Motor	M21	OFF	OFF	ON	OFF	OFF

REP 9.8 Vacuum Fan Gasket Replacement

PARTS LIST ON PL 5.26

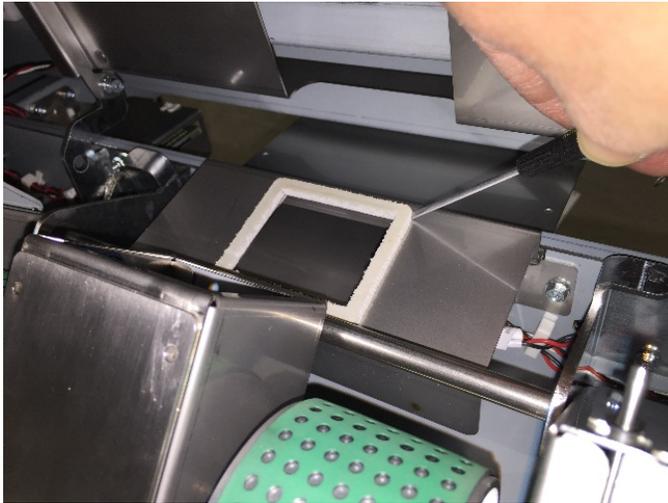
Use this procedure to remove and install the gasket at the Vacuum Fan to Vacuum Module interface.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Raise the Transport Assembly and lift the Vacuum Stacker by pulling on the Vacuum Stacker handle.
4. Using a flat tool, remove the Fan Gasket from the mating surface.



Installation Procedure

1. Clean the mating surface carefully with alcohol and a clean cloth. Remove any adhesive residue.
2. Align the new Gasket with the vacuum opening and press it down firmly to adhere it to the metal surface.
3. Lower the Vacuum Stacker and close the lid.
4. Connect the Power Cord.
5. Turn on power to the eWire.

REP 9.9 Stacker Paper Detect Sensor S44 Replacement

PARTS LIST ON PL 5.26

Use this procedure to remove and install the Stacker Paper Detect Sensor, S44.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Do REP 4.1 [Vacuum Stacker Module Replacement](#) to remove the Vacuum Stacker.
4. Disconnect the Vacuum Fan Cables.

5. Remove the M4 Screws (4) securing the Vacuum Fan and remove the old fan.



Installation Procedure

1. Reverse the steps in the Removal Procedure
2. Connect the Power Cord.
3. Turn on power to the eWire.

10. Book Drawer

REP 10.1 Drawer Full Up Sensor Replacement

PARTS LIST ON PL 5.23

Use this procedure to remove and install the Book Drawer Full Up Sensor. There are two sensors, each consisting of two halves.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Pull the Book Tray all the way out of the eWire.
4. Do REP [1.7](#) to remove the Book Drawer Door.
5. The emitter PCB (2) is located on the front of the Book Drawer. Disconnect the Emitter PCB Cable.
6. Remove the emitter PCB (2) by pulling it away from the book drawer. The emitter PCB is attached by snap-type standoffs.
7. Remove the cover from the back of the Book Drawer by removing the M4 Screws (4).
8. Disconnect the receiver PCB cable.
9. Remove the receiver PCB (2) by pulling it away from the book drawer. The PCB is attached by snap-type standoffs.

Installation Procedure

1. Snap the new Receiver PCB and Emitter PCB onto the respective snap-on standoffs.
2. Connect the Emitter and Receiver PCB sensor cables.
3. Reverse the procedure from the Removal Procedure to reconnect all covers.
4. Connect the Power Cord
5. Turn power ON to eWire.

REP 10.2 Drawer Full Down Sensor Replacement S43

PARTS LIST ON PL 5.23

Use this procedure to remove and install the Book Drawer Full Down Sensor.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Slide the Book Drawer Tray all the way out of the eWire.
4. Remove the Book Drawer rear cover by removing the M4 Screws (4).
5. Disconnect the Sensor cable from the Sensor.
6. Remove the sensor bracket by removing the Screws (2).



7. Disconnect the Sensor from the bracket by removing the M3 Screw and remove the old sensor.

Installation Procedure

1. Reverse the Steps from Removal Procedure.
2. Connect the Power Cord
3. Turn power ON to eWire.

REP 10.3 Book Drawer Full Sensor Replacement S45

PARTS LIST ON PL 5.23

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

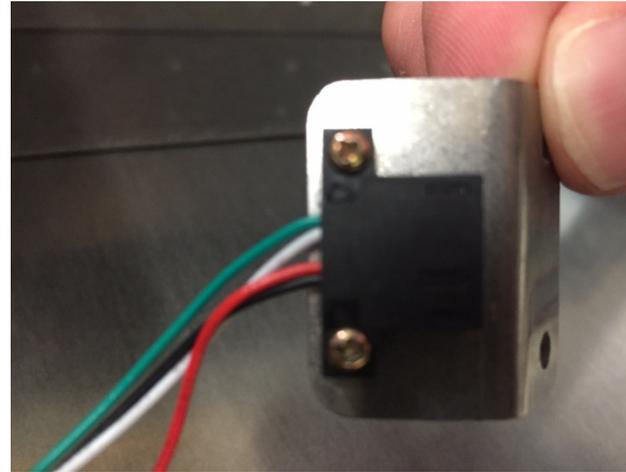
1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Remove the Book Drawer Side Cover by removing the M4 Screws (4).



4. Remove the Sensor Bracket by removing the M4 nuts (2).



5. Remove the Sensor from the Bracket by removing the M2 Screws.



Installation Procedure

1. Attach the new Sensor to the Sensor Bracket using the M2 Screws (2).
2. Attach the Sensor Bracket using the M4 Nuts (2).
3. Replace the Book Drawer Side Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 10.4 Book Drawer Drive Motor Replacement M19

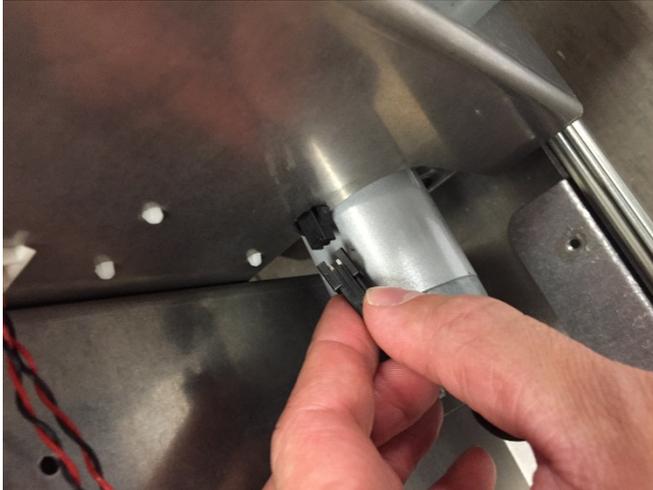
PARTS LIST ON PL 5.23

Removal Procedure

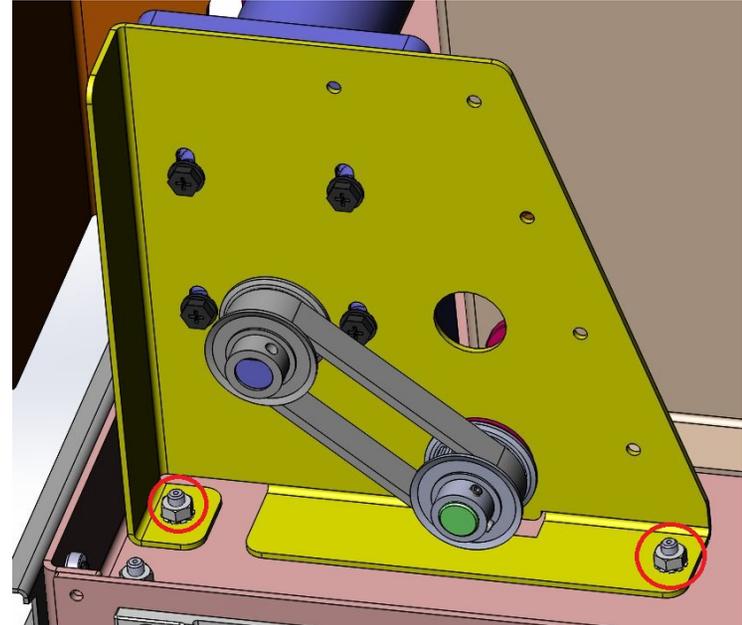
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Slide the Book Drawer Tray all the way out of the eWire.
4. Remove the Book Tray Rear Cover by removing the M4 Screws (4).
5. Do [REP 10.5](#) to remove the belt.
6. Disconnect the Motor Cable.



7. Remove the Motor Bracket by removing the M4 Nuts (2).



8. Remove the M19 motor by removing the M4 mounting screws (4).

Installation Procedure

1. Reverse the Steps in the Removal Procedure
2. Connect the Power Cord.
3. Turn on power to the eWire.

REP 10.5 Book Tray Belt Removal Procedure

PARTS LIST ON PL 5.24

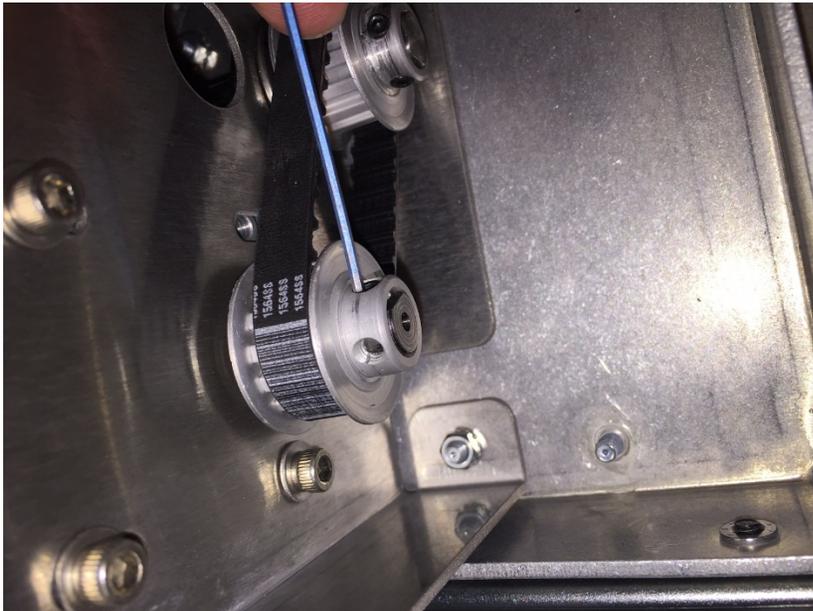
Use this procedure to remove and install the Belt for the Book Tray Drive Motor.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Slide the Book Drawer Tray all the way out of the eWire.
4. Remove the Book Tray Rear Cover by removing the M4 Screws (4).
5. Loosen the set screws on the Pulleys on the Motor Shaft and Drive Shaft.



6. Slide the pulleys and Belt off the shafts and remove the Belt.

Installation Procedure

1. Wrap the new Belt around the Motor Shaft Pulley and Drive Pulley and slide the Pulleys onto their respective Shafts.
2. Secure the pulleys in place by tightening the set screws.
3. Replace the Rear Cover
4. Close the Door.
5. Connect the Power Cord.
6. Turn on power to the eWire.

11. Electrical Components

REP 11.1 Main Control Board A Replacement

PARTS LIST ON PL 5.27

Use this procedure to remove and install the PCB Control Board(s). Before replacing the Main Control board, attempt to retrieve the number of Bind cycles. Do GP 6.2.7 to display the number of Bind cycles. Do GP 6.3.10 to store the eWire Log to USB.

Removal Procedure

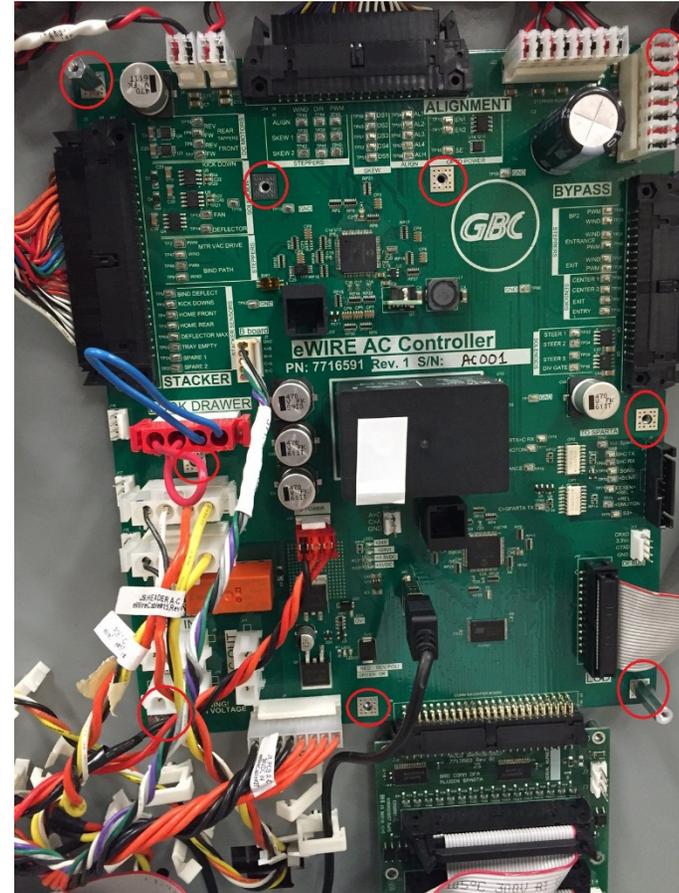
WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Disconnect all connectors from the Main Control Board and Communications Board. Note the connector locations so you can replace them in the same position on the new board.
5. Remove the M3 Screws (4) from the Communication Board and remove the Communication Board from the Main Control Board.
6. Remove the M3 Screws (10) from the Main Control Board and remove the Main Control Board.

Installation Procedure

1. Install the old Communication Board into the new Main Control Board by inserting the connector.
2. Place the Main Control Board and Communication Board in position.
3. Secure the Main Control board by tightening M3 Screws (9)



4. Re-connect all connectors to the Main Control Board and Communication Board. Refer to Section 7, Wiring for details.
5. Do REP 1.5 [Back Cover Replacement](#) to install the Back Cover.
6. Connect the Power Cord.
7. Power ON the eWire.

REP 11.2 Communication Board Replacement

PARTS LIST ON PL 7.1

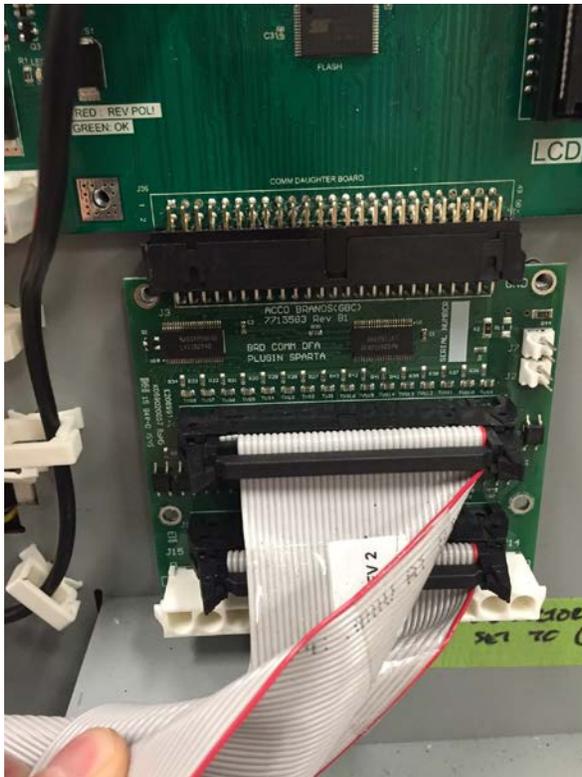
Use this procedure to remove and install the Comm Board.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

Removal Procedure

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Disconnect the Connectors from the Comm Board.
5. Remove the M3 Screws (4) and remove the old Comm Board.



Installation Procedure

1. Insert the new Comm Board into the connector on the Main Control Board.
2. Secure the Comm board by tightening the M3 Screws (4).
3. Re-Connect the Connectors to the new Comm Board.
4. Do REP 1.5 [Back Cover Replacement](#) to install the Back Cover.
5. Connect the Power Cord.
6. Power ON the eWire.

REP 11.3 Main Control Board B Replacement

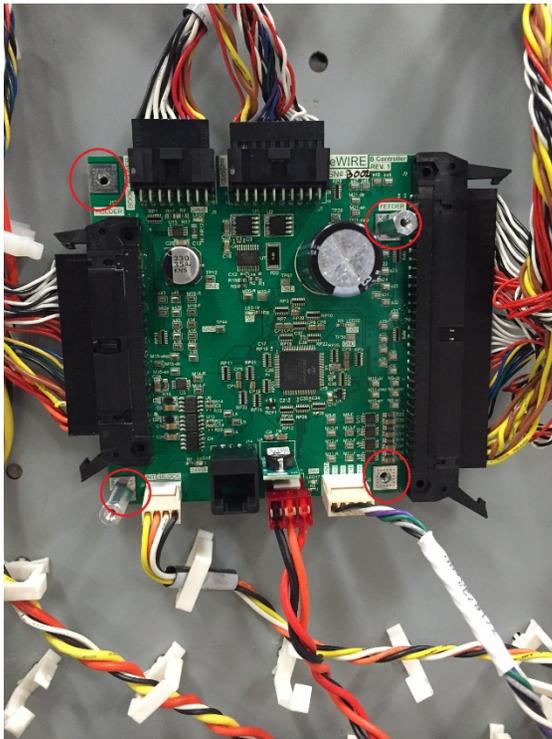
PARTS LIST ON PL 5.27

Use this procedure to remove and install the Main Control Board B.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Disconnect the Connectors from the old Main Control Board B. Note the connector locations so you can return them to the same positions on the new Board.
5. Remove the M3 Screws (4) from the old Main Control Board B, and remove the PCB.



Installation Procedure

1. Place new Main Control Board B in position and secure by tightening the M3 Screws (4).
2. Re-connect all connectors to the Main Control Board B. Refer to the below table for connector locations.
3. Do REP 1.5 [Back Cover Replacement](#) to install the Back Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 11.4 24V Power Supply Replacement

PARTS LIST ON PL 5.27

Use this procedure to remove and install the 24V Power Supply Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Turn off Power to the eWire.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Disconnect all connectors from the 24V power supply.



5. Slide the book drawer all the way out of the machine.

6. While carefully supporting the power supply, remove the M4 Screws (4) from the rear electrical panel plate. The Screws are located on the reverse side of the Power Supply.



7. Remove the Power supply from the electrical panel.

Installation Procedure

1. Position the new 24V Power Supply on the rear electrical panel.
2. Secure the new 24V Power Supply using M4 Screws (5).
3. Reconnect all connectors to the 24V power supply.
4. Do REP 1.5 [Back Cover Replacement](#) to install the Back Cover.
5. Close the book drawer.
6. Connect the Power Cord.
7. Turn on power to the eWire.

REP 11.5 RFI Filter Replacement

PARTS LIST ON PL 5.27

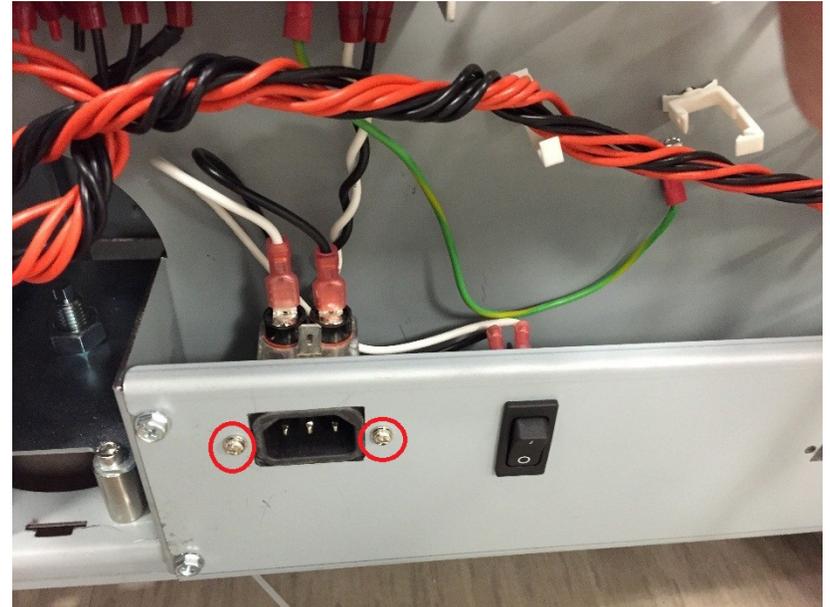
Use this procedure to remove and install the AC Filter Assembly.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Switch power OFF to eWire.
2. Remove the power cord
3. Note the location of the wires (3).



4. Remove the Wires (White/Black/Green) from the AC Filter.
5. Remove the M3 Screws (2) securing the AC Filter to the Electrical Panel.
6. Remove the AC Filter from the Electrical Panel by pushing it forward through the mounting plate.

Installation Procedure

1. Insert the AC Filter into the electrical panel and tighten the M3 Screws (2).
2. Connect the Wires (3) to the AC Filter, maintaining the previous locations.
3. Do [REP 1.5](#) to install the Rear Cover.
4. Connect the Power Cord.
5. Power ON the eWire.

REP 11.6 Power Switch Replacement

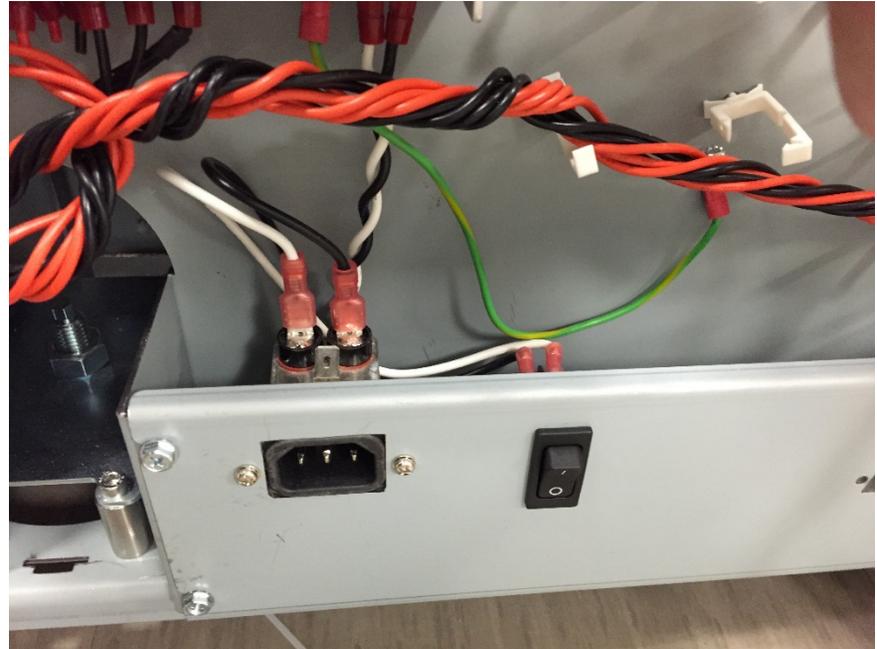
Use this procedure to remove and install the Power Switch.

Removal Procedure

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury. See Section 0, page vi for other languages.

1. Press the Power switch to OFF position.
2. Disconnect the Power Cord.
3. Do REP 1.5 [Back Cover Replacement](#) to remove the Back Cover.
4. Note the wire connection locations (White/Black/Green) on the back of the Switch.



5. Disconnect the wires from the back of the Switch
6. Press the Tabs and remove the Switch from the Panel.

Installation Procedure

1. Install the Switch in the Panel by pressing into into the mounting hole until the tabs lock securely into place.
2. Re-connect the wires, maintaining the wire locations as noted during removal.
3. Do REP 1.5 [Back Cover Replacement](#) to install the back cover
4. Connect the Power Cord.
5. Power ON the eWire.

Adjustments

ADJ 1.1 Element Position Skew Adjustment

Inspection Procedure

- 1) Locate the Element Height Setup Tool, which is attached to the eWire Book Tray Door.



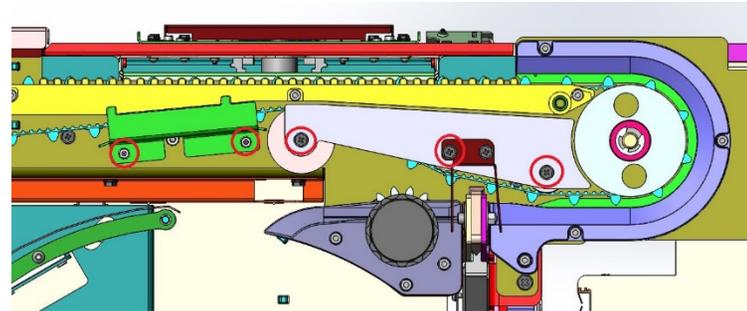
- 2) Pull out the Element Feeder tray, and insert a cheat into the interlock for the Element Feeder Door.
- 3) Enter the Service Menu, and select Function Tests → Pushover → Out. This will move the Expanding T to its forward position.
- 4) Using the Setup Tool, press the front flat surface of the tool against the Element Feeder face. The notch on the Setup Tool is set to 16 mm, which is the correct position of the Expanding T Out.



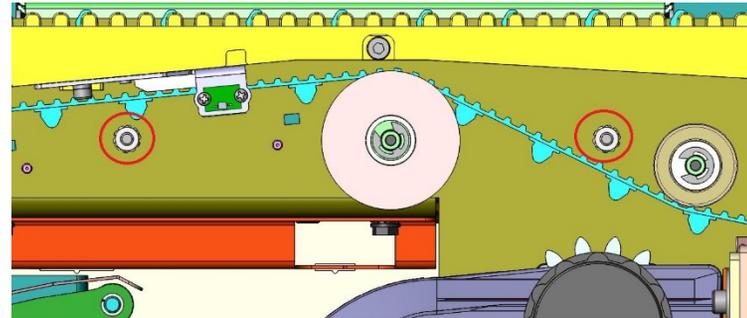
- 5) Repeat the process on the front and rear of the machine. If the Expanding T front face is not touching the tool, refer to the adjustment steps below. If the position is touching the tool, refer to the procedure that directed you here.

Adjustment Procedure

- 1) Remove the screws and nuts (5 total) from the locations shown and remove the Covers.



- 2) Locate the screws indicated in the picture below. Loosen the lock nuts with a wrench. Turn the screws clockwise to decrease Expanding T Out. Turn the screws counter-clockwise to increase Expanding T Out. If the Expanding T Out position is skewed, try adjusting only one screw to correct it.



- 3) After adjustment is complete, tighten the lock nuts. Repeat the Inspection Procedure to determine if the desired location has been reached.
- 4) If additional adjustment is needed, repeat steps 2 and 3. If the position is now correct, return to the procedure that directed you here.

ADJ 1.2 Element Slack Detection Adjust

Inspection Procedure

Perform this procedure if the element slack detection mechanism within the element feeder is too sensitive or not sensitive enough.

Symptoms of too sensitive:

- 1) Slack detection responds quickly to presence of element, yet the mechanism does not rise quickly after element is removed.
- 2) Slack mechanism does not rise at all after removing element.

Symptoms of not sensitive enough:

- 1) Slack detection mechanism does not immediately move down after contact with smallest element size, A (1/4").
- 2) When operating properly, the machine should feed additional element and detect slack 3 or more times during creation of each 11" or A4 size element. If this does not occur then the device is likely not sensitive enough.

Adjustment Procedure

- 1) Remove the covers shown in Fig 1. Refer to REP 3.1 for more details on accessing the Slack Detect mechanism.
- 2) Loosen the M3 screw to move the weight right or left to increase or decrease the sensitivity setting.
- 3) Check the setting after each adjustment.
 - a) Make certain that after depressing the slack detection mechanism and then releasing it that the device immediately returns to the up position. The device should not hesitate in returning to the up position.
 - b) Using an (A) size element (1/4"), ensure that the device is sensitive enough to immediately detect the weight of this smallest element (detect slack present).
 - c) You can use GP 6.3.6, Functional Tests: Feed Element to help in troubleshoot the element feeding process.
- 4) Reinstall the two covers shown and test the machine using the (A) size (1/4") element while ensuring that slack is produced at least 3 times per feed of an A4 or 11" element.

Fig 1.

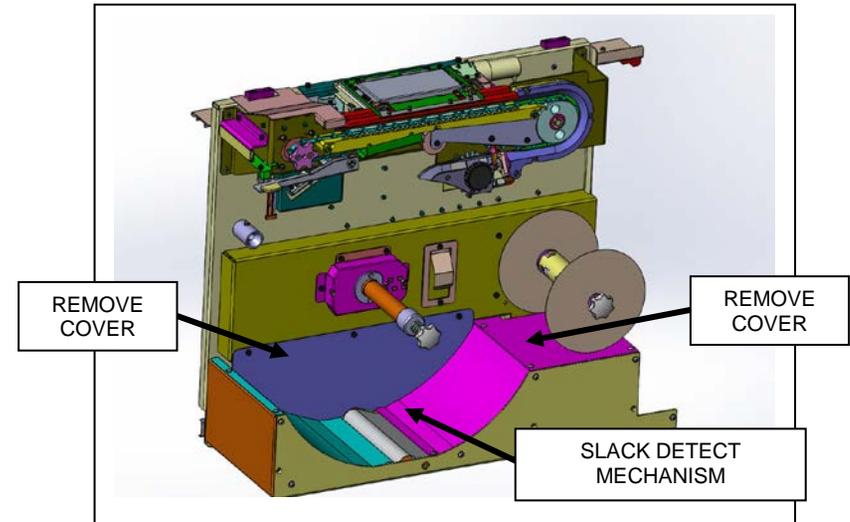
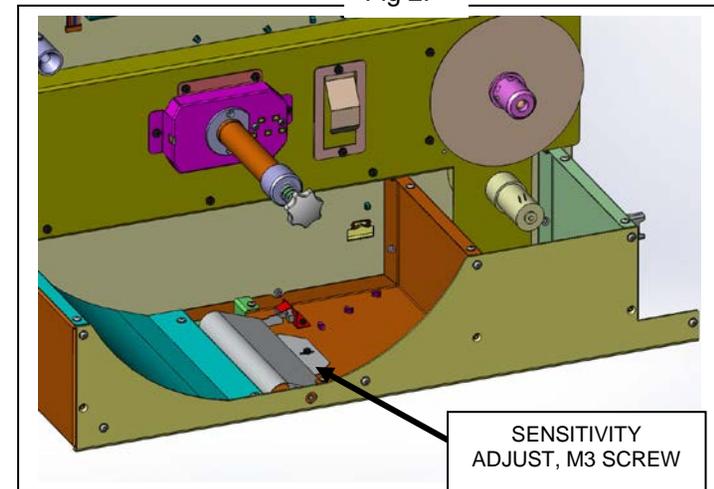


Fig 2.



ADJ 1.3 Holder Mating To Element Feeder

For proper operation, the element holder module should mate to the element feeder without any hesitation or mechanical resistance. The two locating pins on the element holder should smoothly engage the element feeder locating holes. The two locating pins on the element holder should smoothly engage the element feeder.

Adjustment Procedure

- 1) By hand, move the element holder towards the element feeder and note the alignment of the two modules.
- 2) If the element holder locating pins struggle to align with the element feeder locating holes (See Fig 2), then the position needs to be corrected.
 - a) Check the *horizontal* alignment as shown in Fig 2.A and Fig 2.B.
 - i) If an adjustment is needed, loosen the screws for the element feeder stop latch assembly (Fig 2.C) and adjust the position of the element feeder.
 - ii) After adjustment, attempt to engage the holder into the element feeder by hand again while checking the alignment.

Fig 1

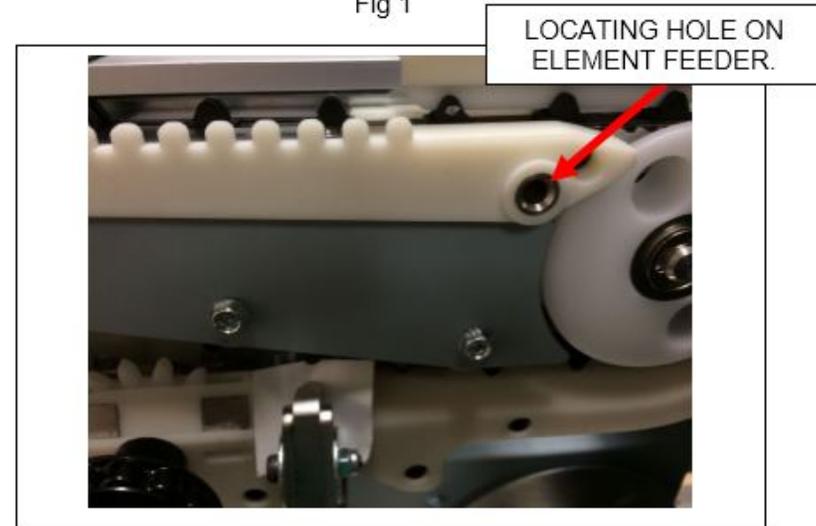
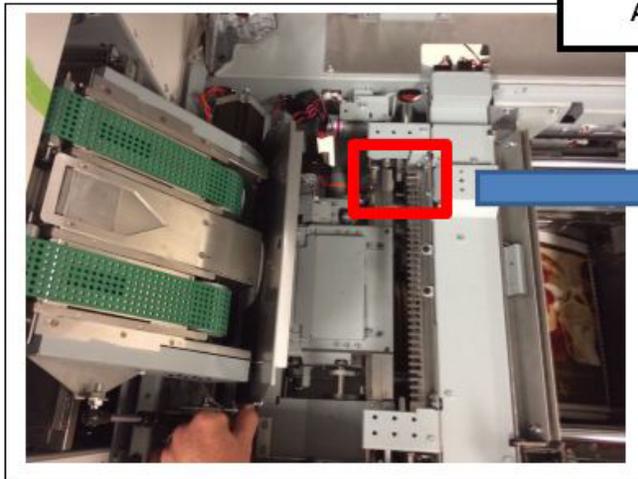
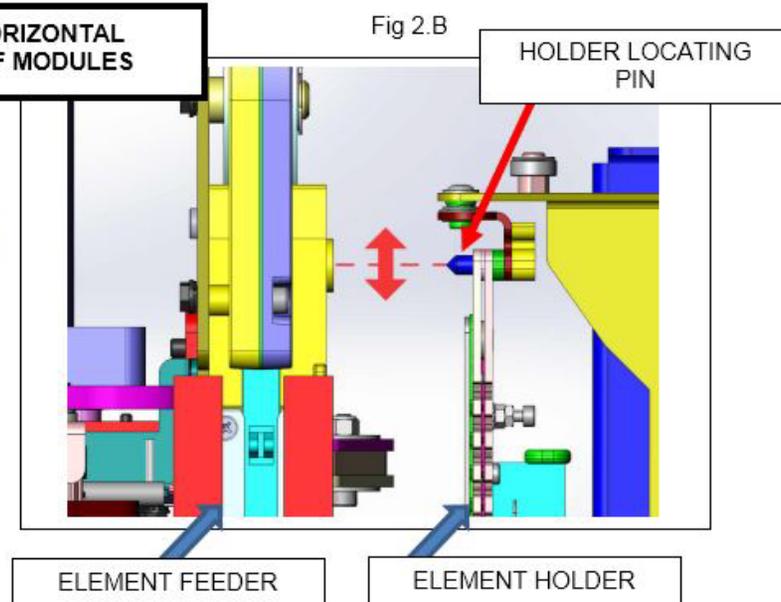


Fig 2.A



CHECKING HORIZONTAL ALIGNMENT OF MODULES

Fig 2.B



the element feeder.

Fig 2.C

b) Check the vertical alignment as shown in Fig 3.B.

- i) After moving the element holder into the element feeder, check the engagement in the vertical direction. If the two do not engage without hesitation then an adjustment is needed.
- ii) Performing Adjustment.
 - (1) Move the element holder into the element feeder and leave the two engaged.
 - (2) Loosen the two screws on the *Height Adjustment Bracket* as shown in Fig 3.C.
 - (3) Insert a flat head screw driver and **very gently** raise the *Height Adjustment Bracket* (Fig 3.D) until it makes contact with the bearing/CAM follower in the track. Do not apply excessive pressure, contact is all that is needed with the bearing.
 - (a) While applying pressure to lightly raise the bracket, tighten the two screws.
 - (4) Perform the same check and adjustment on the rear of the machine (not shown).
 - (5) After adjustment of the front and rear, by hand move the element holder and check for smooth engagement with

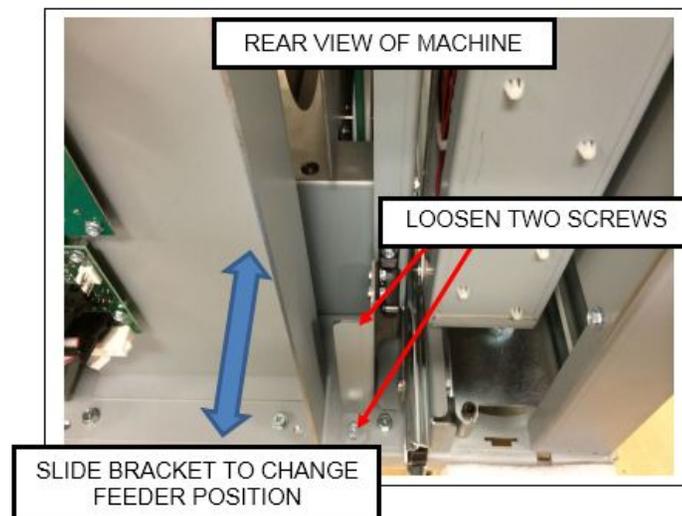


Fig 3.A



Fig 3.B

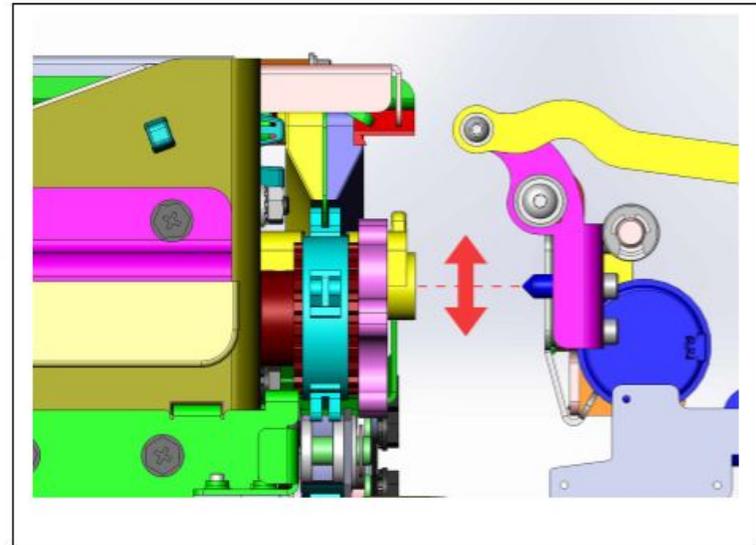


Fig 3.C

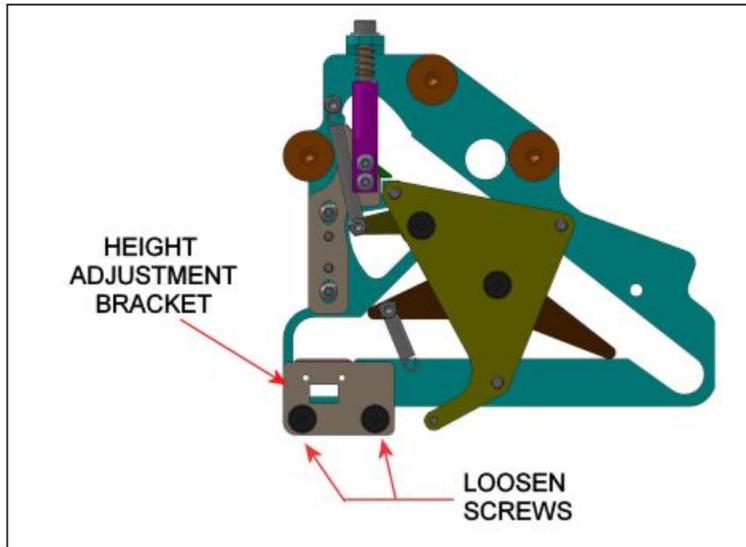
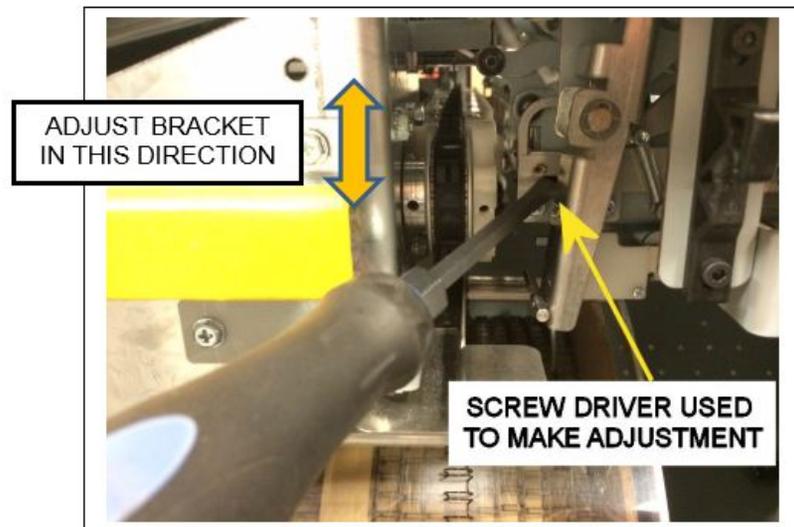


Fig 3.D



ADJ 1.4 Element Feed Belt Home Position

To properly feed an element, the belt tooth must enter/mesh with the element at the proper position. The Feed Belt Home setting controls the point where the belt meshes with the wire openings.

Inspection Procedure

- 1) Open the element feeder and cheat the safety interlock.
- 2) Enter the service menu of the eWire LCD.
- 3) Navigate through the menus as follows:
 - a) **FEED BELT HOME**
 - b) Press the **ENTER** button twice to home the belt.
- 4) Check the stop position of the belt tooth.
 - a) If necessary, **ENTER** can be pressed 2X again to check the belt position repeatedly.
- 5) The belt tooth should be slightly off center from the alignment hole. The tooth position should be about 1 mm in front of the hole as shown.
- 6) To confirm the mesh is correct, carefully watch the belt tooth where it engages with the wire. The tooth should slide easily into the gap of the wire. If the tooth pushes against the wire, it is likely not set to the correct position.

Adjustment Procedure, Fine (Recommended):

- 1) Open the element feeder and cheat the safety interlock.
- 2) Do GP 6.3.13 to access the Feed Belt Home adjustment menu (Fig 2)
- 3) Using the **up/down arrows**, change the value to change the belt home position value.
- 4) After making an adjustment, press the **ENTER** button twice to cause the belt to home. Check the belt tooth location relative to the alignment hole. It should be approximately 1 mm in front.
- 5) If the tooth position looks correct relative to the alignment hole, verify the setting by watching the element tooth engage with the wire as described in the Inspection Procedure. If the belt tooth doesn't engage easily, adjust the Feed Belt Home value until it does.

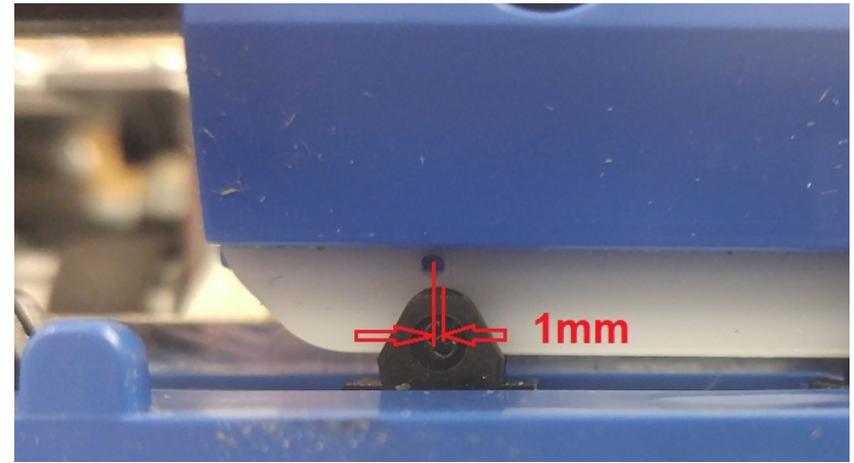


Fig 1



Fig 2

Adjustment Procedure, Coarse (Only use when replacing S25):

If S25 is replaced, the Feed Belt Home position must be set to roughly the correct value using the procedure below. After coarse adjustment is complete, the final value is set by the fine adjustment procedure.

- 1) Begin by setting the belt home value on the LCD screen to a value of 0.
- 2) Open the element feeder and cheat the safety interlock switch.
- 3) Remove the cover shown in Fig 3 by removing the two M3 nuts.
- 4) Loosen (do not remove) the M3 screw securing the belt home sensor.
- 5) Slide the sensor bracket a slight amount to the left or right to affect the belt home position, then tighten the M3 screw.
- 6) Check the belt home position as per the **Inspection Procedure** mentioned earlier in this section.
- 7) Adjust the sensor bracket position and perform the inspection procedure again until the belt home position is roughly correct.
- 8) Once the position is near the correct position, install the cover previously removed (Fig. 3).
- 9) Perform the **Fine Adjustment** of the belt home position as defined earlier in this section.

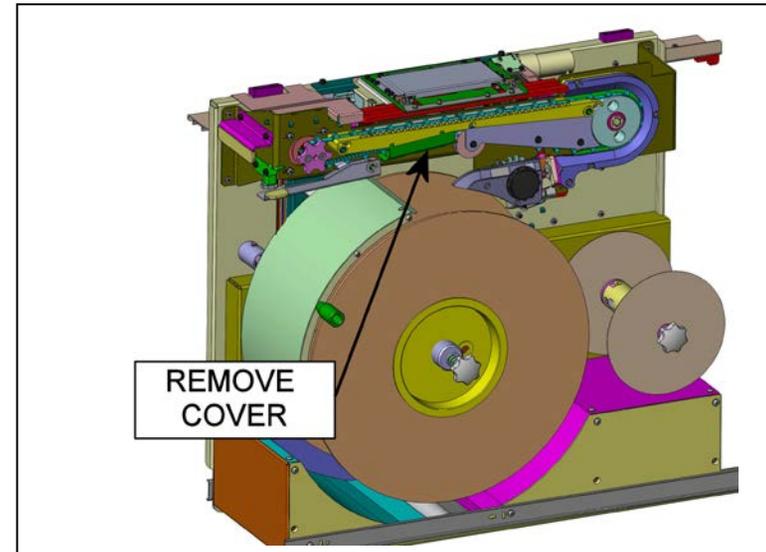


Fig 3

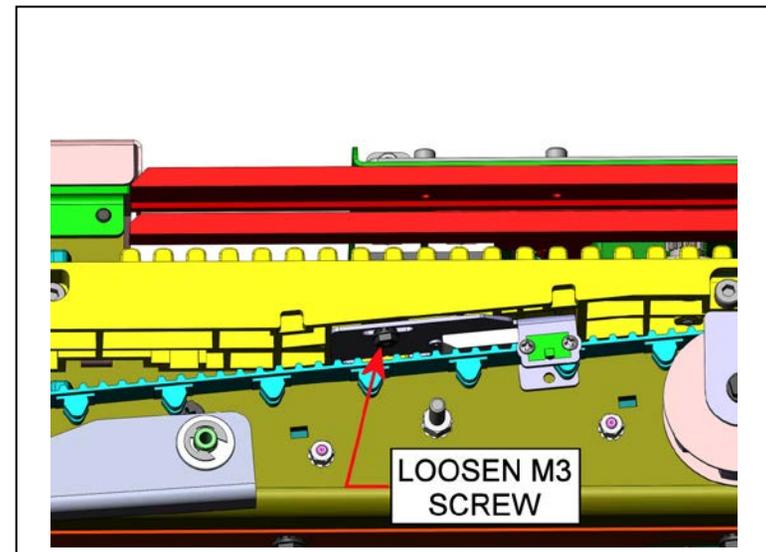


Fig 4

ADJ 1.5 Book Drawer Closed Position

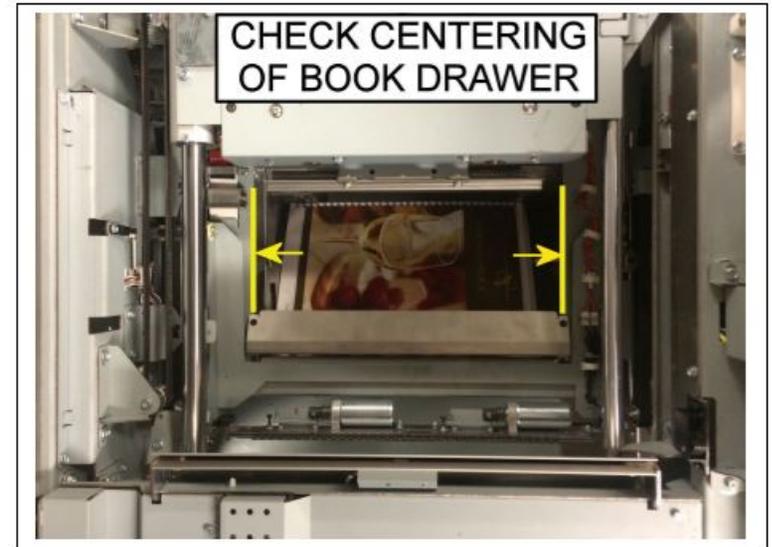
To ensure that the completed books drop into the book drawer from the closer module, the book drawer must be centered within the machine.

Inspection Procedure

- 1) Open the top cover and the lower paper transport.
- 2) With the book drawer closed, inspect the position of the book drawer in regards to the opening in the machine.
- 3) If the book drawer is not well centered, an adjustment is required.

Adjustment Procedure

- 1) Open the book drawer and locate the book drawer stop latch bracket.
- 2) Loosen the screws securing the bracket.
- 3) Shift the bracket in the direction that you desire to move the book drawer, then tighten the screws.
- 4) Close the book drawer and inspect its position as defined in the **Inspection Procedure** section mentioned above.



ADJ 1.6 Timing Belt Tension Adjustment

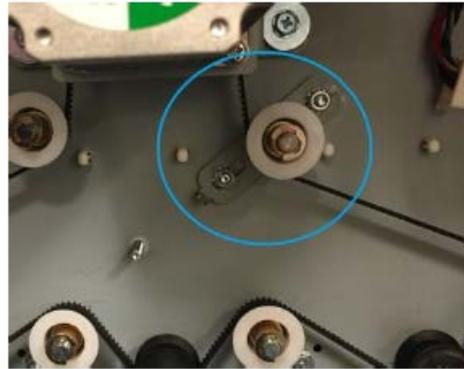
Maintaining proper tension on the Timing Belt is critical to proper operation of the drive belt. If the belt is too loose, the belt will slip or possibly become worn. If the belt is too tight, it will not move freely. This procedure can be used for all belts within the eWire.

Inspection Procedure

- 1) Identify the timing belt.
- 2) Apply pressure to the Timing Belt and check the amount of deflection. If the belt does not deflect at all and seems taut, the belt is likely too tight. If the belt appears to be strained, it is likely too tight.
- 3) Apply pressure to the Timing Belt and measure the amount of deflection. For longer Belts, slightly more deflection is allowable compared to short belts but the belt should not deflect excessively. If excessive deflection is noticed, or the belt teeth appear frayed, the belt is likely too loose. Refer to the guidelines below
 - a) Belt length <100 mm: 1-2 mm deflection
 - b) Belt length >100 mm, <500 mm: 3-5 mm deflection
 - c) Belt length > 500 mm: 6-8 mm deflection

Adjustment Procedure

- 1) Identify the adjustment location for the Timing Belt.
 - a) If the belt has a Tensioner Assembly, use the tensioner to adjust belt tension.



- b) If the motor bracket has slotted screws, loosen the motor mounting screws, and slide the motor back or forward to adjust tension.
 - c) If no slotted adjustment location is noted, loosen all screws that secure belt pulley locations and apply pressure to slightly adjust the pulley position. Secure the screws once proper tension is attained.
- 2) Tighten all screws and verify the belt tension as indicated in **Inspection Procedure**.
- 3) If it is impossible to achieve proper tension, replace the Timing Belt with a new one.

