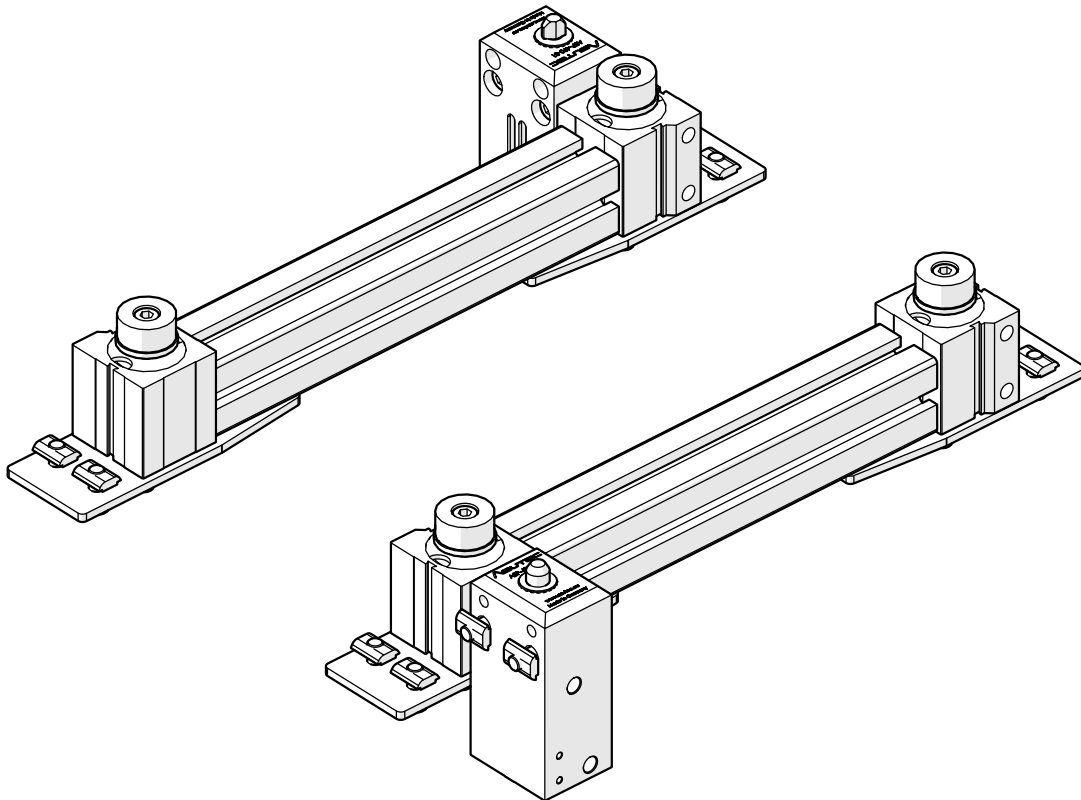



Glide-Line™ LPK


Installation and Maintenance Manual





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.
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	Automatic Equipment – This equipment may start or stop automatically.
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	Electrical Shock – This equipment has connection to an electrical circuit with potentially hazardous energy levels.
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	Consult Manual – This manual must be completely reviewed prior to performing any service.
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	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™ Lift and Position Kits (LPK) are designed to suit multiple conveyance application demands. All LPKs are designed to bolt to the bottom T-Slot of Glide-Line™ Conveyor Beam.

Part Number: LPK-(A)-(B)-(C)

- A** = Pallet Width Minimum 295mm*
- B** = Pallet Length Minimum 240mm*
- C** = Kit Type: LP (Lift & Position), L (Lift Only), or P (Position Only)

Technical Specifications for Lift Cylinder P-00265

Lift range: 1.5mm above belt
 Lift height fine adjustment range: +/- 10mm
 Lift cylinder bore: 40mm
 Lift capacity per cylinder: 150 Lbs. @ 80 psi.
 Pallet length minimum: 240mm*
 Pallet width minimum: 295mm*
 Pneumatic Ports: G1/8

Technical Specifications for Position Cylinder P-00660

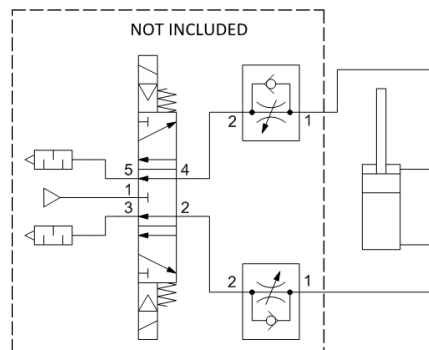
Pallet length minimum: 240mm*
 Pallet width minimum: 295mm*
 Pneumatic Ports: G1/8

*We at Glide-Line pride ourselves on being flexible. Please do not hesitate to contact us for customized solutions outside of the listed size range.

Recommended Pneumatic Schematic:

*Fittings and Valves not included

Ports: G1/8



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

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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.

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 for an LPK shown in Figure 1.

