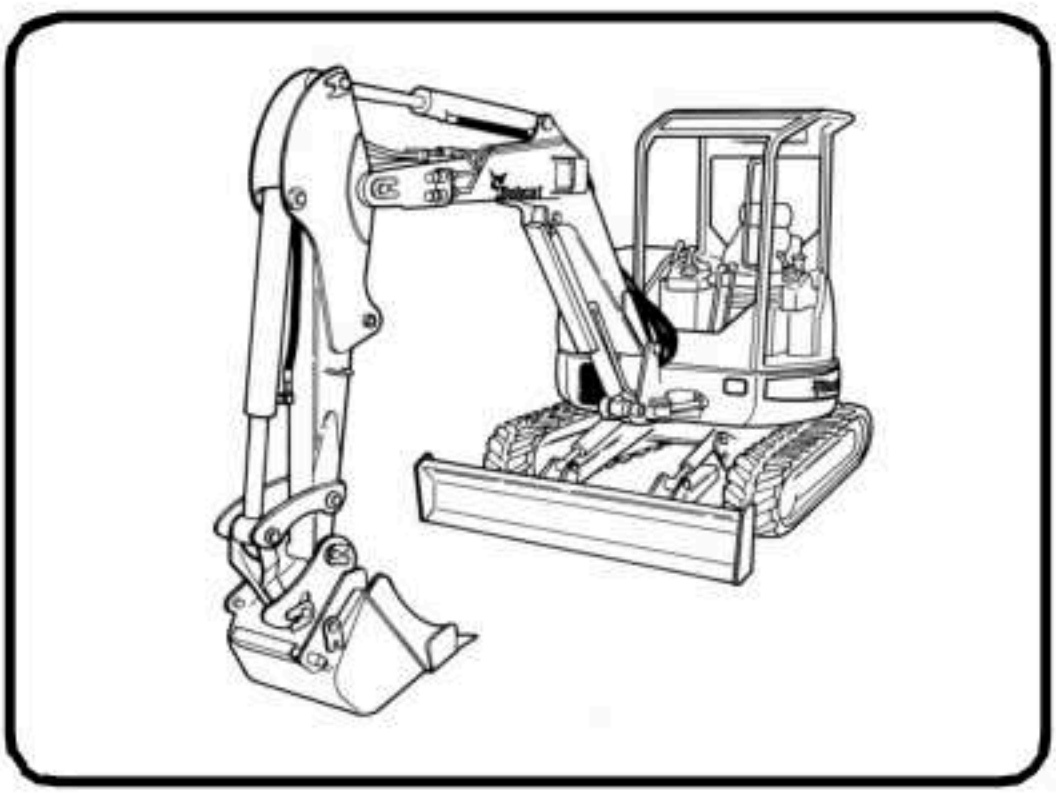
Bobcat®

Service Manual
435 Compact Excavator

S/N AACB11001 & Above
S/N AACD11001 & Above
S/N AA8911001 & Above
S/N AA8A11001 & Above



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Troubleshooting The Hydraulic Circuit

TROUBLESHOOTING THE HYDRAULIC CIRCUIT		
PROBLEM	**CAUSE**	**CORRECTION**
No hydraulic operation at one or more circuits.	Hydraulic oil level low.	Refill with correct oil.
	Hydraulic pump drive coupling damaged.	Replace
	Hydraulic pump defective.	Repair or replace.
	Main relief valve defective.	Readjust or replace.
Hydraulic power insufficient to one or more circuits.	Main relief valve pressure setting incorrect.	Readjust or replace.
All hydraulic speed too slow.	Hydraulic oil level or viscosity incorrect.	Fill to correct level. Use correct viscosity oil.
	Engine RPM reduced.	Readjust or replace.
	Control valve linkage defective.	Check, repair or replace.
	Hydraulic pump volume low.	Check, repair or replace.
Oil temperature too high.	Oil cooler or radiator fins plugged.	Clean oil cooler external surface.
	Hydraulic oil level low.	Fill to correct level.
	Non recommended hydraulic oil.	Replace.
	Relief valve excessively activated.	Use proper operating procedures.
	One or more relief valves not set correctly.	Readjust or replace.
	Extreme operating conditions. High ambient temperature (i.e.: enclosed structure).	
	Fan belt loose.	Tighten fan belt.

