

1.5 X 6 DOUBLE-ACTING RAM ASSEMBLY

ASSEMBLY INSTRUCTIONS

⚠ CAUTION

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

1. Remove the damaged lift ram from the plow gear and A-frame.
2. Remove check valve assembly (see below) prior to inserting rod assembly into double-acting cylinder assembly.

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).

3. Insert rod assembly fully and reinstall check valve assembly. Final torque on the check valve should be 55–65 in-lb, and final torque on the gland nut should be 120–150 ft-lb.
4. **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.
5. Attach the fittings to the lift ram.
6. 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.

7. 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.

8. Fill the hydraulic reservoir to the top of the fill opening.
9. Extend rod end of lift ram and attach to A-frame.
10. Rotate the plow gear back until the attachment arms are parallel with the ground.

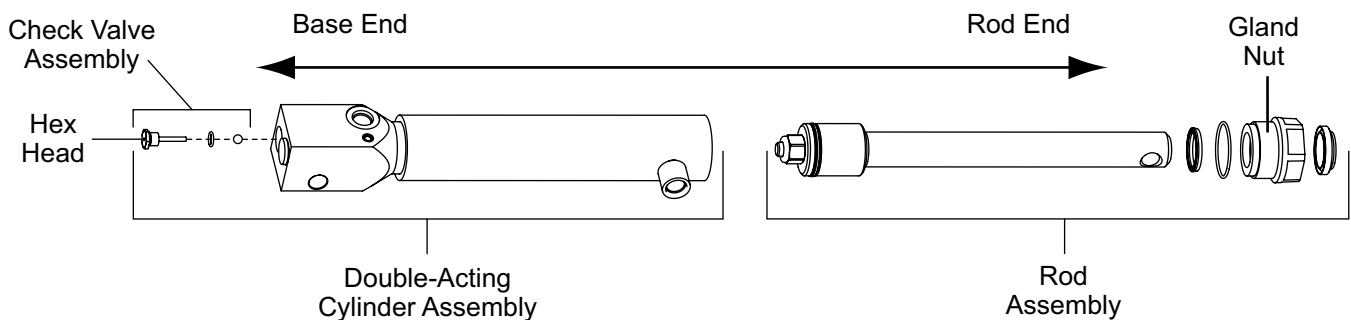
⚠ WARNING

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.

11. Attach plow to vehicle, and raise and lower blade several times. Check fluid level in reservoir with plow in raised position.



Scrape Lock Pressure Adjustment

Although the scrape lock system comes preset from the factory, it may be adjusted if needed. The relief valve stem in the top of the lift ram adjusts this setting.

⚠ WARNING

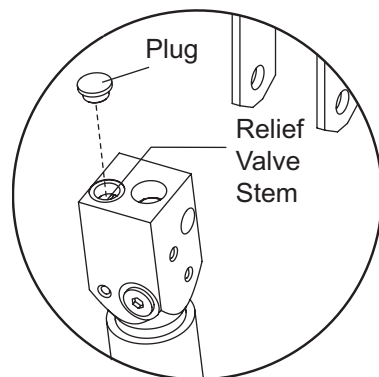
Lower blade when vehicle is parked. Keep 8' clear of blade drop zone. Temperature changes could change hydraulic pressure, causing the blade to drop unexpectedly or damaging hydraulic components. Failure to do this can result in serious personal injury.

⚠ 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.

1. Attach the plow to the vehicle.
2. Raise and lower the blade several times to purge air from the lift ram.

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.



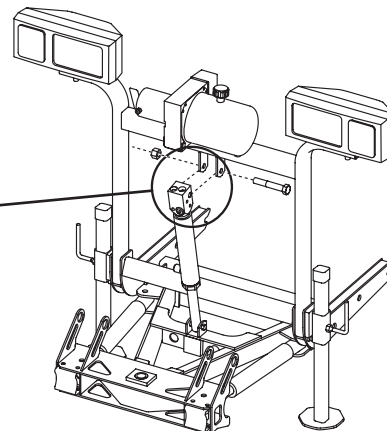
⚠ WARNING

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

3. The recommended pressure setting is 1000–1200 psi. To check the pressure setting, install a T-fitting with a pressure gauge in the rod-end hydraulic line, and observe the pressure reading as the blade is raised. If a pressure gauge is not available, increase the scrape lock setting as high as possible without severely limiting the blade raise speed.
4. 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.
5. 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.

NOTE: Adjustments should be made in 1/8-turn increments.

6. Reattach the lift ram to the plow gear after adjustment.
7. 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.



Douglas Dynamics, L.L.C. 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.