ADJ 1.7 Interlock Flag Adjustment

If a CLOSE DOOR, CLOSE TRAY, or CLOSE LID message is shown even when the door is closed, or the message occurs during operation, it may be necessary to adjust the Interlock Flag.

Inspection Procedure

- 1) Check to see if the CLOSE DOOR, CLOSE TRAY, or CLOSE LID message is shown even when the door is closed. If the message is shown when the door is closed, or you need to press extra hard on the door to make the message go away, the interlock flag may need adjustment.
- 2) If the CLOSE DOOR, CLOSE TRAY, or CLOSE LID shows up during operation, or occurs intermittently, the interlock flag may need adjustment.
- 3) If scoring is noticed on the interlock switch due to the interlock flag rubbing on the hub of the interlock, the interlock flag may need to be adjusted.
- 4) If the door does not appear to close all the way, but sticks out near the interlock location, the Interlock Flag may need adjustment.
- 5) Visually inspect the Interlock Flag position when the door is closed. The Flag should stop 1-2 mm from bottoming out.

Adjustment Procedure

- 1) Open the door and locate the Interlock Flag. This is the metal component that presses the Interlock switch to keep it closed.
- 2) Loosen the M3 Screws (2) securing the Interlock Flag Adjust Plate.



- 3) Shift the Flag Plate forward or back as needed to adjust the resting position of the Interlock Flag Plate within the Interlock Switch. The flag should be 1-2 mm short of bottoming out on the Interlock Switch when in the resting position.
- 4) Tighten the screws and close the door to confirm the Interlock is operating as expected.

ADJ 1.8 Element Hook Position Adjustment

Use this procedure to adjust the eWire alignment and timing to ensure that the punched holes are centered on the wire loops during hooking. The Punched Hole Position Check Tool should be used to aid in making the adjustments and measurements described in this section.

Inspection Procedure

- 1) Remove the eWire die from the punch.
- 2) Remove pins 2 and 33 if using A4 paper or pins 3 and 31 if using LTR. Refer to the AdvancedPunch Pro Manual for reference on how to remove a pin.
- 3) Reinstall the eWire die in the punch.
- 4) Do GP 6.2.2 to decrease the CLOSING value by 4 or to the lowest value possible. Make a note of the initial setting.
- 5) Run a single book, with 3 sheets. Paper weight must be between 75 and 90 gsm. Do not use covers. When setting up this print job, run a test sheet that is punched, but not bound to verify acceptable sheet curl see Book Quality Section 3.5.2. Minimizing curl will improve the accuracy of the following procedure. If necessary, adjust printer settings to reduce curl.
- 6) Remove the book from the book drawer taking note of its orientation. Depending on the current settings for Deflector Timing, Alignment and Skew, a J244 or J202 jam may occur from a sheet/s remaining in Area 2.

At least one sheet was hooked and bound

Yes- Go to Step 12

No- Go to Step 7

- 7) If none of the sheets were hooked, the Deflector Timing, Alignment or Skew setting may be significantly off their optimal values. Record the initial values of these three settings while doing GP 6.1 to set ALIGNMENT, DEFLECTOR, and DESKEW ADJUST to 0. Repeat step 5-6.

At least one sheet was hooked and bound

Yes- Go to Step 12

No- Go to Step 8

- 8) Do GP 6.3.9 to increase DEFLECTOR by 1mm. Repeat step 5-6.

At least one sheet was hooked and bound

Yes- Go to Step 12

No- Repeat this step until the maximum value is reached. If it remains that no sheets are hooking, set DEFLECTOR at 0 and go to Step 9.

- 9) Do GP 6.3.9 to decrease DEFLECTOR by 1mm. Repeat step 5-6.

At least one sheet was hooked and bound

Yes- Go to Step 12

No- Repeat this step until the minimum value is reached. If it remains that no sheets are hooking, set DEFLECTOR at 0 and go to Step 10.

- 10) Do GP 6.2.1 to increase ALIGNMENT by 1mm. Repeat step 5-6.

At least one sheet was hooked and bound

Yes- Go to Step 12

No- Repeat this step until the maximum value is reached. If it remains that no sheets are hooking, set ALIGNMENT at 0 and go to Step 11.

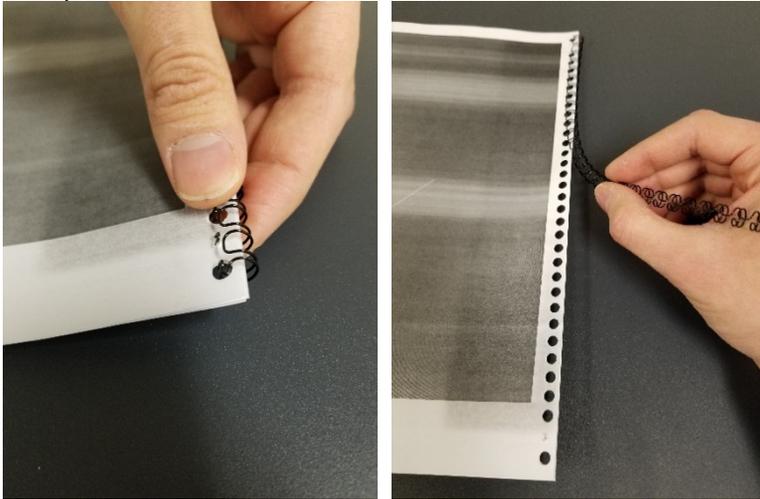
- 11) Do GP 6.2.1 to decrease ALIGNMENT by 1mm. Repeat step 5-6.

At least one sheet was hooked and bound

Yes- Go to Step 12

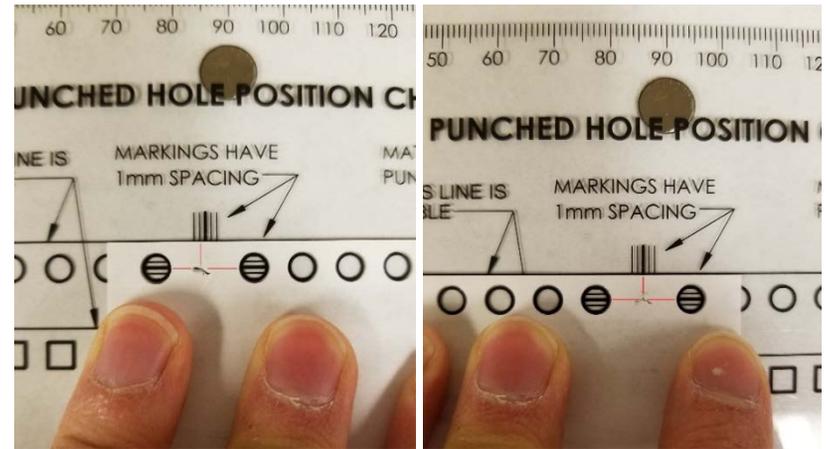
No- Repeat this step until the minimum value is reached. If it remains that no sheets are hooking, return ALIGNMENT, DEFLECTOR, and DESKEW ADJUST to their initial values and return to the trouble shooting step that directed you here.

- 12) Twist and pull the element off the sheets taking care not to tear them. Take the first sheet in the stack (the one that was touching the tray) and place position it on the Punched Hole Position Check Tool found on the inside of the Feeder Drawer or in the following pages. Remove a sheet from the unfinished book. Looking at the side of a sheet that was facing the tray, the center of the small hole created by the element due to the missing pin should be in line with the centers of the punch holes. The distance between the center of the small hole created by the element and the punched holes on either side should be equal.



- 13) Take the first sheet in the stack (the one that was touching the tray) and place it on the Punched Hole Position Check Tool found on the inside of the Feeder Door. The side of the sheet that was facing the tray should be face up. You should see a small hole or an indent in the positions of the removed pins.
- 14) Using the edge of the Punched Hole Position Check Tool or a straight-edge, draw a line from the center of the small holes or indents to the center of the punched holes on either side (try to keep the line parallel with the edge of the sheet).
- 15) Draw a line from the center of the small holes or indents to the edge of the sheet (try to keep the line perpendicular to the edge of the sheet).

- 16) Place the sheet so that the small hole or indent matches the below pictures. The edge of the sheet should be collinear with the horizontal black line and circular or square markings should match up with the punched holes. Following the 1mm markings on the tool, the optimal position for the small holes are indicated by the wider black marks.



NOTE: When changing the DESKEW ADJUST and ALIGNMENT settings these values correspond to all element sizes. When changing the DEFLECTOR setting this value only corresponds to the currently loaded element size.

- 17) Check and correct the sheet skew. Do GP 6.3.18 to access the DESKEW ADJUST setting.
- If the small hole on the right is too close to the edge and the small hole on the left is too far away decrease this value by 1.
- If the small hole on the right is too far away from the edge and the small hole on the left is too close increase this value by 1.
- Repeat Step 5-6 and 12-16.
- Both small holes are the same distance from the edge of the sheet**
- Yes-** Go to Step 18
- No-** Repeat this step

- 18) Check and correct the deflector timing and alignment. Do GP 6.1 to access the DEFLECTOR setting and the ALLIGNMENT setting.

A compass is provided on the Punched Hole Position Check Tool to assist in determining the direction of the needed adjustment. The arrow pointing in the direction the small hole needs to move in order to be in its optimal position has a + or a – next to it and either the word DEFLECTOR or ALLIGNMENT. + Means the value should be increased in mm. – means the value should be decreased mm.

Make a small adjustment to the appropriate setting then repeat Step 5-6 and 12-16.

The small holes are in their optimal positions

Yes- Go to Step 19

No- Repeat this step

- 19) Remove the die from the punch, reinsert the pins and reinstall the die. Run books to verify the issue is corrected.

Issue is corrected

Yes- Return to normal operation

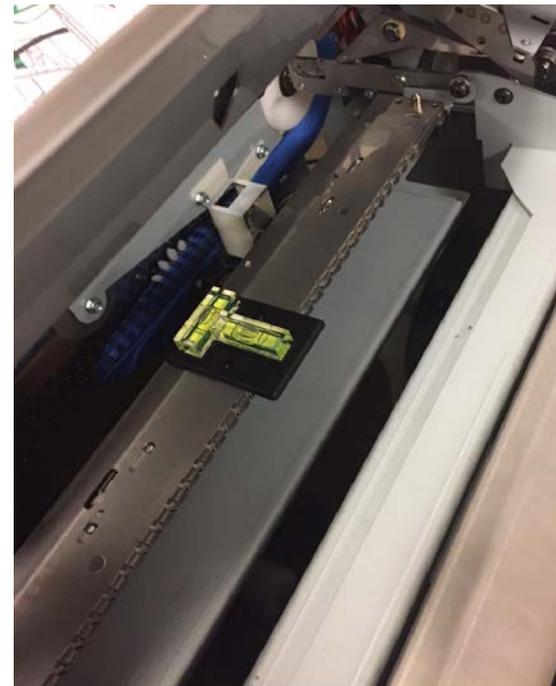
No- Return to the trouble shooting step that directed you here.

ADJ 1.9 Holder Rotate Adjustment

The Holder rotation linkage can be adjusted to ensure the Holder is properly vertical when in the vertical position or horizontal when in the horizontal position. Follow the steps in this section to verify that the Holder Rotate linkage is operating as expected.

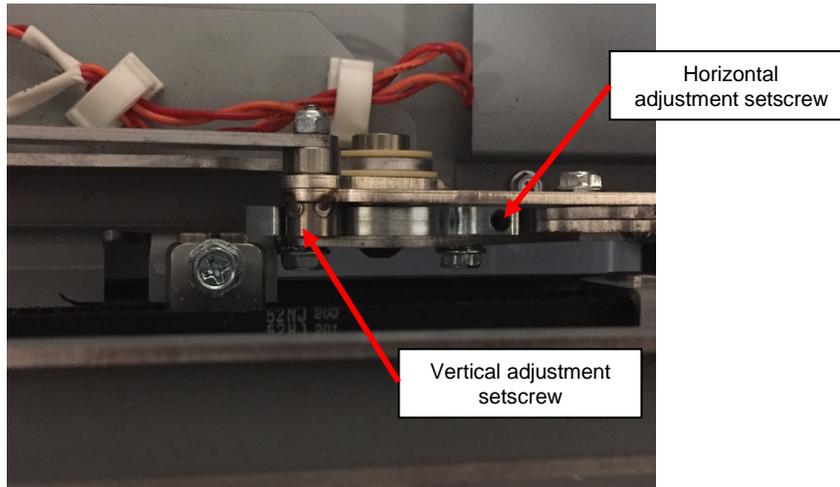
Inspection Procedure

- 1) Do GP 6.3.6 to access the Functional Tests menu. Select the Holder Rotate functional test, which will allow you to move the Holder into a vertical or horizontal position.
- 2) Cycle the Holder from vertical to horizontal several times. Ensure that the linkage moves smoothly. Check the bars in the linkage to see if any of them are bent or loose.
- 3) With the linkage in the Horizontal position, ensure that the Holder face is flat. A small level can be used for this purpose.



Adjustment Procedure

- 1) Fine adjustment to the Holder Vertical or Horizontal position can be made by adjusting the setscrew(s) on the Holder yoke. Note that there is a setscrew for both vertical and horizontal adjustment.



- 2) In some cases, the Holder may need to be adjusted slightly past horizontal to achieve better closing roundness.
- 3) Repeat this process until the proper positions are reached for both vertical and horizontal Holder positions.
- 4) Return to the RAP that brought you here.

ADJ 1.10 Element Tip Height Adjustment

Use the following procedure to ensure that the Element wire tip position is correct, relative to the paper path. If the wire tips are too high or too low, jams or mishooked sheets can occur.

Inspection Procedure

- 1) Do GP 6.3.6 to access the Functional Tests menu. Do the Feed Element functional test. This will cause the eWire to feed one length of wire and move it into the stack position.
- 2) Locate the Element Height Setup tool on the Book Drawer door. Open the Cover, lift up the Vacuum Stacker and place the tool on the element tips. Hold it horizontal against the tines on the Deflector.

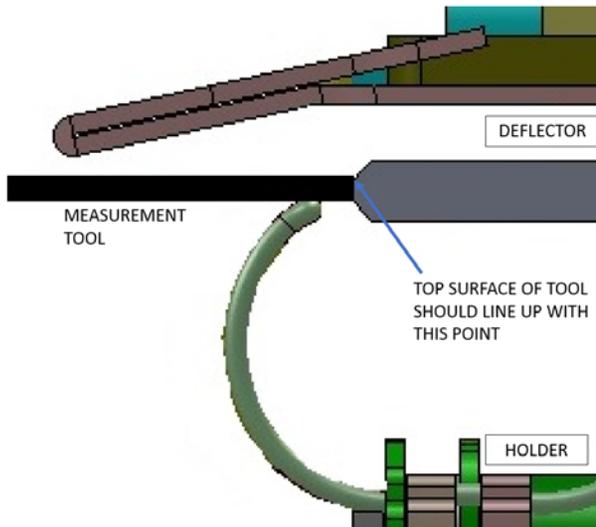


- 3) Note the location of the Deflector tines relative to the tool. The top edge of the tool should be lined up with the bottom of the upper chamfer of the Deflector tine. A flashlight is useful for this step. Refer to the following pictures.



Adjustment Procedure

- 1) Do GP 6.1.3 to enter the Service Menu. Select Element at Stack Position, which can be incremented from -50 to +50. Increasing this value will raise the element tips and decreasing it will lower the element tips.
- 2) Raise or lower the Element at Stack value by 5.
- 3) Insert a cheater into the Lid Interlock
- 4) When motion stops remove the element from the holder
- 5) Repeat the Inspection Procedure
- 6) When the Element wire tip position is correct, return to the procedure that directed you here. **NOTE: THIS PROCEDURE ONLY EFFECTS THE ELEMENT SIZE CURRENTLY LOADED AND MAY HAVE TO BE REPEATED FOR OTHER SIZES.**

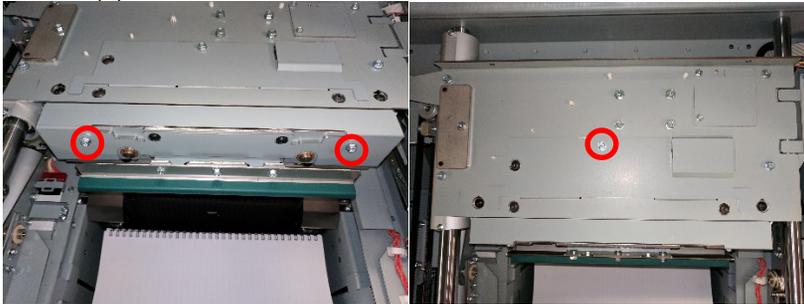


ADJ 1.11 Closer Chain Tension Adjustment

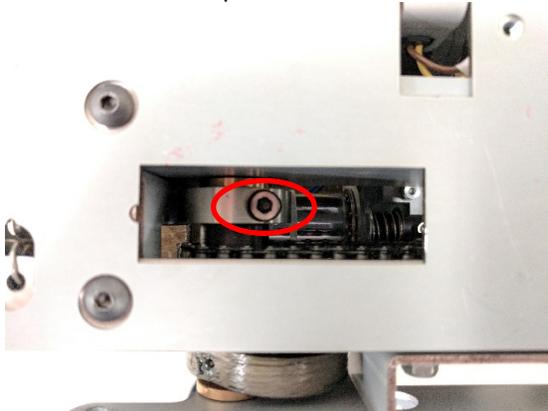
Use the following procedure to correct the phase of the cams in the closer when binding closes unevenly.

Adjustment Procedure

1. Remove both covers from the top of the closer by removing the M4 screws (3).



2. Cheat the interlock for the paper transport panel.
3. Perform GP 6.3.6 Closer Cycle. Remove the interlock cheat when you can see the hex bolt on the exposed collar as shown below.

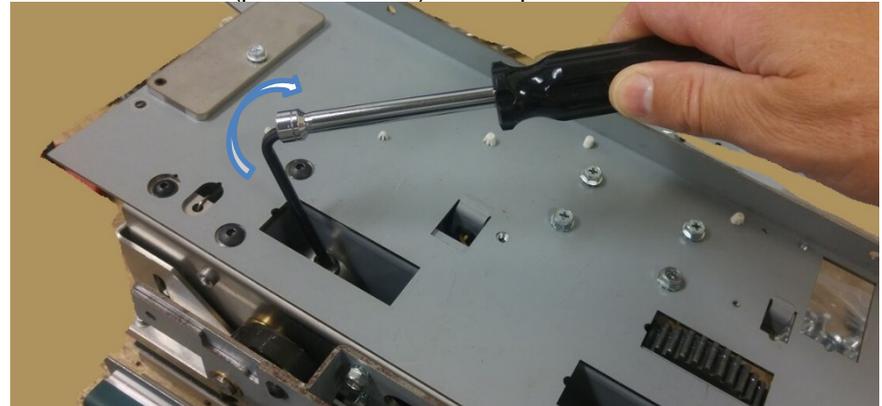


4. Loosen the M4 cap screw on the collar, do not remove it fully

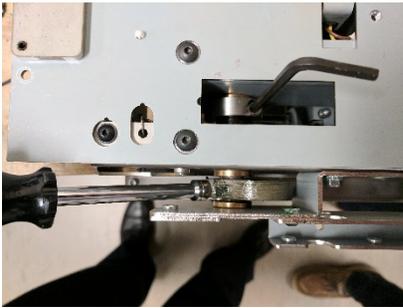
5. Place a screw driver on one side of the cam and tap it to rotate the cam in phase with the driven cam. Counter-clockwise if the collar side of the book is over closed and clockwise if it is under closed.



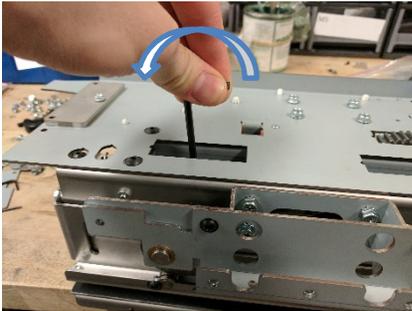
6. Before tightening the collar, using a hex key, apply counter-clockwise torque to the collar. This ensures that there is no slack on the top section of the chain. While holding the chain taught, secure the M4 set screw. One must apply significant torque to properly tighten the collar. A nut-driver (pictured below) can help.



7. Close the machine and run a book to examine the bind. If the problem is still present repeat steps 2-7.
8. Reinstall the closer covers removed in step 1.
9. Return to the RAP that directed you here.
10. collar side of the book is over closed and clockwise if it is under closed.



11. Before tightening the collar, using a hex key, apply counter-clockwise torque to the collar. This ensures that there is no slack on the top section of the chain. While holding the chain taut, secure the M4 set screw.



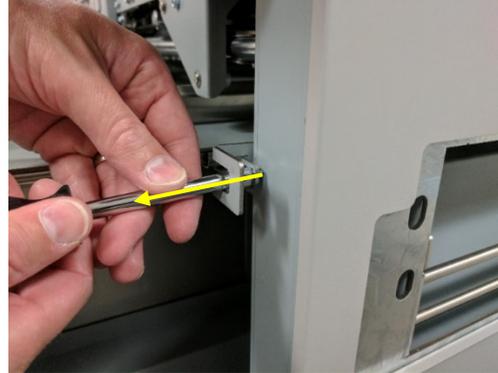
12. Close the machine and run a book to examine the bind. If the problem is still present repeat steps 2-7.
13. Reinstall the closer covers removed in step 1.
14. Return to the RAP that directed you here.

ADJ 1.12 Caster Height Adjustment

Use the following procedure to adjust the height of the eWire.

Adjustment Procedure

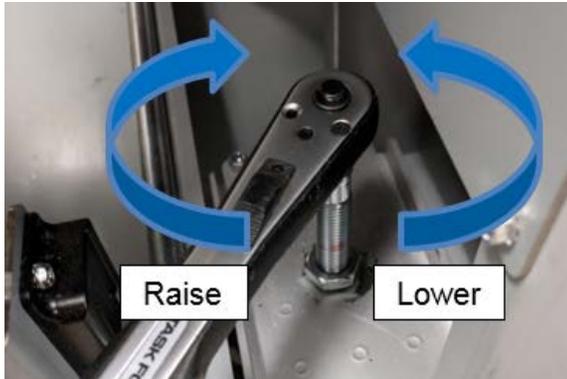
1. Remove the screw securing the docking bracket between the eWire and the upstream punch and disengage the bracket.



2. Refer the manual of the downstream device and disengage the docking mechanism between it and the eWire. Adjusting the height of the eWire with docking brackets engaged can damage the docking mechanisms.
3. Perform REP 1.5 to remove the Back Cover to gain access to the rear casters.
4. The front casters can be accessed by opening the Element Feeder and the Book Drawer doors. To reach the caster you must pull out the drawer completely and access the caster behind it. Do not pull out both drawers at the same time, this will block access to both casters.
5. Loosen the M12 Jam Nut on the caster or casters that require adjustment. Do not remove the Jam Nut completely.



- To adjust the height of the caster, use a 7mm wrench. To raise the eWire, rotate the caster nut clockwise. To lower the eWire, rotate the caster nut counter clockwise.



- After making the required adjustments, check that the top cover of the eWire is level in both the paper path direction, and front to back. If it is not level, readjust the casters.
- After the eWire is at the desired height and level, tighten the jam nuts to lock the height.
- Reinstall the Back Cover following REP 1.5 and reengage the docking mechanisms.

ADJ 1.13 Partial Close Adjustment

In order to remove the cut wire from the Holder module, the Closer will clamp down on the wire prior to moving away from the Holder. The amount of travel for this motion is called the Partial Close.

If the partial close value is set too high, the Closer will get stuck when moving away from the Holder. This will occur primarily when the book thickness is close to the max thickness for a given size.

If the partial close value is set too low, the book may fall out of the Closer during transfer. Poor roundness on only one size element could also be a symptom of partial close too low.

Inspection Procedure

- Access the Service Menu and select Function Tests → Element Cycle → Feed Element → Partial Close.
- Open the top cover. The closer jaws should have a cut wire held inside the jaws and partially clamped.
- Using a hook, Allen wrench, or similar tool, attempt to pull the wire out of the Closer jaws. If the element slips out freely with minimal force, the Partial Close is set too low. Repeat this test on the front and rear.
- If the element is securely held, try running a book with max sheet thickness. Verify if a bind jam occurs. If a bind jam occurs, the partial close is likely set too high.
- If the clamping force seems different on the front and rear, verify that the closing is even across the element. Refer to ADJ 1.11

Adjustment Procedure

- Access the Service Menu and select PARTIAL CLOSE
- Increase or decrease the Partial Close value based on your findings from the Inspection Procedure.
- Repeat the steps in the Inspection procedure to verify if the new value is correct.
- If partial close seems correct, run several books to determine if the problem is resolved. If not, return to the section that directed you here.

ADJ 1.14 Element Xfer Position Adjustment

The element transfer position controls the position of the wire while it is being transferred from the Element Feeder to the Holder. Changing this value will adjust the amount of travel for the element feed belt prior to transferring the wire.

- 1) If the element transfer position is off, the most likely result is difficulty with successfully picking up the wire and placing it onto the Holder.
- 2) Check for consistent issues with wire falling off the Holder. The wire could be completely off the Holder and loose inside the machine. It could also be poorly held on the Holder and partially fall off during operation.
- 3) If these issues are seen, changing the Element Xfer Position may help.
- 4) Always note the initial setting so you can return to this value if needed.

Adjustment Procedure

- 1) Access the Service Menu and select ELEMENT XFER POS
- 2) Increment the value +5 and -5 and run a test in each configuration. Test the element transfer by selecting FUNCTION TEST → ELEMENT CYCLE → FEED ELEMENT. Repeated tests might be necessary to determine if the problem is resolved.
- 3) If improvement is seen by increasing or decreasing this value, continue to adjust the setting until the problem is fully resolved.
- 4) Run a number of books to verify the adjustment made has solved the problem.
- 5) If no improvement is seen by changing the value, reset to the original setting and return to the RAP that directed you here.

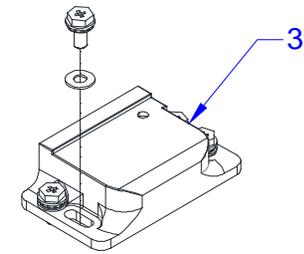
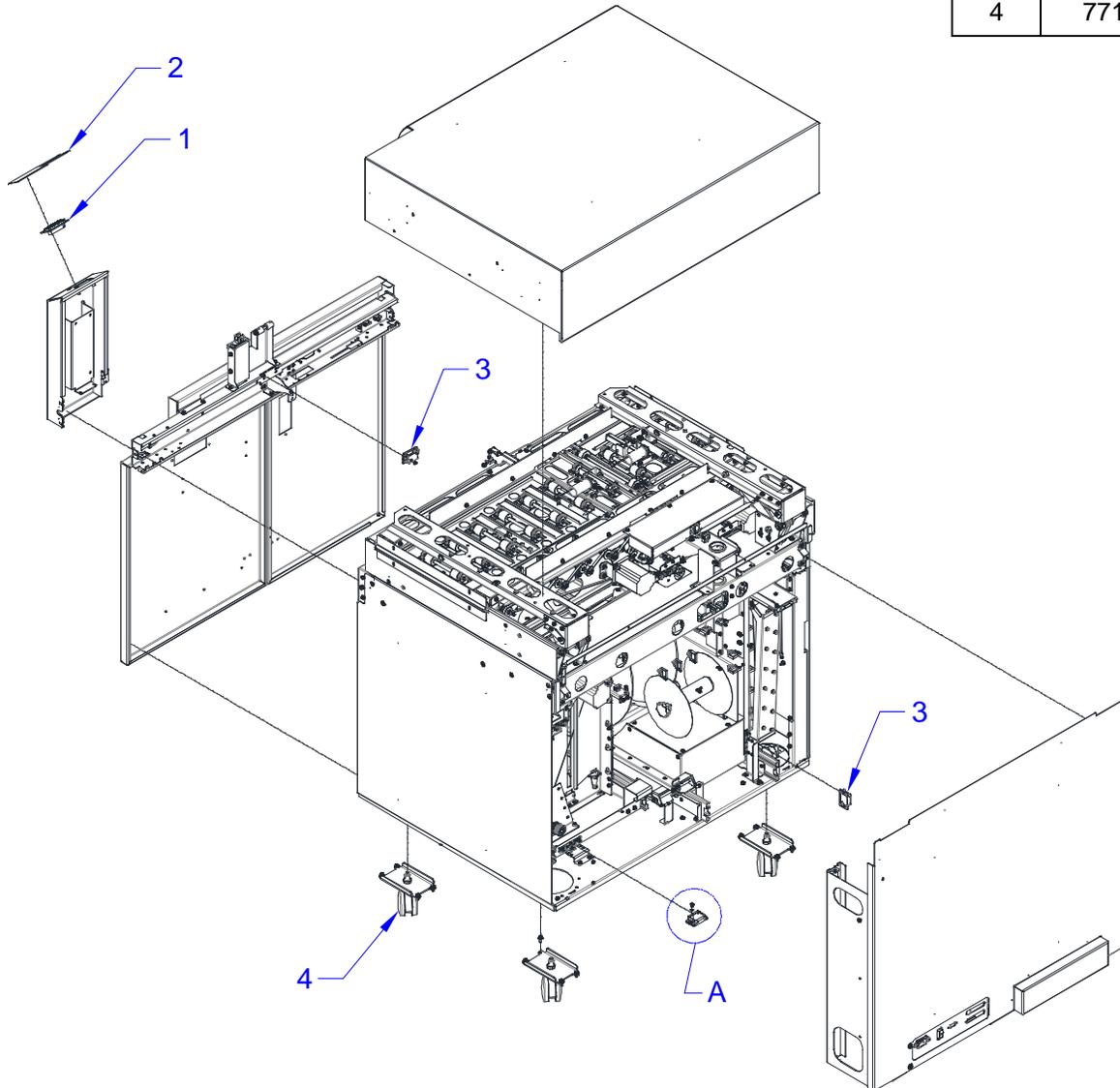
5. Parts List

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PL 5.1 LCD, INTERLOCKS, CASTERS

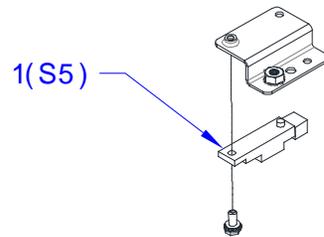
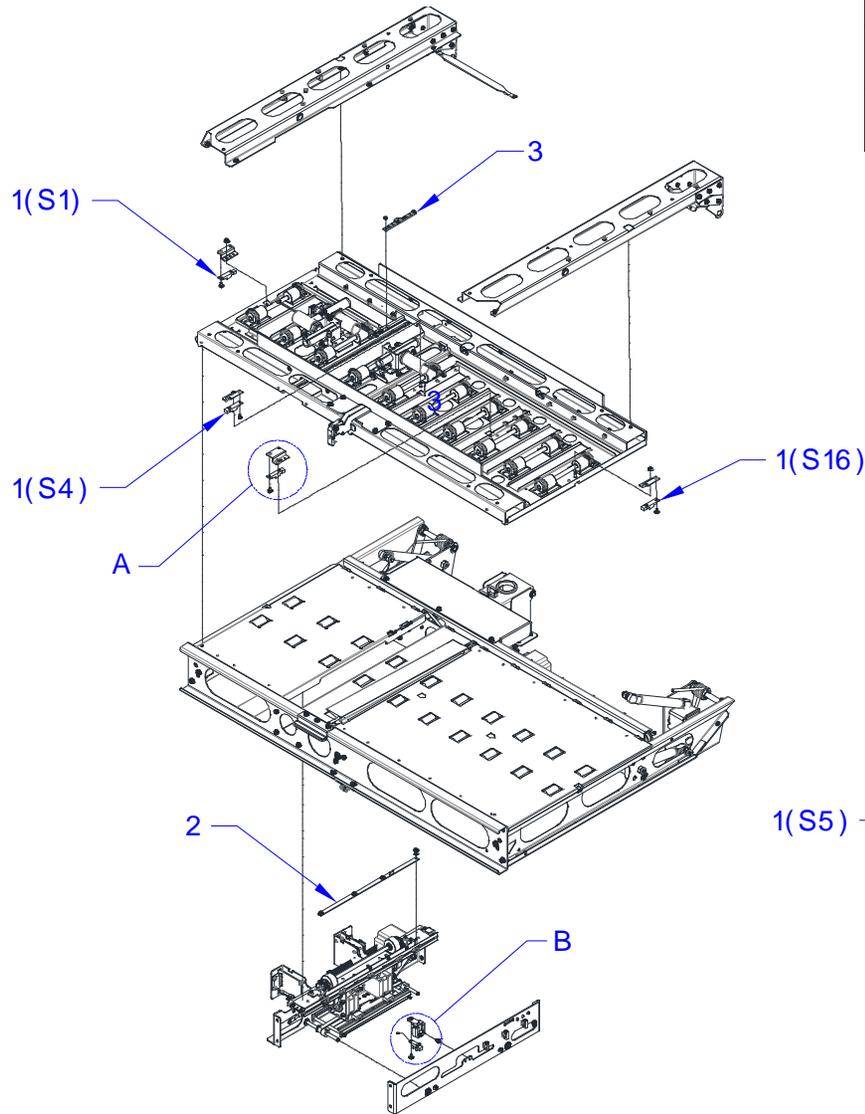
ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715527		LCD Display	1
2	7715682		LCD Membrane Switch	1
3	7706486		Door/Drawer Latches	3
4	7718101		Caster Sub-Assembly	4



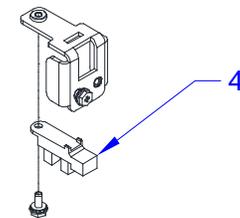
DETAIL A

PL 5.2 PAPER TRANSPORT - SENSORS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715193		Bypass Sensors (S1, S4, S5 & S16)	4
2	7715692		Skew Sensor PCB (S6 - S10)	1
3	7715567		Alignment Sensor PCB Switchable(S12, S13 & S15)	1
4	7715340		Alignment Carriage Home Sensor (S41)	1



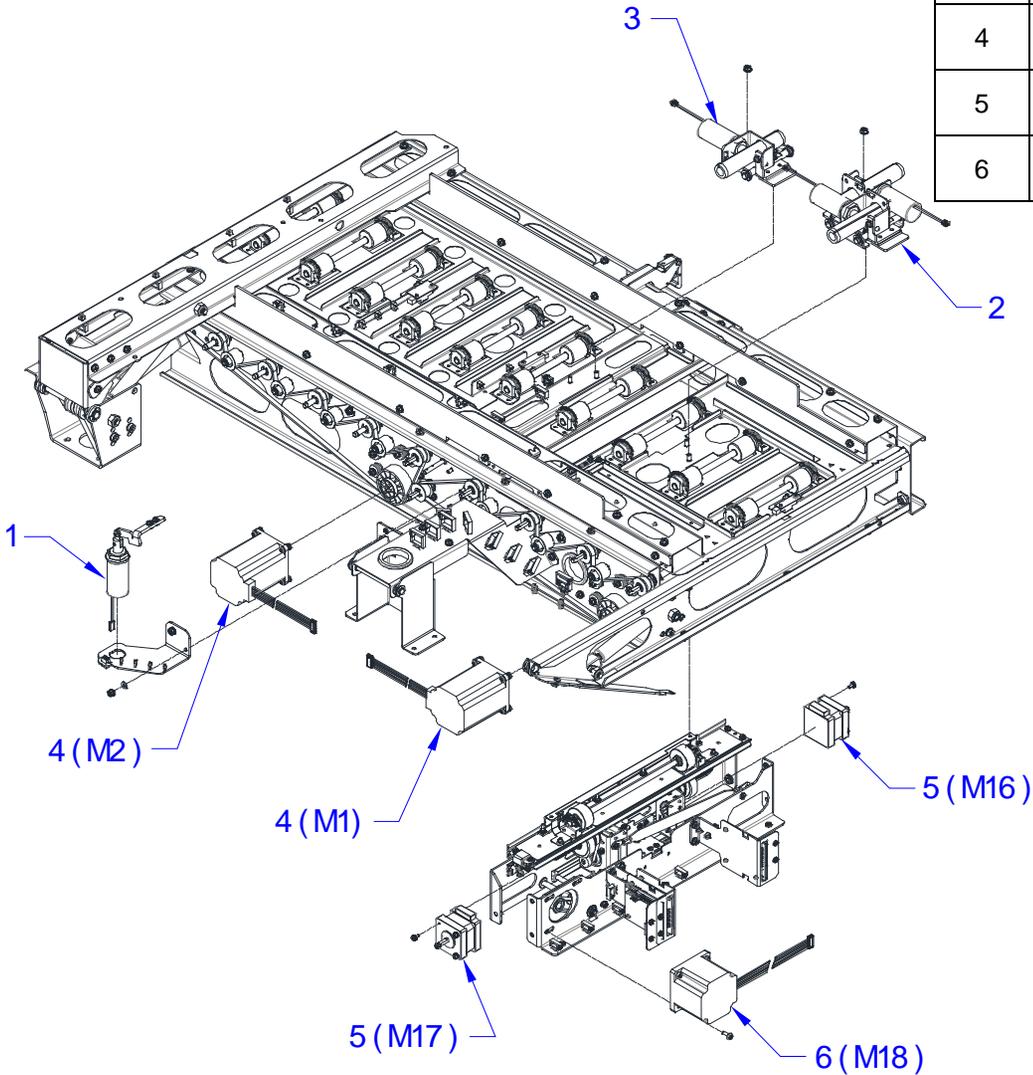
DETAIL A



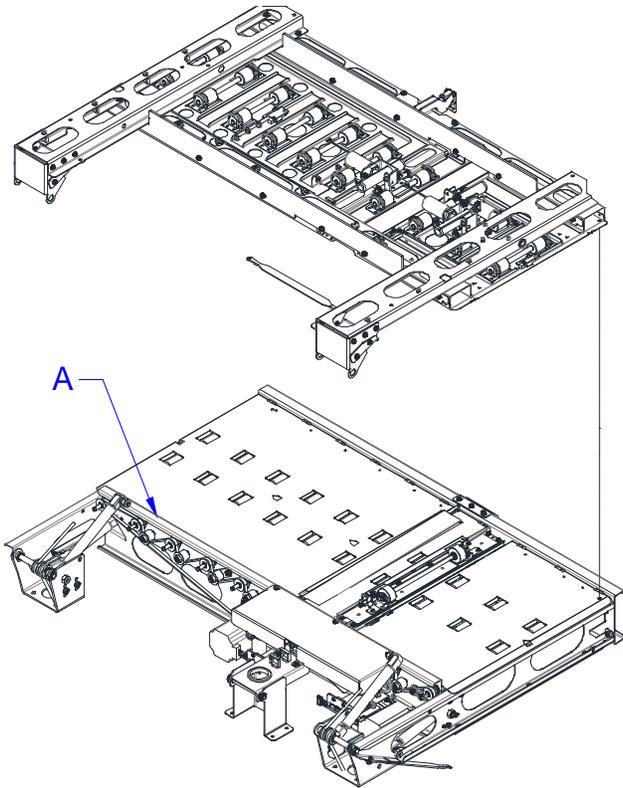
DETAIL B

PL 5.3 PAPER TRANSPORT – MOTORS & SOL

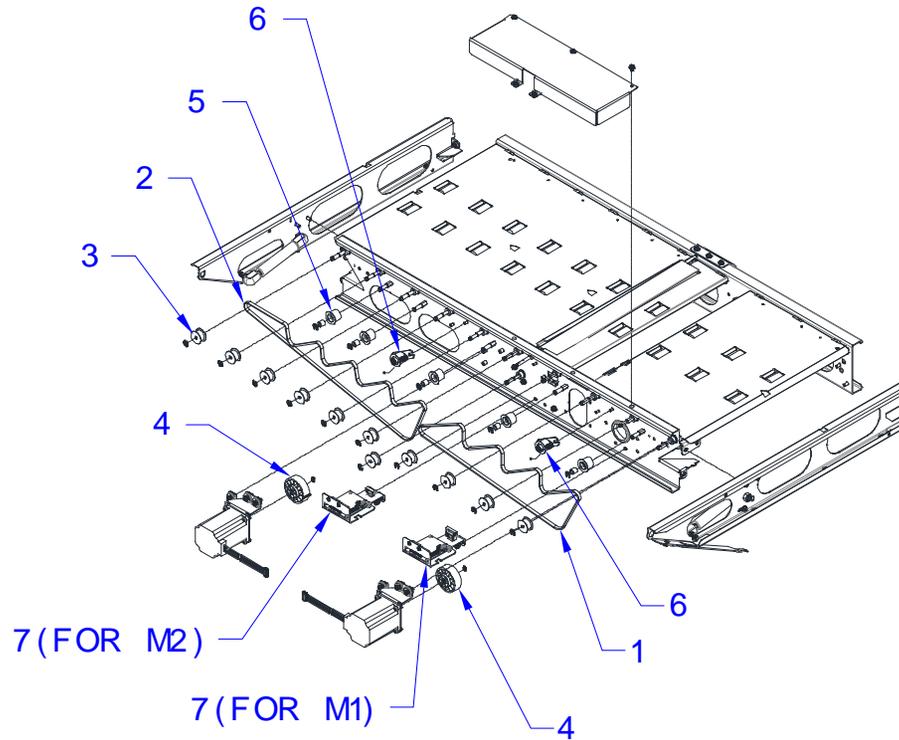
ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7718102		Diverter Solenoid Assembly (L1)	1
2	7717125		Disengaging Roller #1 & 2 (L2 & L3)	2
3	7717128		Disengaging Roller #3 (L4)	1
4	7715200		Bypass Entry and Exit Motors (M1 & M2)	2
5	7715337		Steering Motor #1 & #2 (M16 & M17)	2
6	7715282		Alignment Motor (M18)	1



PL 5.4 PAPER TRANSPORT – REAR SECTION

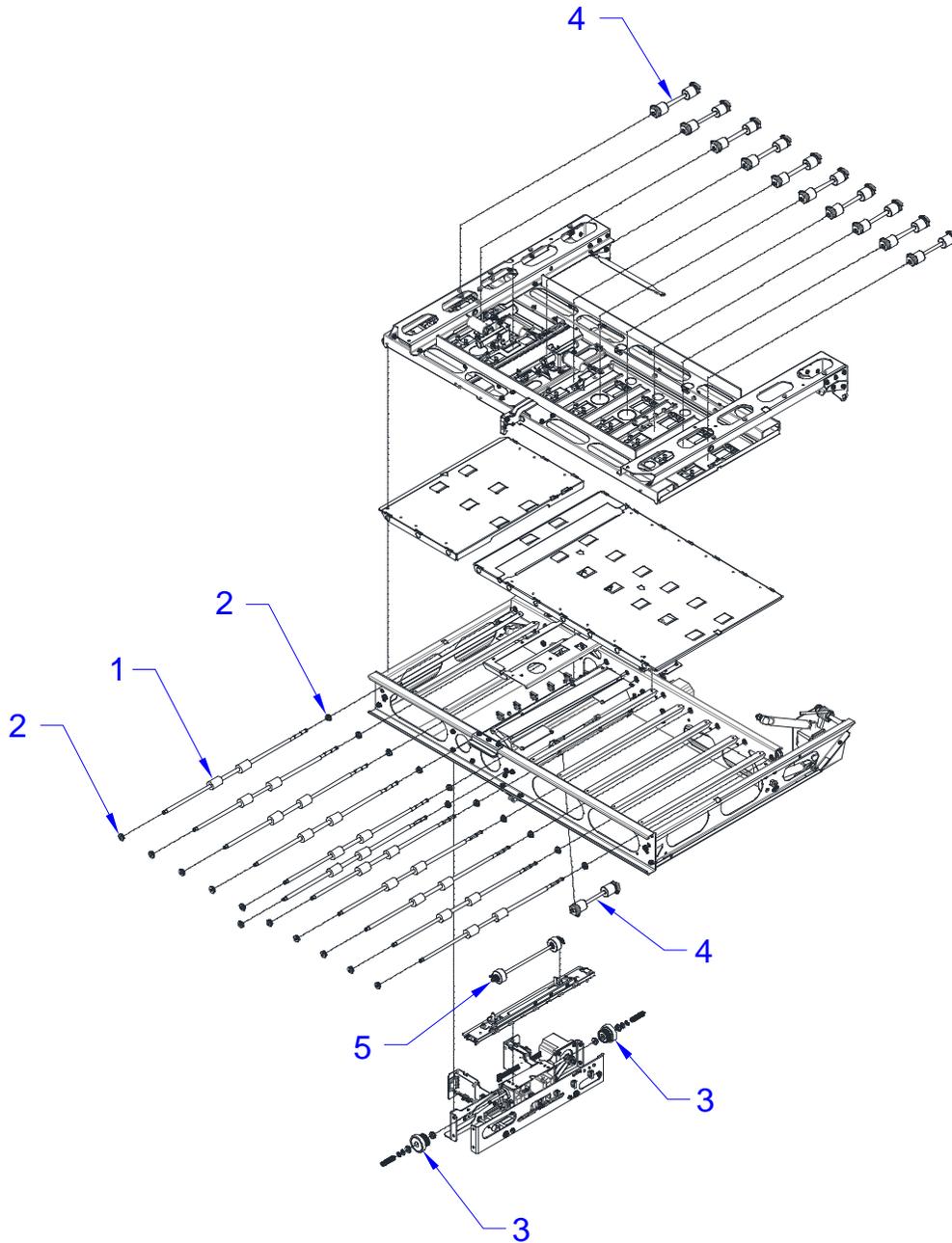


ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7717195		Bypass Timing Belt #1	1
2	7717204		Bypass Timing Belt #2	1
3	7715204		Drive Roller Timing Pulley	11
4	7715201		Stepper Motor Pulley	2
5	7715383		Drive Roller Idler Pulley	7
6	7715245		Timing Belt Tensioner	2
7	7715275		Stepper Motor Driver Board	2



DETAIL A

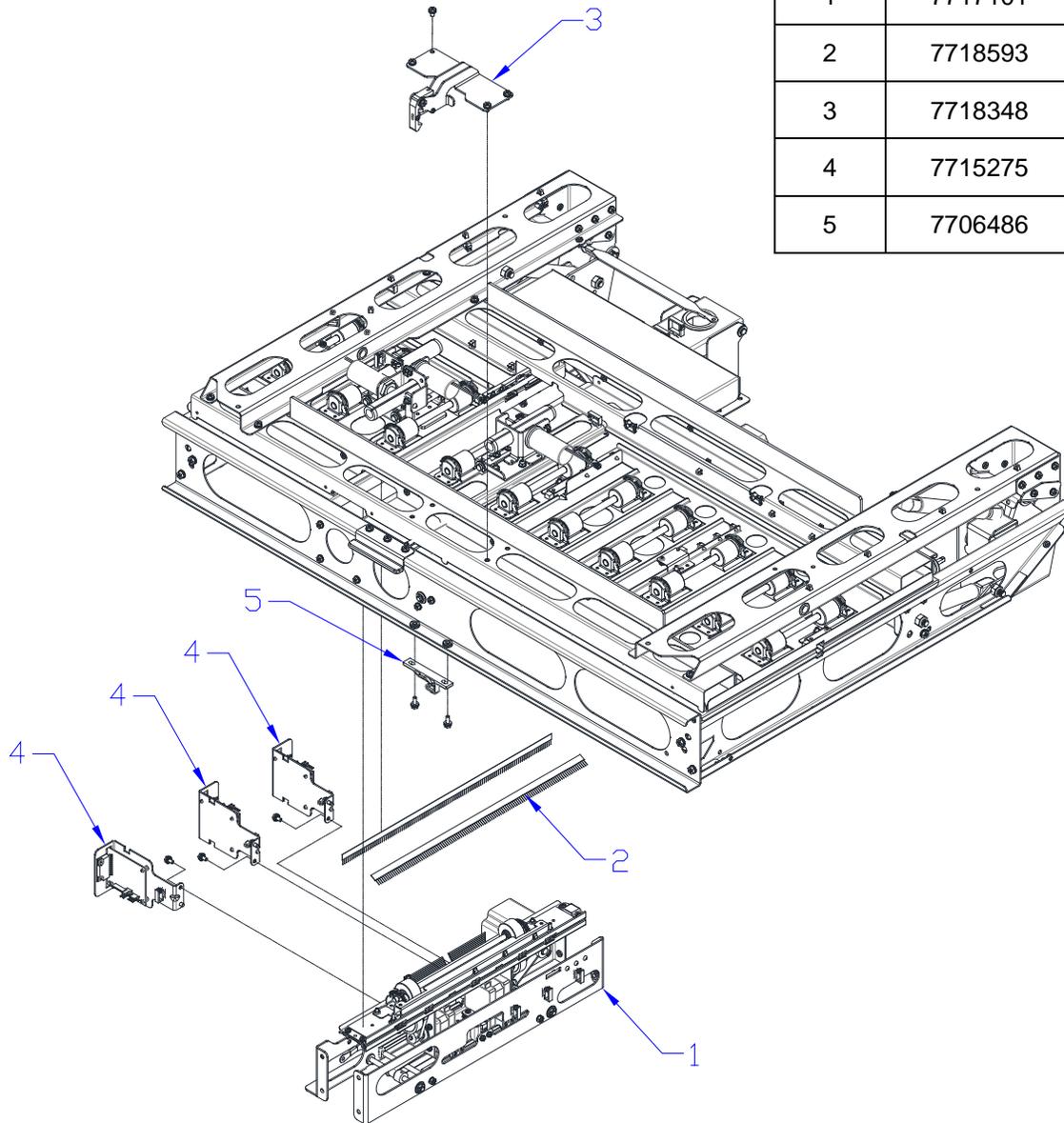
PL 5.5 PAPER TRANSPORT - ROLLERS



ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715093		Drive Roller Assembly	9
2	1821116		Roller Bearing	22
3	7715039		Steering Drive Roller Assembly	2
4	7718381		Idler Roller Assembly	1
5	7718103		Steering Idler Roller Assembly	5
6	7717802		Delrin Drive Roller Assembly	2

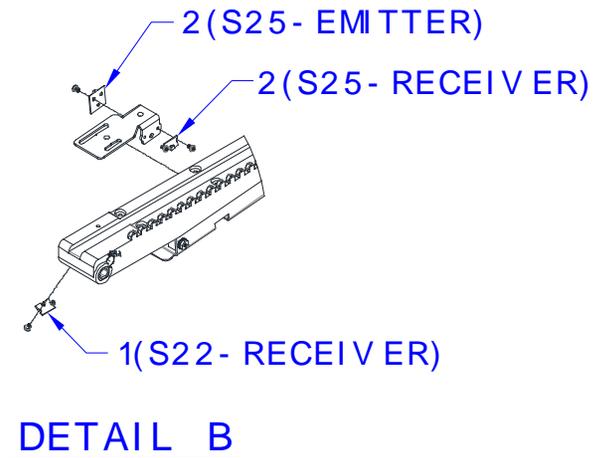
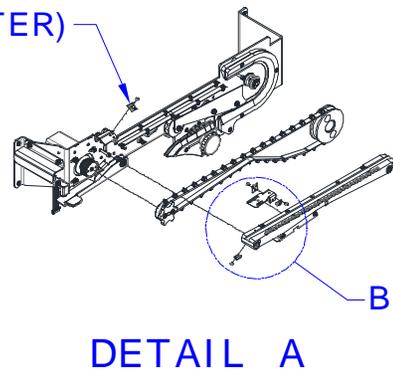
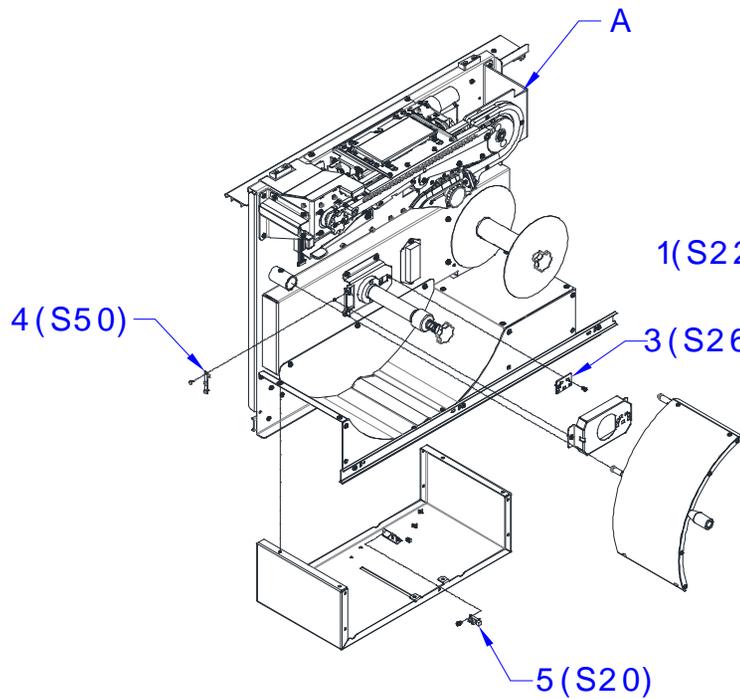
PL 5.6 PAPER TRANSPORT – OTHER PARTS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7717101		Steering Module Assembly	1
2	7718593		Anti-Static Brush Long	1
3	7718348		Latch Assembly	1
4	7715275		Motor Driver Bracket Assembly	3
5	7706486		Push to Close Latch	1



