Glide-Line™
255 Schoolhouse Road
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Phone: 215-721-1900
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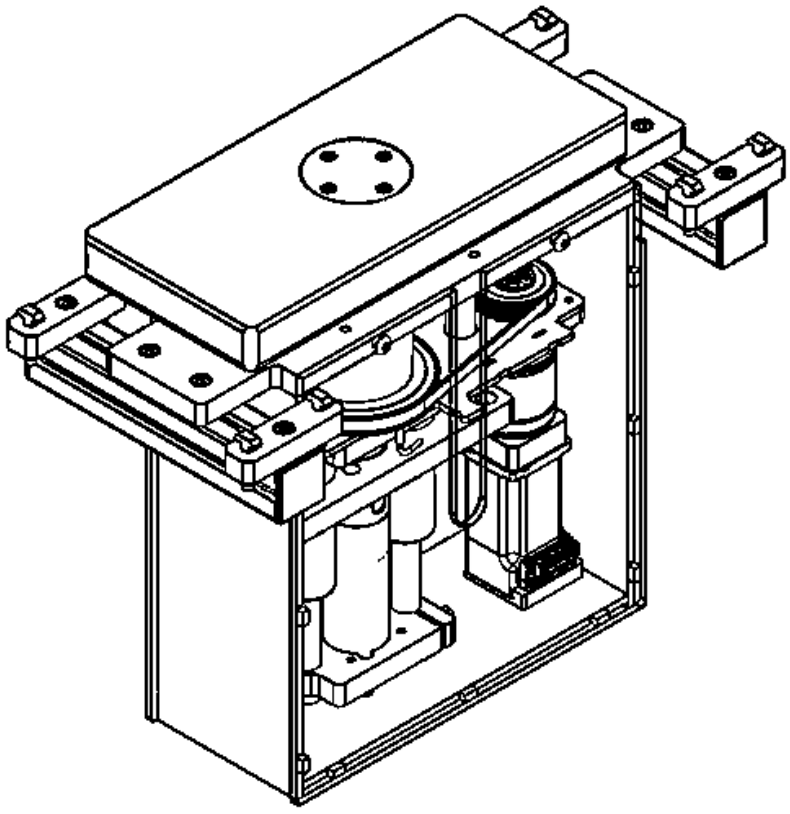
V2.0

Glide-Line™ PLR

Installation and Maintenance Manual



V2.0

Easy. Flexible. Precise. Fast.

Throughout this manual are the following information blocks indicated in the appropriate sections by signal words as specified by ANSI Z535.4 Standard (section 4).

	Warning – This information must be followed to prevent harm to individuals or damage to equipment.
	Automatic Equipment – This equipment may start or stop automatically.
	Electrical Shock – This equipment has connection to an electrical circuit with potentially hazardous energy levels.
	Consult Manual – This manual must be completely reviewed prior to performing any service.
	Lock Out Power – All sources of energy must be controlled before servicing equipment

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1. Introduction

1.1. Description and Technical Specifications

Glide-Line™ Pneumatic Lift and Rotate Units (PLR) are designed to suit multiple conveyance application demands. All PLRs are designed to be conveyor mounted.

Part Number:

PLR-(A)-(B)-(C)-(D)

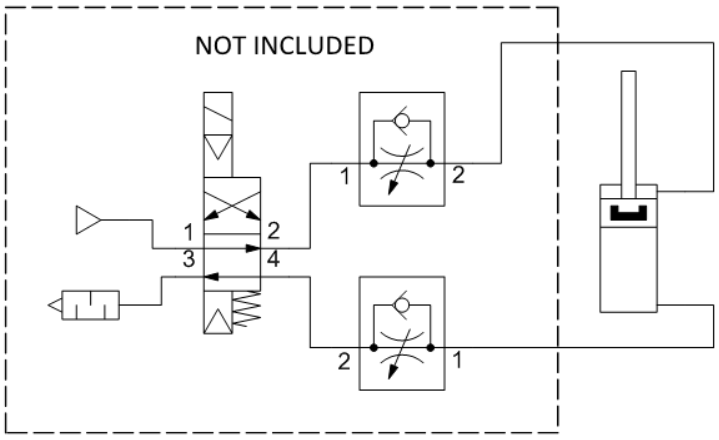
A = Pallet Width Range 160mm to 1040mm
B = Pallet Length Range 160mm to 1040mm
C = **CM** for Conveyor Mounted, **SM** for Station Mount
D = **G** for Guarded, **-blank-** for No Guard

Technical Specifications:

Lift range:	1.5mm to 40mm.
Lift height fine adjustment:	+/- 10mm
Lift cylinder bore:	40mm
Lift capacity:	150 Lbs. @ 80 psi.
Pallet length range:	160mm to 1040mm in 1mm increments
Pallet width range:	160mm to 1040mm in 1mm increments
Pneumatic ports:	¼ NPT

Recommended Pneumatic Schematic:

*Fittings and Valves not included

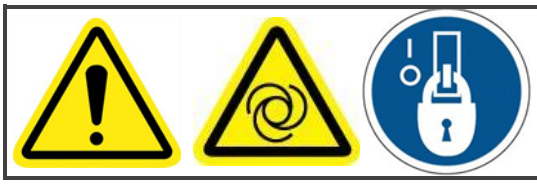


Recommended Sensor Brackets:

4" stroke cylinder or when stroke = 40mm – use bracket P-01027

Recommended Sensor Package:

IFS298 (P-00911) – Inductive sensor K1, 12mm diameter, 8mm nonflush range, 3wire DC PNP, N.O, QD
IFM EVC004 (P-00910) – IFM electronic, cordset, M12 Female R/A, 4 Wire, 5 Pin, 2m, PUR, Black



Personnel working on or around this equipment must be properly trained in operation, maintenance, and lock-out/tag-out procedures.

