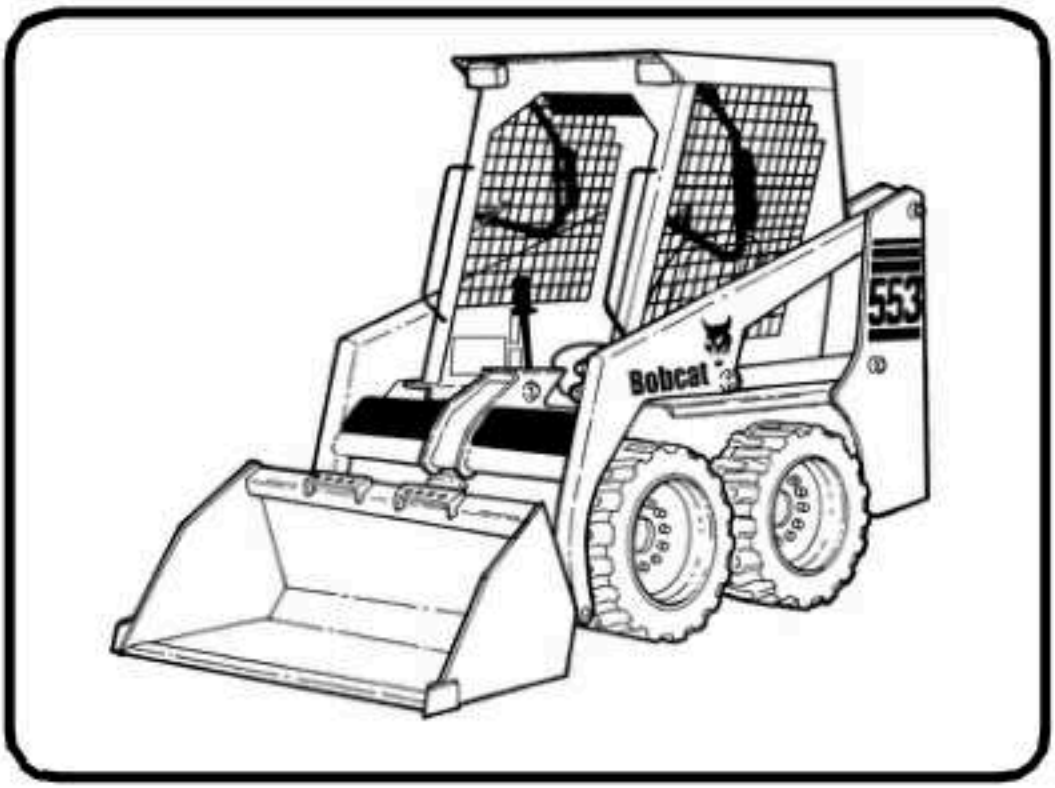
Bobcat®

Service Manual
553 Skid-Steer Loader

S/N 539112001 & Above
S/N 539412001 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

Ingersoll Rand
Compact Vehicle Technologies

6904705 (3-06)

Printed in U.S.A.

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HYDRAULIC/HYDROSTATIC SCHEMATIC
553 (S/N 539111001 AND ABOVE)
(S/N 539411001 AND ABOVE)
(PRINTED DECEMBER 2005)
V-0799legend

