TURBO
873
TURBO
883
INCLUDES HIGH FLOW

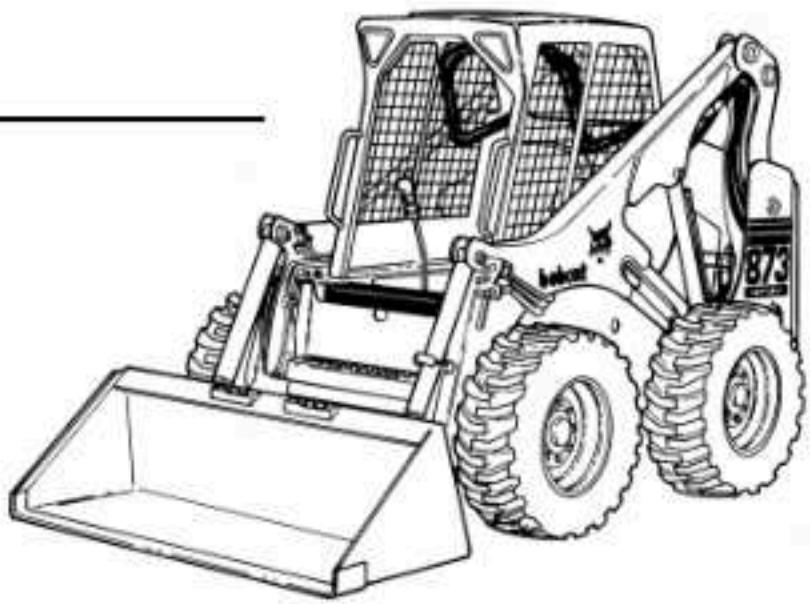
Bobcat®

Service Manual

G Series

S/N 514140001 & Above
S/N 514240001 & Above
S/N 517911001 & Above

S/N 520111001 & Above
S/N 520211001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6900847 (2-06)

Ingersoll Rand
Compact Vehicle Technologies

Printed in U.S.A.

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HYDRAULIC/HYDROSTATIC SCHEMATIC
WITH HIGH FLOW OPTION
873 (S/N 514149137 AND ABOVE)
(S/N 517912142 AND ABOVE)
883 (S/N 520111001 AND ABOVE)
(S/N 520211001 AND ABOVE)

