Glide-Line™
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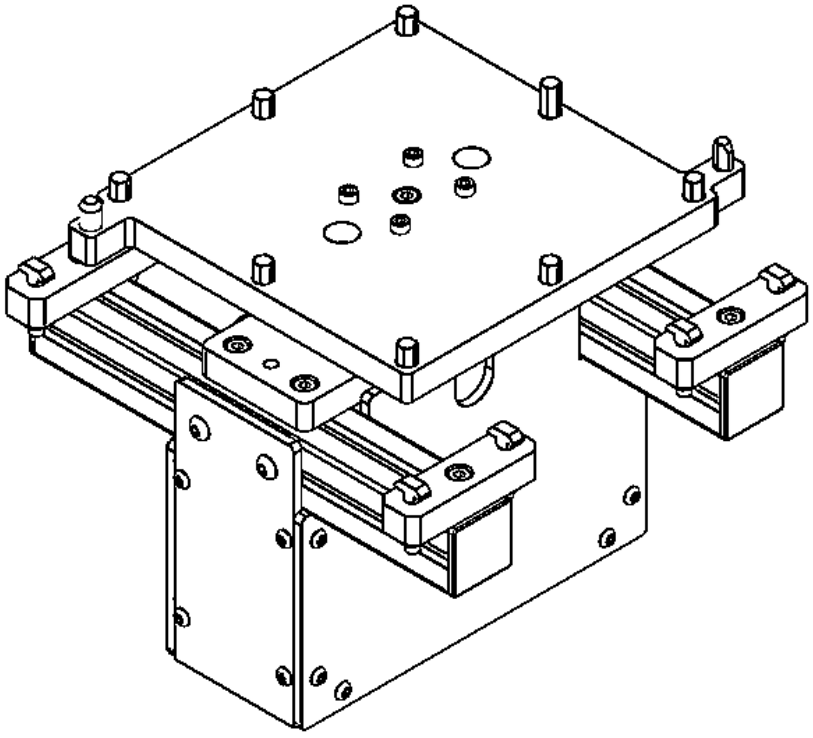
V2.0

Glide-Line™ SLLU

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™ Heavy-Duty Lift and Locate Units (SLLU) are designed to suit multiple conveyance application demands. All SLLUs are designed to be mounted on a station or conveyor.

Part Number: SLLU-(A)-(B)-(C)-(D)-(E)-(F)

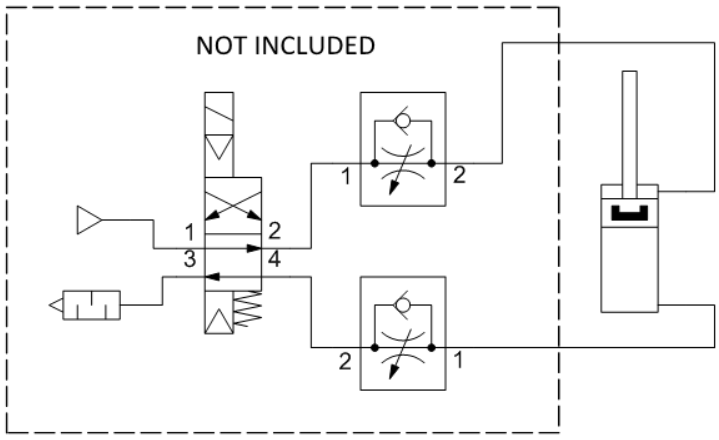
A	= Pallet Width Range 160mm to 1040mm
B	= Pallet Length Range 160mm to 1040mm
C	= Max Lift Distance off Belts 200mm or 40mm
D	= S for Standard Precision, P for High Precision
E	= CM for Conveyor Mounted, SM for Station Mounted
F	= G for Guarded, "Blank" for No Guard

Technical Specifications

Lift range:	1.5mm to 200mm.
Lift height fine adjustment range:	+/- 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:

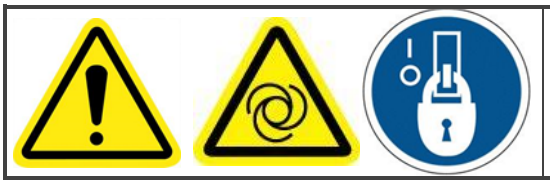
4" stroke cylinder or when (C) = 40mm – use bracket P-01027

10" stroke cylinder or when (C) = 200mm – use bracket P-01031

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

1.2. Operating Conditions and Environment



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

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

Items that should be included in the shipment as shown in Figure 1.

