TURBO
873
TURBO
883
INCLUDES HIGH FLOW

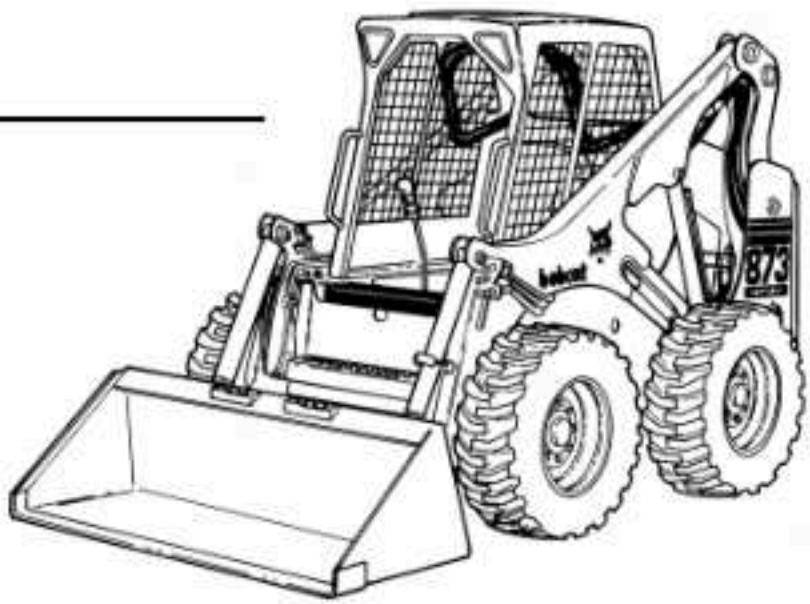
Bobcat®

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 (7-10)

Printed in U.S.A.

© Bobcat Company 2010

MidWestTech | Bobcat 873, 873 High Flow, 883 Turbo G Series Skid Steer Loader Service... Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

ADVANCED CONTROL SYSTEM (ACS) 60-01
ADVANCED HAND CONTROL (AHC) SYSTEM.... 60-01
ADVANCED HAND CONTROL (AHC) SYSTEM
(W/ PUSH BUTTON FLOAT) 60-01
AIR CLEANER 70-01
AIR CLEANER SERVICE 10-01
AIR CONDITIONING SERVICE..... 80-01
AIR CONDITIONING SYSTEM FLOW 80-01
ALTERNATOR (55 AMP) 60-01
ALTERNATOR (90 AMP) 60-01
AUXILIARY PRESSURE RELEASE
(ACCUMULATOR) 20-01

BASIC TROUBLESHOOTING..... 80-01
BATTERY..... 60-01
BICS™ SYSTEM 60-01
BOB-TACH..... 10-01, 50-01
BOBCAT CONTROLLER..... 60-01
BLOWER FAN 80-01
BRAKE..... 40-01
BRAKE (TWO-SPEED)..... 40-01
BUCKET POSITION VALVE
(873 - S/N 514147758 & BELOW) 20-01
BUCKET POSITION VALVE
(873 - S/N 514147759 & ABOVE & 883) 20-01

CHAINCASE 40-01
CHARGE PRESSURE..... 30-30
COMPONENTS 80-01
COMPRESSOR..... 80-01
CONDENSER 80-01
CONTROL HANDLE..... 50-01
CONTROL HANDLE (ADVANCED CONTROL SYSTEM
(ACS) ADVANCED CONTROL HANDLE 50-01
CONTROL HANDLE (ADVANCED CONTROL SYSTEM
(ACS) SELECTABLE HAND / FOOT CONTROL.... 50-01
CONTROL HANDLE (ADVANCED HAND CONTROL)
(AHC) 50-01
CONTROL HANDLE (ADVANCED HAND CONTROL)
(AHC) (W/ PUSH BUTTON FLOAT) 50-01
CONTROL PANEL..... 50-01
CONTROL PEDALS 50-01
CONTROL PEDALS (ACS) 50-01
COOLING FAN 70-01
CONVERSIONS SPEC-01
CYLINDER (LIFT) 20-01
CYLINDER (POWER BOB-TACH)..... 20-01
CYLINDER (TILT) 20-01