(PRINTED JULY 2001)
V-0106legend

LEGEND

1. RESERVOIR:
   Capacity . . . . . 21 Qts. (19.9 L)
2. FILTER - CASE DRAIN (90 Micron)
3. FILTER - HYDRAULIC (CANISTER)
4. SPRING LOADED FILTER BYPASS VALVE: 45-55 PSI (311-379 kPa)
5. PILOT ACTIVATED DIRECTIONAL CONTROL VALVE - HYDRAULIC POWERED BOB-TACH
6. DIFFERENTIAL PRESSURE SWITCH: 36-44 PSI (248-303 kPa)
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
18. LOAD CHECK VALVE
19. RELIEF VALVE - MAIN:
    873: 2950-3050 PSI (20340-21030 kPa)
    883: 3250-3350 PSI (22408-23097 kPa)
    at Front Quick Couplers
20. RELIEF VALVE - PORT:
    873: 3500 PSI (24132 kPa)
    883: 4000 PSI (27579 kPa)
21. ANTICAVITATION VALVE
22. RELIEF/ANTICAVITATION VALVE - PORT (TILT BASE END)
    3500 PSI (24132 kPa)
23. ONE WAY RESTRICTOR VALVE
24. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - AUXILIARY
25. RELIEF VALVE - PORT: . . . . . (Optional)
    3500 PSI (24132 kPa)
26. RELIEF/REPLENISHING VALVE - HIGH PRESSURE: 5000 PSI (34474 kPa)
27. PRESSURE SWITCH
28. RELIEF VALVE - CHARGE:
    120 degrees F. (53 degrees C.)Fluid at 1775 Pump RPM
    390 - 430 PSI (2689 - 2965 kPa)
29. CHARGE PUMP
    14.0 GPM (53.0 L/min.) at 2750 RPM
30. HYDRAULIC PUMP . . . . . Gear Type
    30.7 GPM (116.2 L/min.) at 2750 RPM
31. DRIVE MOTOR SHUTTLE VALVE
32. SHUTTLE RELIEF VALVE:
    200 PSI (1378 kPa)
33. LOAD SHUTTLE VALVE
34. CHECK VALVE
35. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - HIGH FLOW
36. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - DIVERTER
37. RELIEF VALVE - MAIN (HIGH FLOW)
    3000 PSI (20685 kPa)
38. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE (TWO COIL)
39. PILOT TO OPEN CHECK VALVE
40. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BLEED OFF
41. CHECK VALVE - BICS CONTROL VALVE
42. RESTRICTION
43. CHECK VALVE - AUXILIARY
44. ACCUMULATOR
45. VARIABLE CAPACITY DISPLACEMENT BIDIRECTIONAL HYDROSTATIC PUMP
46. TWO STAGE RELIEF 1000PSI/2000PSI
47. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE (TWO COIL)
48. RELIEF VALVE - 1200 PSI (8268 kPa)
49. PRESSURE COMPENSATED FLOW CONTROL
50. CHECK VALVE WITH .015 RESTRICTION
51. RELIEF VALVE - PORT:
    873: 3500 PSI (24132 kPa)
    883: 4000 PSI (27579 kPa)
52. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BUCKET POSITION VALVE (ON/OFF)
53. AUXILIARY HYDRAULIC PUMP
54. FILTER - CASE DRAIN (ATTACHMENT)
55. RESTRICTION - SELECT VALVE

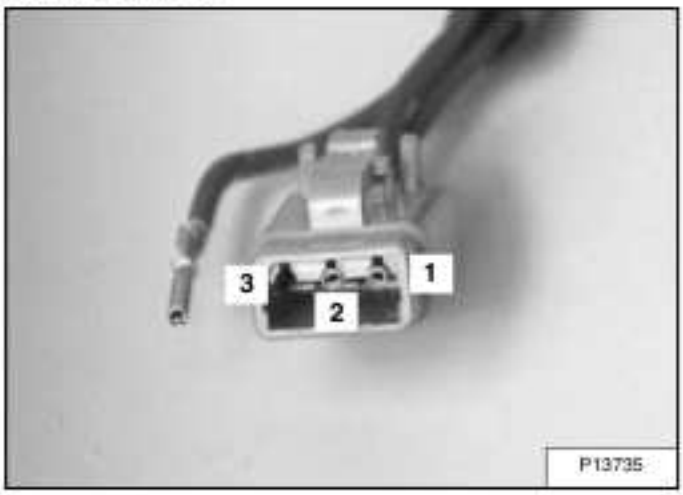
NOTE: Unless otherwise specified springs have NO significant pressure value.

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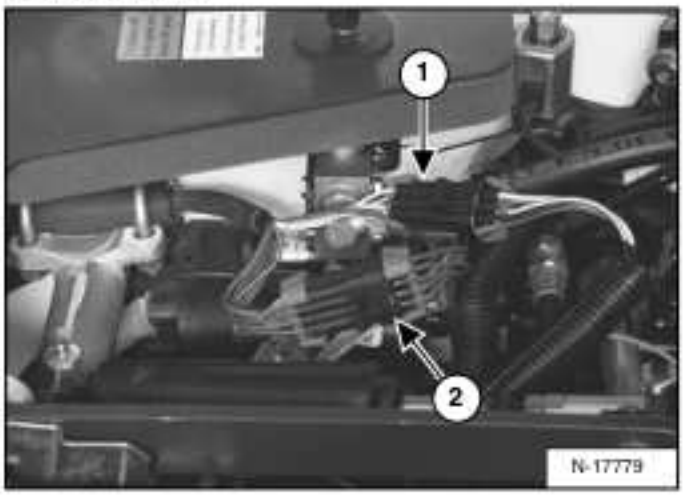
Switch Handle Removal (Cont'd)

