Fisher Engineering
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9825
9835
9840-1

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Lit. No. 21842

Insta-Act® Hydraulic Unit Installation Instructions

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SAFETY INFORMATION

⚠ WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation that may result in minor or moderate injury and/or property damage if not avoided.

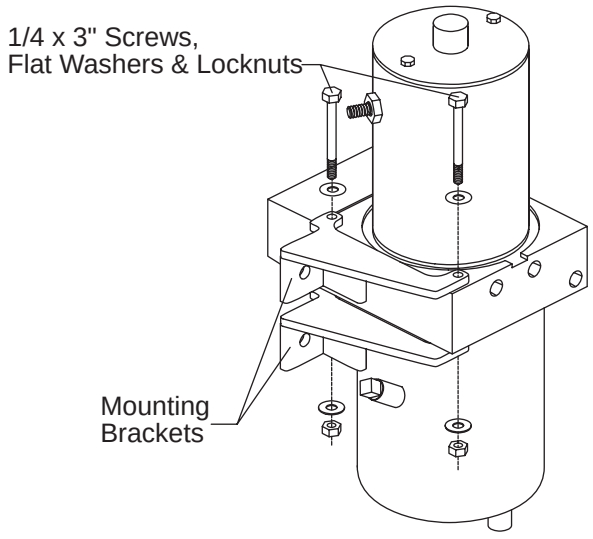
NOTE: Identifies tips, helpful hints and maintenance information the owner/operator should know.

Torque all fasteners according to the torque chart. For proper fit, do not tighten fasteners until instructed to do so.

NC FASTENER TORQUE (FT-LB)			
DIAMETER-	GRADE		
THREADS			
PER INCH	G2	G5	G8
1/4 - 20	6	9	13
5/16 - 18	11	18	28
3/8 - 16	19	31	46
7/16 - 14	30	50	75
1/2 - 13	45	75	115
9/16 - 12	66	110	165
5/8 - 11	93	150	225
3/4 - 10	150	250	370
7/8 - 9	150	378	591
1 - 8	220	583	893

ATTACH MOUNTING BRACKETS TO HYDRAULIC UNIT

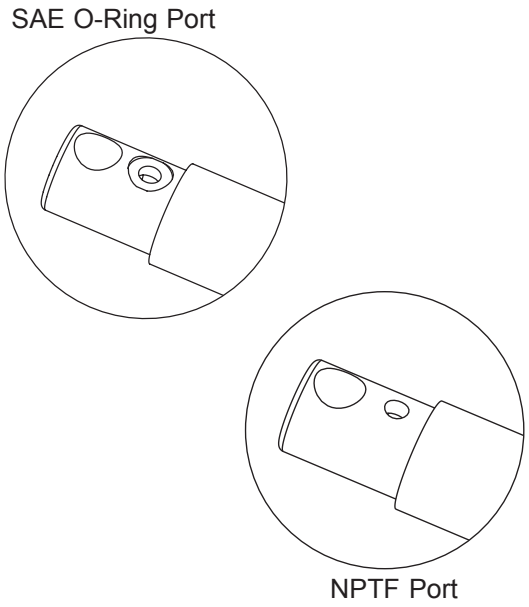
1. Attach the mounting brackets to the valve block with two 1/4 x 3" cap screws, flat washers and locknuts.



ATTACH HYDRAULIC FITTINGS TO CYLINDER

⚠ CAUTION
Do not use thread sealant/tape on hoses or fittings. This could damage product.

NOTE: Before installing hydraulic fittings, identify whether the cylinder is equipped with NPTF or SAE O-Ring ports. SAE O-Ring ports can be easily identified by the flat machined area around the port. See illustration.