- SLLU
- Guarding – configurable option

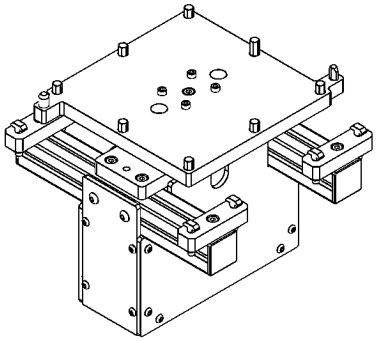


Figure 1: SLLU

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 pins engaging the Pallet's locating bushings
4. Lift runs to end of stroke
5. Operations completed to work piece
6. Lift deactivates and lowers, disengaging from pallet
7. Pallet Stop drops
8. Pallet is conveyed out of work area

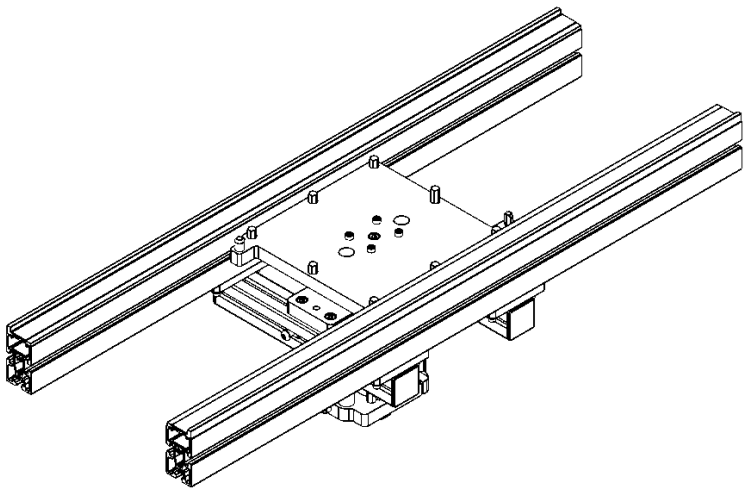


Figure 2: Standard Lift and Locate mounted to conveyor frame.

2. Installation

2.1. Tools Required for Installation

List of recommended and/or required tools for installation.

- Metric Allen Key Size
  - 5
- 13mm wrench or ratchet

2.2. Installing Device

The SLLU is designed to be conveyor mounted. Figure 2 shows the correct orientation of the T-Bolts for when the SLLU is being mounted to the conveyor.

