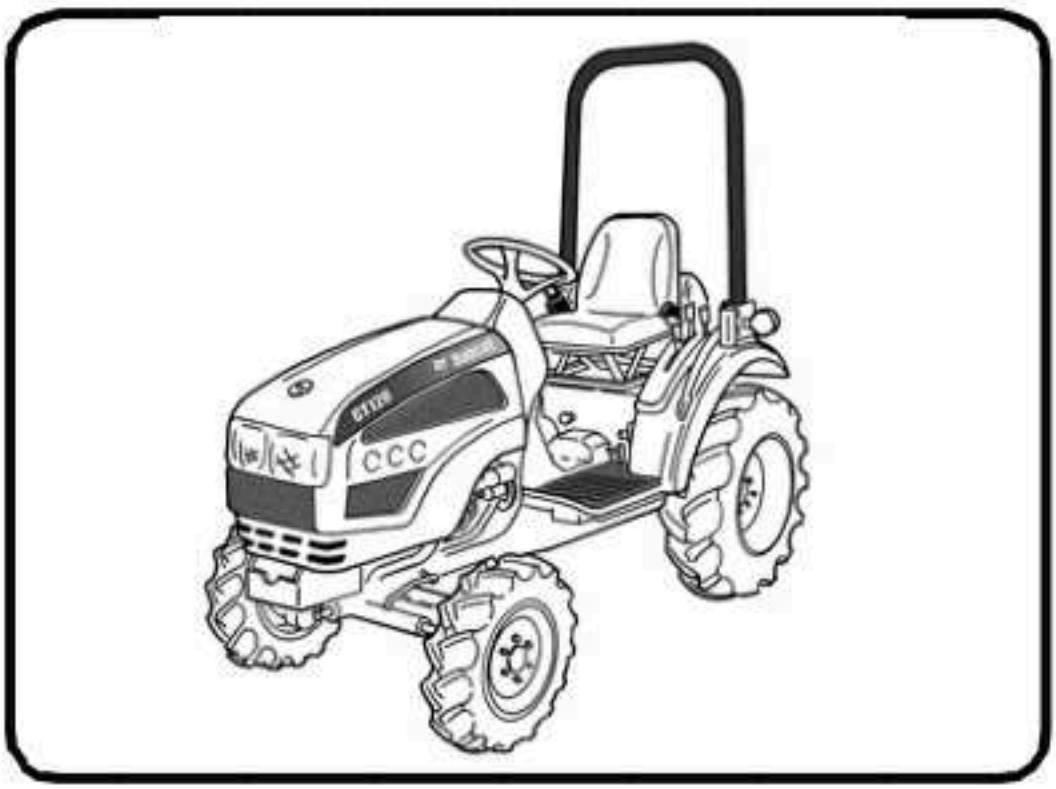
Bobcat®

Service Manual
CT120 Compact Tractor

S/N A59A11001 & Above



6986523 (9-10)

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Troubleshooting The Power Lift Circuit

PROBLEM	CAUSE	CORRECTION
The rockshaft jerks while being raised	Insufficient oil level in the tank	Check the oil level
	Pump inlet filter clogged	Clean or replace the filter
	Infiltration of air into the pump inlet pipe	Check the inlet pipe and any coupling and gasket
Rockshaft does not operate	Adjusting piston or pilot valve stuck	Remove the control valve and unblock the pilot valve and adjusting piston
The rockshaft does not descend over its entire travel	Sensibility adjusted incorrectly	Adjust sensitivity of control valve
	Faulty adjustment of the control lever	Adjust control position lever
The rockshaft does not descend	Hydraulic block switched on	Unscrew the manual lever
	Outlet valve spring damaged	Change the spring
	Piston blocked	Check piston and cylinder
Lifting capacity does not meet specifications	Safety and main relief valves out of calibration	Correct the calibration of the two valves
	Poor pump efficiency	Replace the pump
	Poor control valve efficiency	Overhaul the control valve
	Deterioration of the control valve seal rings	Remove the control valve and replace the external seal rings
The rockshaft supports loads with difficulty; there is arhythmic oscillation when the engine is running; the load descends when the engine is off	Piston gasket worn	Replace the gasket
	Oil leakage from cylinder	Overhaul the cylinder
	Oil leakage from one of the following control valves: non-return valve, outlet valve, and safety valve that protects the cylinder	Remove the control valve and overhaul the following valves: In case of leakage over-haul the control valve
When the arms are in a the upper position, the safety valve (relief valve) place on the body of the rockshaft starts operating	Faulty adjustment of the maximum upper position of Rockshaft lift arms	Adjust the control lever, limiting the maximum upper position travel

