

Power-LOAD® Cot Fastener System

Maintenance Manual

REF 6390



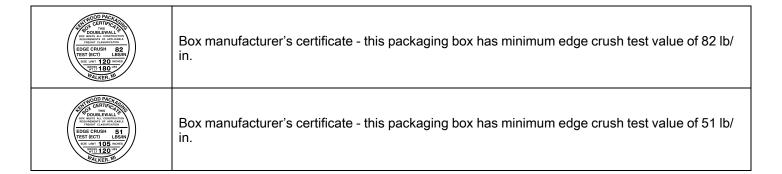
Symbols

T	
	Refer to instruction manual/booklet
[i]	Operating instructions/Consult instructions for use
CE	CE mark
EC REP	EC REP
<u>^</u>	General warning
<u> </u>	Caution
	Warning; crushing of hands
(((-)))	Warning; non-ionizing radiation
REF	Catalogue number
LOT	Lot (batch) code
SN	Serial number
US Patents	For US Patents see www.stryker.com/patents
***	Manufacturer
\sim	Date of manufacture
<u>^</u>	Safe working load
À	Dangerous voltage
c 'AL 'us	Medical Equipment Recognized by Underwriters Laboratories LLC With Respect to Electric Shock, Fire, and Mechanical Hazards only in accordance with ANSI/AAMI ES60601-1:2012 and CAN/CSA-C22.2 No. 60601-1:14.
===	Direct current
	Class II electrical equipment: equipment in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as double insulation or reinforced insulation are provided, there being no provision for protective earthing or reliance upon installation conditions

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<u>A</u>	In accordance with European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) as amended, this symbol indicates that the product should be collected separately for recycling. Do not dispose of as unsorted municipal waste. Contact local distributor for disposal information. Ensure infected equipment is decontaminated prior to recycling.
THE BEACH	The Rechargeable Battery Recycling Corporation (RBRC) is a non-profit, public service organization that promotes the recycling of portable rechargeable batteries. Batteries must be delivered to a battery collection site. Visit the RBRC website (www.rbrc.org) to find a nearby collection site or call the phone number shown on the recycling symbol.
IPX6	Protection from powerful water jets
F©	This device complies with Part 18 of the FCC Rules
	Two person lift
11	This way up
	Fragile, handle with care
	Keep dry
5	Do not stack more than 5 high
12V ====	12 VDC battery powered
	Fuse
<33s >300s	Battery duty cycle (loading): 10.0% (less than 33 seconds on, more than 300 seconds off)
	Battery duty cycle (charging): 100%
U.S.A.	English text below this symbol is intended for USA audiences only.
TRA Registered No: ER35122/14 Dealer No: DA35173/14	Registered in United Arab Emirates by the Telecommunications Regulatory Authority
	Product complies with applicable EMC standards in Australia/New Zealand
ΤΑ-2013/2350 Ι C Λ΄-S Λ APPROVED	Approved by independent communications authority of South Africa

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Warning/Caution/Note Definition

The words WARNING, CAUTION, and NOTE carry special meanings and should be carefully reviewed.

WARNING - Alerts the reader about a situation which, if not avoided, could result in death or serious injury. It may also describe potential serious adverse reactions and safety hazards.

CAUTION - Alerts the reader of a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or damage to the product or other property. This includes special care necessary for the safe and effective use of the device and the care necessary to avoid damage to a device that may occur as a result of use or misuse.

Note - Provides special information to make maintenance easier or important instructions clearer.

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Summary of safety precautions

Always read and strictly follow the warnings and cautions listed on this page. Service only by qualified personnel.

WARNING

- Do not operate Power-LOAD with a voltage that is inconsistent with the rating on the product.
- Do not operate Power-LOAD above its duty cycle to avoid the risk of equipment damage or smoke hazard.
- Do not connect Power-LOAD to a 24 VDC vehicle circuit. Always connect Power-LOAD to a 12.8 VDC-15.6 VDC vehicle circuit that is on a 15A fuse/breaker to prevent power hazards.
- Power-LOAD operates at 13.56 MHz when you use Power-LOAD controls with a powered cot (Power-PRO XT or Power-PRO IT) that could interfere with other equipment that operate at this frequency band.
- The use of accessories, transducers, and cables, other than those specified, with the exception of transducers and
 cables that are sold by Stryker as replacement parts for internal components, may result in increased emissions or
 decreased immunity of the Power-LOAD system.
- Do not use the **Power-LOAD** system and the **Power-PRO** cot adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, observe the **Power-LOAD** system to confirm normal operation in the configuration where it will be used.
- Power-LOAD operates primarily at these frequencies: 70 85 kHz for inductive charging and 13.56 MHz±7 kHz, Amplitude Modulated (OOK), ERP: -82.37 dBm. The inductive charging can operate between these frequencies: 70 - 125 kHz. Other equipment may interfere with the Power-LOAD system, even if that other equipment complies with CISPR emission requirements.
- Always press the main power button to turn the unit off before service or cleaning.
- Always use any appropriate personal protective equipment while power washing to avoid inhaling contagion. Power
 washing equipment may aerate contamination.
- Always wipe the product with clean water and dry after cleaning. Some cleaning products are corrosive in nature and
 may cause damage to the product. Failure to properly rinse and dry the product leaves a corrosive residue on the
 surface of the product and may cause premature corrosion of critical components.
- Always have two installers lift and position the trolley assembly.
- Do not pinch the cables while you service or install the covers.
- Always take ESD precautions when you handle the control board. For more information about ESD protection, contact Stryker Technical Support at (800) 327-0770.
- Use only Mobil Mercon® V Blend ATF Oil (6500-001-293) in the specified quantity. Do not overfill the reservoir with oil. See the Mobil Mercon® V Blend ATF Oil material safety data sheet (MSDS) issued by the manufacturer for safety information (Exxon Mobil Corporation, 1-(800) 947-9147, http://www.exxon.com, http://www.mobil.com, product code: 20103020B010, 525147-00, 97X826).

CAUTION

- Improper usage of the product can cause injury to the patient or operator. Operate the product only as described in this manual.
- Do not modify the product or any components of the product. Modifying the product can cause unpredictable operation resulting in injury to patient or operator. Modifying the product also voids its warranty.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense. In the event of interference, please relocate or reorient the Power-LOAD system or interfering product.
- Always relocate or reorient the Power- LOAD system or interfering product in the event of interference. This device complies with Part 18 of the FCC Rules.
- Do not use portable RF communications equipment (including peripherals such as antenna cables and external antennas) no closer than 30 cm (12 in.) to any part of the **Power-LOAD** system, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment may result.

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- The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area (for which CISPR 11 class B is normally required) is likely to cause harmful interference, in which case the user will be required to correct the interference at their expense. In the event of interference, please relocate or reorient the **Power-LOAD** system or interfering product.
- Do not spray directly underneath the trolley up in to the trolley mechanism. Water could gain ingress into the trolley housing and may accelerate corrosion or degrade operation.
- Do not clean, service, or perform maintenance while the product is in use.
- The manual overrides allow the Power-LOAD system to move freely.
- Damage may occur if the motor armature or stator are bumped around when you replace the motor.
- Do not touch the negative and positive battery terminals together on any metal surface when you replace the battery.

Pinch points

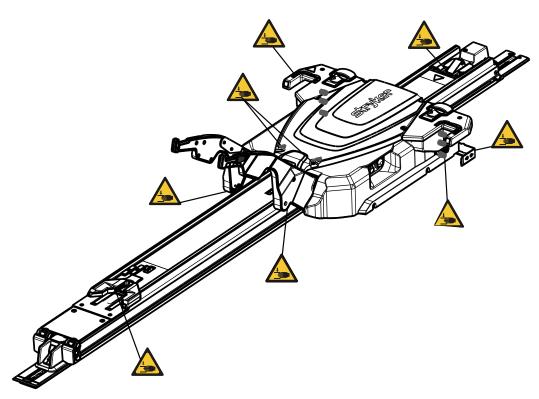


Figure 1 – Pinch points

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Introduction

This manual assists you with the operation or maintenance of your Stryker product. Read this manual before operating or maintaining this product. Set methods and procedures to educate and train your staff on the safe operation or maintenance of this product.

CAUTION

- Improper usage of the product can cause injury to the patient or operator. Operate the product only as described in this
 manual.
- Do not modify the product or any components of the product. Modifying the product can cause unpredictable operation resulting in injury to patient or operator. Modifying the product also voids its warranty.

Note

- This manual is a permanent part of the product and should remain with the product even if the product is sold.
- Stryker continually seeks advancements in product design and quality. This manual contains the most current product
 information available at the time of printing. There may be minor discrepancies between your product and this manual. If
 you have any questions, contact Stryker Customer Service or Technical Support at 1-800-327-0770.

Product description

The Stryker Model 6390 **Power-LOAD**® power-loading cot fastener system is designed to lift, lower, or steer compatible ambulance cots into and out of an emergency ground transport vehicle. When the cot is securely attached to the system, a battery powered hydraulic system assists the operators in loading and unloading a cot. The system also secures the compatible ambulance cot within the vehicle for patient transportation purposes. When the cot is secured in the transport position, **Power-LOAD** inductively charges compatible model 6506 **Power-PRO**™ XT and 6516 **Power-PRO**™ IT ambulance cots. In the event of power loss, the system remains functional for securing the cot within the vehicle.

Indications for use

Power-LOAD is intended to assist with loading and unloading of a compatible wheeled stretcher (ambulance cot) to and from a transport vehicle and to secure the ambulance cot during transport. The device has a maximum safe working load of 870 lb (395 kg), which includes the weight of the ambulance cot, patient, and equipment attached to the cot (such as oxygen bottles, monitors, and pumps). The intended users of the device are trained professionals, including emergency medical service and medical care center personnel, as well as medical first responders, service technicians and installers.

Expected service life

Power-LOAD has a seven year expected service life under normal use conditions and with appropriate periodic maintenance.

Contraindications

None known.

Specifications

<u>^</u>	Safe working load Note - Safe working load indicates the sum of the cot, patient, mattress, and accessory weight.	870 lb	395 kg
Maximum lift capacity (patient and accessories)		700 lb	318 kg

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Overall length	95 in.	241 cm	
Minimum length	89.5 in.	228 cm	
Width	24.5 in.	62 cm	
Weight			
Floor plate assembly	16.5 lb	7.5 kg	
Anchor assembly	23 lb	10.5 kg	
Transfer assembly	67 lb	30.5 kg	
Trolley assembly	105 lb	48 kg	
Minimum operators required for loading/unloading an occupied cot	2		
Minimum operators required for loading/unloading an unoccupied cot	1		
Recommended loading height	22 in. to 36 in.	56 cm to 91 cm	
Hydraulic oil	Mobil Mercon® V Blend ATF Oil	(6500-001-293)	
	See the Mobil Mercon® V Blend safety data sheet (MSDS) for safety		
Electrical requirements	12.8 VDC-15.6 VDC, 15A fuse/b AWG cable	12.8 VDC-15.6 VDC, 15A fuse/breaker, 2 conductor 10 AWG cable	
Battery duty cycle, charging	100%		
Battery duty cycle, loading	10% (33 sec on/5 min off)		
Battery	12 VDC, 5 Ah lead acid battery (6390-001-468)		
Fuse	LITTELFUSE 0496060.ZXD-UL		
Standards	ANSI/AAMI ES60601-1:2012, Composition of the compos	60601-1-12:2014 ic options, see	

Stryker reserves the right to change specifications without notice.

The yellow and black color scheme is a proprietary trademark of Stryker Corporation.

Hereby, Stryker declares that the radio equipment type short range device is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: http://techweb.med.strykercorp.com/EMS/EU%20Declaration%20of%20Conformity/index.html.

Labels may be unreadable from a viewing distance greater than 12 inches.

WARNING

- Do not operate Power-LOAD with a voltage that is inconsistent with the rating on the product.
- Do not operate Power-LOAD above its duty cycle to avoid the risk of equipment damage or smoke hazard.
- Do not connect **Power-LOAD** to a 24 VDC vehicle circuit. Always connect **Power-LOAD** to a 12.8 VDC-15.6 VDC vehicle circuit that is on a 15A fuse/breaker to prevent power hazards.
- Power-LOAD operates at 13.56 MHz when you use Power-LOAD controls with a powered cot (Power-PRO XT or Power-PRO IT) that could interfere with other equipment that operate at this frequency band.
- The use of accessories, transducers, and cables, other than those specified, with the exception of transducers and
 cables that are sold by Stryker as replacement parts for internal components, may result in increased emissions or
 decreased immunity of the Power-LOAD system.

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- Do not use the Power-LOAD system and the Power-PRO cot adjacent to or stacked with other equipment. If adjacent
 or stacked use is necessary, observe the Power-LOAD system to confirm normal operation in the configuration where it
 will be used.
- Power-LOAD operates primarily at these frequencies: 70 85 kHz for inductive charging and 13.56 MHz±7 kHz, Amplitude Modulated (OOK), ERP: -82.37 dBm. The inductive charging can operate between these frequencies: 70 - 125 kHz. Other equipment may interfere with the Power-LOAD system, even if that other equipment complies with CISPR emission requirements.

Environmental conditions	Operation	Storage and transportation
Temperature	-30 °F- (-34 °C)	-30 °F- (-34 °C)
Relative humidity	0%	0%
Atmospheric pressure	700 1060 hPa	700 - 1060 hPa

CAUTION

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense. In the event of interference, please relocate or reorient the Power-LOAD system or interfering product.
- Always relocate or reorient the Power- LOAD system or interfering product in the event of interference. This device
 complies with Part 18 of the FCC Rules.
- Do not use portable RF communications equipment (including peripherals such as antenna cables and external antennas) no closer than 30 cm (12 in.) to any part of the **Power-LOAD** system, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment may result.
- The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area (for which CISPR 11 class B is normally required) is likely to cause harmful interference, in which case the user will be required to correct the interference at their expense. In the event of interference, please relocate or reorient the **Power-LOAD** system or interfering product.

Description	Number	Substance of very high concern (SVHC) chemical name
Power-LOAD	6390-000-000	Lead
Battery, 12V	6390-001-468	Lead
Control board assembly	6390-101-014	Lead

Standards with required options

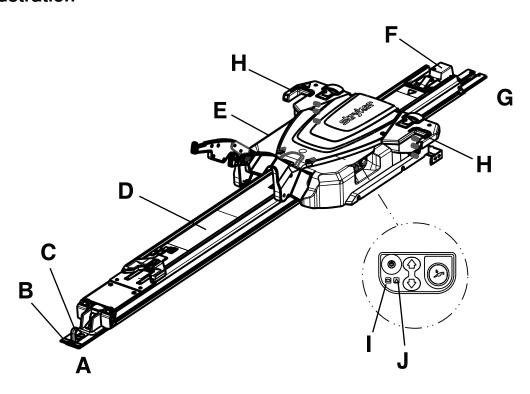
To be compliant with the standards, you must use **Power-LOAD** with the following compatible cots. See the Operations Manual for your cot model for more information.

Note - Compatible cot is loaded into Power-LOAD in powered mode for crash testing.

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Standard	Power-LOAD compatible cot model
SAE J3027 and AS/NZS-4535	6500, 6506
BS EN 1789	6500, 6506, 6085, 6086

Product illustration



Α	Foot end
В	Floor plate
С	Safety hook
D	Transfer assembly
E	Trolley assembly

F	Anchor assembly
G	Head end
Н	LED indicator, head end
I	Battery LED
J	Error LED

Contact information

Contact Stryker Customer Service or Technical Support at: 1-800-327-0770.

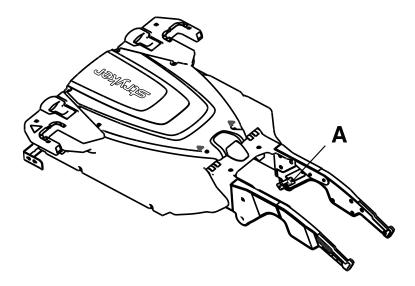
Stryker Medical 3800 E. Centre Avenue Portage, MI 49002 USA

To view your operations or maintenance manual online, see https://techweb.stryker.com/.

Have the serial number (A) of your Stryker product available when calling Stryker Customer Service or Technical Support. Include the serial number in all written communication.

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Serial number location



Date of manufacture

The year of manufacture is the first 2 digits of the serial number.

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Cleaning and disinfecting with wipes

For United States only. Confirm availability for your configuration or region. Call Stryker Customer Service: 1-800-327-0770.

Stryker's preferred wipes (2060-000-001 6" x 10" or 2060-000-002 9" x 12") include the following active ingredients:

- n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride 0.154%
- n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride 0.154%
- Isopropanol 21.000%

Non-active ingredient: Ethylene Glycol Monobutyl Ether – < 3%

Note - For safety information, read the product label.

To clean or disinfect the external product surface:

1. To clean, wipe external surfaces with a fresh, clean wipe to remove all visible soils. Repeat as necessary until the product is clean.

Note

- · Use as many wipes as necessary.
- Complete step 1 before you disinfect.
- 2. To disinfect, wipe external surfaces with a fresh, clean wipe until wet. Allow the external surface to remain wet for two minutes at room temperature.
- 3. Allow the product to dry before you return it to service.

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Cleaning

WARNING

- Always press the main power button to turn the unit off before service or cleaning.
- Always use any appropriate personal protective equipment while power washing to avoid inhaling contagion. Power
 washing equipment may aerate contamination.

CAUTION

- Do not spray directly underneath the trolley up in to the trolley mechanism. Water could gain ingress into the trolley housing and may accelerate corrosion or degrade operation.
- · Do not clean, service, or perform maintenance while the product is in use.

The product is power washable. The product may show some signs of oxidation or discoloration from continuous washing. No degradation of the product's performance will occur from power washing as long as you follow the proper procedures.

- Follow the cleaning solution manufacturer's dilution recommendations exactly.
- Power wash Power-LOAD with recommended cleaners. Hose down the product and towel dry the transfer rails and arm hinges.
- Power wash Power-LOAD with a hand held wand unit or wipe the product with a clean cloth and recommended cleaners.
- When you hose down or power wash the product, do not spray directly underneath the trolley up in to the trolley mechanism. Water could gain ingress into the trolley housing and may accelerate corrosion or degrade operation.
- Using a soft cloth and brush, clean the transfer roller channels to prevent debris accumulation.
- Remove the trolley top cover and patient left side cover assembly to towel dry the control board assembly.
- Disconnect the motor and battery connectors and towel dry the connectors.
- · Towel dry the transfer rails and arm hinges.
- When cleaning, park the ambulance uphill and extend the transfer and trolley so the water drains out of the rear end of the vehicle patient compartment.

Note - Water that gets into the Power-LOAD system will drain through the drain tube to the underside of the vehicle.

Suggested cleaners

In general, when used in concentrations recommended by the manufacturer, either phenolic type or quaternary (excluding **Virex**® TB) type disinfectants can be used. Iodophor type disinfectants are not recommended for use because staining may occur.

WARNING - Always wipe the product with clean water and dry after cleaning. Some cleaning products are corrosive in nature and may cause damage to the product. Failure to properly rinse and dry the product leaves a corrosive residue on the surface of the product and may cause premature corrosion of critical components.

Suggested cleaners include:

- Quaternary cleaners (active ingredient ammonium chloride) that contain less than 3% glycol ether
- Phenolic cleaners (active ingredient o-phenylphenol)
- Chlorinated bleach solution (5.25% less than 1 part bleach to 100 parts water)
- ≤ 21% isopropanol alcohol

Avoid over saturation. Do not allow the product to stay wet longer than the chemical manufacturer's guidelines for proper disinfecting.

Note - Failure to follow the above directions when using these types of cleaners may void this product's warranty.

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Preventive maintenance

Regular inspection and adjustments

Maintenance intervals

This schedule is a general guide to maintenance. The required maintenance schedule may vary based on:

- · Call volume
- Weather
- Terrain
- Geographical location
- · Individual usage

If you are not sure how or when to perform these checks, contact your Stryker Service Technician.

When you perform **Power-LOAD** preventive maintenance checks, you must perform a preventive maintenance check on its corresponding **Power-LOAD** compatible cot and the optional wheel guide assembly (if applicable) to confirm operability of the entire system.

Power-LOAD compatible cot maintenance

Wear items that may require replacement on the **Power-LOAD** compatible cot include the cot arm spacer (6500-002-123), base dead stop (6085-001-094), and load wheel pin (6500-002-104).

Optional wheel guide assembly maintenance (if applicable)

To preserve **Power-LOAD** fastener functionality, make sure that the wheel guide is functional and its structure has not been compromised. The wheel guide rail system assists the **Power-LOAD** system in loading the cot. If the wheel guide has been compromised, replace it immediately.

Note - The **Power-LOAD** maintenance schedule is based on 10 calls per day. Adjust the routine maintenance schedule to your actual service usage.

Every month

Check	Routine
Lock location	Clean debris from the foot end lock location on the transfer

Every three months

Check	Routine
Loose fasteners	Replace if loose
Battery terminal screws	Tighten loose screws (torque to 9 in-lb)
Transfer assembly and anchor assembly	Clean debris from the top of the transfer assembly and anchor assembly
Transfer roller channels	Clean transfer roller channels to prevent debris accumulation
Trolley stop ramp	Tighten loose screws

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Every twelve months

Check	Routine
Battery	Replace if lifting is sluggish
All parts	Check and replace any worn parts, including arm covers, arm wear pads, trolley top and side covers, cot release handle springs, anchor lever cover, anchor inductive primary cover, transfer lock plate, transfer lock pin, or cot guides, if necessary
Dead stop bumpers	Replace if the corner is damaged
Motor	Replace when no motor motion exists
Cylinder rod end	Replace if Power-LOAD functions in manual mode and the error LED is illuminated
Full functionality	See <i>Installation checklist</i> in the Power-LOAD Operations Manual
Hydraulic	Check for hydraulic leaks
Transfer lock bearing	Replace once per year
	Note - During bearing replacement, make sure that the surrounding area is clean (anchor) and apply molybdenum disulfide grease to the transfer lock pin.
V-guide rollers	If the product is difficult to roll or wear is noticeable in the transfer roller channel beyond the inner rod, replace the V-guide rollers on the trolley and switch the patient right, outside, bottom transfer rod with the patient right, outside top transfer rod. Check all remaining rollers for damage or excessive wear. Replace, if necessary.
Lift arm springs	Replace the lift arm springs (0038-895-000) that are located under the trolley top cover

Flat roller and V-guide part replacement schedule

You must replace the flat roller and V-guide parts every 14,110 calls. This is to make sure that the **Power-LOAD** remains functional. Follow this call volume time table to remain compliant with this requirement. The time table will also help plan appropriate service intervals.

Calls per day	Months
6	80
7-8	60
9-10	48
11-12	40
13	36
14-15	30

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Transfer lock bearing part replacement schedule

You must replace the transfer lock bearing parts every 3,653 calls. This is to make sure that **Power-LOAD** remains functional. Follow this call volume time table to remain compliant with this requirement.

Calls per day	Months
2	60
3	40
4-5	24
6	20
7-8	15
9-10	12
11-12	10
13-15	8

Maintenance record

Date	Maintenance operation performed	Ву	Hours

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Training record

	Training date			
Trainee name	Basic training	Refresher update	Owner's manual, inservice, formal class, etc.	

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Quick reference replacement parts

These parts are currently available for purchase. Call Stryker Customer Service: 1-800-327-0770 for availability and pricing.

Name	Number
Actuator assembly, trolley	6390-001-028
Battery	6390-001-468
Board, comm, trolley	6390-001-378
Board, inductive primary, anchor	6390-001-147
Board assembly, trolley control	6390-101-014
Bronze bearing (anchor lock bearing)	0081-439-000
Bumper block, mid position	6390-001-322
Coil assembly, middle, anchor	6390-001-030
Coil assembly, primary, anchor	6390-001-071
Coil assembly, trolley	6390-001-066
Cot release handle spring	0038-376-000
Cover, top	639001010420
Cover assembly, side, patient right	6390-001-041
Cover assembly, side, patient left	6390-001-042
Cover assembly, wing, patient right	6390-101-047
Cover assembly, wing, patient left	6390-101-048
Cover, arm, mid, patient right	639000010369
Cover, arm, mid, patient left	639000010370
Cover, arm, head end, patient right	639000010371
Cover, arm, head end, patient left	639000010372
Grip, arm, patient left	6390-001-341
Grip, arm, patient right	6390-001-368
Dead stop block, threaded	6390-001-246
Dead stop block, thru hole	6390-001-244
Dead stop bumper	6390-001-243
Hydraulics assembly	6390-001-039
Hydraulic fluid	6500-001-293
Hydraulic cylinder rod end	6390-001-040
Label, powered operations instructions	6390-101-498
Label, manual operations instructions	6390-001-499
Motor	6390-101-132

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Name	Number
Power-LOAD mass casualty fastener, wall mounted fastener (Model 6391)	6391-000-000
Power-LOAD mass casualty fastener, floor mounted fastener (Model 6391)	6391-000-000
Release lever housing	6390-001-105
Roller assembly, flat	6390-001-027
Roller assembly, V-guide	6390-001-025
Sensor, angle position (APS)	6390-001-397
Sensor, trolley position (TPS)	6390-001-361
Switch, master on/off	6390-001-450
Wheel guide rail bumper	6390-001-175
Wheel guide rail	6390-001-176

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Troubleshooting

Transfer/cot does not move out of the transport position

Transfer/cot does not move out of the transport position when you press the release lever at the foot end of the anchor.

