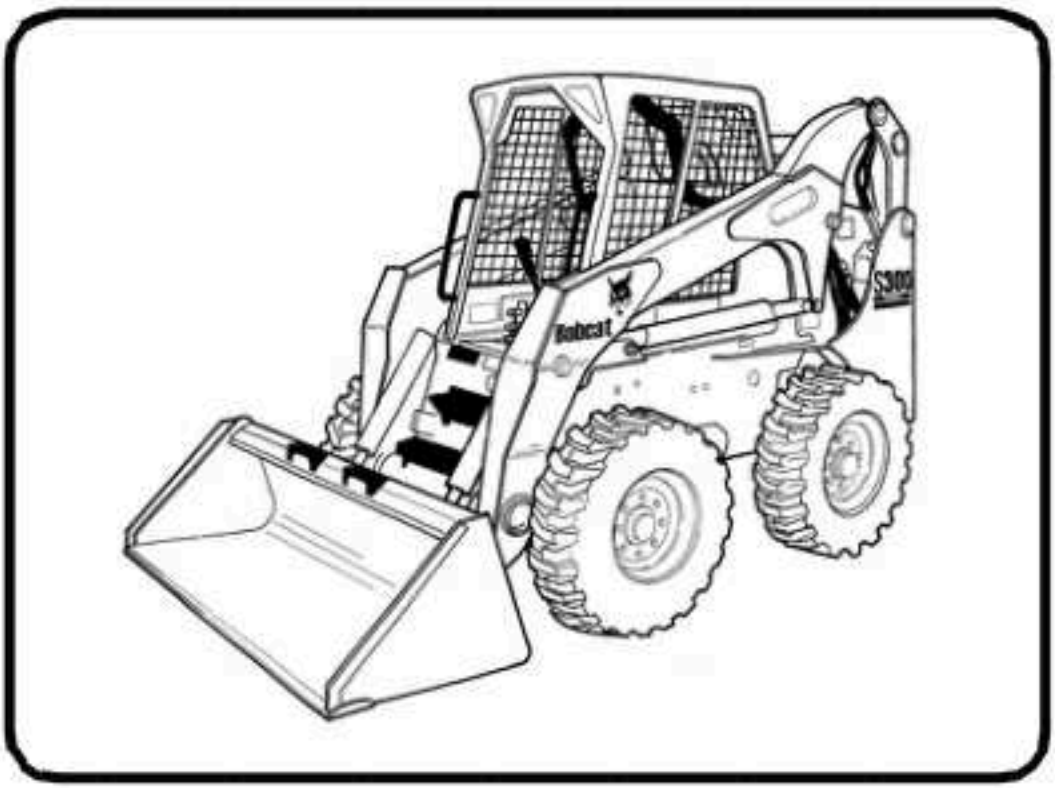
Bobcat®

Service Manual

S250, S300 Skid-Steer Loader

S/N 530911001 & Above
S/N 531011001 & Above
S/N 531111001 & Above
S/N 531211001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6904158 (3-09)

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Remote Start Procedure

⚠ WARNING

AVOID INJURY OR DEATH

With the 7-pin connector plugged into the loader and Remote Start Tool RUN button is not illuminated, the loader can still be started from the operator panel inside the cab.

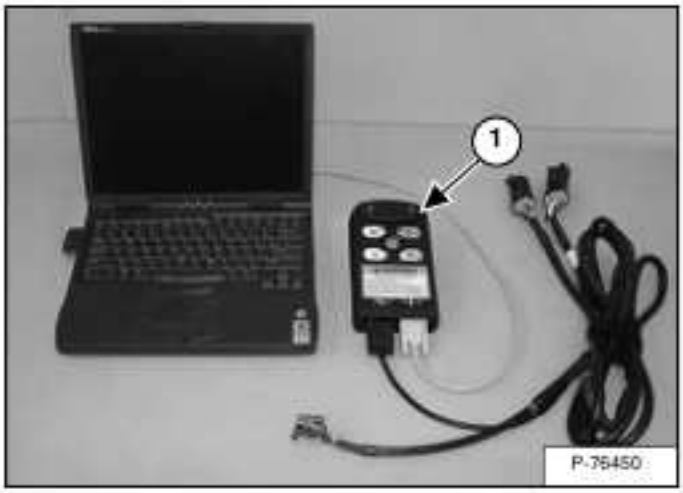
Pressing the RUN button on the Remote Start Tool disconnects the operator panel from the start circuit. If the service technician will be working in the engine area it is important to remove the operator panel key or lock the keypad with a unique password.

