S205 TURBO

S205 TURBO HIGH FLOW

Bobcat®

Service Manual

S/N 528411001 & Above
S/N 528511001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6902917 (7-09)

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HYDRAULIC/HYDROSTATIC SCHEMATIC
WITH HIGH FLOW OPTION
S205 (S/N 528411001 AND ABOVE)
(S/N 528511001 AND ABOVE)

(PRINTED JULY 2005)
V-0568legend

LEGEND

1. RESERVOIR:
   Capacity . . . . . 19.2 Qts. (18,2 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: 5000 PSI (345 Bar)
6. RELIEF VALVE - CHARGE INLET:
   220-270 PSI (15,1-18,6 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
   16.3 GPM (61,7 L/min.) at High Engine Idle
9. RELIEF VALVE - MAIN:
   3250-3350 PSI (224-231 Bar)
   at Front Quick Couplers
10. RELIEF/ANTICAVITATION VALVE - PORT 3500 PSI (241,3 Bar)
11. ANTICAVITATION VALVE
12. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - AUXILIARY
13. RELIEF/ANTICAVITATION VALVE - PORT (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 - 0.140 inch (3,6 mm)
29. RESTRICTOR - 0.031 inch (0,8 mm)
30. RELIEF VALVE: 3300 PSI (228 Bar)
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 BIDIRECTIONAL HYDROSTATIC PUMP
37. SHUTTLE RELIEF VALVE
    (Not Adjustable - Factory Set)
    65 PSI (4,5 Bar)
38. FIXED CAPACITY DISPLACEMENT BIDIRECTIONAL 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. AUXILIARY HYDRAULIC PUMP - 9.2 GPM (34,8 L/min) at High Engine Idle
43. CHECK VALVE - With 300 PSI (20,7 Bar) Spring And With 0.016 inch (0,40 mm) Orifice
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. FILTER - BOB-TACH VALVE
    (S/N 528411783 & Above)
    (S/N 528511010 & Above)

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

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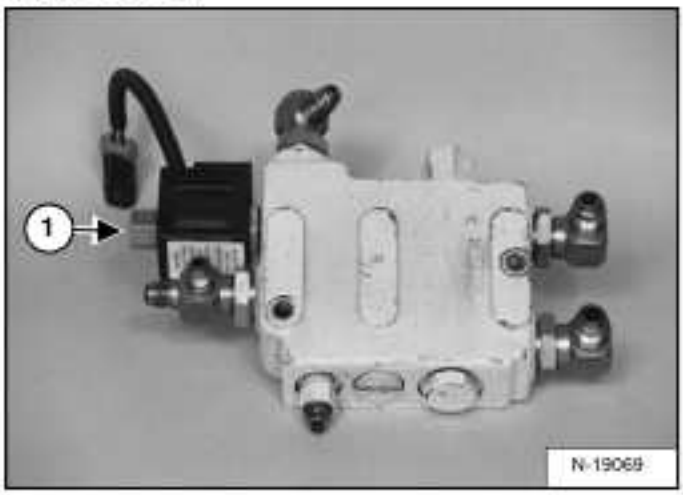
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BUCKET POSITION VALVE (CONT'D)

Disassembly And Assembly

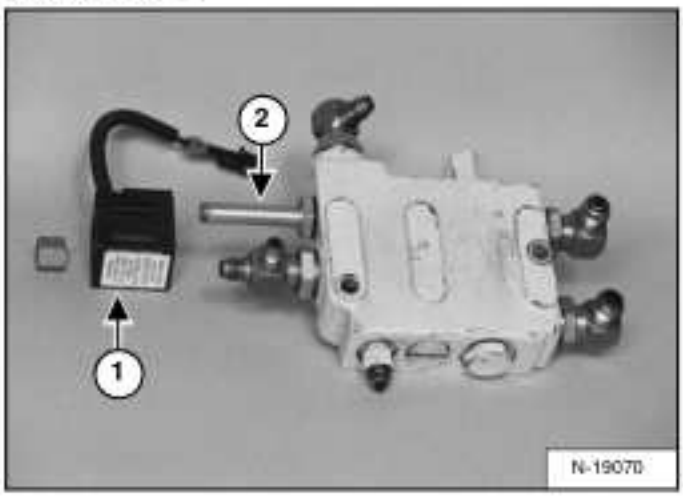
Figure 20-90-11



Remove the solenoid nut (Item 1) **[Figure 20-90-11]**.

Installation: Tighten the nut to 4 - 6 ft.-lb. max. (5 - 8 N•m max.) torque. Overtighten may cause valve failure.