- LPK
- Mounting Hardware

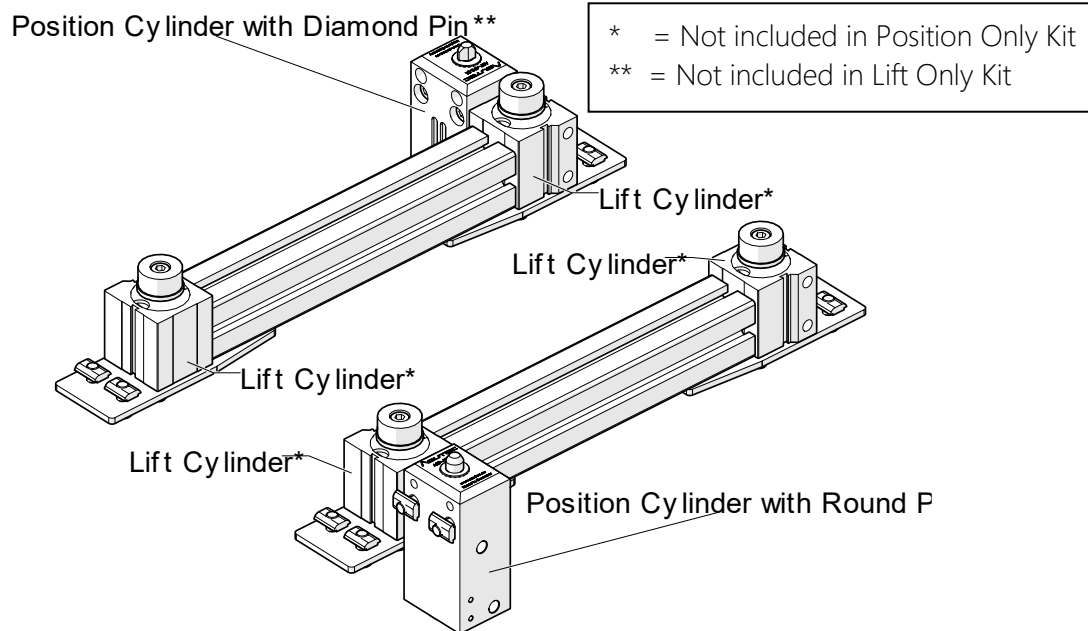


Figure 1: LPK With Mounting Hardware

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1.6. LPK Variants

The LPK is available in three variants, designated by the last letter(s) in the part number (LP, L, P). LP indicates that the LPK includes lift and position. L indicates the LPK is only capable of lifting. P indicates the LPK is only capable of positioning.

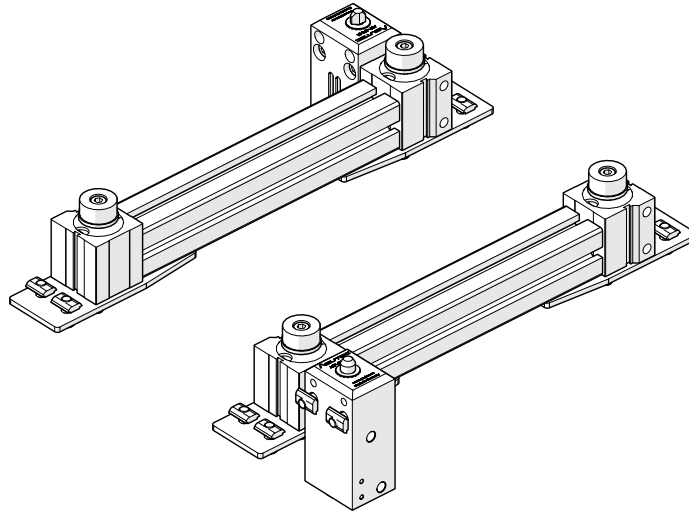


Figure 2: LPK (Lift and Position)

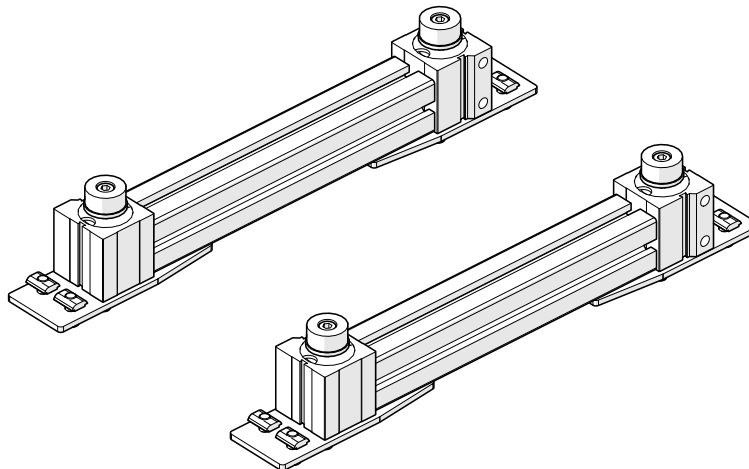


Figure 3: Lift Only

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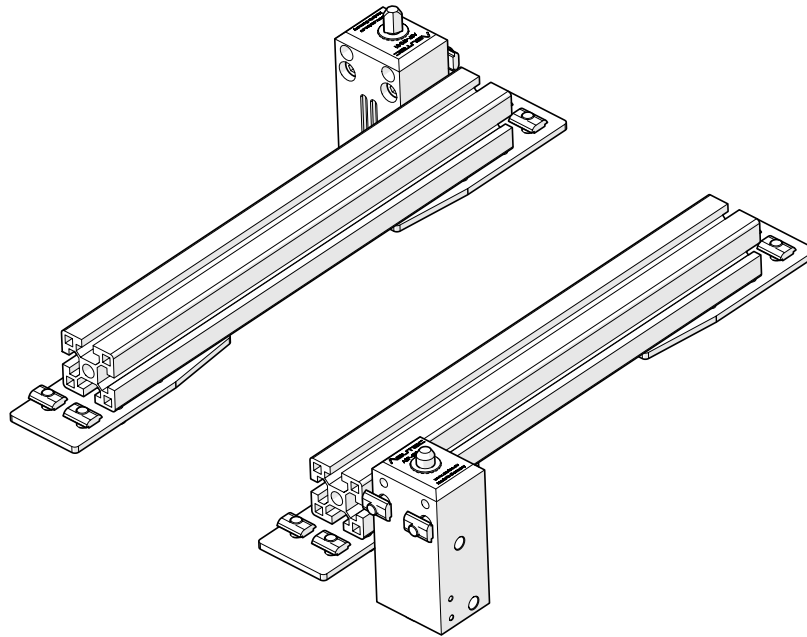


Figure 4: Position Only

1.7. Basic Order of Operations

1. Pallet is conveyed to device.
2. Pallet is stopped directly over device by stop (not included)
3. For Lift Only: All four cylinders will lift pallet above belt
4. For Position Only: Diamond and round pin positioners will engage locating bushings for positional accuracy but will not lift
5. For Lift and Position: Lift cylinders and locating positioners will all engage simultaneously to lift and locate the pallet above the conveyor belt.
6. Once operation complete, lift and position cylinders will deactivate, disengaging from the pallet.
7. Pallet stop lowers
8. Pallet is conveyed out of work area

2. Installation

2.1. Tools Required for Installation

List of recommended and/or required tools for installation.