W-2647-0707

The tool listed will be needed to do the following procedure:

6689779: Remote Start Tool (Service Tool) Kit

Figure 10-61-8



The Remote Start Tool (Service Tool) (Item 1) **[Figure 10-61-8]** is required when the operator cab is in the raised position for service and the service technician needs to turn on the loader or start the engine. Example: adjusting the steering linkage.

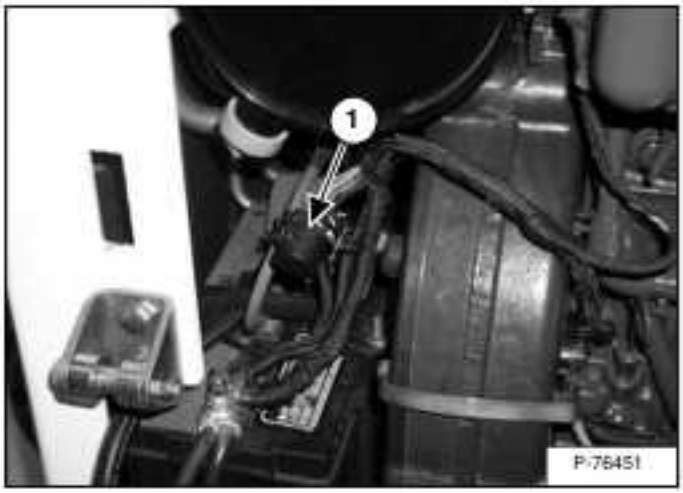
Lift and block the loader.

Raise the lift arms (if required by the procedure) and install an approved lift arm support device.

Raise the operator cab (if required by the procedure).

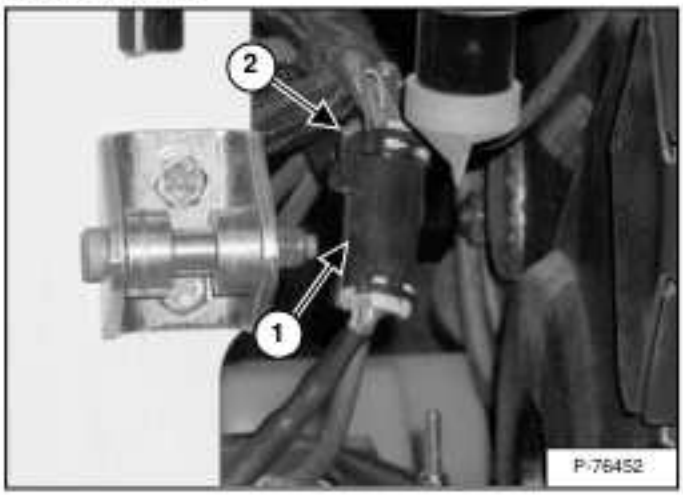
Open the rear door of the loader.

Figure 10-61-9



Loaders without an attachment control harness, remove the loader harness cap (Item 1) **[Figure 10-61-9]** and connect the Loader Service Tool Harness from the Remote Start Tool (Service Tool).

Figure 10-61-10



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 10-61-10]**.

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

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HYDRAULIC/HYDROSTATIC SCHEMATIC
WITH SJC, 2 SPEED AND HIGH FLOW OPTION
S250 (S/N 530911001 - 530940000)
(S/N 531011001 - 531040000)
S300 (S/N 531111001 - 531140000)
(S/N 531211001 - 531240000)

(PRINTED NOVEMBER 2007)
V-0750legend

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. HYDRAULIC BRAKE - SPRING APPLIED - PRESSURE RELEASE
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. RELIEF VALVE - 3300 PSI (228 bar)
51. DUMP VALVE - (ON/OFF)
52. CHECK VALVE
53. AUXILIARY HYDRAULIC PUMP - 16.0 GPM (60,5 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. CHARGE PRESSURE SENSOR
59. CHARGE PUMP - 13.6 GPM (51,5 L/min) at High Engine Idle
60. FIXED CAPACITY DISPLACEMENT HYDRAULIC MOTOR
61. ANTICAVITATION VALVE
62. PROPORTIONAL RELIEF VALVE – (Fan Speed Regulator): 1566 - 1784 PSI (108 - 123 bar)
63. CHECK VALVE
64. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BRAKE
65. FIXED CAPACITY DISPLACEMENT BI-DIRECTIONAL HYDROSTATIC MOTOR – 2 SPEED
66. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE – 2 SPEED
67. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE – 2 SPEED
68. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE – MAKE-UP
69. FILTER - BRAKE

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 degrees F. to the temperature on the chart.

