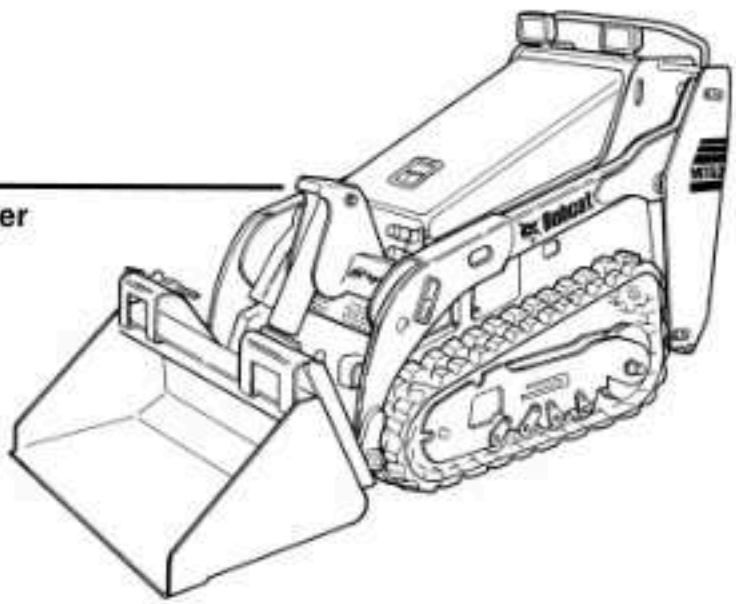
MT52
MT55

Bobcat®

Service Manual

S/N A3WR11001 & Above
S/N A3WT11001 & Above
S/N A3WS11001 & Above
S/N A3WU11001 & Above

Mini Track Loader



6986859 (2-08)

Printed in U.S.A.

© Bobcat Company 2008

MidWestTech | Bobcat MT52, MT55 Mini Track Loader Service Manual | Publication 69868... Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

AIR CLEANER 70-01
AIR CLEANER SERVICE 10-01
ALTERNATOR 60-01
AUXILIARY HYDRAULIC CONTROL SYSTEM 10-01

BATTERY 60-01
BOB-TACH 10-01, 50-01
BOTTOM ACCESS PANEL 50-01

CAMSHAFT AND TIMING GEARS 70-01
CHARGE PRESSURE 30-01
CONTINUOUS FLOW SHUTOFF SWITCH 60-01
CONVERSIONS SPEC-01
CRANKSHAFT AND PISTONS 70-01
CYLINDER (LIFT) 20-01
CYLINDER (TILT) 20-01
CYLINDER HEAD 70-01

DRIVE BELT 30-01

ELECTRIC COOLING FAN 60-01
ELECTRICAL/HYDRAULIC CONTROL 60-01
ELECTRICAL SYSTEM INFORMATION 60-01
ENGINE COOLING SYSTEM 10-01, 70-01
ENGINE INFORMATION 70-01
ENGINE LUBRICATION SYSTEM 10-01
ENGINE SPEED CONTROL 70-01

FLYWHEEL AND ENGINE MOUNTING BRACKET 70-01
FUEL SYSTEM 10-01, 70-01
FUEL TANK 50-01

GRAB BAR 50-01

HOOD 50-01
HYDRAULIC CONNECTION SPECS. SPEC-01
HYDRAULIC CONTROL VALVE 20-01
HYDRAULIC/HYDROSTATIC FILTER 20-01
HYDRAULIC FLUID RESERVOIR 20-01
HYDRAULIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC GEAR PUMP MOUNTING BRACKET 70-01
HYDRAULIC PUMP 20-01
HYDRAULIC/HYDROSTATIC SYSTEM 10-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDROSTATIC CONTROLS 30-01
HYDROSTATIC MOTOR 30-01
HYDROSTATIC PUMP 30-01
HYDROSTATIC SYSTEM INFORMATION 30-01

