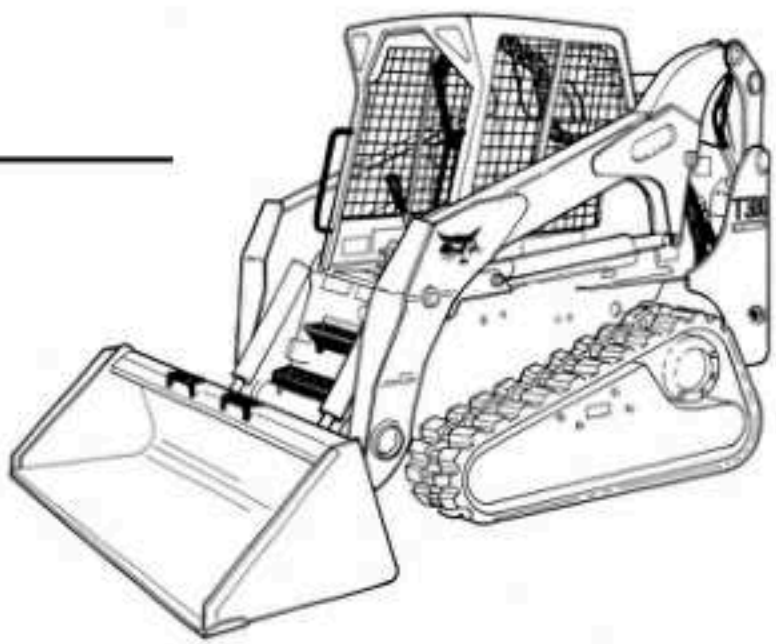
T300
TURBO

T300
TURBO
HIGH FLOW

Bobcat®

Service Manual

S/N 525411001 & Above
S/N 525511001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6902726 (2-06)

Ingersoll Rand
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ACS- ADVANCED CONTROL SYSTEM
AHC- ADVANCED HAND CONTROL SYSTEM
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HYDRAULIC/HYDROSTATIC SCHEMATIC
WITH SJC OPTION
T300 (S/N 525411001 - 525413999)
(S/N 525511001 - 525511999)

