S150
S160
TURBO

Bobcat®

Service Manual

S/N 526611001 & Above
S/N 526711001 & Above
S/N 526811001 & Above
S/N 526911001 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)

6902730 (2-06)

Ingersoll Rand
Compact Vehicle Technologies

Printed in U.S.A.

©Bobcat Company 2006

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

ADVANCED CONTROL SYSTEM (ACS) SELECTABLE HAND/FOOT CONTROL 60-01
AIR CLEANER 70-01
AIR CLEANER SERVICE 10-01
AIR CONDITIONING SERVICE 80-01
AIR CONDITIONING SYSTEM FLOW 80-01
ALTERNATOR 60-01

BATTERY 60-01
BASIC TROUBLESHOOTING 80-01
BICS™ SYSTEM 60-01
BOBCAT CONTROLLER 60-01
BOB-TACH 10-01, 50-01
BRAKE 40-01
BUCKET POSITION VALVE 20-01

CALIBRATION 60-01
CHAINCASE 40-01
CHARGE PRESSURE 30-01
COMPONENTS 80-01
COMPRESSOR 80-01
CONDENSER 80-01
CONTROL HANDLE 50-01
CONTROL HANDLE (SJC) 50-01
CONTROL HANDLE (ADVANCED CONTROL SYSTEM) (ACS) SELECTABLE HAND/FOOT CONTROL 50-01
CONTROL PANEL 50-01
CONTROL PANEL (SJC) 50-01
CONTROL PEDALS 50-01
CONTROL PEDALS (ACS) 50-01
CONTROLLER (SELECTABLE JOYSTICK CONTROL) (SJC) 50-01
CONVERSIONS SPEC-01
COOLING FAN 70-01
CYLINDER (LIFT) 20-01
CYLINDER (POWER BOB-TACH) 20-01
CYLINDER (TILT) 20-01

DIAGNOSTICS SERVICE CODES 60-01
DRIVE BELT 30-01
DRIVE COMPONENTS 40-01

ELECTRICAL SYSTEM INFORMATION 60-01
ELECTRICAL/HYRAULIC CONTROLS REF. 60-01
ELECTRICAL/HYDRAULIC CONTROLS REFERENCE (SELECTABLE JOYSTICK CONTROL) (SJC) 60-01
ENGINE 70-01
ENGINE COMPONENTS 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
FLYWHEEL RPM SENSOR 60-01
FRONT AUXILIARY HYD. COUPLER BLOCK 20-01
FUEL SYSTEM 10-01
FUEL TANK 50-01
GENERAL AIR CONDITIONING SERVICE GUIDELINES 80-01

HEATER COIL 80-01
HEATER/AC FAN 80-01
HEATER VALVE 80-01
HIGH FLOW VALVE 20-01
HYDRAULIC CONNECTION SPECS. SPEC-01
HYDRAULIC CONTROL VALVE 20-01
HYDRAULIC FILTER HOUSING 20-01
HYDRAULIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC FLUID RESERVOIR 20-01
HYDRAULIC/HYDROSTATIC SYSTEM 10-01
HYDRAULIC PUMP 20-01
HYDRAULIC PUMP (HIGH FLOW) 20-01
HYDRAULIC PUMP (HIGH FLOW) (SJC) 20-01
HYDARULIC PUMP (SJC) 20-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDROSTATIC MOTOR 30-01
HYDROSTATIC MOTOR CARRIER 30-01
HYDROSTATIC MOTOR CARRIER (SJC) 30-01
HYDROSTATIC PUMP 30-01
HYDROSTATIC SYSTEM INFORMATION 30-01

INSTRUMENT PANEL 60-01

LIFT ARMS 50-01
LIFT ARM BY-PASS CONTROL VALVE 20-01
LIFT ARM SUPPORT DEVICE 10-01
LIFTING AND BLOCKING THE LOADER 10-01
LIGHTS 60-01
LOADER SPECIFICATIONS SPEC-01
LUBRICATING THE LOADER 10-01

MAIN RELIEF VALVE 20-01
MUFFLER 70-01

OIL COOLER 30-01
OPERATOR CAB 10-01, 50-01
OPERATOR SEAT 50-01
OPERATOR SEAT (SUSPENSION) 50-01

POWER BOB-TACH 10-01, 50-01
POWER BOB-TACH BLOCK 20-01
PRESSURE RELIEF VALVE 80-01
PRESSURE SWITCH 80-01

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

RADIATOR 70-01
REAR AUXILIARY DIVERTER VALVE 20-01
REAR DOOR 50-01
REAR GRILL 50-01
RECEIVER/DRIER 80-01
RECONDITIONING THE ENGINE-V2203-M-DI AND V2003-M-DI-T (TURBO) 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
SERVICE PC (LAPTOP COMPUTER) 60-01
SERVICE SCHEDULE 10-01
SPARK ARRESTOR MUFFLER 10-01
SPEED SENSOR 60-01
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
TURBOCHARGER 70-01

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD II

SAFETY INSTRUCTIONS V

SERIAL NUMBER LOCATIONS IX

DELIVERY REPORT X

BOBCAT LOADER IDENTIFICATION XI

SAFETY AND MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

HYDROSTATIC SYSTEM 30-01

DRIVE SYSTEM 40-01

MAIN FRAME 40-01

ELECTRICAL SYSTEM 60-01

ENGINE SERVICE 70-01

HEATING, VENTILATION, AIR CONDITIONING 70-01

SPECIFICATIONS SPEC-01

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

Troubleshooting Chart

The following troubleshooting chart is provided for assistance in locating and correcting problems which are most common. Many of the recommended procedures must be done by authorized Bobcat Service Personnel only.