- Metric Allen Key Size
 - #6

2.2. Installing Device

This section will go over how to properly install your LPK. Please note that the Lift Only Kit will not include the position cylinders

Step 1: Loosen all P-00223 and M8 SHCS as shown in Figure 6

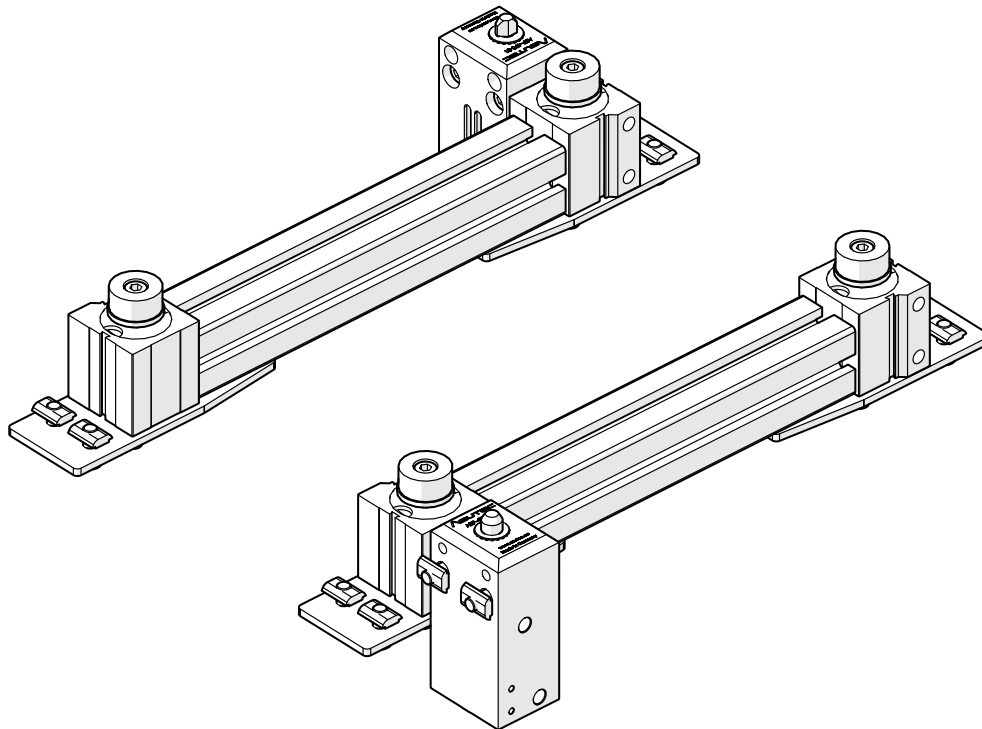


Figure 5: LPK Variant Shown

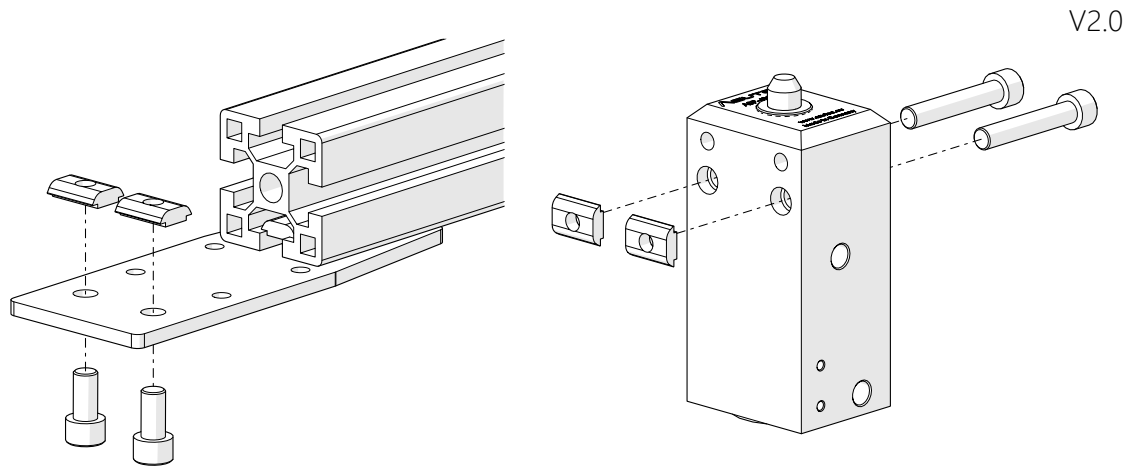


Figure 6: Removing Mounting Hardware

Step 2: Insert P-00223 into T-Slot on base of extrusion

When inserting P-00223 into the T-Slot, angle P-00223 to enable it to fit through the T-Slot opening. Once pushed up into the slot, you may align P-00223 as shown below in Figure 4.

Note: Extrusion shown as a cross-section view for clarity.