Figure 60-122-16



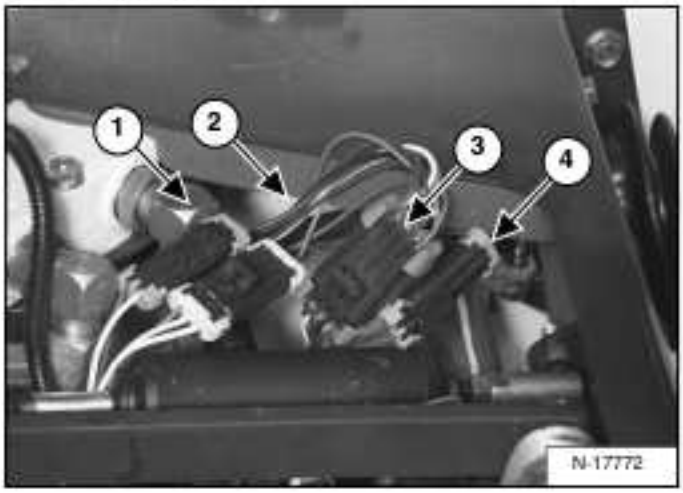
Using a pointed tool, press down on the tab (Item 1) **[Figure 60-122-16]** and pull the wire from the connector.

Figure 60-122-17



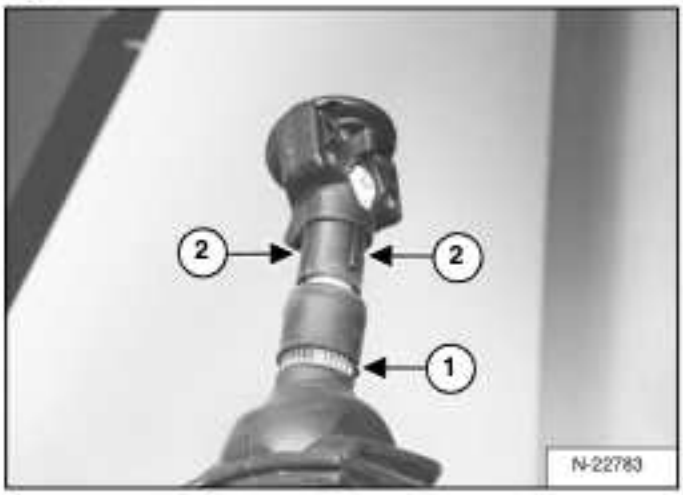
Disconnect the right switch handle connectors (Items 1 & 2) **[Figure 60-122-17]** from the loader wiring harness connectors.

Figure 60-122-18



Disconnect the left switch handle connectors (Items 1, 2, 3 & 4) **[Figure 60-122-18]** from the loader wiring harness connectors.

Figure 60-122-19



Roll the pistol grip handle cover (Item 1) **[Figure 60-122-19]** down.

Using a small screwdriver, lift the handle tabs (Item 2) **[Figure 60-122-19]** and slightly rotate the switch handle.

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Gauge Pressure Related Troubleshooting (Cont'd)