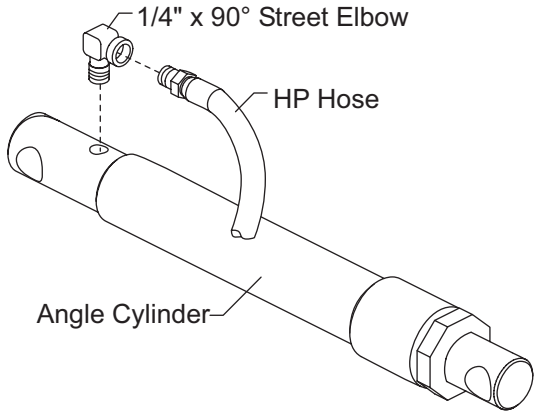
Cylinders with NPTF Port

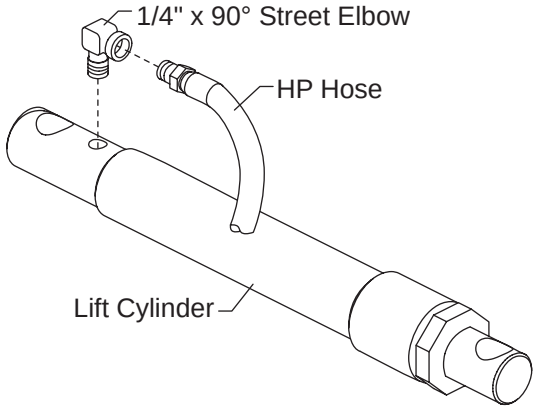
1. Remove the plugs from the angle cylinder ports. Install a 1/4" x 90° NPTF street elbow into each port so when the cylinders are mounted to the A-frame, the fittings face inward, forward, and point up slightly when using 1-1/2 x 12" and 2 x 16" cylinder and on top facing forward when using 1-1/2 x 10" cylinder.

2. Attach a 32" or 36" HP hose to the passenger-side cylinder and a 42" HP hose to the driver-side cylinder.

3. Remove the plug from the lift cylinder port. Install a 1/4" x 90° NPTF street elbow in the port.

4. Attach the 22" HP hose to the lift cylinder elbow.

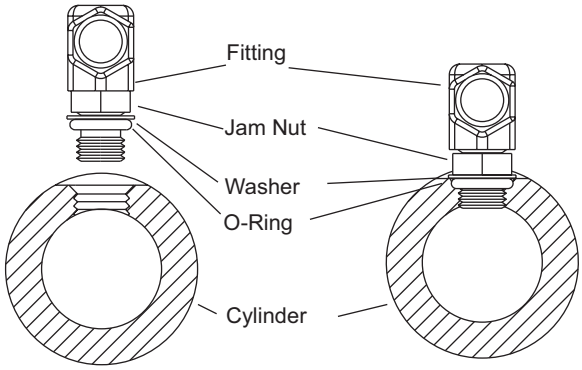




Cylinders with SAE O-Ring Port (9840-1 Kit)

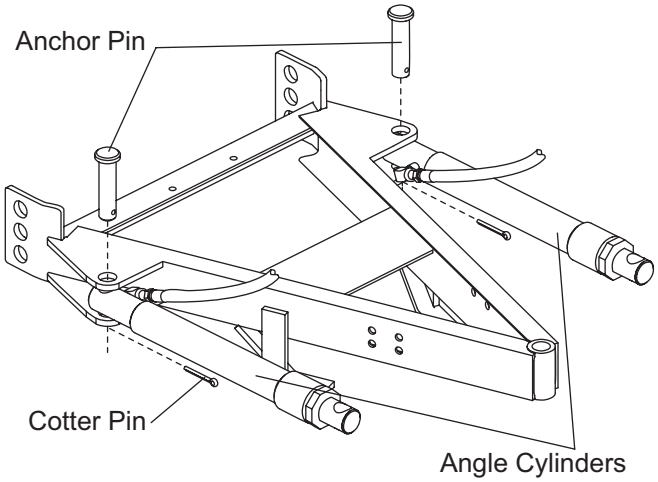
1. Turn the jam nut on the fitting as far back as possible.
2. Lubricate the O-Ring with clean hydraulic oil. Remove the plug from the cylinder port.
3. Screw fitting into port by hand as far as it will go. The washer should contact port face and shoulder of the jam nut threads.
4. Unscrew fitting to proper position, no more than one full turn.
5. Use one wrench to hold the fitting body in position and tighten the jam nut with another wrench until the washer again contacts port face. Tighten 1/8 to 1/4 turn to lock fitting in place.
6. Attach the 22" HP hose to the cylinder elbow.