1.2. Operating Conditions and Environment

Equipment should be in an ambient temperature room. Equipment should not be subject to high humidity or wash-down conditions. Clean-up to be done by wipe down / air blow off only.

1.3. Chemical and Corrosion Resistance

It is recommended that customers contact the factory and obtain samples of applicable modules to be exposed to conditions of the proposed application to determine resistance of material and its durability. For further information, please contact Glide-Line™ at 215-721-1900.

1.4. Unpacking

When the unit arrives, care must be taken to unpack the unit. Units will ship packaged in a box on a skid. Do NOT lift from the lift components, bushings, or locating pins.

It is important to install conveyors and devices level and straight to achieve the listed performance. A non-level installation could induce moment loading to the conveyors and devices, decreasing the expected service life or preventing proper functionality.

1.5. Included Items

List of items that should be included in the shipment.

- PLR
- Guard Package (Optional)

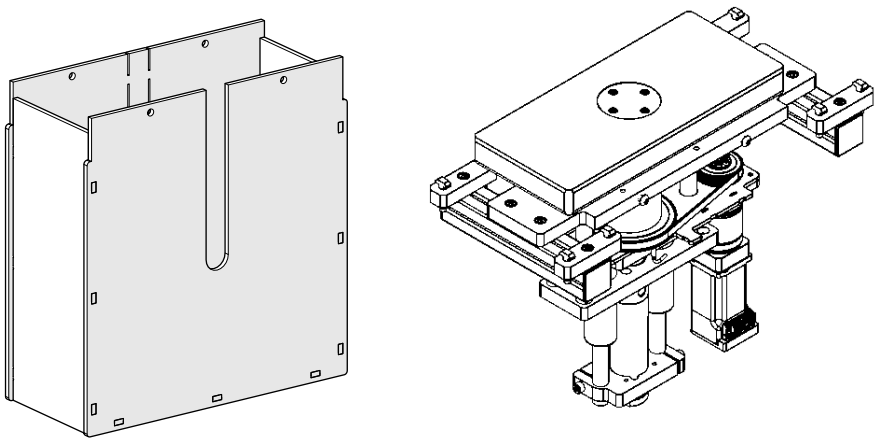


Figure 1: PLR and Guard Package

1.6. Basic Order of Operations

1. Pallet is conveyed to device
2. Pallet is stopped directly over device by stop (not included)
3. Lift actuates and rises, with the top plate engaging the Work Piece Pallet's internal bumpers
4. Lift runs to end of stroke
5. Rotation initiates to final location.
6. Lift Deactivates and lowers, disengaging plate from pallet
7. Pallet Stop Drops
8. Pallet Conveyed out of work area

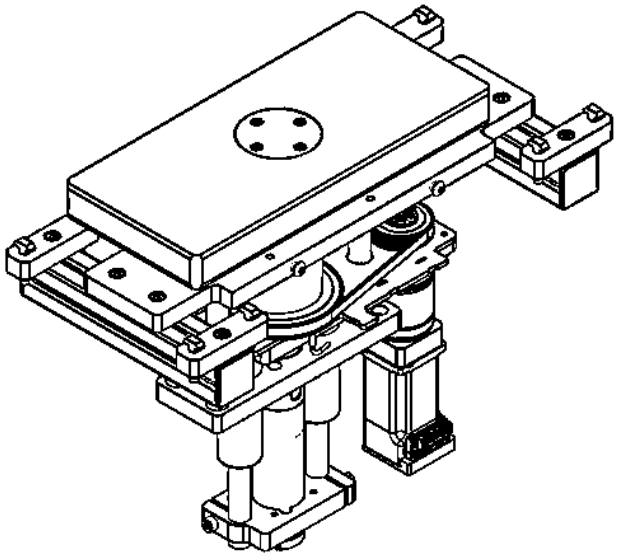


Figure 2: PLR

2. Installation

2.1. Tools Required for Installation

List of recommended and/or required tools for installation.

- #13 Metric Wrench

2.2. Installing Device

Step 1: Undo the M8 BHCS from the mounting plate as shown in Figure 2. Raise the guards up until the mounting holes line up with the holes in the mounting plate. Install the BHCS and tighten.