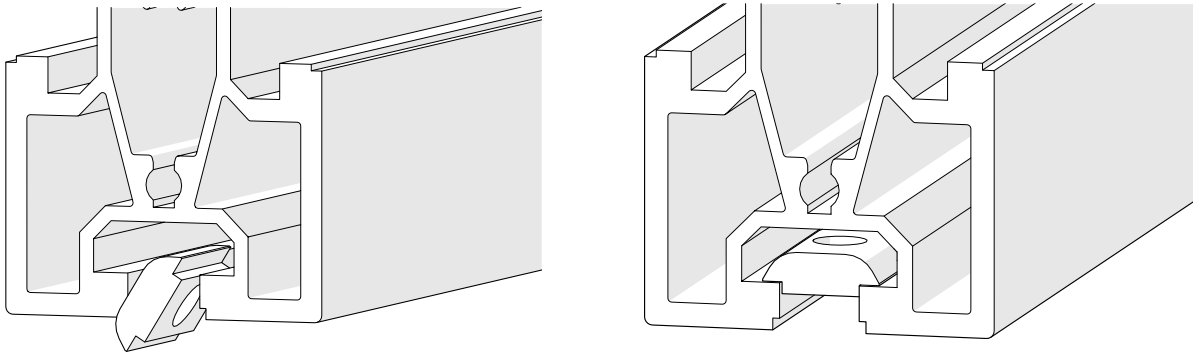


Figure 7: Inserting P-00223 Into Extrusion

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Step 3: Align LPK into position, lining up P-00660 and round or diamond pin with the locating hole on the pallet bumper

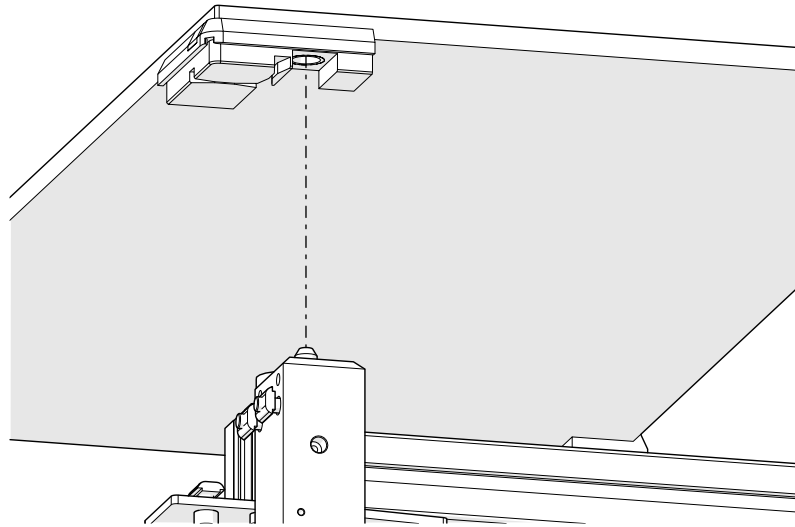


Figure 8: Aligning Locating Pins with Pallet

Step 4: Make sure that the lifts have clearance for the pallet bumpers.

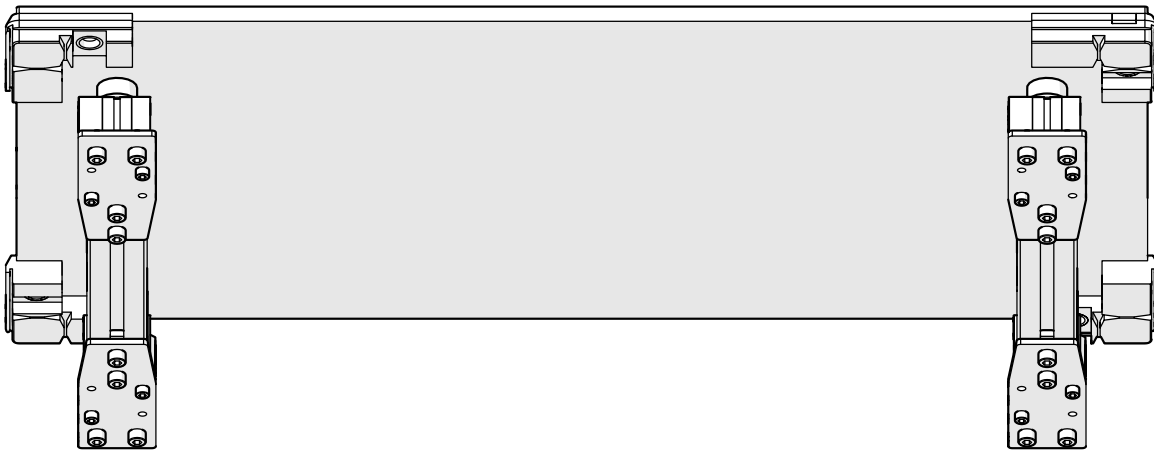


Figure 9: Lining Up M8 SHCS

For **Lift only kits**, make sure that the lift cylinder rods have ample clearance from the pallet bumpers. If the cylinders are too close to the bumpers, there is the risk that they clip the bumpers while lifting. This can cause the pallet to become skewed and/or unstable. If the cylinders are too far away from the corners, then the pallet may be unstable in the lifted position.

