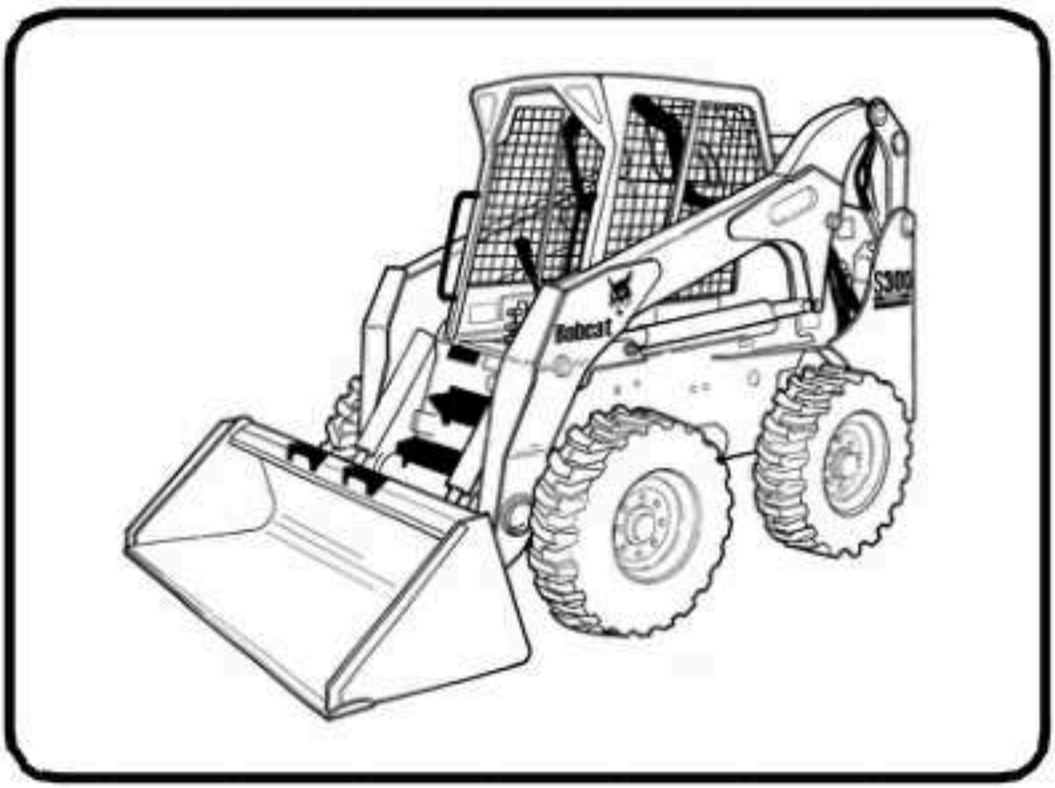
Bobcat®

Service Manual

S250, S300 Skid-Steer Loader

S/N A5GM20001 & Above
S/N A5GN20001 & Above
S/N A5GP20001 & Above
S/N A5GR20001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6987039 (6-10)

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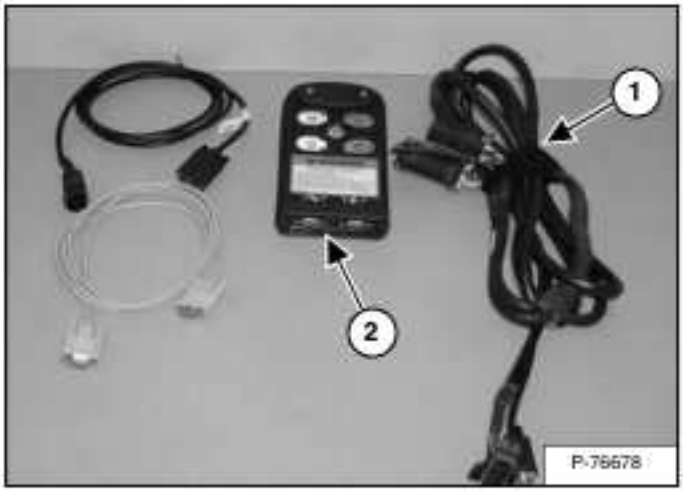
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REMOTE START TOOL (SERVICE TOOL) KIT - 6689779 (CONT'D)