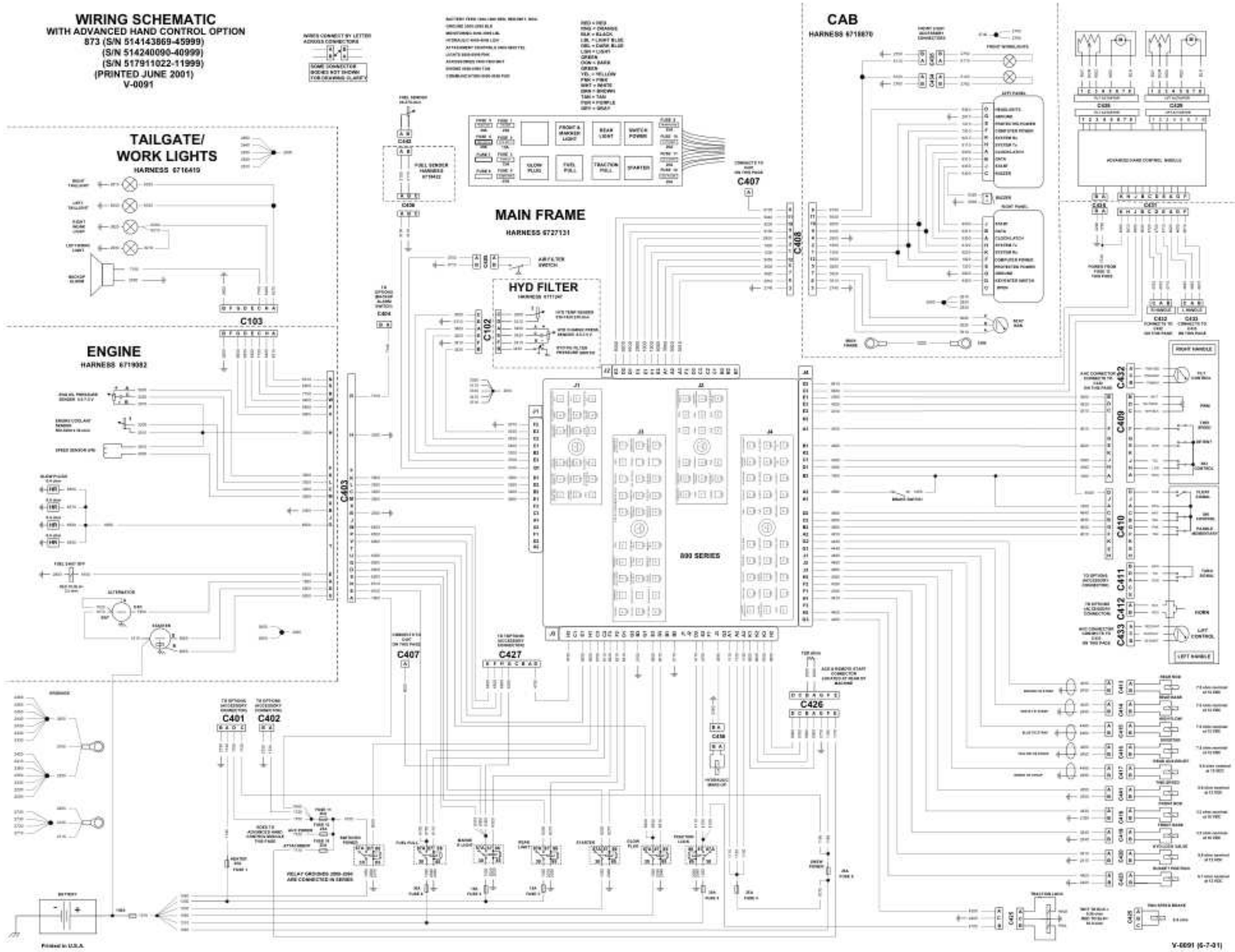
POSSIBLE CAUSE	INSPECTION	SOLUTION
High pressure side too low.		
1. Low refrigerant charge.	The high side pressure will be low and bubbles may be present in sight glass on receiver drier.	Repair any leaks and recharge the refrigerant to the correct level.
System pressures equal.		
1. Clutch not operating.	See magnetic clutch related topics above.	
2. Compressor not pumping.	Equal high and low pressures.	Replace compressor.

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WIRING SCHEMATIC

WITH ADVANCED HAND CONTROL OPTION

873 (S/N 514143869-45999)
(S/N 514240090-40999)
(S/N 517911022-11999)
(PRINTED JUNE 2001)
V-0091



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