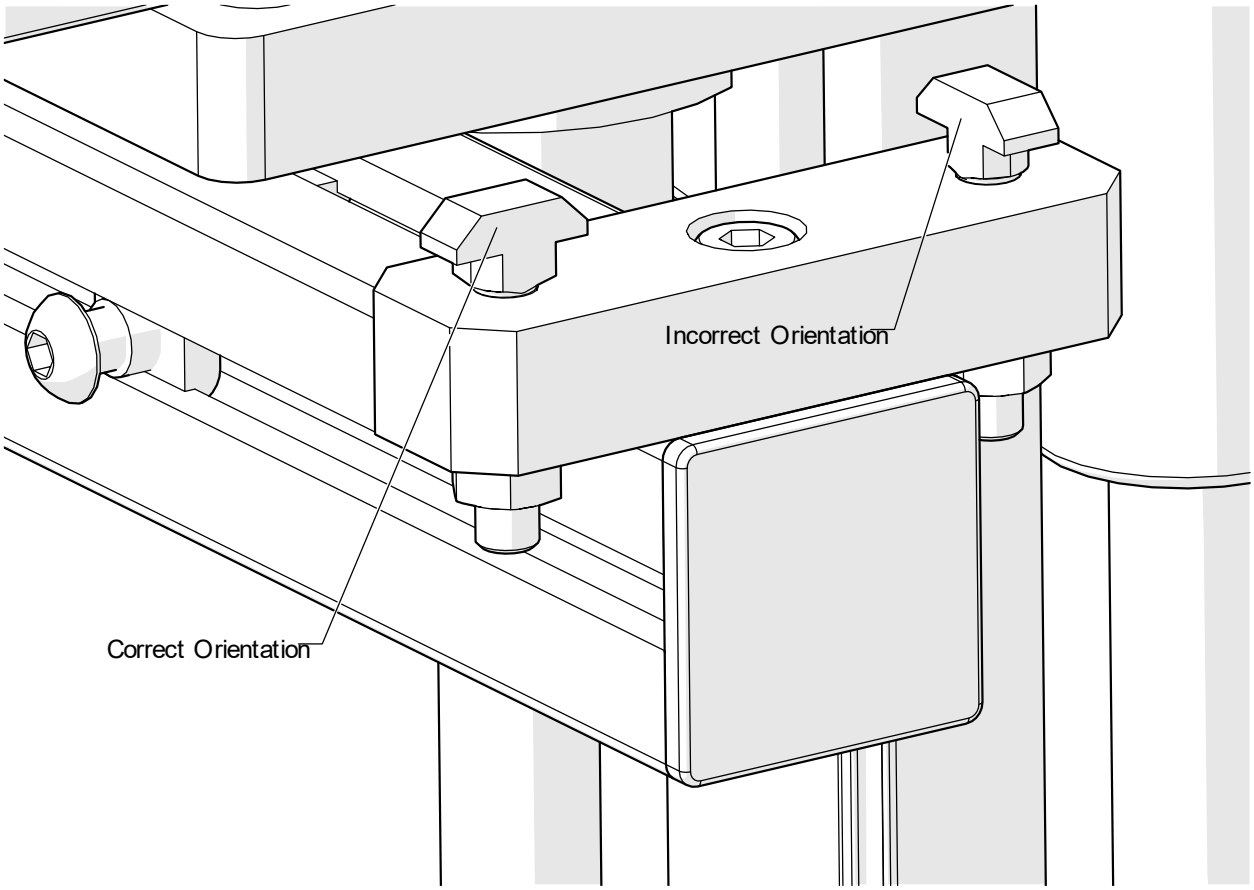


Figure 3: T-Bolt Orientation

Step 1: The SLLU mounts to the bottom of the conveyor. Make sure that all of the T-Bolts fit into the bottom T-Slot of the conveyor strands.