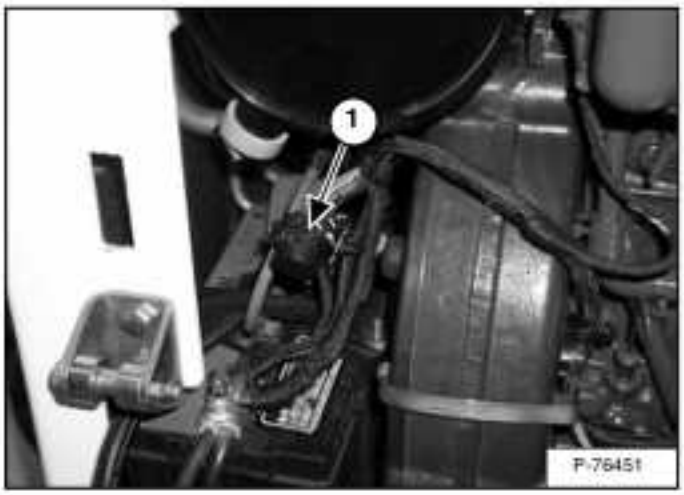
Loader Service Tool Harness - 6689747

Figure 10-61-3



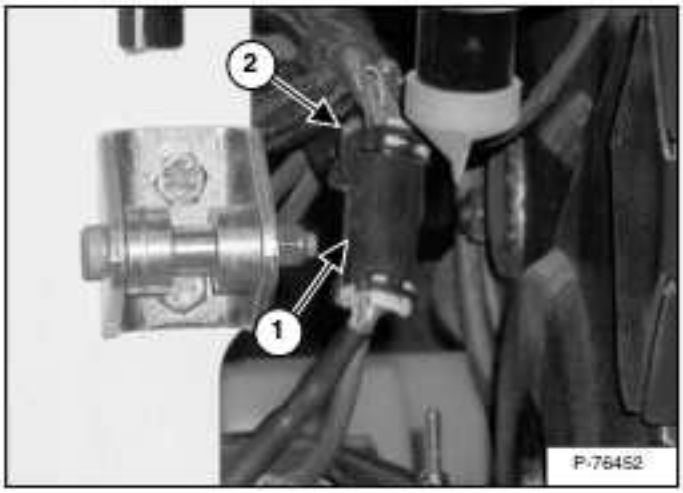
The loader service tool harness (Item 1) **[Figure 10-61-3]** is used to connect the remote start tool (service tool) (Item 2) **[Figure 10-61-3]** to the electrical system on the loader.

Figure 10-61-4



Loaders without an attachment control harness, remove the loader harness cap (Item 1) **[Figure 10-61-4]** and connect the Loader Service Tool Harness from the Remote Start Tool (Service Tool).

Figure 10-61-5



Loaders with an attachment control harness (7 pin or 14 pin), the attachment harness (Item 1) must be disconnected from the loader harness (Item 2) **[Figure 10-61-5]**.

When the remote start procedure is completed, replace the loader connector cap (Item 1) **[Figure 10-61-4]** or reconnect the attachment control harness to the loader harness **[Figure 10-61-5]**.

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HYDRAULIC/HYDROSTATIC SCHEMATIC
WITH SJC OPTION
S250 (S/N A5GM20001 AND ABOVE)
(S/N A5GN20001 AND ABOVE)
S300 (S/N A5GP20001 AND ABOVE)
(S/N A5GR20001 AND ABOVE)

(PRINTED MARCH 2008)
V-1158legend

LEGEND

(1) RESERVOIR:
Capacity . . . . . 18.8 qt. (17,8 L)

(2) SPRING LOADED FILTER BY-PASS VALVE: 45-55 PSI (3,1-3,8 bar)

(3) DIFFERENTIAL PRESSURE SWITCH:
36-44 PSI (2,5-3,0 bar)
Normally Closed

(4) DRIVE MOTOR SHUTTLE VALVE

(5) RELIEF/REPLENISHING VALVE - HIGH PRESSURE: 5075 PSI (350 bar)

(6) RELIEF VALVE - CHARGE INLET:
360 PSI (24,8 bar)
at High Engine Idle
With 140 degrees F. (60 degrees C.) Fluid

(7) FRONT AUXILIARY MANUAL PRESSURE BLEED-OFF VALVE

(8) HYDRAULIC PUMP . . . . . Gear Type
20.7 GPM (78,4 L/min.) at High Engine Idle

(9) RELIEF VALVE - MAIN:
3250-3350 PSI (224-231 bar)
at Front Quick Couplers

(10) PORT RELIEF/ANTICAVITATION VALVE
4000 PSI (276 bar)

(11) ANTICAVITATION VALVE

(12) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - AUXILIARY

(13) PORT RELIEF/ANTICAVITATION VALVE:
. . . . . (Optional)
3500 PSI (241,3 bar)

(14) LOAD CHECK VALVE

(15) LIFT CYLINDER SPOOL - MADE TO RESTRICT FLOW DURING BOOM DOWN BUT NOT DURING BOOM UP

(16) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BICS CONTROL

(17) PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - TILT CONTROL

(18) PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - LIFT CONTROL

(19) PULL BUTTON ACTIVATED DIRECTIONAL CONTROL VALVE - LIFT ARM BY-PASS

(20) PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - UNLOADING SPOOL

(21) PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - FLOW CONTROL SPOOL

(22) FLOW DIVIDER ADJUSTMENT VALVE

(23) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BASE

(24) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - ROD

(25) LOAD SHUTTLE VALVE - BLEED OFF

(26) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - TWO COIL

(27) PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - REAR AUXILIARY

(28) RESTRICTOR - 0.031 inch (0,8 mm)