DIAGNOSTICS 60-01
DRIVE COMPONENETS..... 40-01
DRIVE BELT 30-01

ELECTRICAL / HYDRAULIC CONTROLS
REFERENCE 60-01
ENGINE.....70-01
ENGINE COMPONENENTS AND TESTING.....70-01
ENGINE COOLING SYSTEM 10-01
ENGINE LUBRICATION SYSTEM 10-01
ENGINE SPECIFICATIONS SPEC-01
ENGINE SPEED CONTROL.....70-01
EVAPORATOR 80-01
EVAPORATOR / HEATER UNIT.....80-01
EXPANSION VALVE.....80-01

FAN GEARBOX.....10-01
FINAL DRIVE TRANSMISSION (CHAINCASE.....10-01
FLYWHEEL AND HOUSING 70-01
FUEL SYSTEM.....10-01
FUEL TANK 50-01

GENERAL AIR CONDITIONING SERVICE
GUIDELINES.....80-01

HEATER COIL.....80-01
HEATER VALVE 80-01
HYDRAULIC CONNECTION SPECS. SPEC-01
HYDRAULIC CONTROL VALVE
(FOOT CONTROL).....20-01
HYDRAULIC CONTROL VALVE
(ADVANCED CONTROL SYSTEM) (ACS) (AHC) ..20-01
HYDRAULIC FLUID RESERVOIR 20-01
HYDRAULIC PUMP (ALUMINUM).....20-01
HYDRAULIC PUMP (ALUMINUM HIGH FLOW).....20-01
HYDRAULIC PUMP (CAST IRON) 20-01
HYDRAULIC PUMP (CAST IRON HIGH FLOW) 20-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDRAULIC / HYDROSTATIC FILTER 20-01
HYDRAULIC / HYDROSTATIC FLUID
SPECIFICATIONS SPEC-01
HYDRAULIC / HYDROSTATIC SYSTEM.....10-01
HYDROSTATIC MOTOR 30-01
HYDROSTATIC MOTOR (TWO SPEED) 30-01
HYDROSTATIC MOTOR CARRIER.....30-01
HYDROSTATIC PUMP 30-01
HYDROSTATIC SYSTEM INFORMATION.....30-01

INSTRUMENT PANEL.....60-01

MidWestTech | Bobcat 873, 873 High Flow, 883 Turbo G Series Skid Steer Loader Service... Order the manual at mid-west-tech.com >

LIFT ARM BYPASS CONTROL VALVE....20-01
LIFT ARM SUPPORT DEVICE....10-01
LIFT ARMS....50-01
LIFTING AND BLOCKING THE LOADER....10-01
LIGHTS....60-01
LOADER SPECIFICATIONS (873)....SPEC-01
LOADER SPECIFICATIONS (883)....SPEC-01
LOADER TORQUE....SPEC-01
LUBRICATION OF THE BOBCAT LOADER....10-01

MAIN RELIEF VALVE (AHC)....20-01
MAIN RELIEF VALVE (FOOT CONTROL)....20-01
MUFFLER....70-01

OIL COOLER....30-01
OIL COOLER (SEAL TO CONNECT) (STC)....30-01
OPERATOR CAB....10-01, 50-01
OPERATOR SEAT....50-01
OPERATOR SEAT (SUSPENSION)....50-01

POWER BOB-TACH....10-01
POWER BOB-TACH (883)....50-01
POWER BOB-TACH BLOCK (6674305 ALUMINUM)....20-01
POWER BOB-TACH BLOCK (6676547 ALUMINUM)....20-01
POWER BOB-TACH BLOCK (6677646 CAST IRON)....20-01
POWER BOB-TACH BLOCK (6678206 CAST IRON)....20-01
POWER BOB-TACH BLOCK (6678554) CAST IRON)....20-01
PRESSURE RELIEF VALVE....80-01
PRESSURE SWITCH....80-01

RADIATOR....70-01
REAR AUXILIARY DIVERTER VALVE (SINGLE SHUTTLE)....20-01
REAR DOOR....50-01
REAR GRILL....50-01
RECEIVER / DRIER....80-01
RECONDITIONING THE ENGINE....70-01
REGULAR MAINTENANCE....80-01
REMOTE START....10-01
RPM SENSOR....70-01

