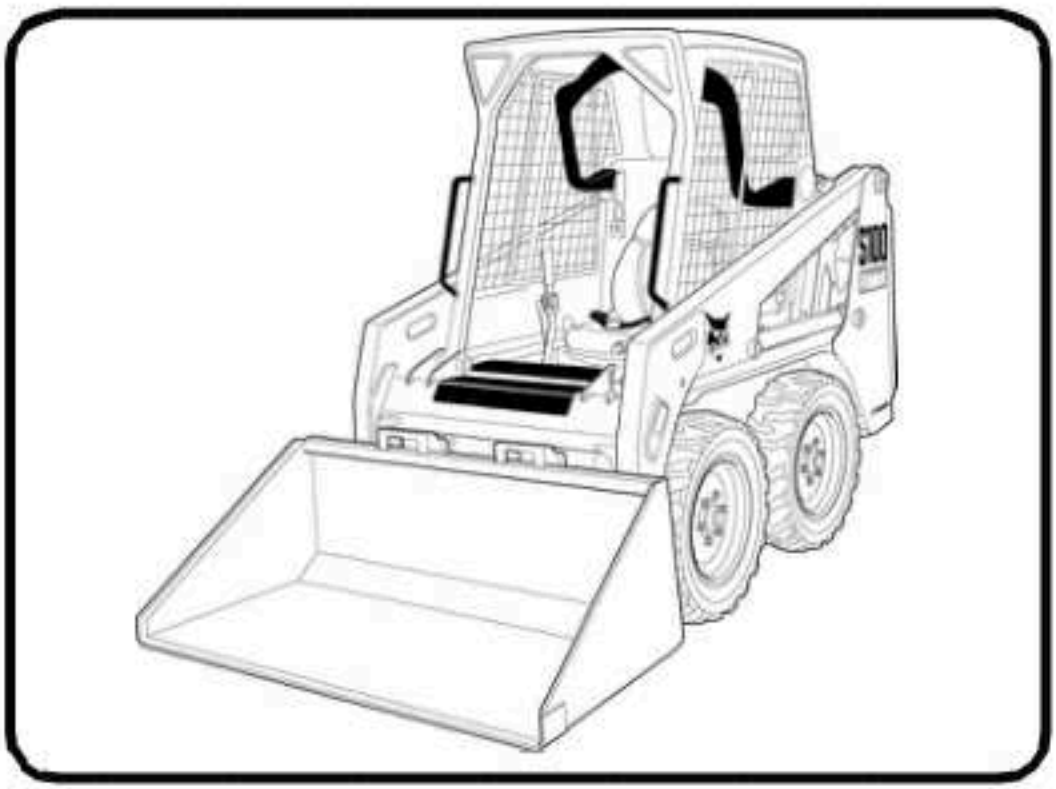
# Bobcat

# Service Manual
# S100 Skid-Steer Loader

## S/N AB6411001 - AB6419999



**EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)**

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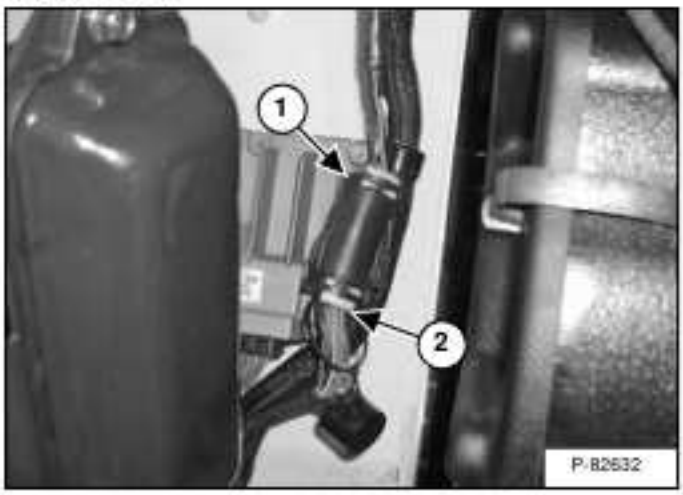


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## Service Tool Harness Control - MEL1565 (Cont'd)