Condenser

Temperatures are not ambient temperatures but condensing temperatures. Add 40 degrees 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 degrees F.
90 degrees F.
+40 degrees F.
130 degrees F. condenser temperature=200 psig

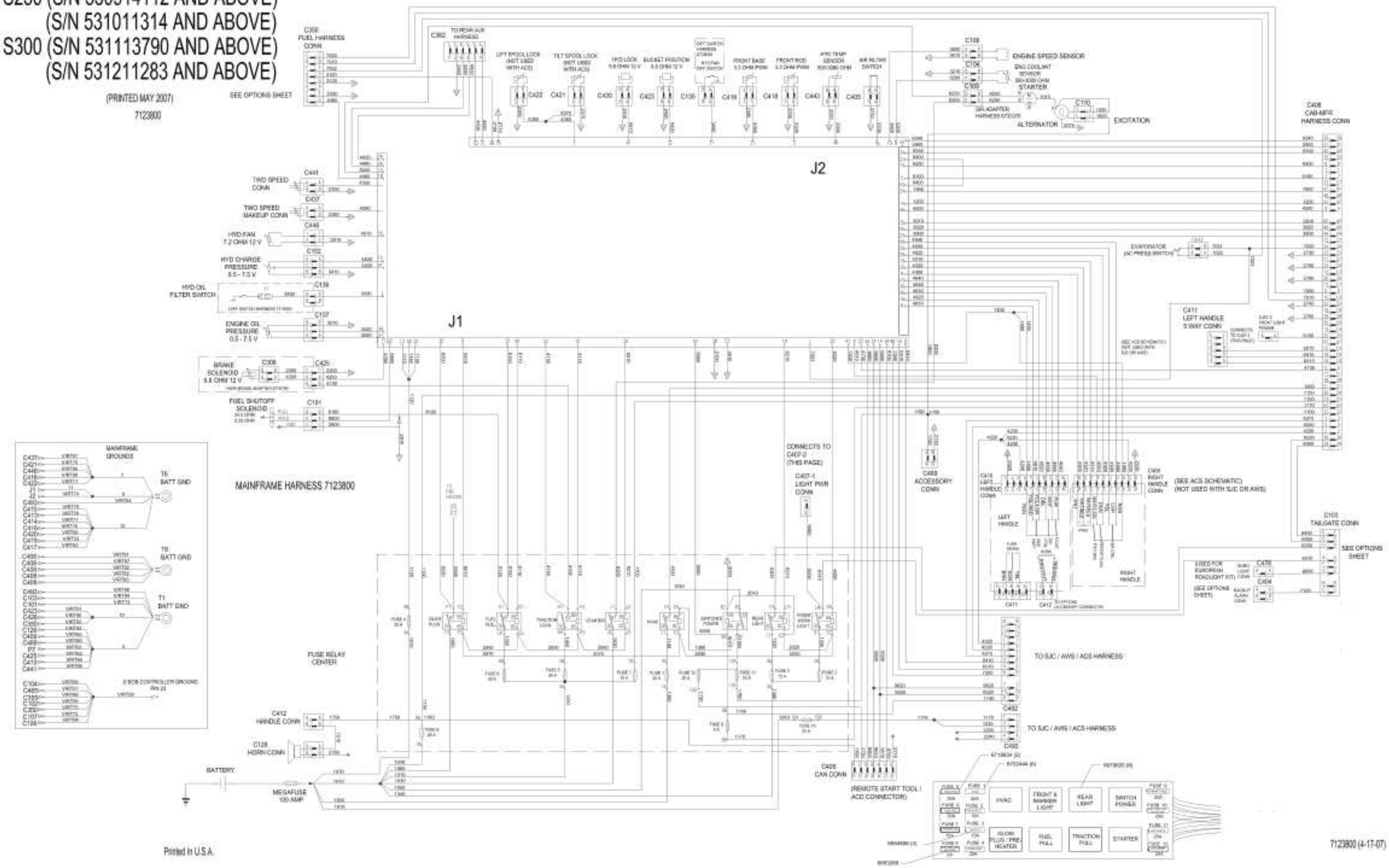
Conditions and pressures will vary from system to system. Check with MCC for system specifications.

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WIRING SCHEMATIC
(MAINFRAME)
S250 (S/N 530914112 AND ABOVE)
(S/N 531011314 AND ABOVE)
S300 (S/N 531113790 AND ABOVE)
(S/N 531211283 AND ABOVE)

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