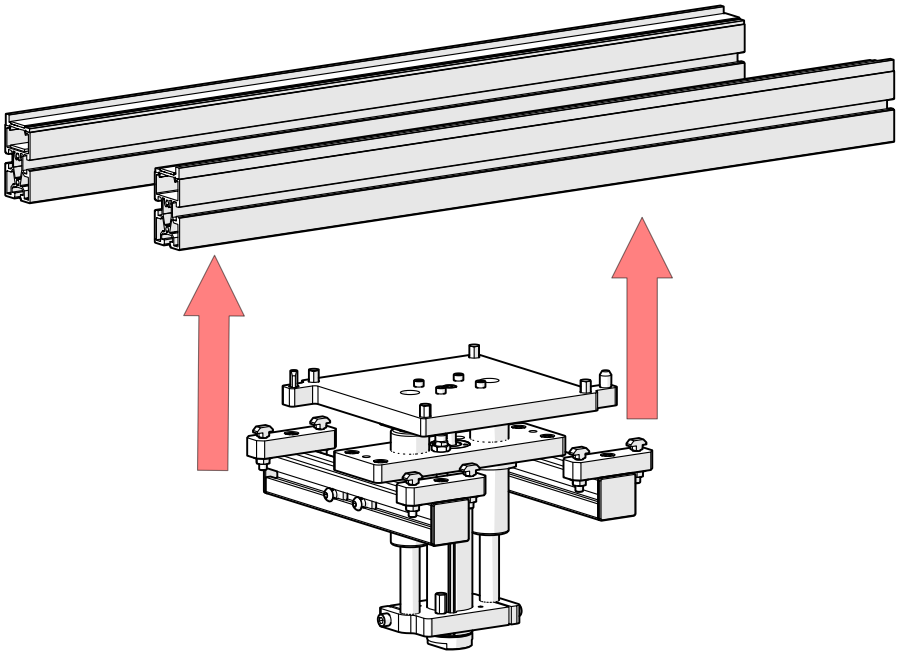


Figure 4: Mounting SLLU

Make sure that the T-Bolt is turned a full 90° after inserting into the T-Slot

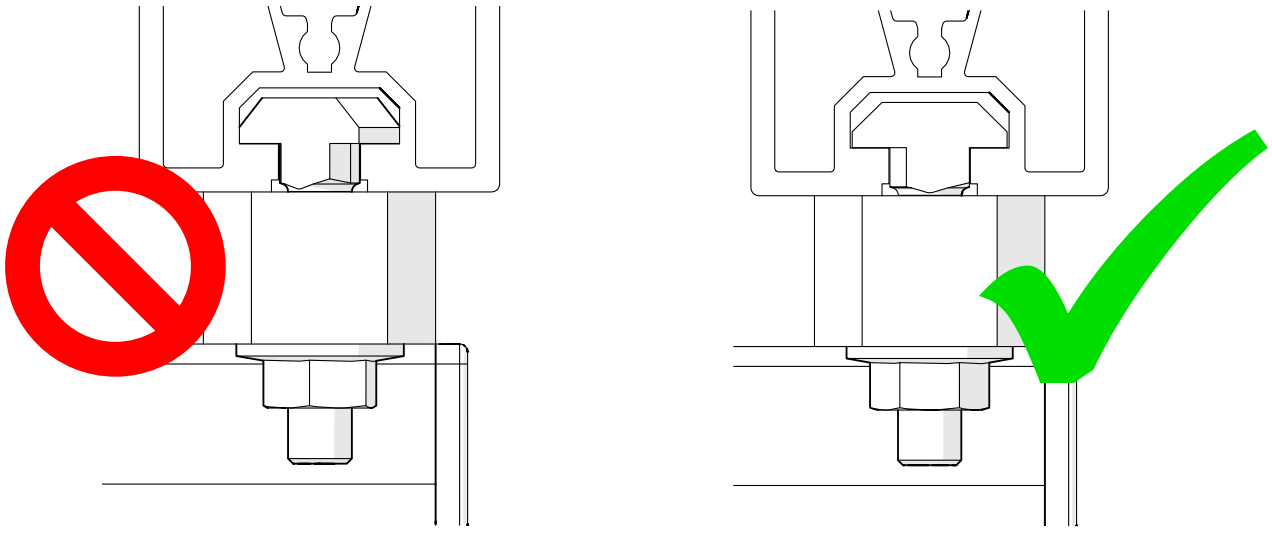


Figure 5: Tightening T-Bolts

Step 2: Once all of the T-Bolts are secured, the SLLU has been mounted. The next step is to install the guarding as shown in Figure 5.

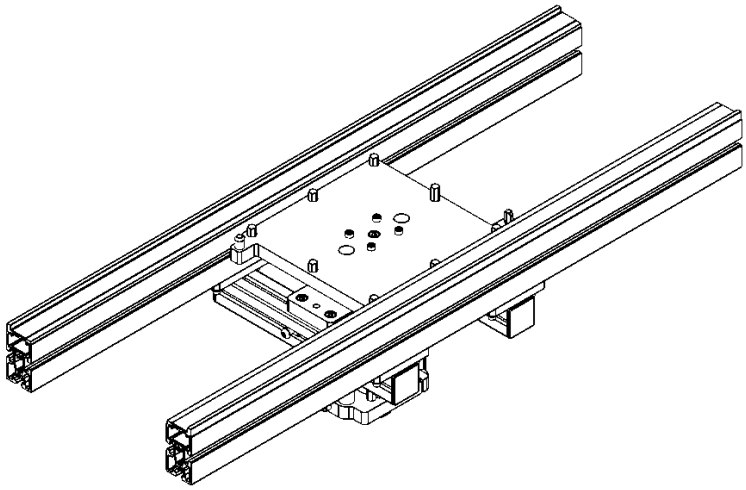


Figure 6: Mounted SLLU

Step 3: Slide the guarding over the bottom of the SLLU as shown in Figure 6.

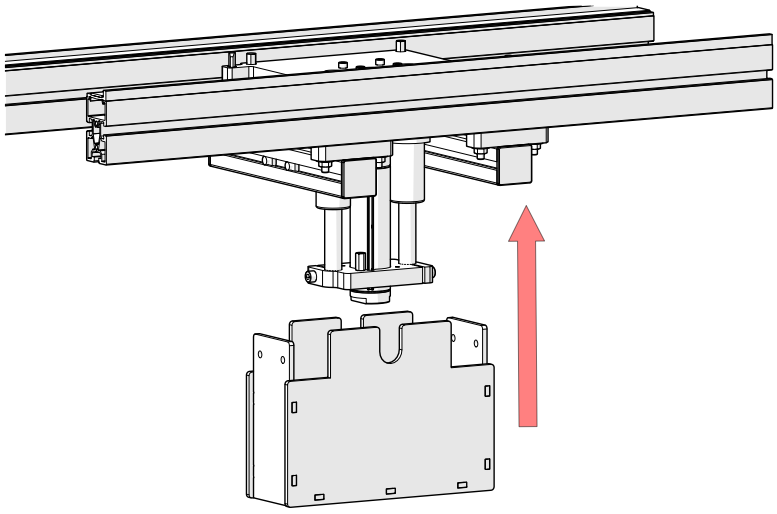


Figure 7: Installing Guarding

Step 4: Secure the guarding with the 4 M8 BHCS as shown in Figure 7.