Figure 10-60-7



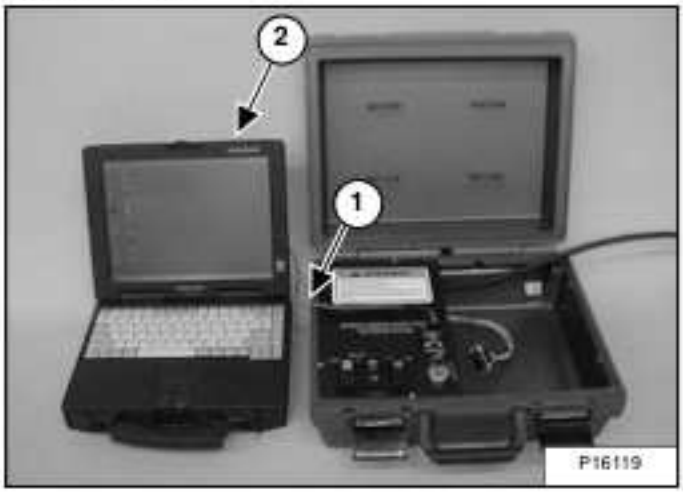

Loaders equipped with an attachment harness (Item 1) **[Figure 10-60-7]** must disconnect the attachment harness from the loader harness (Item 2) **[Figure 10-60-7]**.

Connect the service tool harness to the ACD connector and the loader harness connector.

**NOTE: To monitor, diagnose or load new software the Service PC must be connected to the Remote Start Tool Switch.**

## Service Tool Harness Communicator - MEL1566

Figure 10-60-8




The service tool harness communicator (Item 1) **[Figure 10-60-8]** is required to connect remote start tool to the Service PC (Item 2) **[Figure 10-60-8]**.



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## Specifications

***All dimensions are given in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.***

### Fuel Injection Nozzles

| | |
|---|---|
| Opening Pressure | 1992 - 2133 PSI (137,3 - 147,1 bar) |
| Fuel Tightness Nozzle Seat | Dry Nozzle at 1849 PSI (127,5 bar) |

### Fuel Injection Pump

| | |
|---|---|
| Fuel Tightness Plunger | 10 sec.: initial pressure 1849 - 1991 PSI (127,5 - 137,3 bar) |
| Allowable Limit | 5 seconds 1991 PSI (137,3 bar) |
| Injection Timing | 17 - 19 degrees B.T.D.C. |
| High Idle | 3000 - 3200 RPM |
| Low Idle | 1100 RPM |

### Cylinder Head

| | |
|---|---|
| Cylinder Head Surface Distortion | 0.002 in. (0,05 mm) |
| Top Clearance (Piston to Head) | 0.0217 - 0.0276 in. (0,55 - 0,70 mm) |
| Compression | 541 - 597 PSI (37,3 - 47,2 bar) |
| Allowable Limit | 327 PSI (22,5 bar) |
| Allowable Difference Between Cylinders | 10% or less |

### Valves

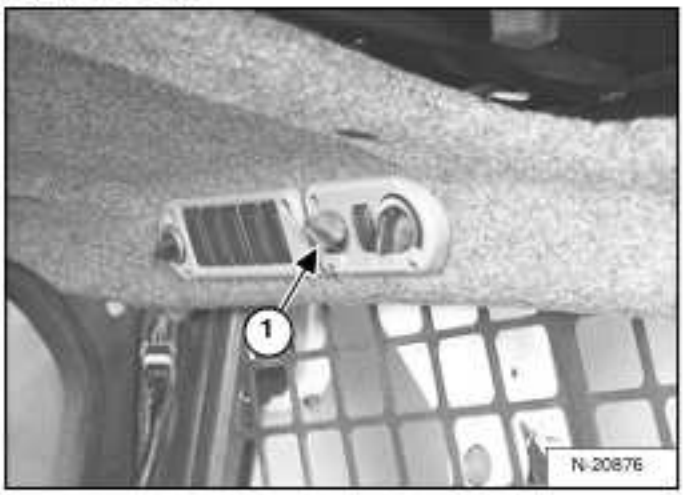
| | |
|---|---|
| Valve Seat Width (Intake & Exhaust) | 0.0835 in. (2,12 mm) |
| O.D. of Valve Stems | 0.2741 - 0.2746 in. (6,960 - 6,975 mm) |
| I.D. of Valve Guides | 0.2760 - 0.2765 in. (7,010 - 7,025 mm) |
| Clearance Between Valve Stem & Guide | 0.0014 - 0.0025 in. (0,035 - 0,065 mm) |
| Allowable Limit | 0.0039 in. (0,1 mm) |
| Valve Clearance (Cold) | 0.00571 - 0.00728 in. (0,145 - 0,185 mm) |
| Valve Recessing (Protrusion) | 0.0020 in. (0,05 mm) |
| (Recess) | 0.0098 in. (0,25 mm) |
| Allowable Limit (Recess) | 0.0157 in. (0,4 mm) |
| Valve Seat Angle (Int.) | 60 degrees |
| Valve Seat Angle (Exh.) | 45 degrees |