LEGEND

1. RESERVOIR:
   Capacity . . . . . 9.2 Qts. (8,7 L)
2. DRIVE MOTOR SHUTTLE VALVE
3. CHARGE PRESSURE SWITCH:
   30-40 PSI (2,7-2,8 Bar)
4. HYDRAULIC FLUID TEMPERATURE SWITCH: 224-234 degrees F. (107-112 degrees C.)
5. FILTER - HYDRAULIC/HYDROSTATIC (CANISTER)
6. SPRING LOADED FILTER BYPASS VALVE: 45-55 PSI (3,1-3,8 Bar)
7. FIXED CAPACITY DISPLACEMENT BIDIRECTIONAL HYDRAULIC/ HYDROSTATIC MOTOR
8. VARIABLE CAPACITY DISPLACEMENT BIDIRECTIONAL HYDRAULIC/ HYDROSTATIC PUMP
9. HYDRAULIC PUMP:
   Gear Type . . . . . 11 GPM (42 L/min.) at High Engine Idle
10. RELIEF/REPLENISHING VALVE - HIGH PRESSURE: 3750 PSI (259 Bar)
11. REPLENISHING VALVE
12. DUAL STAGE RELIEF VALVE - MAIN:
    2300/3000 PSI (159/207 Bar) at Front Quick Couplers
13. LOAD CHECK VALVE
14. DIFFERENTIAL PRESSURE SWITCH:
    25-46 PSI (1,7-3,2 Bar)
15. ONE WAY RESTRICTOR VALVE - LIFT:
    0.125" (3,175 mm)
16. ONE WAY RESTRICTOR VALVE - TILT:
    0.109" (2,769 mm)
17. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE – UNLOADING SPOOL
18. FILTER - TILT LOCK VALVE (SCREEN)
19. CHECK VALVE - TILT LOCK VALVE
20. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - LIFT/TILT CONTROL
21. PULL BUTTON ACTIVATED DIRECTIONAL CONTROL VALVE – LIFT ARM BY PASS
22. CHECK VALVE - LIFT LOCK VALVE
23. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - TILT CONTROL
24. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - LIFT CONTROL
25. SOLENOID ACTIVATED DIRECTIONAL CONTROL VALVE - BUCKET POSITION VALVE (ON/OFF)
26. FLOW DIVIDER ADJUSTMENT VALVE
27. PILOTED ACTIVATED DIRECTIONAL CONTROL VALVE - FLOW CONTROL SPOOL
28. CHECK VALVE - BUCKET POSITION VALVE
29. ANTICAVITATION
30. ANTICAVITATION
31. OIL COOLER BY-PASS
    117-135 PSI (8,1-9,3 Bar)
32. CHARGE RELIEF VALVE
    45-65 PSI (3,1-4,5 Bar)
33. PORT RELIEF VALVE
    3500 PSI (241 Bar)

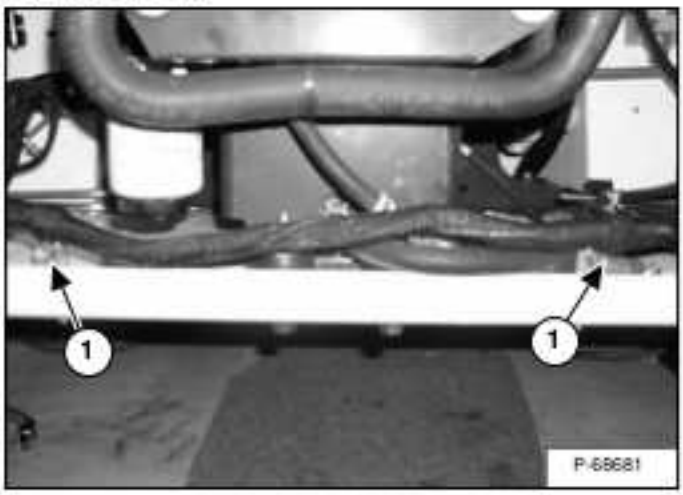
NOTE: Unless otherwise specified springs have NO significant pressure value.

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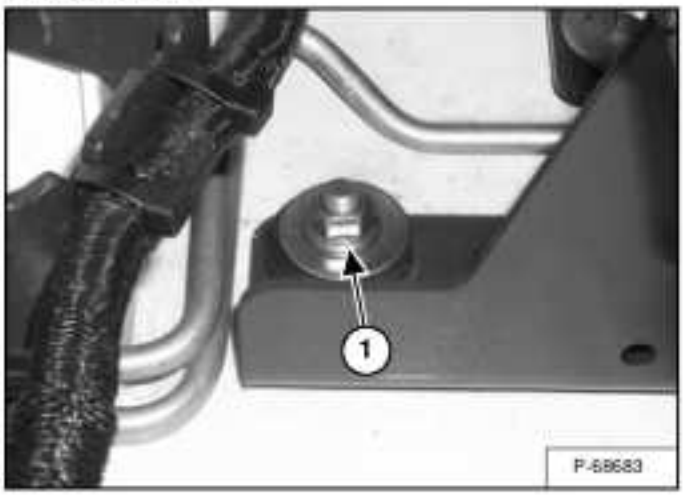
Engine Removal And Installation (Cont'd)