If the lifting arms are over the base tube (powered mode)

- 1. With the help of another person, simultaneously press the transfer release lever at the foot end of the anchor and the trolley release button at the head end of the anchor.
- 2. If the cot is free, then inspect the head end anchor mechanism.
- If the cot still will not move, then repeat step 1 while simultaneously pulling on the patient right transfer lock trigger at the foot end of the transfer.

Note - This should allow the cot to be pulled out while it is still locked into the trolley and transfer.

- 4. With the cot pulled out, look at the underside of the transfer. About 15 in. from the foot end, you will see the metal hook with a semi-circle cutout at its head end.
 - a. Push up on the semi-circle and the cot should be free to move.
 - b. With assistance from another person, pull the cot out.
- 5. With the cot free, check the foot end anchor mechanism.
 - a. Remove the transfer to inspect the foot end anchor pin.
 - b. Remove the anchor mechanism from the foot end anchor.

If the lifting arms are under the base tube

- 1. With the help of another person, press the transfer release lever and lift up on one of the cot release handles on the trolley at the same time.
- 2. If the cot is free, remove the cot and determine whether the black pin will extend up from the anchor head end cover.

Note - The trolley must be in the mid position and the release lever pressed to elevate the pin.

- a. If the pin extends out without signs of damage, check the casting in the trolley release handle mechanism (6390-001-328) or the plastic lever in the trolley middle mechanism.
- b. If the pin does not extend out, check the head end anchor mechanism for damage.

If the cot still will not move

- 1. Insert a screwdriver into each notch at the head end of the trolley side covers to release the cot head section latches.
- 2. After the latches are unlocked, use the release lever at the foot end to release the cot.
- 3. After the cot is removed, inspect the release handle mechanism in the trolley.

Trolley does not roll smoothly

If rolling is difficult while the trolley is rolling on the transfer

- Check the rods in the channels on the outside of the transfer extrusion for debris or foreign material and remove, if necessary.
- 2. If rolling is still difficult, check to see if the transfer extrusion is worn around the channels. If so, replace the V-guide rollers on the trolley.

If rolling is difficult while the transfer is rolling on the anchor

- 1. Check the metal dead stops (6390-001-246) at the head end of the transfer to make sure that they are fully seated and that they are not rubbing on the anchor extrusion.
- 2. Check the rods in the channels on the inside of the transfer extrusion. Remove any debris or foreign material.

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3. If rolling is still difficult, check to see if the transfer extrusion is worn around the channels. If so, replace the V-guide rollers on the anchor.

Trolley rolls part of the way and stops

- Check the transfer lock bearing in the anchor.
 - a. Clean the transfer lock pin.
 - b. Replace the bearing.
 - c. Apply molybdenum disulfide lubricant (6390-001-263) to the inside of the new bearing.
- 2. Check the transfer lock override slides (6390-001-261) for excessive wear.

Trolley makes noise while rolling

If the noise occurs when the trolley is rolling on the transfer

When rolling the system out of the transport position, does the trolley get to the foot end of the transfer before the transfer moves?

- 1. If no, the transfer lock pin in the anchor, or its return spring, is most likely the problem. The pin should return to the full up position after it is pressed.
 - a. Check the transfer lock pin.
 - b. Clean or replace the spring or bearing as needed.
- 2. If yes:
 - a. Remove any debris or foreign objects from the transfer and vehicle floor.
 - b. Inspect the transfer extrusion for wear.
 - c. Remove the trolley from the transfer.
 - d. Make sure that the trolley rollers are free of debris.
- 3. If this does not solve the problem, or if the transfer extrusions worn around the rods, replace the V-guide rollers on the trolley.

If the noise occurs when the transfer is rolling on the anchor

1. If the noise is a high-pitched squeak, check the detent roller. If the noise is a grinding sound, check the transfer lock pin.

Trolley LEDs

Trolley LEDs stay off when the trolley reaches the loading position.

- 1. Confirm that the trolley is powered on and the battery is charged.
- 2. Make sure that the magnet activator (6390-001-106) is present and that it is fastened at the foot end of the anchor.
- 3. With the lifting arms down, push on the trolley. Make sure that the system does not roll away from the loading position and is locked in this position.
- 4. Remove the transfer. Make sure that the magnet mover trigger (6390-001-205) is intact and undamaged.
- 5. Remove the magnet mover trigger (6390-001-205).
- 6. Remove the foot end latch assembly from the transfer and pull out the link in the channel on the patient left side.
 - a. Check that the magnet nested into that link is present and intact.
 - b. Check that the return spring on the link is in good condition.

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- 7. Remove the trolley covers. Check the connection of the trolley position sensor (TPS) cable (6390-001-361). If necessary, replace the trolley position sensor (TPS) (6390-001-361).
- 8. Check the connection of the trolley main cable (6390-001-391) to the control board assembly (6390-101-014). If necessary, replace the control board assembly (6390-101-014).
- 9. Check the connection of the trolley LED cables (6390-001-396). If necessary, replace each of the trolley LEDs (6390-001-396).
- 10. Replace the trolley main cable (6390-001-391).

Cot release button does not unlock the cot from the trolley

- 1. Confirm that both the cot and the trolley have power, that there are no errors, and that both are operational independently.
- 2. Make sure that the cot release handles on the trolley are able to release the cot from Power-LOAD.
- 3. Confirm that communication exists between the cot and Power-LOAD by lifting the cot using the cot controls.
- 4. Press the release button on the second switch. If this works, the issue is with the first switch or there is a bad connection in the cot.
- 5. In a quiet area, press the release button and listen for a clicking sound at the head end patient left side of the trolley. You may need to push the button twice if the cot is asleep.
- 6. If there is a sound, the problem is likely a broken part in the actuator assembly or an improperly installed actuator assembly (6390-001-478).
- 7. If there is no sound, remove the trolley top and the patient left side covers.
 - a. Confirm that the connection of the actuator (6390-001-478) to the circuit board is good and the contacts appear to be in good condition.
 - b. Confirm that the connection of the trolley main cable (6390-001-391) to the control board assembly (6390-101-014) is good, the connector screws are tight, and the contacts appear to be in good condition.
 - c. Test Power-LOAD with a new actuator (6390-001-478).
 - d. Test Power-LOAD with a control board assembly (6390-101-014).

Trolley release handles

Trolley release handles do not release the cot from the trolley.

- 1. Confirm that the system is in the loading position with the cot wheels on the ground and the head section locked into the trolley.
- 2. Confirm that the lifting arms are in the full down position.
- 3. Are the release handles on the trolley free to rotate (they should rotate about 20 degrees)?
- 4. If yes:
 - a. Inspect the release handle mechanism. Pay particular attention to the activation cams (6390-001-329).
 - b. Inspect the trolley latches (6390-001-318 and 6390-001-319).
- 5. If no:
 - a. Remove the trolley covers.
 - b. In the mechanism in the center of the trolley at the head end, check the trolley arm (6390-001-334) or its return spring. Check to see if the spring is broken or jammed by debris.
 - c. Make sure that the trolley arm mechanism (6390-001-045) in the trolley is not jammed.
 - d. Make sure that the trolley latches (6390-001-318 and 6390-001-319) are not stuck or broken.

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Trolley does not lock in the loading position

If the trolley is unlocking from the transfer

- 1. Remove the cot.
- 2. Put the trolley in the middle of the transfer.
- 3. On the extended transfer (located just to the head end of the foot end fastener), the transfer trolley pawl (6390-001-073) should be sticking out of the transfer about 1/2". If the pawl is not sticking up or does not return when pressed, check its return spring. Make sure that there is no debris jamming the return spring.
- 4. Make sure that the pin of the roller in the pawl is not sticking out on either side.
- 5. Remove the transfer head end dead stops.
- 6. Remove the transfer from the anchor.
- 7. Clear any debris or foreign material from the top of the anchor and the channels in the transfer.
 - **Note** Foreign objects that do not allow the trolley to reach the full out position could cause the mechanism to not operate properly.
- 8. Inspect the trolley stop ramp (6390-001-325) on the underside of the trolley middle mechanism to make sure that it is present and secure.

If the transfer is unlocking from the anchor

- Remove the cot.
- 2. Move the trolley to the mid position.
- 3. Check for debris around the transfer lock trigger (6390-001-231).
- 4. Push the transfer all the way to the transport position.
- 5. Pull on the transfer to make sure it is locked.
- 6. If the transfer is not locked, the problem is likely that the transfer lock pin in the anchor is stuck or broken.
- 7. Check the return spring and look for burrs or debris.

Trolley will not unlock from the transfer position

- 1. Remove the cot.
- 2. Using the head end transfer lock override slide (6390-001-261), move the transfer in and put the trolley in the mid position.

Trolley pump runs for an extended time after cot jog up

- 1. Check the angle position sensor (APS) (6390-001-397) calibration set point. Call Stryker Service.
- 2. Remove the patient right side cover. Make sure that the hydraulic cylinder is not "over-stroking."
 - Note Over-stroke condition is evidenced by a ~1/8" back settle in the rod of the hydraulic cylinder at full extension.
- 3. Check for damage of components in the chain of load bearing parts from the lifting arms to the patient right side plate (6390-001-344).

Cot does not lock into the trolley and LEDs flash amber

- 1. Remove the cot from Power-LOAD.
- 2. Make sure that the cot is a Power-LOAD compatible cot and that the load wheel horns and pins (6500-002-104) are present, properly tightened, and in good condition.

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- 3. Make sure that the handle release mechanism (6390-001-046) moves freely and the release handles return to the full down position. Make sure that there is no debris under the release handles.
- 4. Remove the trolley covers. Check the connection of the trolley latch switch cables (6390-001-318 and 6390-001-319).
- 5. Check the connection of the trolley main cable (6390-001-391) to the control board assembly (6390-101-014). If necessary, replace the trolley main cable (6390-001-391) and the control board assembly (6390-101-014).
- 6. Remove and inspect the actuator assembly (6390-001-028) from the trolley.
- 7. Check the return springs connecting the release cams (6390-001-329) to the trolley bottom pans.
- 8. Examine the trolley latches (6390-001-318 and 6390-001-319). Make sure that the electronic switch is being compressed when the latch is locked. Make sure that there are not cables obstructing the pin on the top of the latch and that there is not a broken spring internal to the latch.
- 9. Replace each latch, if necessary.

Cot locks into the trolley at the loading position but LEDs are not on

- 1. Confirm that the trolley is on and the battery is charged.
- 2. Make sure that the magnet activator (6390-001-106) is present and that it is properly fastened at the foot end of the anchor.
- 3. With the lifting arms down, push on the trolley. Make sure that the system does not roll away from the loading position.
- 4. Remove the transfer. Make sure that the magnet mover trigger (6390-001-205) is not damaged.
- 5. Remove the magnet mover trigger (6390-001-205).
- 6. Remove the foot end latch assembly from the transfer.
- 7. Pull out the link in the channel on the patient right side.
- 8. Make sure that the magnet nested into that link is present and intact.
- 9. Make sure that the return spring on the link is in good condition.
- 10. Remove the trolley covers.
- 11. Check the connection of the trolley position sensor (TPS) cable (6390-001-361). If necessary, replace the trolley position sensor (TPS) (6390-001-361).
- 12. Check the connection of the trolley main cable to the control board assembly (6390-101-014). If necessary, replace the trolley main cable (6390-001-391) and the control board assembly (6390-101-014).
- 13. Check the connection of the trolley LED cables (6390-001-396). If necessary, replace one of the trolley LEDs (6390-001-396).

Cot will not jog up when released from the transport position

Check the trolley control panel LEDs. They should be solid green without any solid amber error indication.

If there are no trolley control panel LEDs illuminated

1. Press the main power button to turn the product on. You may need to turn the product on and then off to make sure that Power-LOAD is not in sleep mode.

If the trolley control panel LEDs are illuminated

- 1. Flashing amber means that the battery is low. Return the trolley to the transport position.
- 2. Make sure that the product begins to charge as indicated by a flashing green battery LED.
 - Note The low battery indication (flashing amber) may continue as the battery recharges.
- 3. Solid green battery LED and solid amber LED means that there is a system error. Call Stryker Service for advanced troubleshooting. The following may be attempted:

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Note - If you hear the motor run as you pull the product from the transport toward the loading position, the problem is most likely with the hydraulic unit.

- a. Replace the hydraulics assembly (6390-001-039).
- b. Replace the motor cable (6390-001-431).
- c. Replace the angle position sensor (APS) (6390-001-397).
- d. Replace the trolley position sensor (TPS) (6390-001-361).
- e. Replace the control board assembly (6390-101-014).

Cot will not jog up high enough when released from the transport position

- 1. Check the angle position sensor (APS) (6390-001-397) calibration set point. Call Stryker Service.
- 2. Remove the patient right side cover and make sure that the hydraulic cylinder is not "over-stroking."
 - Note Over-stroke condition is evidenced by a ~1/8" back settle in the rod of the hydraulic cylinder at full extension.
- 3. Check for damage of components in the chain of load bearing parts from the lifting arms to the patient right side plate (6390-001-344).

Cot takes a long time to jog up

- 1. Check that the battery voltage is 12.2 VDC.
- 2. Check the battery cable connections for damage.
- 3. Check the cable connections to the control board.
- Replace the hydraulics assembly (6390-001-039).
- 5. Replace the control board assembly (6390-101-014).

Lifting arms do not lower, but the cot legs extend when you press the extend (+) button

Make sure that the trolley is powered on.

Make sure that the head end LED indicators are green to confirm that Power-LOAD recognizes the loading position.

If the head end LED indicators are not on

1. Check the trolley control panel LEDs to make sure that the product is on.

Note - The LEDs should appear as a solid green battery symbol with no illumination of error indication.

- 2. If the trolly control panel LED illuminates solid green only, then the trolley may not see what position it is in.
 - a. Make sure that the magnet activator (6390-001-106) is present.
 - b. Make sure that the magnet activator (6390-001-106) is fastened and secure at the foot end of the anchor.

If the head end LED indicators are on

Make sure that the trolley motor is running when you press the cot switch.

- 1. If the trolley motor is audible, then the problem is with the low pressure relief valve in the trolley hydraulics assembly.
 - a. Extend the cot legs.
 - b. Use the trolley manual release to drop the lifting arms until they are no longer supporting the cot.
 - c. Press the down button on the trolley side panel to finish lowering the arms.
 - d. If the arm moves, replace the hydraulics assembly (6390-001-039).

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- 2. If the trolley motor is not audible:
 - a. Check the motor and voltage to the motor. If voltage is present, replace the motor (6390-101-132).
 - b. Check the motor and voltage to the motor. If voltage is not present, replace the motor cable (6390-101-431) or the control board assembly (6390-101-014).
 - c. Run the lifting arms down using the trolley control panel. If the product lowers, the problem is likely with communication. Check both sides of the communication link. Replace the communication boards (6390-001-378 or 6500-002-100) as necessary.
- 3. If the trolley control panel LED error indication is illuminated, call Stryker Service for advanced troubleshooting.

Lifting arms lower, but the cot legs do not extend when you press the extend (+) button

- 1. Make sure that the cot battery has sufficient power to drive the cot (no amber battery indicator).
- 2. Check to see if the cot pump motor is audible.
 - a. If yes, the problem is with the cot hydraulic unit.
 - b. If no, check for error codes on the cot LCD.
 - c. Check all cable connections at the control board and hydraulic unit.
 - d. Replace the cot control board (6390-101-014).
 - e. Replace the cot hydraulics assembly (6500-001-030).
 - f. Replace the cot main cable (6500-002-159).

Lifting arms lower cot too quickly when you press the extend (+) button

- 1. Check for proper operation of the support sensor (6390-001-452). Make sure that both switches have continuity when weight < 100 lb is applied to the lifting arms.
 - a. If there is no continuity, replace the rod end assembly (6390-001-040).
- 2. Check for loose cable connections from the support sensors (6390-001-452) to the control board (6390-101-014).

Lifting arms lower the cot too slowly when you press the extend (+) button

- 1. Check the trolley control panel LEDs for low battery indication.
- 2. Check for false closure of the velocity fuse.
- 3. Raise the cot using the trolley control panel. Determine if the cot lowers at the correct rate.
 - a. If the cot does not raise, check for loose or bad trolley pump motor connection.
- 4. Lower the cot using the trolley control panel.
 - a. If yes, replace the hydraulic velocity fuse (6390-001-381).
 - b. If no, replace the motor (6390-101-132).

Trolley does not lower smoothly when you press the extend (+) button

1. Make sure that the trolley hydraulics have sufficient oil in the reservoir when lifting arms are all the way down. Look for any leaks and repair, if necessary.

Note - The oil level should be just below the fill port.

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- 2. Close the docked/locked latch and use the trolley control panel to cycle the lifting arms up and down a few times without a cot.
- 3. Check for proper operation of the support sensor (6390-001-452). Make sure that both switches have continuity when weight of < 100 lb is applied.
 - a. If no continuity, replace the rod end assembly (6390-001-040).
- 4. Check for loose cable connections from the support sensors (6390-001-452) to the control board (6390-101-014).

Trolley hydraulic motor is noisy when you press the extend (+) or retract (-) button

- 1. Make sure that the trolley hydraulics have sufficient oil in the reservoir when the lifting arms are all the way down. Look for any leaks and repair, if necessary.
 - Note The oil level should be just below the fill port.
- 2. Close the docked/locked latch and use the trolley control panel to cycle the lifting arms up and down a few times without a cot.
- 3. Cycle the product up and down three to five times, especially if this problem occurs happens right after a repair.
- 4. Replace the motor (6390-101-132) on the hydraulic unit.
- 5. Replace the hydraulics assembly (6390-001-039).

Lifting arms do not lower cot low enough when you press the extend (+) button

Check the trolley control panel for errors.

If an error occurs when the lifting arms are loaded

- 1. The safety limit for loaded operation of the arms has been reached. This can happen at high load heights (> 34 in.) with heavy loads (> 400 lb).
 - a. Check the support sensor (6390-001-452) or angle position sensor (APS) (6390-001-397) for damage.

If an error occurs when the lifting arms are unloaded or become unloaded

- 1. Make sure that the arms are not being held up on or by the cot legs.
- 2. Check for a broken angle position sensor (APS) (6390-001-397) or angle position sensor (APS) attachment hardware.
- 3. Check for loose cable connections from the angle position sensor (APS) to the control board.
- 4. Replace the control board (6390-101-014).

Cot drifts down or goes into high speed retract when you press the retract (-) button

- 1. Make sure that the trolley is on and functions without errors.
- 2. Make sure that the cot and trolley communication modules are connected, undamaged, and working properly.
 - a. Try the cot with a know good Power-LOAD.
 - b. Try the trolley with a known good cot.
- 3. Check all cable connections associated with communication leading back to the control board.
- 4. Replace the communication board (6390-001-378 or 6500-002-100).
- 5. Replace the control board assembly (6390-101-014 or 6500-002-014).

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Cot legs are retracted, but the cot is not lifted by the lifting arms when you press the retract (-) button

- 1. Make sure that the trolley is on and functions without errors.
- 2. Make sure that the cot and trolley communication modules are connected, undamaged, and working properly.
 - a. Try the cot with a know good Power-LOAD.
 - b. Try the trolley with a known good cot.
- 3. Check all cable connections associated with communication leading back to the control board.
- 4. Replace the communication board (6390-001-378 or 6500-002-100).
- 5. Replace the control board assembly (6390-001-014 or 6500-002-014).

Cot is lifted by the lifting arms but the cot legs do not retract when you press the retract (-) button

- 1. Check the support sensor (6390-001-397) on the trolley.
- 2. Check the cable and connections to the control board.
- 3. Check for an error on the trolley control panel. If there is an error, call Stryker Service.
- 4. Check the cot by itself for proper functionality.
- 5. Make sure that the cot indicates a good battery and no errors are present on the cot LCD. If you have an error, replace the battery.
- 6. Press the retract (-) button on the cot.
 - a. If you hear the cot pump motor run, the issue is a stuck rod-side manual valve (patient left manual valve) on the cot.
- 7. Check for a faulty pressure switch by removing the pressure switch connection from the cot main cable at the end closest to the hydraulics.
 - a. Jumper the cable to simulate a closed switch and press the retract (-) button.
 - b. If you do not hear the motor, the issue is either with cable connections or a bad pump motor.
 - c. Fix the connection or replace the pump motor.
- 8. Check the cot control board (6390-101-014) and replace, if necessary.

Trolley lifts the cot too slowly when you press the retract (-) button

- 1. Make sure that the trolley battery voltage is > 12.2V DC.
 - a. If the battery is charged and the voltage is < 10.0V DC when you press the retract (-) button, replace the trolley battery.
- 2. Check for an error on the trolley control panel LEDs while moving the lifting arms with the trolley control panel.
 - a. If an error is active only when using the lifting arms, replace the support sensor (6390-001-452).
- 3. Replace the hydraulics assembly (6390-001-039).
- 4. Replace the control board assembly (6390-101-014).

Lifting arms lift the cot too quickly when you press the retract (-) button

- 1. Check for a faulty or broken support sensor cable (6390-001-452).
- 2. Check for a faulty cabling connection to the control board.

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Trolley does not lift smoothly when you press the retract (-) button

- Make sure that the trolley hydraulics have sufficient oil in the reservoir when the lifting arms are all the way down. Look for any leaks and repair, if necessary.
 - Note The oil level should be just below the fill port.
- Close the docked/locked latch and use the trolley control panel to cycle the lifting arms up and down a few times without a cot.
- Check for proper operation of the support sensor (6390-001-452). Make sure that both switches have continuity when weight < 100 lb is on the lifting arms.
 - a. If no continuity, replace the rod end assembly (6390-001-040).
- 4. Check for loose cable connections from support sensors to the control board.
- 5. Replace the hydraulics assembly (6390-001-039).

Cot does not lift high enough

- 1. Check the angle position sensor (APS) (6390-001-397) calibration set point. Call Stryker Service.
- 2. Remove the patient right side cover and make sure that the hydraulic cylinder is not "over-stroking."
 - Note Over-stroke condition is evidenced by a ~1/8 in. back settle in the rod of the hydraulic cylinder at full extension.
- 3. Check for damage of components in the chain of load bearing parts from the lifting arms to the patient right side plate (6390-001-344).

Cot does not jog down once in the transport position

Check the trolley control panel LEDs.

Note - The LEDs should be solid green without any solid amber error indication.

- 1. If no trolley control panel LEDs are illuminated, press the main power button to turn the product on.
 - Note You may need to turn the product on and then off to make sure that the Power-LOAD is not in sleep mode.
- 2. If trolley control panel LEDs are illuminated:
 - a. Flashing amber means the battery is low.
 - b. Return the trolley to the transport position.
 - c. Make sure that the product begins to charge as indicated by a flashing green battery LED.
 - Note Low battery indication (flashing amber) may continue while the battery recharges.
 - d. Solid green battery LED and solid amber LED means system error. Call Stryker Service for advanced troubleshooting.
- 3. Check the following items:
 - a. Hydraulics assembly (6390-001-039)
 - b. Motor cable (6390-101-431)
 - c. Angle position sensor (APS) (6390-001-037)
 - d. Control board assembly (6390-101-014)
- 4. Pull the trolley from the transport position. If you hear the motor running as you pull the product from the transport position toward the loading position, the problem is with the hydraulic unit.
- 5. Check the magnet in the anchor pawl at the head end that initiates jog down. Make sure that the pawl is securely connecting with the catch on the trolley when the trolley is in the transport position and that the trolley is not stuck.

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Note - This can be done by visual inspection, but a good indicator of a secure connection is that the release lever at the foot end of the anchor is fully up and not pushed part way in.