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### Engine Coolant bypassing The Heater Valve

**Figure 80-30-16**

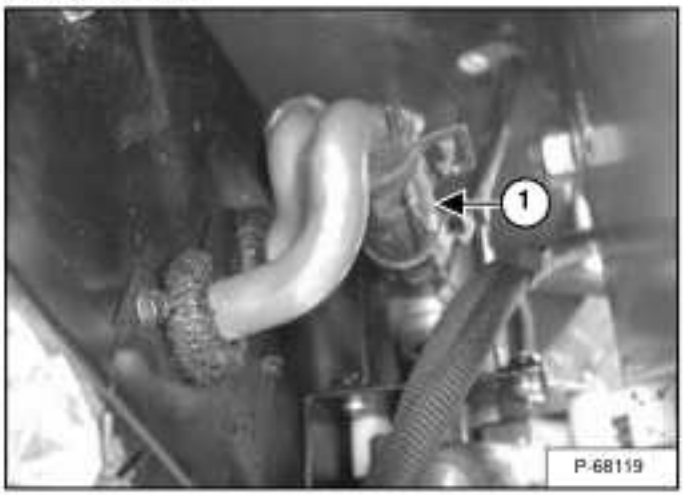



Raise the lift arms and install an approved lift arm support device (See LIFT ARM SUPPORT DEVICE on Page 10-20-1.)

Turn the fan switch (Item 1) **[Figure 80-30-16]** to the High Speed position, with the loader ignition switch OFF.

Raise the operator cab (See Raising on Page 10-30-1.)

**Figure 80-30-17**




Connect the remote start tool to the loader. (See Remote Start Tool - MEL1563 on Page 10-60-1.)

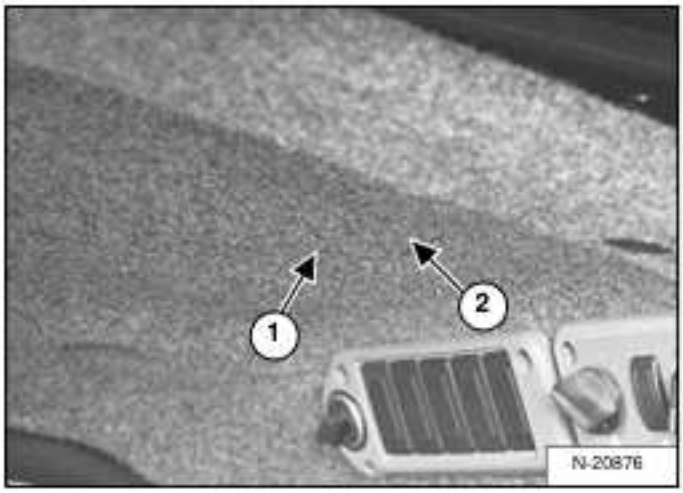
Start the loader and run at high idle, for ten minutes.

Check the heater hose (Item 1) **[Figure 80-30-17]** for temperature.

If the hose is hot, the heater valve is leaking by, and needs to be replaced.