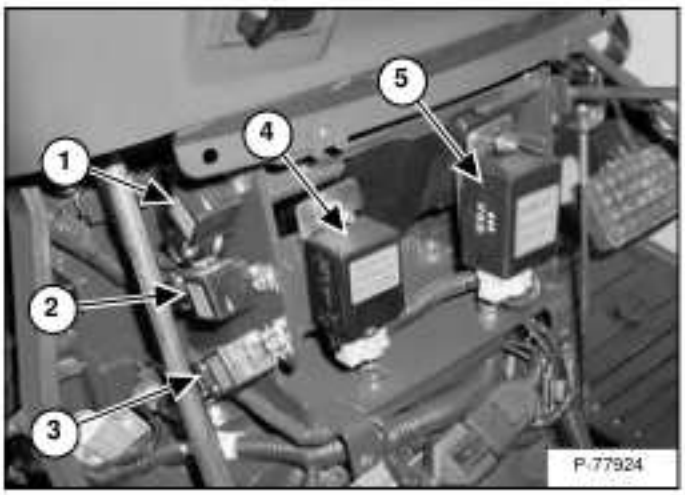
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Fuse And Relay Location - Instrument Panel

Relays

There are three relays used in the electrical circuit. The relays are located below the dash access panel.

Figure 60-10-4



Relay (Item 1) **[Figure 60-10-4]** is for the ignition switch.

Relay (Item 2) **[Figure 60-10-4]** is for the brake light lights.

Relay (Item 3) **[Figure 60-10-4]** is for the high beam.

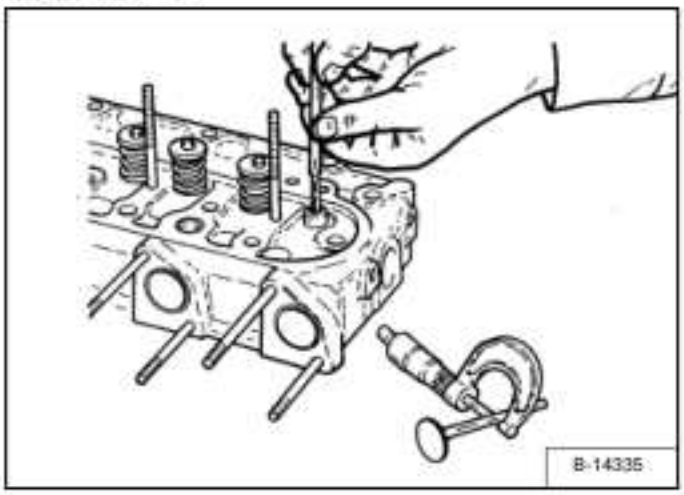
Preheat controller (Item 4) **[Figure 60-10-4]** for the glow plugs.

Flasher (Item 5) **[Figure 60-10-4]** for hazard / directional lights.

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Valve Guide - Checking (Cont'd)

Figure 70-80-22



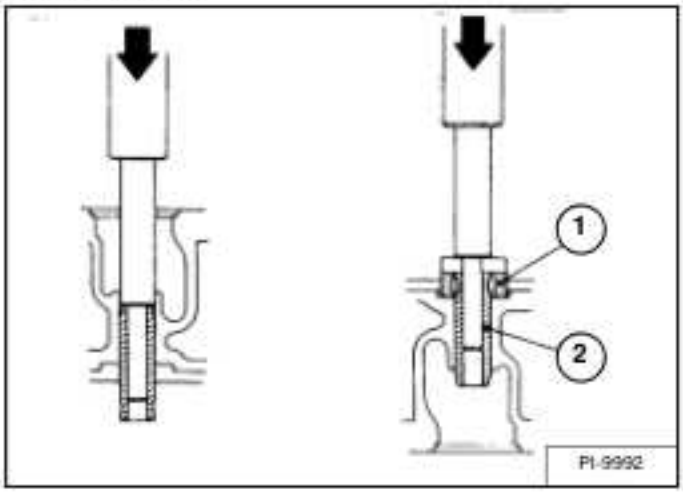
Measure the valve stem O.D. **[Figure 70-80-22]**.

Measure the valve guide I.D. **[Figure 70-80-22]**.

Calculate the clearance. If the clearance exceeds the allowable limit, replace the valve and / or valve guide.

Valve Stem Clearance	Factory Spec.	0.0014 - 0.0026 in. (0,035 - 0,065 mm)
	Allowable Limit	0.004 in. (0,1 mm)
Valve Guide I.D.	Factory Spec.	0.2759 - 0.2765 in. (7,010 - 7,025 mm)
Valve Stem O.D.	Factory Spec.	0.2740 - 0.2746 in. (6,960 - 6,975 mm)

Figure 70-80-23



Press the used valve guide out of the cylinder head using the special driver tool **[Figure 70-80-23]**.