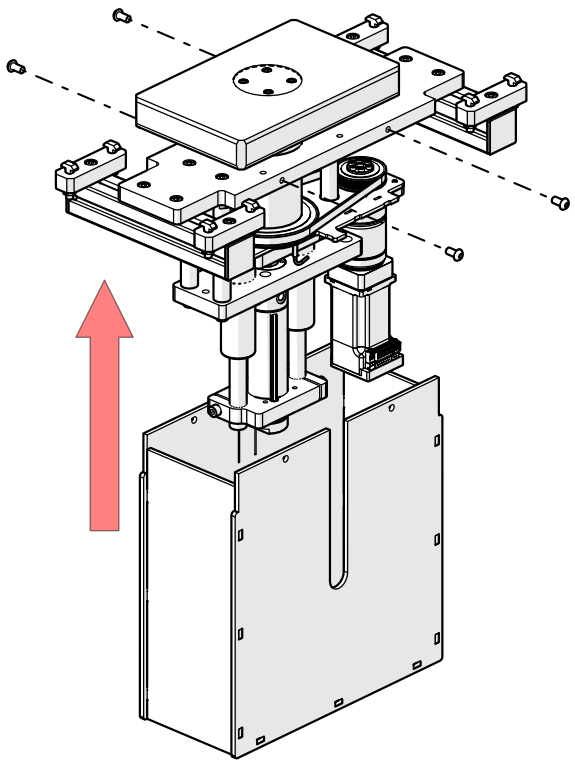


Figure 3: Installing Guards

The PLR is designed to be conveyor mounted. Figure 4 shows the correct orientation of the T-Bolts for when the PLR is being mounted to the conveyor.

