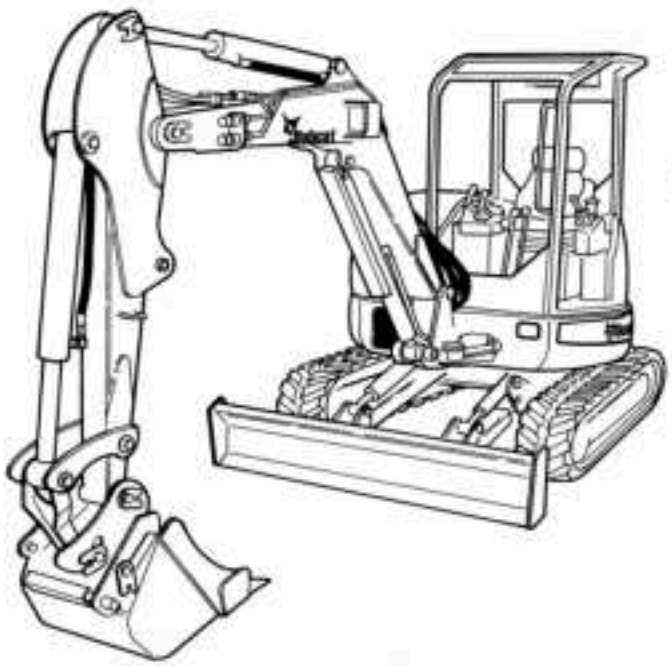
430

Bobcat®

Service Manual

S/N AA8711001 & Above
S/N AA8811001 & 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.

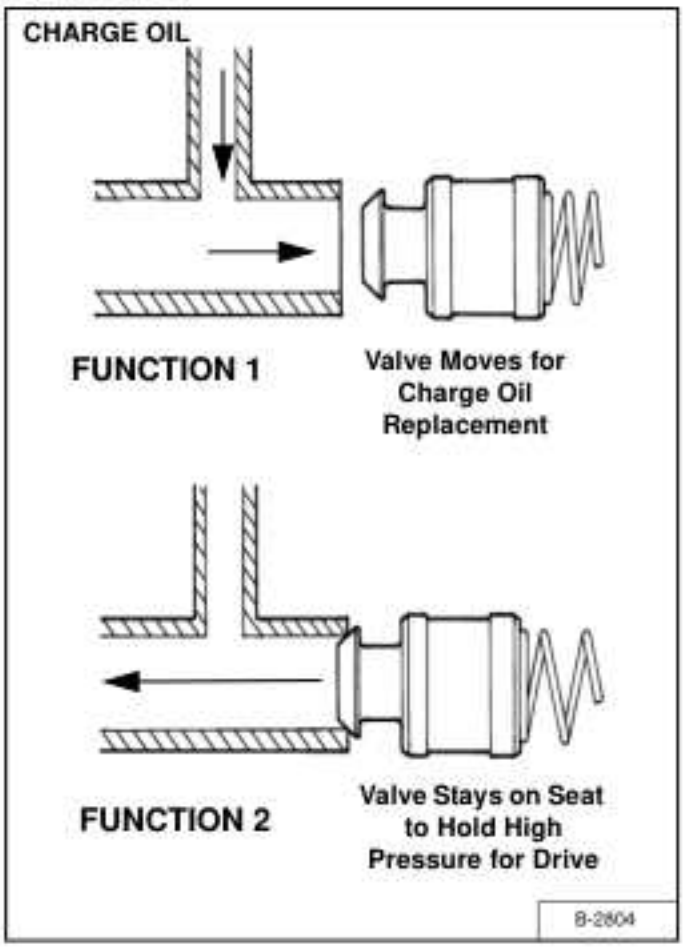
Troubleshooting The Cylinder Circuit

TROUBLESHOOTING THE CYLINDER CIRCUIT		
PROBLEM	**CAUSE**	**CORRECTION**
Cylinder inoperable.	Control console raised.	Lower control console.
	Loose fittings or broken hoses.	Repair or replace.
	Low PSI at joystick.	Check, repair or replace pressure reducing valve and/or safety valve in pressure reducing valve body.
	Lever linkage incorrectly adjusted.	Readjust.
	Control console lockout switch.	Readjust or replace.
	Cylinder internal leakage excessive.	Repair or replace.
	Joystick manifold pressure reducing valve defective.	Repair or replace.
	Joystick internal leakage excessive.	Repair or replace.
Cylinder for insufficient.	Lever linkage incorrectly adjusted.	Readjust.
	Main relief valve pressure to low.	Readjust or replace.
Cylinder speed too slow.	Lever linkage incorrectly adjusted.	Readjust.
	Cylinder internal leakage excessive.	Repair or replace.
	Joystick manifold solenoid valve defective.	Repair or replace.
	Joystick manifold pressure reducing valve defective.	Repair or replace.
	Control valve internal leakage excessive.	Repair or replace.
	Low tie rod torque on hydraulic control valve.	Tighten tie rods to correct torque.
	Joystick internal leakage excessive.	Repair or replace.
	Low or dirty fluid.	Add or replace the hydraulic fluid.
	Relief valve malfunctioning.	Readjust or replace.