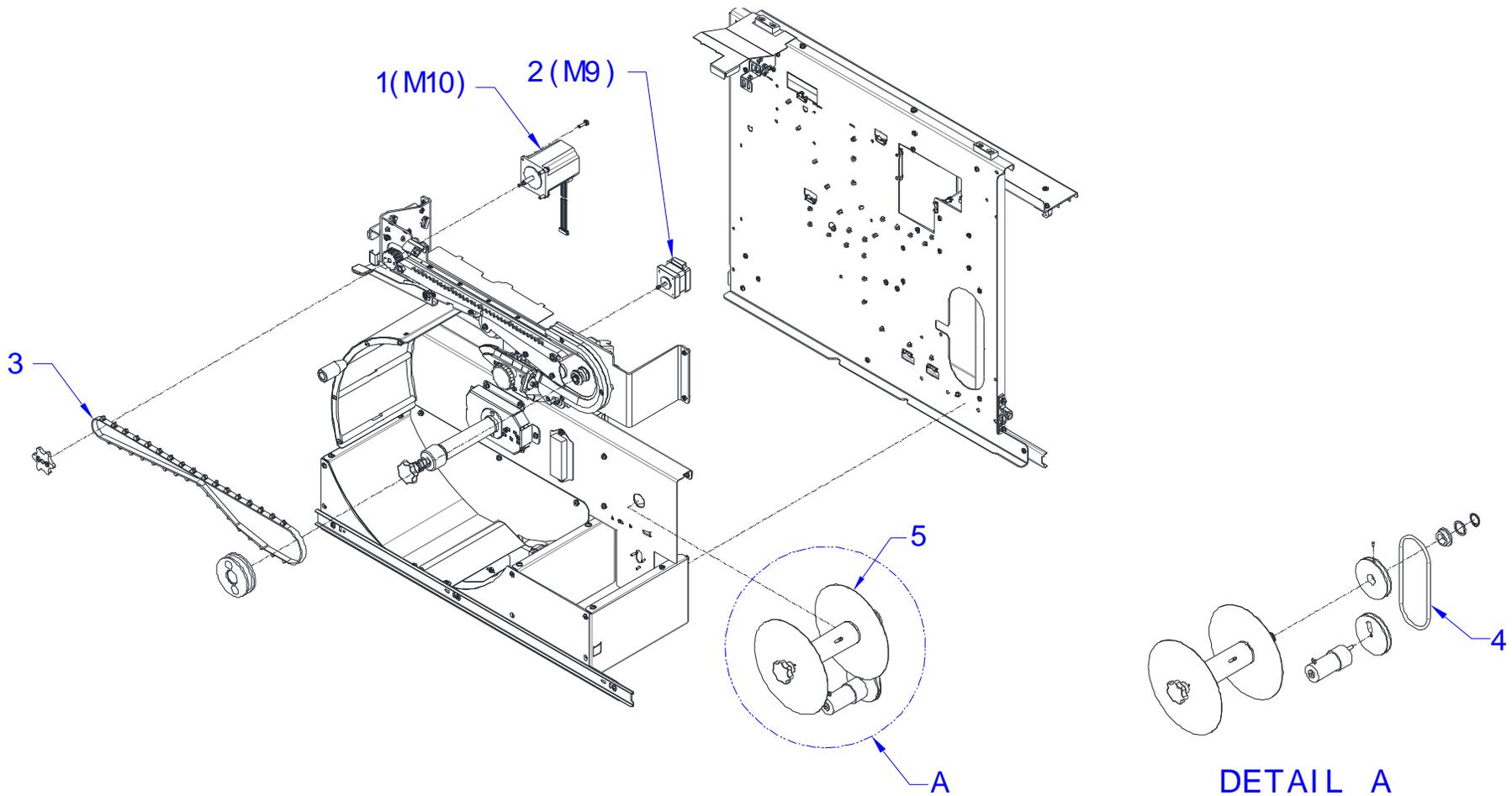
PL 5.7 ELEMENT FEEDER - SENSORS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7716946 & 7716947		Element Detect at Pyramid (S22)	1
2	7716946 & 7716947		Belt Home Sensor Assembly (S25)	1
3	7717206		Spool Detect Sensor PCB (S26-S30)	1
4	7717479		Spool Near Empty Sensor PCB (S50)	1
5	7715340		Element Slack Sensor (S20)	1



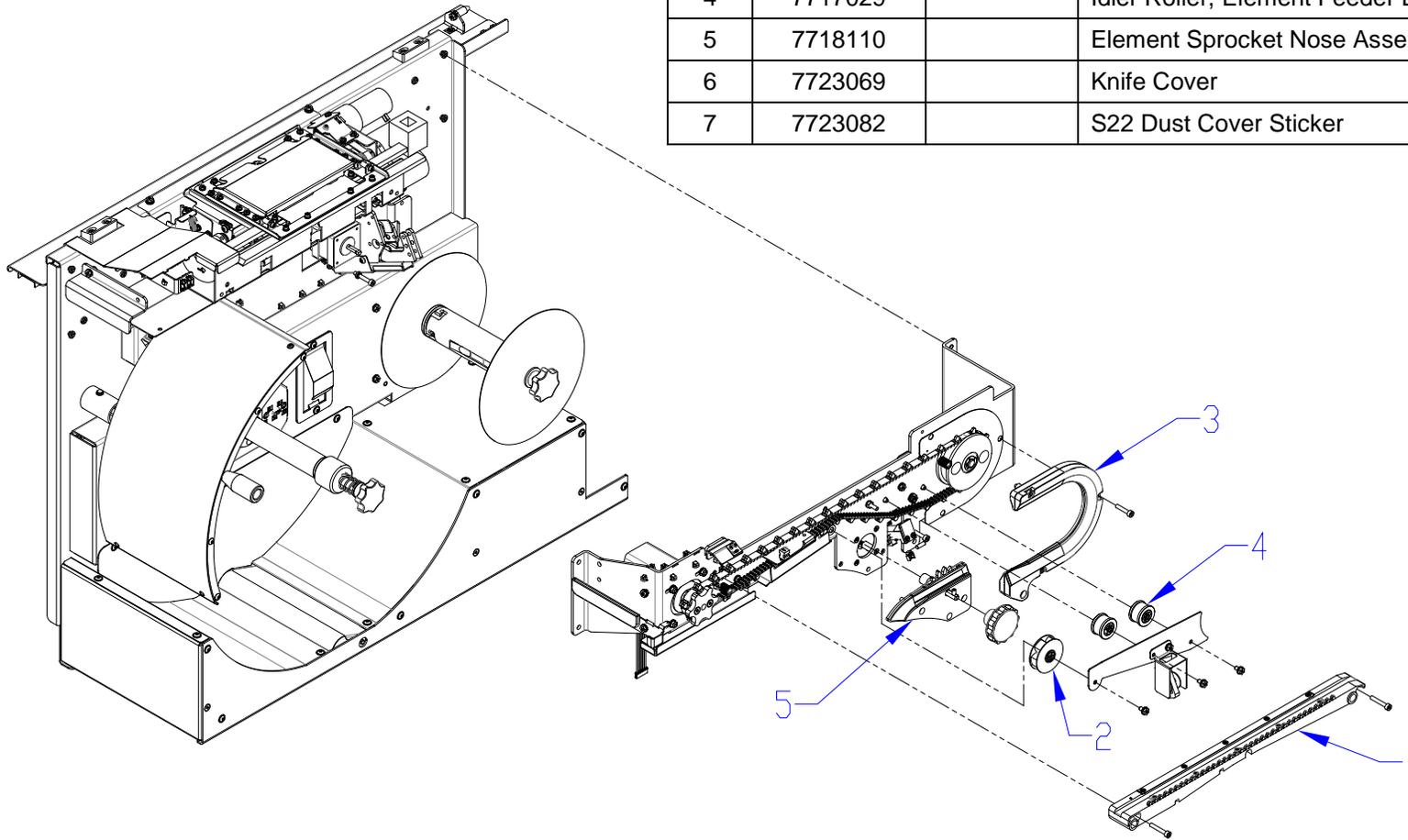
PL 5.8 ELEMENT FEEDER – MOTORS & BELTS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715200		Element Feed Belt Motor (M10)	1
2	7715337		Element Feed Sprocket Motor (M9)	1
3	7716993		Element Feeder Belt	1
4	7717025		Spool Rewind Belt	1
5	7718107		Spool Rewind Drive Assembly (M8)	1



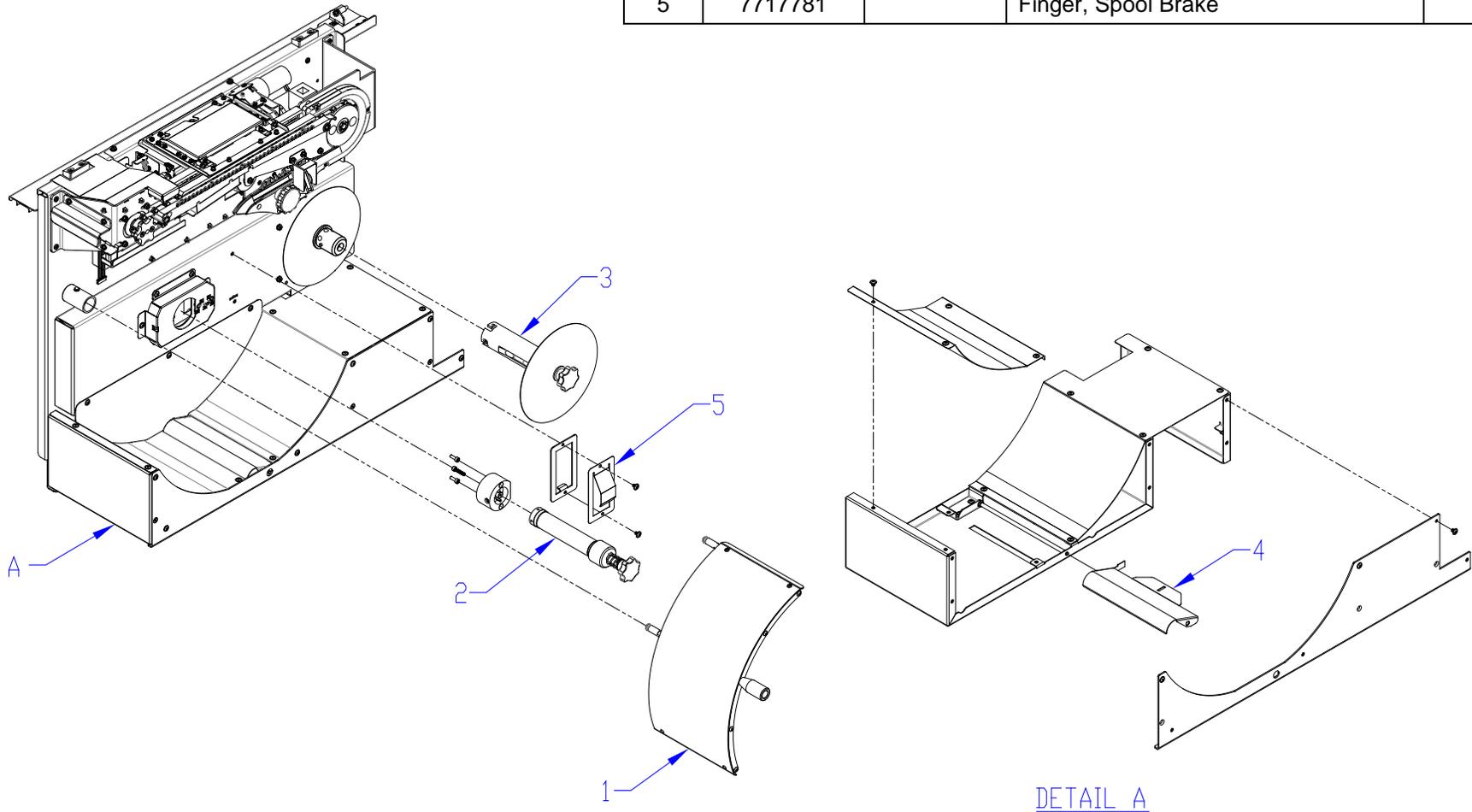
PL 5.9 ELEMENT FEEDER – TOP SECTION

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7716577		Element Feed Track Assembly	1
2	7718109		Element Feeder Belt Idler	1
3	7718108		Element Engagement Guide Assembly	1
4	7717029		Idler Roller, Element Feeder Belt	2
5	7718110		Element Sprocket Nose Assembly	1
6	7723069		Knife Cover	1
7	7723082		S22 Dust Cover Sticker	1



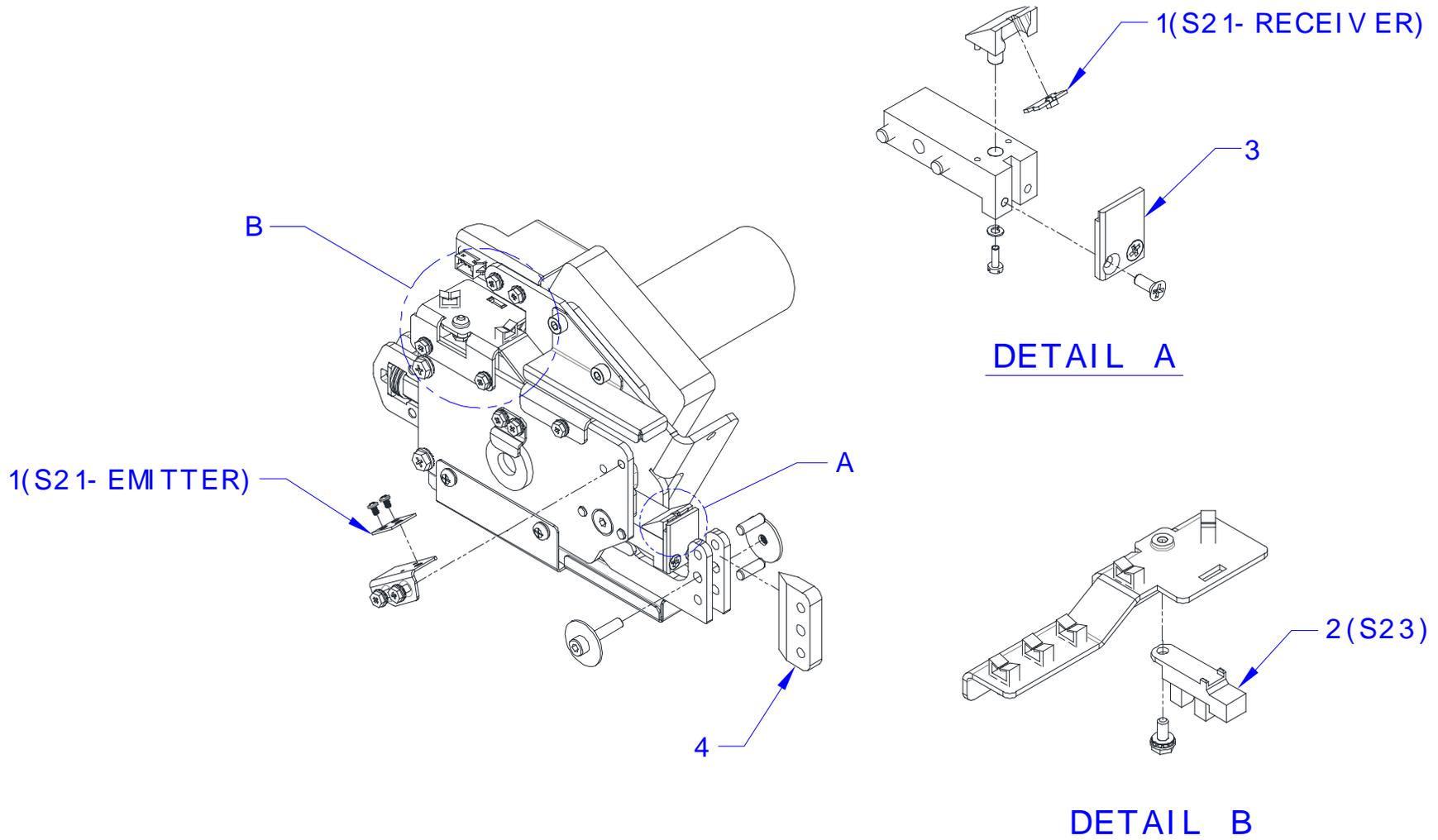
PL 5.10 ELEMENT FEEDER – BOTTOM SECTION

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7717017		Element Shield Assembly	1
2	7716948		Spool Spindle Assembly	1
3	7717065		Rewind Spindle Assembly	1
4	7717008		Element Slack Detect Lever Assembly	1
5	7717781		Finger, Spool Brake	1



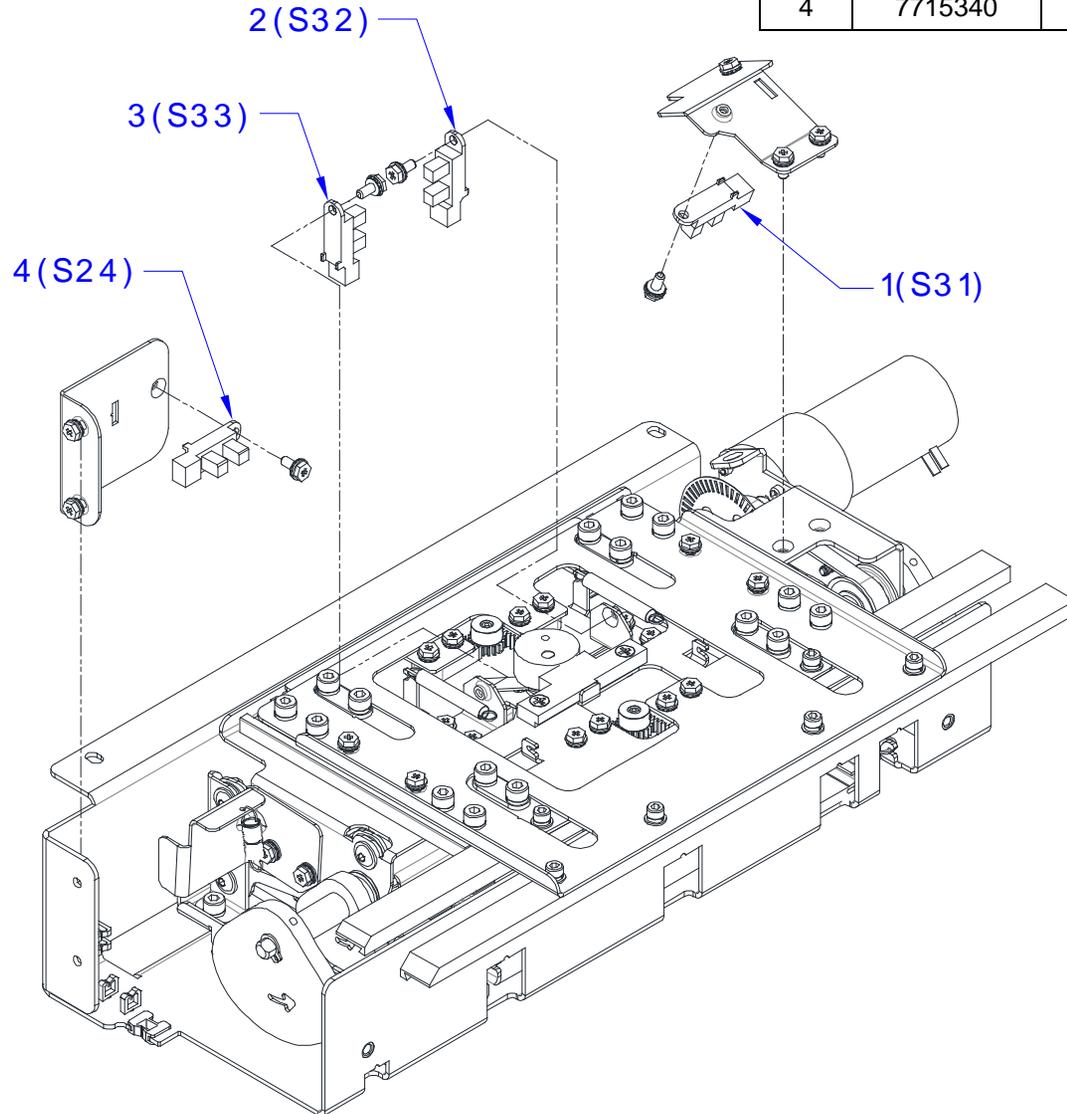
PL 5.11 ELEMENT FEEDER – KNIFE MODULE

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7714775, 7714776		Element Detect at Knife sensor (S21)	1
2	7715340		Knife Home Sensor (S23)	1
3	7717070		Knife Anvil	1
4	7716864		Knife Blade	1

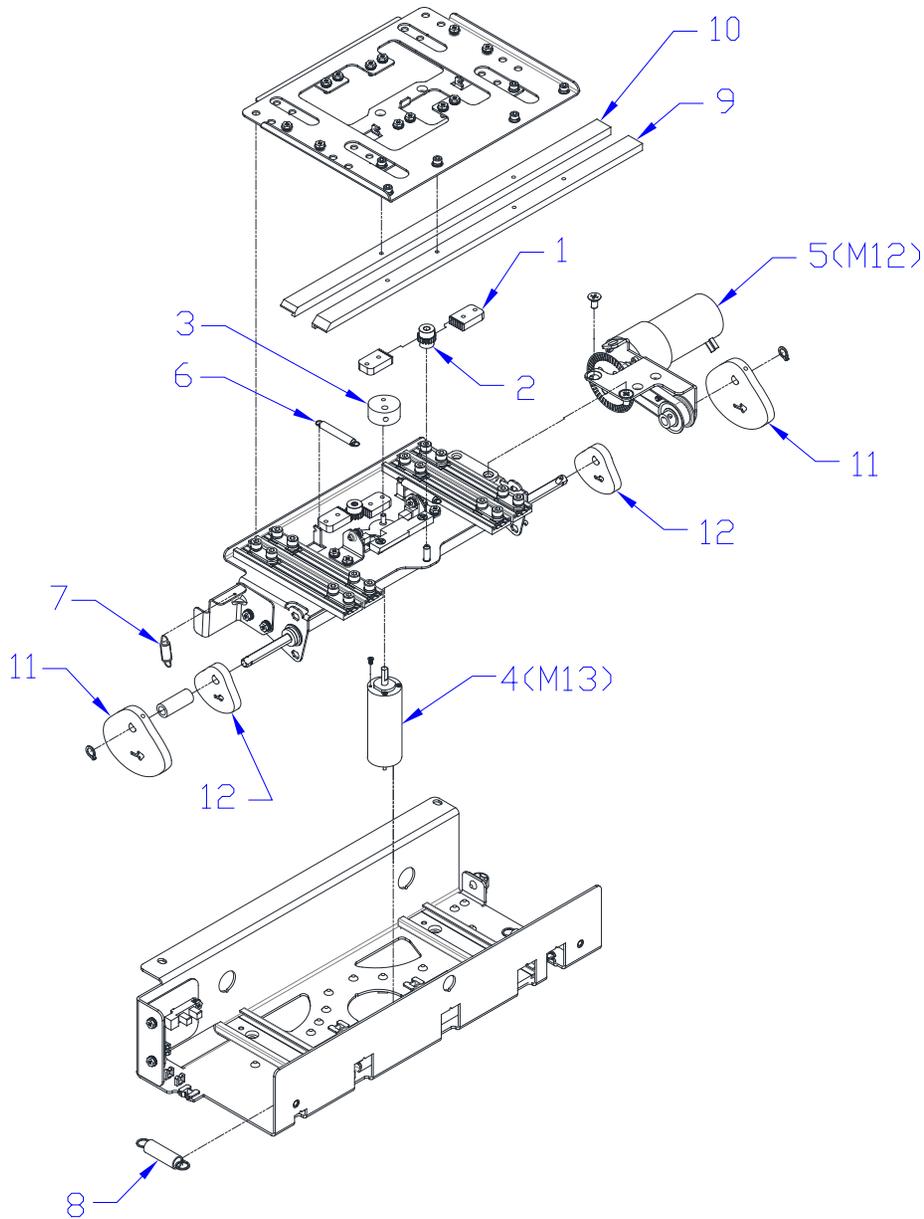


PL 5.12 ELEMENT TRANSFER - SENSORS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715340		Expanding T Encoder Sensor (S31)	1
2	7715340		Expanding T Home Sensor (S32)	1
3	7715340		Expanding T Out Sensor (S33)	1
4	7715340		Pushover Home Sensor (S24)	1



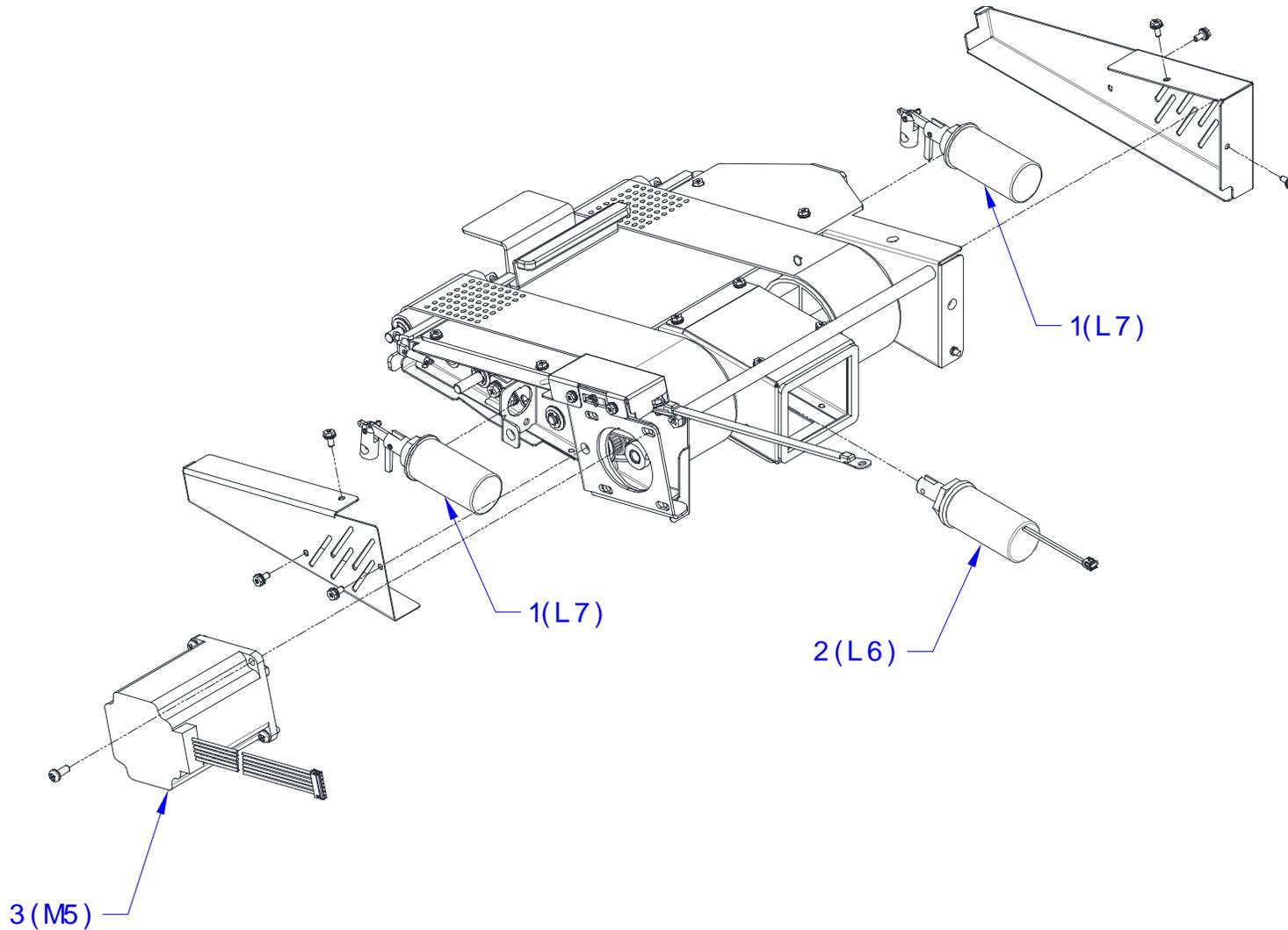
PL 5.13 ELEMENT TRANSFER – COMPONENTS



ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7716901		Expanding T Rack	4
2	7716913		Expanding T Gear	2
3	7716894		Expanding T CAM	1
4	7723853		Expanding T Motor (M13)	1
5	7717682		Pushover Motor Assembly (M12)	1
6	7717415		Expanding T Spring	2
7	7718131		Exp T Motor Counterbalance Spring	1
8	7717411		Element Pushover Spring	2
9	7723816		Expanding T Leading	1
10	7723817		Expanding T Trailing	1
11	7716897		Expanding T, Pushover CAM, Horizontal	2
12	7716898		Expanding T, Pushover CAM, Vertical	2

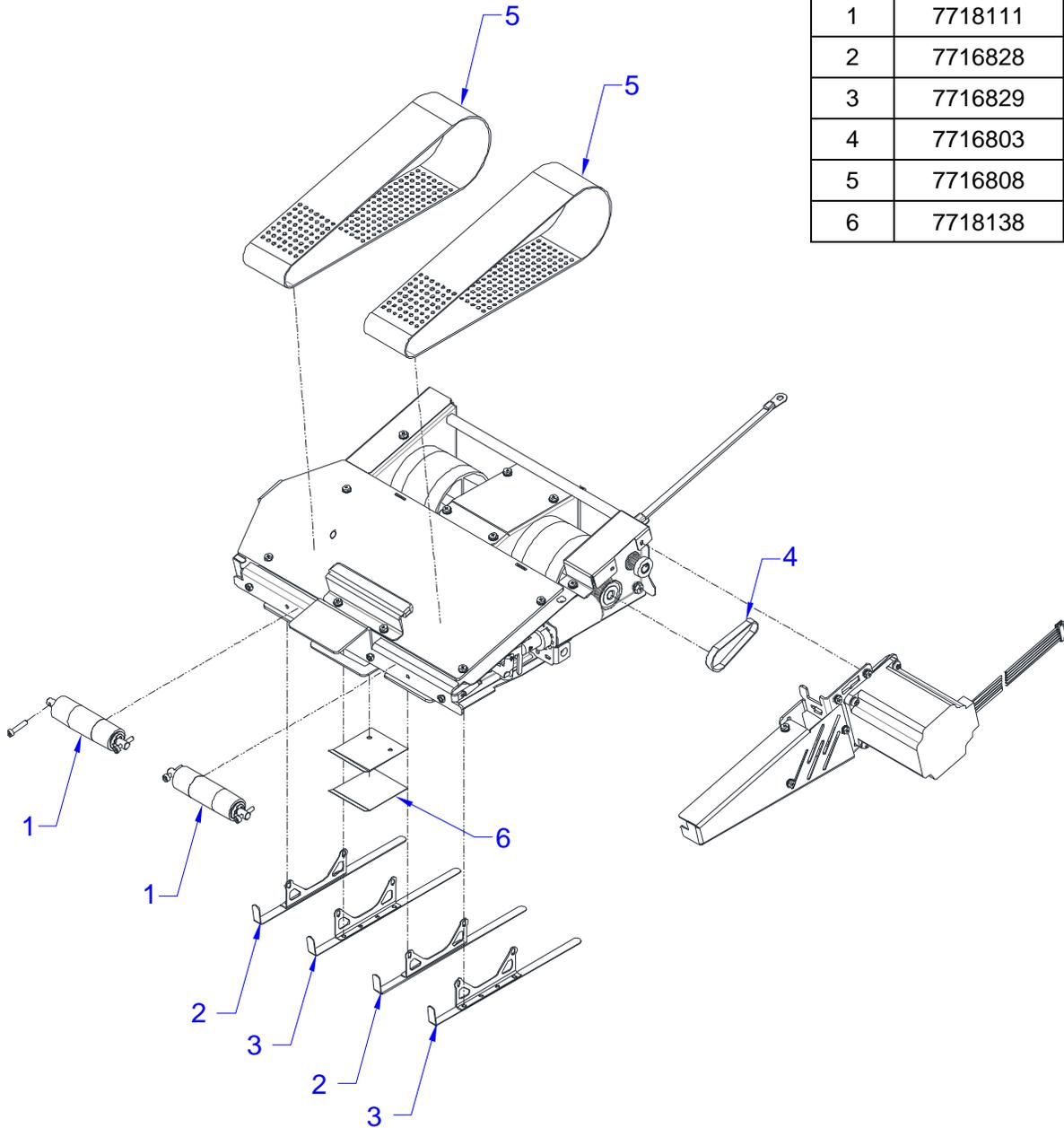
PL 5.14 VACUUM STACKER – MOTORS & SOL

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7718112		Kick Down Solenoid Assembly (L7)	2
2	7715289		Drag Finger Solenoid (L6)	1
3	7715200		Stacker Drive Motor (M5)	1



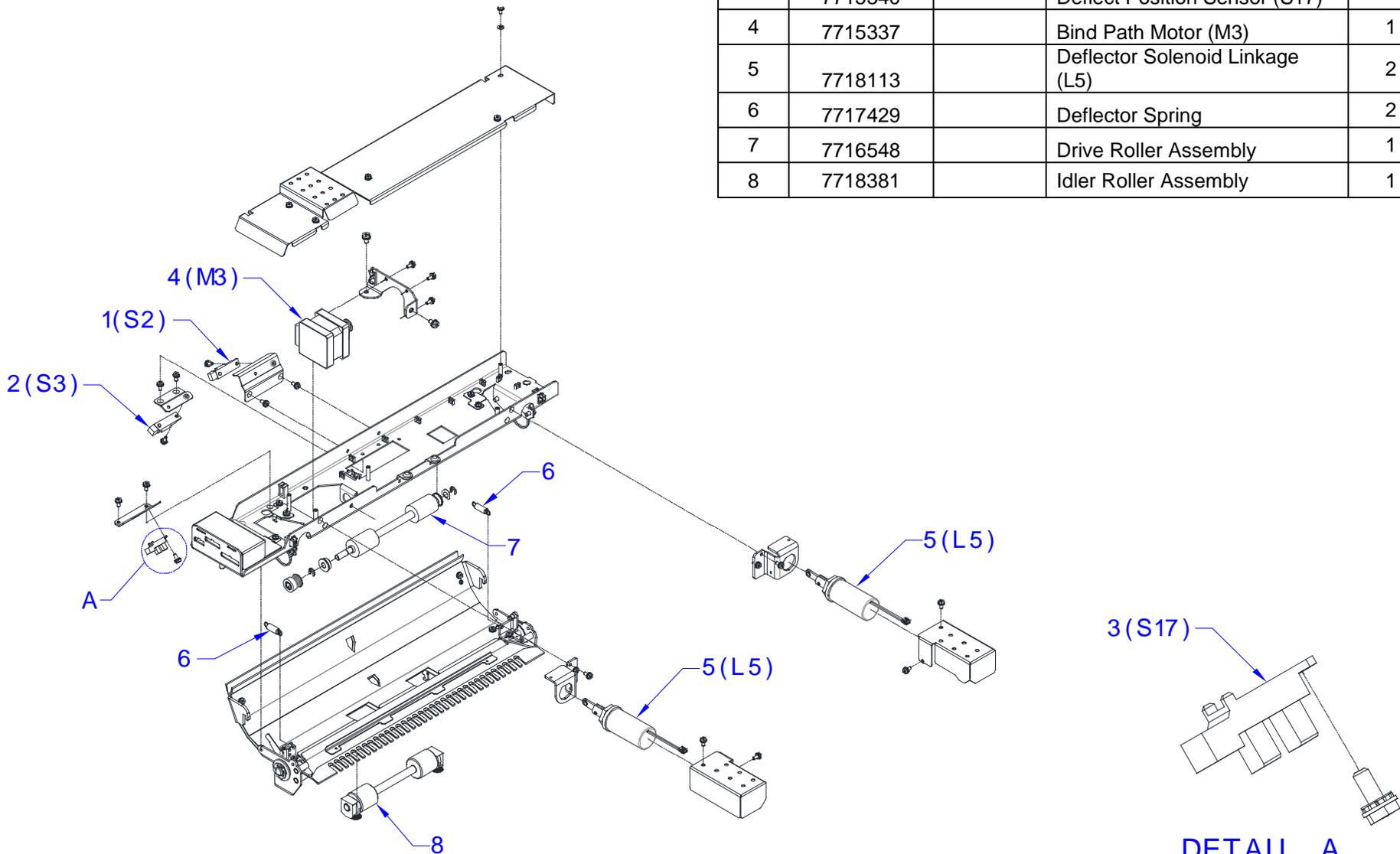
PL 5.15 VACUUM STACKER – MECHANICAL

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7718111		Idler Pulley Sub Assembly	2
2	7716828		Kick Down	2
3	7716829		Kick Down, Reverse	2
4	7716803		Stacker Drive Belt	1
5	7716808		Vacuum Stacker Belt	2
6	7718138		Drag Finger Adhesive Grip	1



PL 5.16 DEFLECTOR MODULE

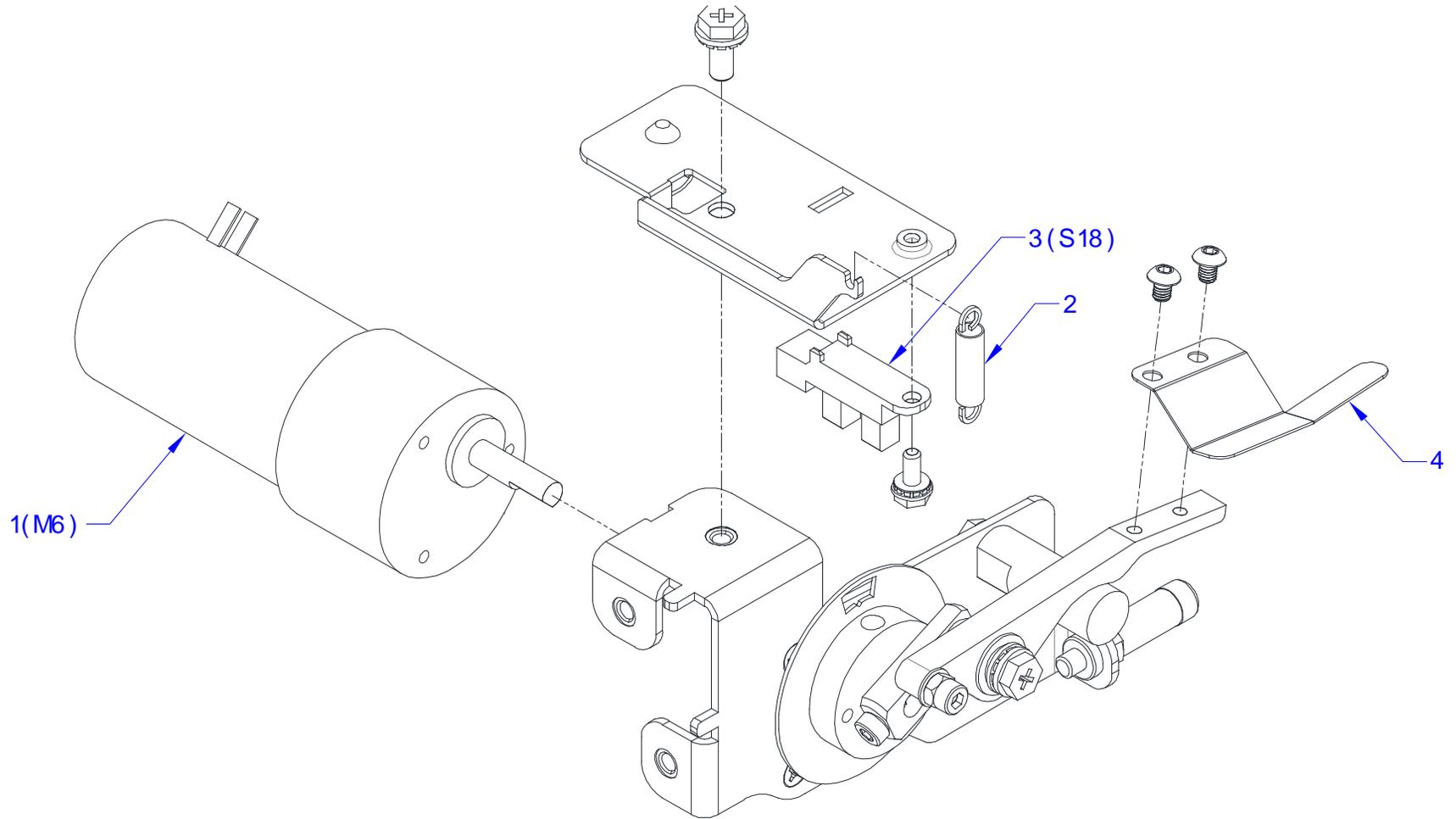
ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715193		Bind Kick-Down Sensor (S2)	1
2	7715193		Bind Deflect Sensor (S3)	1
3	7715340		Deflect Position Sensor (S17)	1
4	7715337		Bind Path Motor (M3)	1
5	7718113		Deflector Solenoid Linkage (L5)	2
6	7717429		Deflector Spring	2
7	7716548		Drive Roller Assembly	1
8	7718381		Idler Roller Assembly	1



DETAIL A

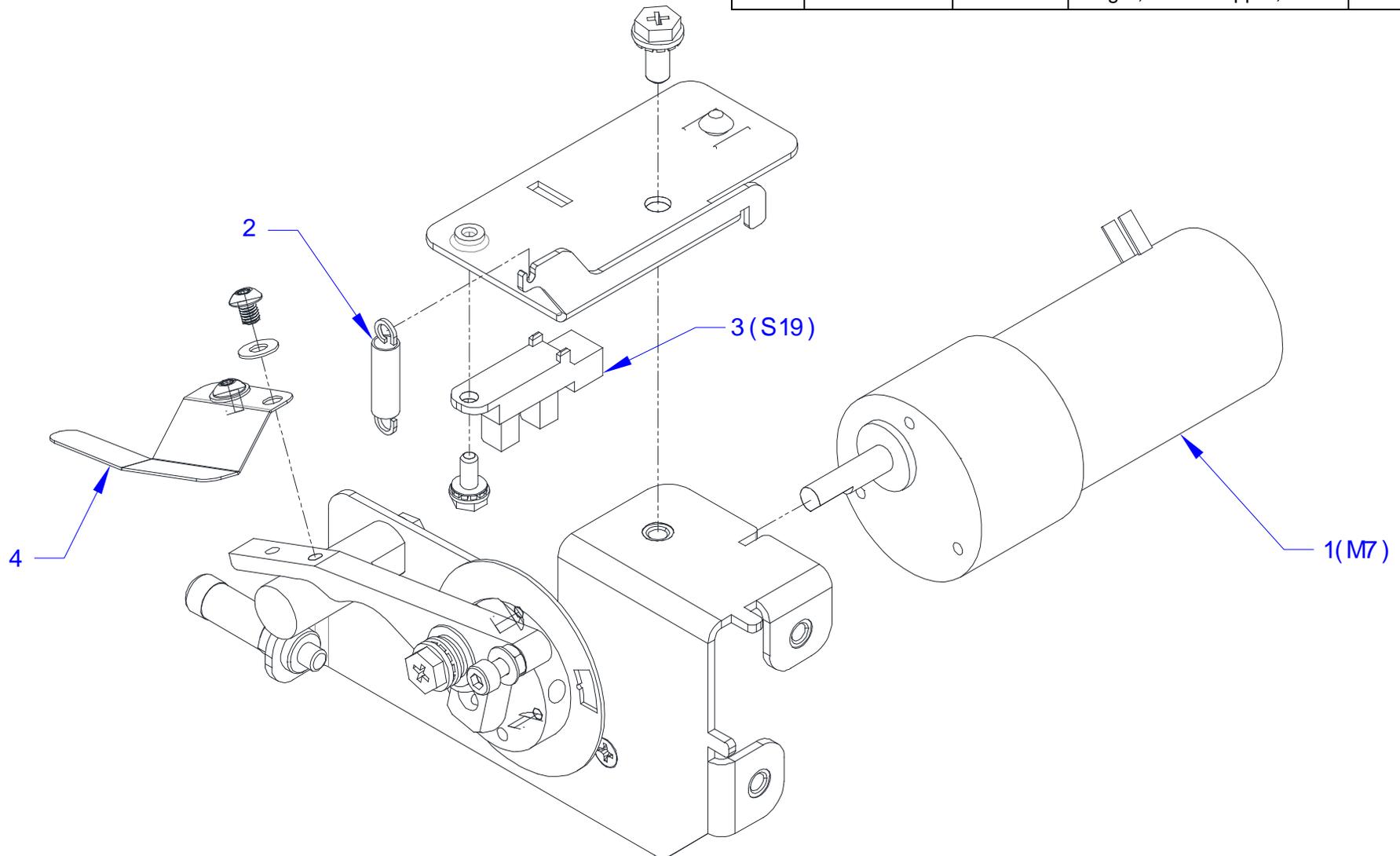
PL 5.17 TAPPER MODULE - FRONT

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7723850		Tapper Motor (M6)	1
2	7717404		Tapper Spring	1
3	7715340		Tapper Sensor (S18)	1
4	7716574		Tapper Finger	1



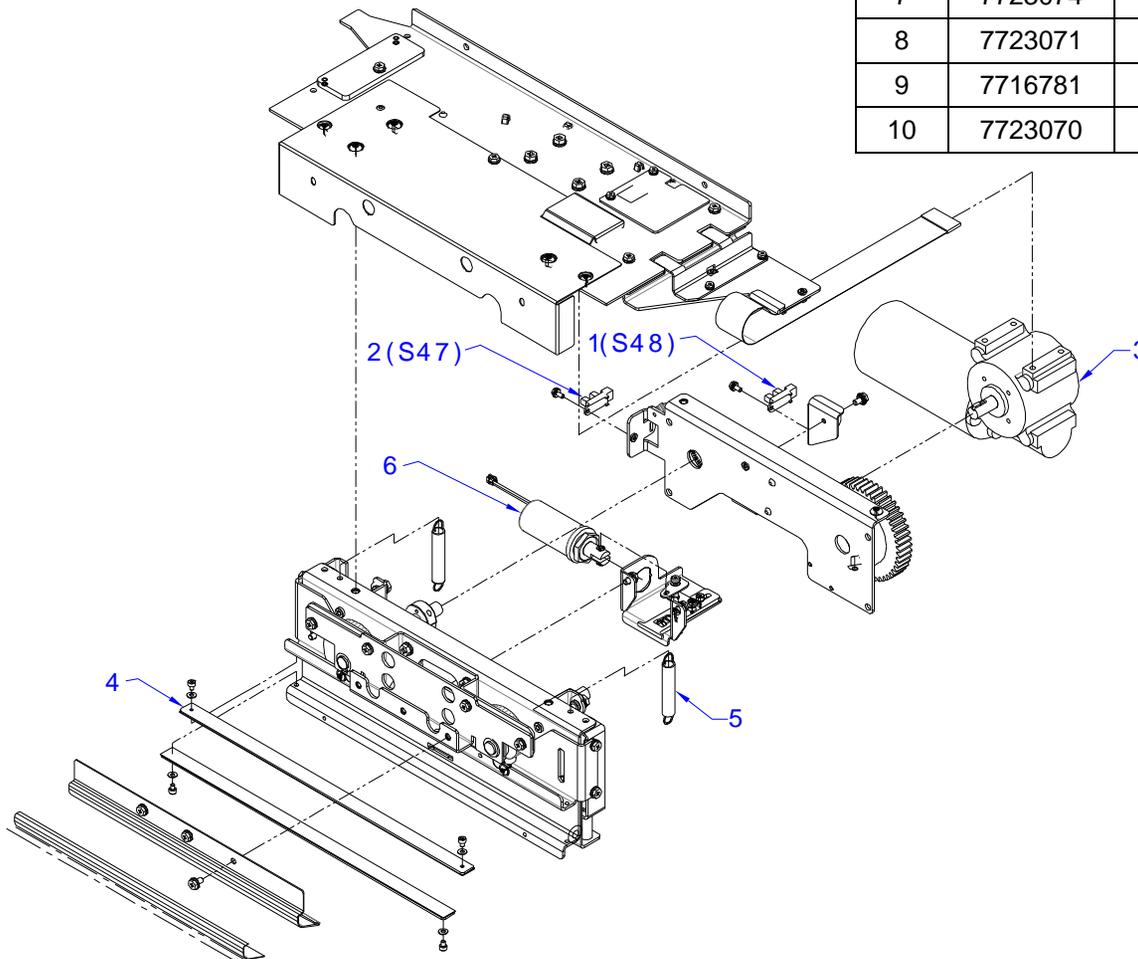
PL 5.18 TAPPER MODULE - REAR

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7723850		Tapper Motor (M7)	1
2	7717404		Tapper Spring	1
3	7715340		Tapper Sensor (S19)	1
4	7716860		Finger, Sheet Tapper, Rear	1



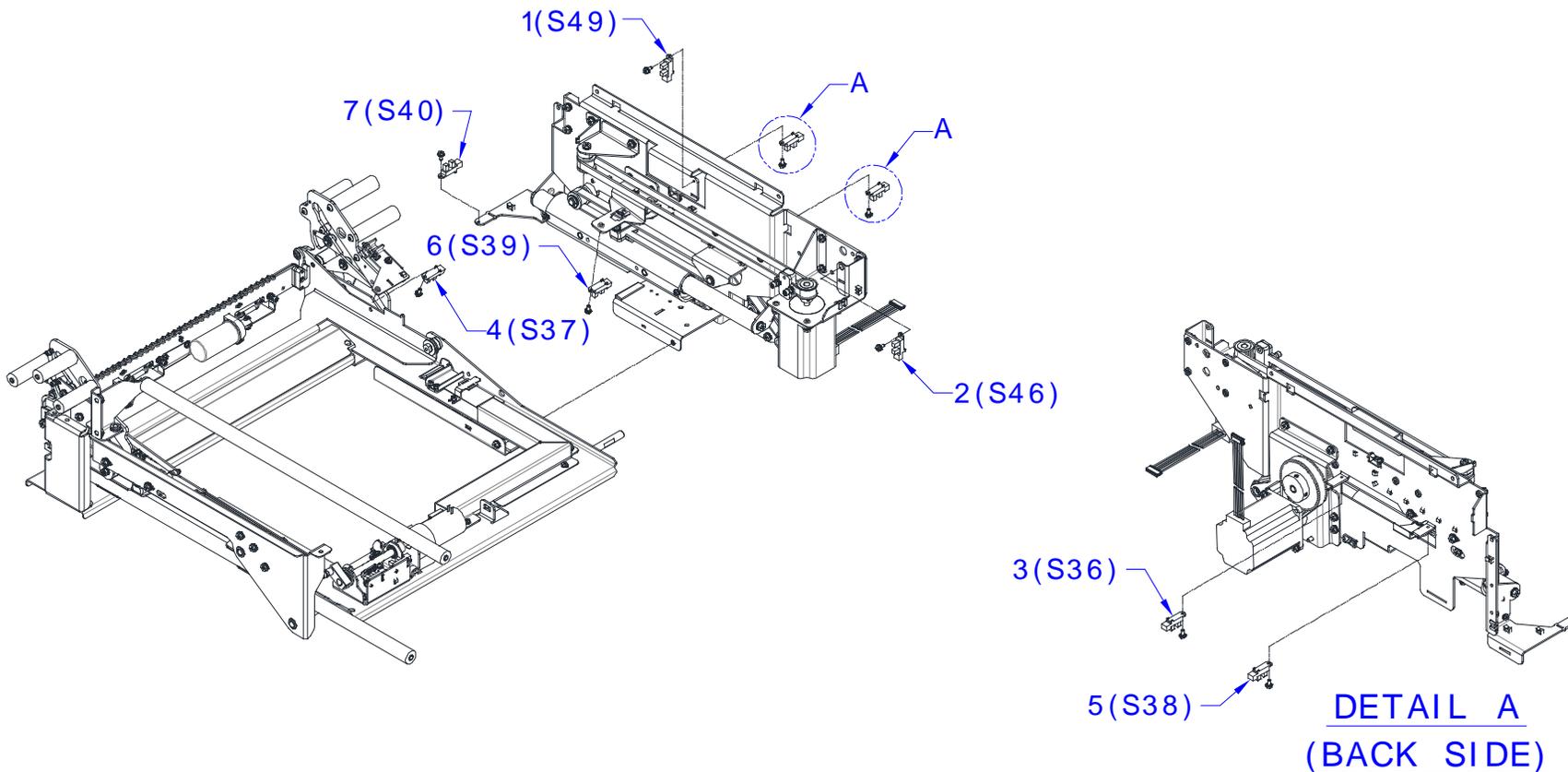
PL 5.19 CLOSER MODULE

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715340		Closer Encoder Sensor (S48)	1
2	7715340		Closer Full Open Sensor (S47)	1
3	7723852		Closer Motor (M20)	1
4	7717658		Closer Jaw Insert	2
5	7716760		Closer Jaw Spring	2
6	7715289		Solenoid, Book Eject	1
7	7723074		Tensioner Assembly	1
8	7723071		Roller Chain	1
9	7716781		Disk Encoder	1
10	7723070		Sprocket 15T	2