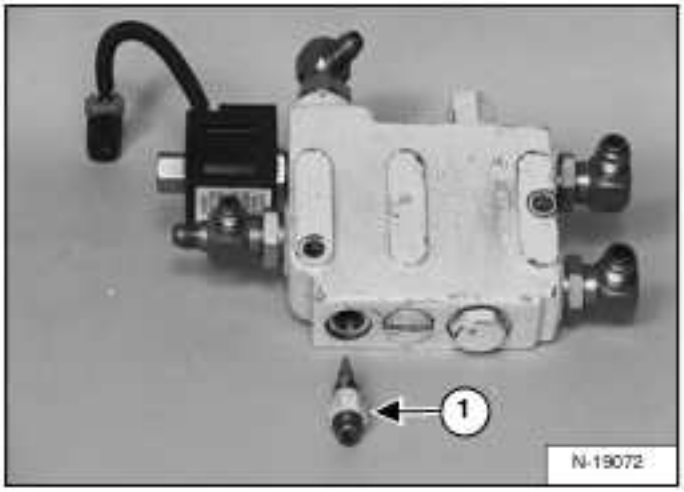
Figure 20-90-12



Remove the solenoid (Item 1) and the solenoid stem (Item 2) **[Figure 20-90-12]**.

Installation: Tighten the solenoid stem to 30 - 35 ft.-lb. (40,8 - 47,6 N•m) torque.

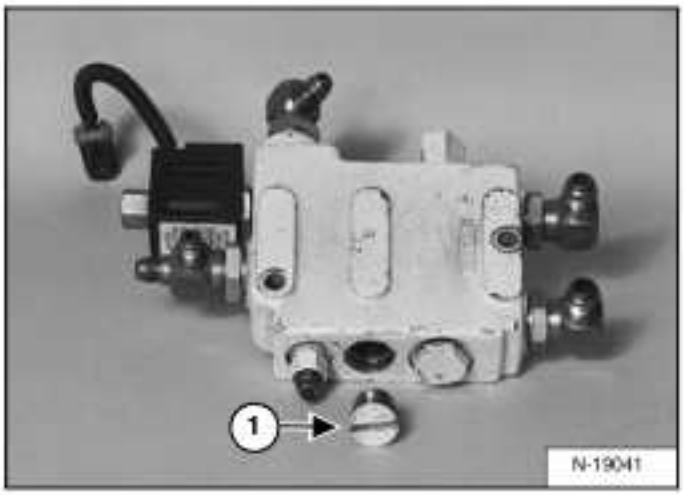
Figure 20-90-13



Remove the flow adjustment valve and O-ring (Item 1) **[Figure 20-90-13]**

NOTE: Always install new O-rings before any parts are installed into the valve. Check the parts for wear or damage and replace as needed.

Figure 20-90-14

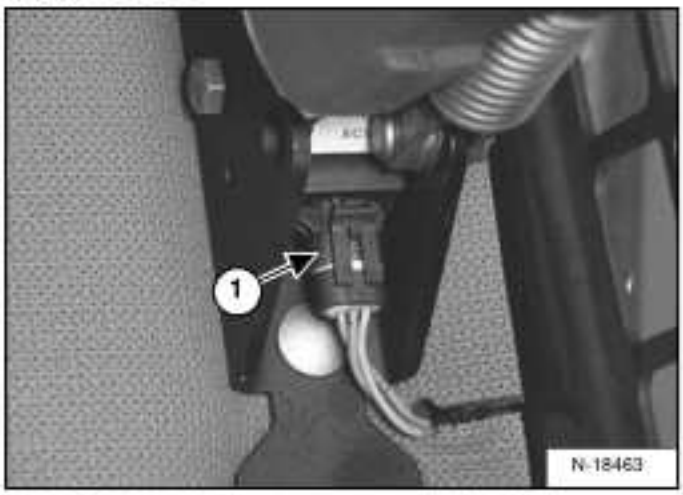


Remove the plug (Item 1) **[Figure 20-90-14]**.

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BICS Circuit Test

Figure 60-100-8

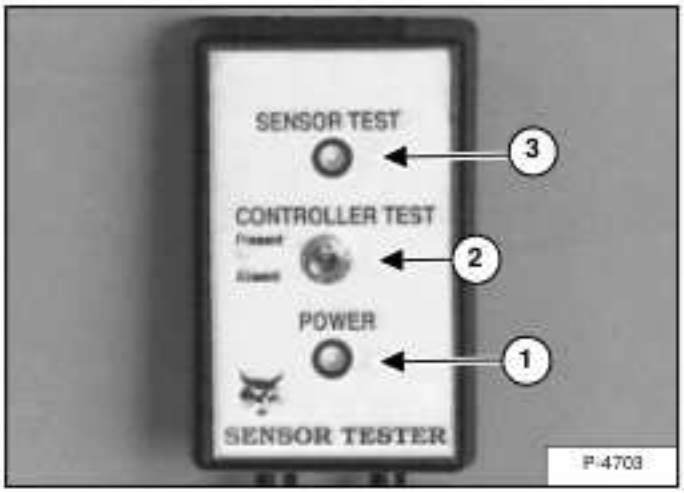


Use Sensor Testers (MEL1428) and seat bar sensor tester adapter (MEL1567) for the following procedure:

Connect the seat bar sensor tester adapter MEL1567 to the sensor tester.