Figure 70-10-11



Remove the bolts (Item 1) **[Figure 70-10-11]** to move the engine harness for engine removal.

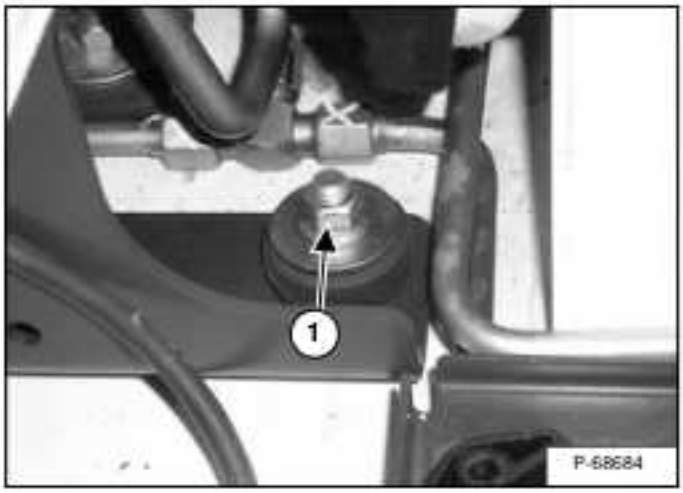
Figure 70-10-12



Remove the nut and washer (Item 1) **[Figure 70-10-12]** from the front left engine mount.

Installation: Tighten the nut to 65-70 ft.-lb. (88-95 N•m) torque.

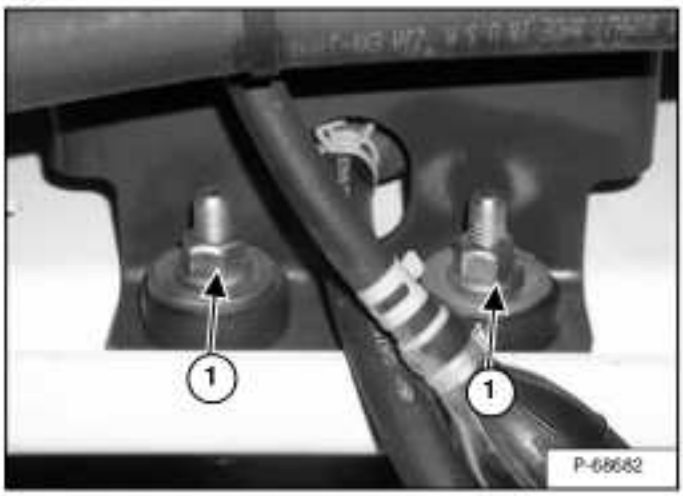
Figure 70-10-13



Remove the nut and washer (Item 1) **[Figure 70-10-13]** from the right front engine mount.

Installation: Tighten the nut to 65-70 ft.-lb. (88-95 N•m) torque.

Figure 70-10-14



Remove the nuts and washers (Item 1) **[Figure 70-10-14]** from the rear engine mount.