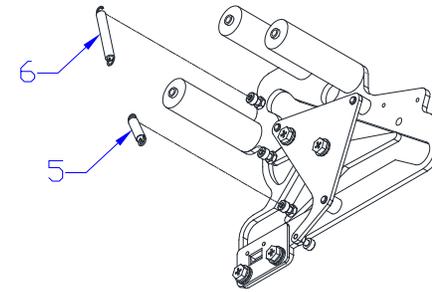
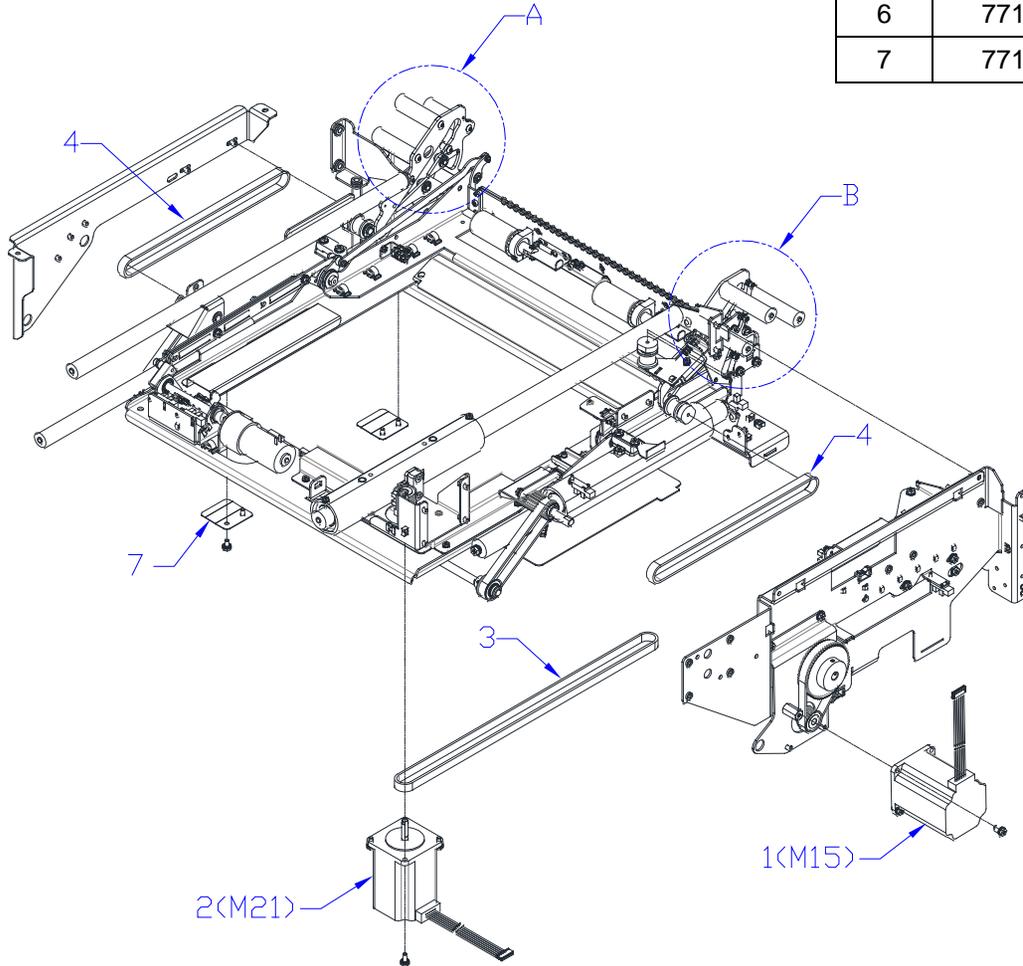
PL 5.20 HOLDER - SENSORS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715340		Closer Staged Sensor (S49)	1
2	7715340		Closer Home Sensor (S46)	1
3	7715340		Holder Position Closer Sensor (S36)	1
4	7715340		Holder Position Stack Sensor (S37)	1
5	7715340		Holder Position Element Sensor (S38)	1
6	7715340		Holder at Reverse Gate Sensor (S39)	1
7	7715340		Holder Near Element Feeder Sensor (S40)	1

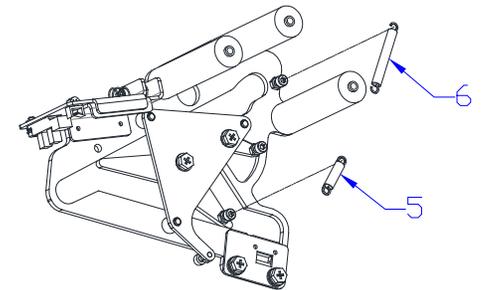


PL 5.21 HOLDER – MOTORS, BELTS & SPRINGS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715200		Holder Linear Motor (M15)	1
2	7715200		Closer Linear Motor (M21)	1
3	7718423		Closer Linear Drive Belt	1
4	7718427		Holder Linear Drive Belt	1
5	7717404		Holder Gates Spring Lower	2
6	7717685		Holder Gates Spring Upper	2
7	7718183		Linear Spring Plate Assembly	2



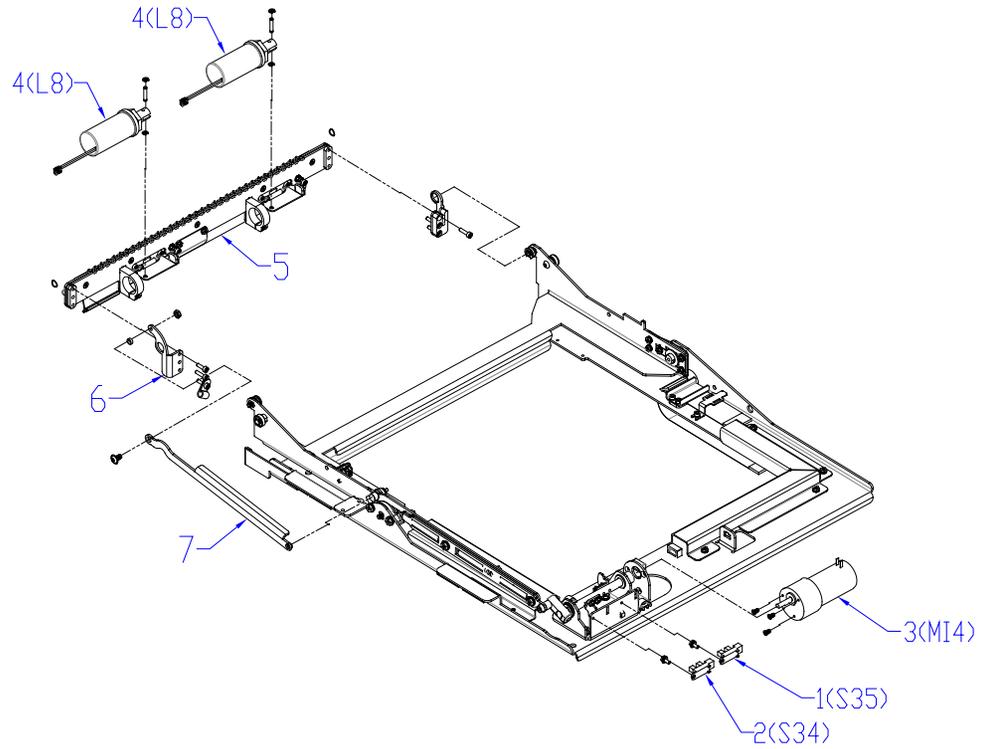
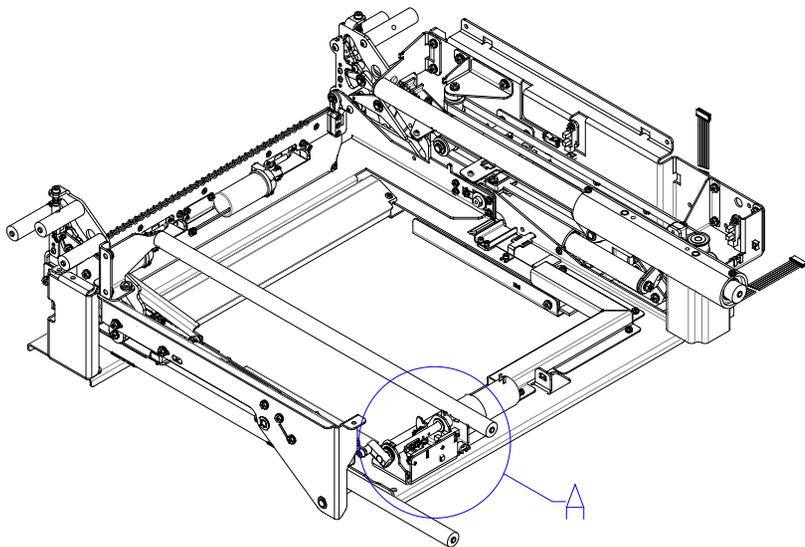
DETAIL A



DETAIL B

PL 5.22 HOLDER – LOCK & ROTATE ASSEMBLIES

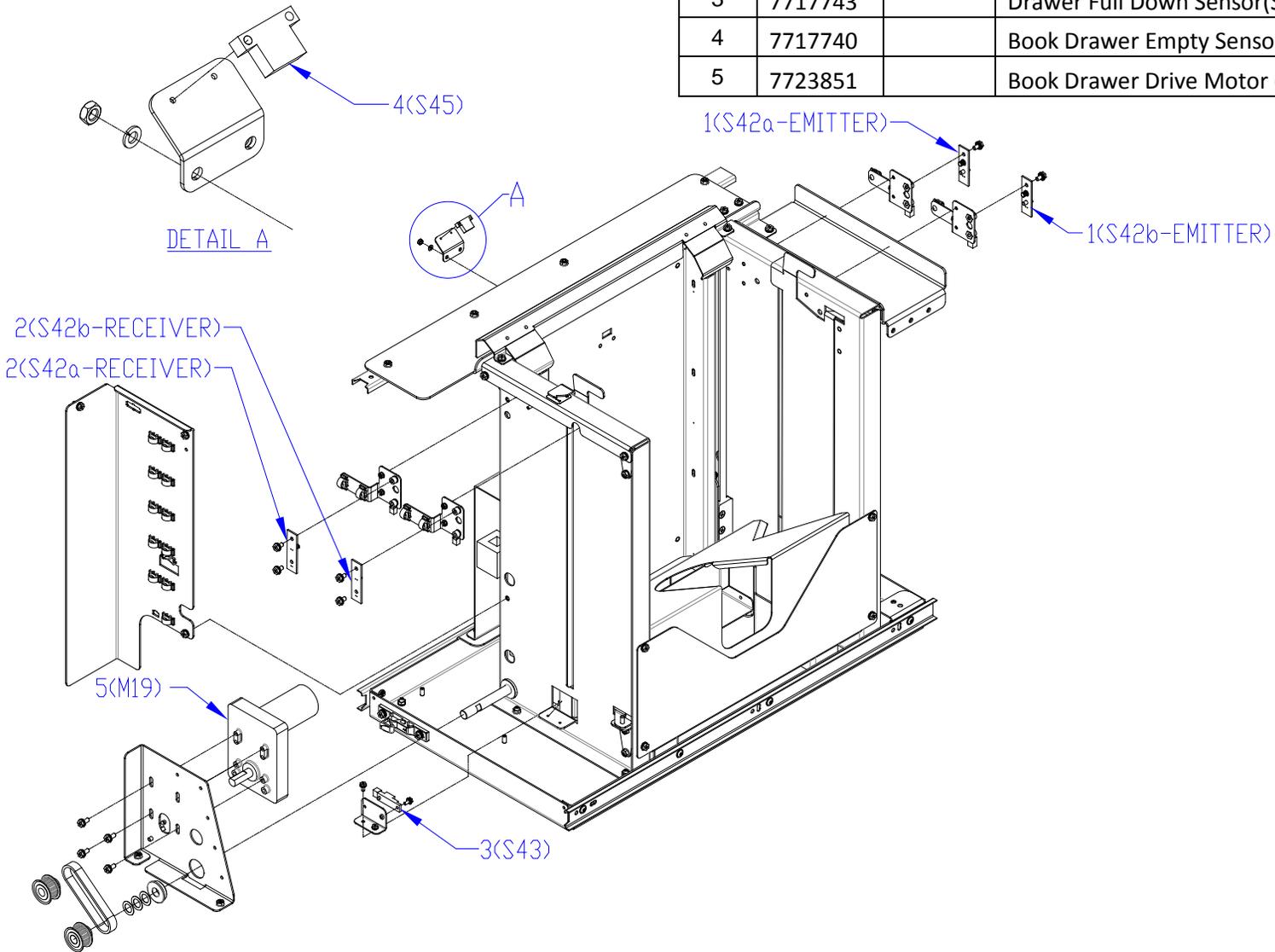
ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715340		Holder Rotate Horizontal Sensor (S35)	1
2	7715340		Holder Rotate Vertical Sensor (S34)	1
3	7718056		Holder Rotate Motor (M14)	1
4	7717746		Holder Lock Solenoid (L8)	2
5	7716612		Holder Lock Sub-Assembly	1
6	7716674		Hinge, Front, Element Holder	1
7	7716675		Link, Holder Rotate	1



DETAIL A

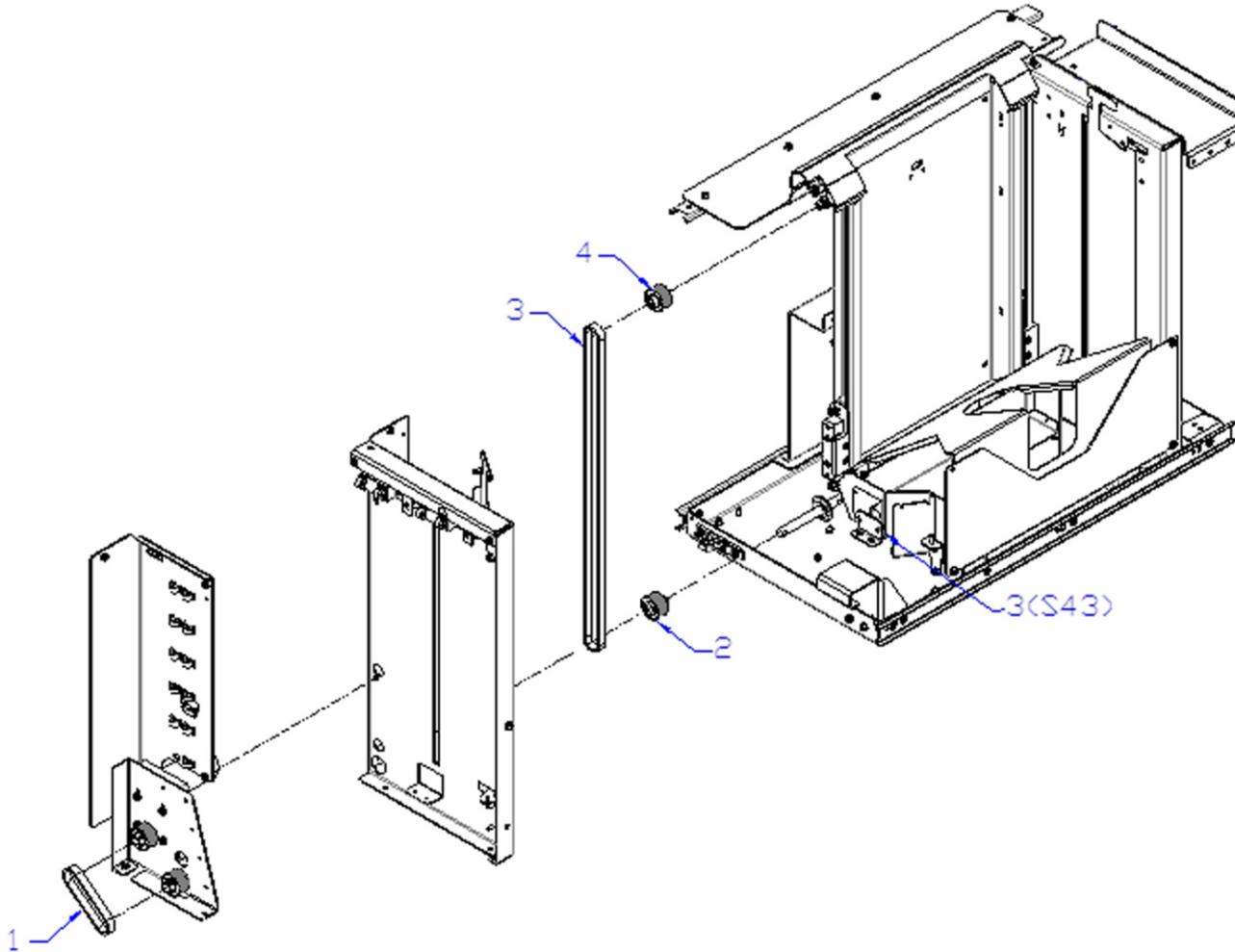
PL 5.23 BOOK DRAWER - SENSORS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7711970		Drawer Full Up Sensors Emitter (S42)	2
2	7711973		Drawer Full Up Sensors Receiver (S42)	2
3	7717743		Drawer Full Down Sensor(S43)	1
4	7717740		Book Drawer Empty Sensor (S45)	1
5	7723851		Book Drawer Drive Motor (M19)	1



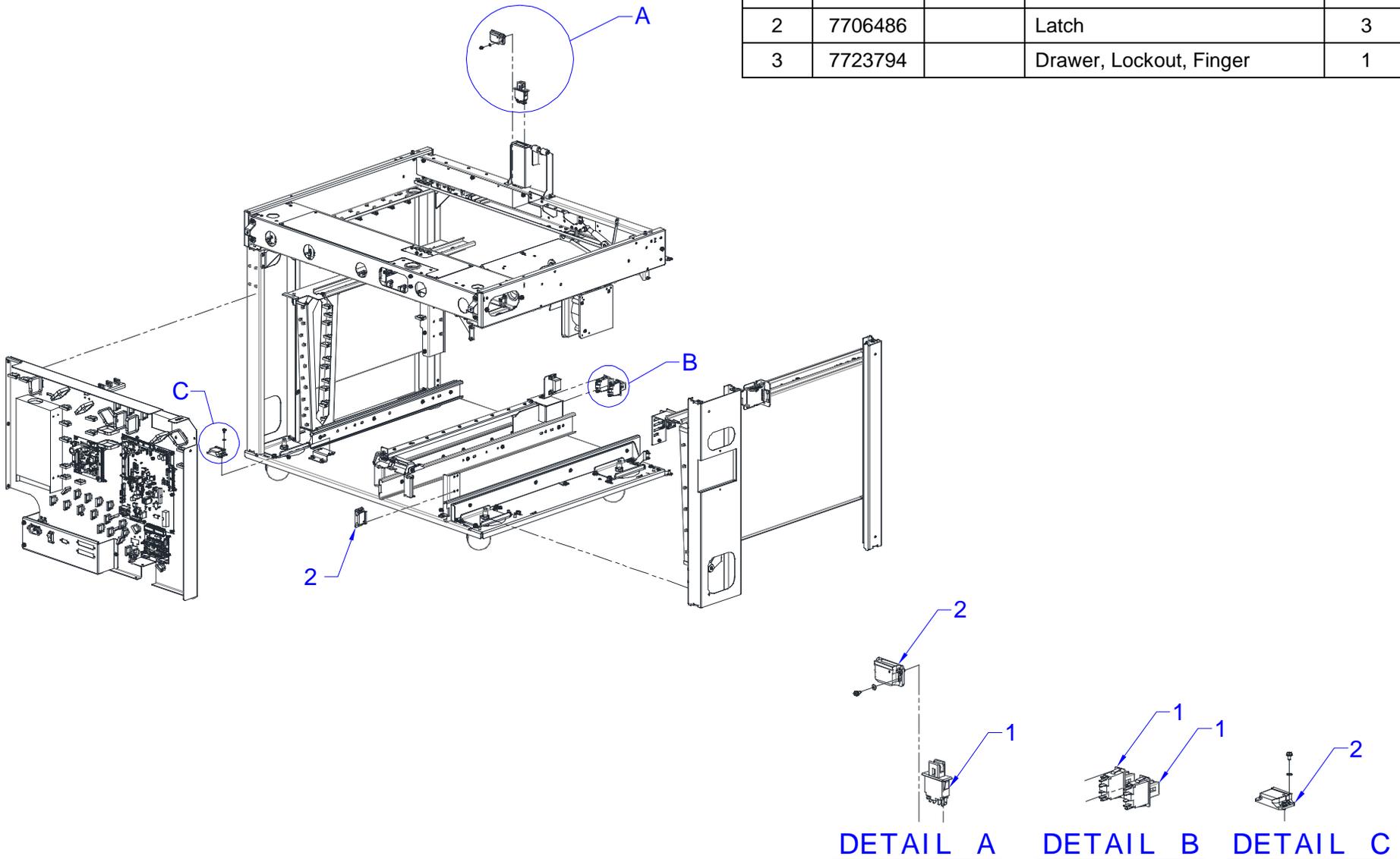
PL 5.24 BOOK DRAWER – BELTS & PULLEYS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7717828		Belt, Book Tray Drive Motor	1
2	7718022		Pulley, Book Tray Drive Shaft	2
3	7717818		Belt, Book Tray Vertical Lift	1
4	7717820		Pulley, Book Tray Vertical Lift	2



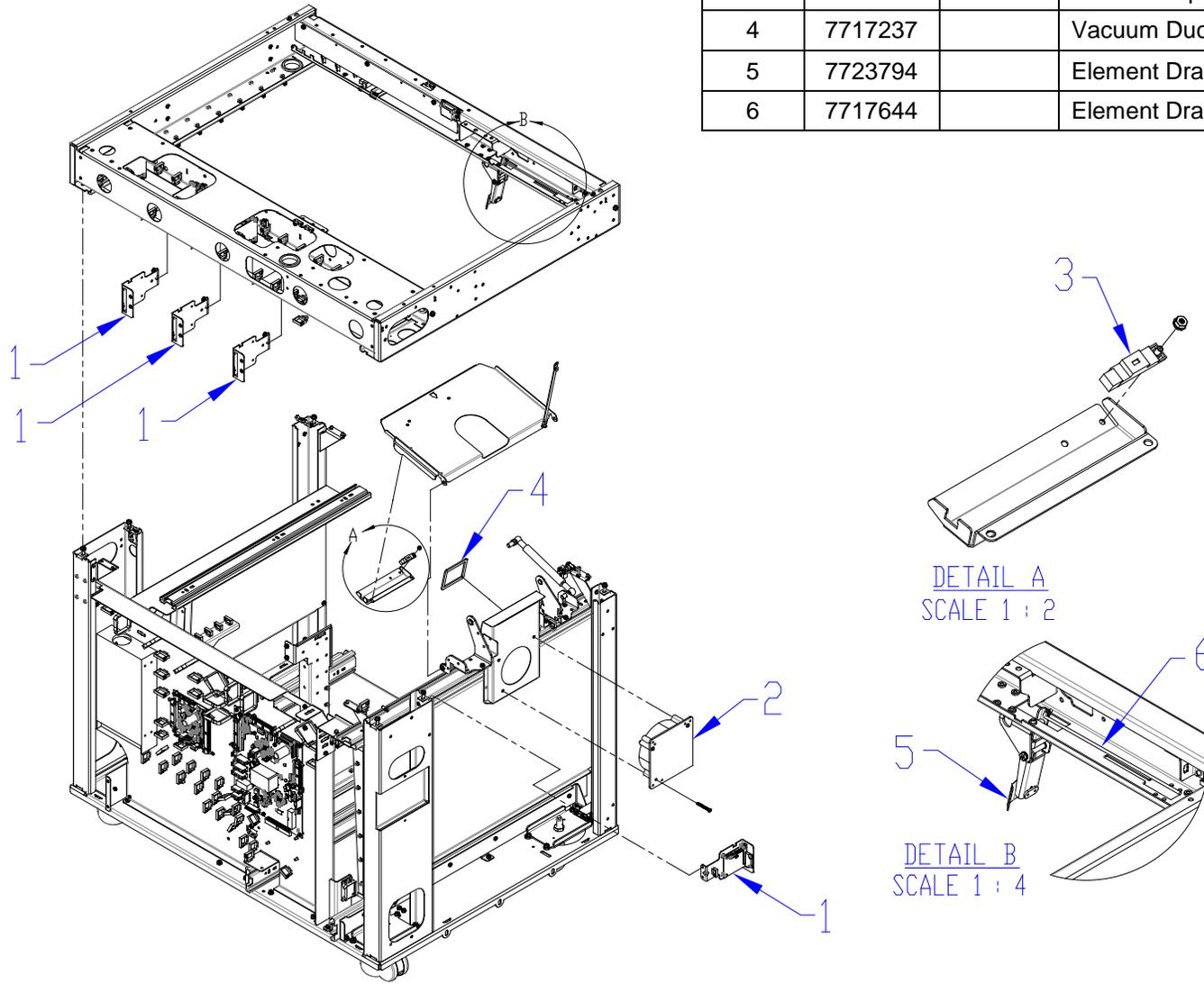
PL 5.25 FRAME - SWITCHES & LATCHES

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7610501		Interlock Switch	3
2	7706486		Latch	3
3	7723794		Drawer, Lockout, Finger	1



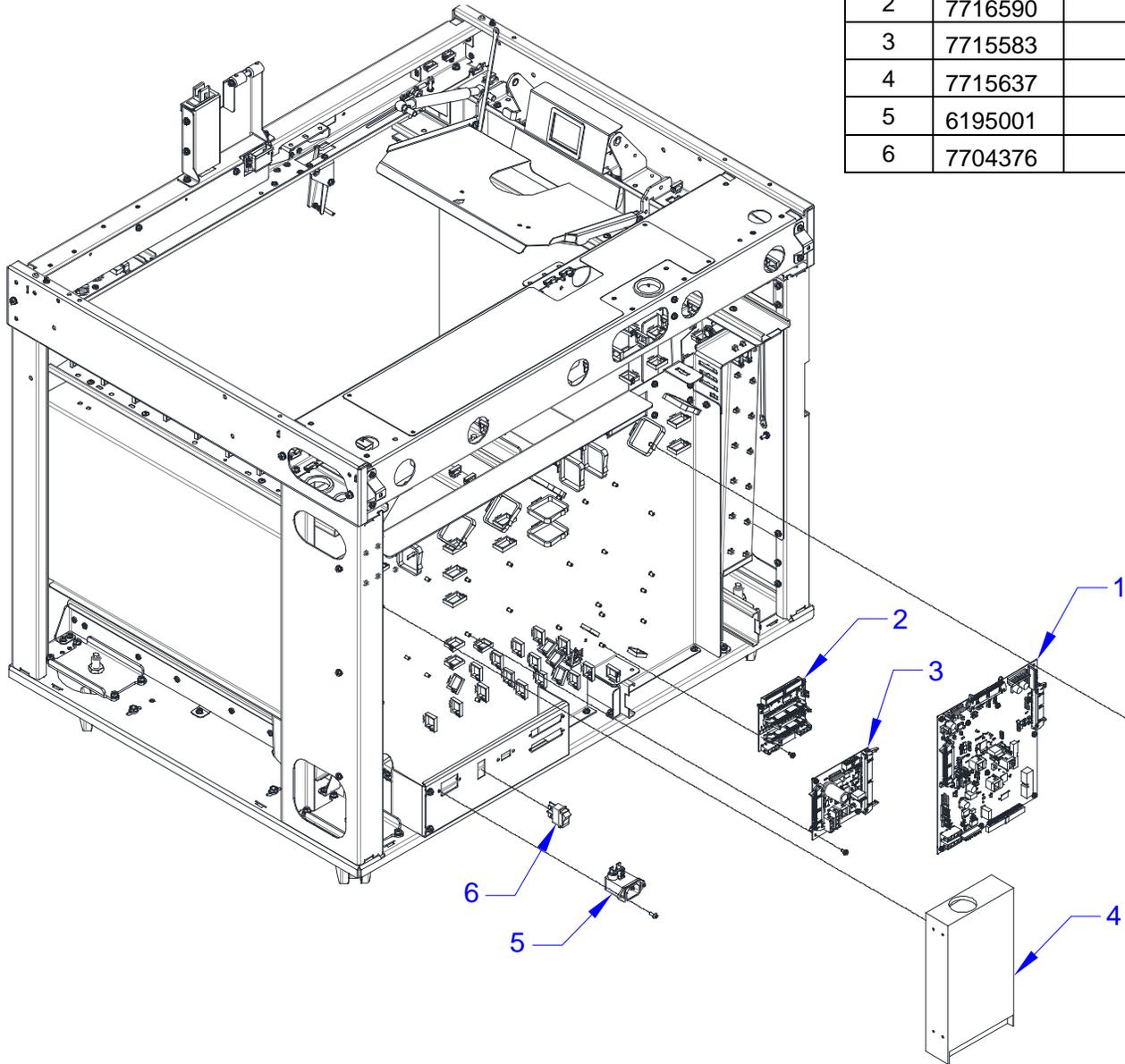
PL 5.26 FRAME – VACUUM & LOCKOUT

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7715275		Stepper Driver Board	4
2	7717339		Vacuum Fan	1
3	7715193		Stacker Paper Detect Sensor (S44)	1
4	7717237		Vacuum Duct Gasket	1
5	7723794		Element Drawer Lockout Finger	1
6	7717644		Element Drawer Lockout Linkage	1

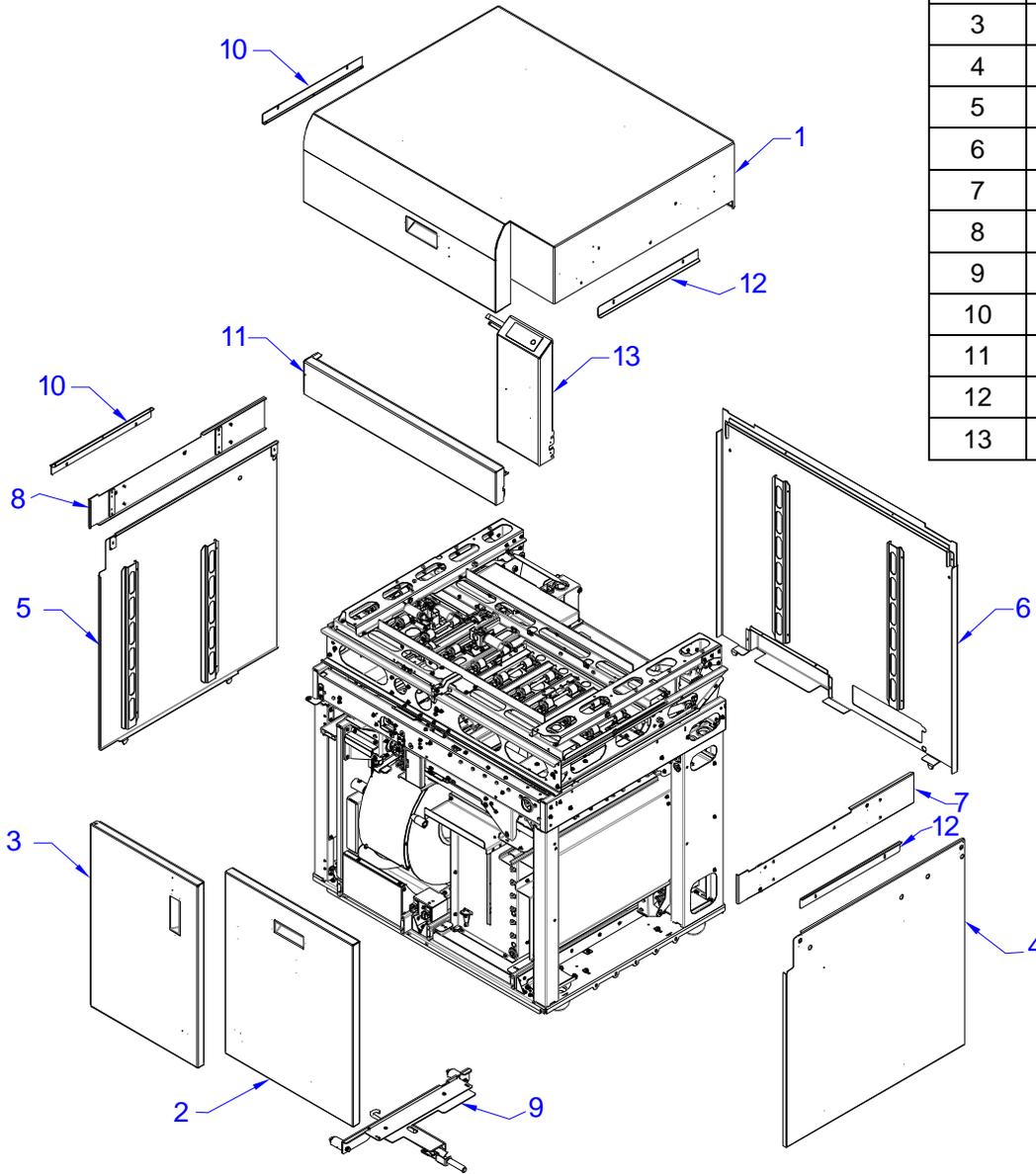


PL 5.27 ELECTRICAL COMPONENTS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7716591		Main Control Board A	1
2	7716590		Communication Board	1
3	7715583		Main Control Board B	1
4	7715637		24 VDC Power Supply	1
5	6195001		RFI Filter	1
6	7704376		AC Power Rocker Switch	1

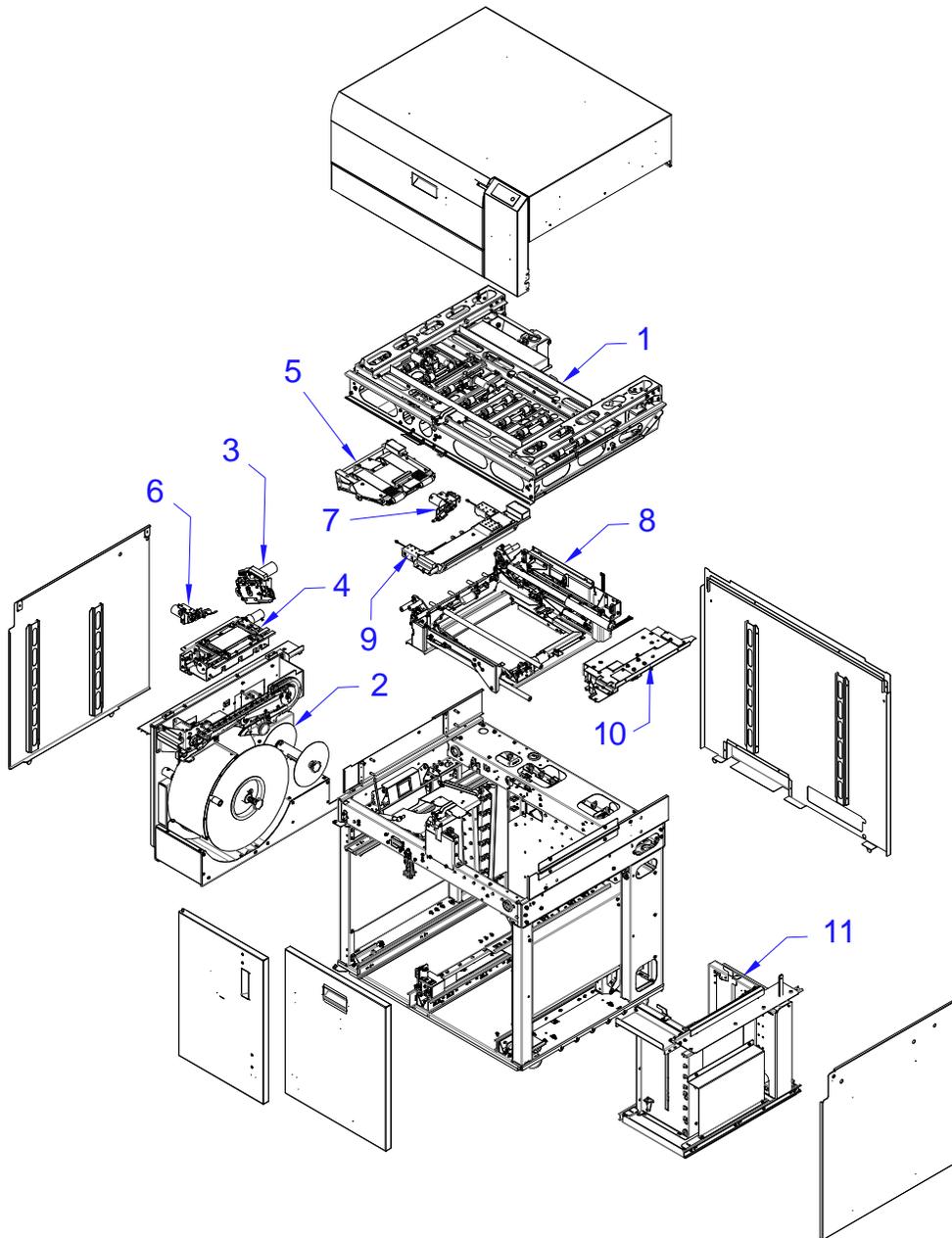


PL 5.28 OUTER COVERS



ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7718339		Top Cover Assembly	1
2	7718400		Door, Book Tray	1
3	7718322		Door, Element Feeder	1
4	7718306		Side Panel Assembly, Left	1
5	7718309		Side Panel Assembly, Right	1
6	7718318		Back Cover Assembly	1
7	7718316		Side Cover Assembly, Right	1
8	7718313		Side Cover Assembly, Left	1
9	7718353		Docking Bracket Assembly	1
10	7718310		Paper Infeed Guide	1
11	7718328		Front Cover Panel Assembly	1
12	7718369		Paper Outfeed Guide	1
13	7718130		LCD Tower Assembly	1

PL 5.29 MAIN ASSEMBLY (MODULES)



ITEM	DESCRIPTION	QTY
1	Paper Transport Complete Assy	1
2	Element Feeder	1
3	Knife Assy	1
4	Element Transfer, Module Assy	1
5	Module, Vacuum, Conveyor	1
6	Front Tapper Assy	1
7	Rear Tapper Assy	1
8	Holder Module	1
9	Deflector Module, Xerox	1
10	Closer Module	1
11	Book Drawer, Complete	1

PL 5.30 TOOLS

ITEM	GBC PART #	XEROX PART #	DESCRIPTION	QTY
1	7717881		Element Height Setup Tool	1
2	7717879		Punched Hole Position Check	1

6. General Procedures and Information

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GP 6.1 eWire User Interface Options

The User Interface consists of an LCD screen, an Up Arrow button, a Down Arrow button and an Enter Button.



The buttons on the User Interface allow you to change the operation mode, the language, and the units.



The User Interface displays status messages and fault codes on two rows of text.

READY
TO BIND

In the User Interface, the top row of text displays the status of the eWire (Ready, Close Door). The bottom row of text displays the options selected on the User Interface.

GP 6.1.1 Accessing the User Interface Menu

To change the settings on the User Interface:

From the top level screen, press either the up arrow button or the down arrow button then press the ENTER button to display the SETTINGS/ INFORMATION screen.

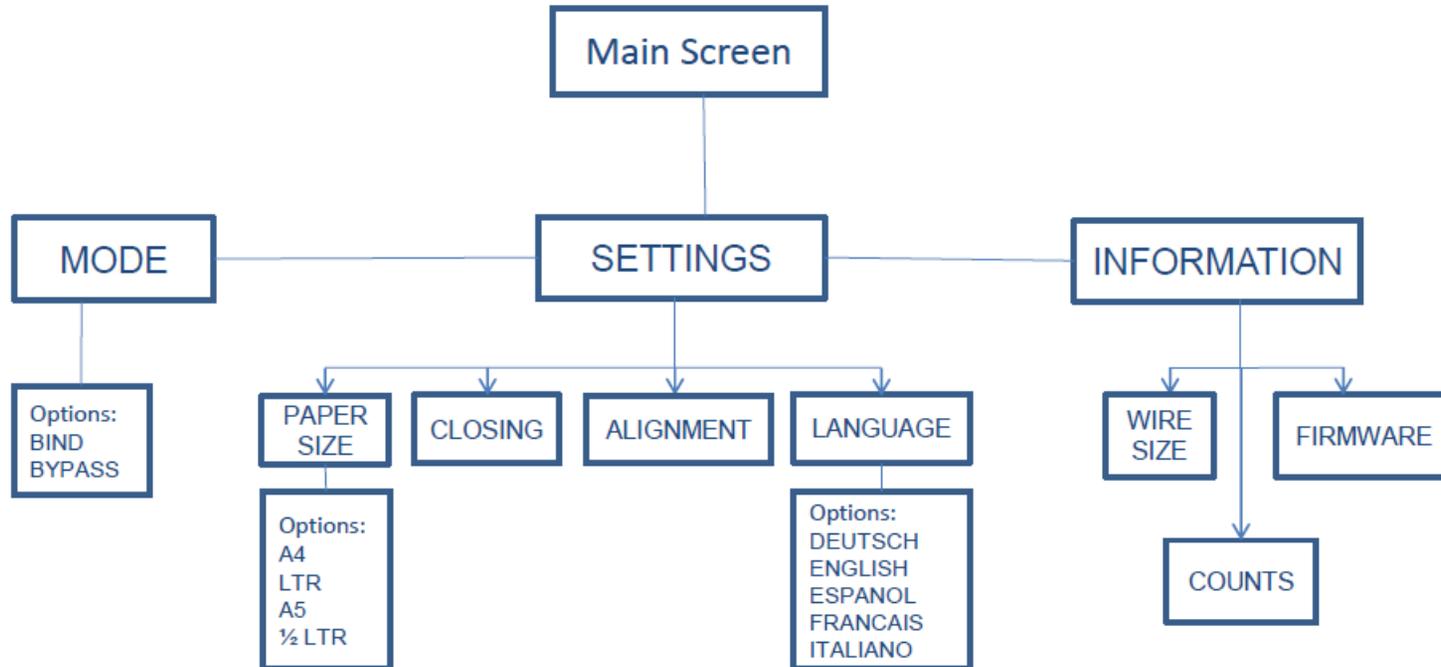
SETTINGS	↶	↑
INFORMATION		↓

- The up arrow indicates that there is a menu option above the option displayed.
- The down arrow indicates that there is a menu option below the option displayed.
- The return symbol indicates the option that will open when you press the ENTER button.

To select SETTINGS, press the ENTER button when the return symbol is next to the word Settings.

To select INFORMATION, press the ENTER button when the return symbol is next to the word Information.

LCD User Interface Screen Overview



GP 6.1.3 *Accessing the Service Interface Menu*

The Service Interface allows you to:

- Set the Line Speed and Printer Type.
- Check the operation of the Sensors, Solenoids, and Motors.
- Perform Functional Tests for key modules and processes.
- Perform Firmware Upgrade.

When the Service Interface is open, the top row of text and the bottom row of text display the options on the Service User Interface menu.

To enter the Service User Interface:

1. Press and hold both the Up Arrow button and the Down Arrow button for 5 seconds.
2. Then while still holding down the Up Arrow button and the Down Arrow button, press the Enter button.
3. The Service User Interface screen will appear.
4. Use the procedures in the following pages to use Service User Interface

GP 6.2 User Interface Procedures

The following section describes the options contained in the eWire User Interface. The user interface can be accessed by pressing the up or down arrows on the LCD panel.

GP 6.2.1 Alignment Setting Adjustment Procedure

Do the following to change the Alignment. Changing the alignment setting will shift the nominal centerline of the sheets toward the front or the rear of the eWire.

From the top level screen, press either the up arrow button or the down arrow button.

READY
TO BIND

This displays the SETTINGS - INFORMATION screen

SETTINGS	←	↑
INFORMATION		↓

Select SETTINGS to enter the setting select menu.

Select ALIGNMENT to enter the alignment adjustment menu.

Press the up arrow or down arrow to change the alignment setting to the desired value (range -2.0 mm to +2.0 mm). Record the initial value so you have a reference point to base future adjustments on.

ALIGNMENT OFFSET	
0.0 mm	←

Press the ENTER button when the desired value is displayed for the Alignment. This will return you to the SETTINGS menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.2.2 Closing Setting Adjustment Procedure

Do the following to select the desired closer travel. A higher number indicates increased close/crimp of element. A lower number will cause the twin loop element to be crimped less.

Note: Changing the Closing Setting effects only the size that is currently installed. For example, if the A size spool is currently loaded, changing the Closing value will not have any impact on the settings for other sizes.

Note: It is recommended to increment Closing Settings by only one value at a time. Adjusting in larger increments may cause over-adjustment.

From the top level screen, press either the up arrow button or the down arrow button.

READY
TO BIND

This displays the SETTINGS - INFORMATION screen

SETTINGS	←	↑
INFORMATION		↓

Select SETTINGS to enter the setting select menu.

Select CLOSING to enter the closing depth adjustment menu.

Press the up arrow or down arrow to change the closing setting to the desired value (range -5 to +5)

CLOSING	
1	←

Press the ENTER button when the desired value is displayed for the Closing. This will return you to the SETTINGS menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.2.3 Paper Size Select Procedure

Do the following to adjust the paper size. The paper size adjustment allows you to choose between A4, A5, Letter, and 1/2-Letter sheet sizes.

From the top level screen, press either the up arrow button or the down arrow button.

READY
TO BIND

This displays the SETTINGS - INFORMATION screen

SETTINGS	←	↑
INFORMATION		↓

Select SETTINGS to enter the setting select menu.

Select PAPER SIZE to enter the paper size selection menu.

Press the up arrow or down arrow to select the desired paper size.

PAPER SIZE	
LTR	←

Press the ENTER button when the desired size is displayed. This will return you to the SETTINGS menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.2.4 LANGUAGE Selection Procedure

Do the following to select the Language used on the user display.

From the top level screen, press either the up arrow button or the down arrow button.

READY
TO BIND

This displays the SETTINGS - INFORMATION screen

SETTINGS	←	↑
INFORMATION		↓

Select SETTINGS to enter the setting select menu.

Select LANGUAGE to enter the language selection menu.

Press the up arrow or down arrow to select between the available languages.

LANGUAGE	
ESPAÑOL	←

English
Español
Français
Italiano
Deutsch

Press the ENTER button when the return symbol is next to the language you would like to use. You will automatically return to the SETTINGS menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.2.7 COUNTS Display Procedure

Do the following to verify the current count of books and sheets for the eWire. Books displays the total number of books that have been produced by the eWire. Sheets displays the total number of sheets of paper that have passed through the eWire.

From the top level screen,

READY
TO BIND

Press either the up arrow button or the down arrow button to display the SETTINGS/ INFORMATION screen.

SETTINGS	↑
INFORMATION	↵ ↓

Select INFORMATION to enter the information menu.

Use the up and down arrows to display the COUNTS option within the INFORMATION menu. The current count of BOOKS and SHEETS will be displayed.

BINDS=	↑
SHTS=	↓

Record the number of Books and Sheets.

Press ENTER to return to the previous menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.2.8 FIRMWARE Display Procedure

The Firmware feature identifies the level of the firmware currently installed to the eWire.

From the top level screen,

READY
SINGLE PUNCH

Press either the up arrow button or the down arrow button to display the SETTINGS/INFORMATION screen.

SETTINGS	↑
INFORMATION	↵ ↓

Select INFORMATION to enter the information menu.

Use the up and down arrows to display the FIRMWARE option within the INFORMATION menu. The currently installed firmware will be displayed on the screen.

A=00.00 B=00.00
C=00.00

Note the version level of the firmware installed on the A, B, and C firmware.

Press the ENTER button to return to the previous menu

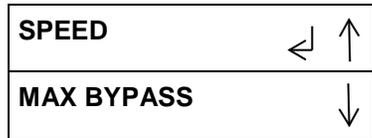
Select EXIT and press ENTER to return to the top level menu.

GP 6.3 Service Interface Procedures

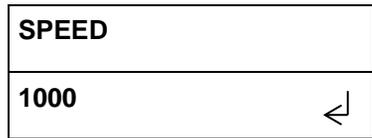
The following section describes the options available via the eWire service menu. The options in this section should only be changes by qualified service technicians during a service call.

GP 6.3.1 SPEED ADJUST Procedure

Using the procedure described in [GP 6.1.3](#), enter Service mode. Use the up and down arrows to scroll down to the SPEED option. Press ENTER to enter speed adjust mode.



Press the up and down arrows to adjust the line speed. When the desired speed value is displayed on the screen, press ENTER. Default Speed is 1000.



You will return to the Service mode menu. Select EXIT and press ENTER to return to the top level menu.

GP 6.3.2 SENSOR Check Procedure

A sensor can fail in two modes:

- **Failed in High state:** Machine thinks the sensor is unblocked even when a sensor flag or sheet is present. In this mode, the LCD will always show "0" for that sensor, and will not go to "1" when a sheet is present.
- **Failed in Low state:** The opposite of the above. The Sensor will show as blocked even when there is no object blocking the sensor.

It is less likely for a sensor to fail in a Low state. Therefore it is more likely that the Sensor will fail to see its flag than the reverse. If the Sensor shows "1" and will not go to "0" it is more likely that there is something blocking the sensor, like debris or a scrap of paper.

Procedure

Do the following to check the status of any of the sensors.

The Sensors feature allows you to view the state of each of the Sensors located throughout the eWire.

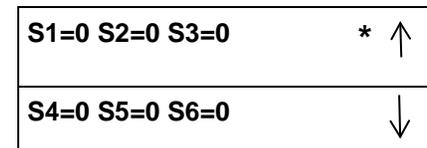
The information contained in this section of the manual will help you to identify and test each of the Sensors in the eWire.

Cover the sensor to check if the sensor status changes from "0" to "1".

- 0 means the sensor is open.
- 1 means the sensor is covered.

Do the following steps to check the sensors:

1. Enter Service Mode by following the procedure described in [GP 6.1.3](#)
2. In service mode, scroll down to select SENSORS from the menu.
3. Press the ENTER button when the return symbol is next to the word SENSORS to display the display the first SENSORS screen.



4. Press the down arrow to scroll through the available Sensors until you locate the Sensor you wish to test.
5. Locate the Sensor on the machine. Refer to [GP 6.4](#) for help in locating a specific Sensor.
6. Verify that the Sensor reads “0” when unblocked and “1” when blocked. You can do this by manually covering the sensor with a piece of paper or other object.
7. If the Sensor does not behave as expected, refer to the troubleshooting steps in [GP 6.4](#) Sensor Checks to troubleshoot the Sensor.
8. When you have completed the Sensor check, scroll down to PREVIOUS MENU or EXIT to leave Sensor mode.
9. Select EXIT and press ENTER to return to the top level menu.