SAFETY....80-01
SEAT BAR....50-01
SEAT BAR SENSOR....60-01
SELECT VALVE....20-01
SERVICE SCHEDULE....10-01
STARTER....60-01
SYSTEM CHARGING AND RECLAMATION....80-01
SYSTEM TROUBLESHOOTING CHART....80-01

TEMPERATURE / PRESSURE....80-01
THERMOSTAT....80-01
TIRE MAINTENANCE....10-01
TORQUE SPECIFICATIONS FOR BOLTS....SPEC-01
TOWING THE LOADER....10-01
TRACTION LOCK....60-01
TRANSPORTING THE BOBCAT LOADER....10-01
TROUBLESHOOTING....70-01

Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD II

SAFETY INSTRUCTIONS V

FIRE PREVENTION VII

SERIAL NUMBER LOCATION IX

DELIVERY REPORT X

BOBCAT LOADER IDENTIFICATION XI

SAFETY & MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

HYDROSTATIC SYSTEM 30-01

DRIVE SYSTEM 40-01

MAINFRAME 50-01

ELECTRICAL SYSTEM & ANALYSIS 60-01

ENGINE SERVICE 70-01

HEATING, VENTILATION, AIR CONDITIONING 80-01

SPECIFICATIONS SPEC-01

MidWestTech | Bobcat 873, 873 High Flow, 883 Turbo G Series Skid Steer Loader Service... Order the manual at mid-west-tech.com >

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

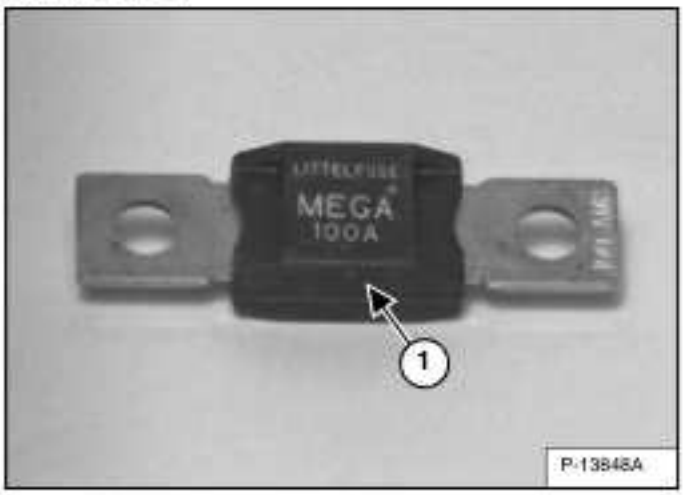
NOTE: Unless otherwise specified springs have NO significant pressure value.

Printed in U.S.A.

MidWestTech | Bobcat 873, 873 High Flow, 883 Turbo G Series Skid Steer Loader Service Manual | Publication 6900847_7_10
Order the manual at mid-west-tech.com >

Description

Figure 60-10-1



The loader has a 12 volt, negative ground alternator charging system. The electrical system is protected by a 100 amp master fuse (Item 1) **[Figure 60-10-1]** to protect against serious system overloads that could lead to burned up harness or loader damage.