Trolley manual release button does not lower the lifting arms

- 1. Remove the patient right side cover. Make sure that the linkages of the manual release that attaches to the side controls are connected and actuating the manual release valve on the hydraulic pump.
 - a. If the manual release valve is actuating, then the problem is a faulty velocity fuse. The velocity fuse (6390-001-381) is located in the cap end cylinder port under the elbow fitting. Remove and replace the velocity fuse.
 - b. If replacing the velocity fuse does not solve the problem, replace the pressure compensated flow control (6390-001-151).
 - c. Replace the hydraulics assembly (6390-001-039).

Trolley manual release button lowers the lifting arms, but not smoothly

- 1. Remove and replace the velocity fuse (6390-001-381).
 - Note The velocity fuse is located in the cap end cylinder port under the elbow fitting.
- 2. If this does not fix the issue, replace the pressure compensated flow control (6390-001-151).
- 3. Replace the hydraulics assembly (6390-001-039).

Trolley error LED indicates an error (solid amber)

Call Stryker Service

Trolley control panel does not move the lifting arms

- 1. Make sure that the power is on (solid green LED on the trolley control panel).
- 2. Make sure that the trolley is in the loading position and the latches are engaged.
 - **Note** The trolley control panel will only work if the trolley is in the loading position and the latches are connected. When the lifting arms are supporting weight, they only lower to a certain angle. These are safety features.
- 3. Check the head end indicators (solid green LED) to make sure that the product is in the loading position and that both latches are engaged.
 - a. If there is no head end indicator LED activity, then the product is not in the loading position.
 - If the head end indicator LEDs are flashing amber, one or both of the latches are not closed. Check the status of the latches.
 - c. If the problem persists, check the switches and connectivity back to the control board.
- 4. Check connectivity from the trolley control panel back to the control board.
- 5. Replace the trolley control panel board (6390-001-450).

Trolley stops part way while rolling to the transport position

- 1. Remove the transfer from the anchor.
 - a. Check for and remove any debris from the anchor and the channels on the inside of the transfer.
 - b. Examine the trolley to transfer lock release ramp (6390-001-144) to make sure that it is intact, tightly fastened, and not excessively worn.

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- Note The transfer lock release ramp is located about 24 in. from the foot end of the anchor.
- c. Examine the trolley to transfer lock pawl assembly (6390-001-144). Make sure that the pawl is allowed to rotate freely and, when pressed, it can rotate fully below the surface of the transfer.
- d. Examine the V-guide rollers and the flat rollers on the trolley and anchor. Replace any rollers that do not roll smoothly or are excessively worn.

Trolley makes noises while rolling

- 1. Check for and remove any debris or foreign objects found inside transfer channels.
- 2. Check the transfer for wear around the channels. Replace if needed.
- 3. Remove the trolley from the transfer and make sure that the trolley rollers are free of debris.
- 4. Replace the V-guide rollers on the trolley (6390-001-025).

Trolley is in the transport position with a cot and the trolley LEDs are not illuminated green

- 1. Pull the trolley out of transport position.
- 2. Inspect the trolley head end pawl. It should return firmly when pressed down. If it does not, check the following:
 - a. Make sure that the pawl is free of debris or foreign objects that may stop it from returning.
 - b. Make sure that the head end anchor release button is free from debris inhibiting motion.
 - c. Check the return springs on the pawl (0038-885-000).
- 3. Check the trolley stop ramp (6390-001-325) on the underside of the trolley middle mechanism.
- 4. Remove the transfer from the anchor. Make sure that the channels where the trolley and anchor rollers travel are free from debris or foreign objects that could limit the range of motion.

Trolley is in the transport position and the cot is not locked in at the foot end

Make sure that the cot foot end casters are on the vehicle floor.

- 1. If yes, pull the cot manual release and push down on the foot end of the cot.
 - a. If the cot still does not drop into the lock, pull the cot all the way out and push the cot retract (-) button to full retract the cot base.
 - b. Load the cot again without using the manual release lever.
 - c. If the cot is still held up by the foot end casters, then the problem is in the cot hydraulic system.
- 2. If no, did Power-LOAD run the motor to jog the cot down when the cot reached the transport position at the head end?
 - a. If no, see Cot does not jog down once in the transport position (page 29).
 - b. If yes, make sure that the cot foot end guide (6500-002-111) is aligned with the transfer foot end guide (6390-001-220).
 - c. To ensure alignment, firmly move the cot foot end back and forth and the cot should drop in place.
 - d. Remove the cot and look for debris in the transfer guide that may be preventing the cot from locking.

Transfer does not lock into the anchor

Push the transfer in by hand to make sure that the transfer goes all the way in against the bumper stops.

- 1. If yes, then the problem is likely the transfer lock bearing in the anchor.
 - a. Clean the transfer lock pin

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- b. Replace the bearing
- c. Apply molybdenum disulfide lubricant (6390-001-263) to the inside of the new bearing.
- d. Inspect the transfer lock override slides (6390-001-261) for excessive wear.
- 2. If no, remove the transfer head end dead stops.
 - a. Remove the transfer from the anchor.
 - b. Clear any debris from the top of the anchor and the channels in the transfer.

Note - Foreign objects that do not allow the trolley to reach the full out position could cause this mechanism to not operate properly.

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Service

Transfer removal

Tools required:

- · T25 Torx driver
- 5/32" hex wrench

Procedure:

- 1. Remove the trolley. See Trolley removal (page 33).
- 2. Put the transfer into the transport position all the way into the vehicle compartment.
- 3. Using a T25 Torx driver, remove the four screws (A) that secure the foot end transfer wear pad (B) to the transfer extrusion (Figure 2).
- 4. Using a 5/32" hex wrench, remove the screw (C) that secures the trolley magnet activator (D) to the anchor extrusion to remove the trolley magnet activator (Figure 2).
- 5. Slide both transfer lock triggers (E) to extend and pull the transfer off of the anchor completely (Figure 2).
 - Note The transfer assembly is heavy and may require assistance to remove.
- 6. Reverse steps to reinstall.
- 7. Verify proper operation before you return the product to service.

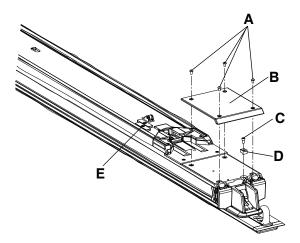


Figure 2 – Foot end transfer components

Trolley removal

Tools required:

- T25 Torx driver
- 3/16" hex wrench

Procedure:

WARNING - Always have two installers lift and position the trolley assembly.

- 1. Raise the lifting arms (A) (Figure 3).
- 2. Press the trolley release button at the head end of the anchor (B) (Figure 3).
- 3. Pull the trolley toward the foot end to the middle of the transfer assembly.
- 4. Slide the patient right transfer lock trigger (C) to extend (Figure 3).

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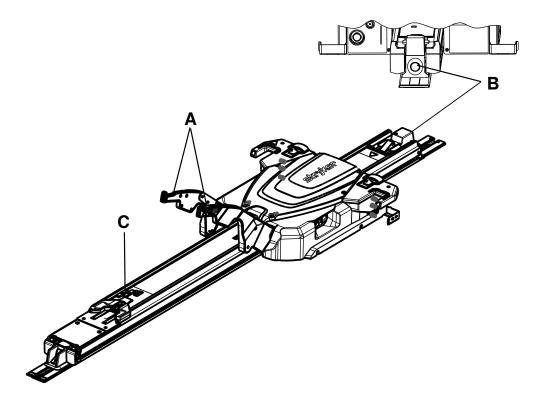


Figure 3 – Trolley mid transfer position

- 5. Pull the transfer toward the foot end until the transfer stops in the first lock position.
- 6. Using a T25 Torx driver, remove the two screws that secure the transfer trim (E) (Figure 4).

Note - The trolley will drop down slightly as you remove it from the transfer. Do not tip the trolley upside down, forward, or onto its side.

7. Using a 3/16" hex wrench, loosen (do not remove) the four socket head cap screws (two on each side) (D) that secure the dead stops to the transfer assembly (Figure 4).

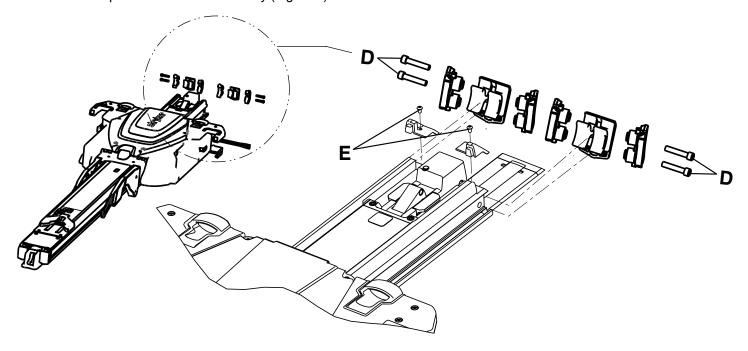


Figure 4 – Trolley screws

8. Push on the screws (loosened in step 7) to loosen the dead stops from the transfer.

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- 9. Remove the dead stop bumpers. Save the bumpers for reinstallation.
- 10. Lift the trolley assembly by its arm and wing.
 - a. Do not lift the trolley by the manual cot release handles.
 - b. Lift only where indicated.
 - c. Installer 1, position hands at A1 and A2 (Figure 5).
 - d. Installer 2, position hands at B1 and B2 (Figure 5).
 - e. Move the trolley toward the head end until it is off of the transfer.
 - f. Remove the trolley from the anchor.
 - g. Place the trolley in a suitable work area.

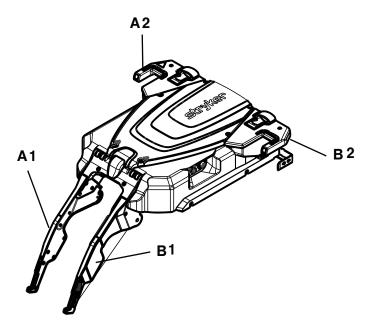


Figure 5 - Trolley hand positions

- 11. Reverse steps to reinstall.
- 12. Verify proper operation before you return the product to service.

Cover removal and replacement

Tools required:

- · T25 Torx driver
- 5/32" hex wrench

Procedure:

WARNING - Do not pinch the cables while you service or install the covers.

1. Using a T25 Torx driver, remove the six screws (A) that secure the trolley top cover (B) (Figure 6).

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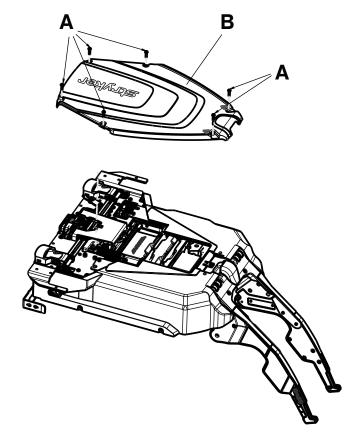


Figure 6 - Trolley top cover

- 2. Using a T25 Torx driver, remove the three screws (C) left side cover (D) (Figure 7).
- 3. Using a 5/32" hex wrench, remove one hex head screw (E) from the top of the left side cover (D) (Figure 7).
- 4. Remove the cover. Save the side cover, left and all screws for reinstallation.
- 5. Repeat steps 2-4 to remove the side cover, right (F) (Figure 7).

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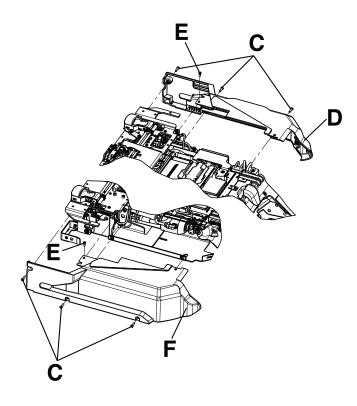


Figure 7 - Trolley side covers

- 6. Reverse steps to reinstall.
- 7. Verify proper operation before you return the product to service.

Manual release button assembly removal and replacement

Tools required:

- T25 Torx drive
- 5/32" hex wrench

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Press the main power button to turn the product off.
- 4. Remove the slic pin (A) from the switch/bracket assembly (Figure 8).
- 5. Using a T25 Torx driver, remove the two button head cap screws (B) that secure the manual release button bracket to the trolley frame (Figure 8).
- 6. Using a 5/32" hex wrench, loosen (do not remove) the socket head cap screw (C) that secures the manual release button bracket to the trolley frame (Figure 8).

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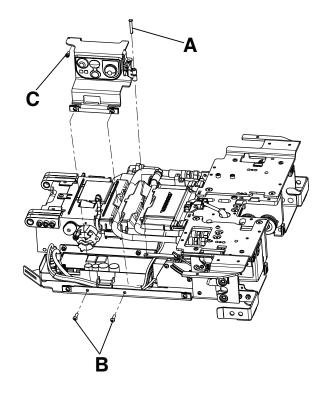


Figure 8 – Manual release button assembly

7. Unplug the cables from the master On/Off switch (D) and remove the manual release button assembly (Figure 9).

Note - Make note of the cable connection locations, so they do not get mixed up.

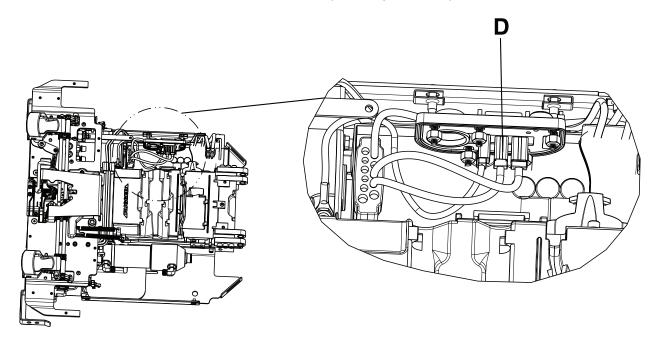


Figure 9 – On/Off switch cable locations

- 8. Reverse steps to reinstall.
- 9. Verify proper operation before you return the product to service.

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Control board assembly removal and replacement

Tools required:

- 3/32" hex wrench
- ESD

WARNING - Always take ESD precautions when you handle the control board. For more information about ESD protection, contact Stryker Technical Support at (800) 327-0770.

Procedure:

- 1. Remove the manual release button assembly. See *Manual release button assembly removal and replacement* (page 37).
- 2. Using a 3/32" hex wrench, loosen (do not remove) the two screws (A) that secure the main cable assembly (B) to the control board assembly (Figure 10).
- 3. Unplug all of the other cables from the control board assembly (C) and then remove the control board assembly (Figure 10). Discard the control board assembly.

Note - Do not dispose of as unsorted municipal waste. Refer to your local distributor for return or collection systems available in your country.

- 4. Align the control board assembly tabs with the holes in bottom pan, left to install the new control board assembly. Make sure that all of the cables are routed correctly.
- 5. Reverse steps to reinstall.
- 6. Verify proper operation before you return the product to service.

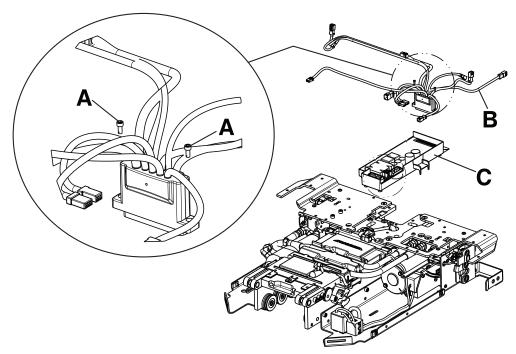


Figure 10 - Control board assembly

Master on/off switch replacement

Tools required:

1/32" nut driver

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Procedure:

- 1. Remove the manual release button assembly. See *Manual release button assembly removal and replacement* (page 37).
- 2. Using an 11/32" nut driver, remove the five Fiberlock hex nuts (A) that secure the master On/Off switch (B) to the manual release button bracket (C). Discard the master On/Off switch (Figure 11).
 - **Note** Do not dispose of as unsorted municipal waste. Refer to your local distributor for return or collection systems available in your country.
- 3. Reverse steps to reinstall.
 - Note Do not overtighten the nuts.
- 4. Verify proper operation before you return the product to service.

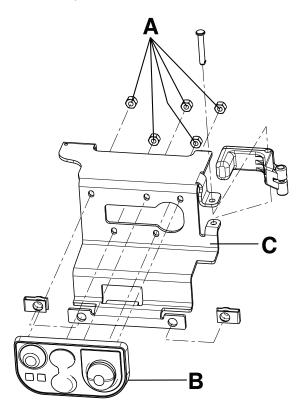


Figure 11 - Master On/Off switch and manual release button bracket assembly

Trolley actuator assembly replacement

Tools required:

T20 Torx driver

Procedure:

- 1. Remove the manual release button assembly. See *Manual release button assembly removal and replacement* (page 37).
- 2. Using a T20 Torx driver, remove the three delta screws (A) that secure the trolley actuator (B) to the trolley frame (Figure 12).

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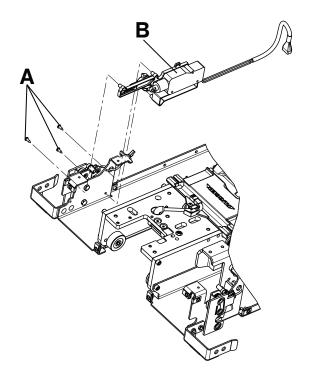


Figure 12 - Trolley actuator assembly

- 3. Unplug the cable (C) from the trolley actuator to the main cable assembly (Figure 13).
- 4. Pull the actuator out and up towards the trolley control board to remove.
- 5. Reverse steps to reinstall.

Note - Make sure that the cables are seated and routed correctly.

6. Verify proper operation before you return the product to service.

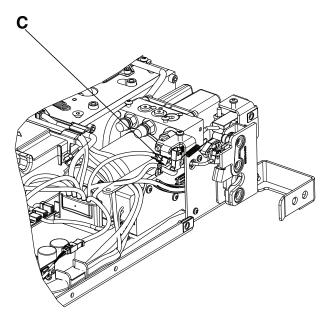


Figure 13 - Main cable assembly

Hydraulics assembly removal and replacement

Tools required:

T20 Torx driver

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- T25 Torx drive
- 1/4" hex wrench
- 3/16" hex wrench
- 1/2" combination wrench
- · Diagonal pliers

Procedure:

- 1. Remove the control board assembly. See Control board assembly removal and replacement (page 39).
- 2. Remove the trolley actuator assembly. See Trolley actuator assembly replacement (page 40).
- 3. Unclip the cables from the trolley routing tray and the hydraulic hoses.
- 4. Unplug the USB quick connect and the D+L-L lock switch cable from the main cable.
- 5. Position the main cable assembly toward the center of the trolley to allow clearance.
- 6. Using a T25 Torx driver, remove the two screws (A) that secure the hydraulics assembly (B) to the wing plate, left (C) (Figure 14).

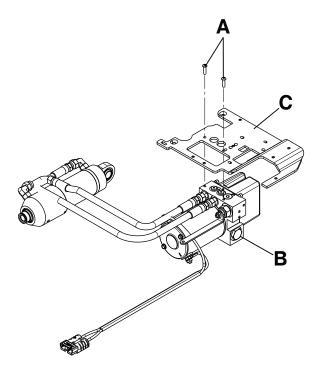


Figure 14 - Hydraulics assembly

- 7. Pull outward to remove the pump assembly and set the pump assembly on top of the wing plate, left.
- 8. Using a 1/4" hex wrench and a 1/2" combination wrench, remove the end cap cylinder pin (D) and nut (E) (Figure 15).

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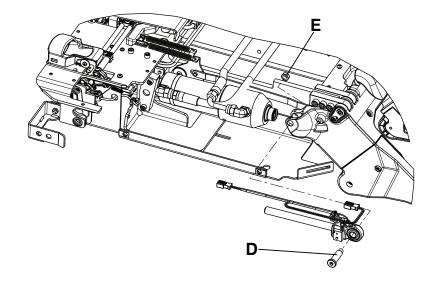


Figure 15 - End cap cylinder pin and nut locations

9. Using diagonal pliers, cut the cable ties (F) that secure the hydraulic cylinder rod end assembly cable to the plastic cover (Figure 16).

Note - Pay attention to the location of all cable ties for reinstallation.

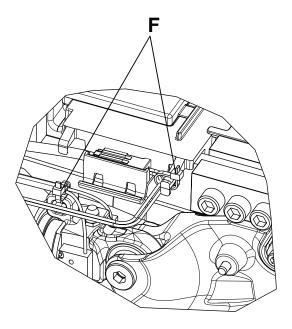


Figure 16 - Cable ties location

- 10. While lifting up on the cylinder, pull the hydraulic cylinder rod end assembly out. Save the hydraulic cylinder rod end assembly for reinstallation.
- 11. Using a 3/16" hex wrench, remove the two screws (G) that secure the pin bracket (H) to the trolley (Figure 17).
- 12. Remove the pin (I) and lift the hydraulic cylinder out (Figure 17).

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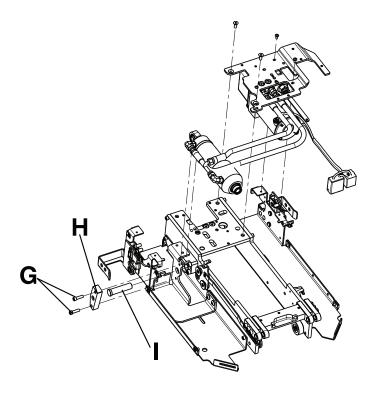


Figure 17 - Pin and hydraulic cylinder removal

13. Remove the hydraulics assembly and properly discard.

Note - Do not dispose of as unsorted municipal waste. Refer to your local distributor for return or collection systems available in your country.

- 14. Reverse steps to reinstall.
- 15. Verify proper operation before you return the product to service.

Hydraulic cylinder rod end replacement

Tools required:

- 1/4" hex wrench
- 1/2" combination wrench
- · Diagonal pliers

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Press the main power button to turn the product off.
- 4. Using a 1/4" hex wrench and a 1/2" combination wrench, remove the end cap cylinder pin (A) and nut (B) (Figure 18).

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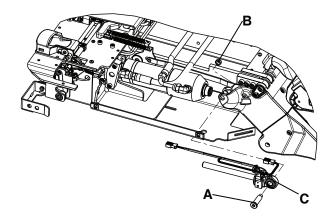


Figure 18 - Hydraulic cylinder rod end assembly

5. Using diagonal pliers, cut the cable ties (D) that secure the hydraulic cylinder rod end assembly cable to the plastic cover (Figure 19).

Note - Pay attention to the location of all cable ties for reinstallation.

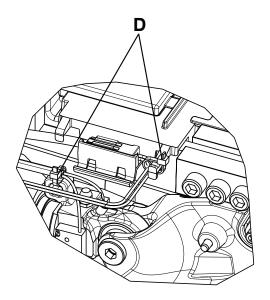


Figure 19 - Cable ties location

- 6. While lifting up on the cylinder, pull the hydraulic cylinder rod end assembly (C) out and discard (Figure 18).
- 7. Reverse steps to reinstall.
- 8. Verify proper operation before you return the product to service.

Communication board replacement

Tools required:

Diagonal pliers

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Using diagonal pliers, cut the cable tie that secures the hydraulic cylinder rod end assembly cable to the plastic cover.

Note - Pay attention to the location of all cable ties for reinstallation.

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4. Lift up on the trolley communication board (A) to remove (Figure 20). Discard the communication board.

Note - Do not dispose of as unsorted municipal waste. Refer to your local distributor for return and/or collection systems available in your country.

- 5. Reverse steps to reinstall.
- 6. Verify proper operation before you return the product to service.

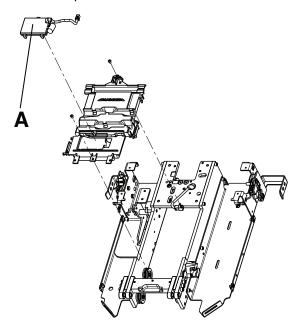


Figure 20 - Communication board assembly

Inductive coil replacement

Tools required:

- 5/32" hex wrench
- 3/16" hex wrench
- T25 Torx driver

Procedure:

- 1. Remove the manual release button assembly, see *Manual release button assembly removal and replacement* (page 37).
- 2. Using a 5/32" hex wrench, remove the screw (A) that secures the inductive coil assembly to the frame (Figure 21).
- 3. Using a 3/16" hex wrench, remove the screw (B) that secures the inductive coil assembly to the frame (Figure 21).
- 4. Remove the cover (C) (Figure 21). Save for reinstallation.