GP 6.3.3 DFA STATUS Procedure

The DFA Status procedure allows you to view the status of the communication signals.

Procedure

Do the following to check the signals

Enter Service Mode by following the procedure described in [GP 6.1.3](#)

Scroll down so the return symbol is next to the words DFA STATUS.

Press ENTER to enter DFA Status mode.

SENSORS	* ↑
DFA STATUS.	↵ ↓

Press the down arrow to scroll through the DFA STATUS values.

C6=0 C7=0	* ↑
S0=0 S1=0 S2=0	↓

Select EXIT and press ENTER to return to the Service Mode Menu.

GP 6.3.4 SOLENOIDS Procedure

The Solenoid feature allows you to test the operation of each of the solenoids in the machine.

NOTE: Door needs to be closed or Interlock Cheater inserted to do this.

Enter Service Mode by following the procedure described in [GP 6.1.3](#). Press the down arrow until the return symbol is next to the words SOLENOIDS. Press Enter.

SOLENOIDS	←	*	↑
MOTORS			↓

Press the down arrow to scroll through the solenoid options.

L1 L2 L3 L4 L5	*	↑
L6 L7 L8 L9		↓

Press the Enter button to turn the selected solenoid on. You should hear the Solenoid click, and see the Solenoid actuate if it is visible. Repeat as needed to check the other Solenoids. If a Solenoid does not operate do [GP 6.18](#) Solenoid Cleaning and Inspection, and repeat steps 1-5. Refer to [GP 6.6](#) for additional info regarding locating and testing the various Solenoids in the eWire. Select BACK to return to the Service Mode menu. Select EXIT to return to the top level screen.

GP 6.3.5 MOTORS Procedure

The Motors feature allows you to test the operation of selected Motors throughout the eWire. Do the following to check the Motors.

NOTE: Door needs to be closed or Interlock Cheater inserted to do this.

Follow the procedure described in [GP 6.1.3](#) to enter Service Mode. Press the down arrow until the return symbol is next to the word MOTORS.

SOLENOIDS		*	↑
MOTORS	←		↓

Press the ENTER button to display the display the first MOTORS screen.

M1 M2 M3 M4	*
M6 M7 M8	BACK

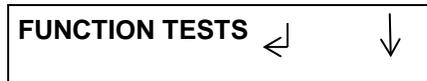
Press the down arrow to scroll through the motors. The selected motor will flash on the LCD screen. Press the Enter button to turn the selected motor on. You should hear the motor running. The motor will run continuously until it is turned off. Press the Enter button again to turn the selected motor off. Repeat as needed to check the other Motors. Refer to [GP 6.5](#) for additional info regarding motor checks, and for help locating the appropriate motor within the eWire. Press the up or down arrow to highlight the BACK option. Press the ENTER button to display the SOLENOIDS / MOTORS menu. Press the up arrow to display the EXIT option. Press ENTER to return to the top level screen.

GP 6.3.6 FUNCTION TESTS Procedure

Do the following to perform Functional Tests. The Functional Test feature allows you to test the operation of various sub-assemblies and machine operations within the eWire.

Enter Service Mode by following the procedure described in [GP 6.1.3](#)

Press the down arrow until the return symbol is next to the words FUNCTION TESTS. Press Enter.



NOTE: Use extreme caution if running any Functional Tests with Interlock Cheaters installed. Injury or machine damage could occur when running the functional tests. Keep hands free of all moving parts while performing this procedure.

After the Functional Test cycle is completed it will stop automatically.

If necessary, press the Enter button again to repeat the Functional Test.

Use the arrows to scroll down to Previous Menu to return to the Functional Test Screen

Use the arrows to scroll down to Exit to exit Service Mode and return to the top level screen.

The following Function Tests are Available through Service Menu:

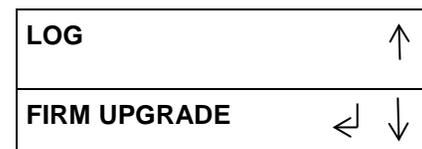
- **Element Cycle:** This opens a sub menu containing the following function tests relating to the Element Feeder
 - **Feed Element:** The Element Feeder will feed and cut enough element to produce one book. It will then transfer the element to Holder and move it to Stack Position.
 - **Partial Close:** After performing the Feed Element function, this will bring the closer to the holder, perform a partial close of the element, and remain at the holder.
 - **Close Element:** After performing the Feed Element function, this will bring the closer to the holder, close the element, return the closer home, and eject the element into the Book Drawer Tray.
- **Tray Home:** Will home the Book Drawer Tray. If the tray is already in the up position, it will move down slightly and then return to home.
- **Cycle Tappers:** Front and Rear Tapper Modules will cycle one time.
- **Element at Close:** Holder and Closer Modules will return to their home positions.

- **Aligner Test:** The aligner motor will cycle back and forward.
- **Fans:** The fan will run continuously.
- **Closer Cycle:** The closer jaws will close and open once.
- **Knife Cycle:** The Knife will close and open once.
- **Pushover:** The Pushover module will cycle out or home as selected by the user.
- **Holder Rotates:** Holder will rotate horizontally or vertically as selected by the user.
- **Holder to Xfer:** Holder will move forward to mate with the Element Feeder.
- **Align Jam:** This causes a jam if the eWire is unable to reach the alignment sensor in the allotted time. If this is off, the sheets that come in overly misaligned will not cause a jam and will be sent to be bound.
- **Skew Jam:** This causes a jam if the eWire is unable to deskew the sheet in the allotted time. If this is off, the sheets that come in overly skewed will not cause a jam and will be sent to be bound.

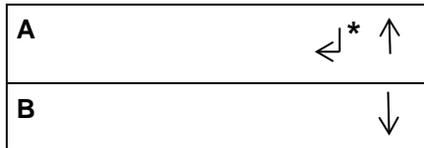
GP 6.3.7 FIRMWARE UPGRADE Procedure

Perform the following steps to upgrade the firmware.

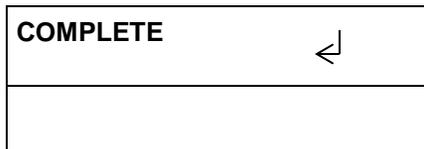
1. Open the Element Feeder Door of eWire before performing the Firmware upgrade procedure. It is required to have a door open during the process to prevent the system from accidentally starting a print job or from entering a mode that may interfere with the Firmware upgrade process.
2. Remove (2) M4 screws and the USB port cover from the back of the machine.
3. Save the firmware file you want to upload to the USB flash drive provided.
IMPORTANT NOTE: Only one file should be present for each of Firmware A, B, and C in the USB flash drive.
4. Enter Service Mode by following the procedure described in [GP 6.1.3](#)
5. Insert the USB Flash drive with the firmware file you want to upload.
6. Press the ENTER button when the return symbol is next to the words FIRMWARE UPGRADE to display the FIRMWARE UPGRADE screen.



7. Press the down arrow to scroll through the Firmware Upgrade options.
 - MAIN Board A – Select this to update the A Board firmware.
 - MAIN Board B – Select this to update the B Board firmware.
 - COMMS (The Communications Board) – Select this to update the Comm firmware
8. Press the ENTER button when the return symbol is next to the Board that you want to upgrade the firmware for.



9. When update is complete for the A or B boards, the system will display the screen shown below. Press ENTER to return to the Firmware Upgrade Menu. When update is complete for the COMM board, you will return automatically to the previous screen.

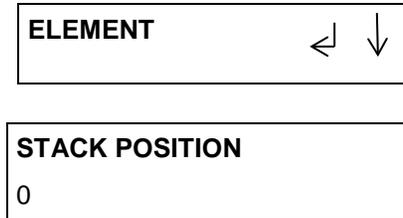


10. Press ENTER to return to the Main Screen.
11. Remove the USB flash drive with the firmware file you uploaded.
12. Install the Cover for USB port and tighten the Screws (2).
13. Switch off the machine. Wait 10 seconds, and then switch the machine back on again. Do [GP 6.2.8](#) to check the firmware, and verify the Firmware revision is correct.

GP 6.3.8 ELEMENT SETTINGS Procedure

The Element Settings option allows the user to change the position of the “Holder at Stack” and “Holder at Closer” positions. Changing this value will cause the travel of the Holder to be slightly more or less at the position selected.

Enter Service Mode by following the procedure described in [GP 6.1.3](#). Press the down arrow until the return symbol is next to the words ELEMENT. Press Enter.



Note the current value before making any changes, so you have a reference point to return to.

The stack position can be changed on a range of -50 to +50

Any changes made to STACK POSITION will apply only to the selected element size. The settings will be remembered when running that size in the future, but other sizes will not be affected.

Press ENTER to save the selected value. You will return to the service menu.

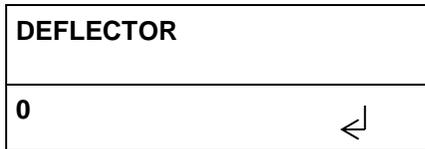
GP 6.3.9 DEFLECTOR Procedure

The Deflector position setting will change the timing offset for the Deflector module. The default value is 0. The timing offset relates to the amount of time that passes from the Deflector Sensor detecting a sheet to the deflector solenoids firing.

Enter Service Mode by following the procedure described in [GP 6.1.3](#). Press the down arrow until the return symbol is next to the words DEFLECTOR. Press Enter.



Note the current value before making any changes, so you have a reference point to return to.



The deflector timing can be changed on a range of -5.0mm to +5.0mm. Press ENTER when the desired value is flashing to save the Deflector settings. You will return automatically to the service menu.

Any changes made to the Deflector Timing values will apply only to the currently installed element size. The settings will be remembered when the same size is installed again, but other sizes will not be affected. If no spool is currently installed, an error message will occur.

GP 6.3.10 LOG Procedure

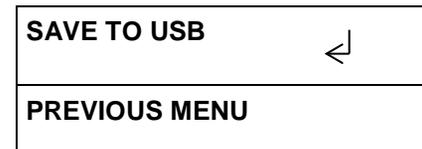
The Log procedure allows you to save information about machine settings and past performance to a USB drive.

Enter Service Mode by following the procedure described in [GP 6.1.3](#). Remove the Screws and remove the USB cover to access the USB port on the rear of the eWire. Insert a USB drive to the port.

Press the down arrow until the return symbol is next to the words LOG. Press Enter.



Only one option, will be available, Save to USB. This will save the current log file to a USB storage device located on the back panel. The file name will be LOG0001.txt, and increment each time the log is saved.



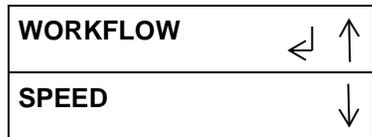
Press Enter to save the current Log File to your USB storage device. You will receive a message showing the log has been saved and the name of the Log File. Press ENTER to return to the service menu.

GP 6.3.11 WORKFLOW Procedure

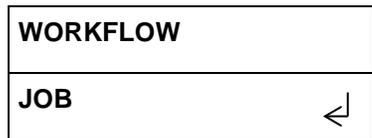
The workflow adjust menu will allow you to choose between two different modes of operation in the eWire. In job mode, an element will be cut and readied as needed for the next book. In streaming mode, elements will be cut and readied continuously in order to increase throughput. Job mode is recommended for the majority of cases.

Using the procedure described in [GP 6.1.3](#), enter Service mode.

Use the up and down arrows to scroll down to the WORKFLOW option. Press ENTER to enter workflow adjust mode.



Press the up and down arrows to adjust between Job and Streaming modes. Press ENTER when the desired mode of operation is selected.



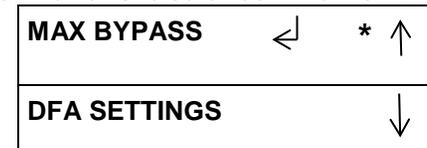
You will return to the Service mode menu.

GP 6.3.12 MAX BYPASS Setting

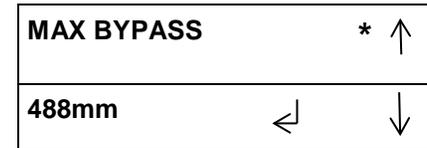
Do the following to set the maximum bypass sheet length through eWire.

Using the procedure described in [GP 6.1.3](#), enter Service mode.

Use the up and down arrows to scroll down to the MAX BYPASS option.



The below screen will appear



762mm is the Max Bypass setting. To reduce the Max Bypass setting, press the down arrow to the desired setting, and then press OK. You will return automatically to the service menu.

GP 6.3.13 FEED BELT HOME Setting

The Feed Belt Home setting will allow the operator to change the position the Element Feeder Belt reaches when it is in home position.

Using the procedure described in [GP 6.1.3](#), enter Service mode.

Use the up and down arrows to scroll down to the FEED BELT HOME option.

FEED BELT HOME	← * ↑
LOG	↓

The below screen will appear

FEED BELT HOME	* ↑
0	← ↓

0 is the default setting. The Feed Belt Home value can be adjusted on a range of -50 to +50. When the desired value has been selected, press ENTER to return to the service menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.3.14 CLOSER TO HOLDER

The Closer to Holder setting will allow the operator to change the position the closer stops at when moving to partial close the element on the holder.

Using the procedure described in [GP 6.1.3](#), enter Service mode.

Use the up and down arrows to scroll down to the CLOSER TO HOLDER option.

CLOSER TO HOLDER	← * ↑
------------------	-------

The below screen will appear

CLOSER TO HOLDER	* ↑
0	← ↓

0 is the default setting. The Closer to Holder value can be adjusted on a range of -256 to +256. When the desired value has been selected, press ENTER to return to the service menu.

Select EXIT and press ENTER to return to the top level menu.

GP 6.3.15 PARTIAL CLOSE Setting

The Partial Close setting will allow the operator to change the amount the closer closes down on the unbound element prior to binding

Using the procedure described in [GP 6.1.3](#), enter Service mode.

Use the up and down arrows to scroll down to the PARTIAL CLOSE

PARTIAL CLOSE	← * ↑
---------------	-------

The below screen will appear

PARTIAL CLOSE	* ↑
0	← ↓

0 is the default setting. The Partial Close value can be adjusted on a range of -5 to +5. When the desired value has been selected, press ENTER to return to the service menu.

Select EXIT and press ENTER to return to the top level menu

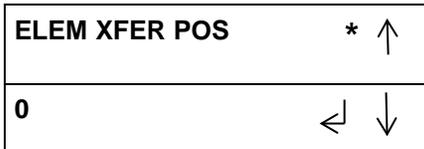
GP 6.3.16 ELEM XFER POS

The Element Transfer Position setting will allow the operator to change the position of the element on the Element Feeder Belt when it is transferred to the holder.

Using the procedure described in [GP 6.1.3](#), enter Service mode. Use the up and down arrows to scroll down to the ELEM XFER POS



The below screen will appear



0 is the default setting. The Feed Belt Home value can be adjusted on a range of -128 to +127. When the desired value has been selected, press ENTER to return to the service menu.

Select EXIT and press ENTER to return to the top level menu

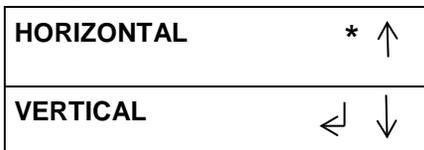
GP 6.3.17 ROTATE DELAY Setting

The Rotate Delay setting will allow the operator to change the position the position of the holder rotate by delaying the stop of the holder a set amount of time.

Using the procedure described in [GP 6.1.3](#), enter Service mode. Use the up and down arrows to scroll down to the ROTATE DELAY option.



The below screen will appear



For both the horizontal and vertical, 0 is the default setting. The Rotate Delay for both settings value can be adjusted on a range of 0 to +100.

When the desired value has been selected, press ENTER to return to the service menu.

Select EXIT and press ENTER to return to the top level menu.

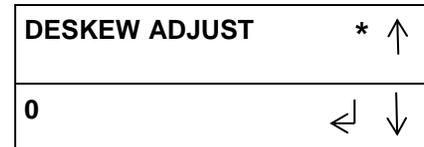
GP 6.3.18 DESKEW ADJUST

The DESKEW ADJUST setting will allow the operator to change the amount the aligner carriage corrects for skewed sheets entering the eWire.

Using the procedure described in [GP 6.1.3](#), enter Service mode. Use the up and down arrows to scroll down to the DESKEW ADJUST



The below screen will appear



0 is the default setting. The Deskew Adjust value can be adjusted on a range of -20 to +20. When the desired value has been selected, press ENTER to return to the service menu.

Select EXIT and press ENTER to return to the top level menu

GP 6.3.19 VOLTAGE

The Voltage option in the service menu will display information on the voltage in the eWire.

Using the procedure described in [GP 6.1.3](#), enter Service mode. Use the up and down arrows to scroll down to the Voltage option.

- 24:** Status of the 24v coming supplied from the power supply
- 24i:** Status of the 24v supplied to eWire through the interlocks
- 5:** Status of the 5v power supplied to the eWire
- 3.3:** Status of the 3.3v power supplied to the eWire

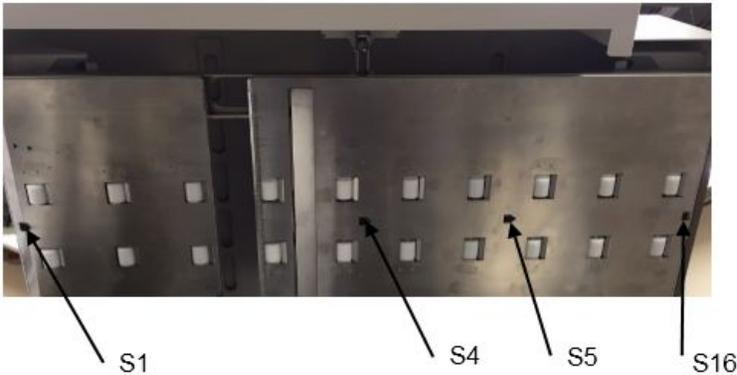
GP 6.4 Check Sensors

Use the information in this section to locate the appropriate sensor(s) on the eWire. Once you have located the sensor, follow [GP 6.3.2](#) to verify the function of the sensor. If the sensor does not operate as expected, follow the troubleshooting steps located in this section to fix the faulty sensor.

GP 6.4.1 Check S1-S5, S16, S43, S45

Locate sensors S1, S4, S5, and S16:

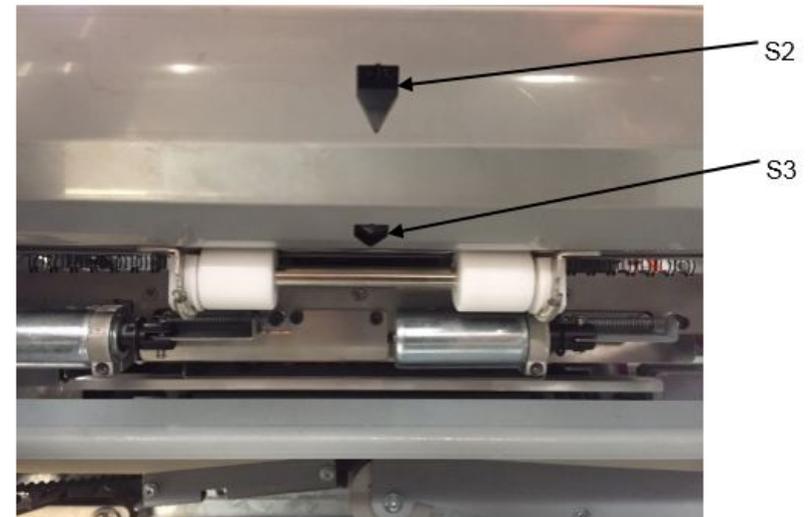
- Raise the Top Cover.
- The sensor windows are located on the Upper Bypass, oriented toward the paper path.
- Sensors S1, S4, S5, and S16 can be blocked manually by using a piece of paper or other solid object.



Sensors S1, S4, S5 and S16 are on the Upper Bypass Panel (PL 5.2).

Locate sensors S2 and S3:

- Raise the Top Cover and the Lower Bypass panel.
- If necessary, manually slide the closer assembly all the way to the right of the machine.
- Sensors S2 and S3 can be manually blocked by using a piece of paper or other solid object.



Sensors S2 and S3 are located on the Deflector Module (PL 5.16).

Locate sensors S43 and S45:

- Slide the book drawer all the way out of the machine.
- Remove any books or paper from the book drawer tray.
- Sensors can be manually blocked using a piece of paper or other object.



Sensors S43 and S45 are on the Book Drawer (PL 5.23)

Sensor Troubleshooting Procedure (S1, S2, S3, S4, S5, S16, S43, and S45):

1. Do GP 6.3.2 [SENSORS Procedure](#). Check to make sure the sensor shows “0” on the LCD when uncovered and “1” when covered.
If the sensor shows “1” when uncovered, clean the sensor. Also check if there is any obstacle in the sensor window.
All sensors show “0” when uncovered and “1” when covered
Yes- Return to the RAP that directed you here.
No-Go to Step 2
2. Make sure the sensor wire is connected securely at the Sensor and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.22](#) and Section 7 for additional info regarding the connector locations.
All the connections are made securely
Yes- Go to Step 3
No- Make the connection and repeat Step 1.
3. Replace the Sensor with a new one (alternatively, swap the sensor in the faulty position with a sensor from a different good position to check if it is a bad sensor).
Replacing the sensor corrects the issue
Yes-Install the new sensor and return to normal operation
No-Go to Step 4
4. Visually inspect the Cable from the sensor all the way to the Control Board (PL 5.27). If the Cable is damaged, replace the Cable. Refer to [GP 6.22](#) to identify all cables used with the sensor.
Sensor cable looks okay
Yes-Go to Step 5
No-Go to Step 6
5. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire.
Re-flashing firmware clears the fault
Yes- Resume normal operation
No- Go to Step 6

6. Replace the Sensor Cable(s). Remove the faulty cable from the sensor by releasing the required cable clamps. Replace with a new cable. Refer to GP 6.22 to identify all required cables.

Replacing the sensor cable(s) corrects the issue

Yes- Resume normal operation

No- Go to Step 7

7. Do REP 11.1 or REP 11.3 to replace the Main Control Board (PL 5.27).

This clears the fault

Yes- Resume normal operation

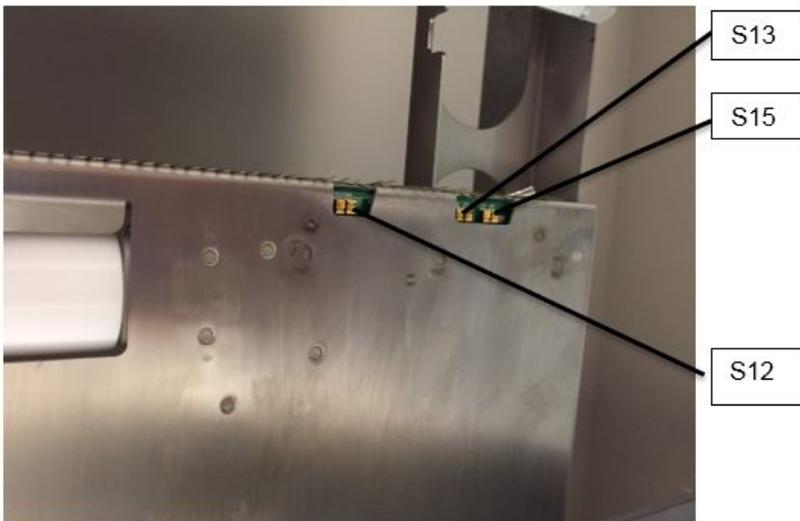
No- Escalate to second level

GP 6.4.2 **Check S6-S10, S12, S13, and S15**

Use the information in this section to locate the appropriate sensor(s) on the eWire. Once you have located the sensor, follow [GP 6.3.2](#) to verify the function of the sensor. If the sensor does not operate as expected, follow the troubleshooting steps located in this section to fix the faulty sensor.

Locate Sensors S12, S13, and S15:

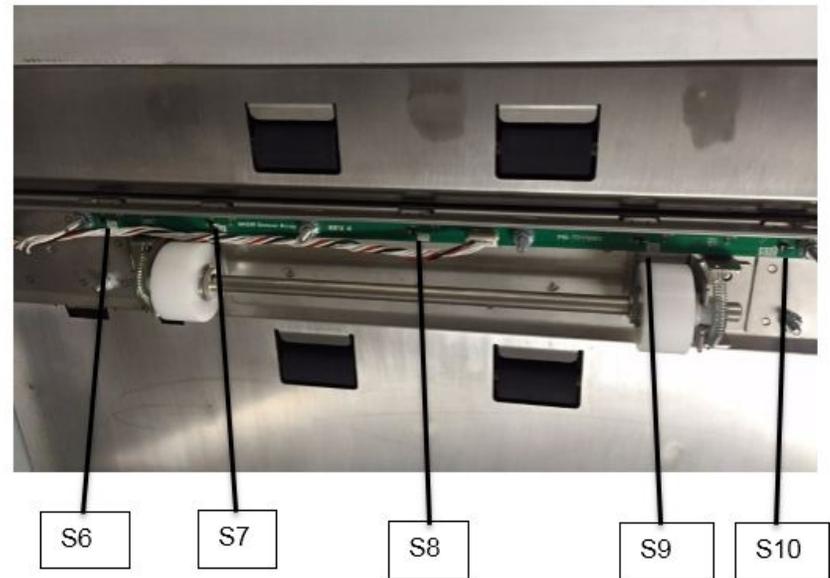
- Raise the Top Cover.
- Locate the Alignment Sensor Board openings on the Upper Bypass panel frame.
- The sensors are mounted on a common Board, but can be checked individually.
- Sensors S11 and S14 are located on the Alignment Sensor Board, but are not used with eWire.



Sensors S12, S13, and S15 are located on the Alignment Sensor Board

Locate Sensors S6, S7, S8, S9, and S10:

- Raise the Top Cover
- Locate the Skew Sensor Board on the surface of the Alignment Carriage.
- Sensors S6-S10 can be checked by sliding a piece of paper into the opening below the Skew Sensor PCB



Sensors S6, S7, S8, S9, and S10 are on the Skew Sensor Board

Sensor Troubleshooting Procedure (S6 – S10, S12 – S15):

1. Do GP 6.3.2 [SENSORS Procedure](#). Check to make sure all sensors show “0” on the LCD when uncovered and “1” when covered.

If any sensor shows “1” when uncovered, clean that sensor. Also check if there is any obstacle in the sensor window.

All sensors show “0” when uncovered and “1” when covered

Yes- Return to the RAP that directed you here.

No-Go to Step 2

2. Make sure the sensor cable is connected securely at the Sensor and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.22](#) and Section 7 for additional info regarding the connector locations.

All the connections are made securely

Yes- Go to Step 3

No- Make the connection and repeat Step 1.

3. Light from sensor components can be viewed with a cell phone camera, if the sensor is working you will be able to see a bright light. Alternately a small mirror can be used. Use this procedure to check that each sensor is emitting a beam of light during operation.

CAUTION: Sensor emits High Intensity narrow angle Infrared beam (940nm). It is invisible to naked eye, avoid looking directly at the sensor when the machine is powered ON. See Section 0, page ix for other languages.

There is no light from any of the sensors on the Sensor Board

Yes- Go to Step 4

There is no light from some of the sensors on the Sensor Board

Yes- Go to Step 5

There is a bright light from all the sensors

Yes- Go to Step 6

4. Replace the sensor board- REP 2.14 for S6-S10 or REP 2.15 for S12-S15

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

5. Replace the sensor cable(s). Refer to [GP 6.22](#) for cable part number(s) and location.

This clears the fault

Yes- Resume normal operation

No- Go to Step 6

6. Do GP [6.3.7](#) FIRMWARE UPGRADE Procedure to Re-flash the firmware for the eWire.

This clears the fault

Yes- Resume normal operation

No- Go to Step 7

7. Do REP 11.1 to replace the Main Control Board (PL 5.27).

This clears the fault

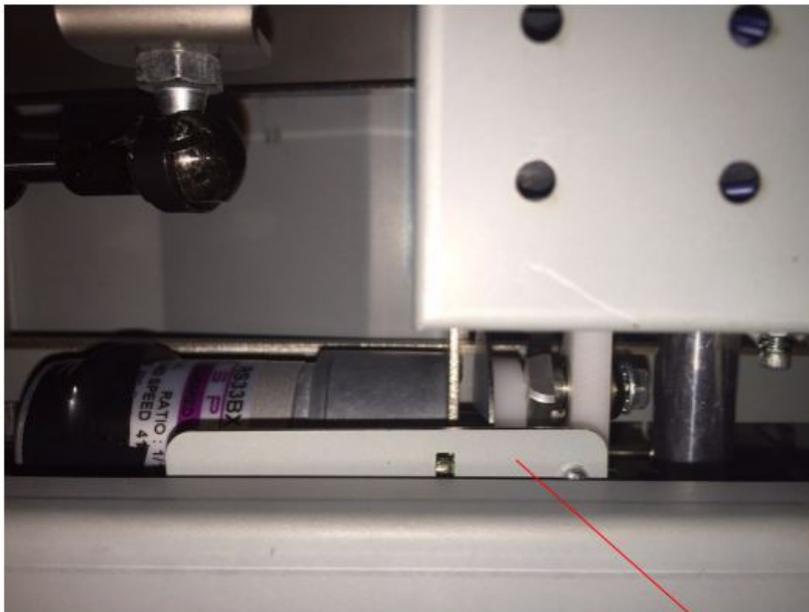
Yes- Resume normal operation

No- Escalate to second level

GP 6.4.3 Check S18-S21, S24, S31-S41, S46-S49

Locate Sensor S18:

- Raise the top Cover.
- If Necessary, do REP 1.8 to remove the Front Cover.
- Locate the Front Tapper 7716863
- Rotate the tapper assembly manually so that the encoder wheel rotates within the sensor. The sensor will become unblocked when the encoder window is centered within the sensor detect area.

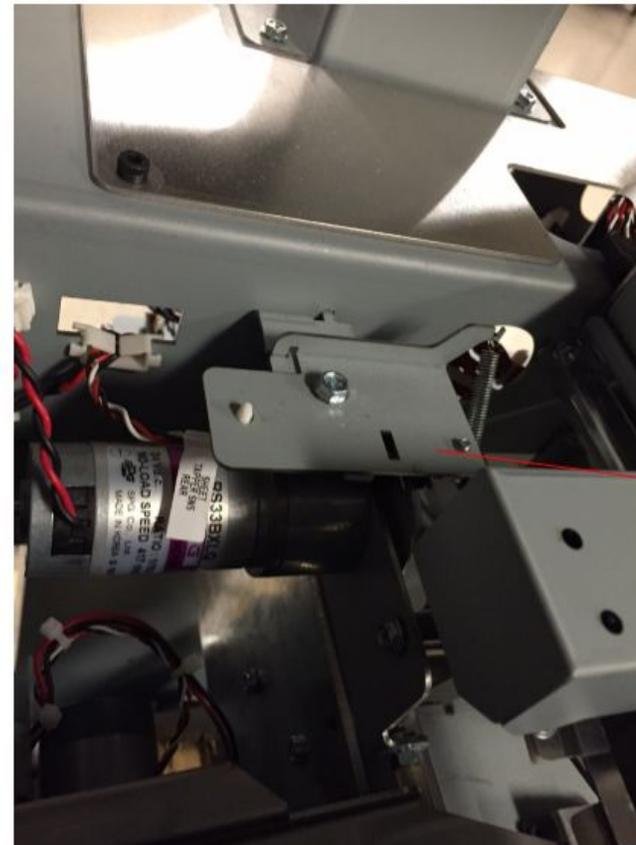


S18

S18 is located in the front tapper module

Locate Sensor S19:

- Raise the top Cover.
- Locate the Rear Tapper 7716874
- Rotate the tapper assembly manually so that the sensor is blocked or unblocked. The sensor will become unblocked when the encoder window is centered within the sensor detect area.

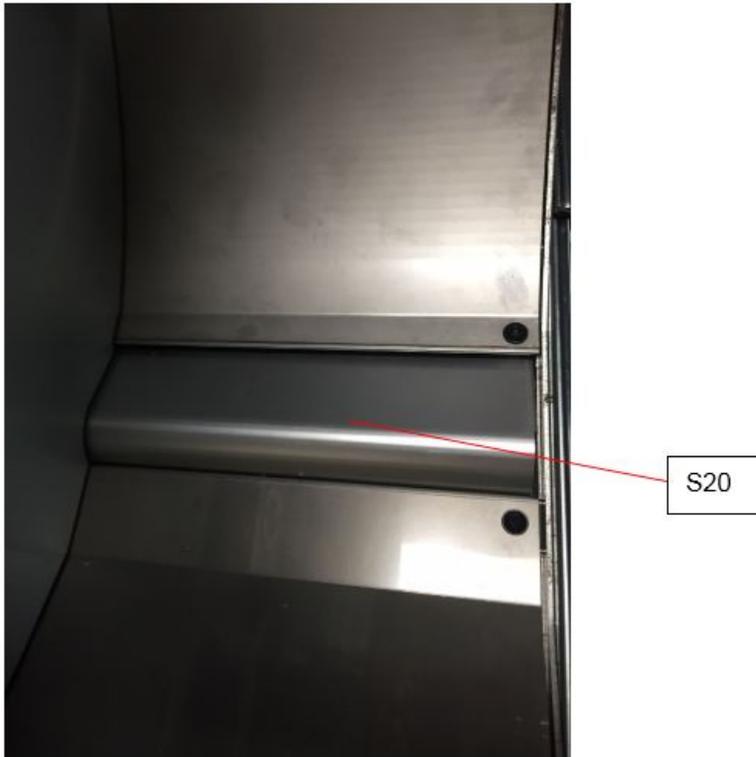


S19

S19 is located in the tapper at the rear of the machine

Locate Sensor S20:

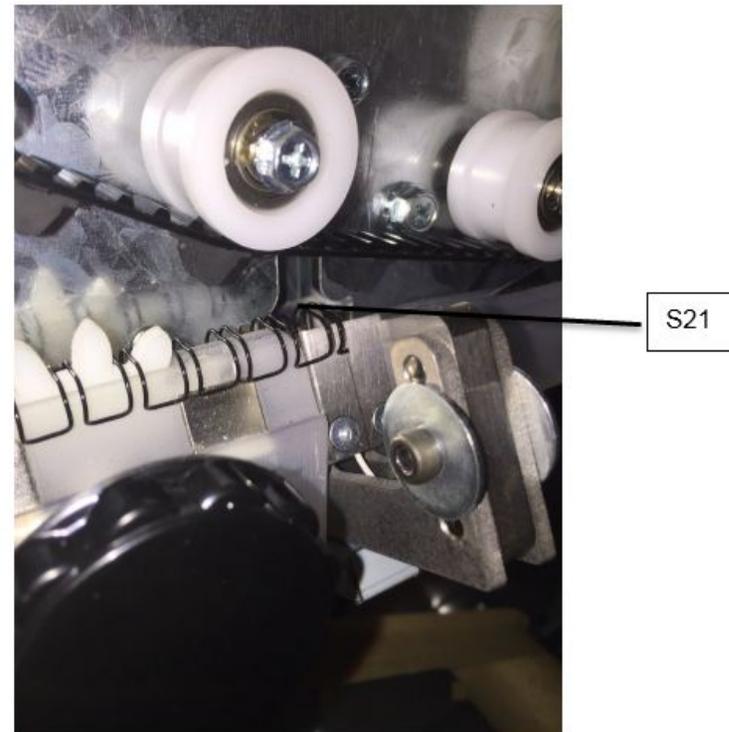
- Slide the Element Feeder Drawer all the way out of the machine.
- Remove the Element Spool
- Manually actuate the sensor slack mechanism to block or unblock the sensor. If there is dust or debris located at the bottom of the Element Feeder, vacuum the area around the slack sensor.
- If actuating the Slack Sensor mechanism is inconclusive, follow REP 3.1 to remove the Slack Sensor mechanism and gain direct access to the Sensor.



S20 is located at the bottom of the Element Feeder Assembly. It can be blocked or unblocked by pressing manually on the Slack Detect mechanism.

Locate Sensor S21:

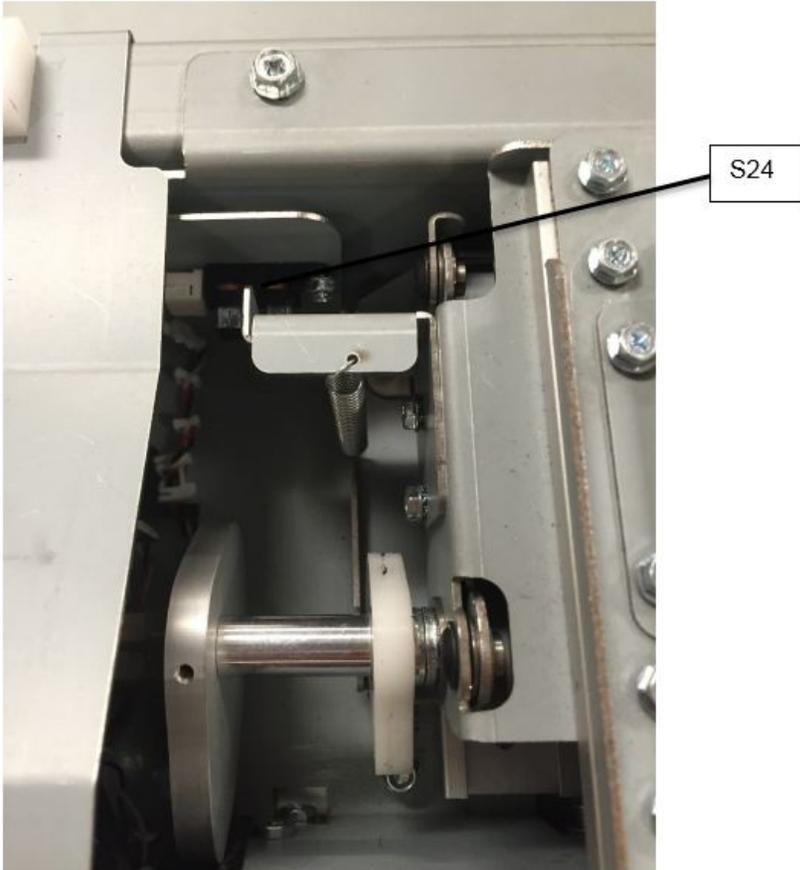
- Slide the Element Feeder Drawer all the way out of the eWire.
WARNING
Moving Parts, keep hands clear of all moving parts when the Interlock Cheater is inserted. Keep fingers away from the Knife Mechanism when power is on. See Section 0, page vii for other languages.
- To check S21, slide a piece of paper above the knife blade until it contacts the back frame of the Element Feeder.



S23 is located on the Knife Module

Locate Sensor S24:

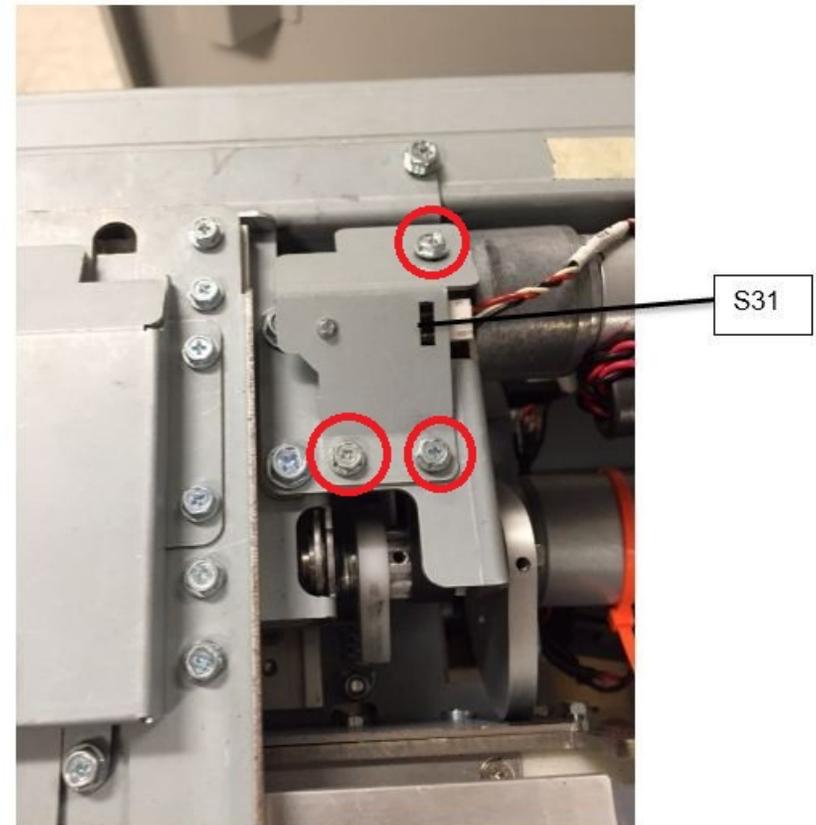
- Slide the Element Feeder Drawer all the way out of the eWire.
- Manually raise and lower the pushover mechanism to block and unblock the sensor.



S24 is located on the Element Transfer Module

Locate Sensor S31:

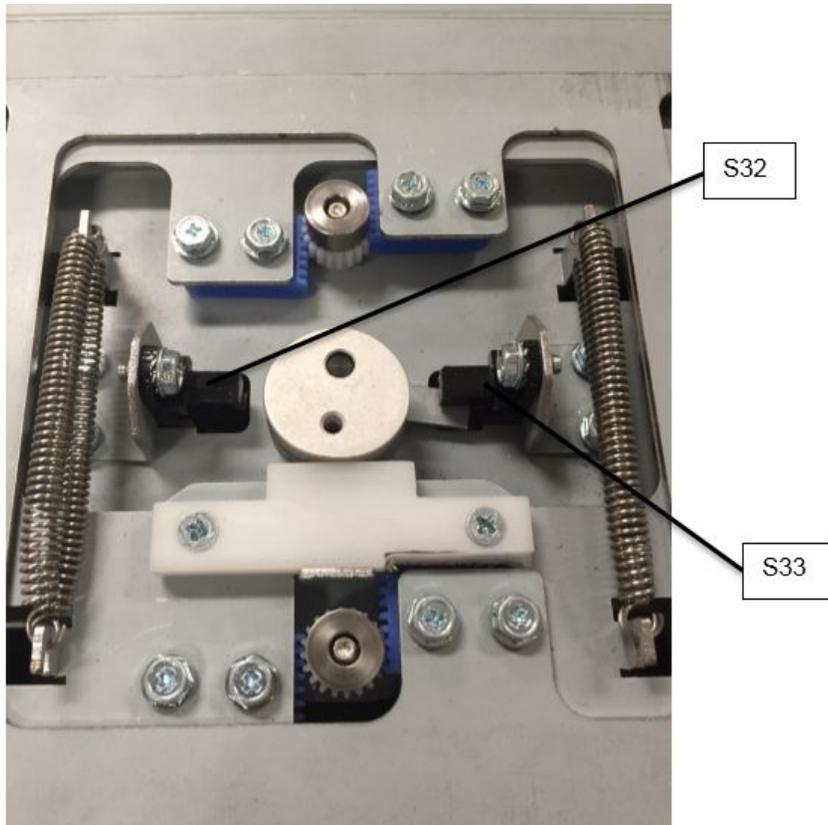
- Slide the Element Feeder Drawer all the way out of the eWire.
- Locate the Pushover Motor on the rear side of the Element Transfer Module.
- Remove the Sensor Bracket by removing the M3 Screws (3), without disconnecting the Sensor cable.
- The sensor can be blocked and unblocked using a piece of paper or other object.



S31 is located on the Element Transfer Module

Locate Sensor S32 and S33:

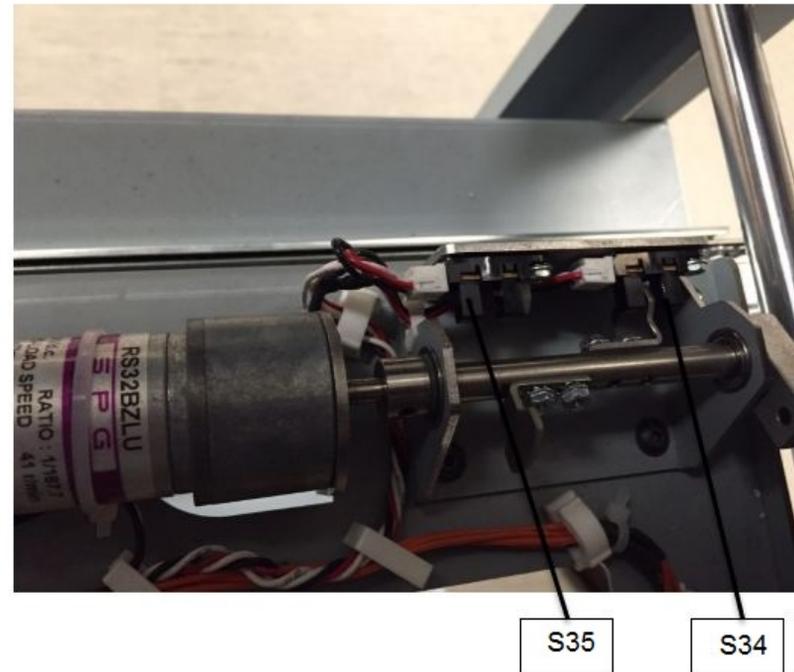
- Slide the Element Feeder Drawer all the way out of the eWire.
- Remove the Element Feeder Cover 7717335 by removing the M3 Screws (4). Refer to REP 3.16.3.
- If necessary, go to GP 6.3.5 and use the Motors Procedure to cycle Motor M13. Remove the Interlock Cheater when the sensor flag is in the desired location. This will allow you to block or unblock each sensor.



S32 and S33 are located on the Expanding T Module

Locate Sensor S34 and S35:

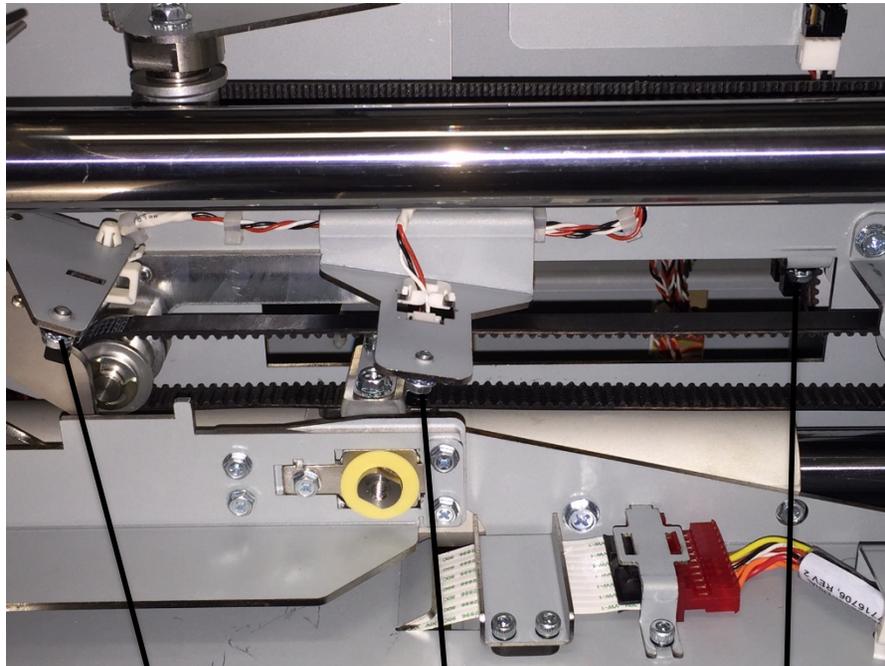
- Raise the Top Cover
- Manually move the closer module forward if needed to view the Holder Rotate linkage
- If the sensor is unblocked, it can be blocked by inserting a piece of paper or other solid object.
- If the sensor is blocked, do REP 8.2 to remove the Holder Rotate Bracket, but do not disconnect the Sensor cables. This will allow you to block or unblock the sensor manually.



S34 and S35 are located on the Holder Module Rotate Mechanism

Locate Sensor S36, S37, S39:

- Raise the Top Cover
- Manually move the closer module forward or back to gain access if necessary
- Manually cycle the holder mechanism if necessary



S37

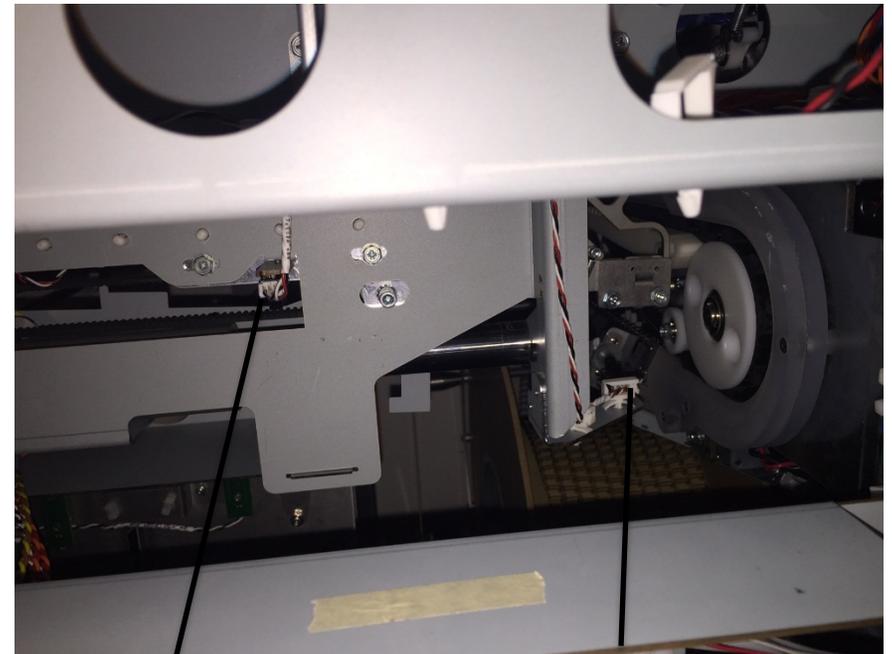
S39

S36

S36, S37 and S39 are located on the Holder Module

Locate Sensor S38 and S40:

- Do REP 1.5 to remove the Back Cover.
- S38 and S40 are most easily viewed from the back.
- If necessary, move the Holder Module manually to unblock the sensor.
- S38 and S40 are located on the Holder Module.



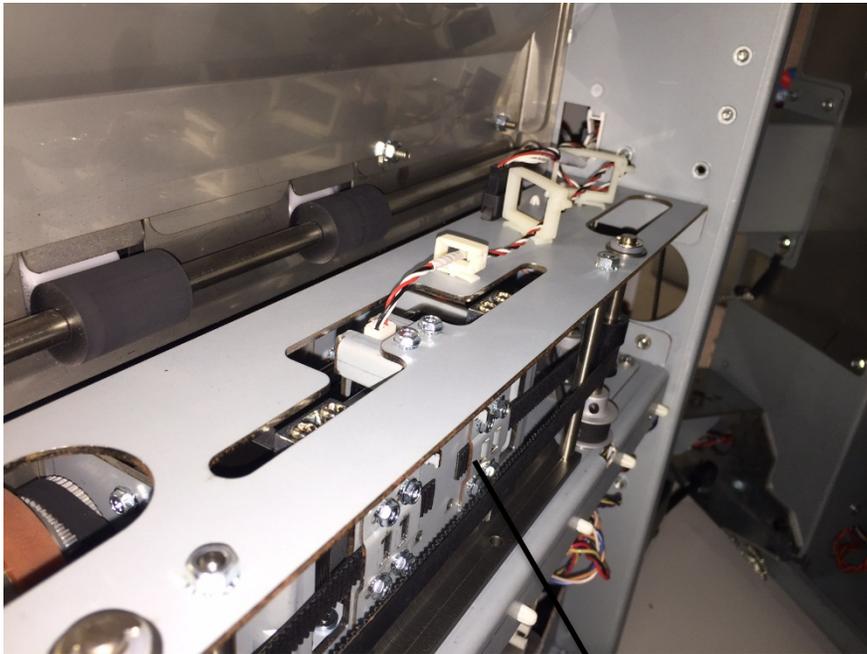
S38

S40

S38 and S40 are located on the Holder Module

Locate Sensor S41:

- S41 is located on the Alignment Module.
- In order to test S41, do GP 6.3.6 Functional Tests and select "Aligner Test." Remove the Interlock cheater before the Functional Test is complete. Return to Sensor Check mode to confirm the sensor is unblocked. Insert the cheater which will cause the Aligner to home. S41 should then be blocked.