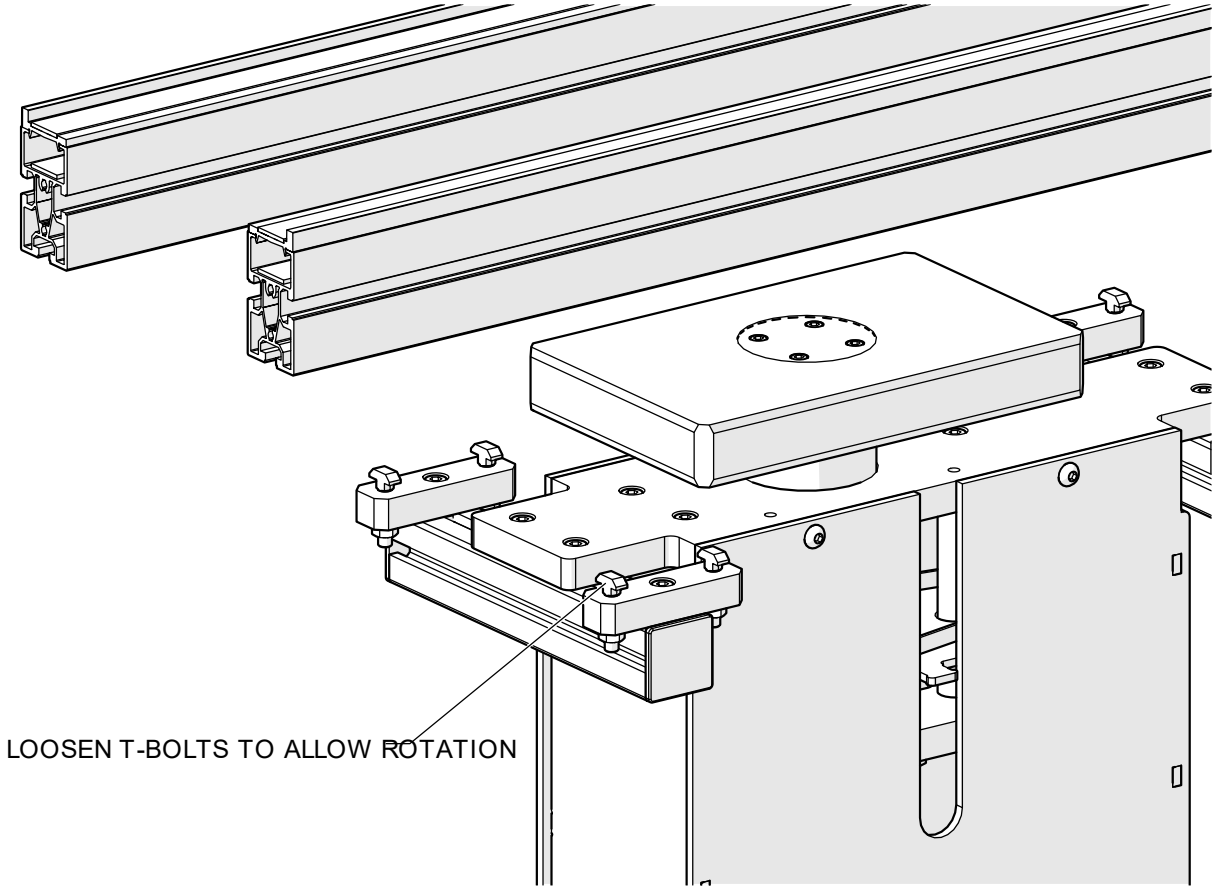


Figure 3: Preparing for Installation

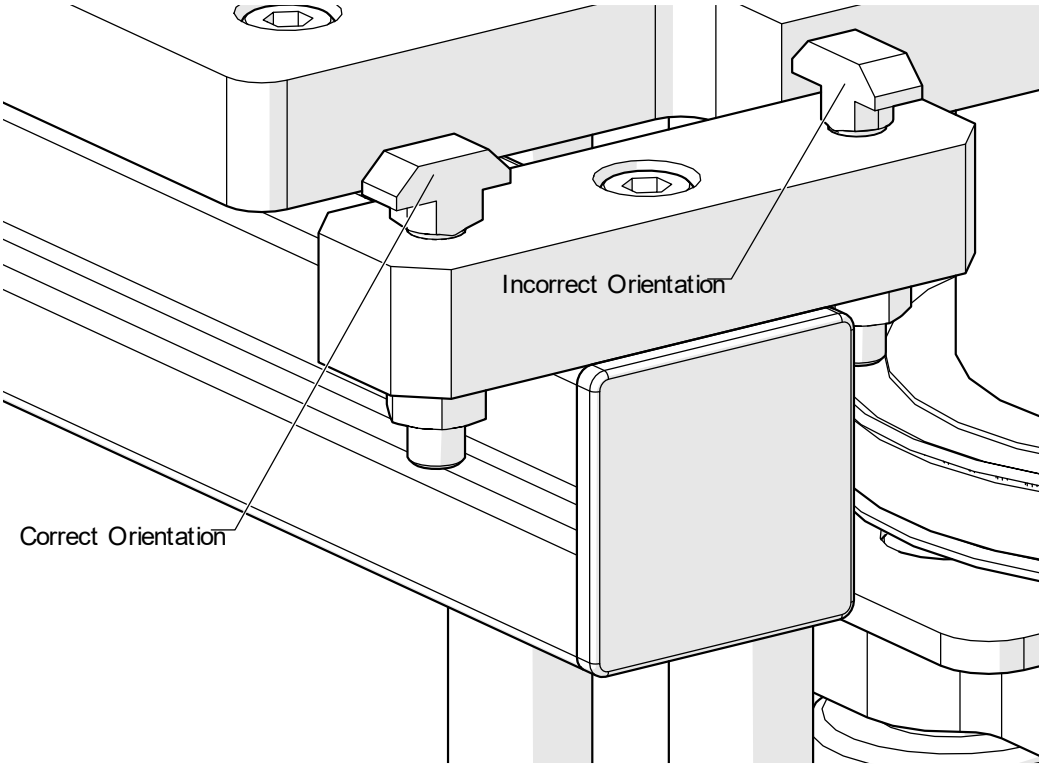


Figure 4: T-Bolt Orientation

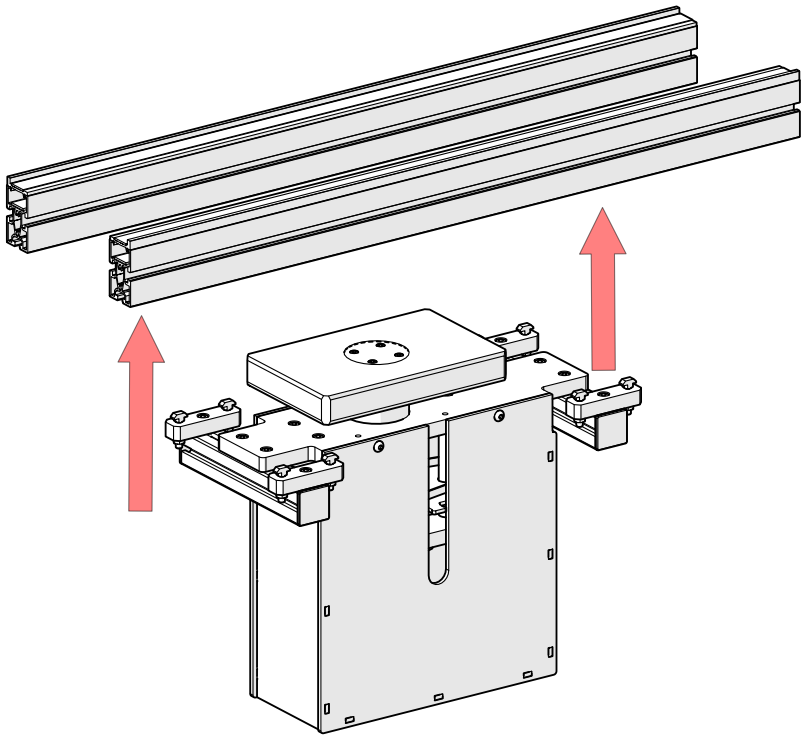


Figure 5: Installing Device

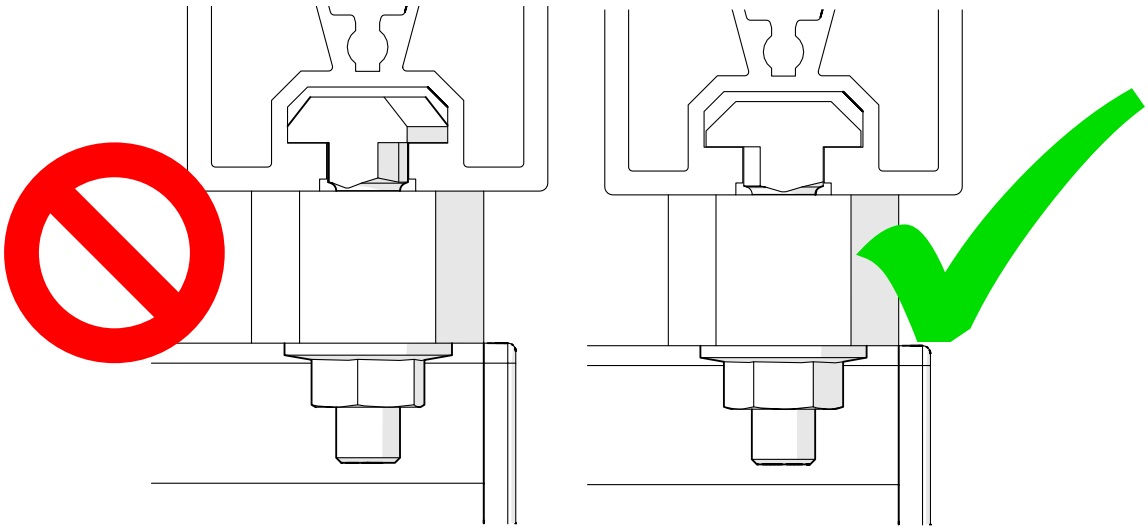


Figure 6: Tightening T-Bolts

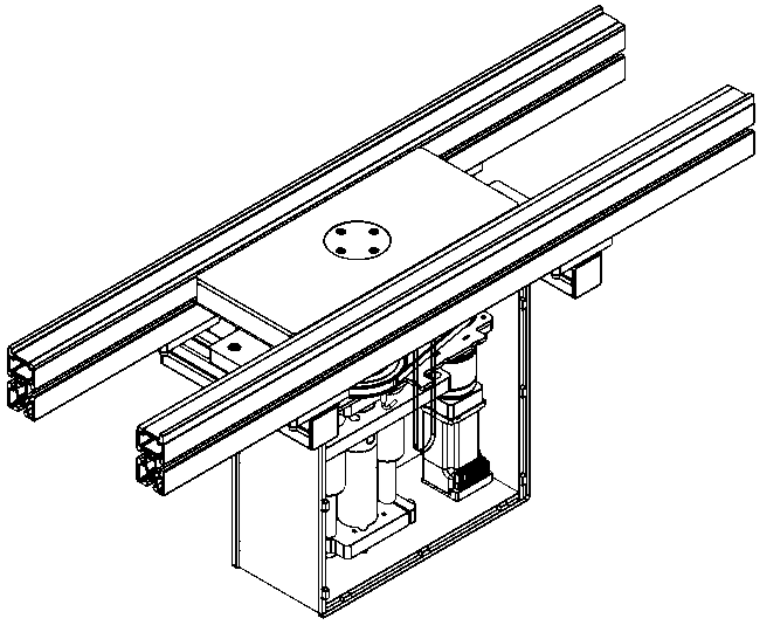


Figure 7: Mounted PLR

3. Safety Instructions

3.1 Operation

	Due to the hazardous moving parts of the device, all personnel in the area of a device should be warned when the device is about to be activated.

Only properly trained personnel should be permitted to operate Glide-Line™ devices. Training should include emergency procedures.

Machine stopping devices should be clearly marked and easily accessible. Personnel working on or near the equipment should be trained in the location of stopping devices.

The area around machinery should be kept clear.

Devices must only handle loads they were designed to carry.

Safety and warning devices must not be tampered with in any way that could endanger personnel.

Personnel must be made aware of all potential hazards including but not limited to entanglement of items such as long hair, loose clothing or jewelry. Personnel must also be aware of any pinch points present on the device that could result in injury.

	Device should not be operated without safety guards in place. Guards should not be removed by anyone other than authorized personnel.

All safety devices, including wiring of electrical safety devices, must be designed to work in a failsafe mode to avoid hazardous conditions from occurring during a power failure.

Refer to ANSI Z244.1-1982, American National Standard for Personnel Protection – Lockout/Tagout of Energy Sources – Minimum Safety Requirements and OSHA Standard Number 29 CFR 1910.147 "The Control of Hazardous Energy (Lockout/Tagout)."

4. Maintenance

This section will go over how to maintain the PLR, including disassembly/reassembly for part replacement, and ensuring proper functionality of the device.

4.1 Removing the pulley belt

Step 1: Remove the M6 SHCS holding the lift plate together shown in Figure 10. This will allow the lift plate to be removed.