INSTRUMENT PANEL 50-01, 60-01

LIFT ARMS 50-01
LIFT ARM BYPASS CONTROL 10-01
LIFT ARM SUPPORT DEVICE 10-01
LIFT AND BLOCKING THE LOADER 10-01
LIFT AND TILT FUNCTION LOCKOUTS 10-01
LIGHTS 60-01
LUBRICATION OF THE MINI LOADER 10-01
LUBRICATION SYSTEM 70-01

MAIN RELIEF VALVE 20-01
(MT52) MINI LOADER SPECIFICATIONS SPEC-01
(MT55) MINI LOADER SPECIFICATIONS SPEC-01
MUFFLER 70-01

NEUTRAL START INTERLOCKS 10-01
NEUTRAL START SENSOR 60-01

OIL COOLER 20-01

PARKING BRAKE 40-01
PIVOT PINS 10-01
PORT RELIEF VALVES 20-01

REAR DOOR 50-01
REVERSE STOP PANEL 10-01, 50-01
RIDE-ON PLATFORM (HINGED) 50-01

SERVICE SCHEDULE 10-01
SPARK ARRESTOR MUFFLER 10-01
STARTER 60-01

TORQUE SPECIFICATIONS FOR BOLTS SPEC-01
TOWING THE LOADER 10-01
TRACK CARRIAGE COMPONENTS 40-01
TRANSPORTING THE BOBCAT LOADER 10-01

MidWestTech | Bobcat MT52, MT55 Mini Track Loader Service Manual | Publication 69868... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD III

SAFETY INSTRUCTIONS V

SERIAL NUMBER LOCATION IX

DELIVERY REPORT IX

BOBCAT LOADER IDENTIFICATION X

SAFETY AND MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

HYDROSTATIC SYSTEM 30-01

DRIVE SYSTEM 40-01

MAIN FRAME 50-01

ELECTRICAL SYSTEM & ANALYSIS 60-01

ENGINE SERVICE 70-01

SPECIFICATIONS SPEC-01

MidWestTech | Bobcat MT52, MT55 Mini Track Loader Service Manual | Publication 69868... Order the manual at mid-west-tech.com >

Troubleshooting

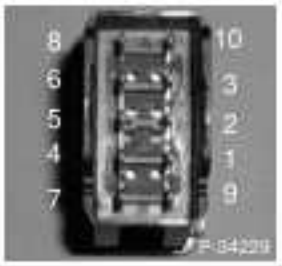
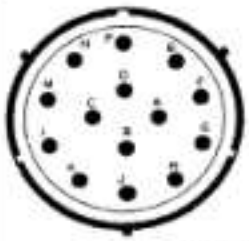
KEY TO CORRECT THE CAUSE
1. The hydraulic fluid level is low or air in the system.
2. The control lever linkage is disconnected.
3. The hydraulic pump has damage.
4. The control lever does not have smooth movement and/or is not returning to neutral position.
5. Relief valve is not at the correct pressure.
6. Suction leak on the inlet side of the hydraulic pump.
7. Fluid is cold. Wrong viscosity fluid. (See SPECIFICATIONS on Page SPEC-01.)
8. Using the loader for more than its rated capacity.
9. Internal leak in the cylinder(s).
10. External leak from the cylinder(s).
11. Damaged lift spool.
12. Excessive auxiliary hydraulics load.
13. Plugged oil cooler. (Air flow restricted)
14. Loose mounting hardware.
15. Lift or tilt lockout circuit or engine or pressure switch circuit failure.
16. Tilt or drive function over relief.
17. Spool not fully stroked.
18. Activate auxiliary control lever in both directions to release pressure.
19. Loose or damaged gear pump to engine coupler. (See Troubleshooting on Page 60-10-5.)
20. Electric cooling fan not operating.
21. Refer to Electrical Service Manual
22. Check Charge Pressure Relief setting

NOTE: The orifice between the lift and auxiliary valve sections provides flow to the auxiliary while the lift is being actuated. The lift function will be reduced at low flow conditions such as low engine speed.