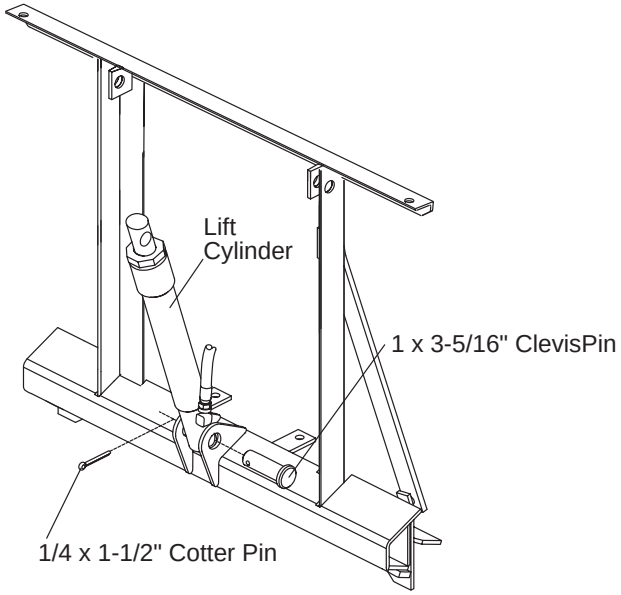
SAE O-Ring Fitting



ATTACHING LIFT AND ANGLE CYLINDERS

1. Attach the lift cylinder to the headgear with a 1 x 3-5/16" clevis pin and 1/4 x 1-1/2" cotter pin.
2. Attach the angle cylinders to the A-frame with the two anchor pins and cotter pins.





MOUNTING HYDRAULIC UNIT

1. Remove the top bolt from the passenger-side headgear brace and swing out of the way.

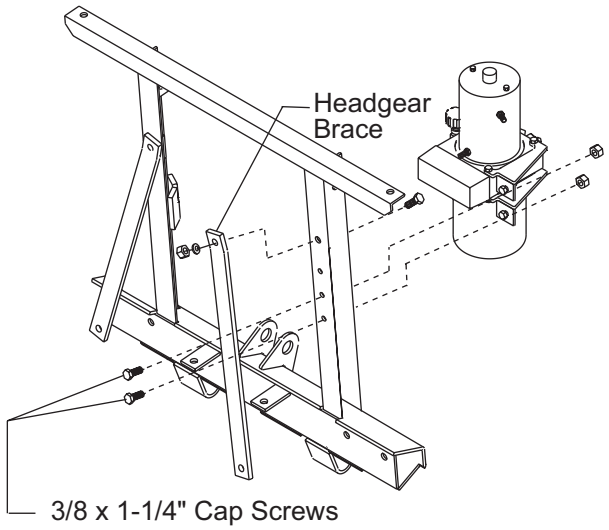
2. Bolt the Insta-Act® hydraulic unit to the headgear using two 3/8 x 1-1/4" cap screws and locknuts. Use the bottom two holes if three holes are available.

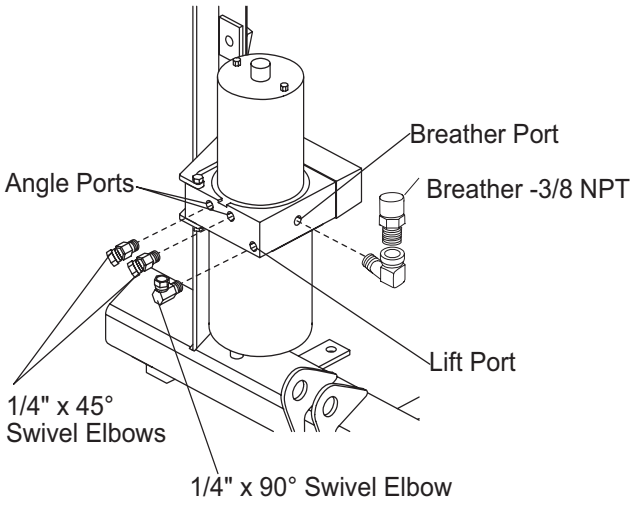
3. Reattach and tighten the headgear brace.

