

Tech Bulletin: DeltaForce® Lift Manifold Valve Replacement

March 31, 2015

DeltaForce®

The Problem: DeltaForce health checks fail. Row units fail to lift or they extend during the air purge test but do not contract.

Causes: Debris from cutting the hoses poses a threat to valves in the hydraulic system. Proper hose cutting technique is vital to maintaining the integrity of the DeltaForce system. Using projectiles to clean hoses is mandatory as is the cleaning of pain chips from around the caps on the cylinders during installation. *Contamination is possible anytime a hydraulic system is opened.*

Before replacing the valve, check these things:

- PSI Requirements at Lift Manifold and DeltaForce Cylinder
 - ◇ Pressure: 2250 PSI minimum
 - ◇ Lift: 200 to 2250+ PSI
 - ◇ Return: Less than 200 PSI
- Hydraulic Routing: If pressures are within range at manifold and different at the cylinder, plumbing is the most likely cause of failure.

The Solution: If the valve has failed due to debris in the system, replace the valve.

Note: Because of tight torque tolerances, the use of a torque wrench is mandatory.

Tools Needed:

- Click-type Torque Wrench
- 7/8" Oxygen/Vacuum Sensor Socket (See illustration A below).
 - ◇ An Extra Deep Socket will also work. The depth of the valve is 3" (See illustration B below).



Illustration A

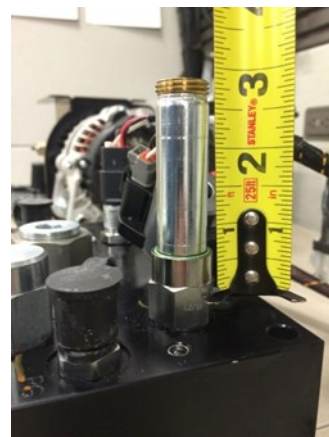


Illustration B

Lift Manifold Valve Replacement

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Step 1

Remove the plastic cap and coil from the valve stem.



Step 2

Remove the valve from the lift manifold. Place removed valve in sealable plastic bag for return to Precision Planting.



Step 3

Install the new valve with a clique-type torque wrench and 7/8" Oxygen/Vacuum Sensor Socket.

Torque Spec: 18—22 ft-lbs



Step 4

Replace the Coil and Plastic Cap.