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Step 5: Make sure that P-00223 are aligned properly in the extrusion

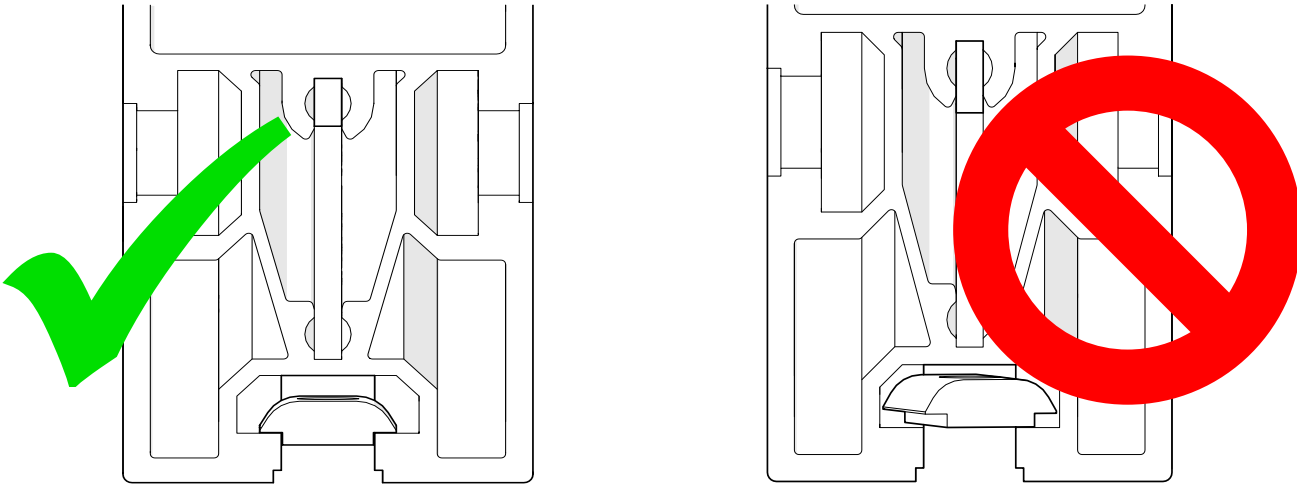


Figure 10: Correct and Incorrect Installation of P-00223

Step 6: After confirming that P-00223 are aligned properly, firmly tighten the M8 SHCS, making sure the LPK is square with the conveyor strands.

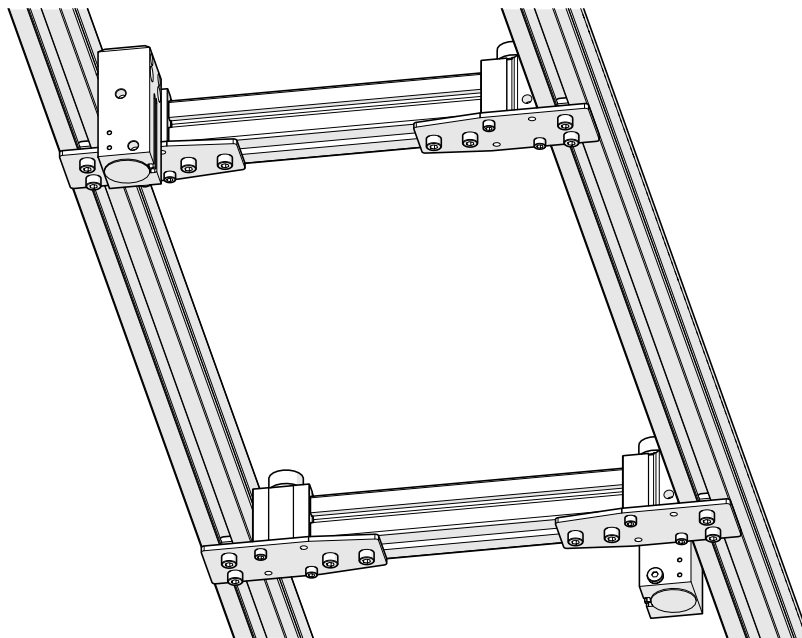



Figure 11: Tightening M8 SHCS

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3. Safety Instructions

3.1 Operation

	<p>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.</p>
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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.

	<p>Device should not be operated without safety guards in place. Guards should not be removed by anyone other than authorized personnel.</p>
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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).”

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4. Maintenance

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

4.1. Tools Required for Maintenance

List of tools needed to replace and maintain wear items.

- Metric Allen Keys
 - #6

			<p>Only trained personnel should perform maintenance procedures. Company approved lock-out/tag-out procedures should be strictly adhered to. Please consult this manual before servicing.</p>
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4.2. Replacing Components

This section will go over replacing P-00265 and P-00660 Air Cylinder.