### Heater Valve Not Opening Or Closing

**Figure 80-30-18**



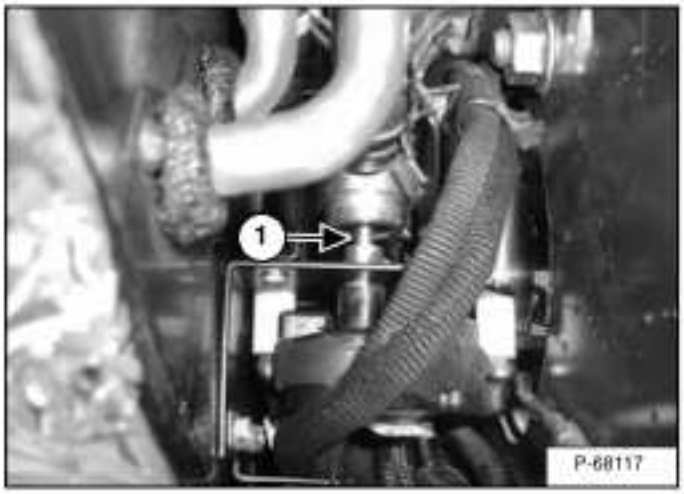

Raise the lift arms and install an approved lift arm support device (See LIFT ARM SUPPORT DEVICE on Page 10-20-1.)

Turn the fan switch (Item 1) to position **1**. Turn the temperature control (Item 2) **[Figure 80-30-18]** to the High cold position, with the loader ignition switch OFF.

Raise the operator cab. (See Raising on Page 10-30-1.)

Connect the remote start tool to the loader. (See Remote Start Tool - MEL1563 on Page 10-60-1.)

**Figure 80-30-19**




Place the remote start tool on the left fender of the loader, so the heater valve can be clearly seen. Watch the valve shaft (Item 1) **[Figure 80-30-19]**, as the key of the remote start tool is turned to the ON position without starting the loader. The heater valve should rotate. Place a mark on the heater valve shaft.



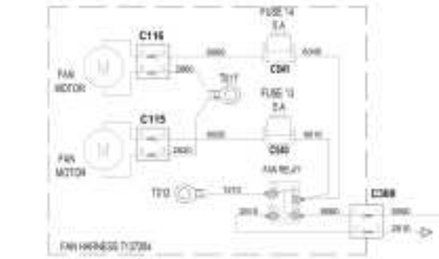
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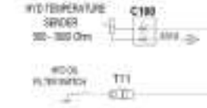
# ELECTRICAL SCHEMATIC

## S100 (S/N AB6420001AND ABOVE)

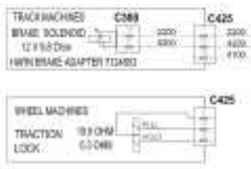
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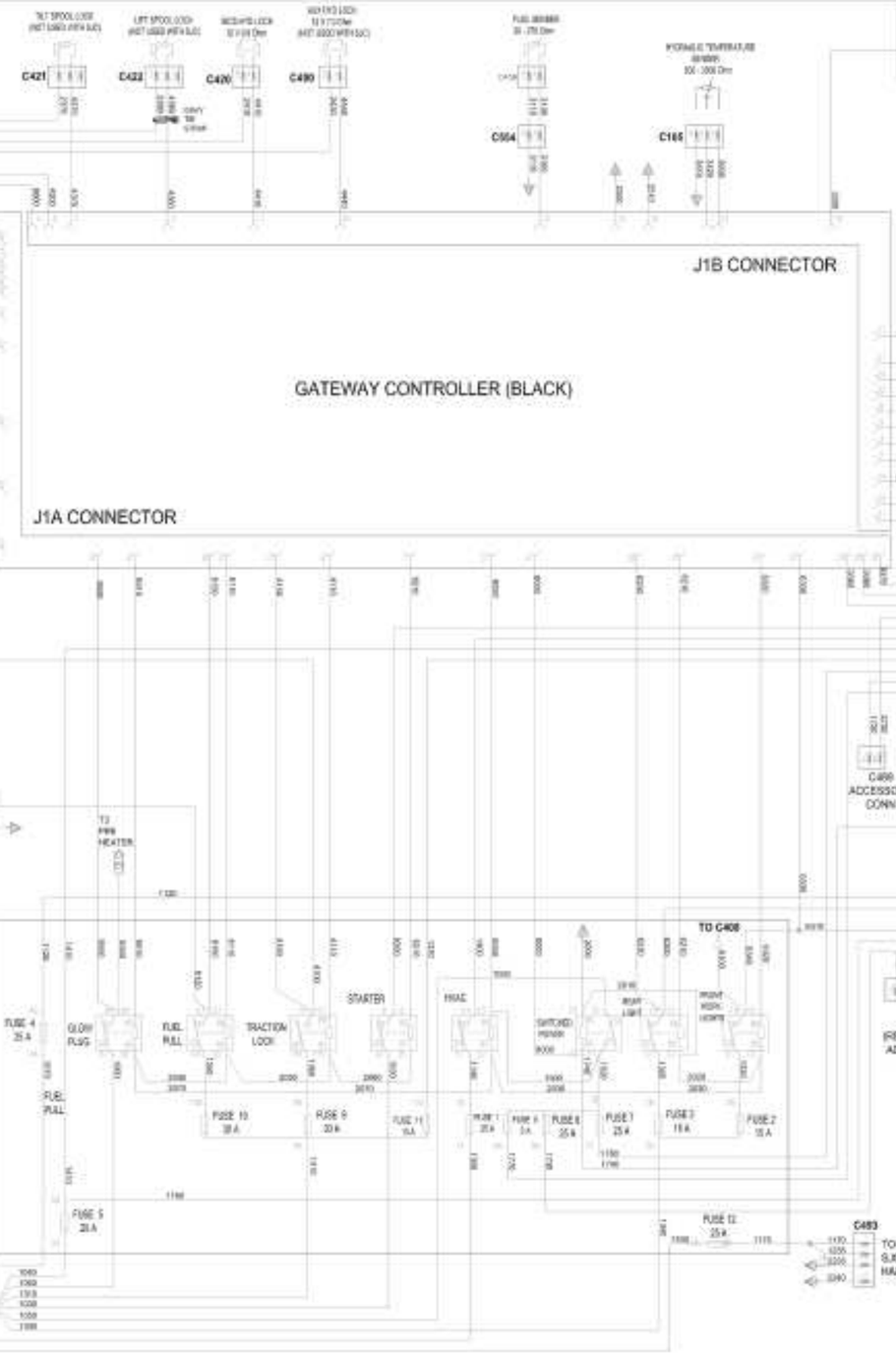



