

# 1.5 X 6 DOUBLE-ACTING RAM ASSEMBLY

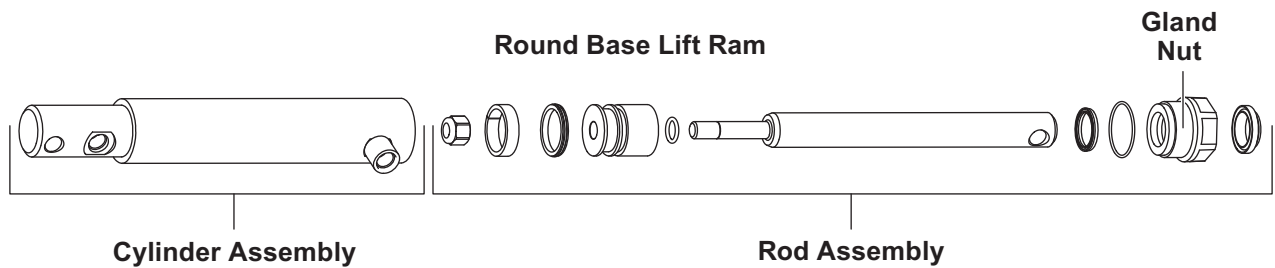
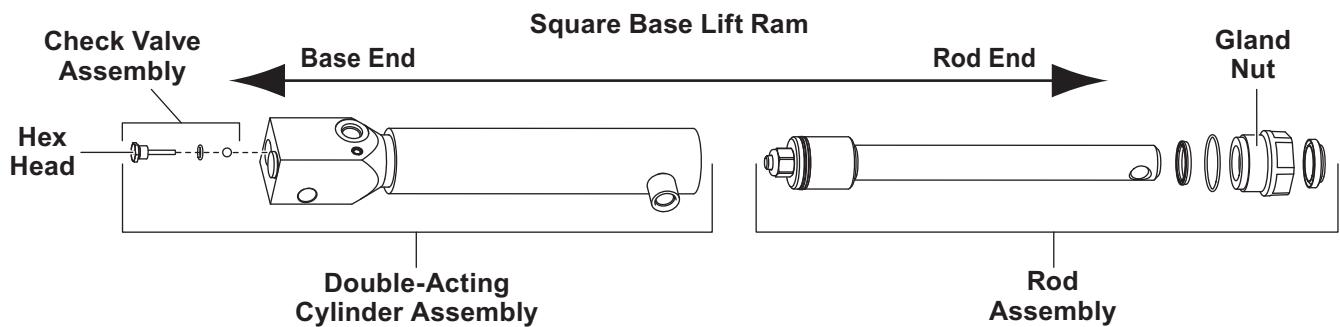
## ASSEMBLY INSTRUCTIONS

### ⚠ CAUTION

Before removing damaged lift ram, detach plow gear from vehicle.

1. Lubricate all seals and O-rings with clean hydraulic fluid before assembly. Assemble gland nut to threaded end of rod before assembling piston to rod. Do not slide gland over the hole. Tighten the piston nut to 35–40 ft-lb.
2. **Square base ram only:** Remove check valve assembly (see below) prior to inserting rod assembly into double-acting cylinder assembly.
3. Insert rod assembly into the cylinder and tighten the gland nut to 120–150 ft-lb. Press the rod fully into the cylinder.
4. **Square base ram only:** Reassemble the check valve and tighten to 55–65 in-lb.
5. Do not allow any extension of the rod prior to attaching completed lift ram. Allowing the rod to extend before attaching the ram to the reservoir will allow air into the ram, which minimizes the scrape lock system's effectiveness.
6. Attach the fittings to the lift ram.

**NOTE:** The check valve has a hex head and does not have a plug covering it. Do not remove the valve assembly with the slotted head (under a plug).



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7. Rotate plow gear forward until the cross member contacts the A-frame, and attach the base end of the retracted lift ram to the plow gear.

**⚠ CAUTION**

Overtightening the swivel nut will damage the hydraulic hose.

8. Attach the hydraulic hoses to the lift ram.

**⚠ CAUTION**

Do not mix different types of hydraulic fluid. Some fluids are not compatible and may cause performance problems and product damage.

**⚠ CAUTION**

DO NOT raise the blade during fill process as this may cause pump cavitation.

9. Fill the hydraulic reservoir to the top of the fill opening.

10. Extend the rod end of the lift ram and attach to the A-frame.
11. Rotate the plow gear back until the attachment arms are parallel with the ground.

**⚠ WARNING**

Keep hands and feet clear of the blade and A-frame when mounting or removing the snowplow. Moving or falling assemblies could cause personal injury.

**⚠ WARNING**

Keep 8' clear of the blade drop zone when it is being raised, lowered or angled. Do not stand between the vehicle and blade or directly in front of blade. If the blade hits you or drops on you, you could be seriously injured.

