

## Bleed air from the hydraulic system:

- 1) Use the installed spreader or install a loop into the pressure & return line for both auger/conveyor & spinner circuit.
  - 2) Engage spreader circuit (electrical or manual over-ride) at “mid range” running speed;
  - 3) Actuate each implement and “dead head” (hold in maximum position) for 30 seconds in each direction (up and then down); (electric or manual overrides ok to dead head the implement);
    - a) Start with implement whose valve is closest to the valve inlet – normally the hoist;
    - b) Repeat steps in order for each implement on truck;
    - c) Entrapped air has been minimized if implement moves smoothly when actuated;
    - d) For single acting implements, consult the implement manufacturer for proper bleeding of air.
- Remove installed plumbing loop (if you used one).
  - Air bleeding is complete.

## Common Startup issues in Hydraulic Systems

- Entrapped air in system
  - Bleed air from system;
  - Seal fittings properly;
- Debris in fluid
  - Clean all hoses after installing fittings to remove hose debris before installing hoses;
  - Run system for 30 minutes. Check filter element for debris and replace if debris is present;

## For more detailed information

- Consult manual and drawings contained on the CD with this shipment

7165 Boone Ave N. Suite 190 Brooklyn Park, MN 55428  
Ph:763-493-9380 F:763-493-9340 [www.ciruscontrols.com](http://www.ciruscontrols.com)



## Installation of Mobile Hydraulic Valve Assembly for Snow & Ice Applications

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Hydraulic hose pressure rating must exceed the inlet pressure relief setting of the valve:

**3,000 psi minimum**



Hose Cleanliness – **critical performance factor**

- Blow out hose debris after terminating hose with fittings and before installing hose onto system;

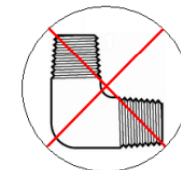
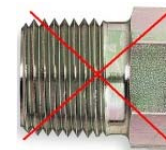
## Hose Routing

- 1) Hoses must be routed to achieve maximum saturation with fluid at the pump with the fewest number of **90 degree fittings**.
- 2) Improper routing of hoses can increase the noise of the system in operation. Avoid contact between truck frame and any fittings; Isolate and wrap any places where fitting to frame contact must occur.

Hose and fittings sizing must match the port size of the pump and valve:

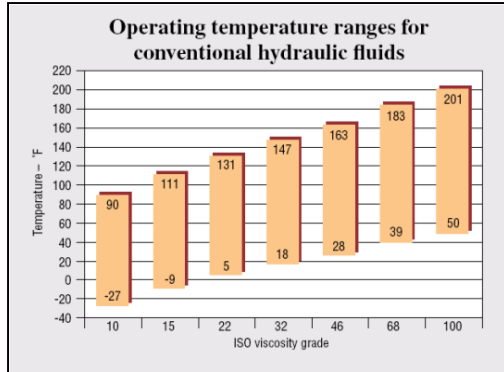
Do not use reducing fittings;

Avoid elbow fittings



Choose Hydraulic Oil that matches your operating condition;

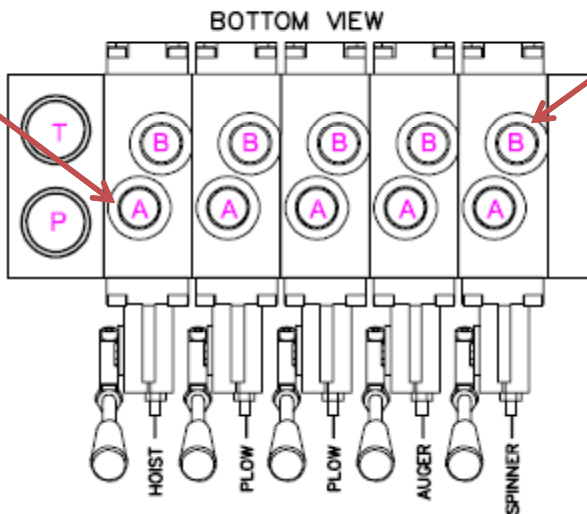
Typical: ATF oil  
or choose by ISO for  
operating temperature  
range



### Plumbing to the valve:

	Port "A"	Port "B"
<b>SINGLE ACTING (SA) CYLINDER</b>	PLUMB TO BASE END OF CYL (POWER UP)	PLUGGED (GRAVITY DOWN)
<b>DOUBLE ACTING (DA) CYLINDER</b>	PLUMB TO ROD END OF CYL (POWER DOWN)	PLUMB TO BASE END OF CYL (POWER UP)

Consult master drawing for A/B port location on your valve.



### Commissioning (initial startup) of valve:

<p>Potential for injury due to unexpected operation of system. Entanglement with implements will cause severe injury to extremities; Before machine start up, all implements <b>MUST</b> be locked in place; All personnel must stay clear of all implements during all startup, programming and operation procedures. Implements may move without warning.</p>		<h2 style="margin: 0;">Warning</h2>
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### Pressure Settings are Critical for Proper Operation

- Complete all hydraulic plumbing to allow operation of all functions and complete the pump commissioning procedure before beginning valve commissioning;
- Install gauge at valve inlet (if not installed);
- Start up vehicle, engage prime mover (or PTO), allow truck to idle;
- **Observe pressure on valve inlet -Standby Pressure– 250-400 psi;** if not in this range, see pump pressure setting procedure to adjust;
- To **check system pressure**, briefly “dead head” and observe gauge. Release immediately if pressure exceeds 2500psi.
- **Main System pressure – 2500 psi (factory setting).**  
Consult manufacturer’s recommendations for special applications or other pressure settings;



- **Individual section relief valves**  
Consult your manual to determine if your valve has settable section reliefs.