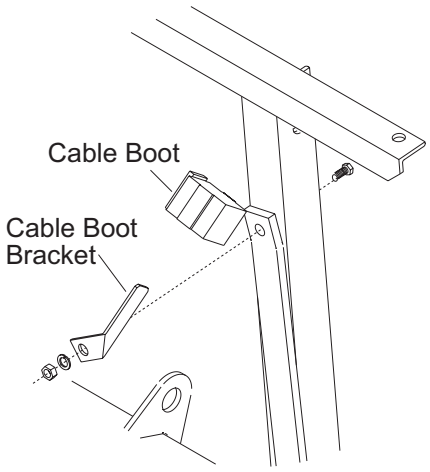
4 Remove the 1/4" NPTF plugs from the angle ports, lift port and the 3/8" NPTF plug from the breather port. Screw 1/4" x 45° swivel elbows into the angle ports. Screw a 1/4" x 90° swivel elbow into the lift port and a 3/8" x 90° street elbow into the breather port as shown.

5. Looking at the front of the vehicle, the 1/4" x 45° swivel elbows in the angle ports should be at 8 o'clock and the 1/4" x 90° swivel elbow in the lift port should be at 12 o'clock. The 3/8" x 90° street elbow in the breather port should point straight up. Screw the breather into the street elbow.

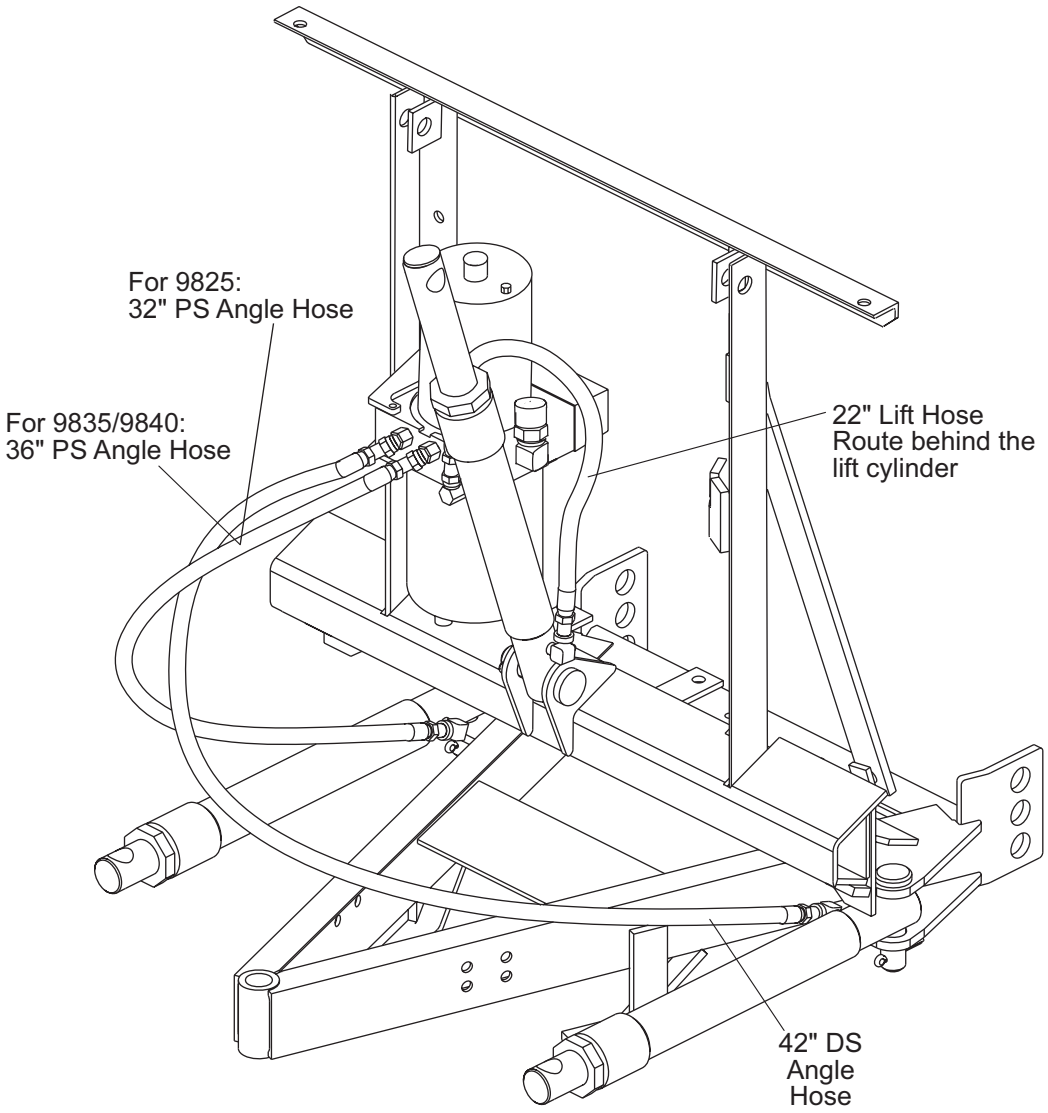
6. Install the cable boot and cable boot bracket as shown.