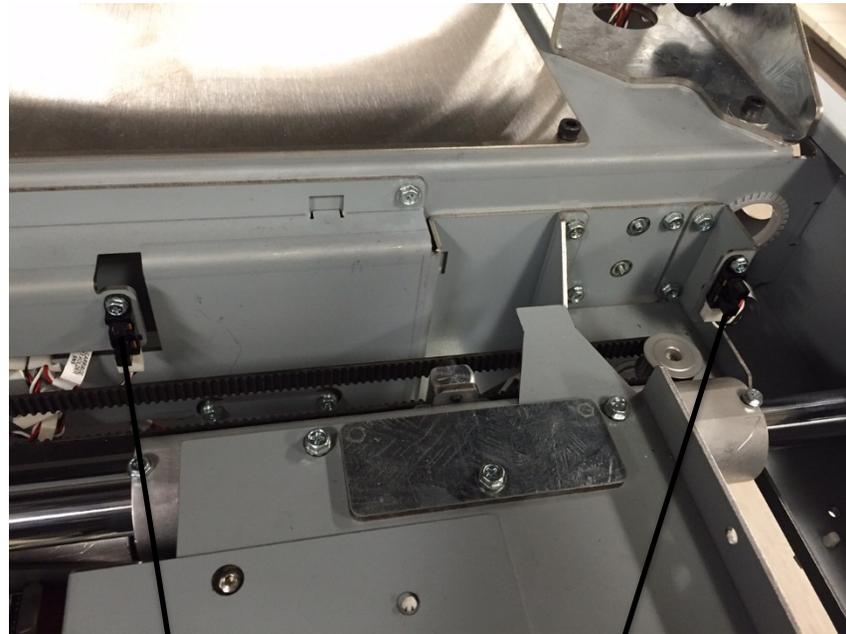


S41

S41 are located on the Alignment Module

Locate Sensor S46 and S49:

- Raise the Top Cover and Lower Bypass.
- Manually move the closer module forward or back if needed to unblock the Sensor.
- The Sensor can be blocked or unblocked by inserting a piece of paper or other solid object.



S49

S46

S46 and S49 are located the back frame behind the closer

Procedure

No- Escalate to second level

1. Do [GP 6.3.2 SENSORS Procedure](#). Check to make sure all sensors show "0" on the LCD when unblocked and "1" when blocked.

If any sensor shows "1" when unblocked, clean that sensor. Also check if there is any obstacle in the sensor path.

All sensors show "0" when uncovered and "1" when covered

Yes- Return to the RAP that directed you here.

No-Go to Step 2

2. Make sure the sensor wire is connected securely at the Sensor and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to Section 7 Wiring and [GP 6.22](#) to find the Cable termination locations.

All the connections are made securely

Yes- Go to Step 3

No- Make the connection and repeat Step 1.

3. Replace the Sensor with a new one (alternatively, swap the sensor in the faulty position with a sensor from a different good position to check if it is a bad sensor).

Replacing the sensor corrects the issue

Yes-Use the new sensor and return to normal operation

No-Go to Step 4

4. Visually inspect the Cable from the sensor all the way to the Control Board (PL 5.27). If the Cable is damaged, replace the Cable. See Section 7 and GP 6.22 for cable part numbers and locations.

Sensor cable looks okay

Yes-Go to Step 5

No-Go to Step 6

5. Do [GP 6.3.7 FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire.

Re-flashing firmware clears the fault

Yes- Resume normal operation

No- Go to Step 7

6. Do REP 11.1 or REP 11.3 to replace the Main Control Board (PL 5.27).

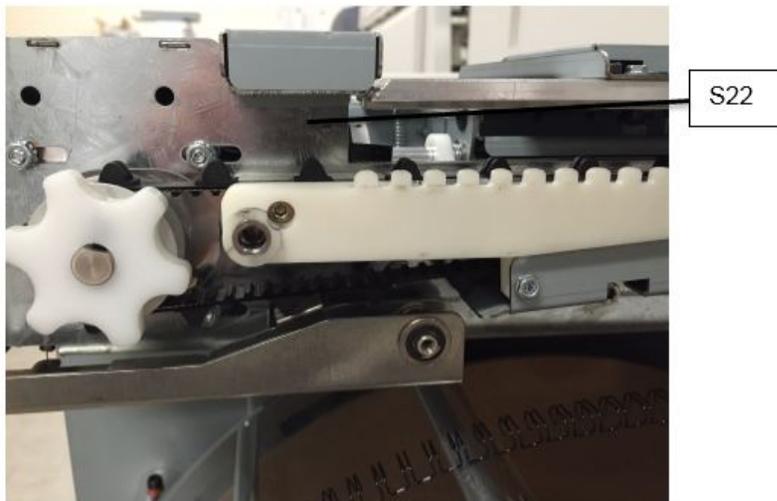
This clears the fault

Yes- Resume normal operation

GP 6.4.4 Check S22, S25, S42

Locate Sensor S22:

- Slide the Element Feeder tray all the way out of the eWire.
- Clean the dust off of the film covering the sensor (do not remove this film)
- Block the Sensor path by sliding a piece of wire element between the Element Feed Belt and the Expanding T mechanism.
- Do GP Functional Tests → Feed Element. Use the knob to advance the cut wire. Ensure that the S22 sensor changes state when blocked by the sensor.

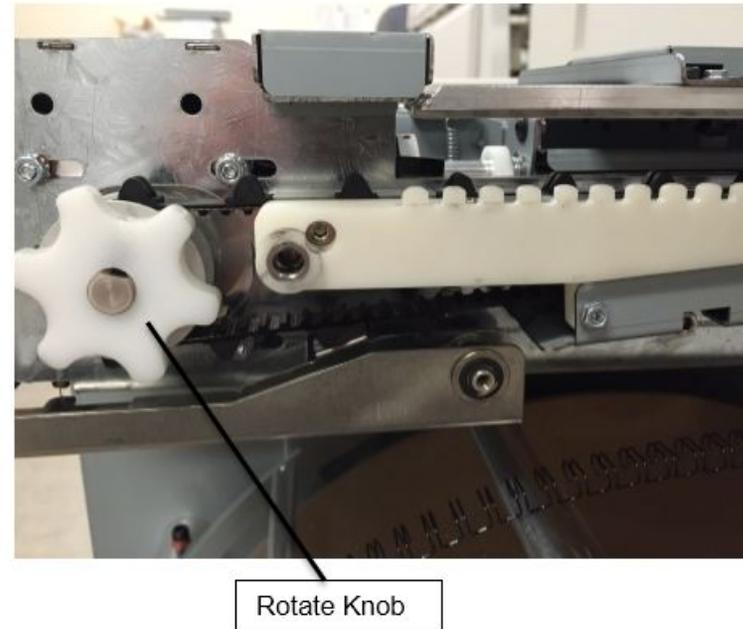


S22 is a beam sensor, it detects presence of an element in the area shown

If S22 is operational but does not show as blocked when wire is present, adjust the sensor alignment until it detects wire every time.

Locate Sensor S25:

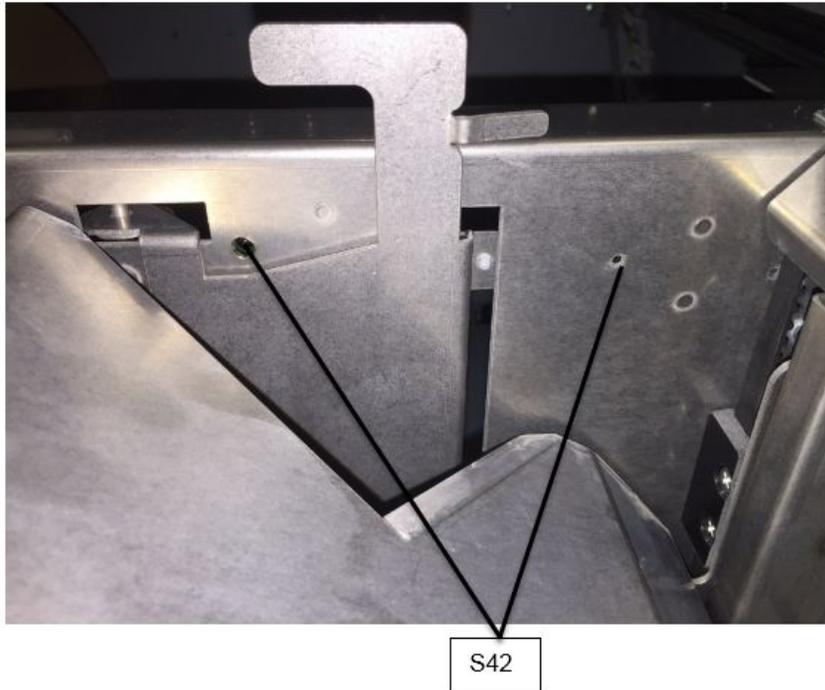
- Slide the Element Feeder tray all the way out of the eWire.
- Remove any remaining Element from the Element Feeder Belt.
- Manually turn the Element Feeder Belt using the Knob. Sensor S25 detects a tooth on the belt, and will cycle on and off when the belt is rotated.



S25 detects the belt tooth, block and unblock it by manually advancing the belt

Locate Sensor S42:

- Slide the book drawer tray all the way out of the eWire.
- Block the sensor path by covering the sensor beam path holes at the upper portion of the book drawer.
- S42 has 2 emitters and 2 receivers, both must be blocked to check the sensor.



S42 is located in the book drawer

Procedure

1. Do [GP 6.3.2 SENSORS Procedure](#). Check to make sure all sensors change state from “1” to “0” when blocked.

If any sensor shows “0” when uncovered, clean that sensor. Also check if there is any obstacle in the sensor window.

All sensors operate correctly

Yes- Go to Step 2

No- Go to Step 3

2. Test the open voltage reading of the sensor. To do this, ensure that the path between the sensors is clear, and place one lead of a multi-meter on the test point with the appropriate sensor label on the AC board, and the other lead on the ground test point.

Voltage reading is less than 0.4V

Yes- Go to Step 3

No- Go to Step 4

3. Make sure the sensor wire is connected securely at the Sensor and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.22](#) to locate the termination location for each sensor.

All the connections are made securely

Yes- Go to Step 4

No- Make the connection and return to normal operation.

4. Replace the faulty sensor board.

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

5. Visually inspect the Cable from the sensor all the way to the Control Board (PL 5.27). If the Cable is damaged, replace the Cable. See Section 7 and [GP 6.22](#) for cable part numbers and locations.

Sensor cable looks okay

Yes- Go to Step 6

No- Go to Step 7

6. Do [GP 6.3.7 FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire.

This clears the fault

Yes- Resume normal operation

No- Go to Step 7

7. Do REP 11.1 or 11.3 to replace the Main Control Board (PL 5.27).

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.4.5 Check S26 - S30, S50

Locate Sensor S26 through S30:

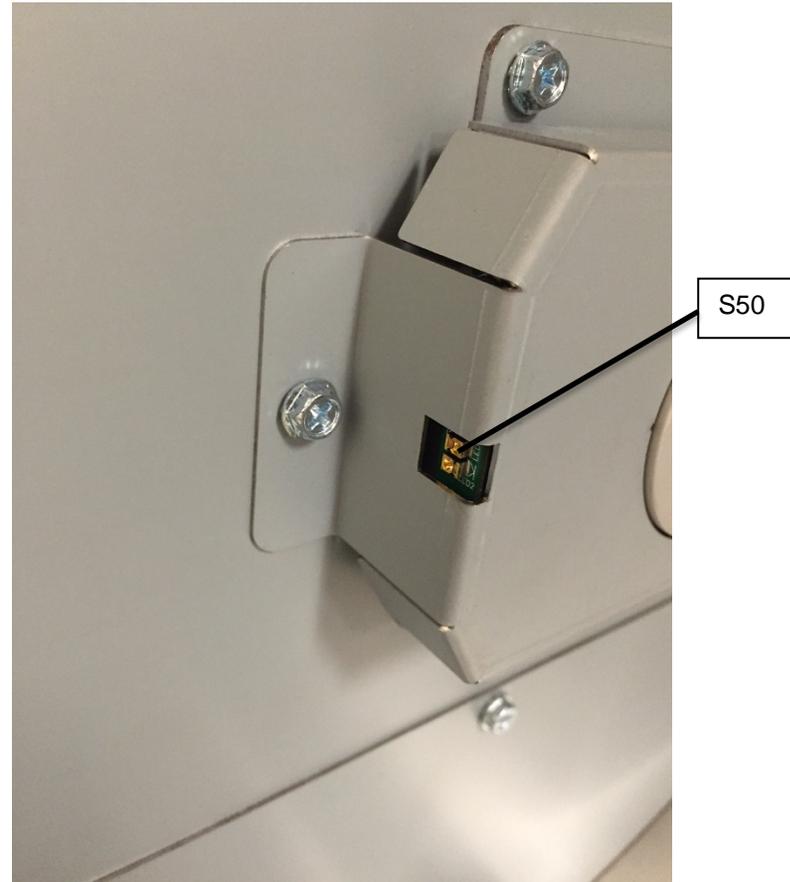
- Slide the Element Feeder tray all the way out of the machine
- [Do GP 6.8](#) to Remove the element spool.
- Sensors can be blocked using a piece of paper.



S26 through S30 are located on the front face of the element feeder spindle assembly

Locate Sensor S50:

- Slide the Element Feeder tray all the way out of the machine
- [Do GP 6.8](#) to Remove the element spool.



S50 is located on the side face of the element feeder spindle assembly

Check Sensors Procedure (S26-S30, S50)

1. Do [GP 6.3.2 SENSORS Procedure](#). Check to make sure all sensors should show “0” on the LCD when uncovered and “1” when covered.

If any sensor shows “1” when uncovered, clean that sensor. Also check if there is any obstacle in the sensor window.

All sensors show “0” when uncovered and “1” when covered

Yes- Return to the RAP that directed you here.

No-Go to Step 2

2. Make sure the sensor wire is connected securely at the Sensor Board and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to Section 7 Wiring and [GP 6.22](#) for details on the Sensor Cable and termination location.

All the connections are made securely

Yes- Go to Step 3

No- Make the connection and return to normal operation.

3. Light from sensor components can be viewed with a cell phone camera, if the sensor is working you will be able to see a bright light. Alternately a small mirror can be used. Use this procedure to check that each sensor is emitting a beam of light during operation.

CAUTION: Sensor emits High Intensity narrow angle Infrared beam (940nm). It is invisible to naked eye, avoid looking directly at the sensor when the machine is powered ON. See Section 0, page ix for other languages.

There is no light from any of the sensors on the Sensor Board

Yes- Go to Step 5

There is no light from one or some of the sensors on the Sensor Board

Yes- Go to Step 4

There is a bright light from all the sensors

Yes- Go to Step 6

4. Visually inspect the Cable from the sensor board all the way to the Control Board (PL 5.27). If the Cable is damaged, replace the Cable. See Section 7 and [GP 6.22](#) for cable part numbers and locations.

Sensor cable looks okay

Yes-Go to Step 5

No-Go to Step 6

5. Replace the Sensor Board. Refer to REP 3.4 to replace the S26-S30 Sensor Board, and refer to REP 3.5 to replace the S50 Sensor Board.

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

6. Do [GP 6.3.7 FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire.

This clears the fault

Yes- Resume normal operation

No- Go to Step 7

7. Do REP 11.1 or 11.3 to replace the Main Control Board (PL 5.27).

This clears the fault

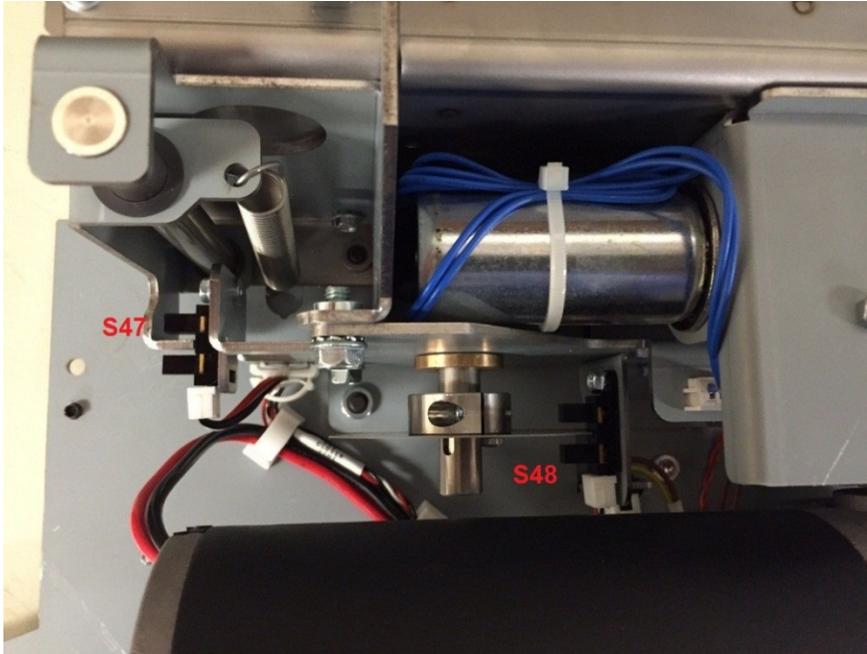
Yes-Resume normal operation

No-Escalate to second level

GP 6.4.6 Check S47, S48

Locate Sensor S47 and S48:

- Do REP 6.1 to remove the Closer Module
- S47 and S48 are located inside the Closer Module
- Note that S47 and S48 are not accessible without disassembling the module and thus cannot be checked with the module plugged in.



2. Replace the Sensor with a known good sensor of the same type, such as S20. Refer to [GP 6.4.3](#) to verify the operation of the sensor you are going to use before installing it in the S47 or S48 slot. Resume testing and verify if the issue is resolved.
Replacing the sensor corrects the issue
Yes- Replace the faulty sensor and resume operation
No- Go to Step 3
3. Visually inspect the Cable from the sensor all the way to the Control Board (PL 5.27). If the Cable is damaged, replace the Cable. See Section 7 and [GP 6.22](#) for cable part numbers and locations.
Sensor cable looks okay
Yes- Go to Step 4
No- Replace the faulty cable and resume operation.
4. Do [GP 6.3.7](#) FIRMWARE UPGRADE Procedure to Re-flash the firmware for the eWire.
Re-flashing firmware clears the fault
Yes- Resume normal operation
No- Go to Step 7
5. Do REP 11.3 to replace the Main Control Board B (PL 5.27).
This clears the fault
Yes- Resume normal operation
No- Escalate to second level

Check Sensors Procedure (Sensors S47 & S48):

1. Make sure the sensor wire is connected securely at the Sensor and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to Section 7 Wiring and [GP 6.22](#) to find the Cable termination locations.
All the connections are made securely
Yes- Go to Step 2
No- Make the connection and resume operation

GP 6.5 MOTOR CHECKS

GP 6.5.1 Check M1, M2, M16, M17, and M18

Locate motors M1, M2, M16, M17, and M18:

- Raise the Lid and insert a cheater into the Interlock.
- Motors M1 and M2 are located on the rear side of the bypass transport assembly (PL 5.3). Motor M1 drives the input side Belt, while Motor M2 drives the output side Belt.
- M16, M17, and M18 are located on the Steering Subassembly (PL 5.3). Motors M16 and M17 drive the front and rear Rollers for skew adjustment. Motor M18 drives the Steering Subassembly for alignment adjustment.

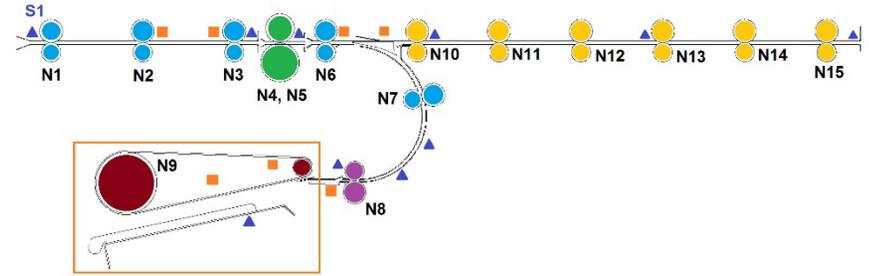
WARNING

Moving Parts, keep hands clear of nips and the belts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

1. For M1, M2, M16 and M17, do GP 6.3.5 [Motors Procedure](#) to check that the corresponding nip rollers turn when the Motor is activated. Refer to the Jam Areas Diagram to identify the nip roller locations.
2. For Motor 18 only, do GP 6.3.6. [Functional Tests](#) to run the Aligner Test function.

The table below identifies the nip rollers driven by the corresponding motors:

Motor	Nip rollers
M1	N1, N2, N3, N6, N7
M2	N10, N11, N12, N13, N14, N15
M16	N4- Front side steering roller
M17	N5- Rear side steering roller
M18	Alignment Carriage



The corresponding Nip rollers turn when the Motor is activated

Yes- Return to the RAP that directed you here

No- Identify the malfunctioning Motor(s) and go to Step 2.

3. Make sure the motor cable is connected securely at the Driver Board and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Do REP 1.1 to access the M1 and M2 Motor Driver Boards. To access the M16-M18 Driver Boards, raise the Upper and Lower Transport assemblies and remove the Underside cover (refer to REP 2.24).

All the connectors are securely connected.

Yes- Go to Step 4

No- Make the connection and resume operation

4. Inspect the timing belt for the motor. Confirm that the timing belt has appropriate tension and that the belt is not damaged or frayed.

Timing belt is okay

Yes- Go to Step 5

No- Replace the faulty belt and resume operation

5. Check the tightness of the pulley set screw on the stepper motor shaft. Also check the set screws/ coiled spring pins for all the pulleys (PL 5.3) that are driven by the stepper motor in question. Skip this step for M1 and M2, which do not have set screws.

All the set screws are secured tightly

Yes- Go to Step 6

No- Tighten the loose set screw and repeat Step 1

6. Check the DIP switch settings for the Motor. DIP Switches are located on the Driver Board that corresponds with each motor. Refer to the Table below for the correct DIP switch settings for each Motor.

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
M1	OFF	ON	OFF	ON	OFF
M2	OFF	ON	OFF	ON	OFF
M16	OFF	OFF	ON	ON	ON
M17	OFF	OFF	ON	OFF	ON
M18	OFF	OFF	ON	OFF	OFF

All the DIP switch setting are correct

Yes- Go to Step 7

No- Correct the DIP switch and repeat Step 1

7. Check if there is power to the Driver board. LED 1 on the Driver board should be lit.

If LED 1 is lit, it means there is 24V DC power to the Driver board from the Main Control board.

If LED 2 is lit, it means there is a fault with either the Driver board or the stepper motor.

LED 1 is not Lit- Go to Step 8

LED 1 is Lit- Go to Step 9

8. Check that the cable(s) connecting the Driver Board 24 VDC signal to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#).

The cables look okay

Yes- Go to Step 10

No- Replace the faulty cable and repeat Step 1

9. Check that the cable(s) connecting the Driver Board Control signal to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#).

The cables look okay

Yes- Go to Step 10

No- Replace the faulty cable and repeat Step 1

10. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation

No- Go to Step 11

11. Replace the driver board for the faulty motor, with DIP switch set correctly for the position you are replacing. Refer to REP 2.17 for Motors M1 and M2. Refer to REP 2.24 for Motors M16, M17, and M18.

This clears the fault

Yes- Resume normal operation

No- Go to Step 12

12. Replace the faulty stepper motor

REP 2.10 for M1 & M2

REP 2.22 for M16 and M17

REP 2.23 for M18

This clears the fault

Yes- Resume normal operation

No- Go to Step 13

13. Replace Main Control Board A (REP 11.1)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.2 Check M3 & M5

Locate Motors M3 and M5:

- Raise the top cover and lower bypass
 - M3 is located on the deflector module. You should be able to hear the motor run and see the deflector rollers rotate when motor is activated.
 - M5 is located on the vacuum stacker module. Refer to PL 5.14. The green belts will turn when M5 is activated.
 - Insert a cheater into the upper bypass panel interlock switch
1. Do GP 6.3.5 [Motors Procedure](#) to check that the corresponding motors turn. M3 turns the N8 nip rollers. M5 turns the green belts on the vacuum stacker.

The corresponding components turn when the Motor is activated

Yes- Return to the RAP that directed you here

No- Identify the malfunctioning Motor(s) and go to Step 2.

2. Make sure the motor wire is connected securely at the Driver Board and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the Main Control Board. For Motor M3, the Driver Board is located on the rear of the eWire. For Motor M5, do REP 1.6 to remove the Side Cover. The Motor Driver for M5 is located on the left side of the eWire frame.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Inspect the timing belt for the corresponding motor drive. Ensure that the timing belt is not broken or frayed. Refer to the REPs below to access the appropriate timing belt.
 - M3: Refer to REP 5.5, Deflector Motor Replacement
 - M5: Refer to REP 4.9, Stacker Drive Belt Replacement

Timing Belt Looks OK

Yes- Go to Step 4

No- Replace the faulty belt and resume operation

4. Check the tightness of the set screw of pulleys on the stepper motor shaft. Check tightness of the set screws on pulleys driven by the motor timing belt.

All the set screws are secured tightly

Yes- Go to Step 5

No- Tighten the loose set screw and repeat Step 1

5. For the motor in question, check the DIP switch settings for the corresponding Driver Board. Refer to the table below to find the correct DIP Switch settings.

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
M3	OFF	ON	OFF	ON	ON
M5	OFF	ON	OFF	ON	OFF

All the DIP switch setting are correct

Yes- Go to Step 6

No- Correct the DIP switch and repeat Step 1

6. Check if there is power to the Driver board. LED 1 on the Driver board should be lit.

If LED 1 is lit, it means there is 24V DC power to the Driver board from the Main Control board.

If LED 2 is lit, it means there is a fault with either the Driver board or the stepper motor.

LED 1 is not Lit- Go to Step 7

LED 1 is Lit- Go to Step 8

7. Check that the cable(s) connecting the Driver Board 24 VDC signal to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, refer to [GP 6.24](#)

The cables look okay

Yes- Go to Step 8

No- Replace the faulty cable and repeat Step 1

8. Check that the cable(s) connecting the Driver Board Control signal to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#)

The cables look okay

Yes- Go to Step 9

No- Replace the faulty cable and repeat Step 1

9. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation

No- Go to Step 10

10. Replace the driver board for the faulty motor, with DIP switch set correctly for the position you are replacing. Refer to REP 9.6, Stepper Driver Boards Replacement.

This clears the fault

Yes- Resume normal operation

No- Go to Step 11

11. Replace the faulty stepper motor

REP 5.5 for M3

REP 4.5 for M5

This clears the fault

Yes- Resume normal operation

No- Go to Step 12

12. Replace Main Control Board A (REP 11.1)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.3 Check M6 and M7

Locate Motors M6 and M7:

- Raise the top cover and lower bypass
- Insert a cheater into the upper bypass panel interlock switch
- M6 is located on the front tapper assembly. Refer to PL 5.17
- M7 is located on the rear tapper assembly. Refer to PL 5.18
- Alternatively, you can do [GP 6.3.6](#) Cycle Tappers to cycle both Tappers just once.

1. Do [GP 6.3.5 Motors Procedure](#) to check that the corresponding motors turn when activated.

The Tapper linkage turns when Motor is activated.

Yes- Return to the RAP that directed you here

No- Identify the malfunctioning Motor(s) and go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.24](#) for termination locations.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Check the tightness of the set screw of the hub on the DC motor shaft.

Set screw is secured tightly

Yes- Go to Step 4

No- Tighten the loose set screw and resume operation

4. Check that the cable(s) connecting the Motor to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#).

The cables look okay

Yes- Go to Step 5

No- Replace the faulty cable and resume normal operation

5. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation

No- Go to Step 6

6. Replace the faulty motor. Refer to REP 7.2, Tapper Motor Replacement M6 and M7.

This clears the fault

Yes- Resume normal operation

No- Go to Step 7

7. Replace the cables from the motor to the Main Control Board. Refer to Section 7, Wiring and GP 6.24 to identify the correct cable part numbers.

This clears the fault

Yes- Resume normal operation

No- Go to Step 8

8. Replace Main Control Board A (REP 11.1)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.4 Check M8

To access motor M8:

- Open the door and slide out the Element Feeder.
- Do [GP 6.8](#) to remove the supply spool
- Insert a cheater into the element feeder door interlock switch

1. Do [GP 6.3.5 Motors Procedure](#) to check that the Rewind Spool rotates when Motor M8 is activated.

The Motor operates as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to REP 3.9 to access the M8 Motor connection.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Inspect the round belt for damage.

Belt is okay

Yes- Go to Step 4

No- Replace the spindle drive assembly 7718107, Refer to REP 3.9. Repeat Step 1.

4. Check the tightness of the set screw of the pulley on the motor shaft. Check tightness of the set screw on the connected pulley.

All the set screws are secured tightly

Yes- Go to Step 5

No- Tighten the loose set screw and repeat Step 1.

5. Check that the cable(s) connecting the Motor to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#)

The cables look okay

Yes- Go to Step 6

No- Replace the faulty cable and resume normal operation

6. Do [GP 6.3.7 FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation

No- Go to Step 7

7. Replace the faulty motor. Refer to REP 3.9, Spool Rewind Motor Replacement.

This clears the fault

Yes- Resume normal operation

No- Go to Step 8

8. Replace the cables from the motor to the Main Control Board. Refer to GP 6.24 for cable part numbers.

This clears the fault

Yes- Resume normal operation

No- Go to Step 9

9. Replace Main Control Board, B (REP 11.3)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.5 Check M9 and M10

Identify Motor M9 and M10:

- Slide the element feeder drawer all the way out of the machine
- M9 is located on the Element Feed Sprocket. M10 is located on the Element Feed Belt drive, near the front of the drawer.
- Insert a cheater into the element feeder door interlock switch



1. Do GP 6.3.5 [Motors Procedure](#) to check the motors activate as expected. M9 will rotate the Element Feed Sprocket. M10 will rotate the Element Feeder Belt.

Motors turn as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the Driver Board and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to REP 3.8 to locate the M9 motor cable connections.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Inspect the element feed belt. Manually advance the belt using the attached knob to confirm that the belt is intact, and that nothing is hindering the smooth advance of the belt.

Belt looks OK

Yes- Go to Step 4

No- Follow REP 3.6 to replace 7716993, Element Feeder Belt.

4. Check the tightness of the set screw of the pulley on the stepper motor shaft.

All the set screws are secured tightly

Yes- Go to Step 5

No- Tighten the loose set screw and repeat Step 1

5. Check the DIP switch settings for the Driver Board. Refer to the table below.

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
M9	ON	OFF	ON	OFF	ON
M10	ON	OFF	ON	OFF	OFF

DIP switch setting are correct

Yes- Go to Step 6

No- Correct the DIP switch and repeat Step 1

6. Check if there is power to the Driver board. LED 1 on the Driver board should be lit.

If LED 1 is lit, it means there is 24V DC power to the Driver board from the Main Control board.

If LED 2 is lit, it means there is a fault with either the Driver board or the stepper motor.

Continue to Step 7

7. Check that the cable(s) connecting the Driver Board to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#)

The cables look okay

Yes- Go to Step 8

No- Replace the faulty cable and resume normal operation

8. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation

No- Go to Step 9

9. Replace the driver board for the faulty motor, with DIP switch set correctly for the position you are replacing.

This clears the fault

Yes- Resume normal operation

No- Go to Step 10

10. Replace the faulty stepper motor. Refer to REP 3.8 for motor M9 and REP 3.7 for motor M10.

This clears the fault

Yes- Resume normal operation

No- Go to Step 11

11. Replace the cables from control board to driver board. Refer to GP 6.24 for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 12

12. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation;

No- Go to Step 13.

13. Replace Main Control Board A (REP 11.1)

This clears the fault

Yes- Resume normal operation;

No- Escalate to second level

WARNING

Moving Parts, keep hands clear of the knife when performing motor checks. Make sure that power is disconnected from the machine before touching any components attached to the knife.

Locate motor M11:

- Slide the element feeder drawer all the way out of the machine.
 - The knife module is located near the element feed sprocket knob, refer to PL 5.11
 - Insert a cheater into the element feeder door interlock switch
1. Do GP 6.3.6 [Functional Test](#) “Knife Cycle” to check the function of the Knife Motor. Knife blade should cycle forward and back when the functional test is operated.

Knife motor operates as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.24](#) to identify termination location.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Do GP 6.3.7 [FIRMWARE UPGRADE](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation;

No- Go to Step 4

4. Do REP 3.15 to replace the Knife Module 7716862

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

5. Replace the cables from the motor to the Main Control Board. Refer to [GP 6.24](#) for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 6

6. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

WARNING

Moving Parts, keep hands clear of the knife when performing motor checks. Make sure that power is disconnected from the machine before touching any components attached to the knife.

Locate motor M12 and M13:

- Slide the element feeder drawer all the way out of the machine.
- M12 Pushover Motor moves the expanding T mechanism forward and back. M13 Expanding T motor expands the Expanding T rails.
- Insert a cheater into the element feeder door interlock switch

1. Do GP 6.3.6 [Functional Test](#) "Pushover" to check the function of the Pushover Motor. OUT will move the pushover mechanism forward, HOME will move the pushover mechanism back.

Do GP 6.3.5. [Motors Procedure](#) to check the function of the Expanding T motor. The expanding T rails should open and close when M13 is activated.

Motor operates as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.24](#) to identify termination location.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Do GP 6.3.7 [FIRMWARE UPGRADE](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation;

No- Go to Step 4

4. Do REP 3.16.8 to replace motor M13 or REP 3.16.7 to replace motor M12.

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

5. Replace the cables from the motor to the Main Control Board. Refer to [GP 6.24](#) for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 6

6. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.8 Check M15 and M21

WARNING

Moving Parts, keep hands clear of the eWire when performing motor checks. Make sure that power is disconnected from the machine before touching any moving parts.

Locate Motor M15 and M21:

- Open the lid and raise the lower bypass panel.
- M15 drives the linear travel belt for the Holder Module. M21 drives the linear travel belt for the Closer Module.

1. To check the motor function, manually move the Closer Module and Holder Module forward. When an interlock cheater is inserted, the Closer and Holder will return to their home positions (at the far right of the eWire).

Motors return to home position as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the Driver Board and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. The motor Driver boards are located on the rear of the eWire Frame.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Inspect the timing belt. Confirm that the belt is not frayed or worn and that no teeth are missing.

Belt looks OK

Yes- Go to Step 4

No- Follow REP 8.10 to replace Closer Linear Belt or 8.11 and 8.12 to replace Holder Linear Belt.

4. Check the tightness of the set screw of the pulley on the stepper motor shaft.

All the set screws are secured tightly

Yes- Go to Step 5

No- Tighten the loose set screw and repeat Step 1

5. Check the DIP switch settings for the Driver Board. Refer to the table below.

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
M15	OFF	OFF	ON	OFF	OFF
M21	OFF	OFF	ON	OFF	OFF

DIP switch setting are correct

Yes- Go to Step 6

No- Correct the DIP switch and repeat Step 1

6. Check if there is power to the Driver board. LED 1 on the Driver board should be lit.

If LED 1 is lit, it means there is 24V DC power to the Driver board from the Main Control board.

If LED 2 is lit, it means there is a fault with either the Driver board or the stepper motor.

Continue to Step 7

7. Check that the cable(s) connecting the Driver Board to the Main Control Board are intact. Refer to the motor cables table to identify the appropriate cable part numbers, [GP 6.24](#)

The cables look okay

Yes- Go to Step 8

No- Replace the faulty cable and resume normal operation

8. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation

No- Go to Step 9

9. Replace the driver board for the faulty motor, with DIP switch set correctly for the position you are replacing.

This clears the fault

Yes- Resume normal operation

No- Go to Step 10

10. Replace the faulty stepper motor. Refer to REP 8.7 for motor M15 and REP 8.8 for motor M21.

This clears the fault

Yes- Resume normal operation

No- Go to Step 11

11. Replace the cables from control board to driver board. Refer to [GP 6.24](#) for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 12

12. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation;

No- Go to Step 13.

13. Replace Main Control Board A (REP 11.1)

This clears the fault

Yes- Resume normal operation;

No- Escalate to second level

GP 6.5.9 Check M14

WARNING

Moving Parts, keep hands clear of the eWire when performing motor checks. Make sure that power is disconnected from the machine before touching any moving parts.

Locate motor M14:

- Open the lid and raise the lower bypass.
 - The Holder Rotate motor is located on the back of the Holder, at the far right of the eWire.
 - Insert a cheater into the top cover Interlock switch.
1. Do GP 6.3.6 [Functional Test](#) “Holder Rotate” to check the function of the Holder Rotate Motor.

Knife motor operates as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.24](#) to identify termination location.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Do GP 6.3.7 [FIRMWARE UPGRADE](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation;

No- Go to Step 4

4. Check the tightness of the setscrew on the M14 motor shaft. Check the tightness of all screws in the Holder Rotate Linkage.

All components are securely tightened

Yes- Go to Step 5

No- Tighten up the screws and repeat Step 1.

5. Replace the cables from the motor to the Main Control Board. Refer to [GP 6.24](#) for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 6

6. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.10 Check M19

WARNING

Moving Parts, keep hands clear of the eWire when performing motor checks. Make sure that power is disconnected from the machine before touching any moving parts.

Locate motor M19:

- Motor M19 is located on the Book Drawer.
- Open the book drawer door all the way
- Insert a cheater into the Book Tray Interlock

1. Do GP 6.3.6 [Functional Test](#) "Tray Home" to check the function of the Book Drawer Motor. The book drawer should rise all the way to its up position. If it is already up, it will move down slightly and return home.

Motor operates as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.24](#) to identify termination location.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Do GP 6.3.7 [FIRMWARE UPGRADE](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation;

No- Go to Step 4

4. Check the tightness of the set screws on the Pulley attached to the motor shaft and the pulley attached to the Book Drawer shaft.

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

5. Inspect the Timing Belt for damage. Make sure that the belt is not frayed or damaged.

Belt Looks OK

Yes- Go to Step 6

No- Replace the Timing Belt.

6. Inspect the Book Drawer for damage or obstructions. Replace any parts that look damaged or worn.

Book Drawer Mechanism looks OK

Yes- Go to Step 7

No- Replace the damaged components.

7. Replace the cables from the motor to the Main Control Board. Refer to [GP 6.24](#) for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 8

8. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.5.11 Check M20

WARNING

Moving Parts, keep hands clear of the eWire when performing motor checks. Make sure that power is disconnected from the machine before touching any moving parts.

Locate motor M20:

- Motor M20 is located on the Closer Module.
- Raise the lid and raise the lower bypass panel.
- Insert a cheater into the Top Cover Interlock

1. Do GP 6.3.6 [Functional Test](#) "Cycle Closer" to check the function of the Closer Motor. The closer jaws should close and open when the Functional Test is initiated.

Motor operates as expected

Yes- Return to the RAP that directed you here

No- Go to Step 2.

2. Make sure the motor wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.24](#) to identify termination location.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Do GP 6.3.7 [FIRMWARE UPGRADE](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Resume normal operation;

No- Go to Step 4

4. Check the tightness of the set screws on the Pulley attached to the motor shaft. Tighten any loose parts

This clears the fault

Yes- Resume normal operation

No- Go to Step 5

5. Inspect the Closer Module parts for damage. Replace any parts that are worn or damaged.

This clears the fault

Yes- Return to normal operation

No- Go to Step 6

6. Replace the cables from the motor to the Main Control Board. Refer to [GP 6.24](#) for cable identification.

This clears the fault

Yes- Resume normal operation

No- Go to Step 7

7. Replace Main Control Board B (REP 11.3)

This clears the fault

Yes- Resume normal operation

No- Escalate to second level

GP 6.6 SOLENOID CHECKS

GP 6.6.1 Check Solenoids L1, L2, L3, and L4

Locate Solenoids L1, L2, L3, and L4:

- Raise the lid by lifting the release handle
- Insert a cheater into the Lid Interlock.
- Solenoid L1, diverter solenoid, is located on the rear of the Lower Transport Assembly. Refer to PL 5.3.
- Solenoids L2, L3, and L4 are located on the top of the Upper Transport Assembly. Refer to PL 5.3.

WARNING

Moving Parts, keep hands clear of moving parts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

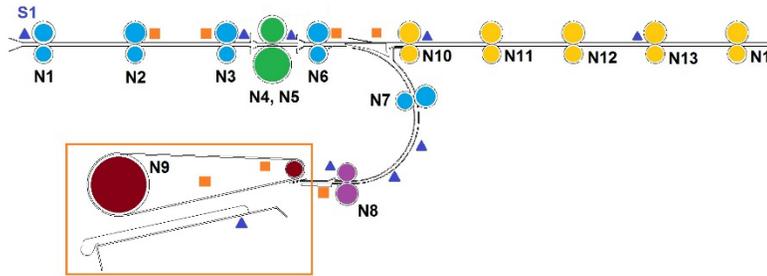
1. Do GP 6.3.4 [SOLENOIDS Procedure](#) to activate and deactivate Solenoid L1, L2, L3, and/or L4

- The diverter gate should rise and fall when L1 is cycled.



- The corresponding rollers should rise and fall when L2, L3, and L4 are cycled.
 - L2: Nip Rollers N2

- L3: Nip Rollers N3
- L4: Nip Rollers N6



Gates or Rollers rise and fall when solenoids are cycled

Yes- Return to the RAP that directed you here

No- Go to Step 2

2. Make sure the solenoid wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.26](#) for termination locations.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Check that the cable(s) connecting the Solenoid to the Main Control Board are intact. Refer to the solenoid cables table [GP 6.26](#) to identify the appropriate cable part numbers.

The cables look okay

Yes- Go to Step 4

No- Identify and replace the faulty cable

4. Do [GP 6.3.7 FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Return to normal operation

No- Go to Step 5

5. Replace the solenoid assembly as indicated below

L1: Replace 7718102 diverter solenoid linkage assembly (refer to REP 2.18)

L2 or L3: Replace 7717125 disengaging roller sub-assembly (refer to REP 2.19)

L4: Replace 7717128 disengaging roller sub-assembly (refer to REP 2.20)

This clears the fault

Yes- Return to normal operation

No- Go to Step 6

6. Do REP 11.1 Main Control Board A Replacement.

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

GP 6.6.2 Check L5 Deflector Solenoids

Locate Solenoid L5:

- Raise the top cover by releasing the latch and raise the Lower Bypass Assembly by lifting the handle.
- Raise the Vacuum Module to access the Deflector
- Insert a cheater into the Lid Interlock
- There are two L5 solenoids located on the deflector module, refer to PL 5.16. The Deflector will raise and lower when L5 is activated.



WARNING

Moving Parts, keep hands clear of moving parts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

1. Do GP 6.3.4 [SOLENOIDS Procedure](#) to activate and deactivate Solenoid L5
 - The deflector mechanism should pivot when solenoid L5 is activated.
 - Look carefully to confirm that the front and rear Deflector Solenoids are both firing simultaneously.

Deflector mechanism pivots when L5 is activated

Yes- Return to the RAP that directed you here

No- Go to Step 2

2. Make sure the solenoid wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to [GP 6.26](#) for termination locations.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Check that the cable(s) connecting the Solenoid to the Main Control Board are intact. Refer to the solenoid cables table [GP 6.26](#) to identify the appropriate cable part numbers.

The cables look okay

Yes- Go to Step 4

No- Identify and replace the faulty cable

4. Do 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Return to normal operation

No- Go to Step 5

5. Replace 7718113 Deflector Solenoid Linkage, refer to REP 5.6

This clears the fault

Yes- Return to normal operation

No- Go to Step 6

6. Do *REP 11.1 Main Control Board A Replacement*.

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

GP 6.6.3 Check L6 and L7 Vacuum Module Solenoids

To access Solenoids L6 and L7:

- Raise the top cover by releasing the latch
- To test Solenoid L6, raise the Vacuum Module by lifting the handle and tilting it back towards the infeed side of the eWire. L6 will activate the kick-down paddle.
- There are two L7 solenoids located on the front and rear of the vacuum module, refer to PL 5.14. To check L7, lower the Vacuum Module into its down position, and check that the kick down legs actuate when L7 is actuated.
- Insert a cheater into the interlock switch for the upper bypass assembly

WARNING

Moving Parts, keep hands clear of moving parts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

1. Do GP 6.3.4 [SOLENOIDS Procedure](#) to activate and deactivate Solenoids L6 and L7
 - The kick down runners (4 total) should cycle down when the L7 solenoids are cycled. Note that both the front and back L7 solenoids should cycle when activated. Kick down linkages will retract when the Vacuum Module is raised, so this is easiest to test in the down position.
 - The drag finger plate should advance when the solenoid L6 is activated. This is easiest to see when the Vacuum Module is in its raised position.

Linkages Move when L6 and L7 are cycled

Yes- Return to the RAP that directed you here
No- Go to Step 2

2. Make sure the solenoid wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Check that the cable(s) connecting the Solenoid to the Main Control Board are intact. Refer to the solenoid cables table to identify the appropriate cable part numbers, [GP 6.26](#).

The cables look okay

Yes- Go to Step 4

No- Identify and replace the faulty cable.

4. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Return to normal operation; **No-** Go to Step 5

5. Replace appropriate solenoids, refer to REP 4.2 Solenoid Replacement, Kickdown Solenoid, Rear (L7), REP 4.3 Solenoid Replacement, Kickdown Solenoid, Front (L7), and REP 4.4 Solenoid Replacement Drag Finger Solenoid (L6).

- 7718112, Kick Down Solenoid Assembly
- 7715289, Drag Finger Solenoid

This clears the fault

Yes- Return to normal operation

No- Go to Step 6

6. Replace the Vacuum Module Assembly 7716805 (refer to REP 4.1)

This clears the fault

Yes- Return to normal operation

No- Go to Step 7

7. Do REP 11.1 Main Control Board A Replacement, or REP 11.3 Main Control Board B Replacement

This clears the fault

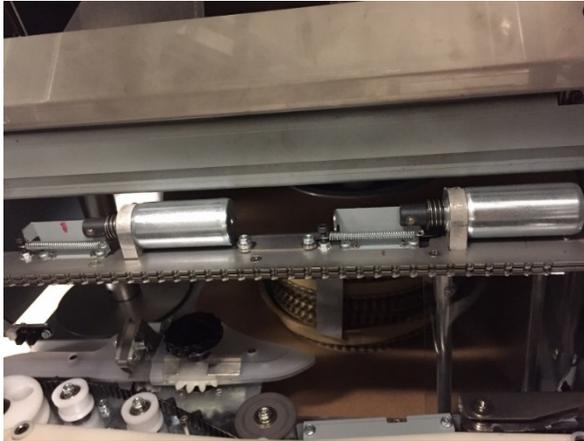
Yes- Return to normal operation

No- Escalate to second level

GP 6.6.4 Check L8 Holder Lock Solenoid

To access Solenoid L8:

- Raise the top cover by releasing the latch
- There are two L8 solenoids located on the holder module, refer to PL 5.22
- Open and close the lid or door to home the Holder Module.
- Insert a cheater into the interlock switch for the upper bypass assembly.



WARNING

Moving Parts, keep hands clear of moving parts when the Interlock Cheater is inserted. See Section 0, page vii for other languages.

1. Do 6.2.5 [SOLENOIDS Procedure](#) to activate and deactivate Solenoid L8
 - The holder lock mechanism should cycle closed and open when L8 is activated
 - Note that both the front and back solenoids should cycle when activated

Holder Lock mechanism cycles forward and back when L8 is cycled

Yes- Return to the RAP that directed you here

No- Go to Step 2

2. Make sure the solenoid wire is connected securely at the header and at the Main Control Board (PL 5.27). Do REP 1.5 to remove the Rear Cover to gain access to the connector at the Control Board. Refer to GP 6.26 for termination locations.

All the connectors are securely connected.

Yes- Go to Step 3

No- Make the connection and resume operation

3. Check that the cable(s) connecting the Solenoid to the Main Control Board are intact. Refer to the solenoid cables table to identify the appropriate cable part numbers, refer to [GP 6.26](#).

The cables look okay

Yes- Go to Step 4

No- Identify and replace the faulty cable

4. Do GP 6.3.7 [FIRMWARE UPGRADE Procedure](#) to Re-flash the firmware for the eWire

This clears the fault

Yes- Return to normal operation

No- Go to Step 5

5. Replace 7717746 Holder Lock Solenoid L8, refer to REP 8.16

This clears the fault

Yes- Return to normal operation

No- Go to Step 6

6. Replace 7716612 Holder Lock Assembly, refer to REP 8.17 Holder Lock Sub-Assembly Replacement

This clears the fault

Yes- Return to normal operation

No- Go to Step 7

7. Do *REP 11.3 Main Control Board B Replacement*.

This clears the fault

Yes- Return to normal operation

No- Escalate to second level

GP 6.7 Supply Spool Installation

Do the following procedure to install a new supply spool into the eWire. If you need to remove a spool that is not yet empty first, first do GP 6.8.

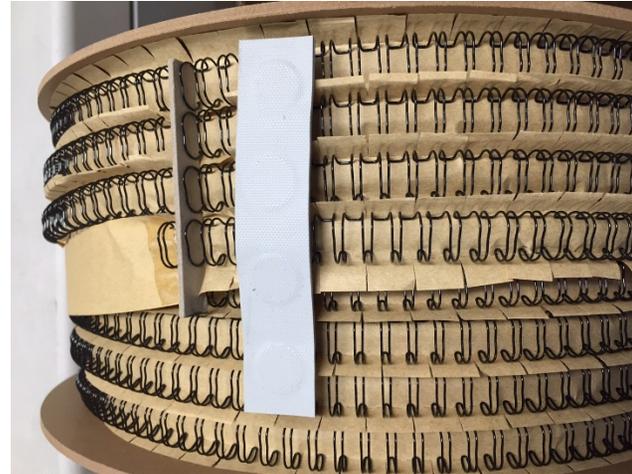
1. Stop the Printer/Copier. Open the eWire access door panel and slide the Element Feeder Drawer out.
2. If applicable, go to GP 6.8 to remove the previously installed element spool.
3. Remove the wire shield by pulling on the handle to remove it. Place it on top of the



4. Remove the spool holder cap from the spindle by turning it counter-clockwise.



5. Remove spool from carton and remove the plastic shrink wrap. Place a flexible magnet on the spool behind the flat cardboard insert. Do not remove the cardboard insert until the wire is secured.



6. Install the spool by sliding it onto the Spindle Shaft. The circular bar code must be facing towards the inside of the Element Feeder. Secure the spool by tightening the Spool Holder Cap.
7. After confirming that the flexible magnet is securing the wire end, carefully remove the cardboard spacer.



8. Pull the wire and paper away from the spool and hold them both in one hand. With your free hand install the wire shield.



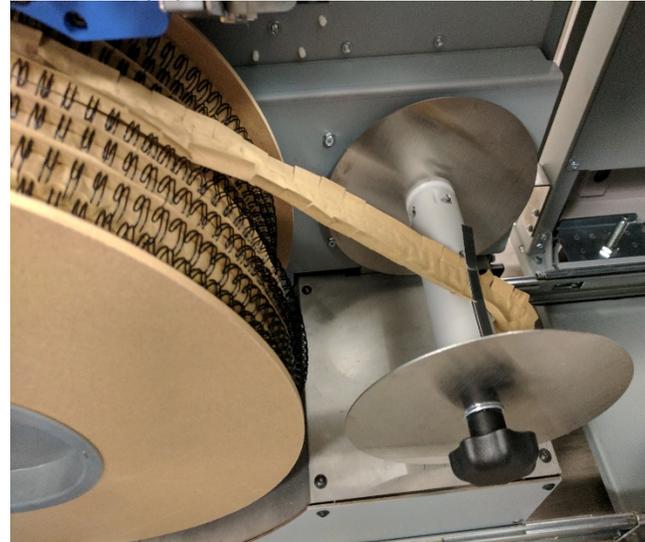
9. While still holding the carrier paper, use the magnetic catch to hold the wire.