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Relief/Replenishing Valve Function

Figure 30-10-1



The functions of the relief/replenishing valves are:

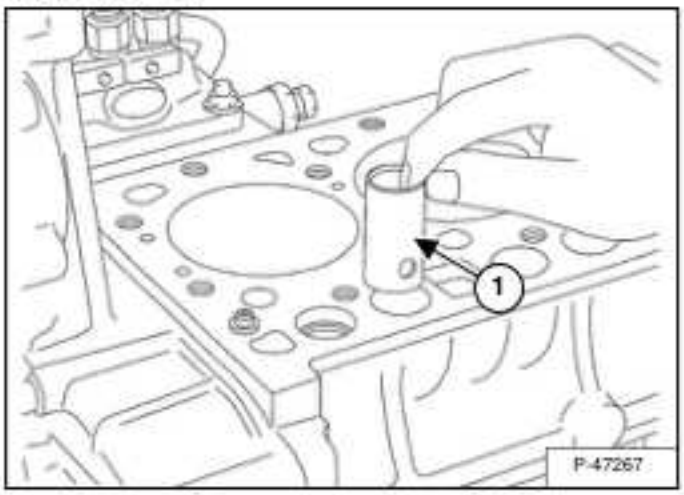
1. To give replacement fluid to the low pressure side of the hydrostatic circuit. Replacement fluid is needed because of normal internal leakage and the controlled flow to the oil cooler for cooling; Function 1 **[Figure 30-10-1]**.

2. To keep high pressure fluid out of the low pressure side of the hydrostatic circuitry; Function 2 **[Figure 30-10-1]**.

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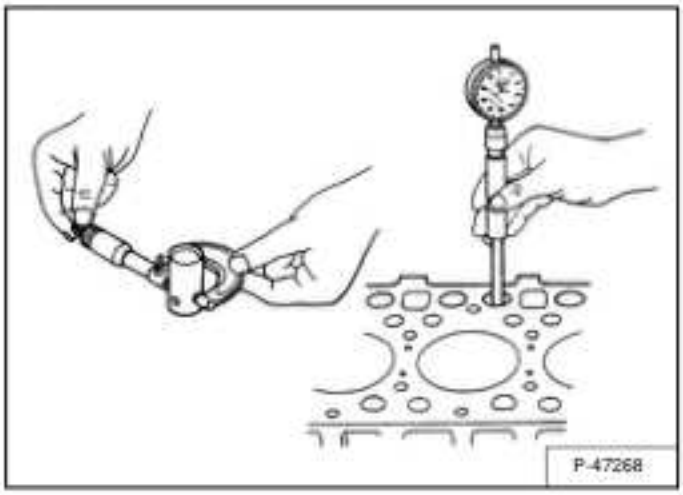
Valve Tappets

Figure 70-80-35



Remove the valve tappets (Item 1) **[Figure 70-80-35]**.

Figure 70-80-36



Measure the O.D. of the tappet **[Figure 70-80-36]**.

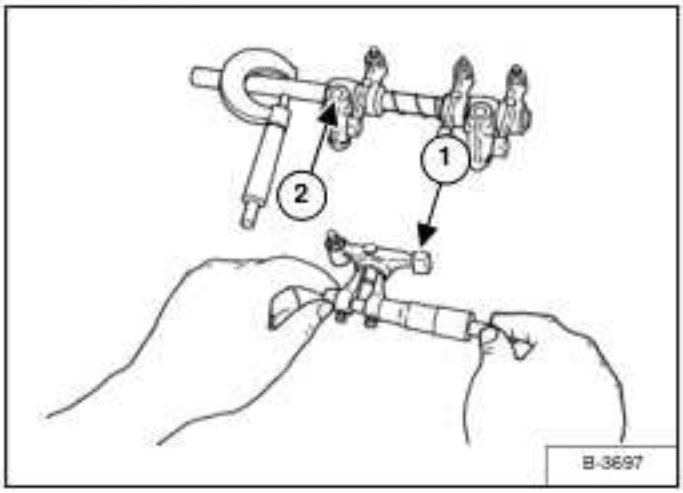
Measure the ID of the tappet bore **[Figure 70-80-36]**.

If the clearance exceeds the allowable limit, replace the tappets.

Tappet OD	0.9433 - 0.9441 in. (23,96 - 23,98mm)
Tappet Bore ID	0.9449 - 0.9457 in. (24 - 24,02 mm)
Clearance Between Tappet and Tappet Bore	0.0008 - 0.0024 in. (0,02 - 0,06 mm)
Allowable limit	0.0028 in. (0,07 mm)

Rocker Arm And Shaft - Checking

Figure 70-80-37



Measure the rocker arm I.D. (Item 1) **[Figure 70-80-37]** with an inside micrometer.

Measure the rocker arm shaft O.D. (Item 2) **[Figure 70-80-37]** with an outside micrometer.

If the clearance exceeds the allowable limit, replace the bushing.

If the clearance still exceeds the allowable limit after the bushing is replace, replace the rocker arm shaft.

Oil Clearance Between Rocker Arm & Shaft	0.0006 - 0.0018 in. (0,02-0,05 mm)
Allowable Limit	0.004 in. (0,1 mm)
Rocker Arm Shaft O.D.	0.5501 - 0.5506 in. (13,97 - 13,98 mm)
Rocker Arm I.D.	0.5512 - 0.5519 in. (14,0 - 14,02 mm)

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WIRING SCHEMATIC

430 (S/N AACF11001 AND ABOVE)
(S/N AACG11001 AND ABOVE)
(S/N AA8711001 AND ABOVE)
(S/N AA8811001 AND ABOVE)

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CONTROL MODULE
CONNECTORS J1-J6

LH CONSOLE
HARNESS 7135275

RIGHT HAND CONSOLE
HARNESS 7135276

ENGINE HARNESS
6814829

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