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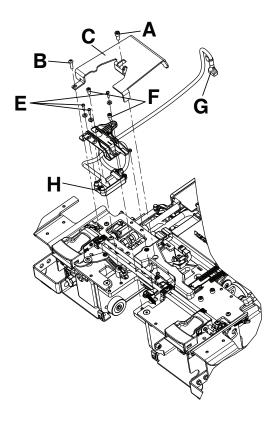


Figure 21 - Inductive coil assembly

5. Remove the return spring (D) (Figure 22). Save for reinstallation.

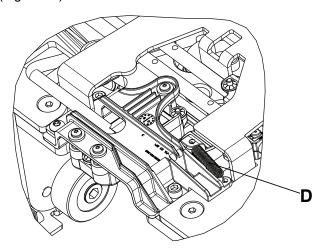


Figure 22 - Return spring location

- 6. Using a T25 Torx driver, remove the screws (E) that secure the charge bracket (Figure 21).
- 7. Using a 5/32" hex wrench, remove the screw (F) that secures the charge bracket (Figure 21).
- 8. Using a T25 Torx driver, remove the two screws that secure the back left wing cover.
- 9. Unplug the cable (G) from the trolley control board, and remove the inductive coil (H) (Figure 21). Discard the inductive coil.

Note

- · Lift up on the trolley control board to pull the cable through.
- Pay attention to the cable routing for reinstallation.
- Do not dispose of as unsorted municipal waste. Refer to your local distributor for return or collection systems available in your country.

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- 10. Reverse steps to reinstall.
- 11. Verify proper operation before you return the product to service.

Trolley position sensor (TPS) replacement

Tools required:

- · T25 Torx driver
- 1/8" hex wrench
- 5/32" hex wrench
- 1/4" ratchet

Procedure:

- 1. Remove the trolley. See Trolley removal (page 33).
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Unplug the TPS cable (A) from the main cable assembly (Figure 23).

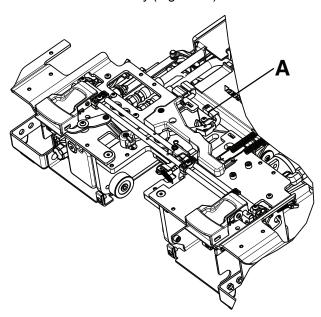


Figure 23 – Main cable assembly

- 4. Using a 5/32" hex wrench, loosen (do not remove) the socket head cap screw (B) that secures the trolley mechanism arm (Figure 24).
- 5. Using 1/8" hex wrench, remove the flat head cap screw (C) that secures the link to the trolley mechanism arm and remove the trolley mechanism pivot pillar (D) (Figure 24).
- 6. Using a 1/8" hex wrench, loosen (do not remove) the flat head cap screw (E) that secures the front link (F) to the trolley mechanism arm and swing it out of the way (Figure 24).

Note - Rotate the link to remove the pivot pillar. During removal, pay attention to the orientation of the pivot pillar.

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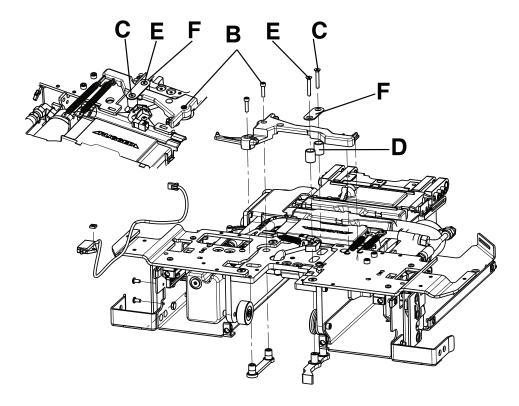


Figure 24 - TPS assembly

7. Using a 1/4" ratchet and a T25 Torx driver, remove the two button head cap screws (G) that secure the TPS assembly (H) (Figure 25).

Note

- Slightly lift up on the trolley mechanism arm to pull the cable through to remove the TPS. Discard the TPS.
- Do not dispose of as unsorted municipal waste. Refer to your local distributor for return and/or collection systems available in your country.

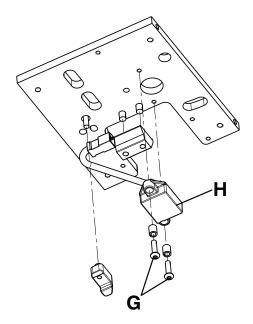


Figure 25 – TPS assembly bottom view

- 8. Reverse steps to reinstall.
- 9. Verify proper operation before you return the product to service.

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Flat roller and V-guide roller replacement

Tools required:

- 3/8" drive ratchet
- 1/4" socket
- Torque wrench (in-lb) > 317 in-lb

Procedure:

- 1. Remove the trolley. See Trolley removal (page 33).
- 2. Carefully set the trolley upright on its head end (Figure 26).

Note - Do not tip the trolley upside down, forward or onto its side.

3. Using a 1/4" socket with a 3/8" drive ratchet, loosen (do not remove) the pivot bolt that secures the bad roller to the trolley.

Note - The V-guide rollers are on the patient right side (five rollers) (A) and the flat rollers are on the patient left side (two rollers) (B) (Figure 26).

- 4. Reverse steps to reinstall. Make sure that you torque all bolts to 235 317 in-lb.
- 5. Verify proper operation before you return the product to service.

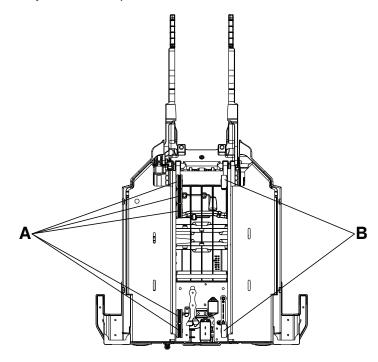


Figure 26 - Trolley bottom view of the V-guide rollers

Hydraulic cylinder removal and replacement

Tools required:

- 1/4" hex wrench
- 1/8" hex wrench
- 1/2" combination wrench
- Diagonal pliers
- 5/8" combination wrench
- 3/16" hex wrench

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11/16" combination wrench

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
 - Note This makes working on the product easier, but is not required.
- 2. Press the manual release button on the Power-LOAD control panel until the lifting arms are in the lowest position.
- 3. Remove the trolley covers. See Cover removal and replacement (page 35).
- 4. Using a 1/4" hex wrench and a 1/2" combination wrench, remove the end cap cylinder pin (A) and nut (B) (Figure 27).

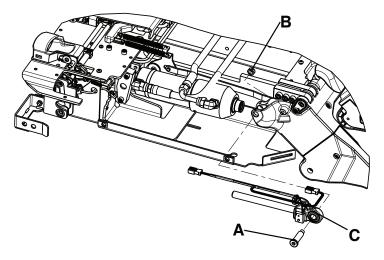


Figure 27 - Hydraulic cylinder assembly

5. Using diagonal pliers, cut the cable ties (D) (Figure 28) that secure the hydraulic cylinder rod end assembly (C) cable to the plastic cover (Figure 27).

Note - Pay attention to the location of all the cable ties for reinstallation.

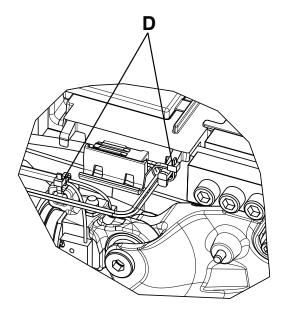


Figure 28 - Cable ties locations

- 6. While lifting up on the cylinder, remove the hydraulic cylinder rod end assembly (C) (Figure 27). Save the hydraulic cylinder rod end assembly for reinstallation.
- 7. Using an 11/16" combination wrench, disconnect both hoses from the cylinder. See *Velocity fuse removal and replacement* (page 52).

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- Note Hydraulic fluid will leak from the cylinder and hoses. Lay down towels to catch fluid.
- 8. Using a 5/8" combination wrench, loosen (do not remove) the jam nuts on both of the cylinder hose fittings, and unthread the fitting from the hydraulic cylinder. Save all parts for reinstallation.
 - Note Pay attention to the hose routing and location for reinstallation.
- 9. Using a 1/8" hex wrench, remove the velocity fuse from the hydraulic cylinder. Save the fuse for reinstallation.
- 10. Using a 3/16" hex wrench, remove the two screws (E) that secure the cylinder bracket (F) to the trolley and remove the end cap cylinder pin (G) (Figure 29).

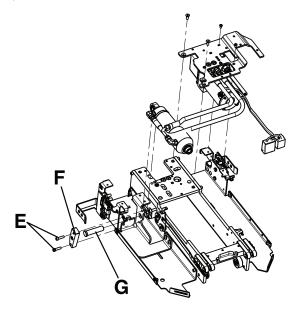


Figure 29 - Hydraulic cylinder pin location

- 11. Remove the hydraulics assembly and discard.
- 12. Using a 1/8" hex wrench, install the velocity fuse into the cylinder.
- 13. Reverse steps to reinstall.
- 14. Check the fluid level before you return the product to service. See Filling the reservoir (page 60).
- 15. Verify proper operation before you return the product to service.

Velocity fuse removal and replacement

Tools required:

- 1/8" hex wrench
- 11/16" combination wrench
- 5/8" combination wrench
- Torque wrench (in-lb)

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
 - Note This makes working on the product easier, but is not required.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Using an 11/16" combination wrench, disconnect the hydraulic hose (A) closest to the mounting bracket at the head end of the trolley (Figure 30).

Note - Hydraulic fluid will leak from the cylinder and hoses. Lay down towels to catch fluid.

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- 4. Using a 5/8" combination wrench, loosen (do not remove) the jam nut on the cylinder hose fitting (B) and unthread the fitting from the hydraulic cylinder (C) (Figure 30). Save all parts for reinstallation.
- 5. Using a 1/8" hex wrench, remove the velocity fuse (D) from the hydraulic cylinder (C) (Figure 30). Discard the fuse.
- 6. Reverse steps to reinstall.

Note - When you reinstall the cylinder hose fitting (B), lubricate the O-ring with ATF and only thread the fitting in until you feel resistance. When you align the fitting for proper position, do not back out more than 340 degrees from where you felt resistance. Use a torque wrench to torque the jam nut of the fitting to 190±10 in-lb.

- 7. Check the fluid level before you return the product to service. See Filling the reservoir (page 60).
- 8. Verify proper operation before you return the product to service.

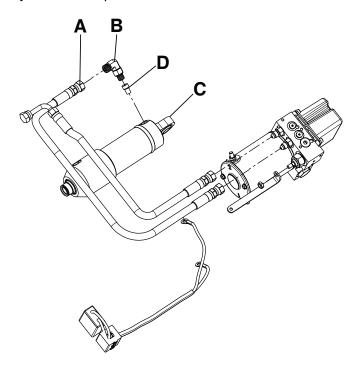


Figure 30 – Velocity fuse components

Non-locking manual valve removal and replacement

Tools required:

- 7/16" deep well socket
- 7/8" deep well socket
- · 3/8" drive ratchet
- 1/16" hex wrench

Procedure:

1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.

Note - This makes working on the product easier, but is not required.

- 2. Lower the lifting arms down.
- 3. Remove the trolley covers. See Cover removal and replacement (page 35).
- 4. Remove the manual release button assembly. See *Manual release button assembly removal and replacement* (page 37).
- 5. Using a 7/16" deep well socket and 3/8" drive ratchet, remove the Nylock hex nut (A) that secures the non-locking manual valve (B) to the manual release link (C) (Figure 31).

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Note - Place a 1/16" hex wrench through the slot on the non-locking manual valve (B) to keep it from turning (Figure 31).

6. Using a 7/8" deep well socket and 3/8" drive ratchet, remove the non-locking manual valve (B) (Figure 31). Discard the valve.

Note - Hydraulic fluid will leak from the cylinder and hoses. Lay down towels to catch fluid.

- 7. Reverse steps to reinstall.
- 8. Check the fluid level before you return the product to service. See Filling the reservoir (page 60).
- 9. Verify proper operation before you return the product to service.

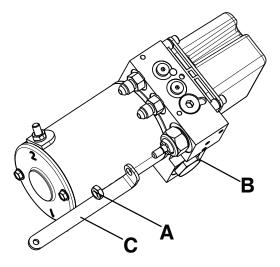


Figure 31 - Non-locking manual valve

Hose removal and replacement

Tools required:

- 11/16" combination wrench
- (2) 9/16" combination wrench
- T25 Torx driver

Procedure:

Pull the trolley assembly out of the patient compartment until it locks into the loading position.

Note - This makes working on the product easier, but is not required.

- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Using an 11/16" combination wrench, disconnect the hydraulic hose (A) closest to the mounting bracket at the head end of the trolley (Figure 32 and Figure 33).

Note - Hydraulic fluid will leak from the cylinder and hoses. Lay down towels to catch fluid.

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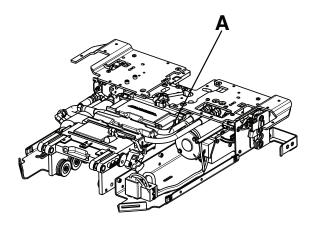


Figure 32 - Hydraulic hose location

4. Using a T25 Torx driver, loosen (do not remove) the two screws (B) that secure the manifold fitting to the left wing plate (Figure 33).

Note - Do not remove the manifold fitting, just loosen the screws to gain better access to the nuts.

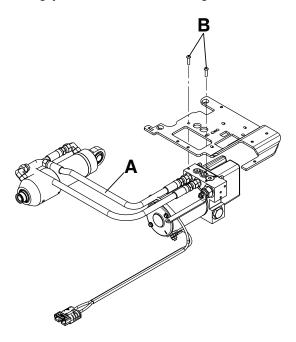


Figure 33 - Manifold fitting screws location

- 5. Using two 9/16" combination wrenches, disconnect the bad hose from the manifold fitting. Discard the hose.
 - Note Hydraulic fluid will leak from the cylinder and hoses. Lay down towels to catch fluid.
- 6. Reverse steps to reinstall.
- 7. Check the fluid level before you return the product to service. See Filling the reservoir (page 60).
- 8. Verify proper operation before you return the product to service.

Pump / motor assembly replacement

Tools required:

• (2) 9/16" combination wrench

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Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
 - Note This makes working on the product easier, but is not required.
- 2. Remove the hydraulics assembly. See Hydraulics assembly removal and replacement (page 41).
- 3. Using two 9/16" combination wrenches, loosen (do not remove) the hose end connectors (A) from the manifold to remove both hoses (Figure 34).

Note - Hydraulic fluid will leak from the cylinder and hoses. Lay down towels to catch fluid.

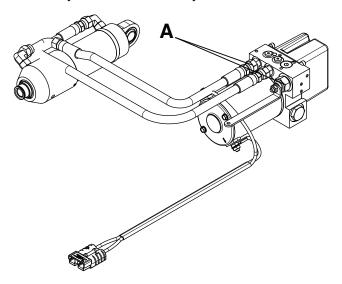


Figure 34 – Hydraulics assembly hose end connectors

- 4. Reverse steps to reinstall.
- 5. Verify proper operation before you return the product to service.

Motor cable removal and replacement

Tools required:

7/16" combination wrench

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
 - Note This makes working on the product easier, but is not required.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Remove the hydraulics assembly. See Hydraulics assembly removal and replacement (page 41).
- 4. Using a 7/16" combination wrench, remove the two nuts (A) and star washers (B) that secure the motor cable (C) to the motor assembly (Figure 35).

Note - Pay attention to the cable routing and terminal orientation for reinstallation.

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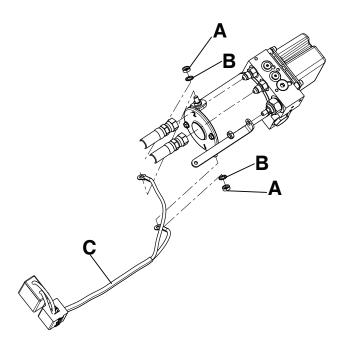


Figure 35 - Motor assembly

- 5. Reverse steps to reinstall.
- 6. Verify proper operation before you return the product to service.

Motor replacement

Tools required:

- 9/32" socket
- 1/4" drive ratchet

Procedure:

CAUTION - Damage may occur if motor armature or stator are bumped around when you replace the motor.

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
 - Note This makes working on the product easier, but is not required.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Remove the motor cable. See Motor cable removal and replacement (page 56).
- 4. Using a 9/32" socket and 1/4" drive ratchet, remove the two bolts (A) that secure the motor (B) to the hydraulic manifold assembly (C) (Figure 36).

Note - Do not overtighten the bolts during reinstallation.

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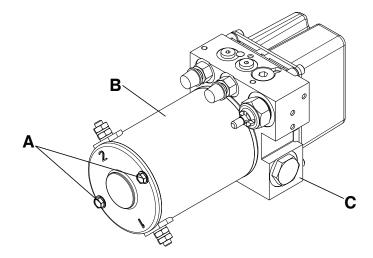


Figure 36 - Motor replacement parts

- 5. Reverse steps to reinstall.
- 6. Verify proper operation before you return the product to service.

Pressure compensated flow control valve replacement

Tools required:

- 1/4" hex wrench
- · Needle nose pliers

Procedure:

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
 - Note This makes working on the product easier, but is not required.
- 2. Remove the trolley covers. See Cover removal and replacement (page 35).
- 3. Remove the hydraulics assembly. See Hydraulics assembly removal and replacement (page 41).
- 4. Using a 1/4" hex wrench, remove the hex plug (A) from the top of the hydraulic manifold assembly (Figure 37).

Note - Pay attention to the orientation of the valve for reinstallation.

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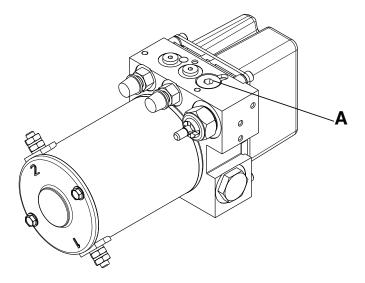


Figure 37 - Hex plug location

- 5. Using the needle nose pliers, remove and discard the pressure compensated flow control valve.
- 6. Install the replacement pressure compensated flow control valve.

Note - Install the O-ring side of the valve down into the port.

- 7. Reverse steps to reinstall.
- 8. Check the fluid level before you return the product to service. See Filling the reservoir (page 60).
- 9. Verify proper operation before you return the product to service.

Battery replacement

Tools required:

T25 Torx driver

Procedure:

CAUTION - Do not touch the negative and positive battery terminals together on any metal surface when you replace the battery.

- 1. Press the main power button to turn the product off.
- 2. Using a T25 Torx driver, remove the two button head cap screws (A) that secure the rear trolley plate cover (B) to the trolley frame (Figure 38). Remove the cover.
- 3. Pull to remove the battery housing assembly (C) (Figure 38).

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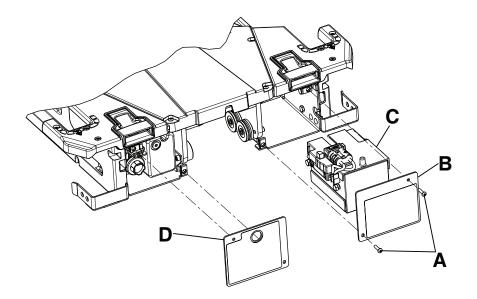


Figure 38 - Battery housing components

4. Remove and discard the battery.

Note - Do not dispose of as unsorted municipal waste. Refer to your local distributor for return and/or collection systems available in your country.

- 5. Install the replacement pressure compensated flow control valve.
- 6. Reverse steps to reinstall.
- 7. Verify proper operation before you return the product to service.

Filling the reservoir

Tools required:

3/16" hex wrench

Procedure:

WARNING - Use only Mobil Mercon® V Blend ATF Oil (6500-001-293) in the specified quantity. Do not overfill the reservoir with oil. See the Mobil Mercon® V Blend ATF Oil material safety data sheet (MSDS) issued by the manufacturer for safety information (Exxon Mobil Corporation, 1-(800) 947-9147, http://www.exxon.com, http://www.mobil.com, product code: 20103020B010, 525147-00, 97X826).

- 1. Pull the trolley assembly out of the patient compartment until it locks into the loading position.
- 2. Make sure that the lifting arms are in the down position before you fill the reservoir.
- 3. Using a 3/16" hex wrench, remove the fill plug (D) (Figure 38). See Battery replacement (page 59).
- 4. Fill the reservoir up to the bottom of the fill port with Mobil Mercon® V Blend ATF Oil (6500-001-293).
- 5. Reinstall the plug.

Primary coil replacement, foot end

Tools required:

- (2) 1/8" hex wrench
- 1/4" hex wrench
- 3/8" hex driver

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Torque wrench (ft-lb) > 60 ft-lb

Procedure:

- 1. Remove the trolley. See Trolley removal (page 33).
- 2. Remove the transfer. See *Transfer removal* (page 33).
- 3. Using a 3/8" hex driver, remove the four anchor mounting posts (A) that secure the anchor to the floor plate (Figure 39).

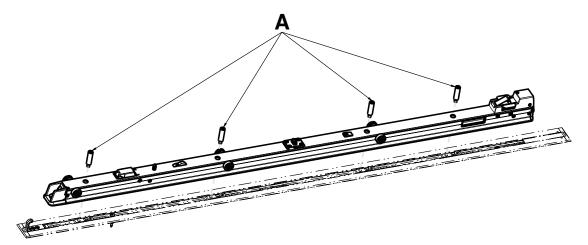


Figure 39 - Remove the anchor mounting posts

- 4. Flip the anchor on its side and unplug the anchor plunger assembly cables from the patient compartment main power cable at the head end.
- 5. Using a 1/8" hex wrench, remove on the of the two flat head cap screws (B) that secure the release lever housing (F) to the anchor (Figure 40).

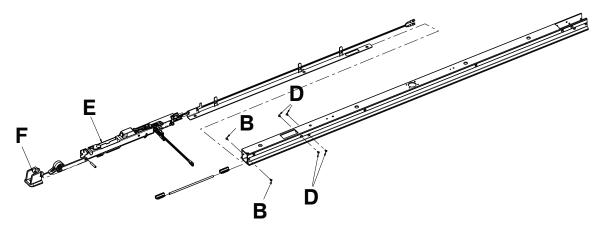


Figure 40 – Remove the anchor plunger assembly

- 6. Using the second 1/8" hex wrench, insert the wrench into the anchor pivot pin to remove the other screw and remove the release lever housing.
 - Note The LED cable will still be attached. Do not pull the parts to prevent damage.
- 7. Using a 1/4" hex wrench, remove the two screws (C) that secure the flat roller assembly and the V-guide roller assembly on the foot end of the anchor assembly (Figure 41). Save all parts.

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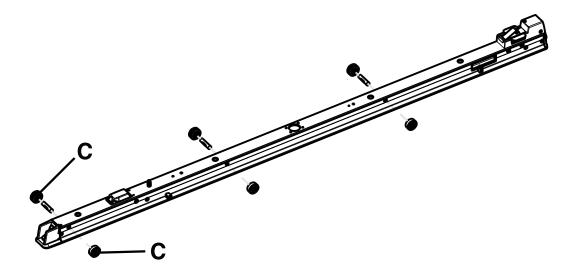


Figure 41 – Remove the flat roller assembly and V-guide roller assembly

- 8. Using a 1/8" hex wrench, remove two of the four flat head cap screws (D) from one side of the anchor plunger assembly, mid (Figure 40). Save the screws.
- 9. Using the second 1/8" hex wrench, insert the wrench into the anchor pivot pin to remove the other two of the four flat head cap screws (D) (Figure 40). Save the screws.
- 10. Unplug the power cables from the extension cable from the underside of the anchor.
- 11. Remove the anchor plunger assembly, mid (E) from the anchor (Figure 40).
- 12. Remove the anchor pivot pin (G) that holds the anchor coil assembly (H) to the anchor housing (J) (Figure 42).
- 13. Unplug the coil wires from the inductive primary board (I) (Figure 42). Discard the anchor coil assembly.
- 14. Reverse steps to reinstall. Torque the V-guide roller assembly and flat roller assembly to 235 317 in-lb. Torque the anchor mounting posts to 60 ± 10 ft-lb.
- 15. Verify proper operation before you return the product to service.