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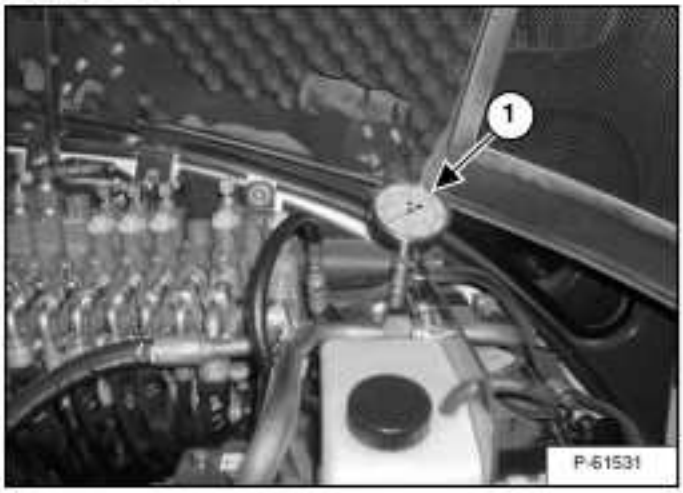
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Piston Pump Testing (Cont'd)

Torque Limiter Supply Pressure Adjustment

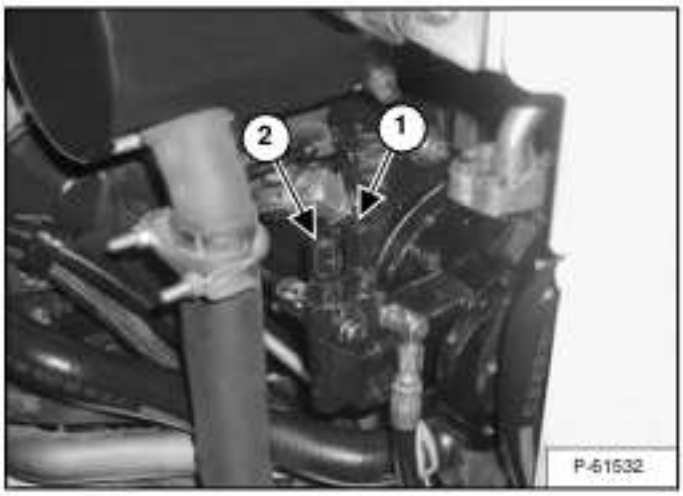
NOTE: This circuit is capable of high pressure.

Figure 20-50-7



Connect a **500 PSI (35 bar) pressure gauge** (Item 1) **[Figure 20-50-7]** to the pump diagnostic coupler at the control valve.

Figure 20-50-8



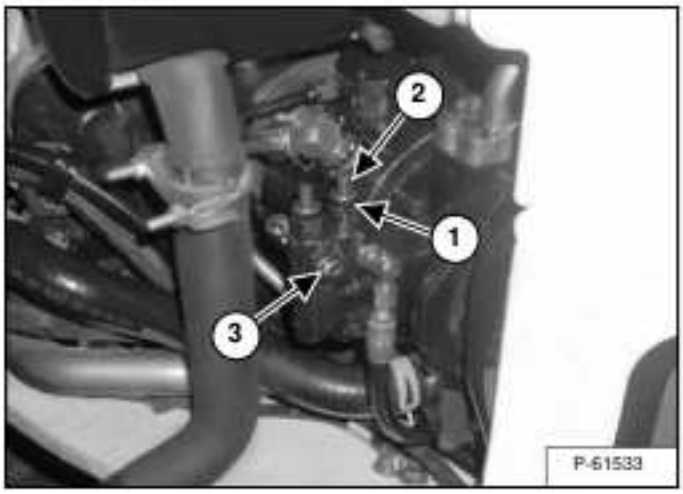
At the hydraulic pump, remove the cap (Item 1) **[Figure 20-50-8]** from the pump margin spool adjustment (front cap.)

Remove the cap (Item 2) **[Figure 20-50-8]** from the pump torque limiter supply spool adjustment (rear cap.)

NOTE: The adjustment caps contain a sealing washer that can be easily lost when caps are removed.

NOTE: To adjust the Torque Limiter Supply Pressure, the Pump Margin Spool must be temporarily bottomed out.