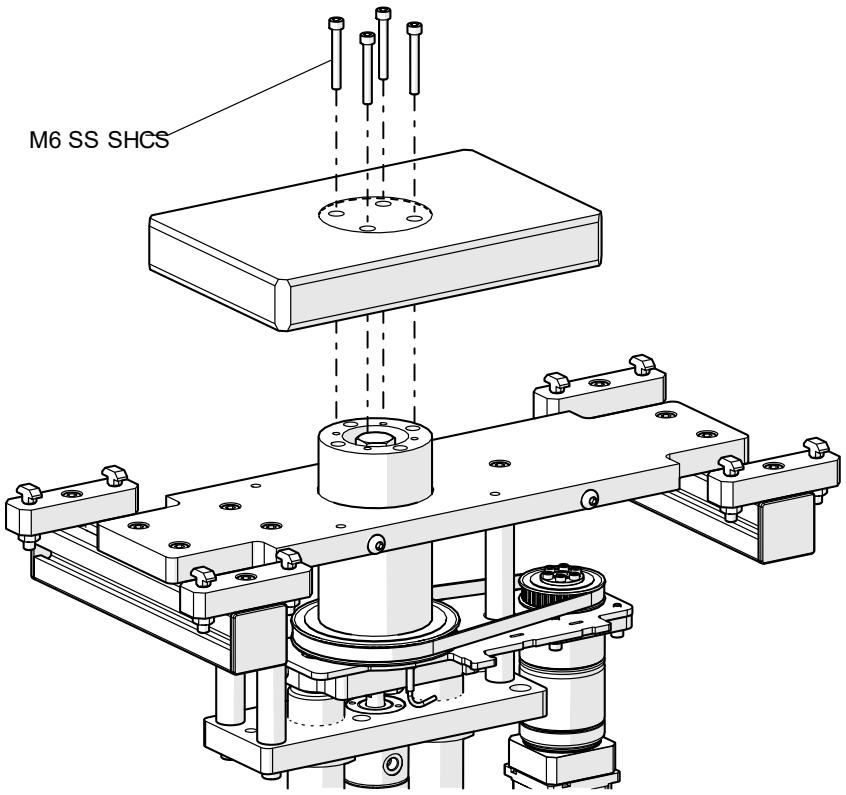


Figure 10: Removing Top Plate

Step 2: Remove the M8 SHCS that hold the three linear rods to the mounting plate shown in Figure 11.

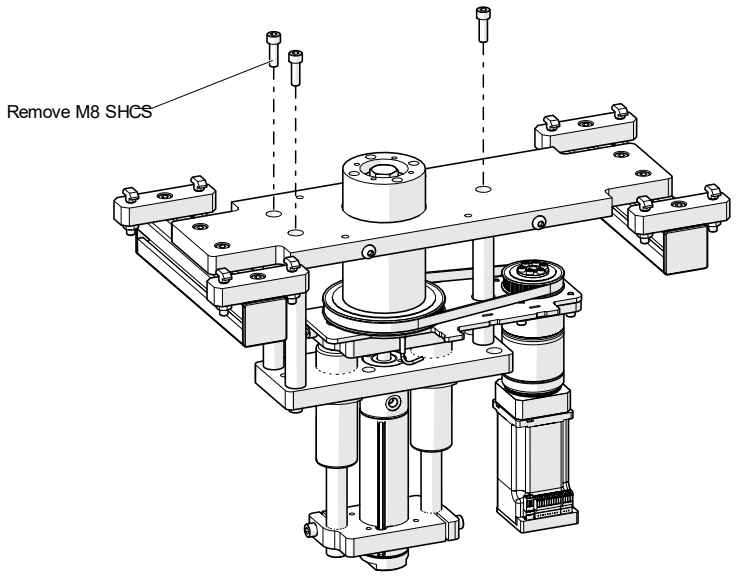


Figure 11: Removing M8 SHCS

This allows the mounting plate to be removed, shown in Figure 12.

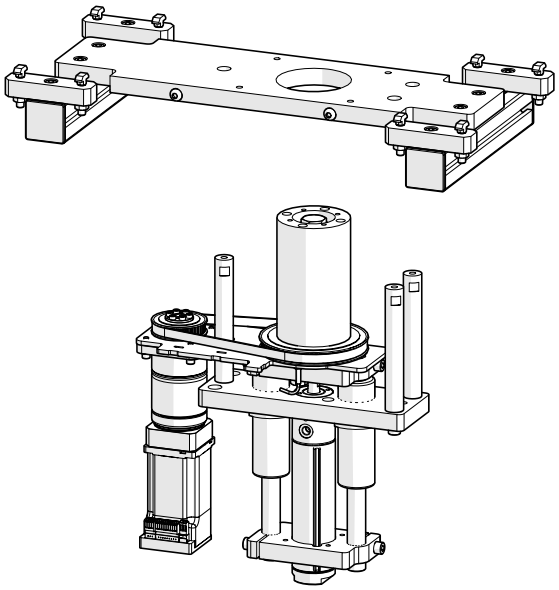


Figure 12: Removing Mounting Plate

Step 3: Remove the four M5 SHCS securing the gearbox as shown in Figure 13.

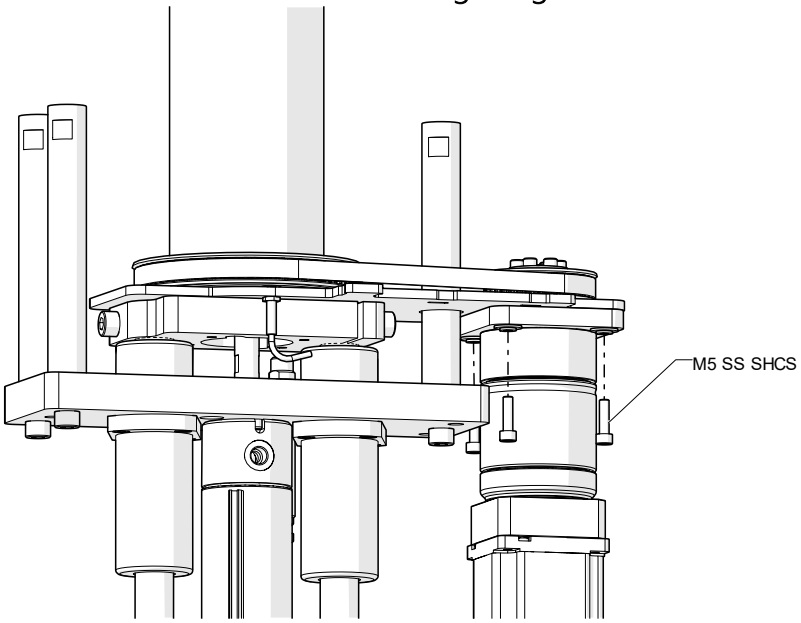


Figure 13: Remove M5 SHCS

Step 4: Slide the Drive Unit towards the lift post to create slack in the belt. Lift the belt up to remove as shown in Figure 14.