* Engine OFF - Always engage parking brake.

MidWestTech | Bobcat MT52, MT55 Mini Track Loader Service Manual | Publication 69868... Order the manual at mid-west-tech.com >

Identification Chart

Flipper Control Switch / Chute Control Switch	Control Switch Number	Switch Terminal Activated	Attachment Harness Terminal Activated	Attachment Harness Connector
	1	3	C	Fourteen Pin Connector Viewed from front (pin side of connector) of loader.
	2	1	D	
	3	3	F	
	4	1	E	
				

NOTE: Control switch terminals #8 are ground and the pin B on the 14 pin connector is also ground. Control switch terminals #2 are power.

MidWestTech | Bobcat MT52, MT55 Mini Track Loader Service Manual | Publication 69868... Order the manual at mid-west-tech.com >

Hydraulic System

Pump Type	Engine driven, gear type
Pump Capacity	12 GPM (45.4 L/min.) @ High Idle
System Relief at Quick Couplers	2700 PSI (186 bar)
Filter (Hydraulic)	Full flow replaceable, 10-micron synthetic media element
Hydraulic Cylinders Bore Diameter: Lift Cylinder (2) Tilt Cylinder (2) Rod Diameter: Lift Cylinder (2) Tilt Cylinder (2) Stroke: Lift Cylinder (2) Tilt Cylinder (1)	Double-acting; tilt cylinders have cushioning feature on dump and rollback 2.25 in. (57,2 mm) 3.00 in. (76,2 mm) 1.25 in. (31,8 mm) 1.25 in. (31,8 mm) 14.16 in. (359,7 mm) 10.56 in. (268,2 mm)
Control Valve	3-Spool, open center type with float detent on lift
Fluid Type	Bobcat Fluid, Hydraulic / Hydrostatic 6903117 - (2.5 Gal. container) 6903118 - (5 Gal. container) 6903119 - (55 Gal. container)
Fluid Lines	SAE Standard tubelines, hoses and fittings
Hydraulic Function Time: Raise Lift Arms Lower Lift Arms Bucket Dump Bucket Rollback	 3.10 Seconds 2.10 Seconds 1.90 Seconds 1.60 Seconds

Electrical

Starting Aid	Glow Plugs
Alternator	Belt driven, 40 Amp open frame w/ internal regulator
Battery	12 volts, 530 CCA @ 0°F (-18°C),
Starter	12 volts, gear type, 3.62 HP (2,7 kW)
Instrumentation	**Gauges:** Hourmeter, Fuel Level, Engine Coolant Temperature, Voltmeter **Warning lights:** Engine Oil Pressure, Hydraulic Oil Temperature **Other:** Lights, Opt./Accessory Switches or Indicators

Drive System

Drive System	Fully hydrostatic, track drive
Transmission	Infinitely variable tandem hydrostatic piston pumps, driving two fully reversing hydrostatic motors

Capacities

Fuel	7 Gal. (26,5 L)
Engine Lubrication & Filter	3.4 qt. (3,2 L)
Engine Cooling System	5 qt. (4,7 L)
Hydraulic/Hydrostatic Reservoir Only (Center of Sight Glass)	2.5 Gal. (9,5 L)
Hydraulic/Hydrostatic System	5.3 Gal. (20,0 L)

MidWestTech | Bobcat MT52, MT55 Mini Track Loader Service Manual | Publication 69868... Order the manual at mid-west-tech.com >