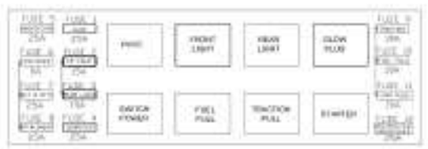

**MAINFRAME HARNESS 7159002**





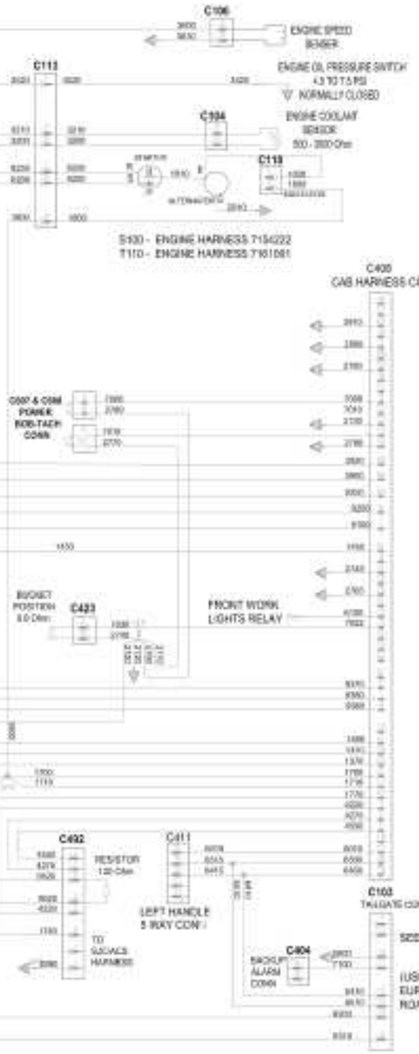


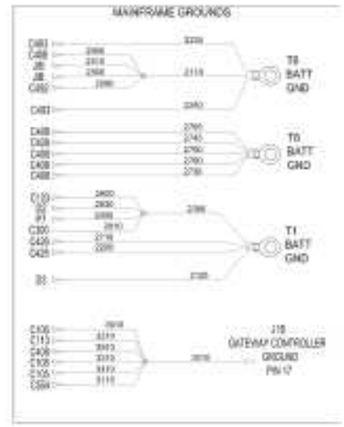









GATEWAY CONTROLLER (BLACK)





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