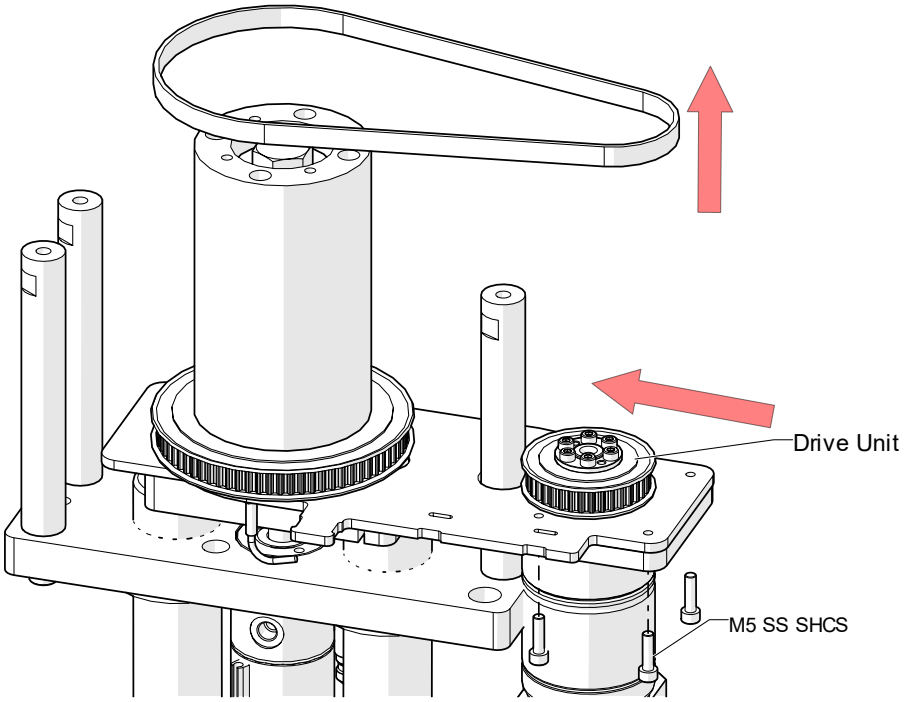


Figure 14: Removing Belt

To reassemble, follow the previous steps in reverse order.

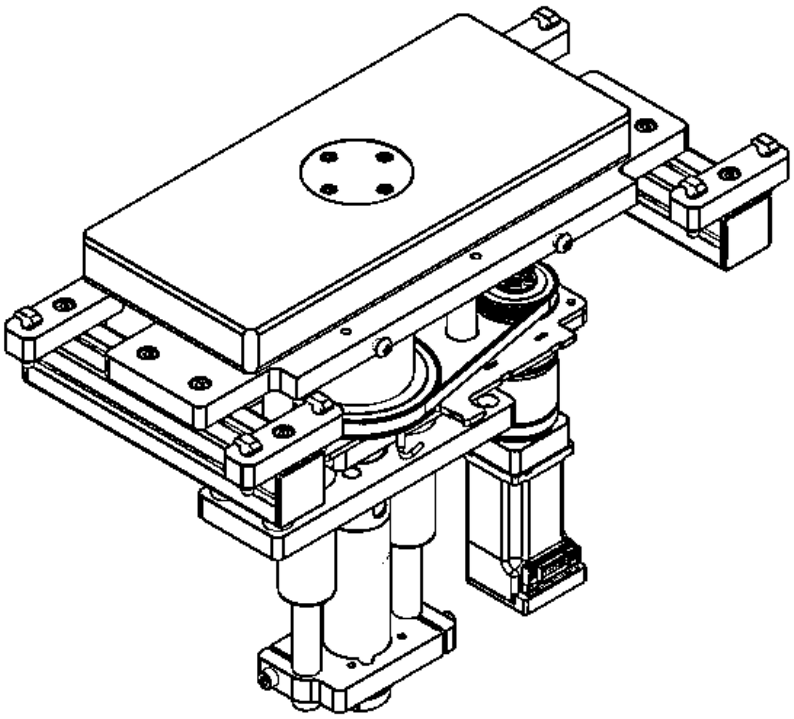


Figure 15: PLR

5. Troubleshooting

This section lists some common issues/solutions that you may come across while operating the LRU. For more technical/specific questions, please contact Glide-Line™ at 215-721-1900.

Q: PLR lift plate actuates up and down too fast/abruptly.
A: It is recommended that flow control valves are used to fine tune the rate at which the PLR lifts and retracts.

6. How to Order Spare Parts

Spare parts may be purchased directly from Glide-Line™.

For a full list of spares for your specific LRU, please reference the serial number located in the center of the mounting plate as shown below and contact a Glide-Line™ representative at 215-721-1900.

The next section covers spare parts for standard configurations of the PLR, which can be ordered directly from Glide-Line™.