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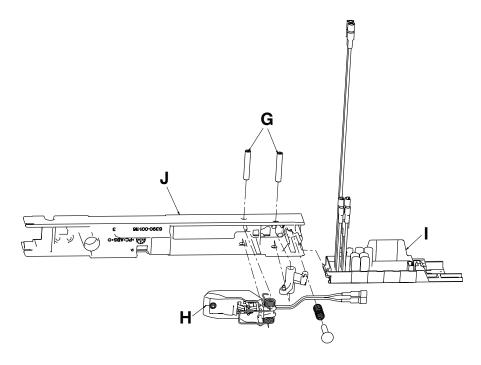


Figure 42 - Unplug coil wires from the inductive primary board

Primary coil replacement, head end

Tools required:

- 5/32" hex wrench
- (2) 1/8" hex wrench
- 3/8" hex driver
- T25 Torx driver
- · Diagonal pliers
- Torque wrench (ft-lb) > 60 ft-lb

Procedure:

- 1. Remove the trolley. See Trolley removal (page 33).
- 2. Remove the transfer. See Transfer removal (page 33).
- 3. Using a 3/8" hex driver, remove the four anchor mounting bolts that secure the anchor to the floor place.
- 4. Unplug the main power cable from the patient compartment to the anchor assembly at the head end.
- 5. Using a 5/32" hex wrench, remove the four screws (A) (Figure 43).
- 6. Using two 1/8" hex wrenches, remove the four flat head cap screws (B) that secure the anchor pawl assembly to the anchor (Figure 43).
- 7. Pull the anchor pawl assembly toward the head end of the anchor to remove the anchor pawl assembly.

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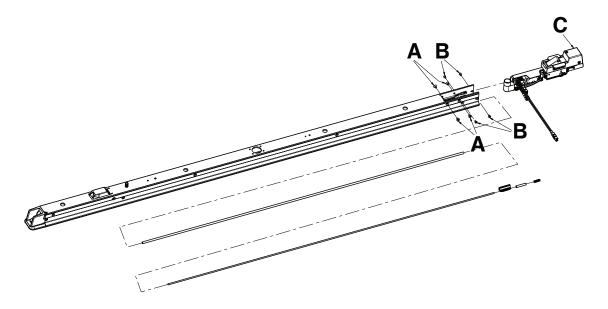


Figure 43 - Remove the anchor pawl assembly from the anchor

- 8. Unplug the power cables from the extension cable from the anchor.
- 9. Unplug the two coil wires from the inductive primary board.
- 10. Using diagonal pliers, cut the cable ties (D) that secure the coil wires to the wire management strap (Figure 44).

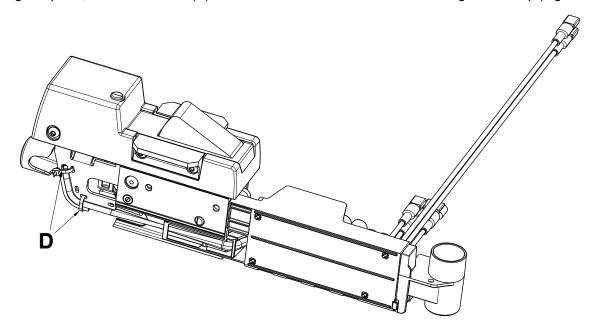


Figure 44 - Remove cable ties

11. Using a T25 Torx driver, remove the four button head cap screws (E) that secure the two retainer wings and remove the retainer wings (Figure 45). Save all parts.

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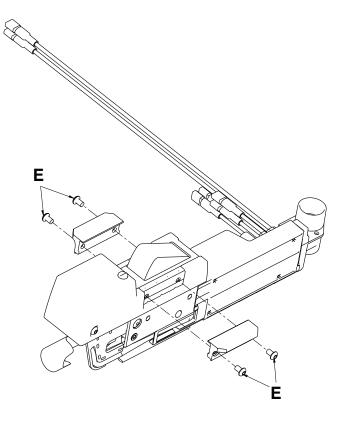


Figure 45 - Remove the retainer wings

12. Using a 1/8" hex wrench, remove the two button head cap screws (F) that secure the anchor housing assembly head end to the anchor pawl assembly. Remove the anchor housing assembly (G) (Figure 46).

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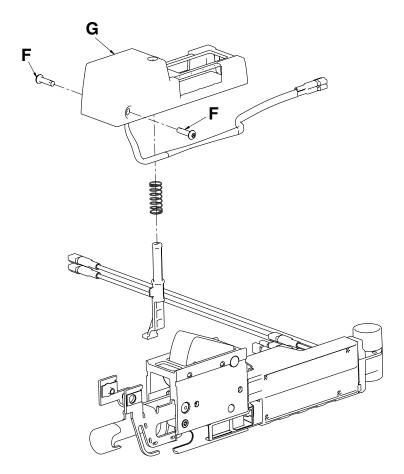


Figure 46 - Remove the anchor housing assembly

13. Remove and discard the anchor housing.

Note - Do not dispose of as unsorted municipal waste. Refer to your local distributor for return, and or collection systems available in your country.

- 14. Reverse steps to reinstall. Use a torque wrench to tighten each anchor mounting post to 60 ± 10 ft-lb.
- 15. Verify proper operation before you return the product to service.

Transfer lock bearing removal and replacement

Tools required:

5/32" hex wrench

Procedure:

- 1. Remove the trolley. See Trolley removal (page 33).
- 2. Remove the transfer. See *Transfer removal* (page 33).
- 3. Using a 5/32" hex wrench, remove the four flat head cap screws (A) that secure the transfer lock cap (B) to the anchor extrusion (Figure 47).
- 4. Remove the transfer lock cap (B) (Figure 47).
- 5. Remove the transfer lock pin assembly (C), compression spring (D), and bronze bearing (E) from the anchor extrusion (Figure 47). Discard the bronze bearing.
- 6. Clean the transfer lock pin assembly (C) and compression spring (D) thoroughly (Figure 47).
- 7. Install the supplied bronze bearing (D), compression spring (D), and transfer lock pin assembly (C) into the anchor extrusion (Figure 47).

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Note - Before you reinstall, grease the transfer lock pin assembly with molybdenum disulfide lubricant (6390-001-263).

- 8. Using a 5/32" hex wrench, reinstall the four flat head cap screws that secure that transfer lock cap (B) to the anchor extrusion. Start each screw first and then tighten all four screws.
- 9. Reinstall the transfer. See Transfer removal (page 33).
- 10. Reinstall the trolley. See *Trolley removal* (page 33).
- 11. Verify proper operation before you return the product to service.

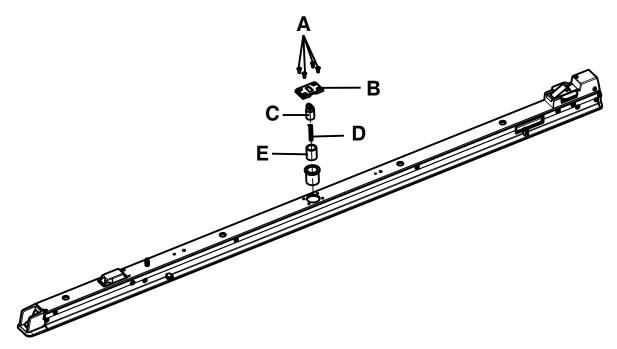
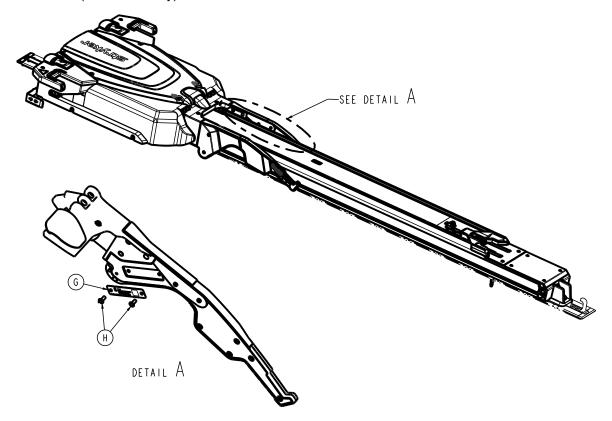


Figure 47 – Transfer lock bearing removal and replacement

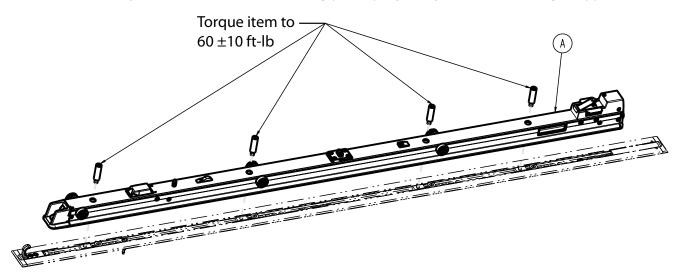
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Power-LOAD assembly

6390-001-010 Rev AB (Reference only)

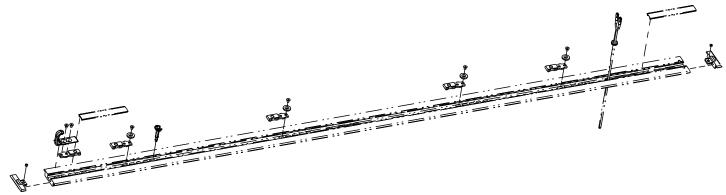


Note - Make sure that you reinstall the serial number tag (item G) any time you service the lifting arm(s).



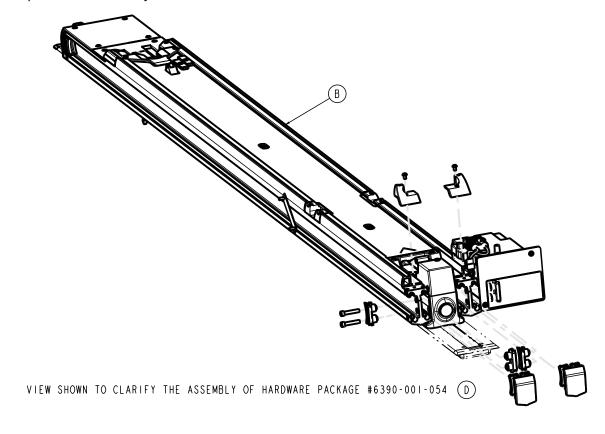
VIEW SHOWN TO CLARIFY THE ASSEMBLY OF MOUNTING POSTS WHICH ARE INCLUDED IN HARDWARE PACKAGE # 6390-001-054 (D)

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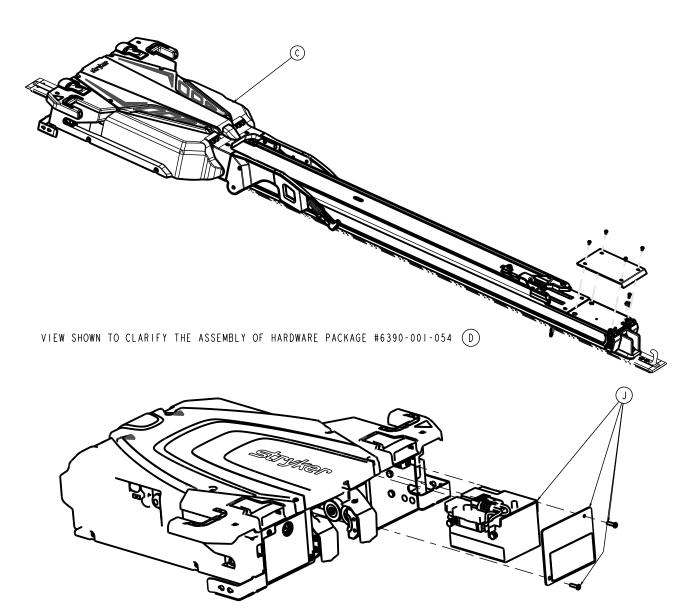


VIEW SHOWN TO CLARIFY THE ASSEMBLY OF THE UNIVERSAL FLOOR PLATE OPTION 6390-028-000

- 1. Cut pieces to desired length to cover void at either end, as needed.
- 2. Drill .400/.450 diameter hole through 6390-001-107, floor plate, for assembly. Hole to be drilled at pre-machined counter-sunk locations only.
- 3. Torque to 60 ± 10 ft-lb.
- 4. Drill .600/.656 diameter hole through 6390-001-107, floor plate, for assembly. Hole to be drilled at one of the premachined pocket locations only.



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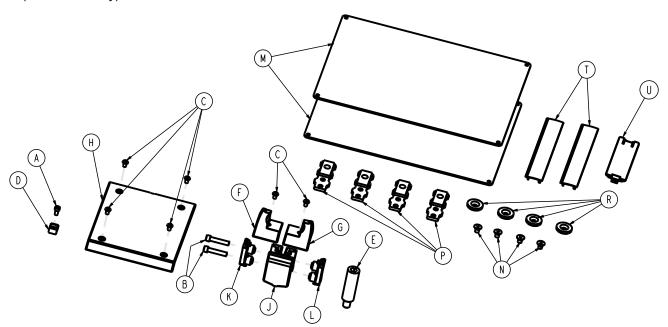


Item	Number	Name	Quantity
A	6390-001-011	Anchor assembly (page 72)	1
В	6390-101-012	Transfer assembly (page 80)	1
С	6390-001-013	Trolley assembly (page 87)	1
D	6390-001-054	Assembly kit, Power-LOAD - 6390-001- 054 (page 71)	1
G	6390-001-926	6390 tag, serial number	1
Н	0025-079-000	Dome head rivet	2
J	639001010026	Battery installation assembly	1

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Assembly kit, Power-LOAD - 6390-001-054

Rev AA (Reference only)

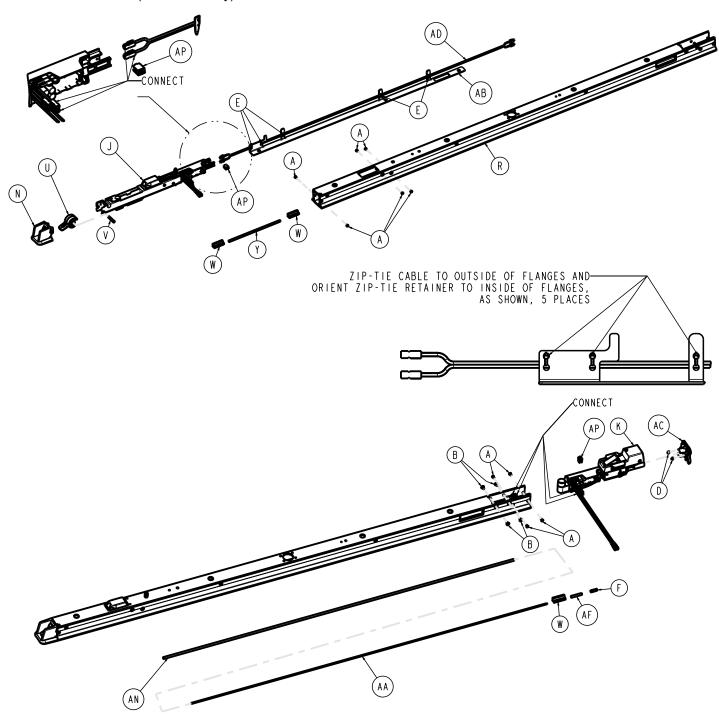


Item	Number	Name	Quantity
A	0004-658-000	Socket head cap screw	1
В	0004-662-000	Socket head cap screw	4
С	0004-665-000	Button head cap screw	6
D	6390-001-106	Trolley magnet activator	1
E	6390-001-150	Anchor mounting post	4
F	6390-001-210	Transfer trim, head end, left	1
G	6390-001-211	Transfer trim, head end, right	1
Н	6390-001-225	Transfer wear pad, foot end	1
J	6390-001-243	Dead stop bumper	2
K	6390-001-244	Dead stop block, thru hole	2
L	6390-001-246	Dead stop block, threaded	2
M	6390-001-467	Plate, IFU label	2
N	0001-194-000	Flat head cap screw, 1/4–20" x 3/8" hex wrench with patch	4
Р	6390-101-108	Floor plate attachment bracket	4
R	6390-001-110	Retainer, attachment bracket, sub anchor	4
T	6390-001-166	Floor plate cover, short	2
U	639000010101	Inductive primary anchor cover	1

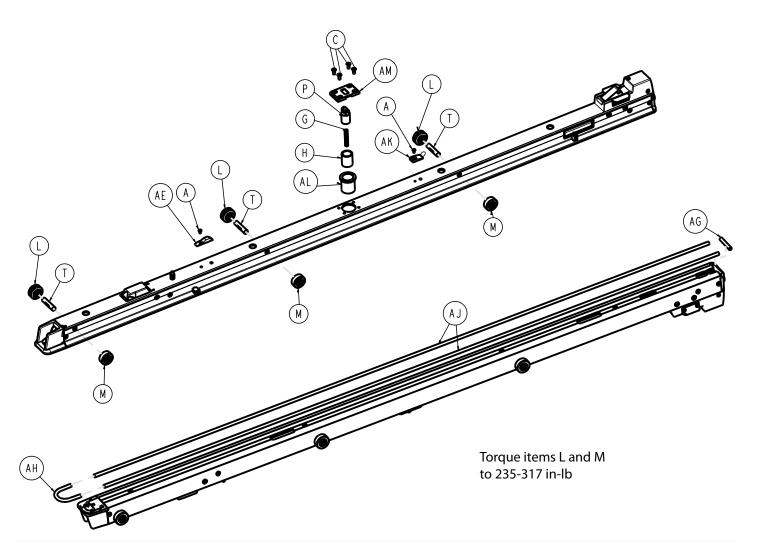
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Anchor assembly

6390-001-011 Rev AA (Reference only)



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Item	Number	Name	Quantity
Α	0001-193-000	Flat head cap screw	12
В	0001-194-000	Flat head cap screw	4
С	0001-195-000	Flat head cap screw	4
D	0015-087-000	Square nut	2
E	0038-111-000	Zip tie	5
F	0038-887-000	Compression wire	1
G	0038-606-000	Compression wire	1
Н	0081-439-000	Bronze bearing	1
J	6390-101-023	Anchor plunger assembly, middle (page 79)	1
K	6390-001-024	Anchor pawl assembly, head end (page 75)	1
L	6390-001-025	V-guide roller assembly	3
M	6390-001-027	Flat roller assembly	3
N	6390-101-105	Anchor trigger housing, foot end	1
Р	639001010074	Transfer lock pin assembly (page 118)	1
R	639000010100	Machined anchor extrusion	1
T	6390-001-103	Anchor roller axle	3
U	6390-001-104	Anchor trigger	1
V	6390-001-112	Anchor pivot pin, threaded	1
W	6390-001-113	Anchor drive block	3
Υ	6390-001-114	Anchor drive rod, medium	1

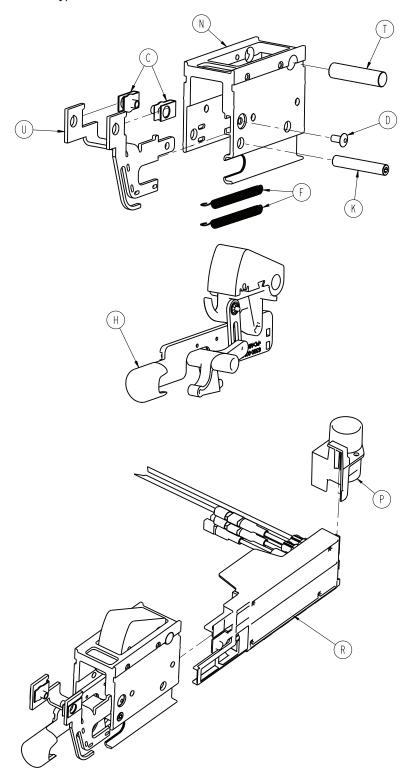
6390-109-002 Rev A.0 73 EN

Item	Number	Name	Quantity
AA	6390-001-186	Anchor drive rod, long	1
AB	6390-001-120	Wire routing and washer bracket	1
AC	6390-001-136	Anchor end cap, rear	1
AD	6390-001-139	Cot charging cable	1
AE	6390-001-144	Trolley to transfer lock ramp	1
AF	6390-001-152	Anchor rod drive, rear	1
AG	6390-001-179	Anchor seal, head end	1
AH	6390-001-180	Anchor seal, foot end	1
AJ	6390-001-181	Anchor seal, side	2
AK	6390-001-193	Detent spring ramp	1
AL	6390-101-195	Transfer lock housing	1
AM	6390-101-196	Transfer lock cap	1
AN	6390-001-190	Anchor drive rod, bearing sleeve, long	1
AP	6390-001-158	Secondary coil lock	2

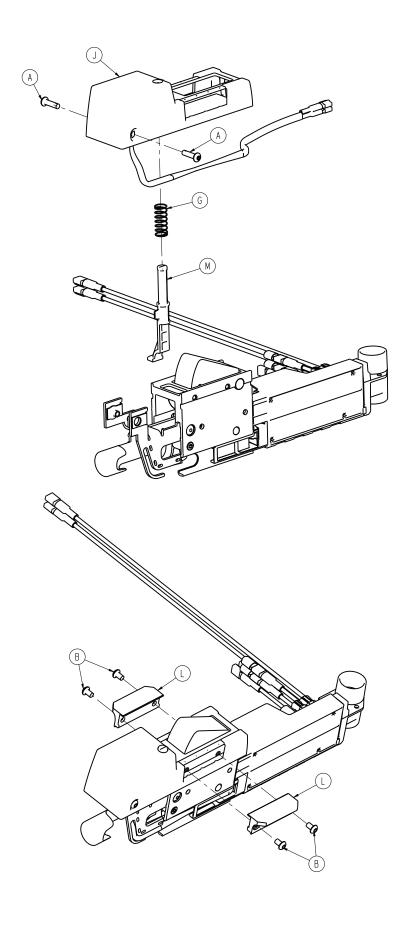
EN 74 6390-109-002 Rev A.0

Anchor pawl assembly, head end

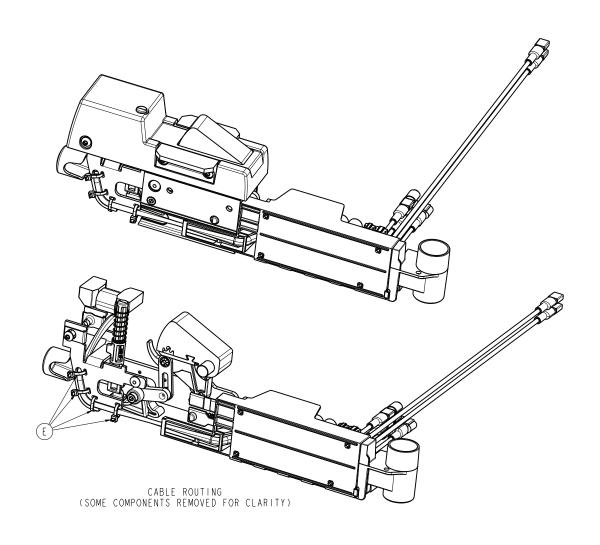
6390-001-024 Rev C (Reference only)



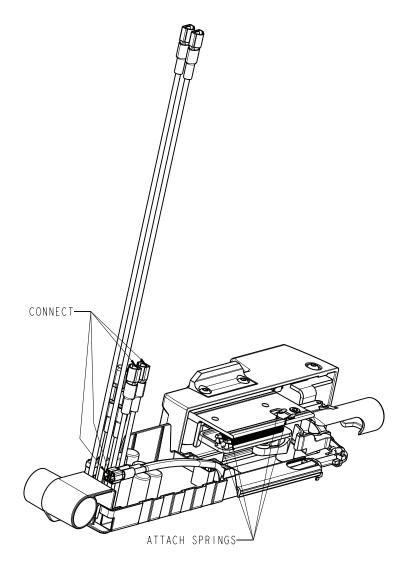
6390-109-002 Rev A.0 75 EN



EN 76 6390-109-002 Rev A.0



6390-109-002 Rev A.0 77 EN



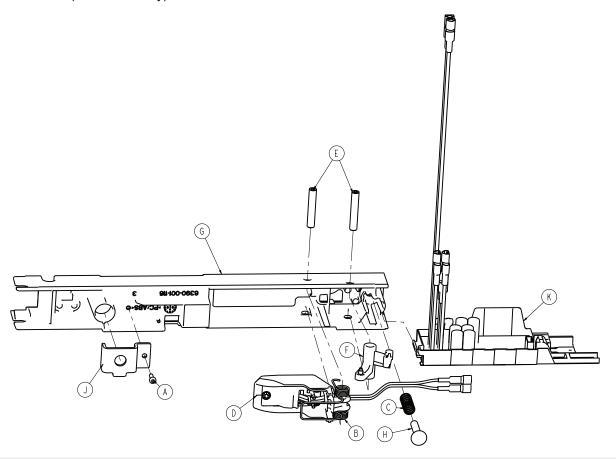
SPRING ATTACHMENT (SOME COMPONENTS REMOVED FOR CLARITY)