(PRINTED FEBRUARY 2005)
V-0405legend

LEGEND

1. RESERVOIR:
   Capacity . . . . . 21 qt. (19.9 L)
2. FILTER - CASE DRAIN (90 Micron)
3. FILTER - HYDRAULIC (CANISTER)
4. SPRING LOADED FILTER BYPASS VALVE: 45-55 PSI (3,1-3,8 bar)
5. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BUCKET POSITION VALVE (ON/OFF)
6. DIFFERENTIAL PRESSURE SWITCH: 36-44 PSI (2,5-3,0 bar)
7. FLOW DIVIDER ADJUSTMENT VALVE
8. CHECK VALVE - BUCKET POSITION VALVE
9. FIXED CAPACITY DISPLACEMENT BIDIRECTIONAL HYDROSTATIC MOTOR
10. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - FLOW CONTROL SPOOL
11. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - UNLOADING SPOOL
12. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - TILT CONTROL
13. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - LIFT CONTROL
14. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BICS CONTROL
15. PULL BUTTON ACTIVATED DIRECTIONAL CONTROL VALVE - LIFT ARM BY PASS
16. FILTER - BICS CONTROL VALVE (SCREEN)
17. ONE WAY RESTRICTOR (ACS Valve Only)
18. LOAD CHECK VALVE
19. RELIEF VALVE - MAIN:
    at Front Quick Couplers
    3250-3350 PSI (224-231 bar)
20. RELIEF VALVE - PORT:
    4000 PSI (275 bar)
21. ANTICAVITATION VALVE
22. RELIEF/ANTICAVITATION VALVE - PORT (TILT BASE END)
    3500 PSI (241 bar)
23. RELIEF VALVE - PORT:
    4000 PSI (275 bar)
24. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - AUXILIARY
25. RELIEF VALVE - PORT: . . . . . (Optional)
    3500 PSI (241 bar)
26. RELIEF/REPLENISHING VALVE - HIGH PRESSURE: 5220 PSI (345 bar)
27. PRESSURE SWITCH
28. RELIEF VALVE - CHARGE:
    140 degrees F. (60 degrees C.)Fluid at high engine idle
    330 - 360 PSI (22,7 - 24,8 bar)
29. CHARGE PUMP:
    11.1 GPM (42 L/min) (for each pump) at high engine idle
30. HYDRAULIC PUMP . . . . . Gear Type
    20.7 GPM (78,4 L/min) at high engine idle
31. DRIVE MOTOR SHUTTLE VALVE
32. SHUTTLE RELIEF VALVE:
    200 PSI (13,8 bar)
33. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Base
34. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - Rod
35. LOAD SHUTTLE VALVE - BLEED OFF
36. PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - (Two Coil)
37. PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - REAR AUXILIARY
38. ORIFICE - With 0.140 inch (3,6 mm)
39. RELIEF VALVE:
    3000 PSI (207 bar)
40. ORIFICE - With 0.031 inch (0,79 mm)
41. CHECK VALVE - BICS CONTROL VALVE
42. RESTRICTION
43. CHECK VALVE
44. FRONT AUXILIARY MANUAL PRESSURE BLEED-OFF VALVE
45. VARIABLE CAPACITY DISPLACEMENT BIDIRECTIONAL HYDROSTATIC PUMP
46. RELIEF VALVE - 2000 PSI (138 bar)
47. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE (TWO COIL)
48. RELIEF VALVE - 1200 PSI (83 bar)
49. CHECK VALVE - With 80 PSI (5,5 bar) Spring
50. CHECK VALVE - With 300 PSI (20,7 bar) Spring and 0.016 inch (0,40 mm) orifice
51. ORIFICE - With 0.025 inch (0,64 mm)
52. PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - HYDRAULIC POWERED BOB-TACH
53. FILTER - CASE DRAIN (ATTACHMENT)
54. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BRAKE
55. HYDRAULIC BRAKE - SPRING APPLIED - PRESSURE RELEASE
56. ORIFICE - With 0.089 inch (2,26 mm)
57. DISPLACEMENT CONTROL VALVE
58. PUMP SERVO
59. PRESSURE CONTROL PILOT VALVE (2 COILS) 0 - 0.085 Ampere

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

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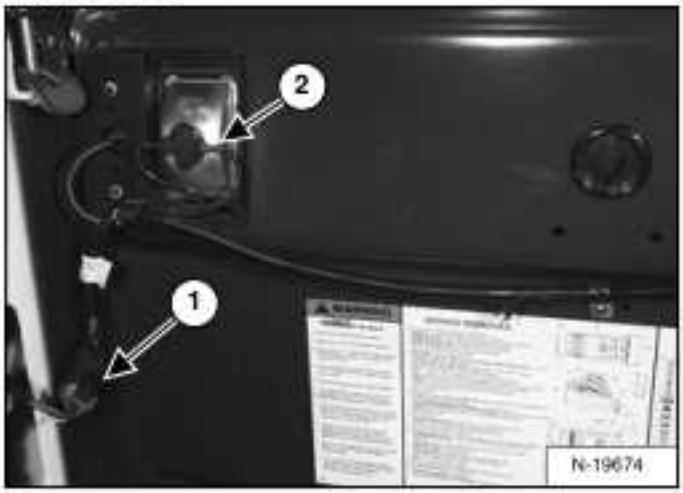
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REAR DOOR