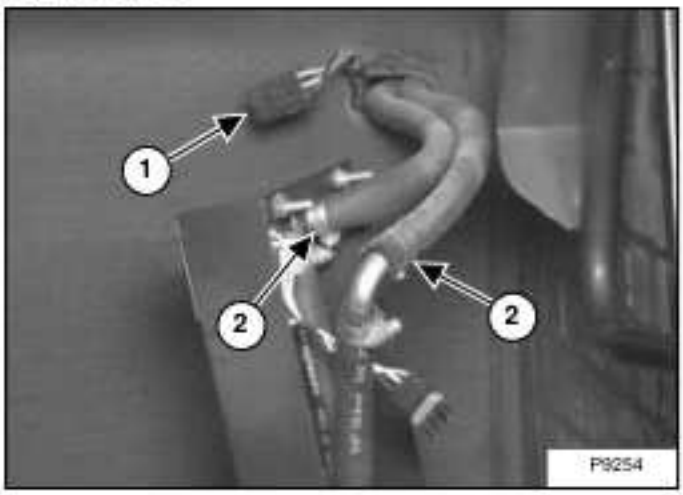
Installation: Tighten the nuts to 65-70 ft.-lb. (88-95 N•m) torque.

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Removal And Installation (Cont'd)

Figure 80-40-4

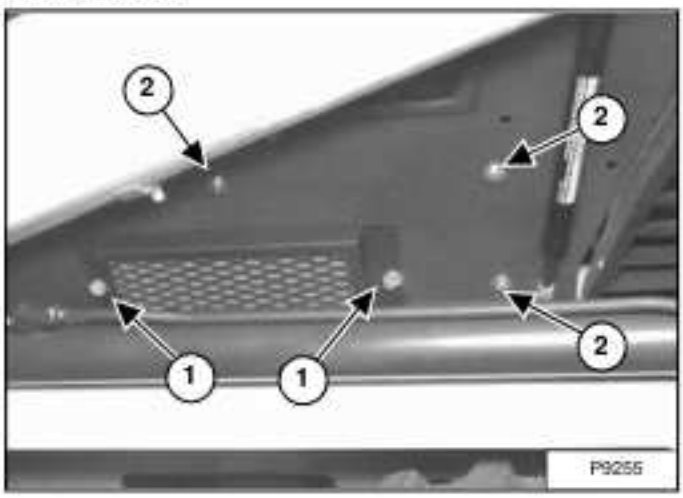


Disconnect the heater wiring harness from the engine harness (Item 1) **[Figure 80-40-4]**.

Remove the hoses (Item 1) **[Figure 80-40-4]** from the heater.

NOTE: Be sure to mark the hoses for the correct location during assembly.

Figure 80-40-5



Remove the thumb screws (Item 1) **[Figure 80-40-5]** and flat washers to remove the filter and screen.

Remove the bolts (Item 2) **[Figure 80-40-5]** from the side of the cab to remove the heater.

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WIRING SCHEMATIC

OPTIONS

553 (S/N 539111001 AND ABOVE)
(S/N 539411001 AND ABOVE)
(PRINTED DECEMBER 2004)
V-0802



EUROPEAN ONLY

HEADLIGHT HARNESS - 6707672

FRONT WIPER HARNESS - 6712259

REAR WIPER HARNESS - 6712260

NEW TO OLD ADAPTER HARNESS - 6706391

BEACON/STROBE HARNESS - 6712258

STANDARD TAIL GATE HARNESS - 7109403

ATTACHMENT HARNESS - 6727870

RENTAL HARNESS - 6714038

POWER HARNESS 6706816

EUROPEAN ONLY

4-WAY FLASHER HARNESS - 6709538

DELUXE TAIL GATE HARNESS - 7109404

4-WAY FLASHER HARNESS - 6712288

LEFT HANDLE (If Equipped)

RIGHT HANDLE (If Equipped)

HOURMETER HARNESS - 6700228

BACK-UP ALARM HARNESS - 6715659

JV REAR CAB HARNESS - 6711160

4-WAY LIGHT HARNESS - 6714213

JV FLASHER LIGHT HARNESS - 6710605

BEACON/STROBE HARNESS - 6708316

HEATER WIRING HARNESSES - 6660894 and 6660892

DOME LIGHT

HORN HARNESS - 6708506 or 6709526

BACK-UP ALARM SWITCHES HARNESS - 6704358

CAB ACCESSORY HARNESS - 6710481

V-0802 (11-30-05)

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