Item	Number	Name	Quantity
Α	0004-396-000	Button head cap screw	2
В	0004-665-000	Button head cap screw	4
С	0018-009-000	Extruded "U" nut	2
D	0025-079-000	Dome head rivet	1
E	0038-111-000	Zip tie	4
F	0038-885-000	Pawl return spring	2
G	0038-888-000	Compression, wire	1
Н	6390-001-070	Manual release mechanism	1
J	6390-001-071	Anchor housing assembly, head end	1
K	6390-001-112	Anchor pivot pin, threaded	1
L	6390-001-123	Retainer wing	2
M	6390-001-124	Anchor actuator pin, head end	1
N	6390-001-125	Anchor housing, head end	1
Р	6390-001-137	Wire protector	1
R	6390-001-147	Inductive primary board	1
Т	6390-001-149	Pawl pivot pin	1
U	6390-001-164	Wire management strap, head end	1

EN 78 6390-109-002 Rev A.0

Anchor plunger assembly, middle

6390-101-023 Rev A (Reference only)

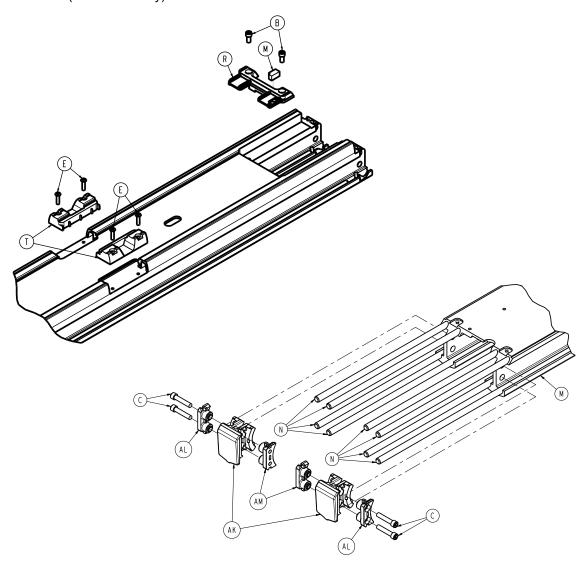


Item	Number	Name	Quantity
Α	0023-163-000	Screw	1
В	0038-886-000	Torsion spring - anchor coil housing	1
С	0038-888-000	Compression, wire	1
D	6390-001-030	Anchor coil assembly, mid	1
E	6390-001-112	Anchor pivot pin, threaded	2
F	6390-001-115	Pivot actuator	1
G	6390-001-116	Anchor housing, middle	1
Н	6390-001-117	Anchor actuator pin, middle	1
J	6390-001-127	Anchor bolster plate, foot end	1
K	6390-001-147	Inductive primary board	1

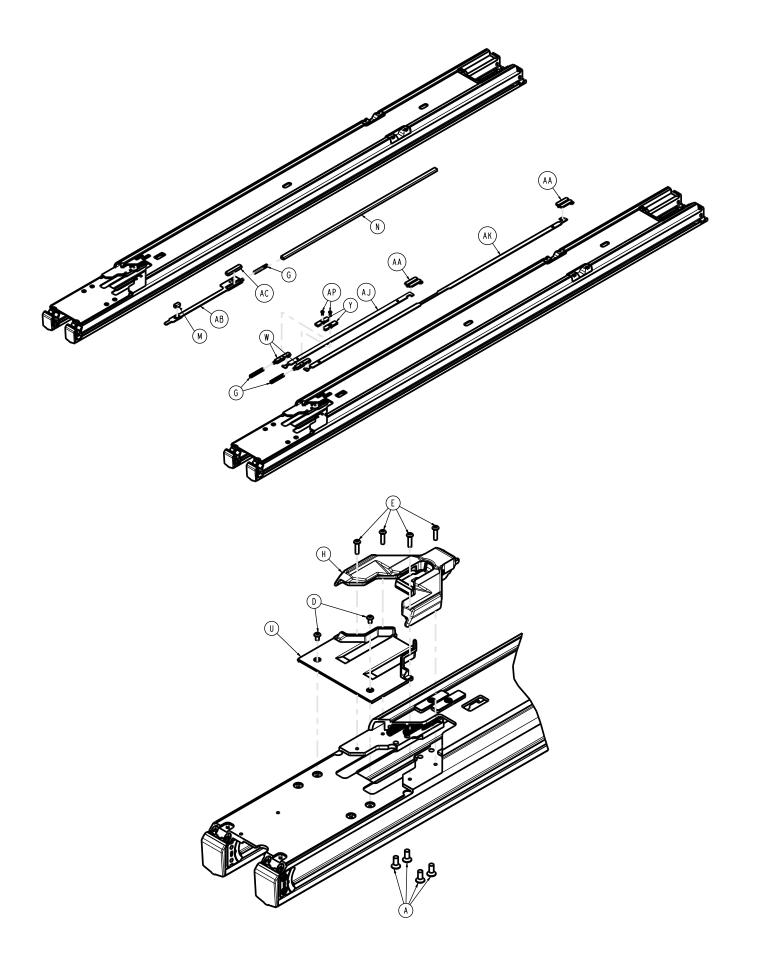
6390-109-002 Rev A.0 79 EN

Transfer assembly

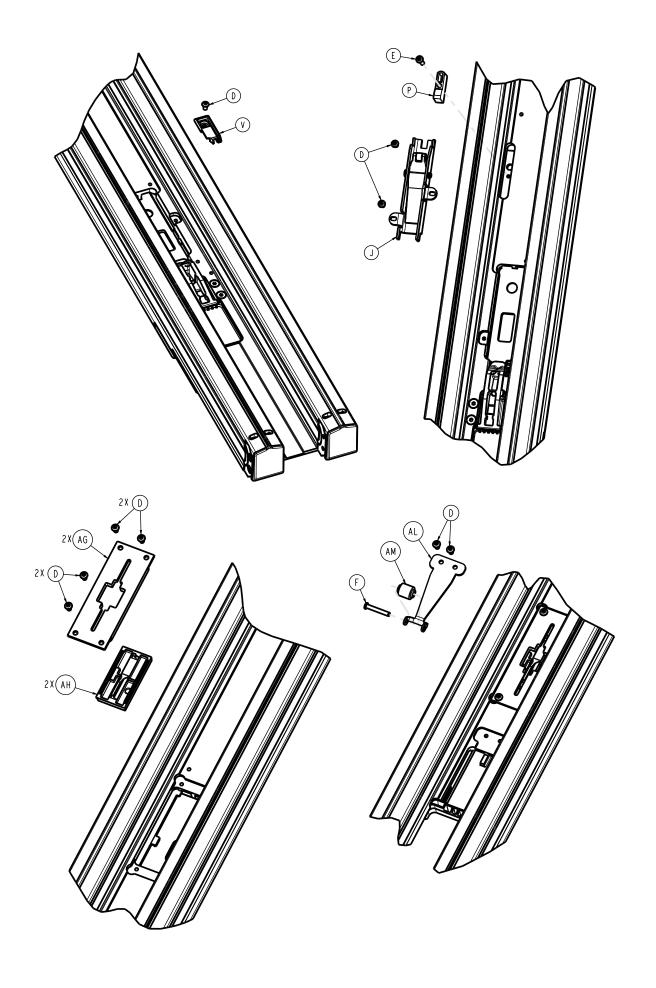
6390-101-012 Rev AB (Reference only)

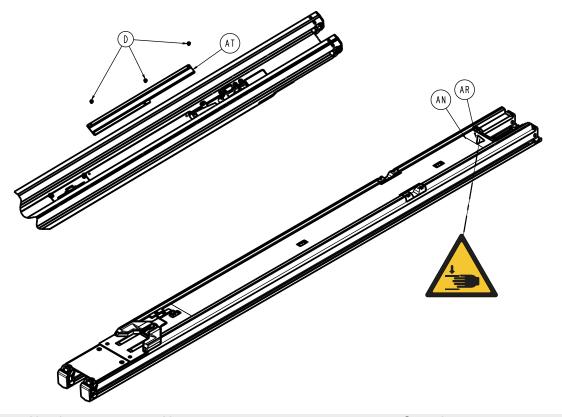


EN 80 6390-109-002 Rev A.0



6390-109-002 Rev A.0 81 EN





Item	Number	Name	Quantity
A	0001-195-000	Flat head cap screw	4
В	0004-660-000	Socket head cap screw	2
С	0004-662-000	Socket head cap screw	4
D	0004-665-000	Button head cap screw	18
E	0004-666-000	Button head cap screw	9
F	0027-778-000	Slic pin	1
G	0038-606-000	Compression wire	3
Н	6390-101-018	Foot end fastener assembly (page 85)	1
J	6390-001-021	Transfer trolley lock assembly (page 86)	1
K	6390-001-200	Transfer extrusion	1
L	6390-001-201	Roller rail rod	8
M	6390-001-203	Transfer magnet	2
N	6390-001-204	Transfer magnet spacer	1
Р	6390-001-205	Magnet mover trigger	1
R	6390-001-207	Transfer back cover	1
T	6390-001-208	Mid position head end cutout cap	2
U	6390-001-213	Inductive charger cover plate	1
V	6390-001-217	Lock latch indicator slide block	1
W	6390-001-230	Transfer lock trigger base	2
Υ	6390-001-231	Transfer lock trigger	2
AA	6390-001-233	Transfer lock slide	2
AB	6390-001-240	Magnet mover	1
AC	6390-001-242	Magnet mover glide	1
AD	6390-001-243	Dead stop bumper	2
AE	6390-001-244	Dead stop block, thru hole	2
AF	6390-001-246	Dead stop block, threaded	2
AG	6390-001-260	Transfer lock plate	2

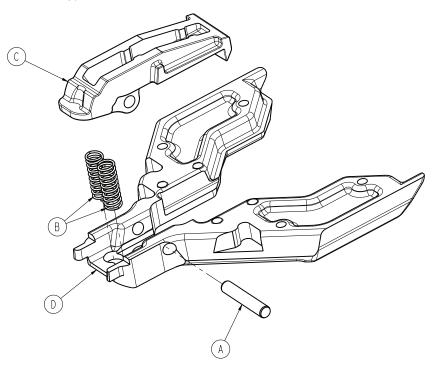
6390-109-002 Rev A.0 83 EN

Item	Number	Name	Quantity
AH	6390-001-261	Transfer lock override slide	2
AJ	6390-001-266	Transfer lock link, short	1
AK	6390-001-267	Transfer lock link, long	1
AL	6390-001-269	Detent spring	1
AM	6390-001-270	Detent roller	1
AN	639000010299	Label, Re-LOAD transfer	1
AP	0004-585-000	Button head cap screw	2
AR	6506-001-905	Label, warning, crushing of hands	1
AT	6390-001-276	Transfer wear pad	1

EN 84 6390-109-002 Rev A.0

Foot end fastener assembly

6390-101-018 Rev A (Reference only)

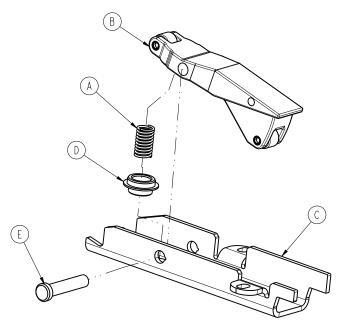


Item	Number	Name	Quantity
Α	0026-556-000	Dowel pin	1
В	0038-890-000	Compression spring	2
С	6390-001-279	Foot end fastener hook, cast	1
D	6390-001-220	Foot end fastener guide	1

6390-109-002 Rev A.0 85 EN

Transfer trolley lock assembly

6390-001-021 Rev A (Reference only)

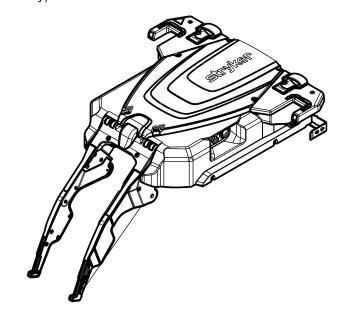


Item	Number	Name	Quantity
A	0038-890-000	Compression, spring	1
В	6390-001-073	Transfer trolley lock assembly	1
С	6390-001-250	Transfer trolley bracket	1
D	6390-001-252	Transfer trolley lock spring cap	1
E	6390-001-259	Trolley lock pivot pin	1

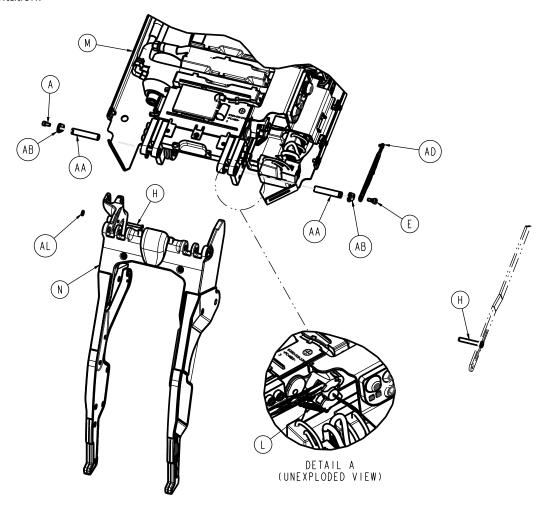
EN 86 6390-109-002 Rev A.0

Trolley assembly

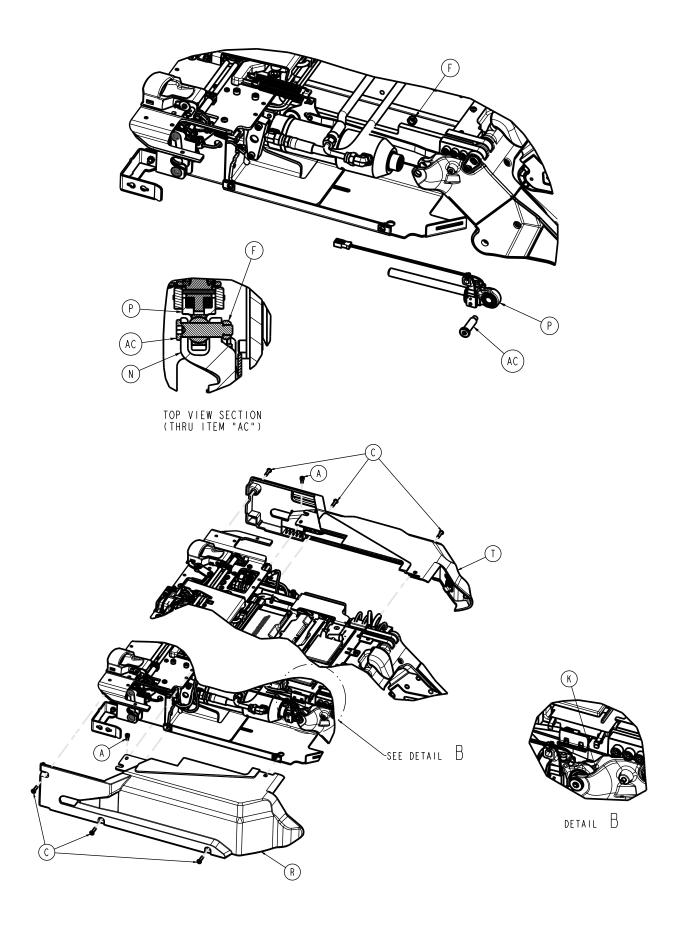
6390-001-013 Rev AA (Reference only)

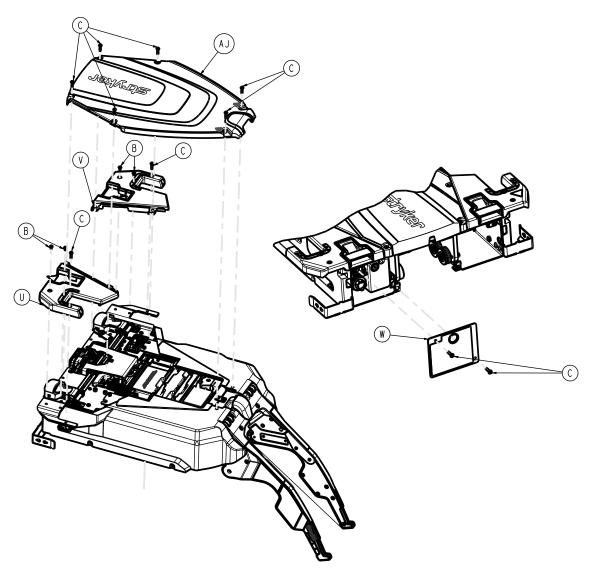


- 1. Angle sensor to be connected to Item AD with indicating dot oriented to top.
- 2. Item H orientation.



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Item	Number	Name	Quantity
Α	0004-658-000	Socket head cap screw	3
В	0004-665-000	Button head cap screw	4
С	0004-666-000	Button head cap screw	16
E	0008-082-000	Socket head set screw	1
F	0016-132-000	Nylock hex nut	1
Н	0027-778-000	Slic pin	1
K	0038-111-000	Zip tie	1
L	0038-896-000	Extension spring	1
M	6390-001-015	Trolley main frame (page 91)	1
N	6390-001-016	Trolley arm assembly (page 111)	1
Р	6390-001-040	Hydraulic cylinder rod end assembly	1
R	6390-001-041	Side cover, right	1
T	6390-001-042	Side cover, left	1
U	6390-101-047	Wing cover, right	1
V	6390-101-048	Wing cover, left	1
W	6390-101-062	Trolley rear cover plate, left	1
AA	6390-001-309	Arm hinge pin	2
AB	6390-001-311	Hinge cover plate	2

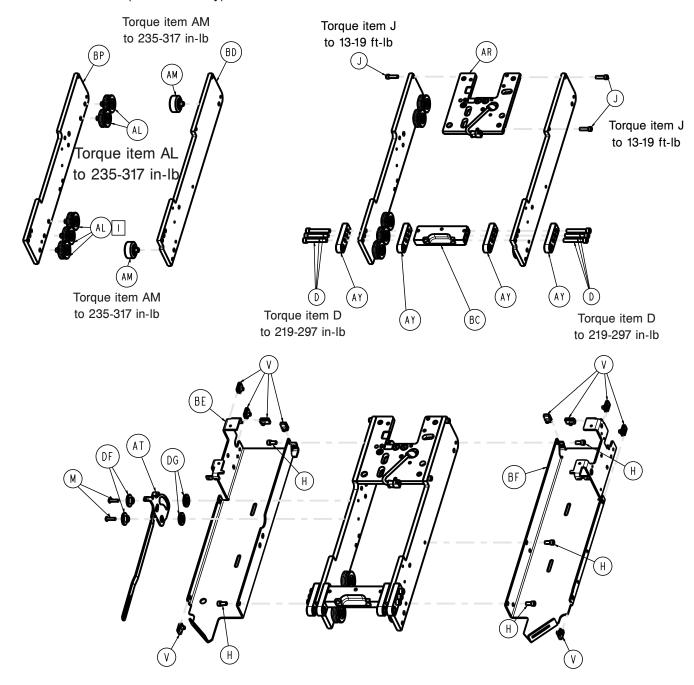
6390-109-002 Rev A.0 89 EN

Item	Number	Name	Quantity	
AC	6390-001-313	Cylinder clevis pin	1	
AD	6390-001-377	Angle sensor link	1	
AJ	639001010420	Re-LOAD trolley top cover	1	
ΑI	0011-454-000	Plain washer	1	

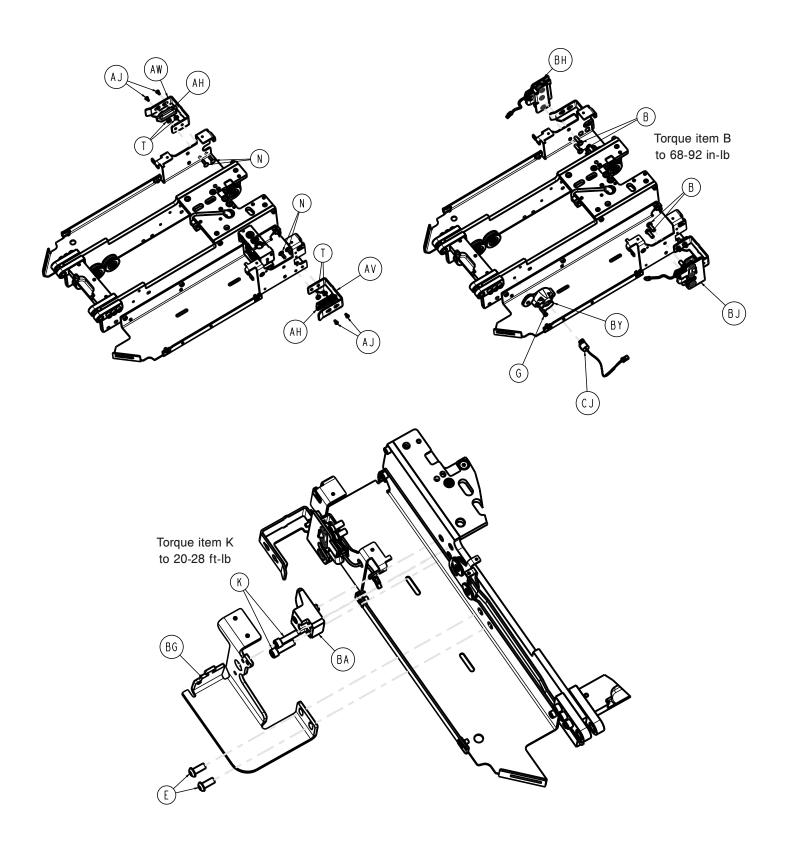
EN 90 6390-109-002 Rev A.0

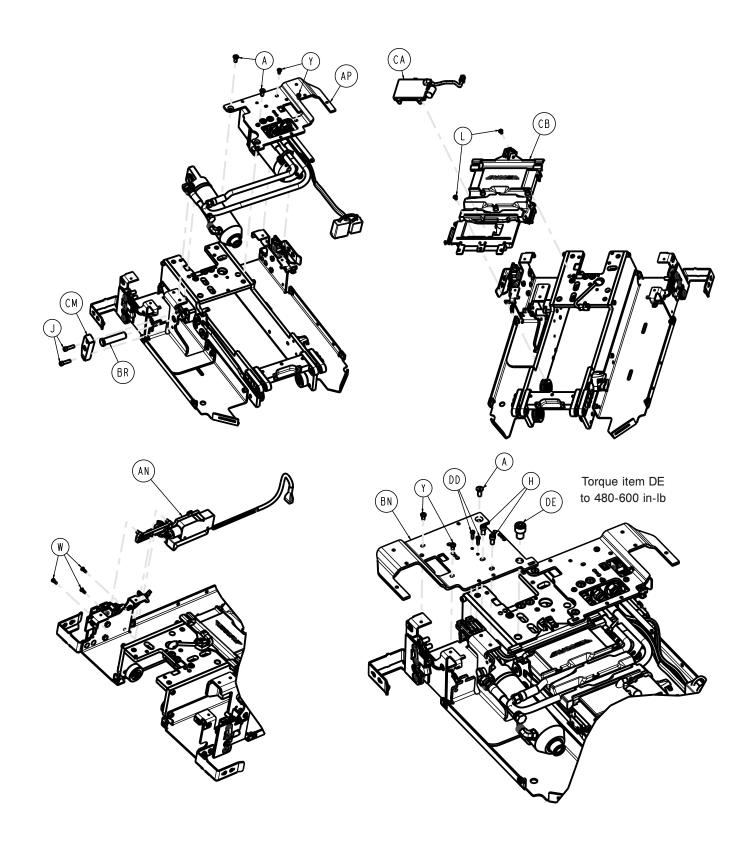
Trolley main frame

6390-001-015 Rev AB (Reference only)