Removal And Installation

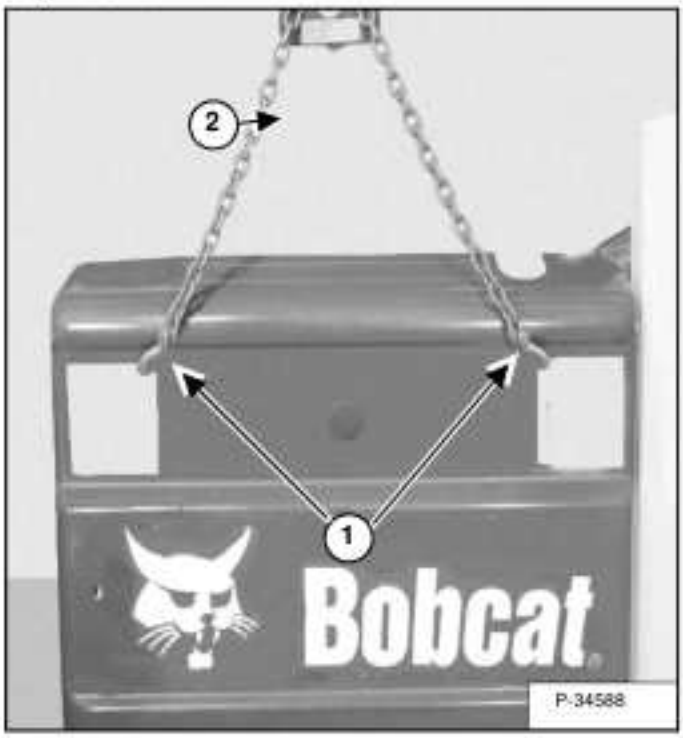
Figure 50-70-1



Disconnect the light harness connector (Item 1) **[Figure 50-70-1]** from the engine harness.

Remove both rear lights (Item 2) **[Figure 50-70-1]** from the door. (See Rear Removal And Installation on Page 60-60-1.)

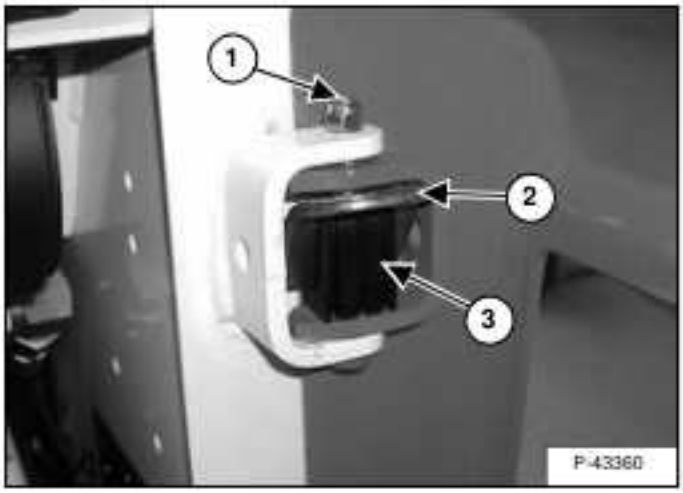
Figure 50-70-2



Secure the chain hooks (Item 1) **[Figure 50-70-2]** to the door as shown.

Connect a chain hoist (Item 2) **[Figure 50-70-2]** to the lifting chain.

Figure 50-70-3



Remove the top and bottom door hinge mounting bolts (Item 1) **[Figure 50-70-3]** and nuts.

NOTE: Install the door stop (Item 2) and the door stop retainer (Item 3) [Figure 50-70-3] in the top hinge as shown.

Installation: Tighten the mounting bolts and nuts to 25-28 ft.-lb. (34-38 N•m) torque.

Lift the door away from the loader frame and put the door flat on the floor.

Installation: Reverse the removal procedure to install the rear door.