ROUTING HYDRAULIC HOSES TO FITTINGS IN VALVE BLOCK



SNOWPLOW CONTROL HARNESS AND CABLE INSTALLATION

1. Connect the snowplow control harness to the valve block according to the instructions inside the solenoid cover.

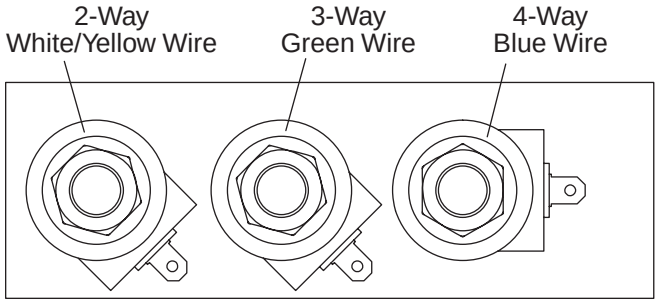
NOTE: The strain relief must be inside the cover to prevent unnecessary strain on the solenoid connectors.

2. Attach the snowplow cable assembly to the motor terminals. Connect the black and red striped wire to the positive terminal. Connect the black wire to the negative terminal.

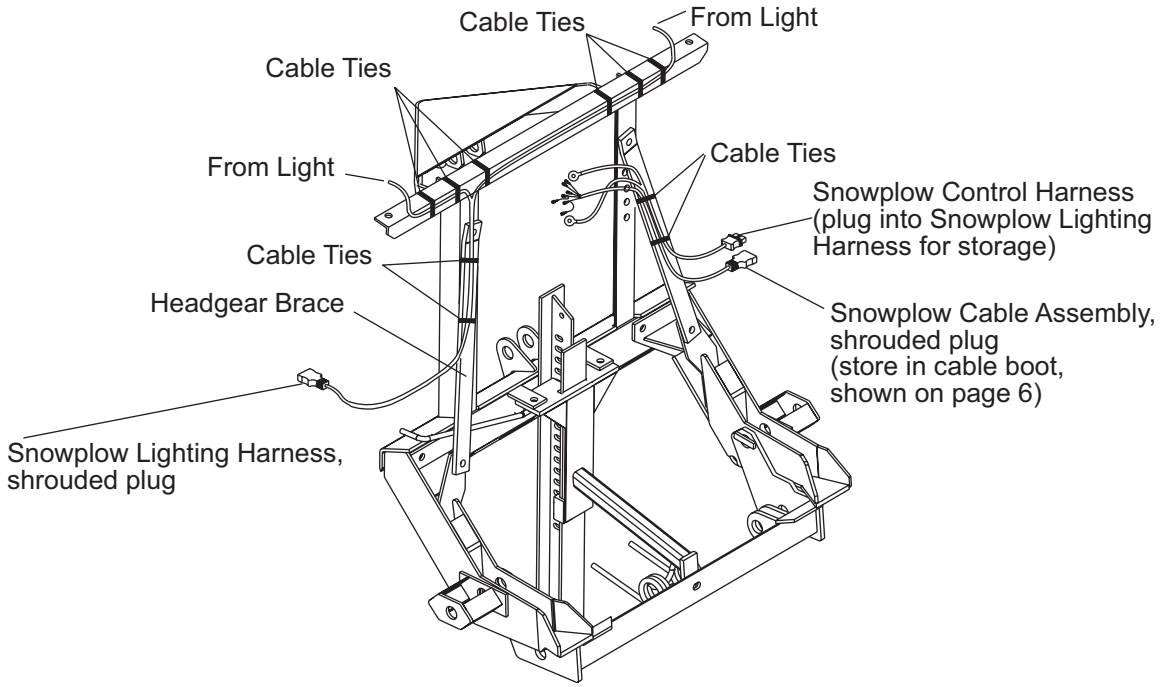
NOTE: Connect the smaller black wire with the orange stripe to the negative terminal of the motor.

3. Cable tie harnesses and cable assembly to the headgear braces as shown.

NOTE: Snowplow lighting and control harnesses plug into one another for storage.



Black / Orange Wire to Each Coil



FINAL ADJUSTMENTS

⚠ WARNING

The driver shall keep bystanders clear of the blade when it is being raised, lowered or angled. Do not stand between the vehicle and the blade, or within 8 feet of a moving blade. A moving or falling blade could cause personal injury.