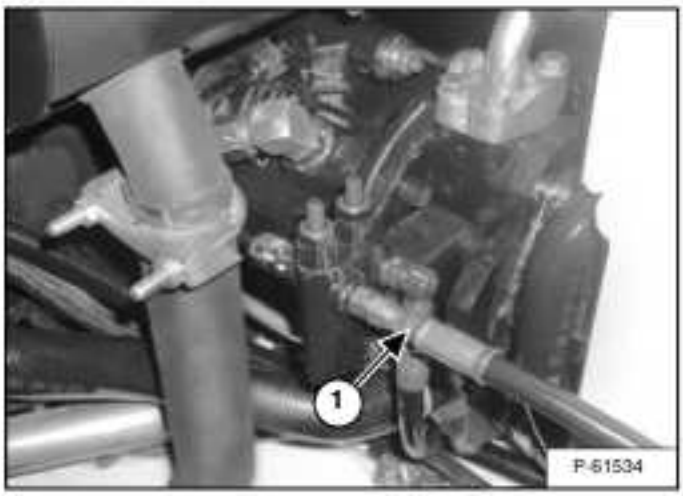
Figure 20-50-9



Loosen the nut (Item 1) on the pump margin spool. (Front spool) With an Allen wrench turn the pump margin spool adjustment (Item 2) **[Figure 20-50-9]** all the way in. (Approximately six turns)

Remove the plug (Item 3) **[Figure 20-50-9]** from the torque limiter supply spool and install a 15KN-3 fitting.

Figure 20-50-10



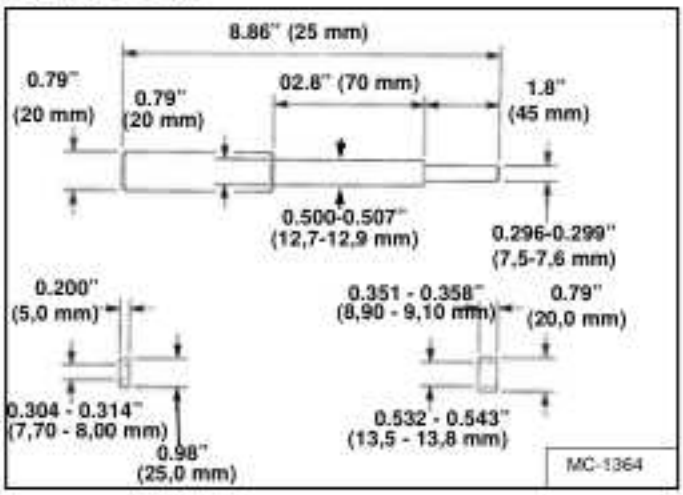
Connect a 1/4 in. (6,35 mm) hydraulic hose, with a 90° end (Item 1) **[Figure 20-50-10]**, to the fitting.

Remove the cap from the hydraulic reservoir and route the hydraulic hose into the reservoir.

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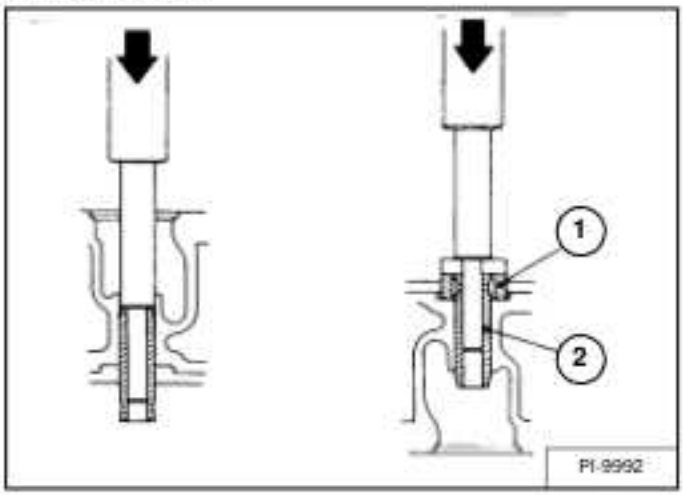
Valve Guide Checking (Cont'd)

Figure 70-80-15



To remove and replace the valve guide, make the driver tool as shown in figure **[Figure 70-80-15]**.