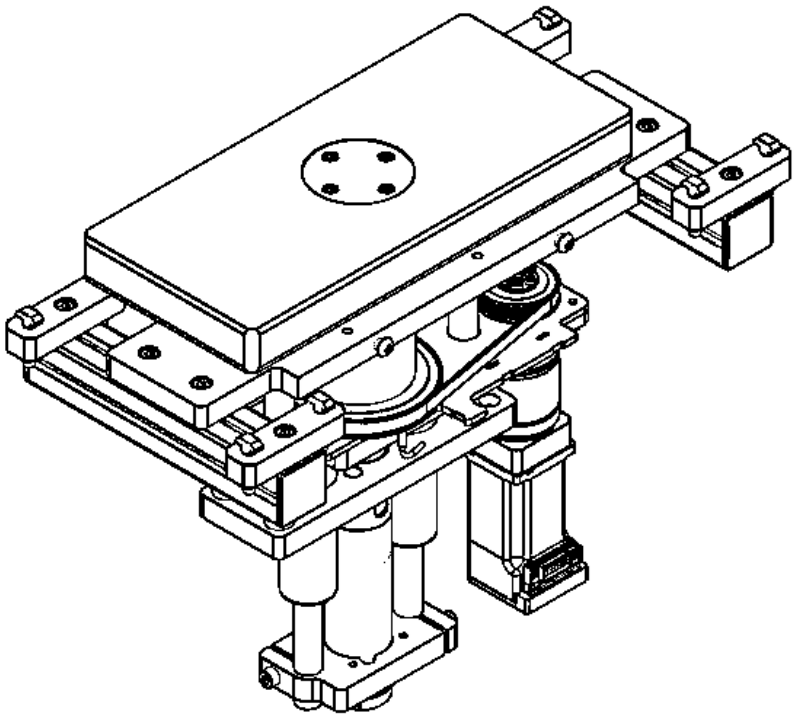


Figure 8: PLR

6.1 Spare Parts for PLR

PLR Spare Parts

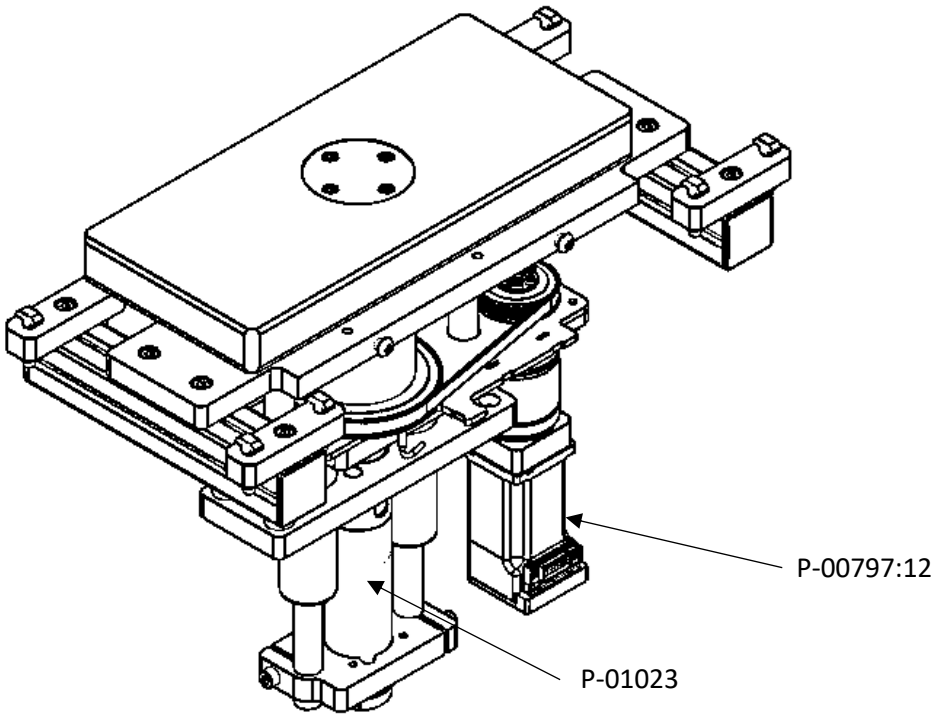


Figure 9: Spare Parts

Parts:

- P-01023 (Lift Cylinder) **Please contact Glide-Line for information regarding a replacement**
- P-00797:12 (Dyadic RSA12 NEMA 23 Motor Replacement)

7. Returns

	Under no circumstances will a component be accepted without a Glide-Line™ RMA number.

When requesting a Return Materials Authorization (RMA), please have the following information available:

- Customer's name and address
- Customer original purchase order number
- Glide-Line's™ project number or serial number
- Description of part(s) being returned
- Reason for return

To preserve the return, all returned parts must be properly packaged to prevent shipping damage. The Glide-Line™ issued RMA number must be clearly marked and visible on the exterior packaging. The Glide-Line™ issued RMA form must also be included inside the package.

Includes:

- Location, type of service and length of time in service
- Complete description of the faulty operation of the component and the circumstances of failure.
- State requested service – warranty or non-warranty
- Complete shipping instructions for return of component
- Name and telephone number of person to be contacted if there are any questions about the returned part.

If a part is damaged or lost during transit, the customer is responsible for directing a claim to the carrier. The customer is responsible for return freight.

Upon receipt of the defective component(s), Glide-Line™ will examine it for warranty defects. A credit will be issued for the replacement when and if the component is found to be defective.

Following the above procedure correctly will expedite handling of the returned component and will prevent unnecessary additional charges for inspection and testing to determine the problem with the component. For all orders and service, a written Purchase Order for repairs must be enclosed.