12. Attach the snowplow to the vehicle, and raise and lower the blade several times. Check the fluid level in the reservoir with the plow in the raised position. On units without a dipstick breather, fluid level should be 1-1/2"-2" below the top of the reservoir.

# SCRAPE LOCK PRESSURE ADJUSTMENT

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## SCRAPE LOCK PRESSURE ADJUSTMENT

### **⚠ WARNING**

Lower blade when vehicle is parked. Keep 8' clear of blade drop zone. Temperature changes could change hydraulic pressure, causing the blade to drop unexpectedly or damaging hydraulic components. Failure to do this can result in serious personal injury.

### **⚠ CAUTION**

To prevent accidental movement of the blade, always turn the ON/OFF switch to OFF whenever the snowplow is not in use. The control indicator light will turn off.

Although the scrape lock system comes preset from the factory, it may be adjusted if needed.

1. Attach the snowplow to the vehicle.

2. Raise and lower the blade several times to purge air from the lift ram.

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**NOTE:** If blade will not raise or raises too slowly, the setting is too high. Decrease the setting until blade will raise easily. Likewise, if backdrag performance has decreased, the setting is too low. Increase the setting until optimal backdrag performance is reached.

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### **⚠ WARNING**

Hydraulic oil under pressure can cause skin injection injury. If you are injured by hydraulic oil, get medical attention immediately.

3. Install a T-fitting and pressure gauge in the lift ram rod-end hydraulic line.

# SCRAPE LOCK PRESSURE ADJUSTMENT

4. **For Square Base Ram:** To gain access to the relief valve stem, remove the 1/2" x 3" cap screw that attaches the lift ram to the top of the plow gear, and remove the plug covering the slotted head of the relief valve stem.

**For Round Base Ram:** Remove the rear plug on top of the hydraulic unit.

5. The recommended pressure setting is 1000–1200 psi while the plow is raising. Adjust the scrape lock pressure setting by using a slotted-head screwdriver. Turn the relief valve stem IN (clockwise) to increase the scrape lock pressure; turn the relief valve stem OUT (counterclockwise) to decrease it.

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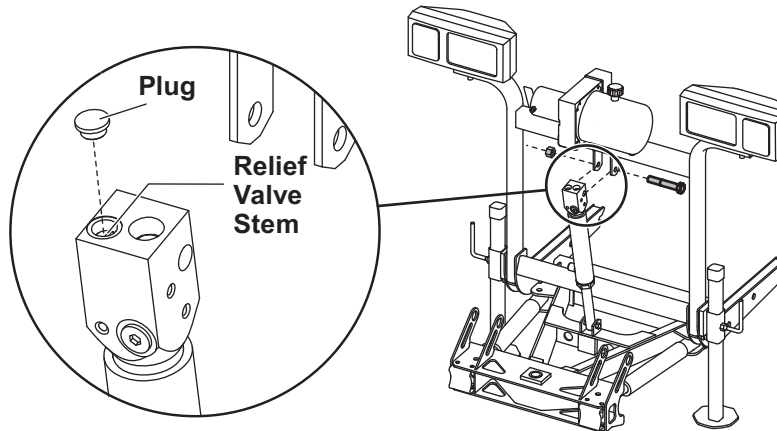
**NOTE: Adjustments should be made in 1/16-turn increments.**

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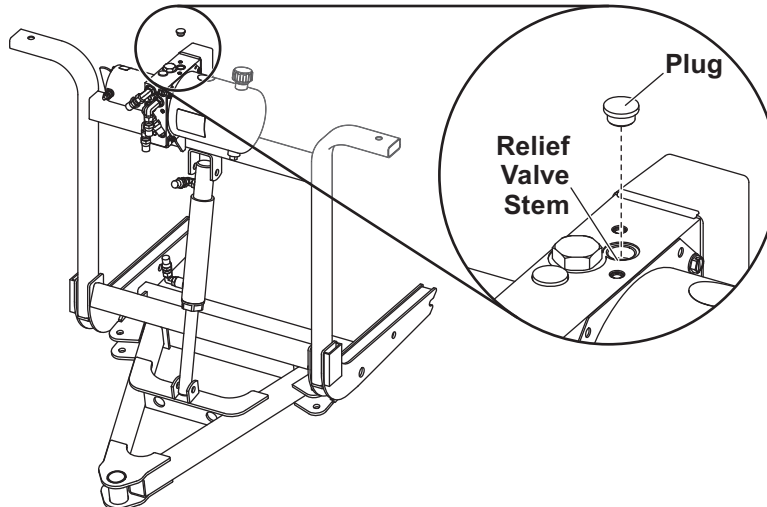
6. Reattach the square base lift ram to the plow gear after adjustment. Recheck the pressure setting.
7. **Square Base Ram:** Remove the 1/2" x 3" cap screw that attaches the lift ram to the top of the plow gear, reinstall the plug over the relief valve stem, and reattach the lift ram.

**Round Base Ram:** Reinstall the plug over the relief valve stem.

## Square Base Ram:



## Round Base Ram:



The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used.

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