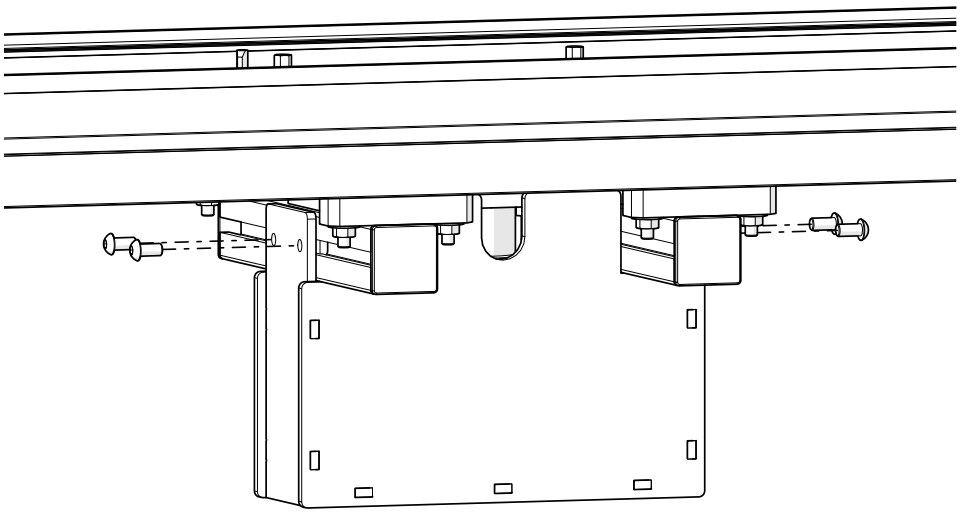


Figure 8: Securing Guards

Step 5: Once the M8 BHCS are tightened, installation of the guarding is complete as shown in Figure 8.

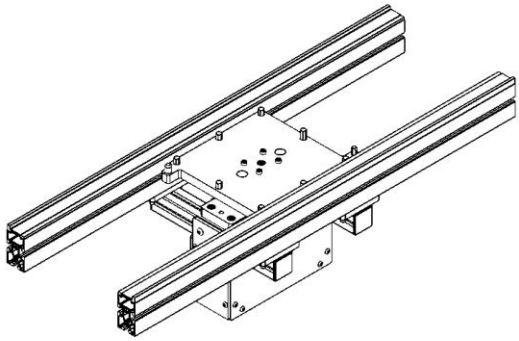


Figure 9: Installed Guards

2.3 Stroke Adjustment

The arrows in Figure 9 show the M8 SHCS that will need to be loosened in order to adjust the stroke of the SLLU.

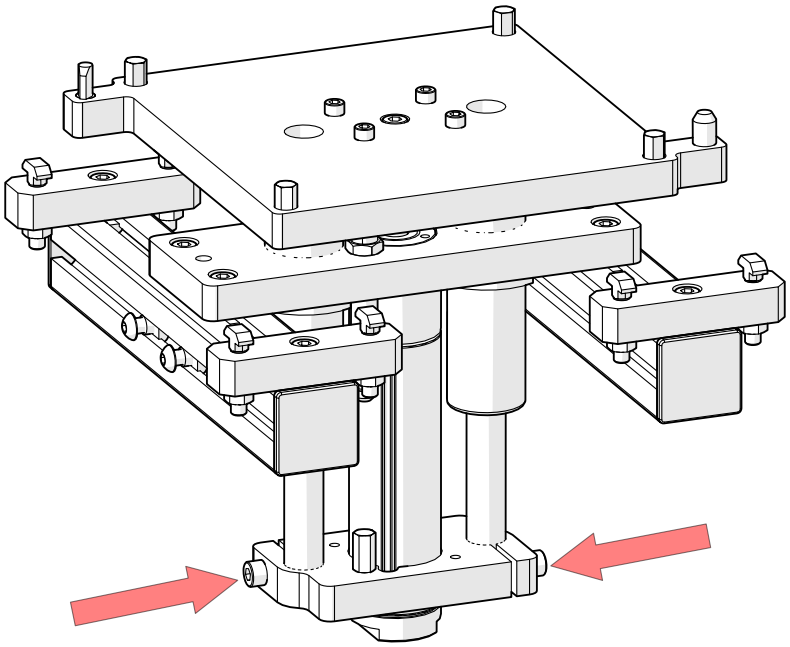


Figure 10: Loosening M8 SHCS

As shown in Figure 10, the stroke of the SLLU has been adjusted.

*Note that the process is the same for both the short stroke and long stroke versions (short stroke shown)

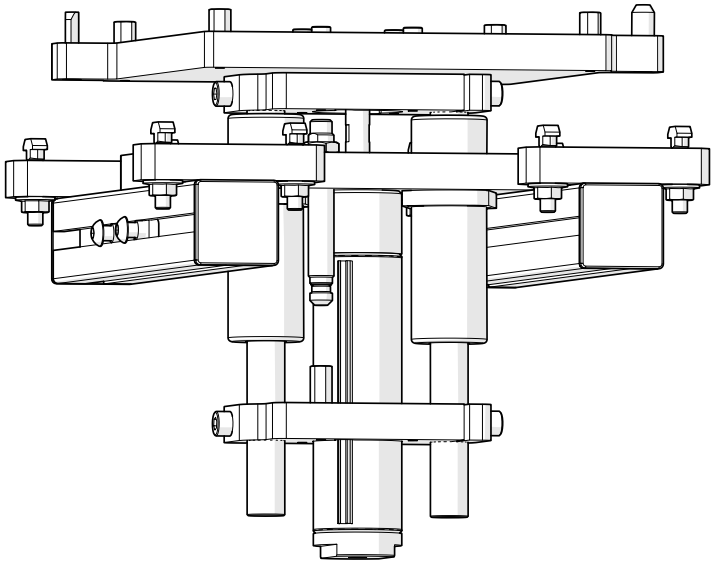


Figure 11: Adjusting Stroke

The P-00179 shock can also be adjusted for fine tuning of the stroke.*

*Note that this is only for fine tuning, any major stroke adjustment must be done following the previous steps.