Disconnect the seat bar sensor connector (Item 1) **[Figure 60-100-8]**.

Figure 60-100-9



Connect Sensor Tester (Item 1) **[Figure 60-100-9]** inline to the seat bar sensor connectors.

Turn the key to the ON position. **DO NOT START THE ENGINE**.

If there is no power light on the sensor tester, check the tester or wiring harness.

When the power light is illuminated, move the toggle switch (Item 2) **[Figure 60-100-9]** on the sensor tester to the ***Present*** position.

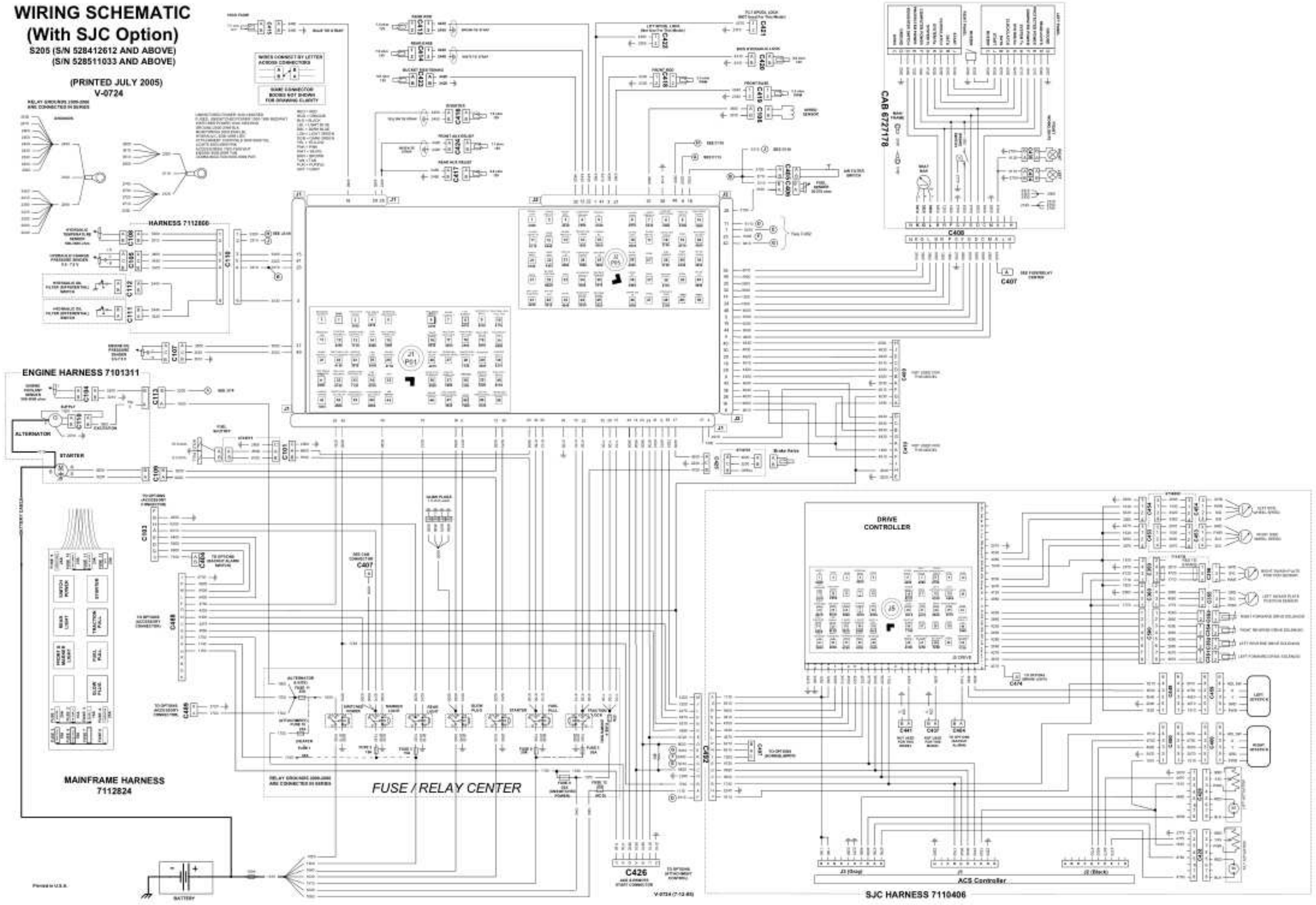
NOTE: The sensor test light (Item 3) [Figure 60-100-9] is only activated by the seat bar. It will be off with the seat bar up or on with the seat bar down.

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WIRING SCHEMATIC
(With SJC Option)

S205 (S/N 528412612 AND ABOVE)
(S/N 528511033 AND ABOVE)

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