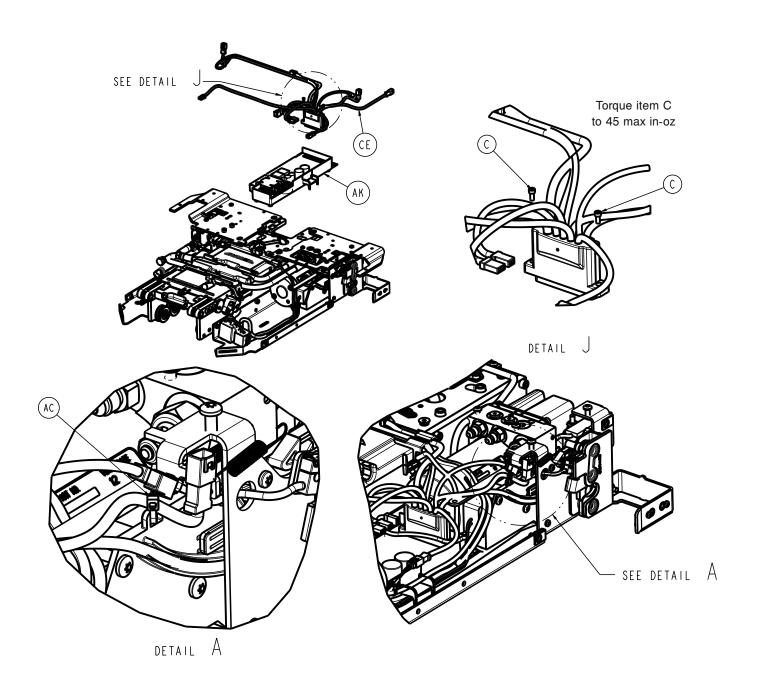


6390-109-002 Rev A.0 91 EN

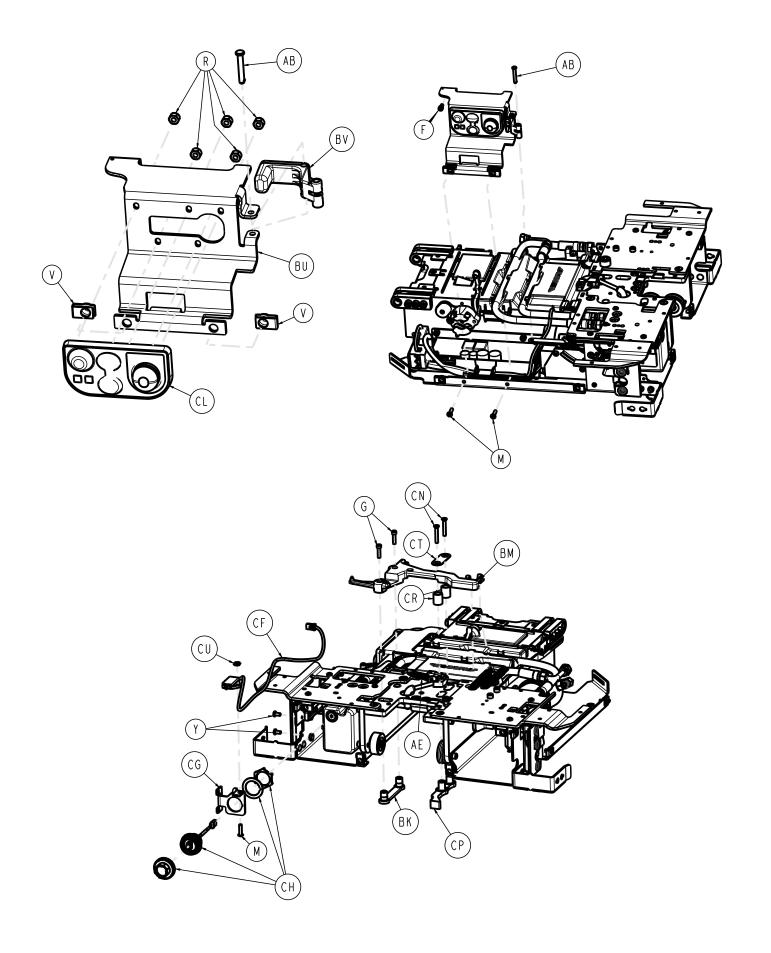




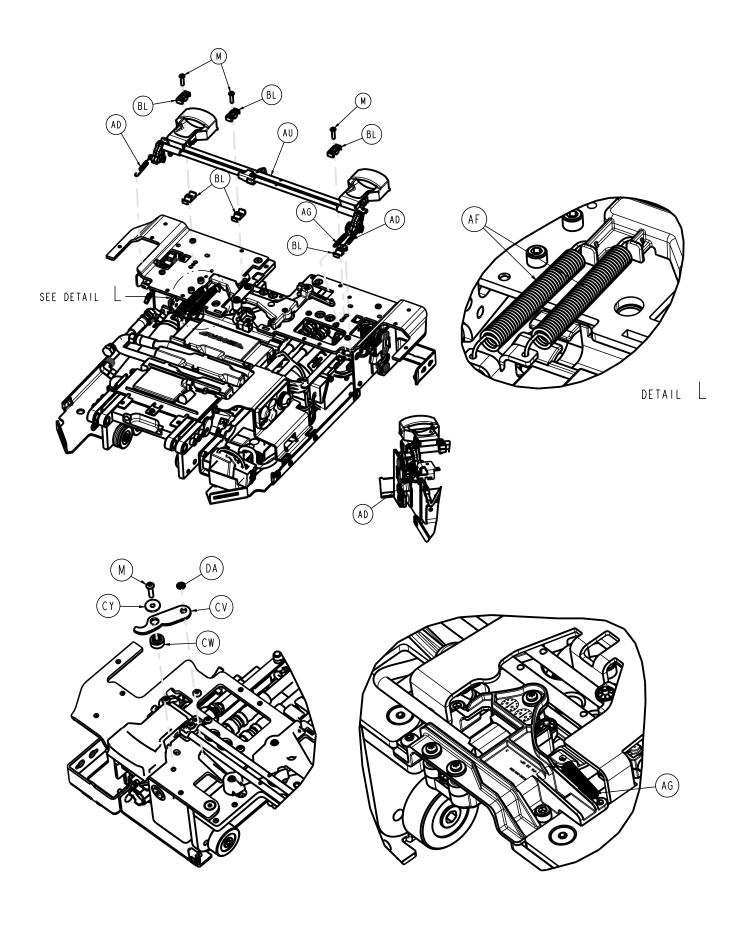
6390-109-002 Rev A.0 93 EN

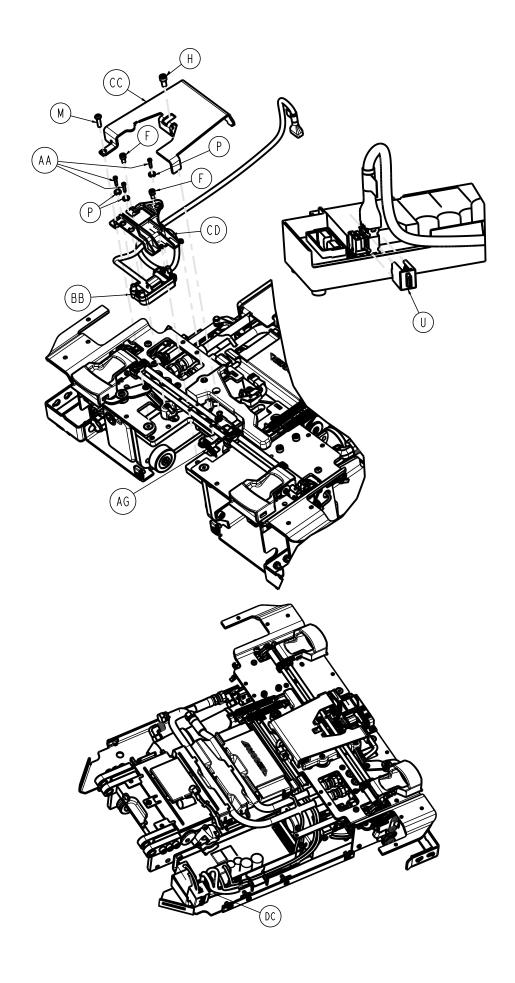


EN 94 6390-109-002 Rev A.0

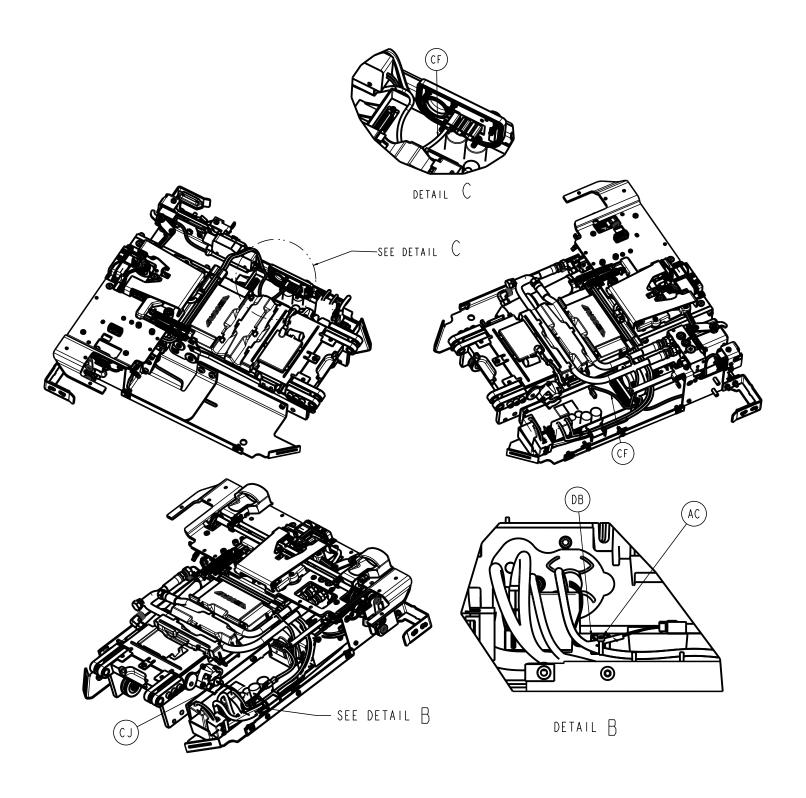


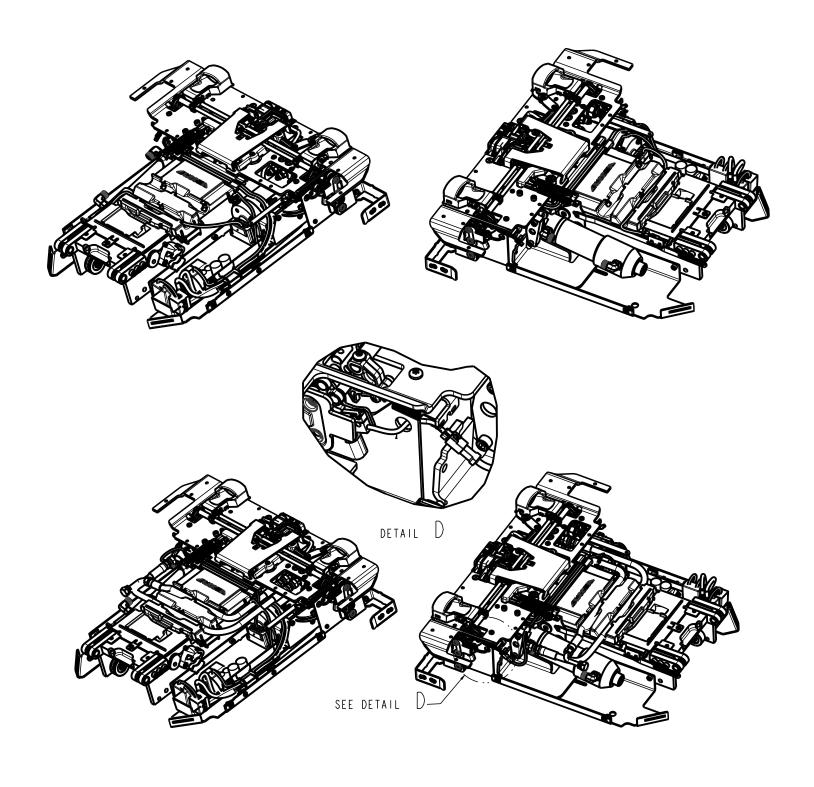
6390-109-002 Rev A.0 95 EN



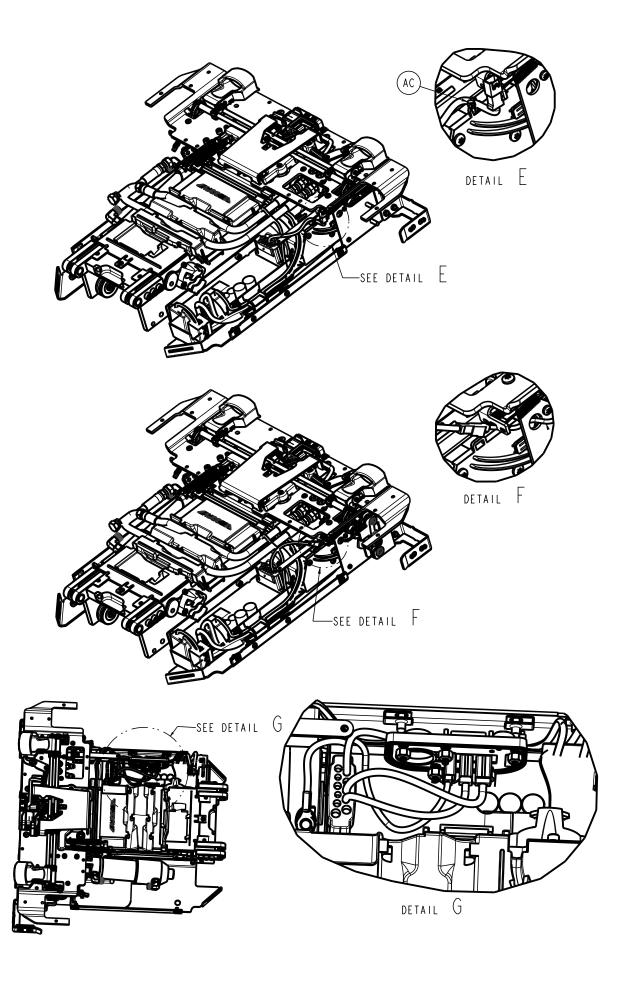


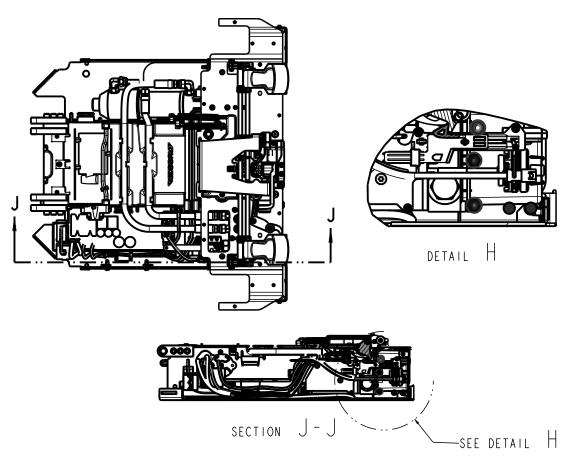
6390-109-002 Rev A.0 97 EN





6390-109-002 Rev A.0 99 EN





Item	Number	Name	Quantity
Α	0001-195-000	Flat head cap screw	3
В	0003-148-000	Hex head cap screw	4
С	0004-874-000	Socket head cap screw	2
D	0004-352-000	Socket head cap screw	6
E	0004-652-000	Button head cap screw	2
F	0004-658-000	Socket head cap screw	3
G	0004-659-000	Socket head cap screw	3
Н	0004-660-000	Socket head cap screw	8
J	0004-661-000	Socket head cap screw	5
K	0004-397-000	Socket head cap screw	2
L	0004-665-000	Button head cap screw	2
M	0004-666-000	Button head cap screw	10
N	0005-047-000	Carriage bolt	4
Р	0011-436-000	Washer	3
R	0016-014-000	Fiberlock hex nut	5
T	0015-003-000	Hex nut	4
U	6390-001-588	Secondary coil lock	1
V	0018-009-000	Extruded "U" nut	12
W	0023-167-000	Delta screw	3
Υ	0023-296-000	Pan head machine screw	6
AA	0023-321-000	Delta screw	3
AB	0027-778-000	Slic pin	2
AC	0038-111-000	Zip tie	2
AD	0038-376-000	Extension spring	2
AE	0038-894-000	Extension spring	1

6390-109-002 Rev A.0 101 EN

Item	Number	Name	Quantity
AF	0038-895-000	Extension spring	2
AG	0038-896-000	Extension spring	2
AH	6390-001-294	Guide block, horn, load wheel	2
AJ	0023-163-000	Delta screw	4
AK	6390-101-014	Control board assembly	1
AL	6390-001-025	V-guide roller assembly	5
AM	6390-001-027	Flat roller assembly	2
AN	6390-001-028	Trolley actuator assembly - 6390-001- 028 (page 114)	1
AP	6390-001-035	Wing assembly, left (page 105)	1
AR	6390-001-043	Trolley/transfer interface mechanism (page 104)	1
AT	6390-001-045	Trolley arm mechanism	1
AU	6390-001-046	Trolley manual release assembly (page 109)	1
AV	6390-001-052	Load wheel horn guide weldment, left	1
AW	6390-001-053	Load wheel horn guide weldment, right	1
AY	6390-001-064	Hinge plate assembly	4
BA	6390-001-065	Cylinder support block assembly	1
BB	6390-001-066	Coil housing assembly	1
BC	6390-001-301	Trolley main frame front block	1
BD	6390-001-304	Trolley main frame side block, left	1
BE	6390-001-314	Bottom pan, right	1
BF	6390-001-315	Bottom pan, left	1
BG	6390-001-316	Cylinder support bracket	1
BH	6390-001-318	Custom Eberhard latch, right	1
BJ	6390-001-319	Custom Eberhard latch, left	1
BK	6390-001-320	Bottom release arm	1
BL	6390-001-333	Release rod support block	6
BM	6390-001-334	Trolley mechanism arm	1
BN	6390-001-340	Wing plate, right	1
BP	6390-001-344	Trolley main frame side plate, right	1
BR	6390-001-360	End cap cylinder pin	1
BU	6390-001-365	Manual release button bracket	1
BV	6390-001-366	Manual release button - pump	1
BY	6390-001-375	Angle sensor housing	1
CA	6390-001-378	Trolley communication board	1
СВ	6390-001-379	Trolley routing tray	1
CC	6390-001-385	Center metal cover	1
CD	6390-001-388	Trolley inductive charge bracket	1
CE	6390-001-391	Main cable assembly	1
CF	6390-001-392	Trolley rear LED assembly	1
CG	6390-001-393	USB mounting bracket	1
CH	6390-001-395	USB connector	1
CJ	6390-001-397	Angle position sensor	1
CL	6390-001-450	Master on/off switch	1
CM	6390-001-352	Cylinder bracket	1
CN	0001-196-000	Flat head cap screw	2
CP	6390-001-351	Trolley release actuator	1

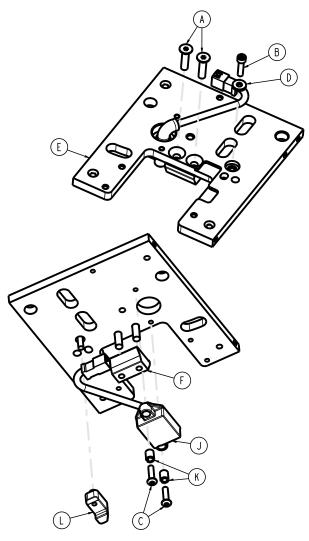
EN 102 6390-109-002 Rev A.0

Item	Number	Name	Quantity
CR	6390-001-343	Trolley mechanism pivot pillar	2
CT	6390-001-336	Link	1
CU	0015-087-000	Square nut	1
CV	6390-001-412	Handle lock pawl	1
CW	6390-001-413	Handle lock pivot base	1
CY	0011-518-000	Washer	1
DA	0028-217-000	Push nut	1
DB	0058-143-000	Adhesive backed mounting tab	1
DC	6390-001-545	Battery fuse extension cable	1
DD	0023-162-000	Delta screw	2
DE	0004-404-000	Socket head cap screw	1
DF	6390-001-574	Trolley lock mechanism actuator bushing	2
DG	6390-001-573	Actuator thrust washer	2

6390-109-002 Rev A.0 103 EN

Trolley/transfer interface mechanism

6390-001-043 Rev AA (Reference only)

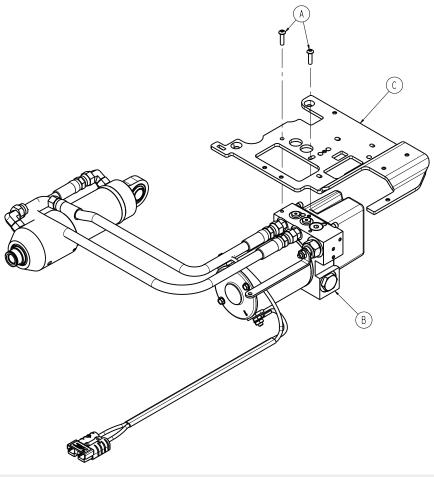


Item	Number	Name	Quantity
Α	0001-004-011	Flat head cap screw	2
В	0004-659-000	Socket head cap screw	1
С	0004-666-000	Button head cap screw	2
D	0011-517-000	Washer	1
E	6390-001-303	Trolley main frame top plate	1
F	6390-001-325	Trolley stop ramp	1
J	6390-001-361	TPS sensor assembly	1
K	6390-001-362	TPS compression limiter	2
L	6390-001-404	Transfer to anchor release plug	1

EN 104 6390-109-002 Rev A.0

Wing assembly, left

6390-001-035 Rev A (Reference only)

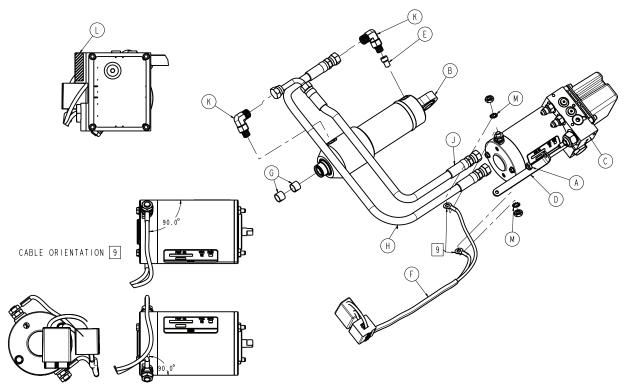


Item	Number	Name	Quantity
A	0004-666-000	Button head cap screw	2
В	6390-001-039	Hydraulics assembly (page 106)	1
С	6390-001-339	Wing plate, left	1

6390-109-002 Rev A.0 105 EN

Hydraulics assembly

6390-001-039 Rev U (Reference only)

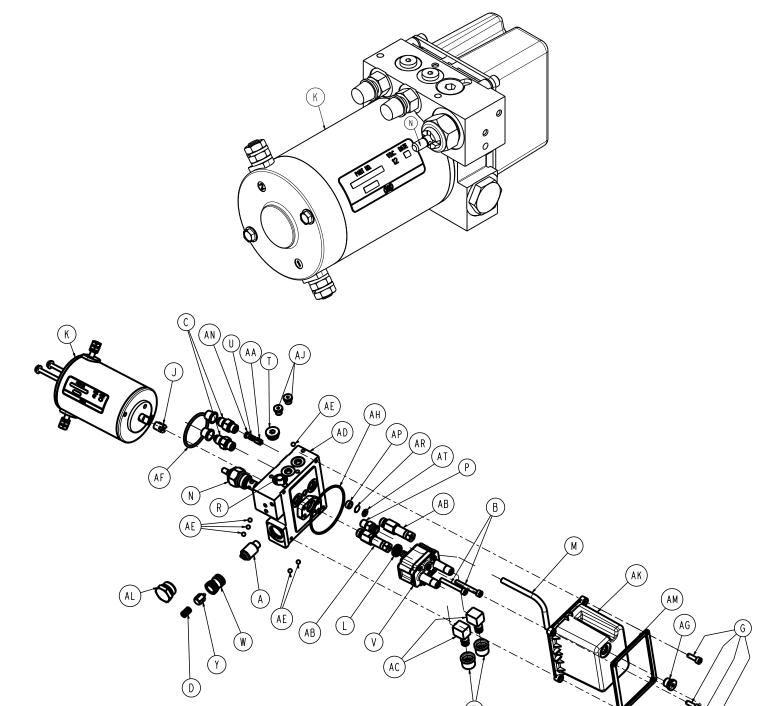


Item	Number	Name	Quantity
Α	0016-102-000	Nylock hex nut	1
В	6390-001-029	Hydraulic cylinder	1
С	6390-101-038	Manifold assembly (page 107)	1
D	6390-001-167	Manual release link	1
E	6390-001-381	Velocity fuse	1
F	6390-101-431	Motor cable	1
G	6390-001-433	Inner rod bearing	2
Н	6390-001-436	Hydraulic hose, cap end	1
J	6390-001-437	Hydraulic hose, rod end	1
K	6500-001-297	Cylinder rod side hose fitting	2
L	NA	Label	1
M	0013-038-000	External tooth lock washer	2

EN 106 6390-109-002 Rev A.0

Manifold assembly

6390-101-038 Rev B (Reference only)



Item	Number	Name	Quantity
A	6390-001-438	Shuttle spool	1
В	406187	Socket head cap screw	2
С	6390-001-146	Fitting STR SAE4 J1C4	2
D	410462	Compression spring	1