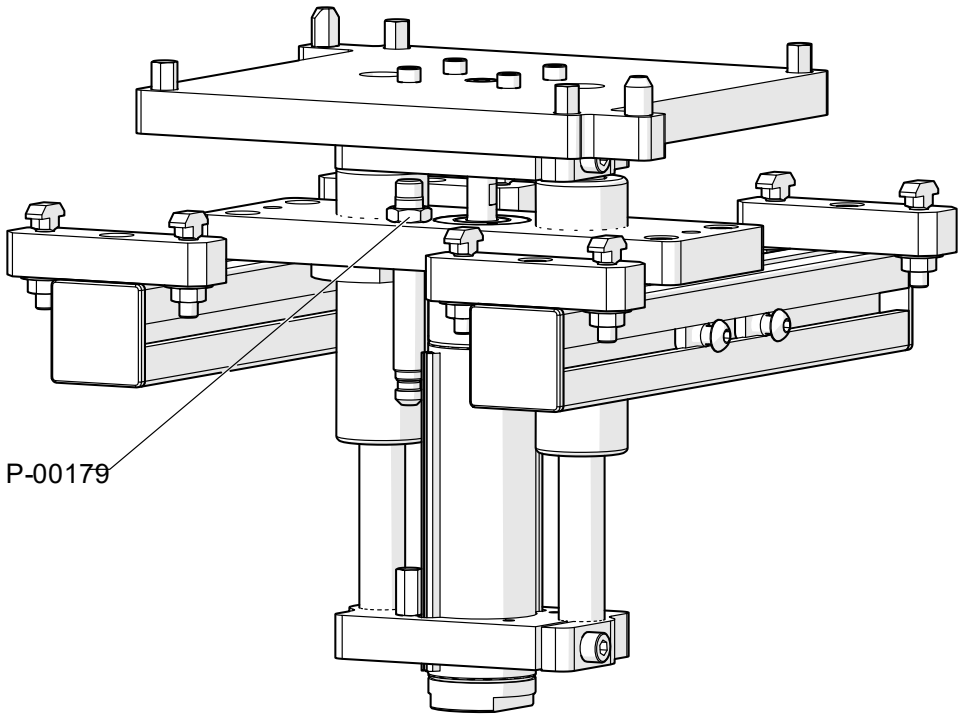


Figure 12: Loosening P-00179

Loosen the jam nut and twist the shock to adjust.**

**Note that the shock can only be adjusted a small amount up and down. Too far up and it will interfere with the P-00157 plate. Too far down and there will not be enough thread engagement.

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)."

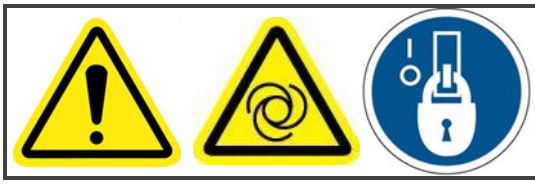
4. Maintenance

This section will go over how to maintain the SLLU, 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
  - 5, 6
- 11mm wrench or adjustable wrench
- 17mm wrench

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

4.2. Replacing Components

This section will go over replacing P-00179 shock.

- Use 17mm wrench to remove jam nut

Step 1: Remove Jam Nut as shown in Figure 14.