(29) RELIEF VALVE: 3300 PSI (228 bar)

(30) CHARGE PRESSURE SENSOR

(31) FILTER - HYDRAULIC (CANISTER)

(32) FILTER - CASE DRAIN (SINTERED BRONZE)

(33) FILTER - BICS CONTROL VALVE (SCREEN)

(34) CHECK VALVE - BUCKET POSITION VALVE

(35) RESTRICTION

(36) VARIABLE CAPACITY DISPLACEMENT BI-DIRECTIONAL HYDROSTATIC PUMP

(37) SHUTTLE RELIEF VALVE
(Not Adjustable - Factory Set)
200 PSI (13,8 bar)

(38) FIXED CAPACITY DISPLACEMENT BI-DIRECTIONAL HYDROSTATIC MOTOR

(39) CHECK VALVE - With 80 PSI (5,5 bar) Spring

(40) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BUCKET POSITION VALVE (ON/OFF)

(41) CHECK VALVE - BICS CONTROL VALVE

(42) RESTRICTION - 0.343 inch (8,7 mm)

(43) FILTER - Bob-Tach Valve

(44) PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - HYDRAULIC POWERED BOB-TACH

(45) RESTRICTION - 0.089 inch (2,26 mm)

(46) RESTRICTION - 0.025 inch (0,6 mm)

(47) RELIEF VALVE - 2000 PSI (137 bar)

(48) RELIEF VALVE - 1200 PSI (83 bar)

(49) SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE (TWO COIL)

(50) FIXED CAPACITY DISPLACEMENT HYDRAULIC MOTOR

(51) ANTICAVITATION VALVE

(52) PROPORTIONAL RELIEF VALVE –
(Fan Speed Regulator):
1566 - 1784 PSI (108 - 123 bar)

(53) CHARGE PUMP -
13.6 GPM (51,5 L/min) at High Engine Idle

(54) CHECK VALVE - With 300 PSI (20,7 bar) Spring with 0.016 inch (0,40 mm) orifice

(55) SOLENOID ACTIVATED CONTROL VALVE - FORWARD/REVERSE

(56) SERVO PISTON -Swash Plate

(57) POSITION SENSOR -Swash Plate

(58) FILTER - HYDRAULIC (CANISTER)

(59) SPRING LOADED FILTER BY-PASS VALVE: 75-83 PSI (5,2-5,7 bar)

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NOTE: Unless otherwise specified, springs have NO significant pressure value.

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Temperature / Pressure Chart (Cont'd)

Evaporator

Pressures represent gas temperatures inside the coil. not the coil surface. For an estimate of the temperature of the air coming off the coil add 8° - 10° F to the temperature on the chart.

Condenser

Temperatures are not ambient temperatures but condensing temperatures. Add 40° F to the ambient temperature to get the condensing temperature and then refer to the pressure chart to see appropriate pressure for ambient temperature.

Example: Ambient Temperature=90° F

90° F

+40° F

130° F condenser temperature=200 psig

Conditions and pressures will vary from system to system. Check with MCC for system specifications.

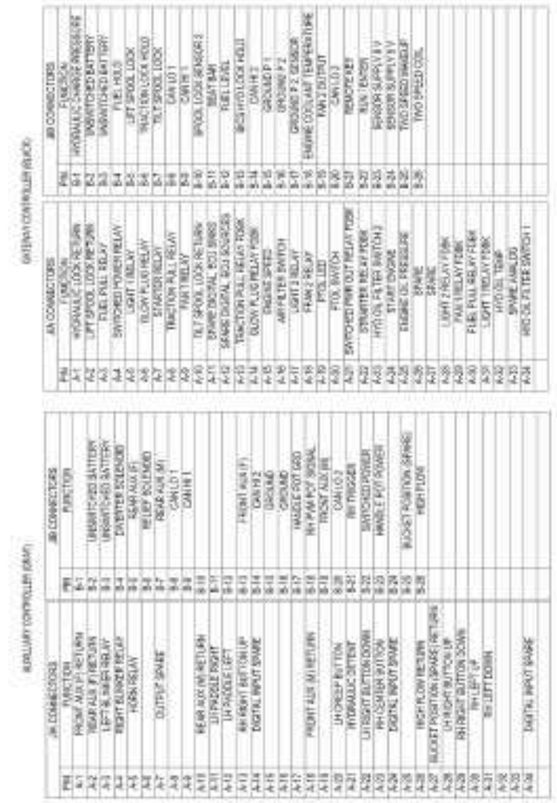
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WIRING SCHEMATIC
(MAINFRAME)
S250 (S/N A5GM20001 AND ABOVE)
(S/N A5GN20001 AND ABOVE)
S300 (S/N A5GP20001 AND ABOVE)
(S/N A5GR20001 AND ABOVE)

(PRINTED OCTOBER 2009)

7159444 or 7169388

LARGE FRAME
MAINFRAME
HARNESS
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