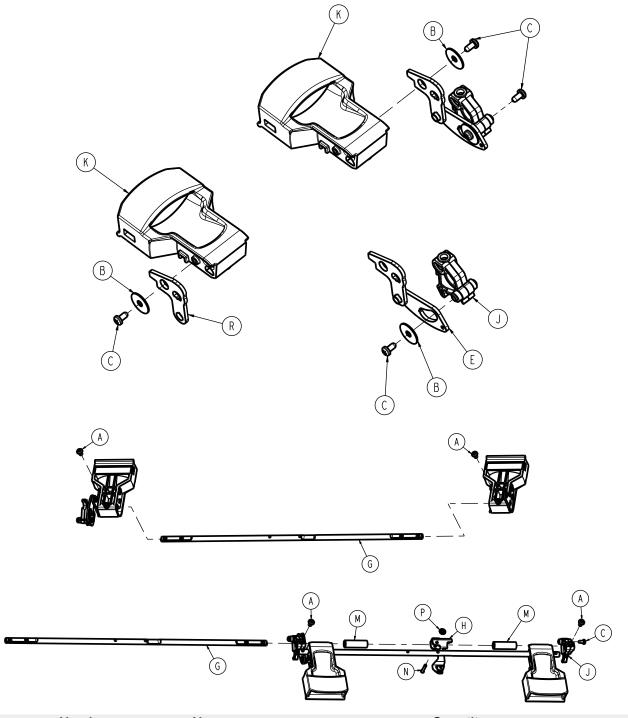
6390-109-002 Rev A.0 107 EN

Item	Number	Name	Quantity
E	410521	Filter	2
F			
G	416242	Socket head cap screw	4
Н			
J	413528	Coupling	1
K	6390-101-132	Motor 12DC 108/165AY	1
L	413675	Seal shaft	1
M	414885	Return tube	1
N	6500-001-289	Non-locking manual valve	1
Р	414644	Fitting STR 1/8" NPTF 1/4" TB	1
R	6390-001-151	Valve PC flow control	1
Т	415866	Plug SAE6 HOL hex	1
U	415867	Compression spring	1
V	646679	Pump	1
W	773763	Check seat assembly	1
Υ	773776	Poppet assembly	1
AA	774585	Poppet assembly	1
AB	775905	Relief valve assembly	2
AC	775942	Filter assembly suction filter	2
AD	6390-101-129	Adapter block	1
AE	401072	Ball steel	6
AF	405673	O-ring	1
AG	409278	Plug SAE2 HOL hex	1
AH	410566	O-ring	1
AJ	413577	Plug SAE2 HOL hex	2
AK	6390-001-128	Reservoir loader	1
AL	776573	Hex plug retainer assembly	1
AM	6390-001-209	Flange RSVR loader	1
AN	414669	RV spring retainer	1
AP	364094	AL spacer	1
AR	411888	Filter screen	1
AT	401273	O-ring	1

EN 108 6390-109-002 Rev A.0

Trolley manual release assembly

6390-001-046 Rev C (Reference only)



Item	Number	Name	Quantity
Α	0004-665-000	Button head cap screw	4
В	0011-518-000	Washer	3
С	0023-163-000	Delta screw	5
E	6390-001-060	Manual release linkage assembly, left	1
G	6390-001-326	Actuation rod	2
Н	6390-001-328	Manual cot release slider block	1
J	6390-001-329	Actuation cam	2

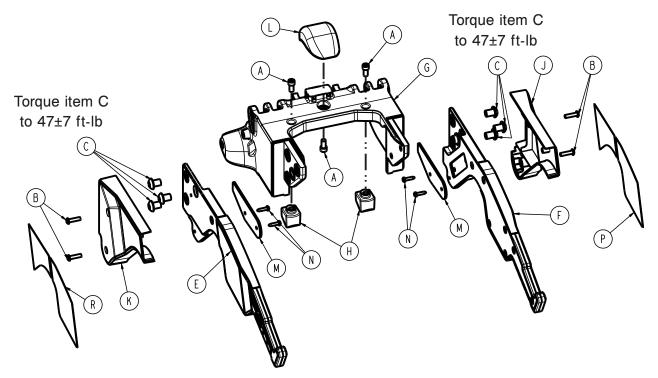
6390-109-002 Rev A.0 109 EN

Item	Number	Name	Quantity	
K	6390-001-332	Trolley release handle	2	
M	6390-001-387	Release handle retainer	2	
N	6390-001-323	Cot manual release pin	1	
Р	0028-217-000	Push nut	1	
R	6390-001-382	Trolley release handle link arm	1	

EN 110 6390-109-002 Rev A.0

Trolley arm assembly

6390-001-016 Rev AA (Reference only)

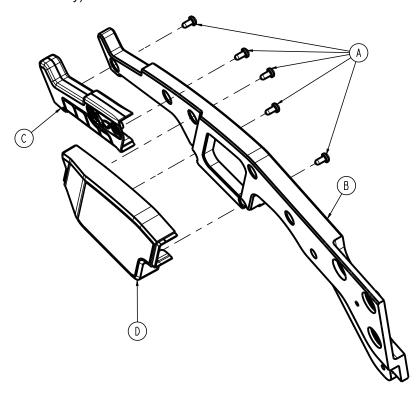


Item	Number	Name	Quantity
A	0004-660-000	Socket head cap screw	3
В	0004-666-000	Button head cap screw	4
С	0004-668-000	Button head cap screw	6
E	6390-001-036	Arm, right (page 113)	1
F	6390-001-037	Arm, left (page 112)	1
G	6390-001-305	Middle arm	1
Н	6390-001-322	Mid position bumper lock block	2
J	639000010372	Re-LOAD arm cover, head end, left	1
K	639000010371	Re-LOAD arm cover, head end, right	1
L	6390-001-440	Trolley cot ramp	1
M	6390-001-486	Arm cover guard, head end	2
N	0023-162-000	Delta screw	4
Р	639000010410	Label, Re-LOAD arm cover, left	1
R	639000010411	Label, Re-LOAD arm cover, right	1

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Arm, left

6390-001-037 Rev AA (Reference only)

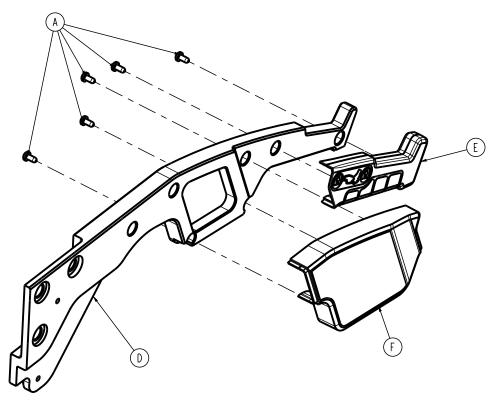


Item	Number	Name	Quantity
A	0023-163-000	Delta screw	5
В	6390-001-417	Arm, left	1
С	6390-001-341	Arm grip, left	1
D	639000010370	Re-LOAD arm cover, foot end, left	1

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Arm, right

6390-001-036 Rev AA (Reference only)

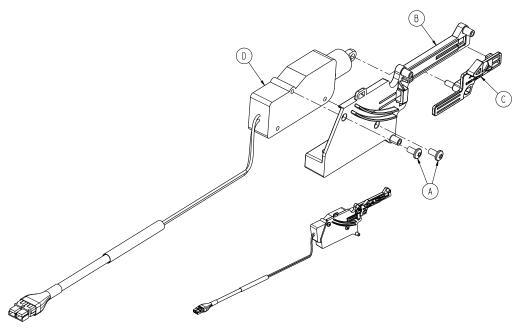


Item	Number	Name	Quantity
A	0023-163-000	Delta screw	5
D	6390-001-418	Arm, right	1
E	6390-001-368	Arm grip, right	1
F	639000010369	Re-LOAD arm cover, foot end, right	1

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Trolley actuator assembly - 6390-001-028

Rev A (Reference only)

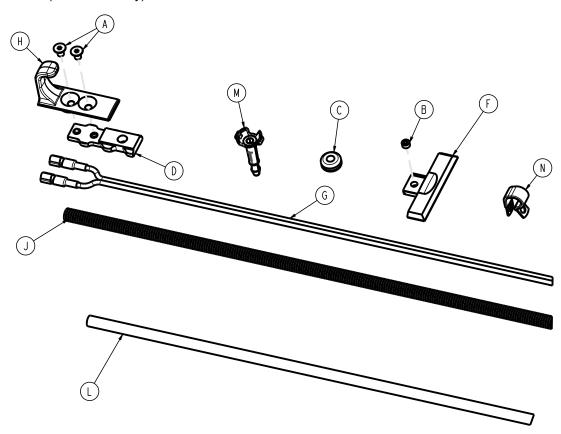


Item	Number	Name	Quantity
A	0023-296-000	Pan head machine screw	2
В	6390-001-476	Lock release actuator housing	1
С	6390-001-477	Lock release actuator slide	1
D	6390-001-478	Actuator	1

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Floor plate, install components

6390-001-055 Rev C (Reference only)

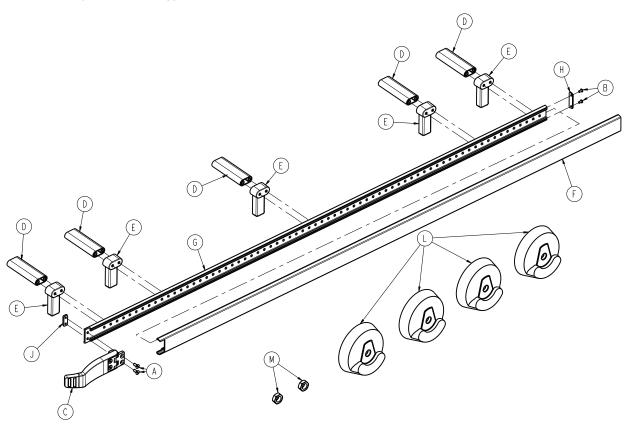


Item	Number	Name	Quantity
Α	0001-194-000	Flat head cap screw	2
В	0021-197-000	Set screw	2
С	0037-247-000	Rubber grommet	1
D	6390-101-108	Floor plate attachment bracket	1
F	6390-001-111	End cap, floor plate, machined	2
G	6390-001-135	Cable, anchor to vehicle	1
Н	6390-001-148	Safety hook, Power-LOAD	1
J	6390-001-153	Loom, wire protection, under ambulance	± 1
L	6390-001-170	Drain tube	1
M	6390-001-183	Drain tube, floor plate	1
N	6390-001-202	Rubber coated clamp, P style	6

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Wheel guide, optional

6390-027-000 Rev D (Reference only)

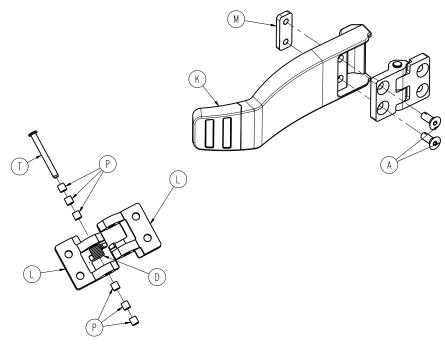


Item	Number	Name	Quantity
A	0001-195-000	Flat head cap screw	2
В	0023-296-000	Pan head machine screw	2
С	6390-001-017	Wheel guide assembly, optional - 6390- 001-017 (page 117)	1
D	6390-001-173	Spacer	5
E	6390-001-174	Wheel guide support	5
F	6390-001-175	Wheel guide rail bumper	1
G	6390-001-176	Wheel guide rail	1
Н	6390-001-178	Wheel guide cap	1
J	6390-001-191	Wheel guide nut	1
L	6390-001-206	Wheel cover	4
M	0016-060-000	Toplock locknut	2

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Wheel guide assembly, optional - 6390-001-017

Rev C (Reference only)

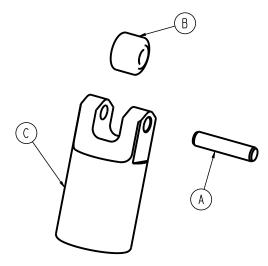


Item	Number	Name	Quantity
Α	0001-195-000	Flat head cap screw	2
D	0038-377-000	Torsion spring	1
K	6390-001-185	Wheel guide	1
L	6390-001-188	Wheel guide hinge	2
M	6390-001-191	Wheel guide nut	1
Р	0081-500-000	Bearing	6
T	0026-403-000	Clevis pin	1

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Transfer lock pin assembly

639001010074 Rev AA (Reference only)



Item	Number	Name	Quantity
Α	0026-684-000	Dowel pin	1
В	6390-001-199	Transfer lock roller	1
С	639000010197	Transfer lock pin	1

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Power-LOAD assembly, MTS - 639000550010

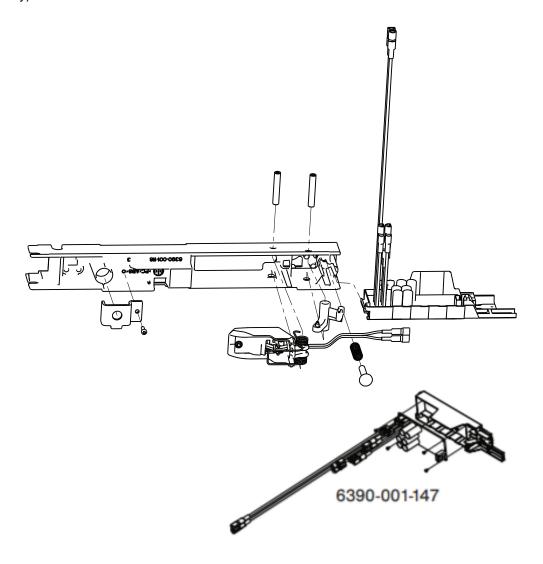
Rev AB (Reference only)

Note - See drawing Power-LOAD assembly (page 68) for assembly view and drawing notes.

Item	Number	Name	Quantity
Α	6390-001-011	Anchor assembly (page 72)	1
В	6390-101-012	Transfer assembly (page 80)	1
С	6390-001-013	Trolley assembly (page 87)	1
D	6390-001-054	Assembly kit, Power-LOAD - 6390-001- 054 (page 71)	1
G	639000010900	Tag, serial number	1
Н	0025-079-000	Dome head rivet	2
J	639001010026	Battery installation assembly	1

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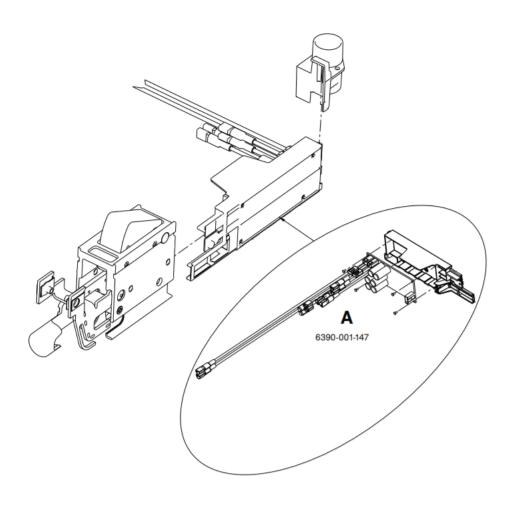
(Reference only)



Item	Recycling/material code	Important information	Quantity
А	6390-001-147 (Inductive Primary Board)		1
В	6390-001-030 (Anchor Coil Assembly, Middle)		1

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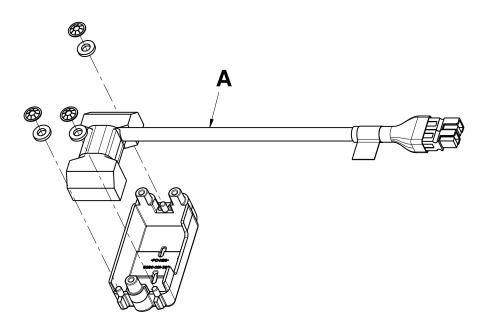
(Reference only)



Item	Recycling/material code	Important information	Quantity
А	6390-001-147 (Inductive Primary Board)		1

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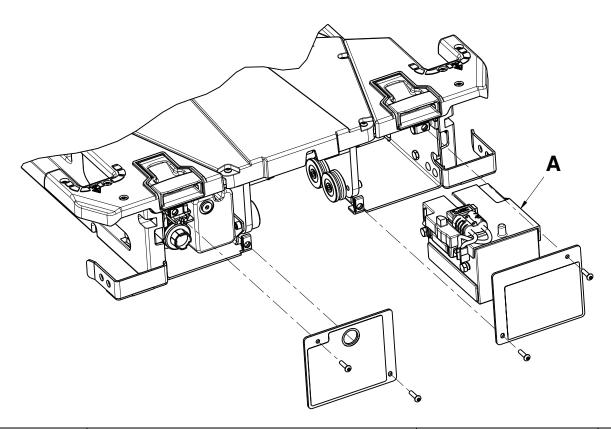
(Reference only)



Item	Recycling/material code	Important information	Quantity
A	6390-001-337 (Trolley Secondary Coil)		1

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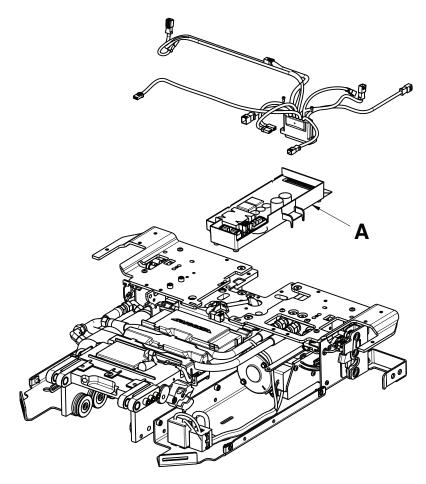
(Reference only)



Item	Recycling/material code	Important information	Quantity
А	6390-001-026 (12V, 5 Ah Lead Acid Battery)		1

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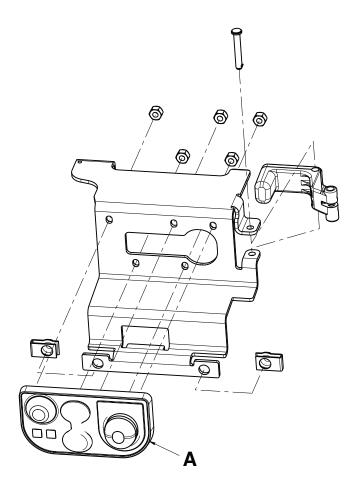
(Reference only)



Item	Recycling/material code	Important information	Quantity
Α	6390-101-014 (Control Board Assembly)		1

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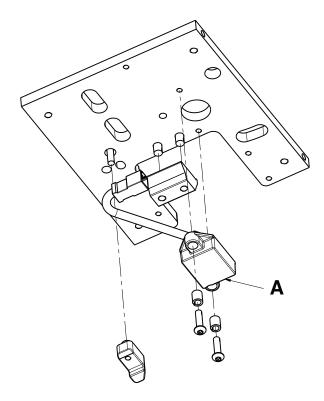
(Reference only)



Item	Recycling/material code	Important information	Quantity
Α	6390-001-450 (Master On/Off Switch)		1

6390-109-002 Rev A.0 125 EN

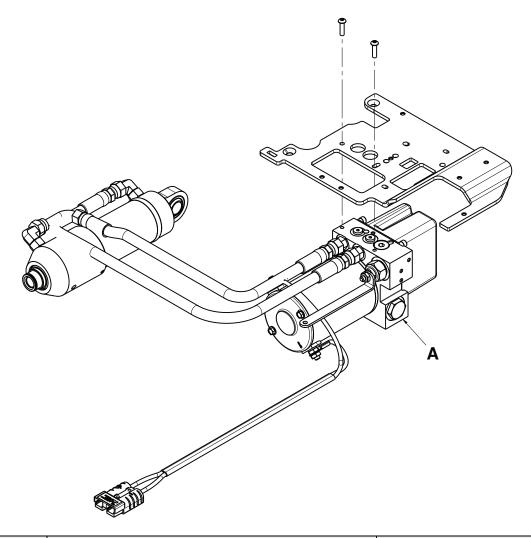
(Reference only)



Item	Recycling/material code	Important information	Quantity
Α	6390-001-361 (TPS Sensor Assembly)		1

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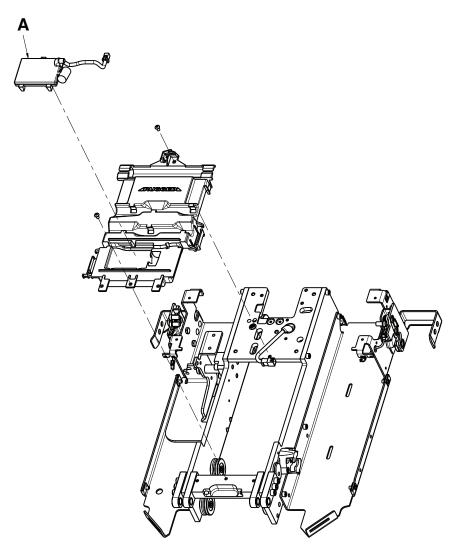
(Reference only)



Item	n	Recycling/material code	Important information	Quantity
А		6390-001-039 (Hydraulics Assembly)		1

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(Reference only)



Item	Recycling/material code	Important information	Quantity
A	6390-001-378 (Trolley Comm Board)		1

EN 128 6390-109-002 Rev A.0

EMC information

Guidance and manufacturer's declaration - electromagnetic emissions

Power-LOAD is intended for use in the electromagnetic environment specified below. The customer or the user of **Power-LOAD** should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment	
RF Emissions CISPR 11	Group 1	The Power-LOAD system uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.	
RF Emissions CISPR 11	Group 2	The Power-LOAD system must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected.	
RF Emissions CISPR 11	Class A	The Power-LOAD system is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.	

Recommended separations distances between portable and mobile RF communications equipment and Power-LOAD

Power-LOAD is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of **Power-LOAD** can help prevent electromagnetic interferences by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and **Power-LOAD** as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output	Separation distance according to frequency of transmitter			
power of transmitter W	150 kHz to 80 MHz d=(1.2) (√P)	80 MHz to 800 MHz d=(0.35) (√P)	800 MHz to 2.7 GHz d=(0.70) (√P)	
0.01	0.12	0.04	0.07	
0.1	0.38	0.11	0.22	
1	1.20	0.35	0.70	
10	3.79	1.11	2.21	
100	12	3.5	7	

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

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Guidance and manufacturer's declaration - electromagnetic immunity

Power-LOAD is suitable for use in the electromagnetic environment specified below. The customer or the user of **Power-LOAD** should assure that it is used in such an environment.

Immunity test	EN/IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge (ESD) IEC 61000-4-2	<u>+</u> 8 kV contact <u>+</u> 15 kV air	<u>+</u> 8 kV contact <u>+</u> 15 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to ground	±1 kV line(s) to line(s) ±2 kV line(s) to ground	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Electrical transient conduction along supply ISO 7637-2	per ISO 7637-2	per ISO 7637-3	N/A

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Guidance and manufacturer's declaration - electromagnetic immunity					
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 6 Vrms in ISM and amateur radio bands 150 kHz to 80 MHz 10 V/m 80 MHz to 2.7 GHz	3 V 6 Vrms in ISM and amateur radio bands 10 V/m	Portable and mobile RF communications equipment should be used no closer to any part of Power-LOAD , including cables, than the recommended separation distance calculated from the equation appropriate for the frequency of the transmitter. Recommended separation distance D=(1.2) (√P) D=(.35) (√P) 80 MHz to 800 MHz D=(0.70) (√P) 800 MHz to 2.7 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site a should be less than the compliance level in each frequency range.b Interference may occur in the vicinity of equipment marked with the following symbol:		

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Guidance and manufacturer's declaration - electromagnetic immunity

Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

Note 3: The ISM (industrial, scientific and medical) bands between 0.15 MHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz. The amateur radio bands between 0.15 MHz and 80 MHz are 1.8 MHz to 2.0 MHz, 3.5 MHz to 4.0 MHz, 5.3 MHz to 5.4 MHz, 7 MHz to 7.3 MHz, 10.1 MHz to 10.15 MHz, 14 MHz to 14.2 MHz, 18.07 MHz to 18.17 MHz, 21.0 MHz to 21.4 MHz, 24.89 MHz to 24.99 MHz, 28.0 MHz to 29.7 MHz and 50.0 MHz to 54.0 MHz.

Note 4: Evaluated for immunity to proximity fields from RF wireless communication equipment per IEC 60601-1-2: 2014 Table 9.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which **Power-LOAD** is used exceeds the applicable RF compliance level above, the **Power-LOAD** system should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating **Power-LOAD**.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 20 V/m.

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