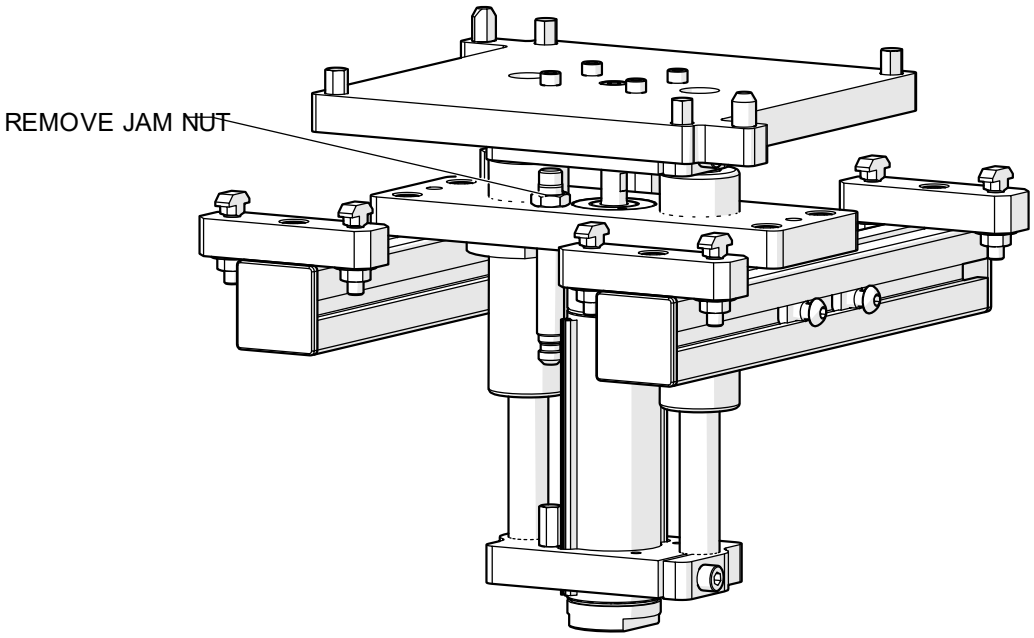


Figure 13: P-00179

Note: The lift plate may need to be in the "UP" position to gain adequate clearance to remove the jam nut and P-00179.

!!! Make sure all power and air are off while working on the device!!!

Step 2: Remove Shock as shown in Figure 15.

Once the jam nut is removed, unthread the shock to remove P-00179 from the SLLU.

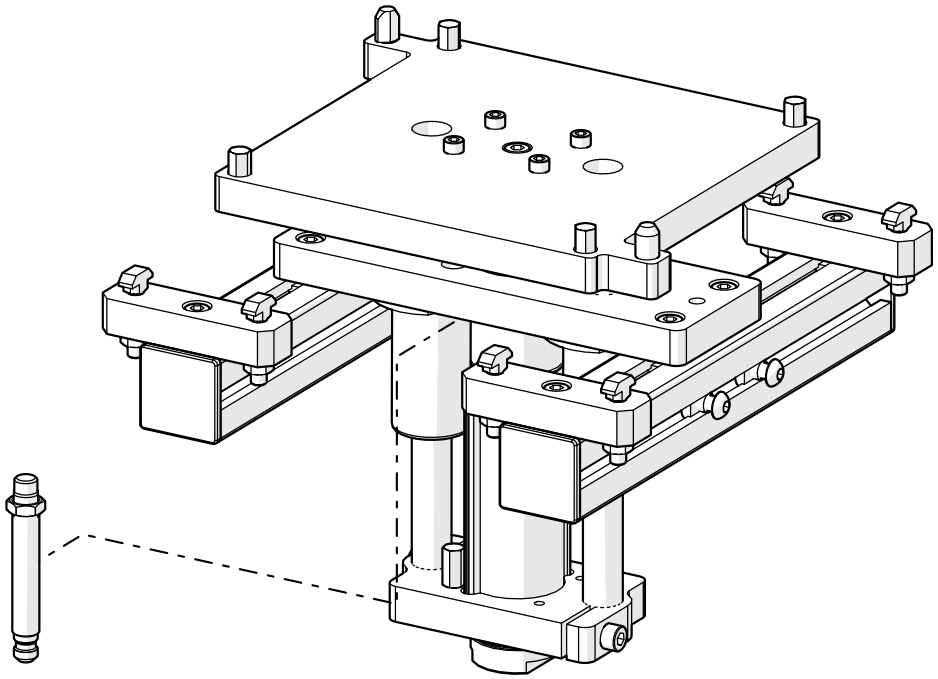


Figure 14: Removed P-00179

To install the new P-00179 shock, follow the previous steps in reverse order.

If the lift cylinder needs to be replaced, please contact Glide-Line™ for more information.

5. Troubleshooting

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

Q: SLLU lift plate actuates up and down too fast/abruptly.
A: It is recommended that meter out flow control valves are used in-line as close to the air cylinder as possible.

Q: SLLU lifts too high or too low.
A: Adjust the stroke following the steps presented in the Installation section of this manual.

6. How to Order Spare Parts

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

For a full list of spares for your specific SLLU, 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 SLLU, which can be ordered directly from Glide-Line™.

Figure 12 shows the location of the Serial Number on your SLLU.