Figure 70-80-16



Press the used valve guide out of the cylinder head using the special driver tool **[Figure 70-80-16]**.

Put oil on the outside diameter of the new valve guide. Press the new valve guide into the cylinder head from the top side. Use the special driver tools (Items 1 & 2) **[Figure 70-80-16]**, press the new guide until the tool contacts the cylinder head.

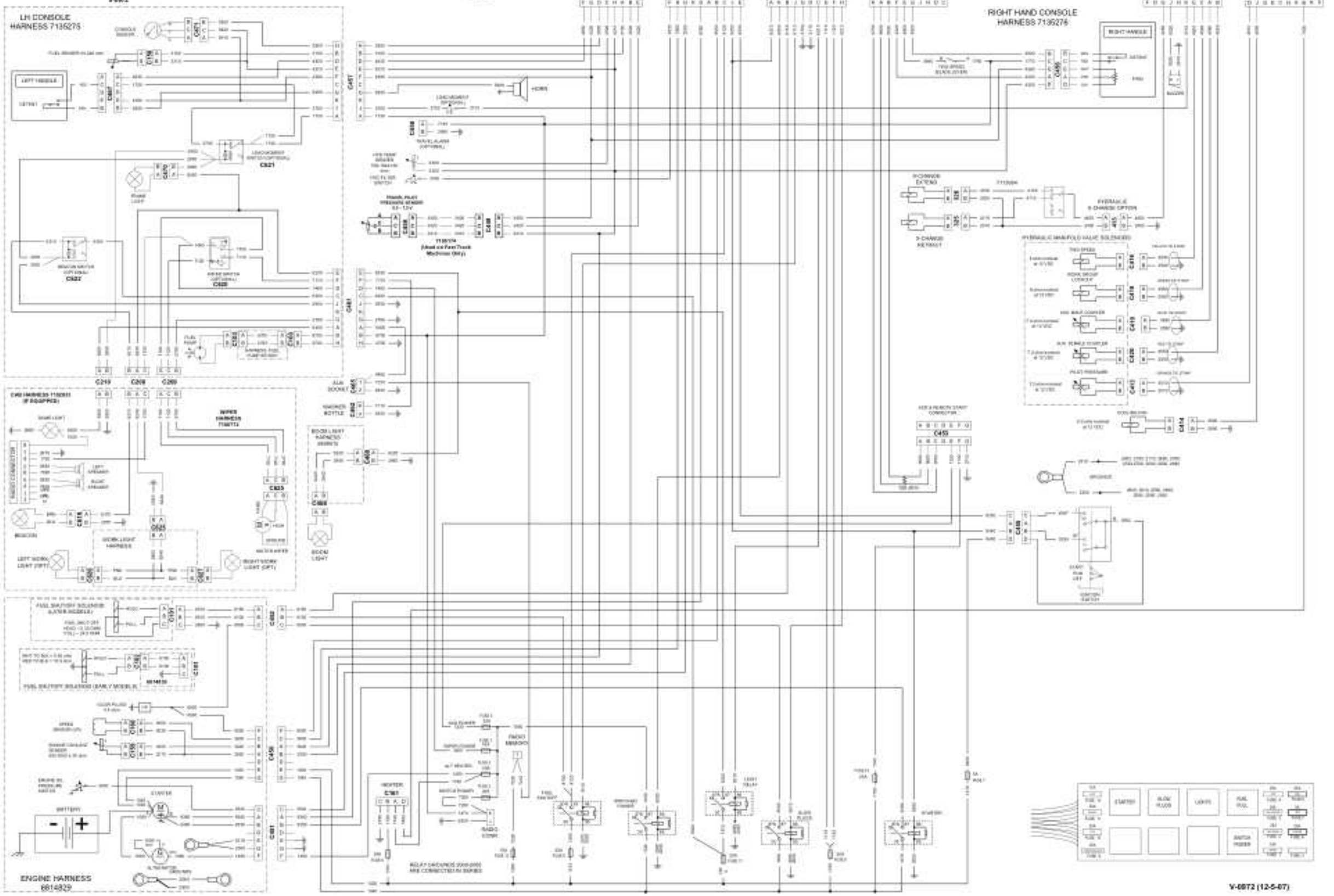
Ream the valve guide to the correct specifications.

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WIRING SCHEMATIC

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