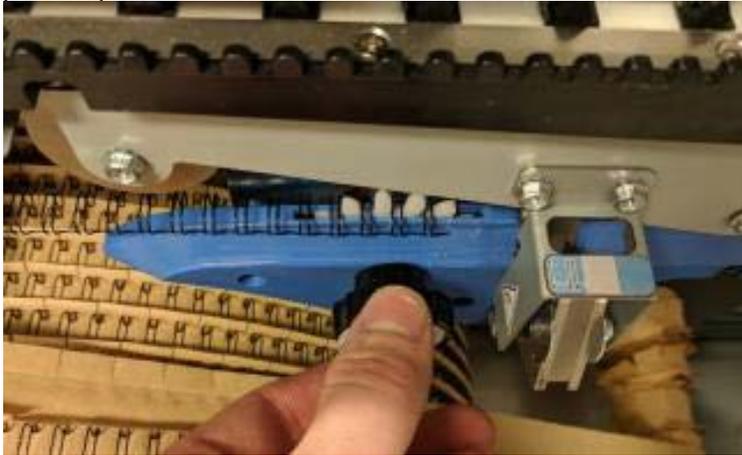
10. Lift the metal guide of the shield and slide the carrier paper between it and the lower bars.



11. Attach the loose end of the support paper to the paper feed hub. Secure the paper to the hub via the metal clip.



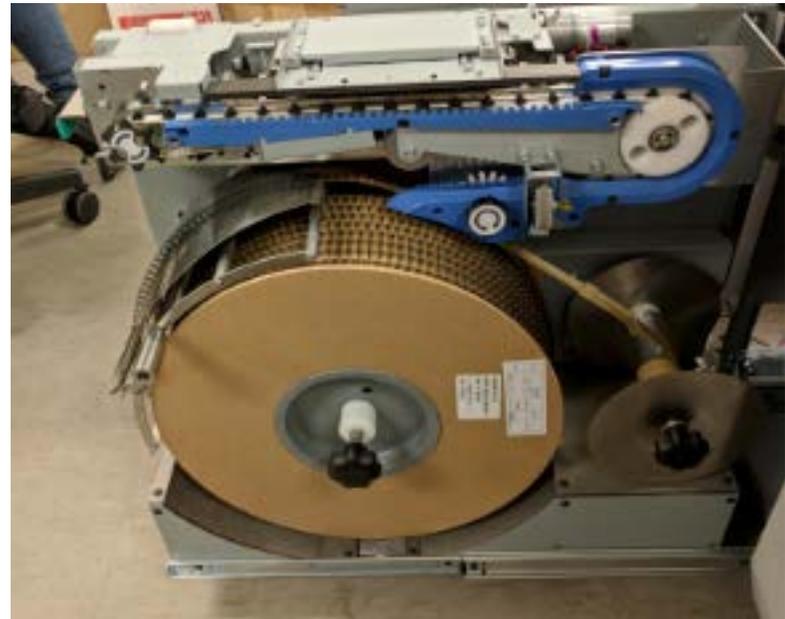
12. Turn the rewind spool clockwise until you have enough wire to reach the blue wire guide. Slide the wire onto the plastic wire guide and feed it into the plastic sprocket. Use the knob to manually turn the plastic sprocket and aid wire installation



13. Adjust the wire end position by using the knob attached to the wire feed sprocket. The wire end should line up in the window on the blade guard.



14. Confirm that the spool is installed properly.
- a. Is the rewind paper secured to the Rewind Hub and taut?
 - b. Is the wire fed loosely across the wire shield?
 - c. Is there one row of slack wire beneath the spool, in contact with the bottom of the Element Feeder Drawer?
 - d. Is the end of the wire in line with the mark on the Element Guide Nose, just in front of the Knife?
 - e. Is all the spool packaging and the flexible magnet removed?



15. Slide the Element Feeder Drawer back into the eWire and close the door.

GP 6.8 Supply Spool Removal

Do the following procedure to remove a partially full supply spool from the eWire. If the spool is empty, the same general procedure can be used but there is no need secure loose wire to the spool.

1. Stop the Printer/Copier. Open the eWire access door panel and slide the Element Feeder Drawer out.
2. Turn the sprocket knob counter-clockwise to disengage the end of the wire from the Element Feed assembly. Take the loose wire end and secure it to the magnetic holder on the Element Feeder.



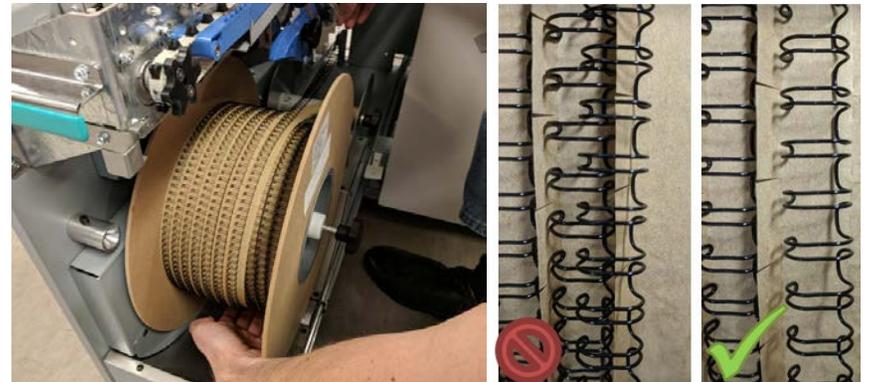
3. Turn the rewind spool counterclockwise to generate slack in the carrier paper.



4. Lift the metal wire guide on the shield and pull the carrier paper out from the shield. Then Remove the wire shield. Pull on the wire shield handle to remove the entire shield, and place the shield safely on top of the element feeder.



5. Rewind the spool counterclockwise to take the excess slack from the wire and the paper.
6. Take the wire off the magnet and place it on the empty carrier paper you rewound. Pull the wire toward the rewind spool making sure to take up all of the slack. Ensure that the wire you are placing back on the spool is contained in the paper you are rewinding and does not interfere with the other rows of wire.



7. Secure the wire using a magnet as shown. Repeat steps 3 and 5 until all the wire is on the spool.



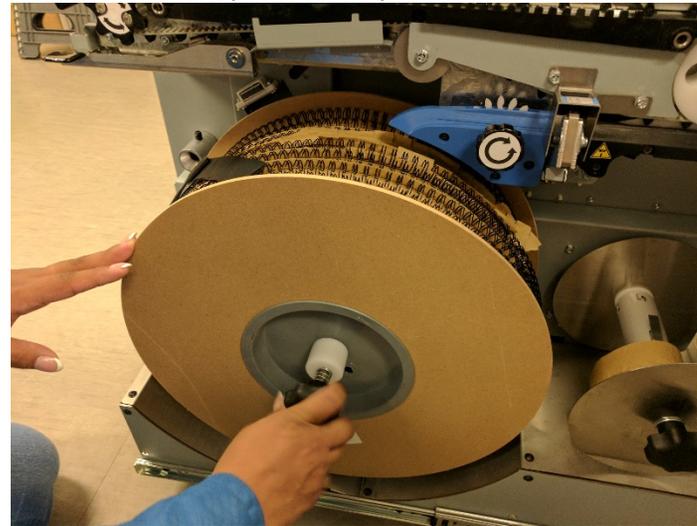
8. Secure the wire rows on the spool at the end of the loose wire using the 2nd magnet strip, then move the first magnet strip you placed as shown here. Place the magnets across rows of wire so that the loose end of wire is secured to the wound rows. The magnets prevents the wire from slipping when the spool is removed.



9. Tear the carrier paper where it leaves the rewind spool. Your carrier paper should extend about 12 inches (30 cm) beyond the loose end of your wire.



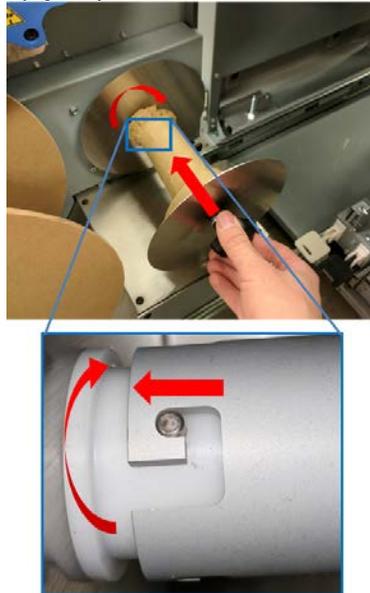
10. Unscrew the spool retainer. Turn the knob counterclockwise to loosen and remove the cap. Set the cap aside.



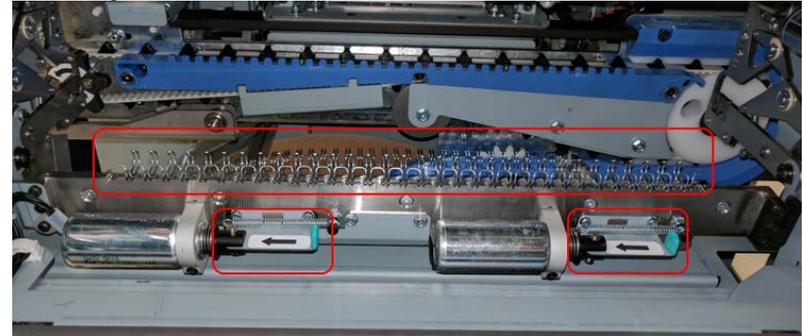
11. Remove the spool from the machine. Pull the spool straight away from the machine to slide it off the spindle. Properly store the spool for future use. Refer to [GP 6.9](#) for Spool Storage guidelines.



12. To remove the rewind spool from the feed spindle, push the hub in and turn it clockwise. Remove the excess paper by sliding it off the hub. If the rewind spool is full of paper, it may be difficult to remove. The spool must be pressed in firmly before rotating to disengage the pin. Reinstall the empty Paper Feed Hub onto the spindle.



13. Open the top cover and identify the wire Holder. Check if there is a cut length of wire on the Holder (long boxed section). If there is, remove it by pressing the Holder release (small boxed sections) and removing the wire.



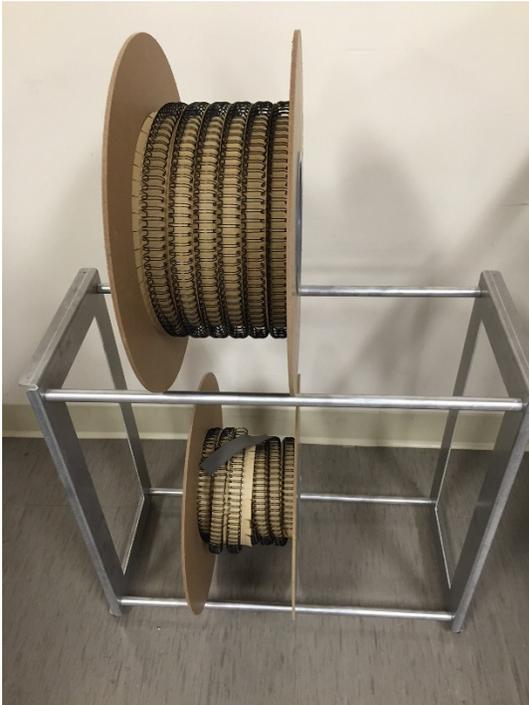
14. If a new supply spool is to be installed, refer to GP 6.7. If not, reinstall the Spool Holder Cap and Wire Guide for the next operation.
15. Slide the Element Feeder Drawer back into the eWire and close the door.

GP 6.9 Spool Storage

Always properly store the eWire Supply Spool when it is not in use. Unopened cartons should always be stored vertically as indicated on the spool packaging. Do not remove the packaging or shrink wrap until you are ready to use the spool.



2. Partially used spools must always be stored vertically. Use the recommended spool storage rack for best performance.



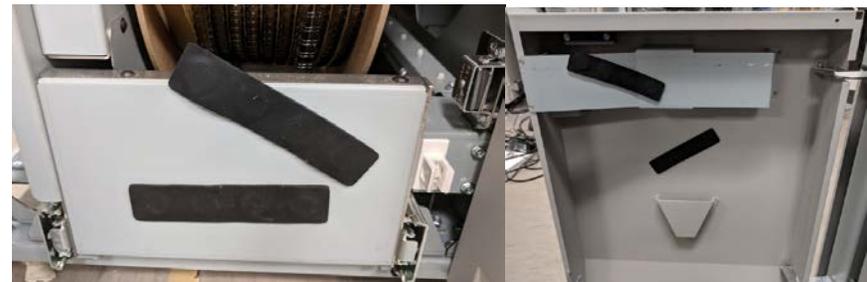
3. Never store the spool on its side, as wire twisting could occur



4. Do not store the magnet strips on the inside of the element feeder drawer when not in use, this can cause wire jams. Store the magnets as shown below on the element feeder drawer or away from the machine. When storing them on the element feeder, ensure that they are completely on the flat face of the drawer and are not near the spool.



Example of improper magnet storage:



GP 6.10 Internal Inspection

Do the following whenever the cover has been removed for corrective maintenance.

1. Visually inspect for defects and problems such as damaged components, loose screws or nuts, abraded wire insulation, loose terminals, etc.
2. Correct any problems before returning the machine to service.

GP 6.11 External Cleaning

Do the following to clean the exterior of the eWire.

1. Clean the exterior covers with a soft cloth, mild detergent and warm water. Use a minimal amount of water to avoid dripping onto sensitive components.
2. Do not use chemical cleaners or solvents as these may have a harmful effect. Use detergent sparingly to avoid contact with electrical components.

Warning: Make sure you disconnect the eWire from its power source before cleaning. Failure to observe this warning could result in death or serious injury. See *Section 0, page vii for other languages.*

GP 6.12 Internal Cleaning

Do the following to clean the interior of the eWire.

1. Open the doors and lid and remove paper dust and debris. Paper dust can accumulate throughout the machine including around the motors and other electrical components.
2. Use a vacuum cleaner if possible. A small paintbrush can also be used but extreme care should be used around electrical components.
3. Clean non-electrical components with alcohol, an approved cleaner, or a soft cloth moistened with mild detergent and warm water.
4. Clean the Rollers with alcohol.

Warning: Make sure you disconnect the eWire from its power source before cleaning. Failure to observe this warning could result in death or serious injury. See *Section 0, page vii for other languages.*

GP 6.13 Base Cleaning

Paper dust and particles fall to the bottom of the element feeder. Clean every service call.

1. Clean with a vacuum cleaner each time the machine is serviced. The customer can also do this between the technician's visits.
2. Clean dust off of the film covering S22 (GP 6.4.4) with a dry cloth

GP 6.14 Idler Roller and Idler Springs Inspection

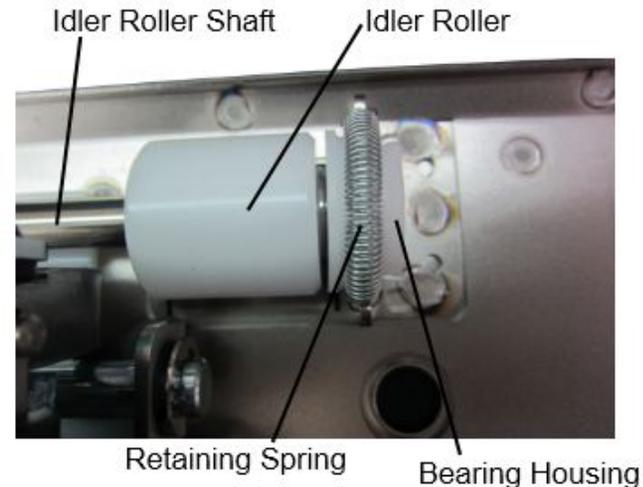
Idler rollers press against the drive rollers and move the paper through the eWire.

Maintenance Schedule

Inspect and clean every 1000K cycles.

Procedure

1. Inspect the rollers for wear, debris, toner marks, unevenness, and dents.
2. Inspect springs (2) for each Idler Roller, and make sure they are correctly hooked.
3. Inspect the Bearing Housing. The Bearing Housing should slide freely in the Bearing Forks.



GP 6.14.1 Roller Cleaning

Use this procedure to clean the Rollers.

Maintenance Schedule

Inspect and clean every 1000K cycles.

Procedure

1. Do REP 2.4 or REP 2.5 *Idler Roller Replacement* to remove the Idler Roller.
2. Clean the Idler Rollers with a soft cloth and alcohol.
3. Inspect rollers for wear patterns or groves. The roller surface should be smooth.
4. Ensure the rollers turn freely on the shaft and that the idler roller shaft "floats" freely in the bushing forks.
5. Do REP 2.4 or REP 2.5 *Idler Roller Replacement* to re-install the Idler Roller.

GP 6.15 Optical Sensor Cleaning

Do the following procedure to inspect and clean the Optical Sensors. Clean the Optical Sensors if excessive debris or dust is seen in the vicinity, or if there is a possible issue with the function of the sensor.

1. Use compressed air to blow the debris off each sensor. If necessary, use a clean cloth with alcohol to carefully clean the surface of the sensor. The following illustration shows an example of the sensors.



2. If necessary, refer to GP 6.4 [Sensor Checks](#) to locate and verify function of the sensors.

Do the following to inspect and clean the Bypass Paper Path.

1. Open the top cover and raise the Upper Bypass to access the Bypass Paper Path.
2. Inspect the Bypass panel, rollers, and entrance guide for wear, damage, and obstructions.
3. Inspect the rollers for wear patterns or groves. The roller surface should be smooth and even. Make sure the rollers are clean. Clean rollers with a soft cloth and alcohol.
4. Inspect the polished metal surfaces on the Upper Bypass and Lower Bypass. Ensure the surface is smooth and free of debris. Clean the Upper Bypass and Lower Bypass plates with a cloth and alcohol.
5. Ensure the bypass diverter moves freely and returns to the bypass position.

GP 6.17 Timing Belt Inspection

GP 6.16 Bypass Paper Path Inspection and Cleaning

Use the following procedure to inspect the Timing Belts throughout the eWire. Inspect the Timing Belts if excessive wear or debris is observed, or if the function of the components driven by the belt appears to be compromised. Black dust around the area of a Timing Belt or frayed edges could indicate that the Belt is close to failure.

Procedure

Do the following to inspect the Timing Belts.

1. Inspect all timing belts for wear, missing teeth, frayed edges, and cracks.
2. For replacement, refer to the heading for the appropriate module in Section 4, Replacement Procedures.
3. Check for proper deflection of belts. The belts should be slightly loose with approximately 1/4" deflection when pressed.
4. Belts that are too loose will not drive properly and belts that are too tight can wear out prematurely or damage their driven components.
5. If the Belt has a Tensioner along the length of the Belt, the tension can be adjusted by loosening the screws on the Tensioner, and adjusting the Tensioner position until the proper tension is achieved.

GP 6.18 Solenoid Cleaning and Inspection

Do the following to inspect and clean the Solenoids every 1000K cycles.

1. Clean the solenoid and surrounding area with a vacuum cleaner and canned air.
2. Make sure the solenoid is clean and dry.
3. Inspect for dirt or obstructions, wear or a damage spring.
4. Inspect and ensure the Solenoid linkage moves freely. Press linkage down and release. Linkage should return.
5. If necessary, refer to GP 6.3.4 to test the function of the Solenoid.

Note: Do not apply lubricants to the solenoid or linkage.

GP 6.19 Drawer Slide Rails Cleaning

Do this procedure to clean the Drawer Slides that are used with the Element Feeder and Book Tray.

Preventative Maintenance:

Do this every 500K cycles.

Procedure

1. Use a can of compressed air to remove dust from the alignment carriage rails. The carriage can be moved back and forth on the rails to clean the entire surface. Alternately, a soft cloth and alcohol can be used.
2. If necessary, the drawer can be removed from the rails by releasing the plastic catch on the side of the rail.
3. Slide the drawer in and out to ensure the drawer moves freely with no obstructions or excessive drag.

Important Note: DO NOT use any lubricant on the rails

GP 6.20 Diverter Solenoid Assembly Inspection

Use this procedure to inspect the Diverter Solenoid Assembly every 1000K cycles.

1. Disconnect the Power Cord.
2. Do REP 1.1 to remove the Top Cover.
3. Clean the Solenoid and surrounding area with a vacuum cleaner and canned air. Refer to PL 5.3
4. Make sure the solenoid is clean and dry.
5. Raise the Diverter Solenoid by hand and release it. The Diverter should fall freely. Make sure the linkage operates smoothly.
6. Do GP 6.3.4 [Solenoids Procedure](#) to activate and deactivate Solenoid L1.

The diverter gate should rise and fall when L1 is cycled.

GP 6.21 List of Sensors

The table below lists all of the Sensors located in the eWire. Sensors are indicated by number and by description. For additional information, refer to Section 7 Wiring.

SENSOR	PART NO	DESCRIPTION	LOCATION
S1	7715193	BYPASS ENTRY SENSOR	UPPER TRANSPORT
S2	7715193	DEFLECTOR, KICK DOWN ACTUATOR	DEFLECTOR
S3	7715193	DEFLECTOR, ACTUATOR SENSOR	DEFLECTOR
S4	7715193	SENSOR, BYPASS CENTER	UPPER TRANSPORT
S5	7715193	SENSOR, BYPASS CENTER	UPPER TRANSPORT
S6	7715037	SKEW BOARD, SENSOR 1	UPPER TRANSPORT
S7	7715037	SKEW BOARD, SENSOR 2	UPPER TRANSPORT
S8	7715037	SKEW BOARD, SENSOR 3	UPPER TRANSPORT
S9	7715037	SKEW BOARD, SENSOR 4	UPPER TRANSPORT
S10	7715037	SKEW BOARD, SENSOR 5	UPPER TRANSPORT
S12	7715694	SENSOR ALIGNMENT 1	UPPER TRANSPORT
S13	7715694	SENSOR ALIGNMENT 2	UPPER TRANSPORT
S15	7715694	SENSOR ALIGNMENT 3	UPPER TRANSPORT
S16	7715193	SENSOR, BYPASS EXIT	UPPER TRANSPORT
S18	7715340	SENSOR, TAPPER HOME, FRONT	TAPPERS
S19	7715340	SENSOR, TAPPER HOME, REAR	TAPPERS
S20	7715340	SENSOR, ELEMENT SLACK	ELEMENT FEEDER
S21	7714775 & 7714776	SENSOR, ELEMENT DETECT AT KNIFE	ELEMENT FEEDER
S22	7714775 & 7714776	SENSOR, ELEMENT DETECT AT PYR	ELEMENT FEEDER
S23	7715340	SENSOR, KNIFE HOME	ELEMENT FEEDER
S24	7715340	SENSOR, PUSHOVER HOME	EXPANDING T
S25	7714775 & 7714776	SENSOR, BELT HOME	ELEMENT FEEDER
S26	7717206	SENSOR, SPOOL DETECT 1	ELEMENT FEEDER
S27	7717206	SENSOR, SPOOL DETECT 2	ELEMENT FEEDER

S28	7717206	SENSOR, SPOOL DETECT 3	ELEMENT FEEDER
S29	7717206	SENSOR, SPOOL DETECT 4	ELEMENT FEEDER
S30	7717206	SENSOR, SPOOL DETECT 5	ELEMENT FEEDER
S31	7715340	SENSOR, PUSHOVER ENCODER	EXPANDING T
S32	7715340	SENSOR, EXPANDING T HOME	EXPANDING T
S33	7715340	SENSOR, EXPANDING T OUT	EXPANDING T
S34	7715340	SENSOR, HOLDER ROTATE VERTICAL	HOLDER
S35	7715340	SENSOR, HOLDER ROTATE HORIZONTAL	HOLDER
S36	7715340	SENSOR, HOLDER POSITION CLOSER	HOLDER
S37	7715340	SENSOR, HOLDER POS AT STACK	HOLDER
S38	7715340	SENSOR, HOLDER POS AT ELEMENT	HOLDER
S39	7715340	SENSOR, DETECT AT REVERSE GATE	HOLDER
S40	7715340	SENSOR, HOLDER POS AT FEEDER	HOLDER
S41	7715340	SENSOR, ALIGN HOME	UPPER TRANSPORT
S42	7711970 & 7711973	SENSOR, BOOK DRAWER FULL UP	BOOK DRAWER
S43	7715193	SENSOR, BOOK DRAWER FULL DOWN	BOOK DRAWER
S44	7715193	SENSOR, BOOK DRAWER PAPER DETECT	BOOK DRAWER
S46	7715340	SENSOR, CLOSER MECH HOME	CLOSER
S47	7715340	SENSOR, CLOSER FULL OPEN	HOLDER
S48	7715340	SENSOR, CLOSER ENCODER	CLOSER
S49	7715340	SENSOR, CLOSER STAGED	HOLDER
S50	7717479	SENSOR, SPOOL NEAR EMPTY	ELEMENT FEEDER

GP 6.22 Sensor Connections

The table below lists the cable connections for each Sensor located in the eWire. The Sensor Cable column indicates the cable that connects directly to the sensor. The Final Termination Column indicates the location of the sensor signal on the Main PCB, A or B board. The Internal Cable column lists any cables that connect the sensor cable to the Main PCB. Some sensors have more than one intermediate cable.

SENSOR	SENSOR CABLE	INTERNAL CABLE #1	INTERNAL CABLE #2	INTERNAL CABLE #3	FINAL TERMINATION
S1	7716733	N/A	N/A	N/A	J7, A
S2	7716708	7716705	N/A	N/A	J3, A
S3	7716708	7716705	N/A	N/A	J3, A
S4	7716733	N/A	N/A	N/A	J7, A
S5	7716733	N/A	N/A	N/A	J7, A
S6	7716738	7716736	N/A	N/A	J14, A
S7	7716738	7716736	N/A	N/A	J14, A
S8	7716738	7716736	N/A	N/A	J14, A
S9	7716738	7716736	N/A	N/A	J14, A
S10	7716738	7716736	N/A	N/A	J14, A
S12	7716737	7716736	N/A	N/A	J14, A
S13	7716737	7716736	N/A	N/A	J14, A
S15	7716737	7716736	N/A	N/A	J14, A
S16	7716733	N/A	N/A	N/A	J7, A
S18	7716712	7716705	N/A	N/A	J3, A
S19	7716712	7716705	N/A	N/A	J3, A
S20	7716720	7716719	7716711	N/A	J9, B
S21	7716704	7716720	7716719	7716711	J9, B
S22	7716720	7716719	7716711	N/A	J9, B
S23	7716704	7716720	7716719	7716711	J9, B
S24	7717473	7717472	7716717	7716711	J9, B
S25	7716720	7716719	7716711	N/A	J9, B
S26	7716721	7716718	7716711	N/A	J9, B
S27	7716721	7716718	7716711	N/A	J9, B

S28	7716721	7716718	7716711	N/A	J9, B
S29	7716721	7716718	7716711	N/A	J9, B
S30	7716721	7716718	7716711	N/A	J9, B
S31	7717473	7717472	7716717	7716711	J9, B
S32	7717473	7717472	7716717	7716711	J9, B
S33	7717473	7717472	7716717	7716711	J9, B
S34	7716706	7717347	7716709	N/A	J12, B
S35	7716706	7717347	7716709	N/A	J12, B
S36	7716709	N/A	N/A	N/A	J12, B
S37	7716709	N/A	N/A	N/A	J12, B
S38	7716709	N/A	N/A	N/A	J12, B
S39	7716709	N/A	N/A	N/A	J12, B
S40	7716709	N/A	N/A	N/A	J12, B
S41	7716736	N/A	N/A	N/A	J14, A
S42	7716732	7716731	7716730	N/A	J5, B
S43	7716732	7716731	7716730	N/A	J5, B
S44	7716732	7716731	7716730	N/A	J5, B
S46	7716703	N/A	N/A	N/A	J7, B
S47	7716702	7717348	7716703	N/A	J7, B
S48	7716702	7717348	7716703	N/A	J7, B
S49	7716703	N/A	N/A	N/A	J7, B
S50	7716721	7716718	7716711	N/A	J9, B

GP 6.23 List of Motors

The table below lists all of the Motors located in the eWire. Motors are indicated by number and by description. For additional information, refer to Section 7 Wiring.

MOTOR	PART NO	DESCRIPTION	LOCATION
M1	7715200	MOTOR BYPASS 1	UPPER TRANSPORT
M2	7715200	MOTOR BYPASS 2	UPPER TRANSPORT
M3	7715337	MOTOR BIND PATH 1	DEFLECTOR
M5	7715200	MOTOR VACUUM DRIVE	VACUUM STACKER
M6	7714769	MOTOR TAPPER, FRONT	TAPPERS
M7	7714769	MOTOR TAPPER, REAR	TAPPERS
M8	7714768	MOTOR SPOOL REWIND	ELEMENT FEEDER
M9	7715337	MOTOR ELEMENT FEED SPROCKET	ELEMENT FEEDER
M10	7715200	MOTOR ELEMENT FEED BELT	ELEMENT FEEDER
M11	7714770	MOTOR KNIFE	ELEMENT FEEDER
M12	7714768	MOTOR ELEMENT PUSHOVER	EXPANDING T
M13	7714772	MOTOR EXPANDING T	EXPANDING T
M14	7714768	MOTOR HOLDER ROTATE	HOLDER
M15	7715200	MOTOR HOLDER LINEAR	HOLDER
M16	7715337	MOTOR SKEW FRONT	UPPER TRANSPORT
M17	7715337	MOTOR SKEW REAR	UPPER TRANSPORT
M18	7715282	MOTOR SHEET ALIGN	UPPER TRANSPORT
M19	7714770	MOTOR DRAWER ELEVATION	BOOK DRAWER
M20	7714771	MOTOR ELEMENT CLOSER	CLOSER
M21	7715200	MOTOR CLOSER LINEAR	HOLDER

GP 6.24 Motor Connections

The table below lists the cable connections for each motor located in the eWire. The Motor Cable column indicates the cable that connects to the motor or driver board. Note that some stepper motors have separate signal paths for power and control signals. The Final Termination Column indicates the location of the motor connector on the Main PCB, A or B board. The Internal Cable column lists any cables that connect the sensor cable to the Main PCB. Some sensors have more than one intermediate cable.

MOTOR	MOTOR CABLE	INTERNAL CABLE #1	INTERNAL CABLE #2	INTERNAL CABLE #3	TERMINATION
M1	7716733	N/A	N/A	N/A	J7, A
	7716739	N/A	N/A	N/A	J22, A
M2	7716733	N/A	N/A	N/A	J7, A
	7716740	N/A	N/A	N/A	J4, A
M3	7716705	N/A	N/A	N/A	J3, A
	7716725	N/A	N/A	N/A	J19, A
M5	7716705	N/A	N/A	N/A	J3, A
	7716725	N/A	N/A	N/A	J19, A
M6	7716712	7716705	N/A	N/A	J3, A
M7	7716712	7716705	N/A	N/A	J3, A
M8	7716720	7716719	7716711	N/A	J9, B
M9	7716721	7716718	7716711	N/A	J9, B
	7716723	7716725	N/A	N/A	J19, A
M10	7716721	7716718	7716711	N/A	J9, B
	7716723	7716725	N/A	N/A	J19, A
M11	7716704	7716720	7716719	7716711	J9, B
M12	7717473	7717472	7716717	7716711	J9, B
M13	7717473	7717472	7716717	7716711	J9, B
M14	7716706	7717347	7716709	N/A	J12, B
M15	7716709	N/A	N/A	N/A	J12, B
	7716741	N/A	N/A	N/A	J21, A
M16	7717197	7716736	N/A	N/A	J14, A
	7716739	N/A	N/A	N/A	J22, A

M17	7717197	7716736	N/A	N/A	J14, A
	7716739	N/A	N/A	N/A	J22, A
M18	7717197	7716736	N/A	N/A	J14, A
	7716739	N/A	N/A	N/A	J22, A
M19	7716732	7716731	7716730	N/A	J5, B
M20	7716702	7717348	7716703	N/A	J7, B
M21	7716703	N/A	N/A	N/A	J7, B
	7716741	N/A	N/A	N/A	J21, A

GP 6.25 List of Solenoids

The table below lists all of the Solenoids located in the eWire. Solenoids are indicated by number and by description. For additional information, refer to Section 7 Wiring.

SOLENOID	PART NUMBER	DESCRIPTION	LOCATION
L1	7715336	SOLENOID, DIVERTER GATE	UPPER TRANSPORT
L2	7715289	SOLENOID, STEERING 1	UPPER TRANSPORT
L3	7715289	SOLENOID, STEERING 2	UPPER TRANSPORT
L4	7715289	SOLENOID, STEERING 3	UPPER TRANSPORT
L5	7715289	DEFLECTOR	DEFLECTOR
L6	7715289	SOLENOID DRAG FINGER	VACUUM STACKER
L7	7717746	SOLENOID KICK DOWN	VACUUM STACKER
L8	7717746	SOLENOID, HOLDER LOCK	HOLDER

GP 6.26 Solenoid Connections

The table below lists the cable connections for each Solenoid located in the eWire. The Solenoid Cable column indicates the cable that connects directly to the solenoid. The Final Termination Column indicates the location of the sensor signal on the Main PCB, A or B board. The Internal Cable column lists any cables that connect the solenoid cable to the Main PCB. Some solenoids have more than one intermediate cable.

SOL	CABLE	INTERNAL CABLE #1	INTERNAL CABLE #2	INTERNAL CABLE #3	TERMINATION
L1	7716733	N/A	N/A	N/A	J7, A
L2	7716733	N/A	N/A	N/A	J7, A
L3	7716733	N/A	N/A	N/A	J7, A
L4	7716733	N/A	N/A	N/A	J7, A
L5	7716700	7716705	N/A	N/A	J3, A
L6	7716701	7716705	7716709	N/A	J12, B
L7	7716701	7716705	N/A	N/A	J3, A
L8	7716706	7717347	7716709	N/A	J12, B

GP 6.27 Recommended Tool Kit

Tools recommended for service of the eWire

Standard Tools (metric)

- 7mm Nut Driver
- 5.5mm Nut Driver
- 7mm Open End Wrench
- 5.5mm Open End Wrench
- 10mm Open End Wrench
- Needle Nose Pliers
- Phillips Screwdriver
- Flathead Screwdriver
- Wire Cutters
- Metric Allen Key (1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 6mm)

GP 6.28 Other Recommended Tools and Supplies

- 0.25mm, 1mm, and 3mm Shim Gauges
- 0 to 2 kgf Force gage
- Loctite
- 150mm Metric ruler

GP 6.29 Cleaning Materials

Use a clean, soft, lint-free cloth or a small paint brush to clean the following.

- GP 6.11, [External Cleaning](#)
- GP 6.12, [Internal Cleaning](#)

Use a soft cloth and alcohol to clean the following.

- GP 6.14.1 [Idler Roller Inspection and Cleaning](#)

Use canned air or soft cloth to clean the following

- GP 6.15, [Optical Sensor Cleaning](#)
- GP 6.19, [Slide Carriage Rails](#)

Use canned air or vacuum cleaner to clean the following.

- GP 6.18, [Solenoid Cleaning and Inspection](#)

GP 6.30 General Specifications

Speed	Up to 157 sheets per minute	
Bind Sheet Size and Edge LEF- Long Edge Fed	US Sizes LTR LEF Statement LEF ISO sizes A4 LEF A5 LEF	
Paper Stock	Plain: 75gsm - 300gsm (20# bond to 110# cover) Coated: 120gsm - 300gsm (32# bond to 110# cover)	
Paper Bypass Mode Sheet size	Paper sizes and stocks same as printer	
Power Supply	115V, 60Hz, Single Phase 230V, 50Hz, Single Phase	
Electrical	Amps and Frequency	115V; 2.8A; 60Hz 230V; 1.4A; 50Hz
Safety Certification	cULus, CE	
Dimensions	L: 74cm; W: 89cm; H: 104cm L: 29"; W: 35"; H: 40"	
Weight	226 kg (500 lbs)	
Shipping Weight	273 kg (600 lbs)	
Manufactured	Assembled in Taiwan	

GP 6.31 DFA Profile, Versant

Name	eWire
Device Type	Finisher
Function 1	Line Off
Function 2	Line On
Sheet Sequence	1-N
Side 1 Direction	FaceUp
Last sheet first	Yes
Min Sheet Length	208 mm
Max Sheet Length	232 mm
Min Sheet Width	277 mm
Max Sheet Width	300 mm
Min Sheet Weight	60 gsm
Max Sheet Weight	253 gsm
Min Set Size	7
Max Set Size	173
Time between sheets	170 ms
Sheet jam time	2200 ms
Set complier time	22000 ms
Time between sets	0 ms
Set jam time	19000 ms
Time to cycle up	25 sec
Pause for Setup	Unchecked
Offline (S0)	On
Faulted (S1)	On
Full (S2)	On
Sheet delivered (S3)	On
Set delivered (S4)	On
Delivery signal type	Lead edge
Recovery behavior	Set
Delivery start adjust	0
Delivery end adjust	30 ms
End of set offset	0
Finisher capacity	2
Cycle down delay	20 sec
In order delivery delay	0
Same Output	1

Section Contents

Wiring Data

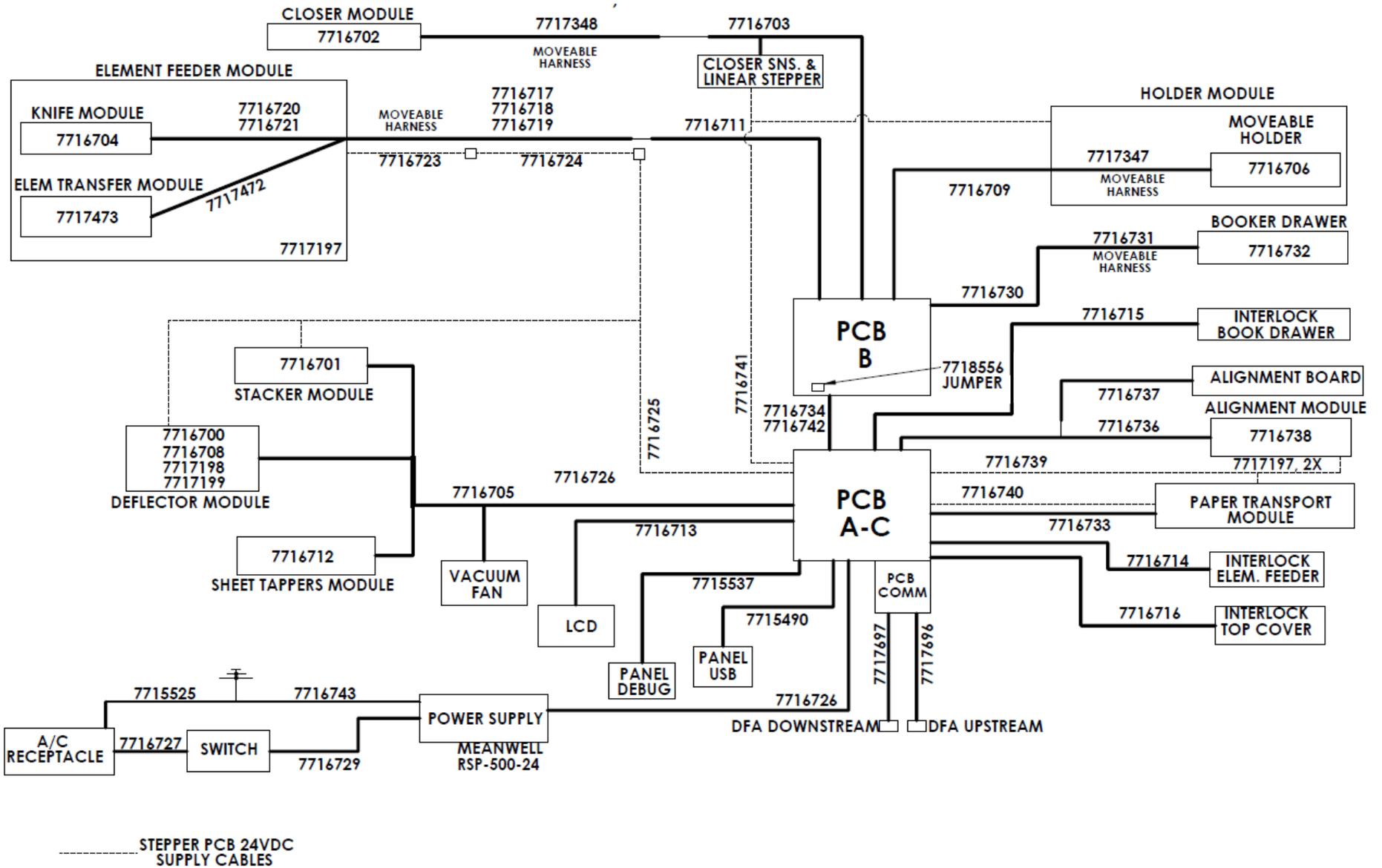
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○ Cable Location Index

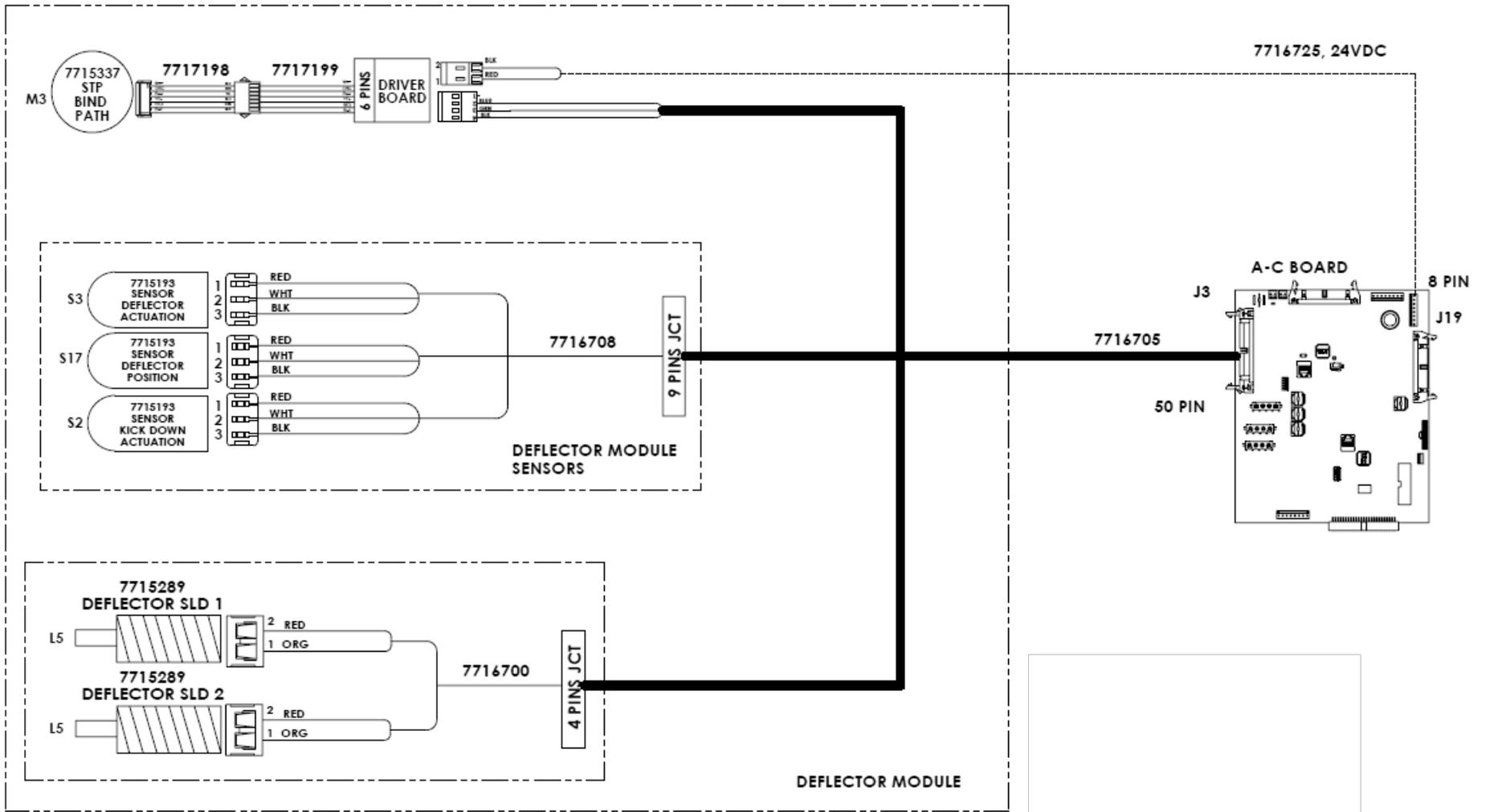
Cable #	Description	Location
7716700	WIRE HARNESS, SOL, DEFLECTOR MODULE	7-4
7716701	WIRE HARNESS, VACUUM STACKER INTERNAL	7-10
7716702	WIRE HARNESS, CLOSER MODULE INTERNAL	7-13
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7716735	CABLE ASSY, PCB INTERLINK, B TO C	7-3
7716736	CABLE ASSY, ALIGNMENT MODULE	7-11
7716737	CABLE ASSY, ALIGNMENT MODULE SENSOR BOARD	7-11
7716738	CABLE ASSY, SKEW BOARD	7-11
7716739	CABLE ASSY, 24VDC, MOTOR DRIVERS #2	7-11
7716740	CABLE ASSY, 24VDC, MOTOR DRIVERS #3	7-9
7716741	WIRE HARNESS, SOL, DEFLECTOR MODULE	7-7 , 7-13
7716743	CABLE ASSY, GROUND WIRE	7-3
7715525	GROUND WIRE	7-3
7717197	CABLE, STEPPER DRIVER TO MOTOR	7-11
7717472	CABLE ASSY, ELEM. TRANSFER, EXTENSION	7-6
7717473	CABLE ASSY, ELEM. TRANSFER, INTERNAL	7-6
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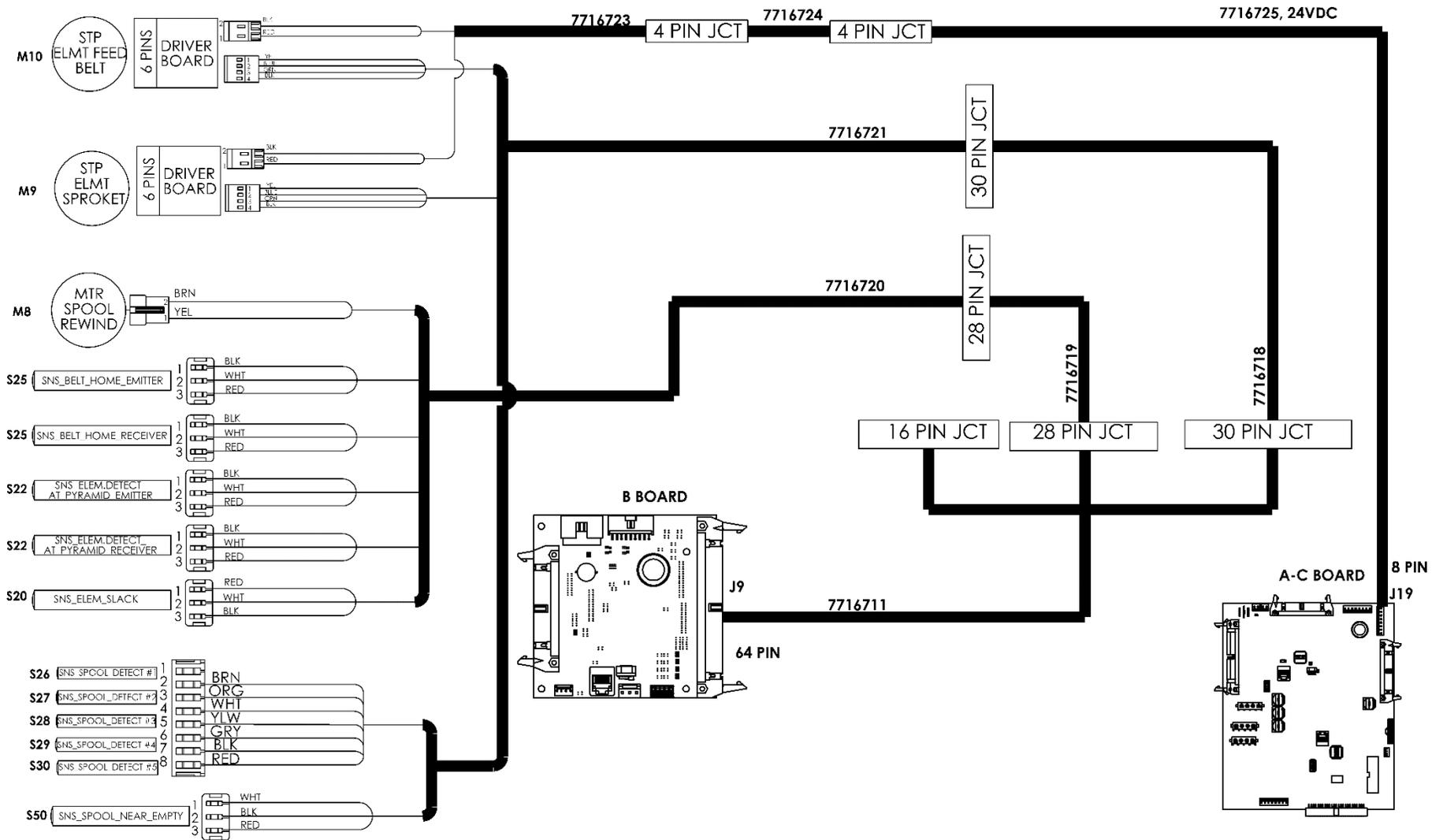
○ System Wiring