Figure 60-10-2

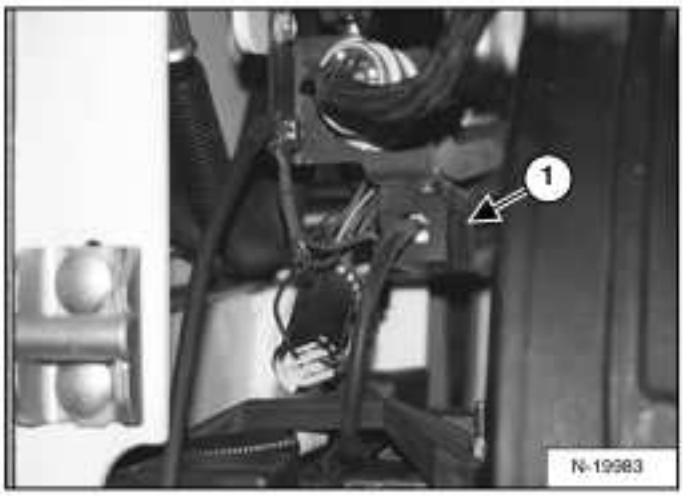
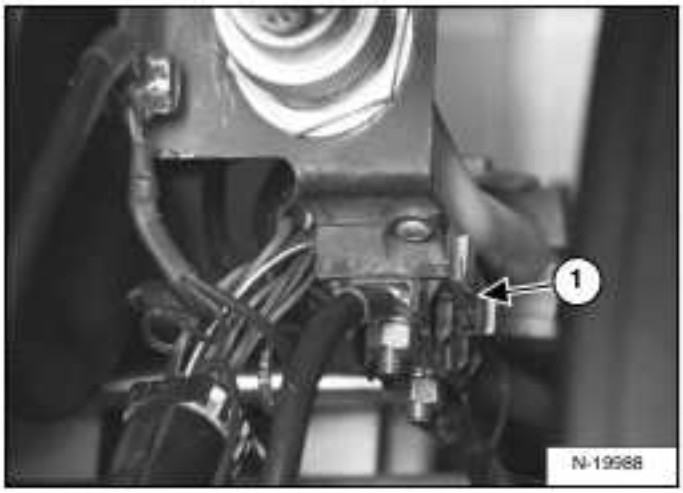
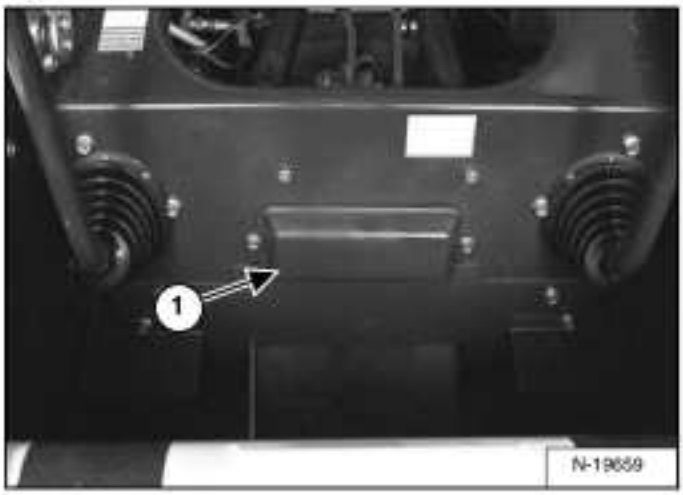


Figure 60-10-3



The fuse holder is located in the engine compartment, below the engine harness connector (Item 1) **[Figure 60-10-2]** & **[Figure 60-10-3]**.

Figure 60-10-4



The electrical system is also protected by fuses and relays under the fuse panel cover (Item 1) **[Figure 60-10-4]** located in the cab on the control panel.

IMPORTANT

Do Not use silicone base sprays and/or sealants on harness connectors or components.

I-2123-0397

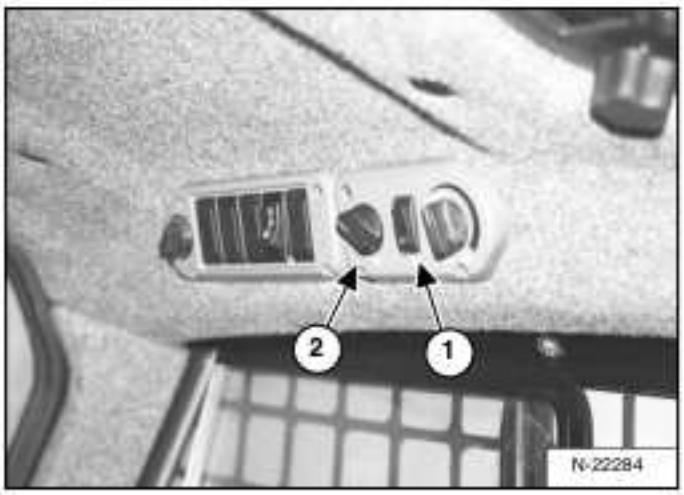
MidWestTech | Bobcat 873, 873 High Flow, 883 Turbo G Series Skid Steer Loader Service... Order the manual at mid-west-tech.com >

Checking The Electrical System

Check to see if the compressor clutch is engaging.