- Use #5 Allen key for M6

Step 1: Remove M6 X 12 SHCS Securing P-00265

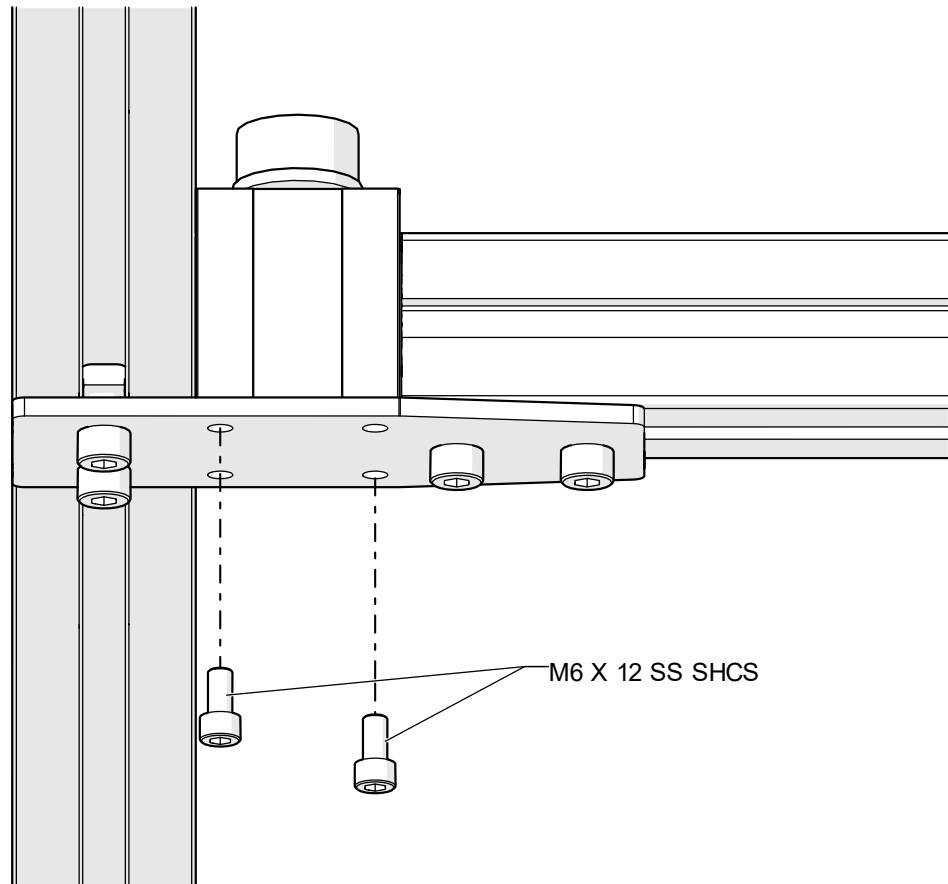


Figure 15: Removing M6 X 12 SHCS

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Step 2: Remove P-00265

Once the M6 SHCS are removed, you may remove P-00265. Please make note of the orientation of the airports so you can install the replacement part in the same position.

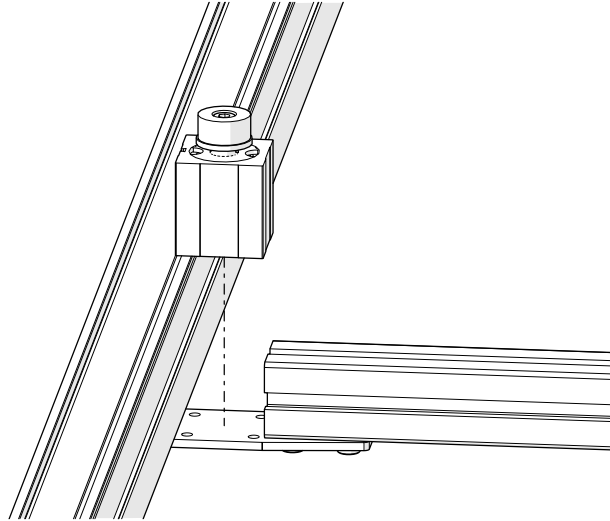


Figure 16: Removing P-00265

Step 3: Remove Bottom M6 SHCS

Next, remove the M6 SHCS securing the air cylinder to the mounting plate from underneath. Once these are removed, you will be able to remove the air cylinder.

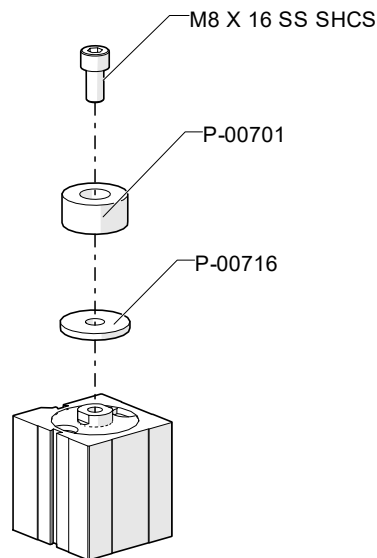


Figure 17: P-00265 with Associated Parts

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While removing the M8 SHCS, take note that once these are removed, P-00660 will not be supported.
 Make sure to secure P-00660 before completely loosening the SHCS.

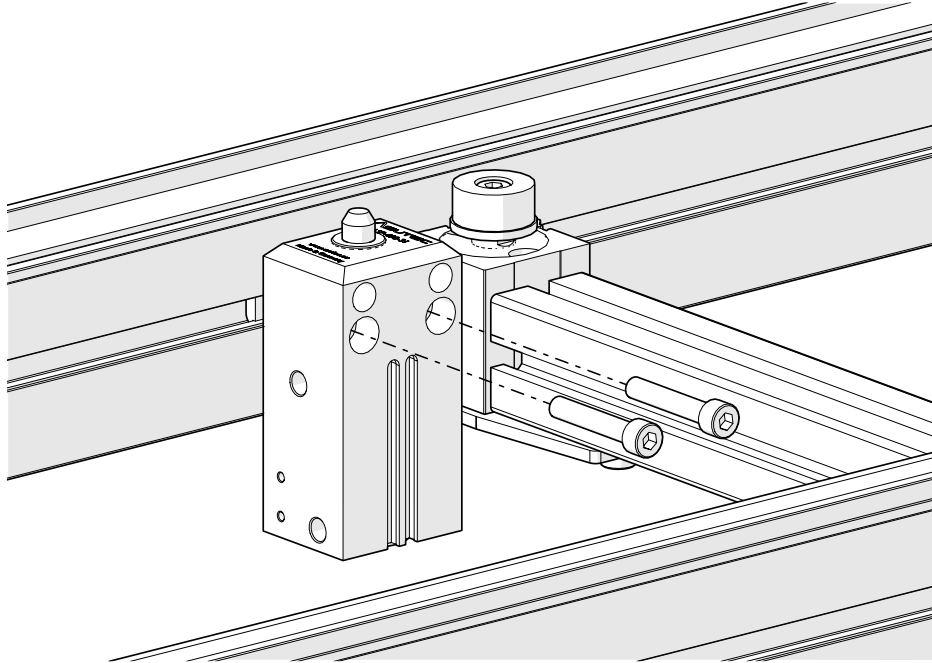


Figure 18: Removing M8 SHCS

After removing the SHCS, you are now able to remove P-00660.