1. Fill the hydraulic unit to top of fill hole with hydraulic fluid.

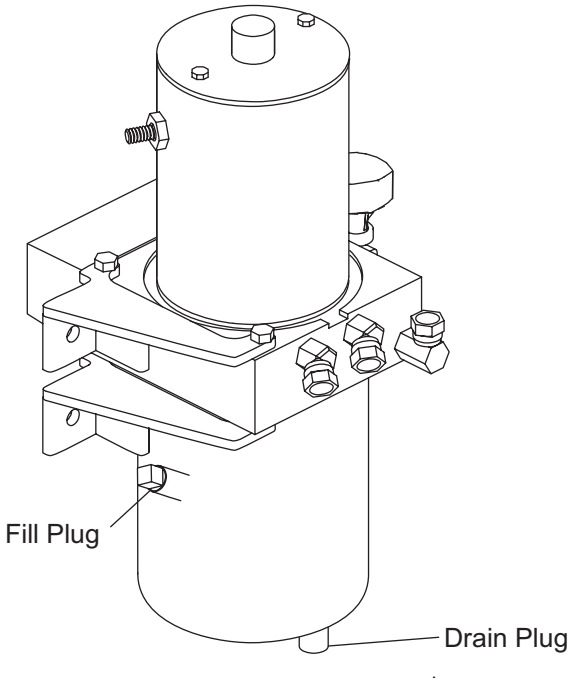
   System Capacity:
   Reservoir—1-3/4 quart
   Complete System—2-3/8 to 2-3/4 quarts

2. Raise and lower the snowplow several times. Return to the lower position, retracting the lift cylinder completely.

3. With the blade lowered, add more hydraulic fluid to the reservoir. Angle the blade several times in each direction.

4. With the blade in the straight position and the lift cylinder fully retracted, add enough additional hydraulic fluid to bring fluid level to top of fill hole.

5. Adjust the length of the lift chain so the A-frame hits the lower crossmember (9825/9835) or stops (9840-1) when the lift cylinder is fully raised. Cylinder rod extends 6" for LD applications and 10" for RD/HD/ Commercial applications. **Tighten both U-bolts.**



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