

## Motor Settings for CARCO H140 for CAT D8T Tractors

On certain CARCO H140 winches used on CAT D8T tractors with ripper hydraulics, the minimum motor displacement setting as shipped may not be compatible with some pipeline yo-yo operations or other applications using Reel-Out with heavy suspended loads. During Reel-Out operations of this nature, erratic winch performance may be noticed. Under the most extreme line load conditions, damage to the winch brake valve could occur.

**PACCAR Winch considers this as a safety related issue** as many pipeline jobs require the lowering of other equipment and personnel down-slope.

**Please note, only specific units are affected.** Please refer to the dealer letter for the serial numbers of the winches affected.

To resolve the issue, the minimum displacement adjusting screw on the winch hydraulic motor must be replaced and adjusted to the correct measurement. For new winches with no field use, the modification to the motor displacement is all that is required. For units with field use, PACCAR Winch will also supply a replacement brake valve. PACCAR Winch strongly recommends that the brake valve be changed out on these units to ensure no pre-existing damage remains.

**PACCAR Winch will supply the necessary parts at no charge to enable this modification.**

Follow the procedures below to complete the necessary changes.

### Motor Adjustment Repair Procedure:

**NOTE:** *This repair procedure will open the motor rotating group to atmosphere. Be sure to clean the motor thoroughly and use caution to eliminate the intrusion of moisture or other foreign matter to the motor and hydraulic system.*

1. Remove the motor cover from the RH side of the winch.

**NOTE:** *A ½"-UNC threaded hole is provided in the top of the cover to aid handling using a standard eyebolt and hoist due to the size and bulk of the cover.*

2. Locate the minimum displacement adjusting screw, as defined in Fig. 1, directly adjacent to the motor ID tag. Break the plastic protective cap off the adjusting screw.
3. Using a 19mm box end wrench and a 6mm hex wrench, loosen the jam nut on the existing adjusting screw and back the screw completely out of the motor.

**NOTE:** *Be prepared to install the new adjusting screw to minimize hydraulic fluid loss from the open screw port.*

4. Install the new adjusting screw (90 mm long) and jam nut into the motor opening. Adjust the length of the screw projecting above the jam nut to the dimension shown in Fig. 2. This specified projection dimension must be met after the jam nut is properly tightened. Tighten the jam nut to 60 lb-ft (81 N•m).

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- Install the new protective cap over the adjusting screw. Insert the retainer cup into the end of the cap and set the cap by lightly tapping it into position using a soft mallet.

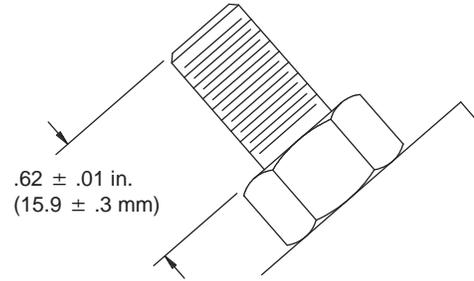
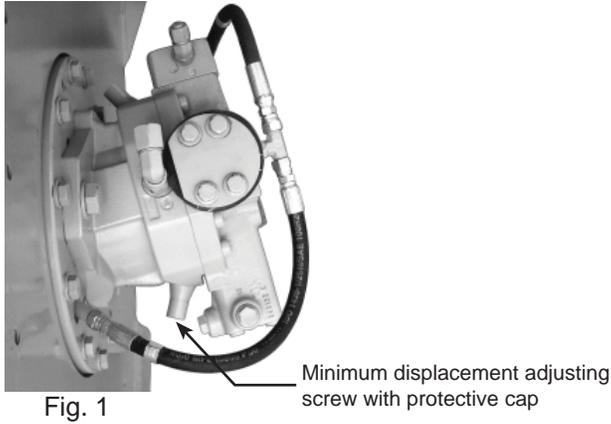


Fig. 2

### Brake Valve Replacement Procedure:

(Refer to Fig. 3)

- Be sure the engine is off and the tractor hydraulic system pressure has been relieved. Refer to the tractor service manual for further guidance.

**NOTE:** Any fluid remaining within the hydraulic motor and associated hoses will be lost during this procedure. Take proper precautions to contain the spill and minimize contamination of the area.

- Remove the large Reel-In hose and straight adapter fitting from the brake valve located on the bottom side of the hydraulic motor.  $1\frac{1}{2}$ " and  $1\frac{5}{8}$ " open end wrenches will be required.
- Remove the brake release pilot hose and 90° elbow fitting from the brake valve "BR" port.  $\frac{9}{16}$ ",  $\frac{5}{8}$ " and  $1\frac{1}{16}$ " open end wrenches will be required.
- Remove the brake valve and spacer plate from the motor. A  $\frac{3}{8}$ " hex wrench will be required. Remove and discard existing o-rings from brake valve and spacer plate. Install new o-rings provided in grooves in both brake valve and spacer plate.
- Install spacer plate and new brake valve to the motor. O-ring groove in spacer plate should be oriented "up" toward the bottom surface of the motor. Re-use the existing fasteners and tighten to 70 ft-lbs (95 N•m).
- Install the existing 90° elbow to the "BR" port of the brake valve. Leave the jam nut loose.
- Attach the existing brake release pilot hose to the elbow. Position the hose and fitting and tighten the jam nut on the elbow. Tighten the hose end fitting.
- Reinstall the straight adapter into the brake valve Reel-In port. Tighten as required.
- Attach the existing Reel-In hose to the fitting and properly tighten.
- Ensure all hoses and fittings are tight before start-up.

Fig. 3