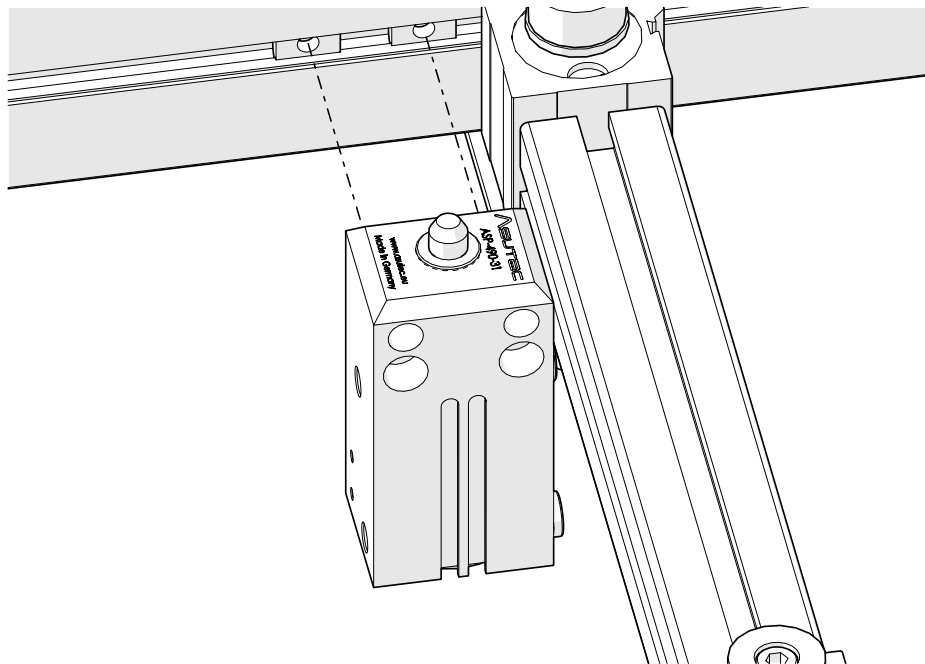


Figure 19: Removing Air Cylinder

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Step 4: Replacing P-00701 and P-00716 on Lift Cylinders

Use a size 6 Allen Key to remove the M8 X 16 SHCS. Once that is removed you will be able to remove both P-00701 and P-00716. When reinstalling both pieces, make sure to apply Blue Loctite to the M8 SHCS to prevent it from backing out over time.

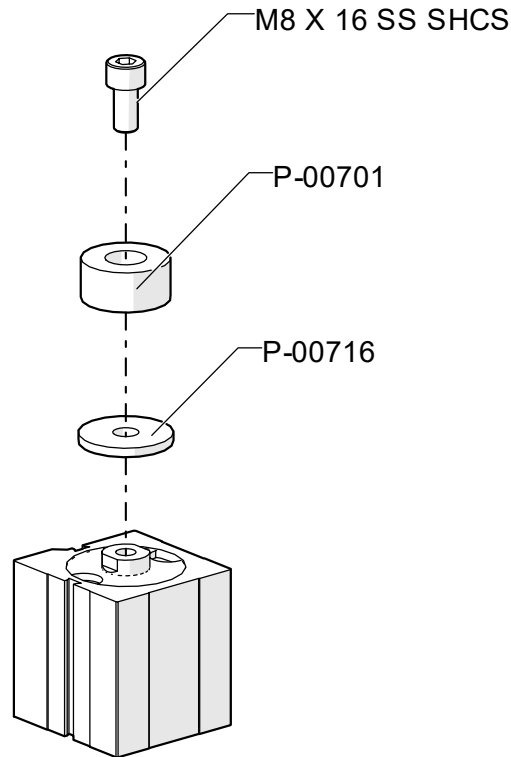


Figure 20: Replacing P-00701 and P-00716

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5. Troubleshooting

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

Issue: After mounting the LPK, the device seems to have come loose on the extrusion.

Solution: Check to make sure that the P-00223 were installed properly. If they were skewed during installation, it is possible they were not fully seated in the T-Slot, causing them to come loose.

Issue: Pallet becomes unstable during lifting motion.

Solution: Check to make sure the device is square with the conveyor. Make sure the LPK is evenly spaced between the ends of the pallet and that the lift rods are not interfering or hitting the pallet bumpers.

Issue: LPK lift actuates up and down too fast/abruptly.

Solution: It is recommended that meter out flow control valves are used in-line directly on or as close as possible to the air cylinders.

Issue: LPK round and diamond pins not correctly interfacing with pallet locating pins.

Solution: It is recommended that you reach out to a Glide-Line Team member to ensure proper angle of installation was correct because both pins were pressed into lift position cylinder prior to ship.

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6. How to Order Spare Parts

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

For a full list of spares for your specific LPK, please reference the serial number and contact a Glide-Line™ representative at 215-721-1900.