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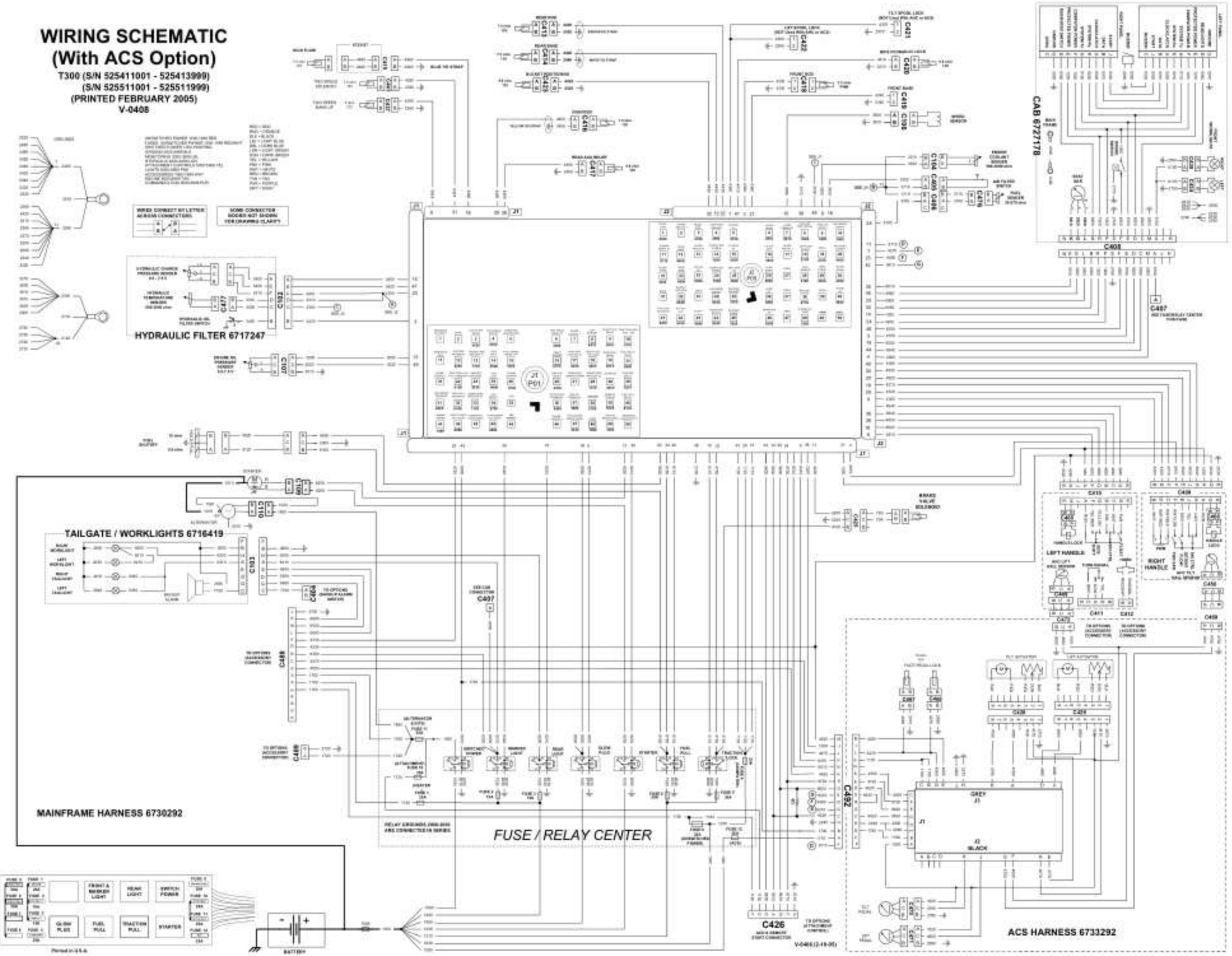
Gauge Pressure Related Troubleshooting (Cont'd)

Possible Cause	Inspection	Solution
High pressure side Too low.		
1. Low refirgerant charge.	The high side pressure will be low and bubbles may be present in sight glass on receive drier.	Repair any leaks and recharge the refrigerant to the correct level.
System pressures Equal		
1. Clutch not operating.	See magnetic clutch related topics above.	
2. Compressor not pumping.	Equal high and low pressures.	Replace compressor.

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WIRING SCHEMATIC
(With ACS Option)

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