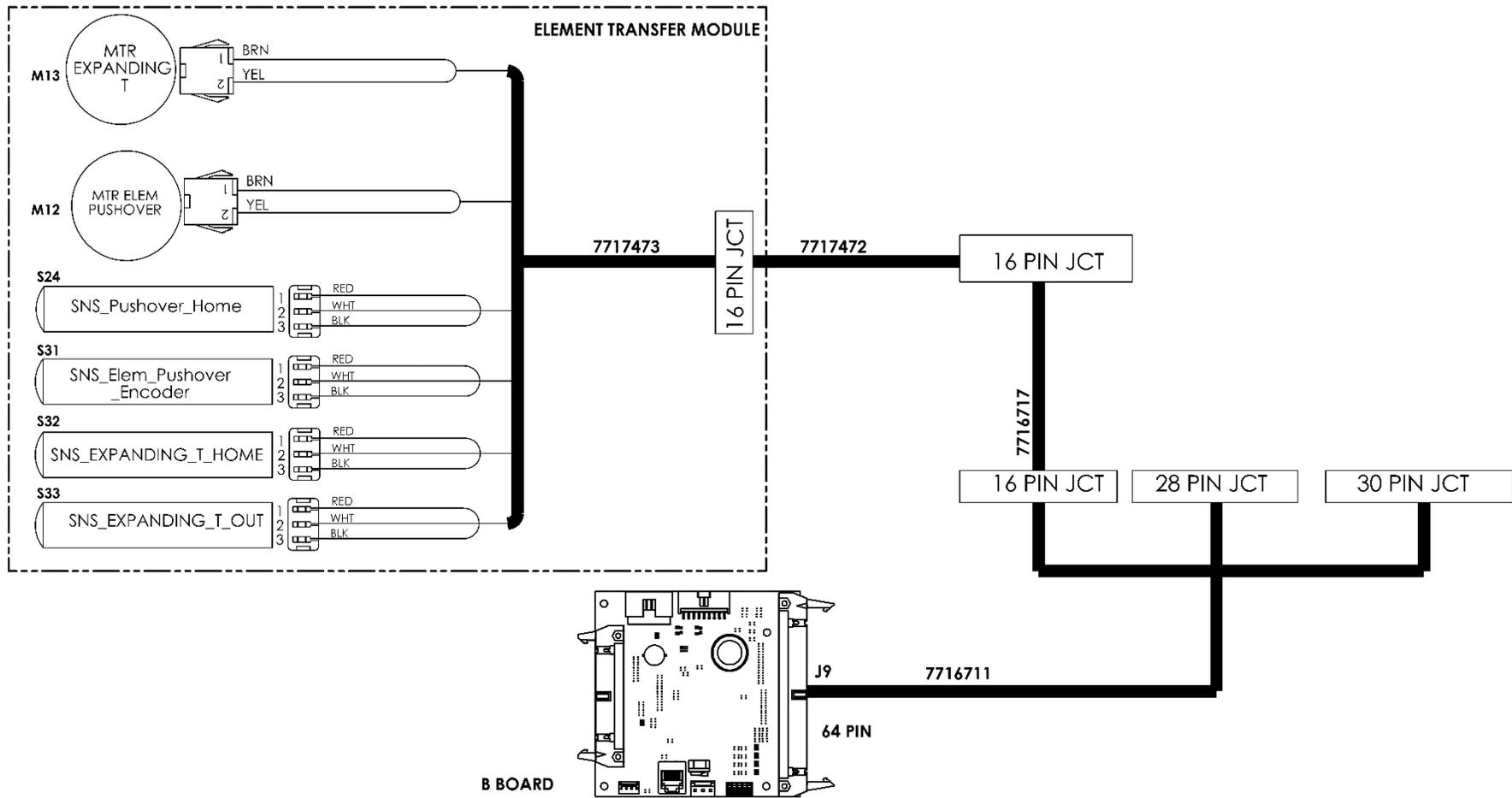
○ Deflector Module



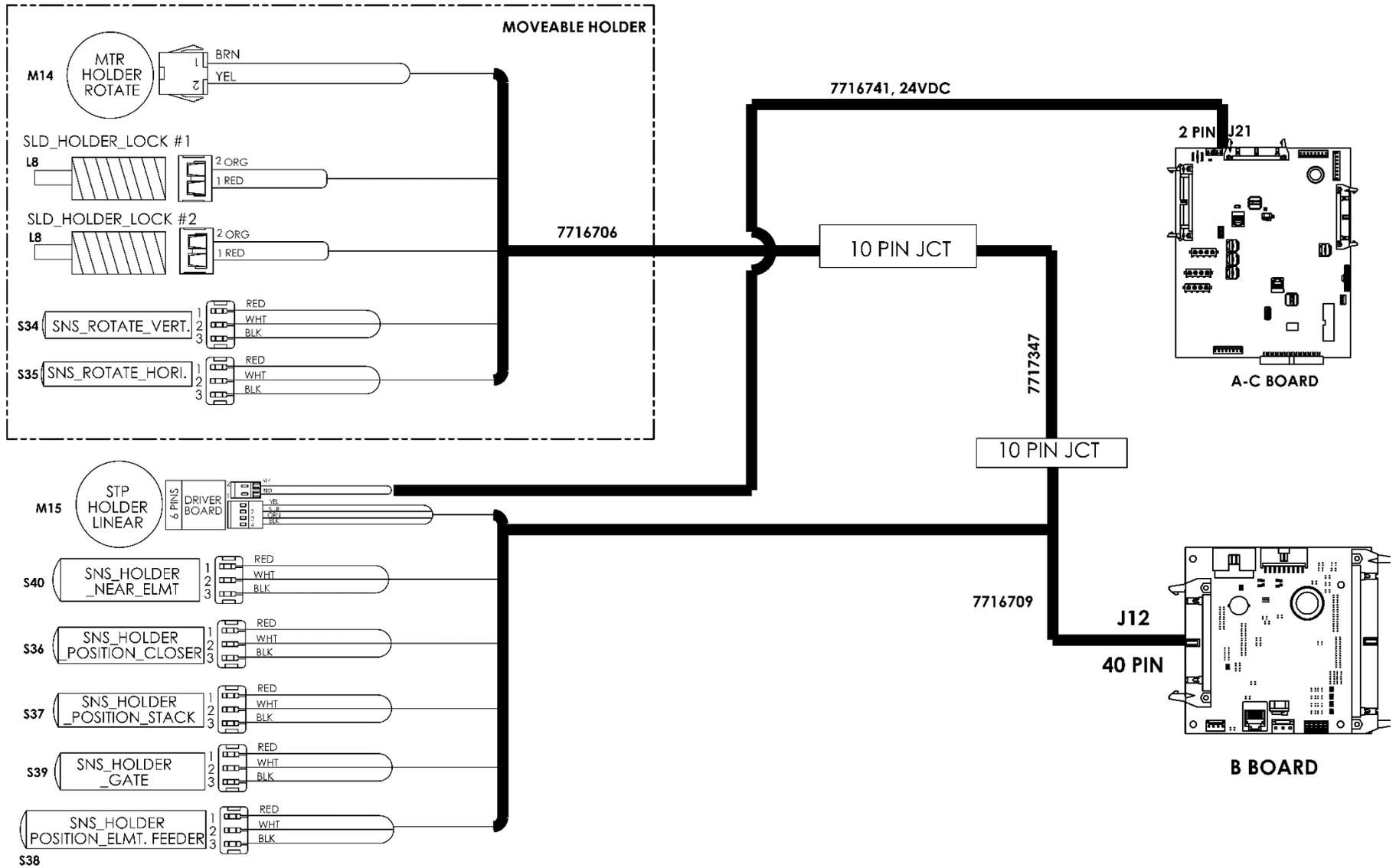
○ Element Feeder Module



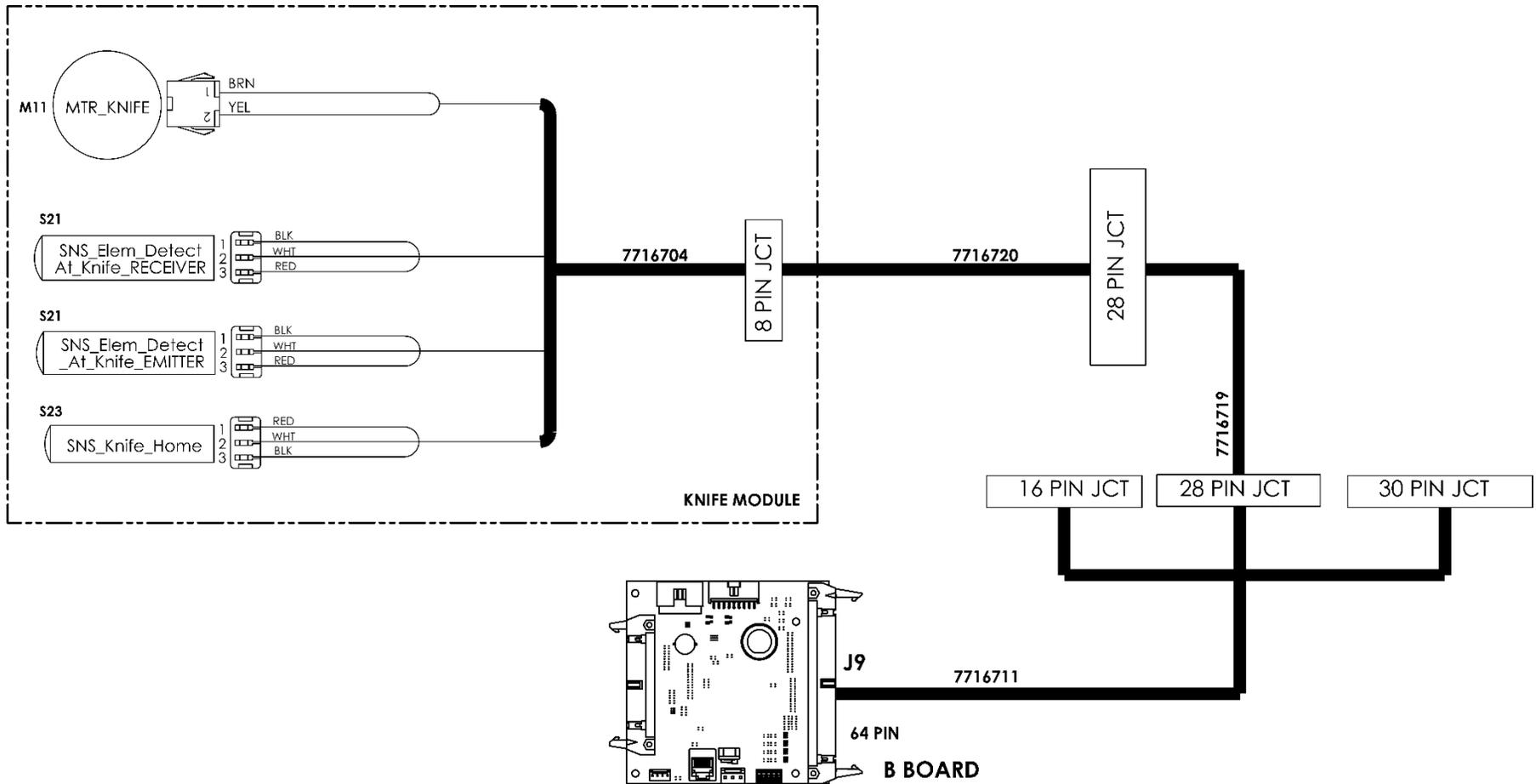
○ Element Transfer Module



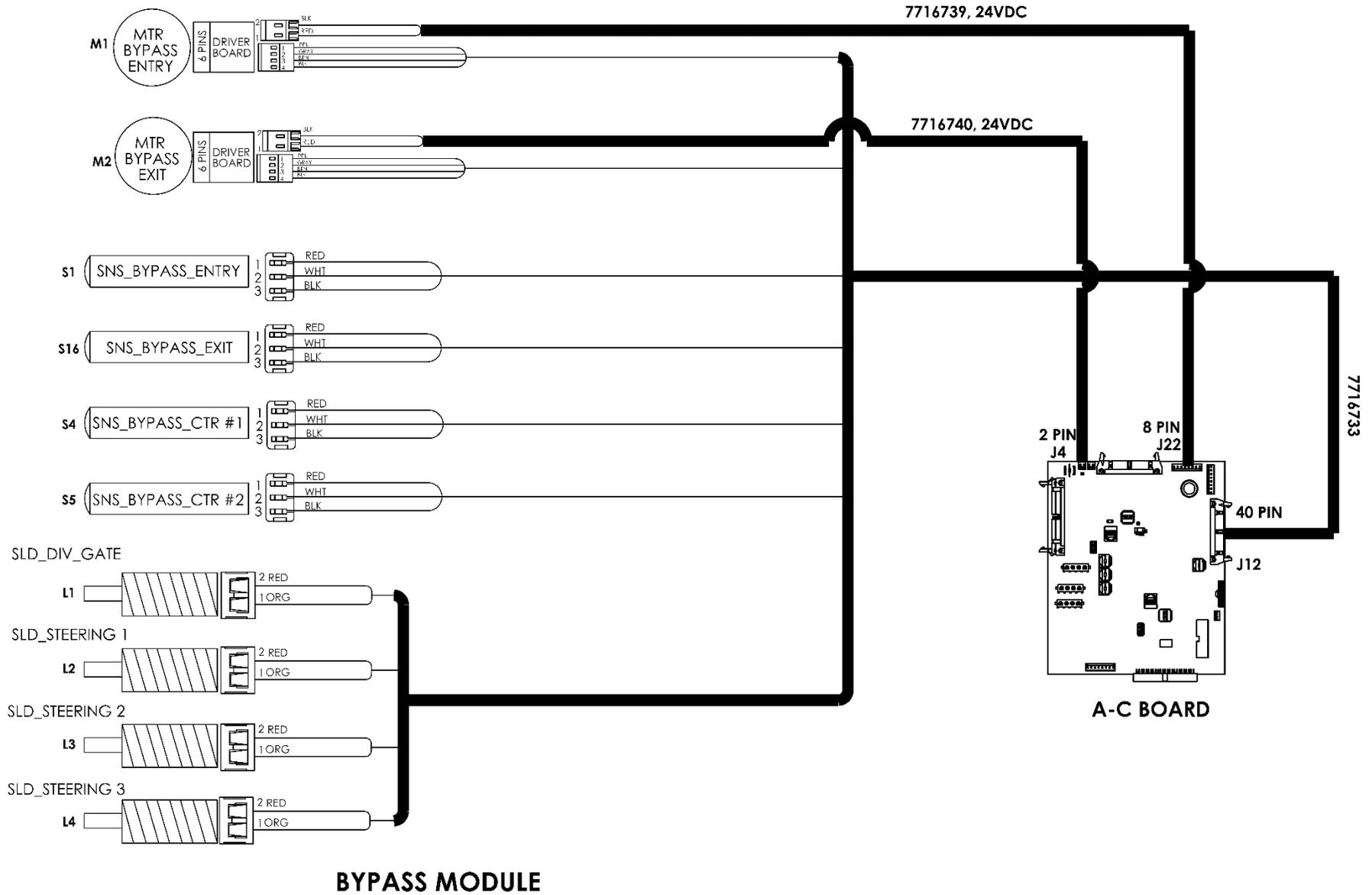
○ **Holder Module**



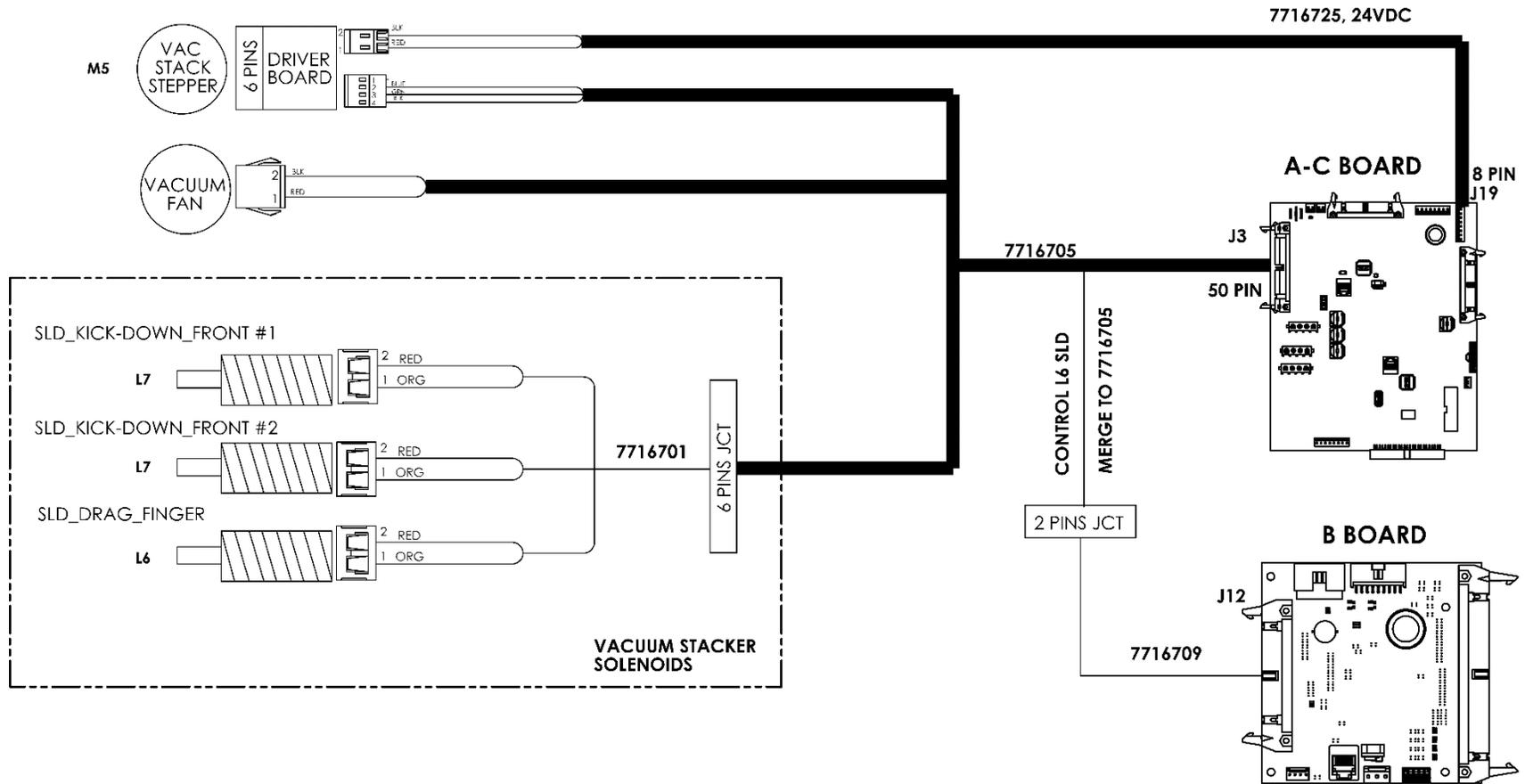
○ Knife Module



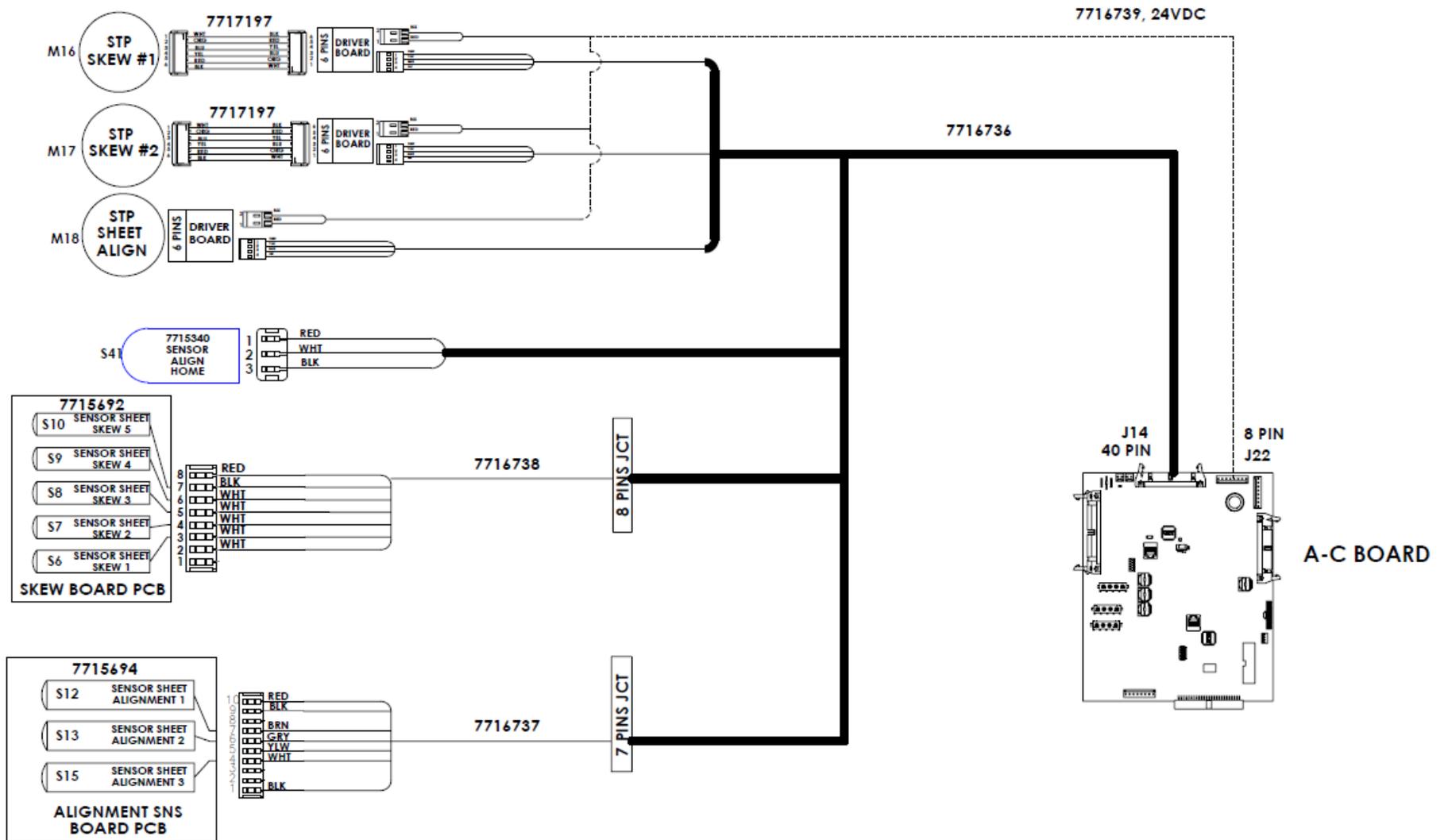
○ Paper Transport Module



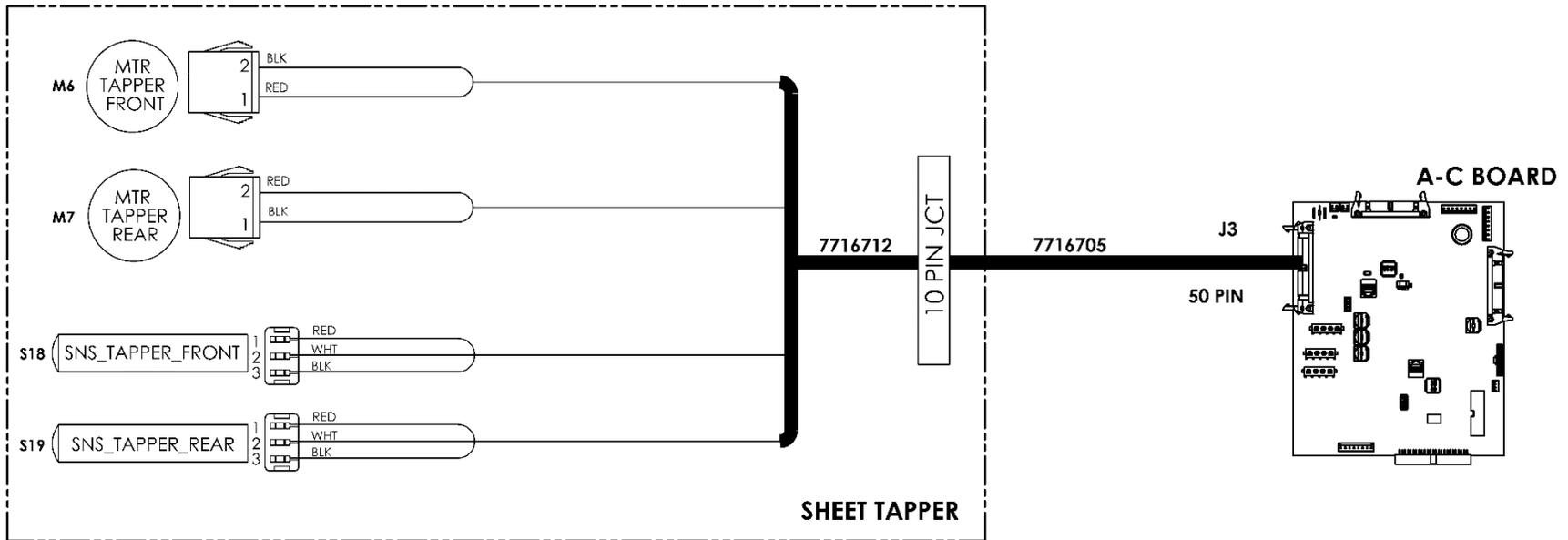
○ **Stacker Module**



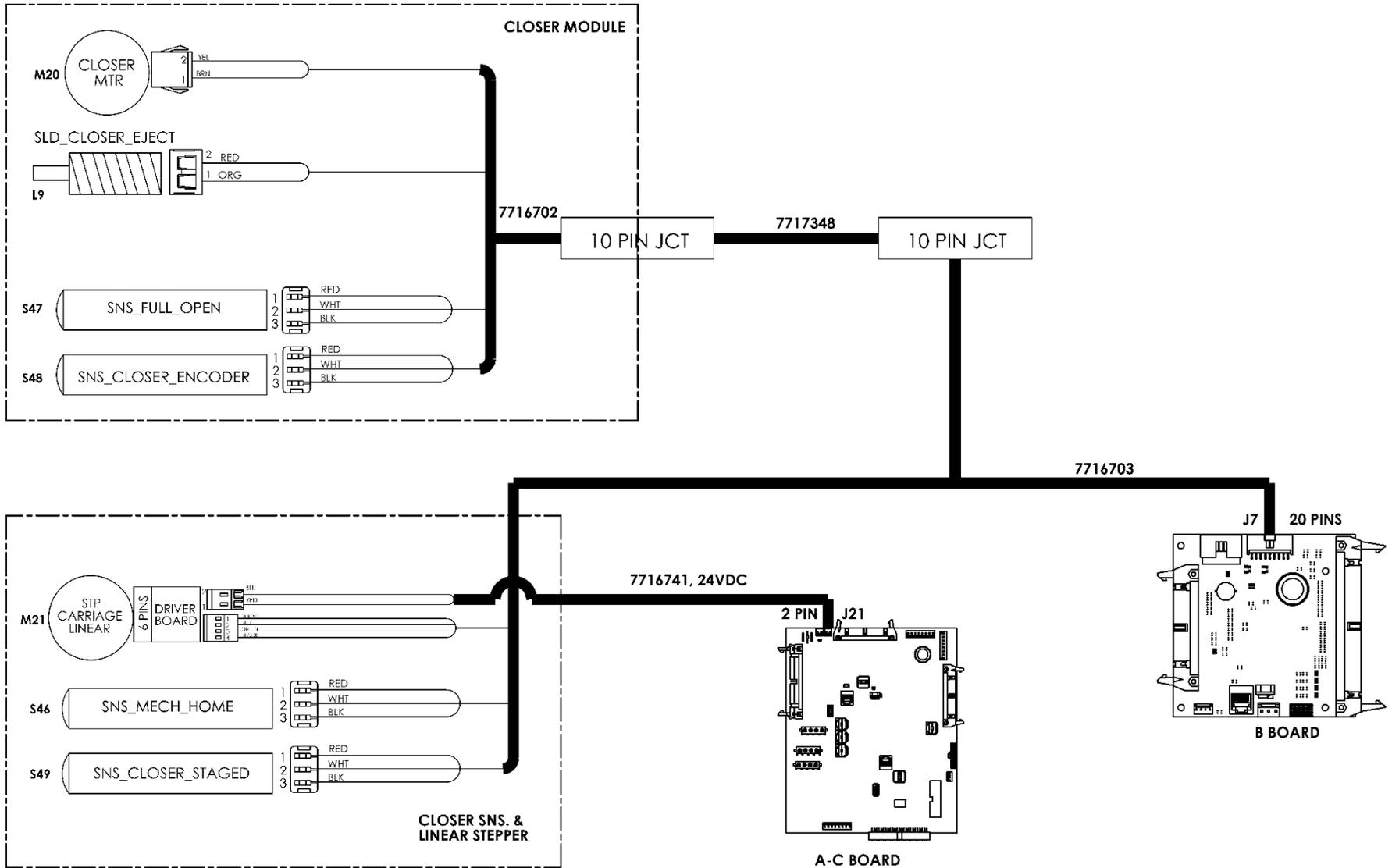
- Steering Module



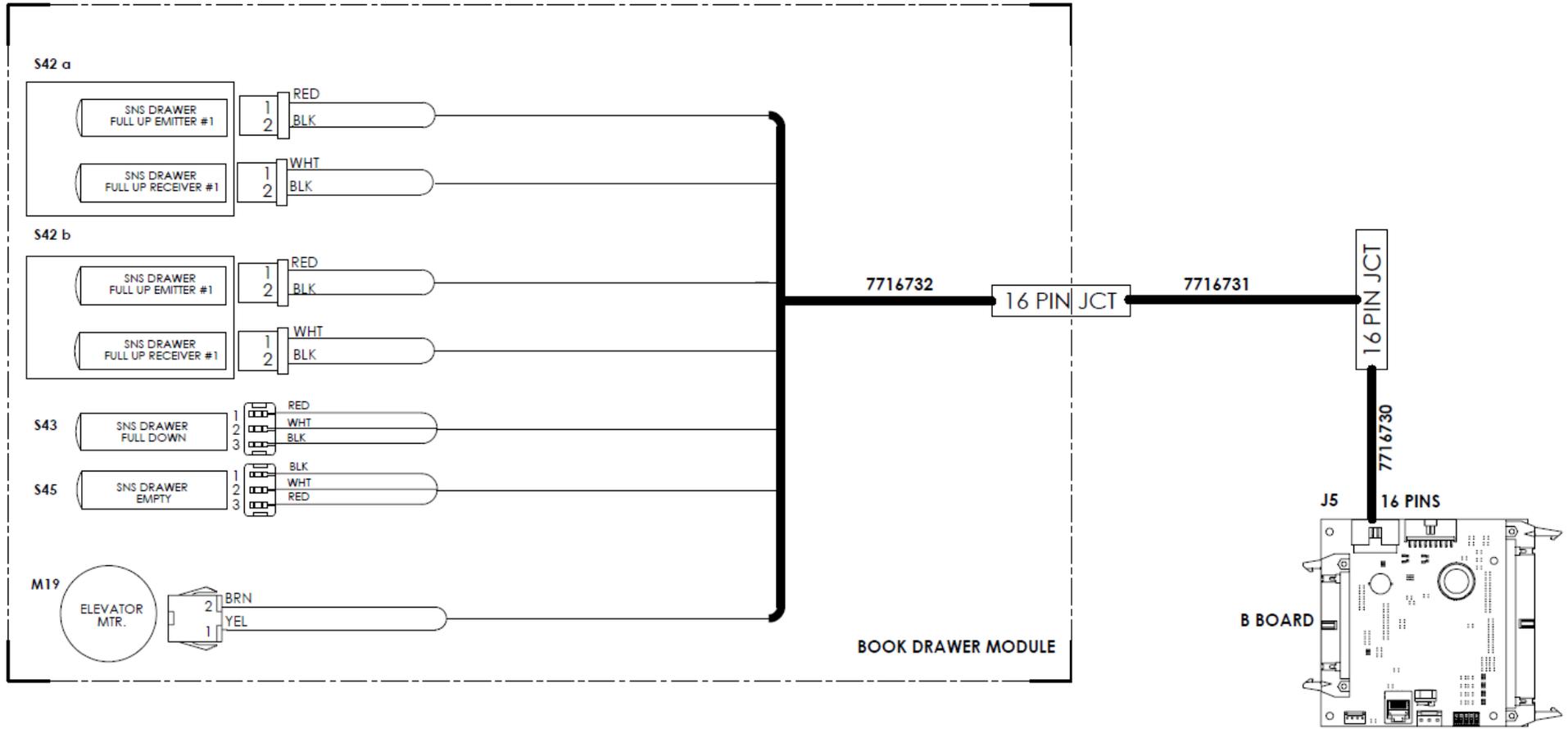
○ Tappers Module



o Closer Module



○ Book Drawer Module



8. Installation Instructions

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8.1. Introduction

This section contains general installation points regarding the unpacking and setup of the eWire.

8.1.1 Check the Packing List

The eWire shipping material should contain 2 boxes:

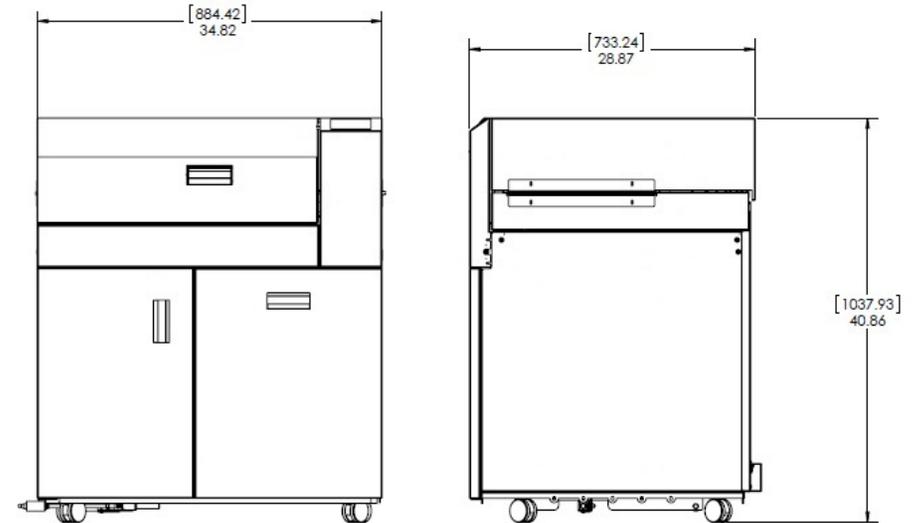
- Pallet with eWire.
- Cardboard box containing the Spare Parts Kit.

The fully packed eWire measures 1270mm H x 1040mm W x 920mm L (50in H x 41in W x 36 in L) and weighs 274 kgs (605 lbs)

8.2. Installation Requirements

8.2.1 Space Requirements

Before installing the eWire, make sure you have adequate space and clearance.



eWire System Dimensions

8.2.2 Upstream Device Requirements

The AdvancedPunch Pro punch system must be installed upstream of the eWire. The AdvancedPunch Pro does not need to be directly attached to the eWire.

8.2.3 Required Tools

The following tools are required to unpack and install the eWire.

- Utility knife or box cutter
- 17mm and 19mm open end wrenches
- 10mm socket wrench
- 7mm socket wrench or nut driver
- 200 gsm (or heavier) paper

8.3. Remove the Packing Materials

Do the following to remove all packing materials from the eWire.

1. Clear the space needed for the eWire.
2. Move the Shipping Container into position near where you will install the eWire



3. Remove the plastic shrinkwrap from the container and remove the Packing Straps.
4. Remove the wooden ramp from the top of the Shipping Container. Do not discard the wooden ramp. It will be needed later to remove the eWire from the pallet.
5. Remove the foam corner protectors from inside the packaging.
6. Remove cardboard outer package by lifting it straight up off the eWire. Take care not to scrape the sides of the machine. Note: Two people should work together to lift the outer packaging, which is one large piece.
7. Remove the inner shrink wrap covering the eWire.

8. Locate the 4 Support Brackets on the front and back of the machine. Remove the M6 Screw securing the Clamp to the Support Bracket and remove the Clamp. Remove the M10 Screws securing the Support Bracket and remove the Support Bracket from the eWire.



9. Repeat for the remaining Support Brackets and Bracket Clamps.
10. Remove the M6 Screws securing the Side Bracket to the eWire. Remove the M10 Screws securing the Side Brackets to the pallet. Slide the Side Brackets out from under the eWire and remove it.



11. Repeat for the opposite Side Bracket.

12. Remove the blocks and bolts from the element feeder drawer.
Place the ramp support blocks under the pallet, lining up the holes in the blocks with the holes in the pallet.



13. Place the wooden ramp onto the appropriate location on the front of the pallet. Secure the ramp in place using 2 long screws or Allen wrenches.

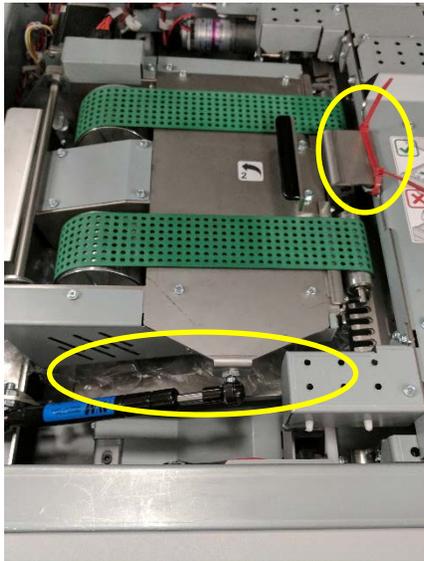


14. Using two people, carefully push the eWire from the back down the ramp. Make sure the eWire casters stay on the pallet and the ramp and control the machine on the way down. Make sure to support the eWire carefully while moving due to its weight.
15. Open the top cover and lift the lower bypass panel. Remove the shipping material in the book draw so that the drawer can open. Open the book drawer and remove the contents. Check all the parts are present before proceeding.

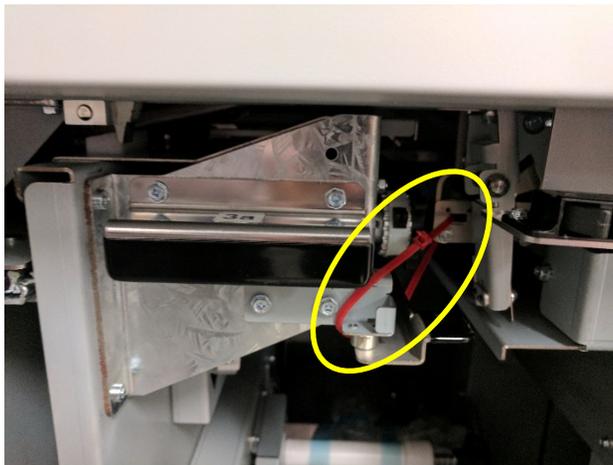


EUROPE	4 POWER CORDS, DANISH 771589, SWITZ. 7714334, UK 7714333, AND CONTINENTAL EU 7714332
NORTH AMERICA	1 POWER CORD 6200001
7718353	DOCKING BRACKET ASSY, UPSTREAM
7716523	CD, USER AND INSTAL. MANUALS, EWIRE
7610500	CABLE ASSY, INTERFACE (37 PINS)
1824402	HEX BOLT, M10 X 40
7718072	MAGNET, EWIRE, SPOOL
7723152	WIRE CUTTERS
7717288	DOCKING BRACKET ASSY, DOWNSTREAM
1823906	SCREW, PHILLIPS HX HD W/SEMS M5 X 10
7717879	TOOL, PUNCHED HOLE POSITION CHECK
7717881	EWIRE SETUP TOOL ASSEMBLY, ELEMENT HEIGHT
7709668	SCREW, CARRAIGE, 5/16-18X4"
7723183	SUPPORT, PACKING, EWIRE

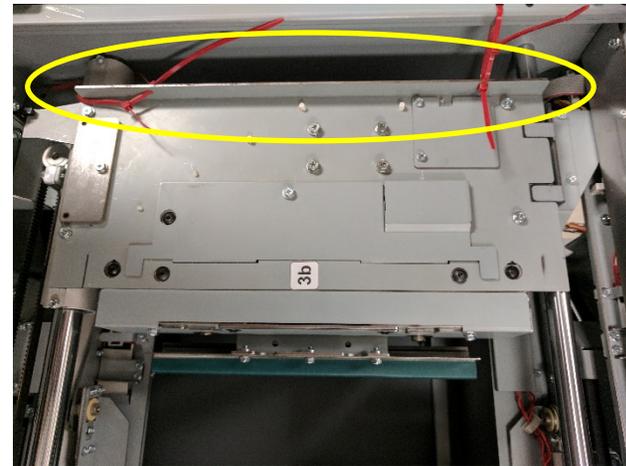
16. Using the wire cutters from the installation kit, remove the red cable tie from the handle. Lift the handle on the Vacuum Module and remove the bubble wrap from beneath the Vacuum Module.



17. Remove the zip tie from the Drawer Lockout mechanism where shown.



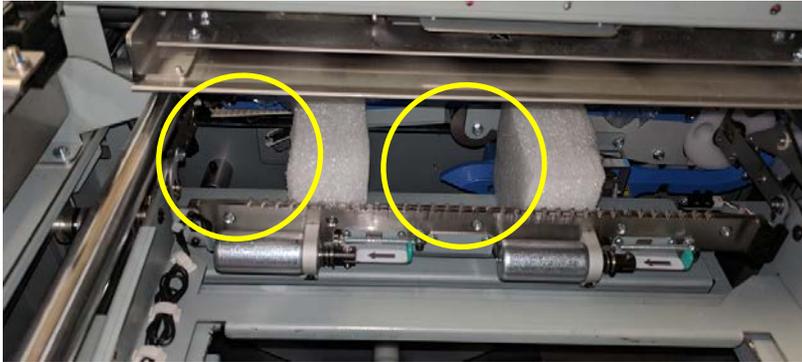
18. Remove the zip ties securing the closer module the side frame of the eWire.



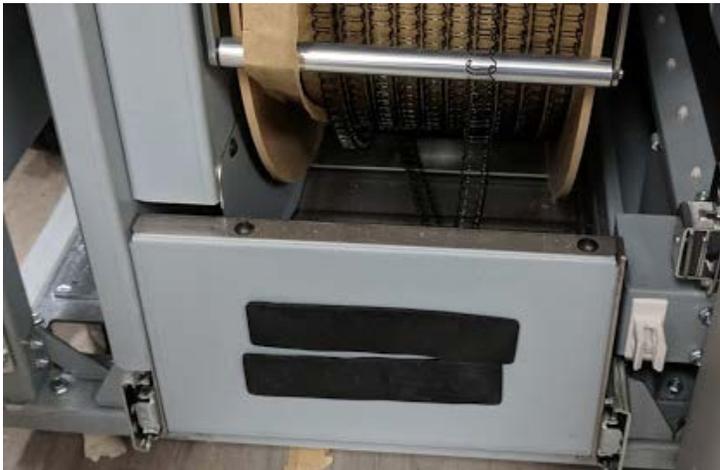
19. Move the closer module by hand to reveal the cable tie on the holder frame. Remove the cable tie.



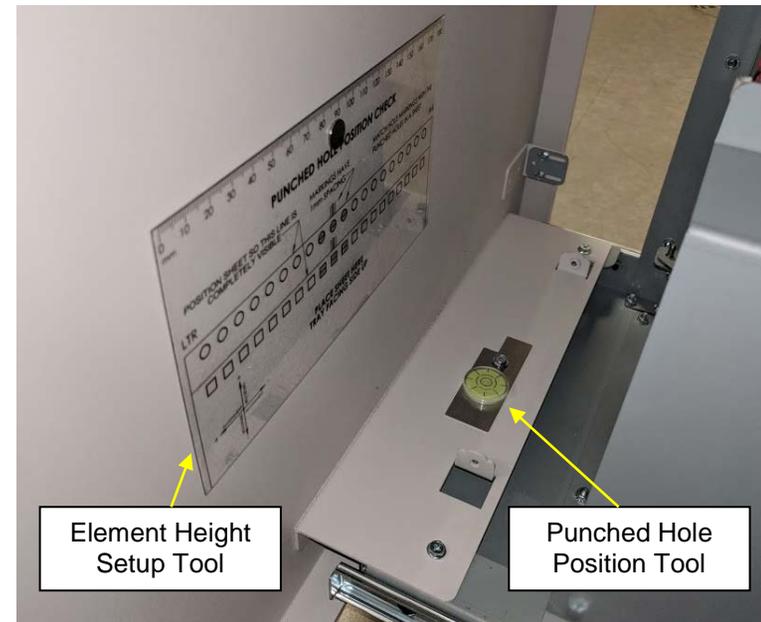
20. Remove the foam shipping blocks from the front and rear that keeping the holder in place.



21. Place the spare magnet strips from the installation kit on the element feeder as shown below. When storing them on the element feeder, ensure that they are completely on the flat face of the drawer and are not near the spool.



22. Take the wire cutters from the installation kit and install them into the triangular pocket located behind the element feeder door. Place the Element Height Setup Tool and the Punched Hole Position check tool on the inside of the book drawer as shown below. Secure the Element Height Setup Tool using the M4 screw provided.



8.4. Inspect for Damage

1. Inspect the entire machine for damage. Make sure any damage that could affect the operation of the eWire is repaired.
2. Double check that all packaging (foam, zip ties, lock collars) has been removed from the eWire. Running the eWire with packaging material still in place could cause damage.

8.5. Prepare the Docking Brackets

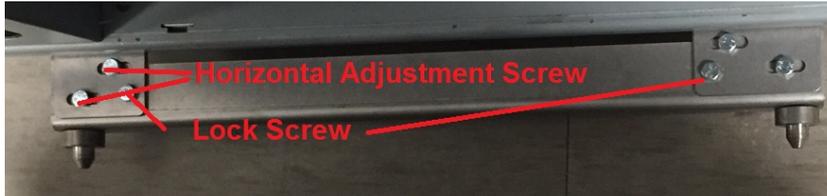
Do the following to install the Docking Bracket Assemblies that were shipped inside the eWire.

1. Do REP 1.6 to remove the Side Cover on the upstream and downstream sides of the eWire.
2. Locate the slots on the eWire Frame on the upstream side.
3. Slide the Upstream Docking Bracket under the eWire and insert the threaded studs through the slots. Secure the docking bracket using M6 Nuts, but do not fully tighten yet.
4. Move the eWire forward until the Docking Bracket assembly engages with the upstream device (such as AdvancedPunchPro). Reach underneath the frame to lock the Docking Bracket in place using the hook.
5. Check the gap between eWire and the Upstream Device. If the gap is too large or too small, the Docking Bracket can be shifted using the slots so that the eWire mating face is closer, or further away from the upstream device. Secure the Nuts to lock in the new position.

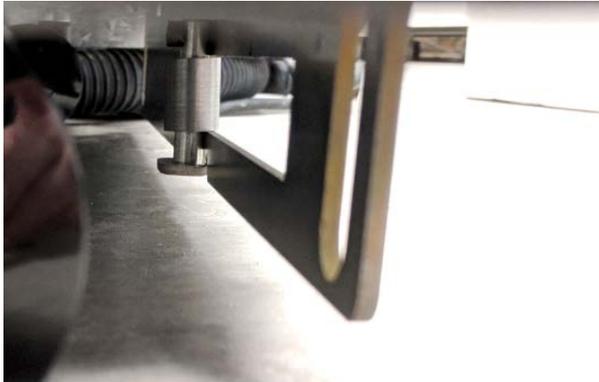


6. After the Gap adjustment has been made, dock the eWire to the upstream device again and confirm the spacing is correct. You may want to mark the position on the eWire frame so you can return to it later if needed.
7. Check the horizontal alignment. This can be checked by using a reference point for paper center on both the eWire and the upstream device. If horizontal alignment looks good, no further action is needed.
8. If there is an issue with horizontal alignment, measure the amount eWire must be shifted to correct the offset. Undock the eWire and remove the Docking Bracket from the eWire.

- Remove the 2 Locking Screws from the Docking Bracket and loosen the 4 Adjustable Screws. Shift the Docking Face Plate by the amount defined in Step 7. Secure the Adjustable Screws. Repeat the steps above to dock the eWire again and ensure the offset has been corrected.



- Place the Downstream Docking Bracket under the downstream side of the eWire so the pin side of the bracket is on facing upstream.

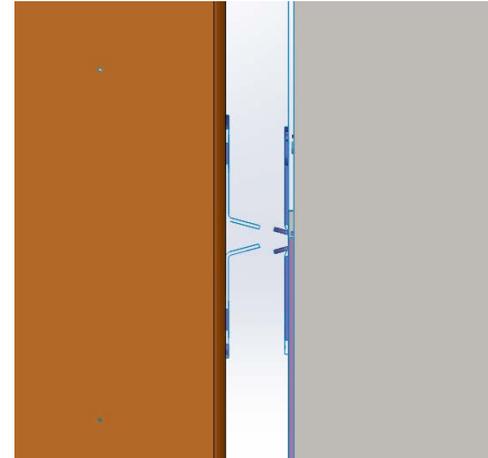


- Using the M5 screws provided, secure the bracket to the eWire base. The mounting holes on the eWire base are slotted and the brackets location can be adjusted. Refer to the install manual of the downstream device for the positioning of this bracket.



8.6. Vertical Alignment

- With the eWire docked to the upstream device, look through the gap on the upstream side of eWire. Confirm that the exit baffles of the upstream device are aligned vertically with the infeed baffles of the eWire.



- If the eWire is not vertically level with the upstream device, undock the eWire. Measure the height from the floor to the center of the paper path on each side to determine how much adjustment is needed.
- Remove the side covers (REP 1.6) and raise or lower the eWire by adjusting the casters (4 total). Loosen the jam nuts and then use a socket wrench to raise or lower the caster.
- After adjustment, refer to 8.7 Leveling Procedure. If the eWire is not level, adjust the casters until it is level.
- When the eWire has been raised or lowered by the amount of offset measured between eWire and the upstream device, re-dock the eWire and confirm that the input and output baffles are now aligned. If additional adjustment is needed, repeat Step 2.

8.7. Level the eWire

1. Check the level of the eWire front to rear.
2. Check the level of the eWire left to right.



3. If adjustment is needed, remove the side plates to access the casters. Loosen the jam nut underneath the caster and raise or lower the caster using an adjustable wrench.
4. Repeat the process for all necessary casters. Repeat steps 1 and 2 and make additional adjustments if needed.
5. Tighten the jam nut on each caster and replace the side covers.

8.8. Power Up the eWire

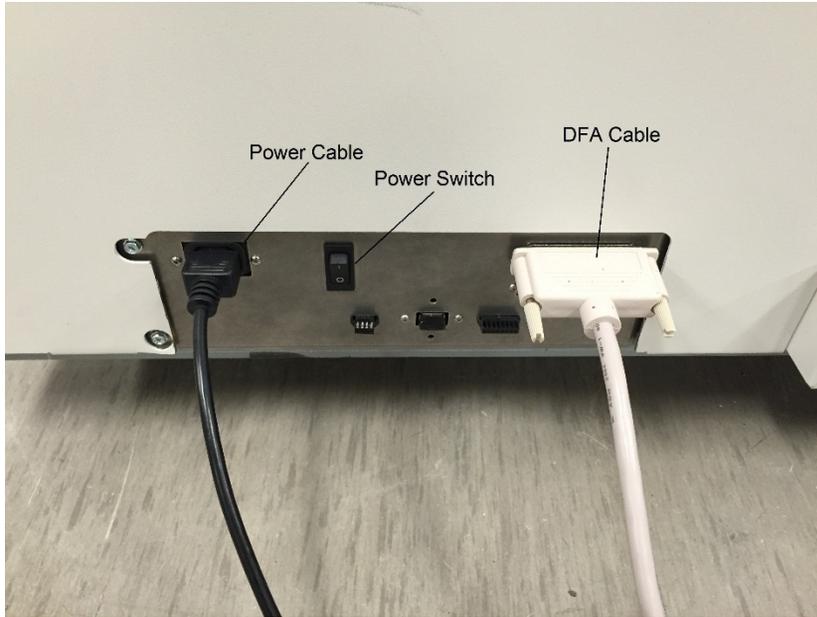
Do the following to power up the eWire.

1. Check the Volt and Hertz specifications on the Serial number label to ensure that the input power at the site matches the power requirements of the eWire.



2. Connect the Power Cord to the AC Filter on the rear of the eWire.
3. Connect the Upstream DFA Cable to the eWire.

4. Connect the Power Cord to AC power outlet.



5. Press the Power Switch to the On (I) position.
6. Wait until the User Interface indicates that the eWire is READY.

READY
TO BIND

8.9. Configure the eWire

1. Do GP 6.2.4 LANGUAGE MODE Procedure to set the desired language.
2. Do GP 6.3.1 SPEED Procedure to set the line speed.
3. Do GP 6.2.3 PAPER SIZE Procedure to set the desired paper size.
4. Do GP 6.3.7 to install the Firmware, latest revision
5. When installing downstream of a SFP, confirm that the PFIM software is level 4.32 or higher. Contact Xerox Support if the software version is not available on GSN.
6. When the eWire is connected to the Versant Family of printers configure the NVM setting per the table below.

Printer	NVM Value
Versant 80	740-498 = 1
Versant 180	740-498 = 1
Versant 2100	740-499 = 1
Versant 3100	740-499 = 1

8.10. Run in Bypass Mode

Put the eWire into Bypass mode to allow paper to pass through the eWire without being diverted.

1. From the top level screen of the LCD User Interface, press either the Up Arrow Button or the Down Arrow Button.
2. Do GP 6.2.5 to enter Bypass Mode.
3. READY - BYPASS should appear on the LCD.
4. Program the printer to feed a diagnostics job into the EWire in BYPASS mode, and check that the sheets pass through the EWire properly.

8.11. Run the eWire in Bind Mode

Do the following to run the eWire in Bind Mode.

1. From the top level screen on the LCD User Interface, press either the Up Arrow Button or the Down Arrow Button.
2. Do GP 6.2.5 to enter BIND mode.
3. READY – TO BIND should appear.
4. The EWire is now ready to function in BIND mode.
5. Do GP 6.7 to install a supply spool.
6. Program the printer to feed a book job into the eWire and confirm that the eWire successfully creates a book.
7. Verify the quality of the book, including appropriate roundness of the bound element. If there is a concern about binding quality, refer to the troubleshooting guide found in Section 3, Book Quality.

8.12. Versant Profile Settings

Name	eWire
Device Type	Finisher
Function 1	Line Off
Function 2	Line On
Sheet Sequence	1-N
Side 1 Direction	FaceUp
Last sheet first	Yes
Min Sheet Length	208 mm
Max Sheet Length	232 mm
Min Sheet Width	277 mm
Max Sheet Width	300 mm
Min Sheet Weight	60 gsm
Max Sheet Weight	253 gsm
Min Set Size	7
Max Set Size	173
Time between sheets	170 ms
Sheet jam time	2200 ms
Set compier time	22000 ms

Time between sets	0 ms
Set jam time	19000 ms
Time to cycle up	25 sec
Pause for Setup	Unchecked
Offline (S0)	On
Faulted (S1)	On
Full (S2)	On
Sheet delivered (S3)	On
Set delivered (S4)	On
Delivery signal type	Lead edge
Recovery behavior	Set
Delivery start adjust	0
Delivery end adjust	30 ms
End of set offset	0
Finisher capacity	2
Cycle down delay	20 sec
In order delivery delay	0
Same Output	1

8.13. User Manual

Make sure the customer has the *User Instructions Manual*.