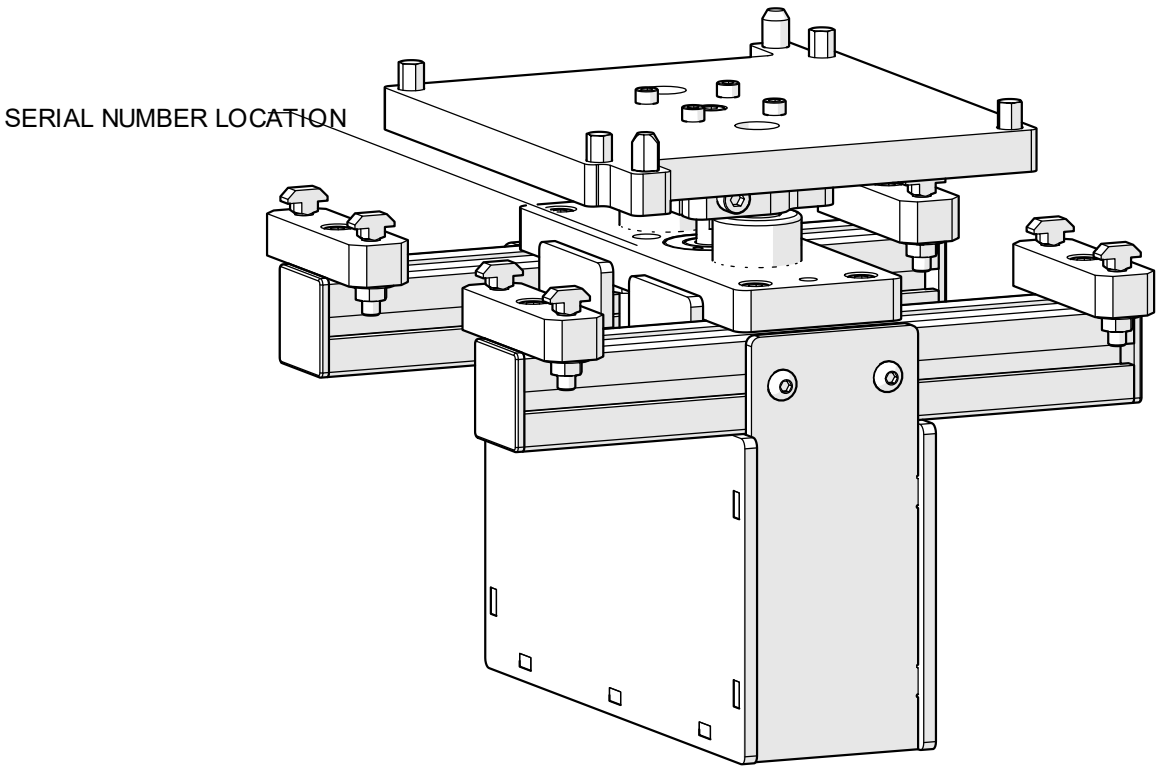


Figure 15: Serial Number Location

6.1 Spare Parts for SLLU

SLLU Spare Parts

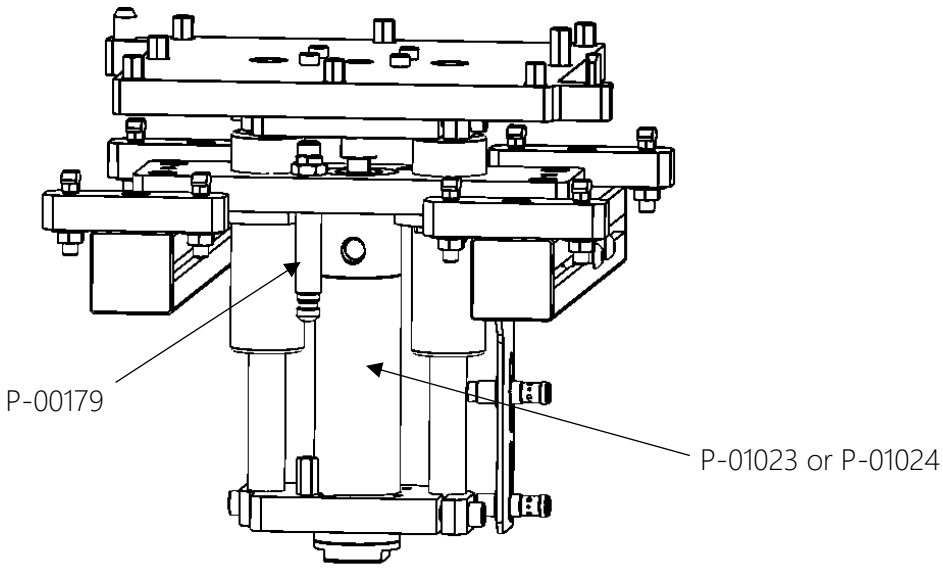


Figure 16: SLLU

Parts:

- P-01023 or P-01024 (Lift Cylinder***)
- P-00179 (Shock)

***Please contact Glide-Line if P-01023/P-01024 needs to be replaced

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.