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

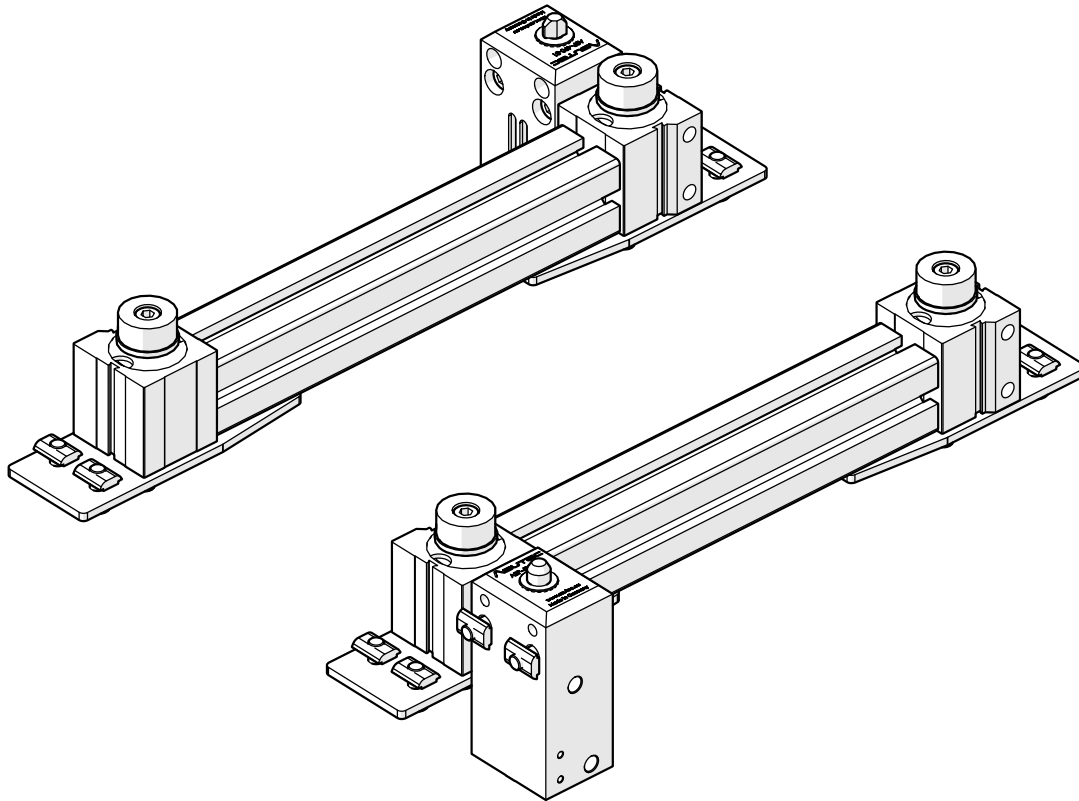


Figure 12: LPK: Lift and Position

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6.1 Spare Parts for LPK

P-00265 Air Cylinder

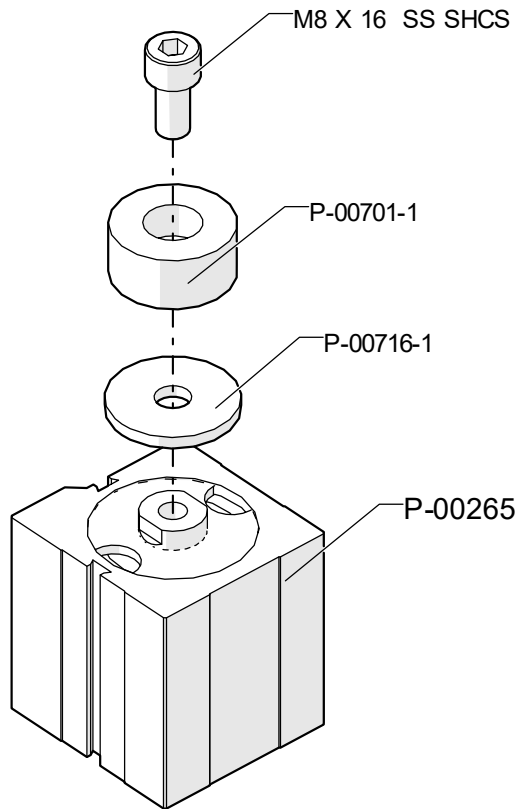
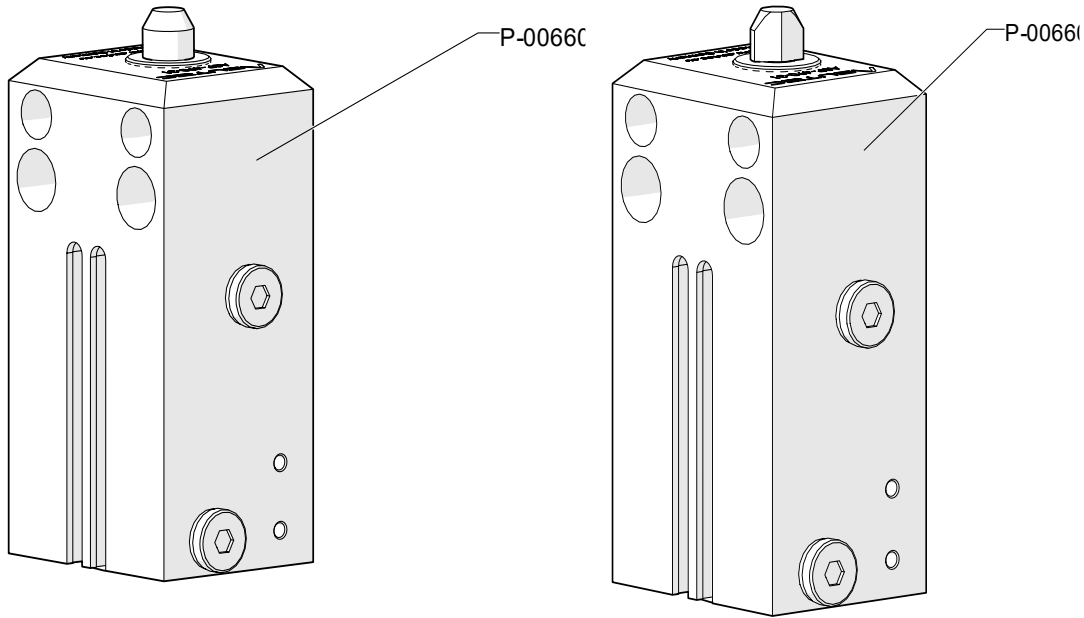


Figure 13: P-00265 and Associated Parts

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P-00660 Locate Cylinder with Shot Pins



Figure 14: Diamond and Round Pin Cylinders

Round Pin on Left, Diamond Pin on Right

Please specify if you need to have the Round Pin or Diamond Pin installed in P-00660 as well as if you have a Lift and Position LPK or a Position Only Kit. Please provide the serial number as well, since this will provide the information needed to ensure the diamond pin is set to the correct angle for your application.

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7. Returns

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

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