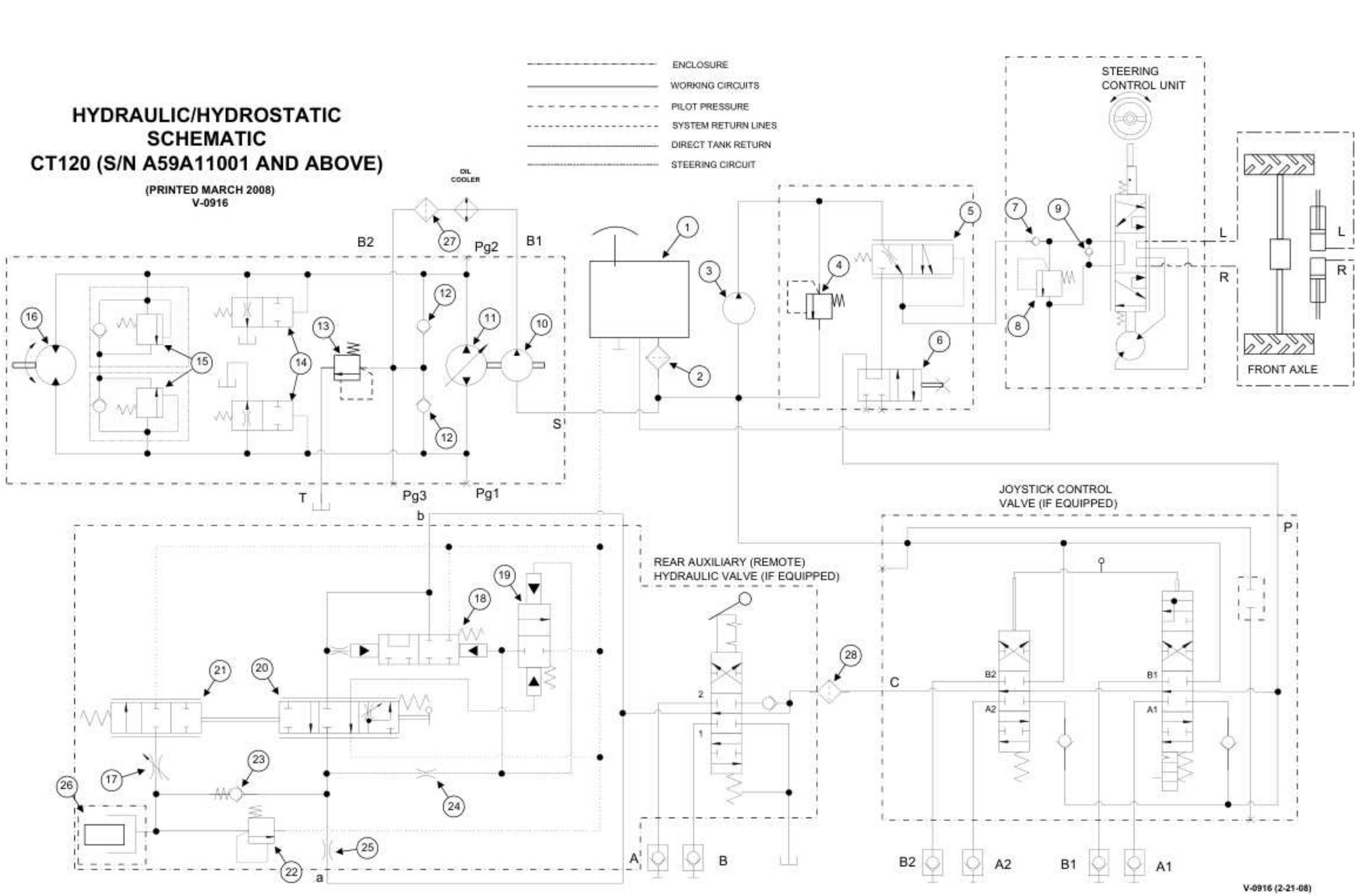
Put oil on the outside diameter of the new valve guide. Press the new valve guide into the cylinder head from the top side. Use the special driver tools (Items 1 and 2) **[Figure 70-80-23]**, press the new guide until the tool contacts the cylinder head.

Ream the valve guide to the correct specifications.

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HYDRAULIC/HYDROSTATIC SCHEMATIC
CT120 (S/N A59A11001 AND ABOVE)

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