With an operator in the loader seat and the cab door open, turn the loader key switch to RUN (Standard Panel) OR press the RUN/ENTER Button (Deluxe Panel), without starting the loader.

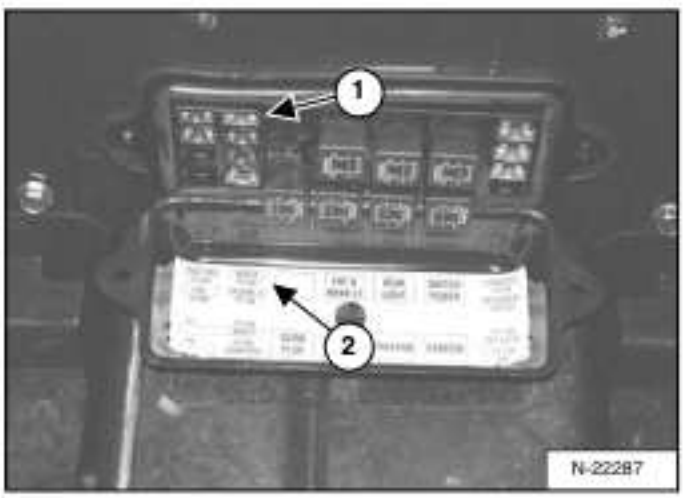
Figure 80-50-19



Push the A/C switch (Item 1) **[Figure 80-50-19]** to the ON position. Turn the blower switch (Item 2) **[Figure 80-50-19]** to the first On position.

The compressor clutch should make a click sound, which indicates the clutch is engaging.

Figure 80-50-20

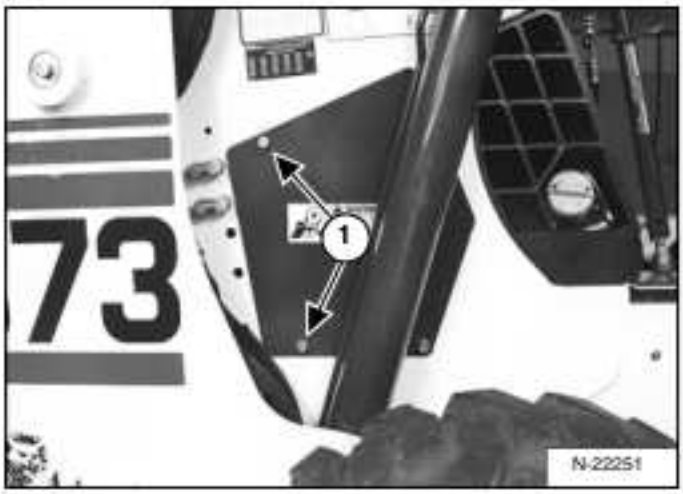


If the compressor clutch does not engage, check the loader fuse (Item 1) **[Figure 80-50-20]** located on the control panel in the loader cab.

Replace the fuse if burned out.

NOTE: The decal (Item 2) [Figure 80-50-20] inside the fuse cover, refers to the fuse as HEATER. This fuse controls the power for both the Heater and the A/C systems.

Figure 80-50-21



Remove the right side access cover mount bolts (Item 1) **[Figure 80-50-21]**.

Rotate the loader access cover out of the way.

Figure 80-50-22



Disconnect the loader harness (Item 1) **[Figure 80-50-22]** from the compressor clutch wire.

MidWestTech | Bobcat 873, 873 High Flow, 883 Turbo G Series Skid Steer Loader Service... Order the manual at mid-west-tech.com >

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

TAILGATE/ WORK LIGHTS

HARNESS 6716419

ENGINE

HARNESS 6719082

MAIN FRAME

HARNESS 6727131

CAB

HARNESS 6718870

HYD FILTER

HARNESS 6717247

C103 C401 C402 C403 C407 C408 C426 C427 C432 C433 C435

800 SERIES

V-0091 (6-7-01)

Order the manual at mid-west-tech.com >