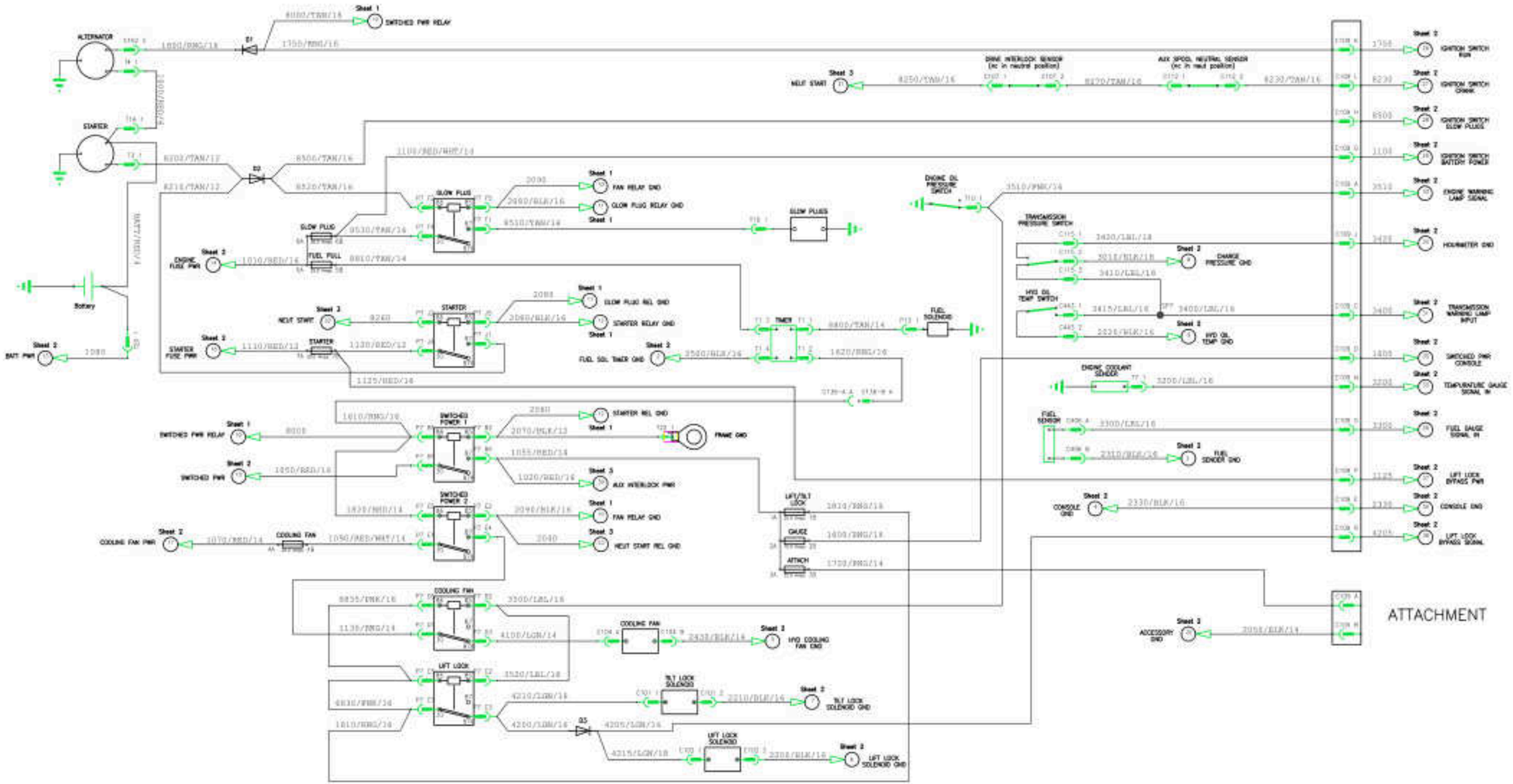
ELECTRICAL SCHEMATIC

MT52 (S/N A3WR11001 AND ABOVE)
MT52 (S/N A3WS11001 AND ABOVE)
MT55 (S/N A3WT11001 AND ABOVE)
MT55 (S/N A3WU11001 AND ABOVE

Sheet 1 of 3

PRINTED FEBRUARY 2008

CONSOLE HARNESS CONNECTOR



Printed in U.S.A.

7155548 (1-31-08)

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