⚠ WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0903

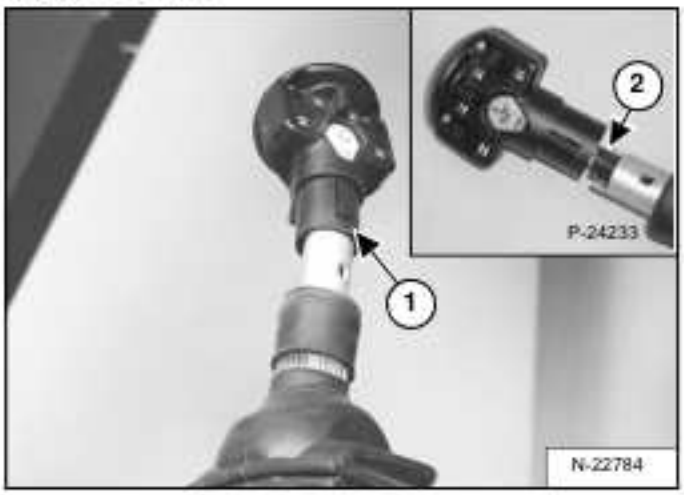
PROBLEM	CAUSE
Battery will not take a charge.	1, 2, 3, 4, 5
Alternator will not charge.	1, 2, 5
Starter will not turn the engine.	2, 3, 4, 6, 7, 8, 9

KEY TO CORRECT THE CAUSE
1. Alternator belt is loose or damaged.
2. Battery connections are dirty or loose.
3. Battery is damaged.
4. The ground connection is not making a good contact.
5. The alternator is damaged.
6. The engine is locked.
7. The starter is damaged.
8. The wiring or solenoid is damaged.
9. Check the fuses.

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

Switch Handle Removal (Cont'd)

Figure 60-120-20

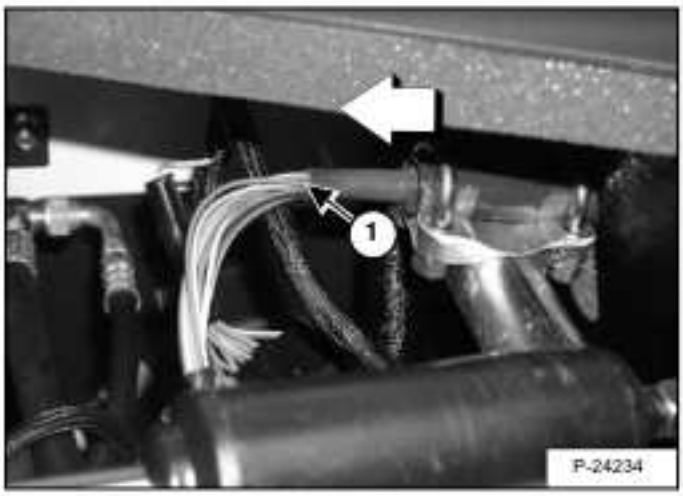


Pull the switch handle and wiring harness assembly (Item 1) **[Figure 60-120-20]** from the control lever.

Cut the wires (Item 2) **[Figure 60-120-20]** below the switch handle and remove switch handle.

NOTE: Only cut the wires if the switch handle is bad and needs replacement. If the switch handle is good and just needs to be removed for control handle or lever replacement, then remove the connectors on the end of the harness and pull switch handle and harness up through the top of the lever tube.

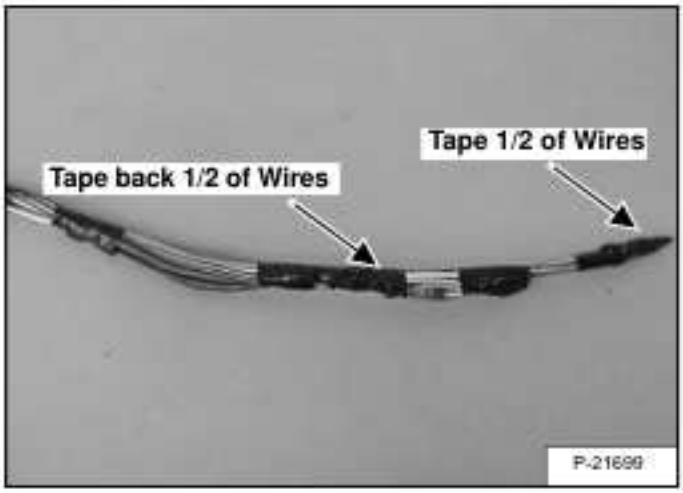
Figure 60-120-21



If the harness has been cut: pull the harness (Item 1) **[Figure 60-120-21]** out through the bottom of the control lever tube.

Switch Handle Installation

Figure 60-120-22



When installing the new switch handle, tape the wire terminals together.

The switch handle comes with a 6 inch piece of heat shrink tube slid over the end of the wires. Remove the heat shrink tube from the end of the wires before routing the harness through handle and control lever tube.

NOTE: Leave all the other heat shrink tube on the wires for protection.

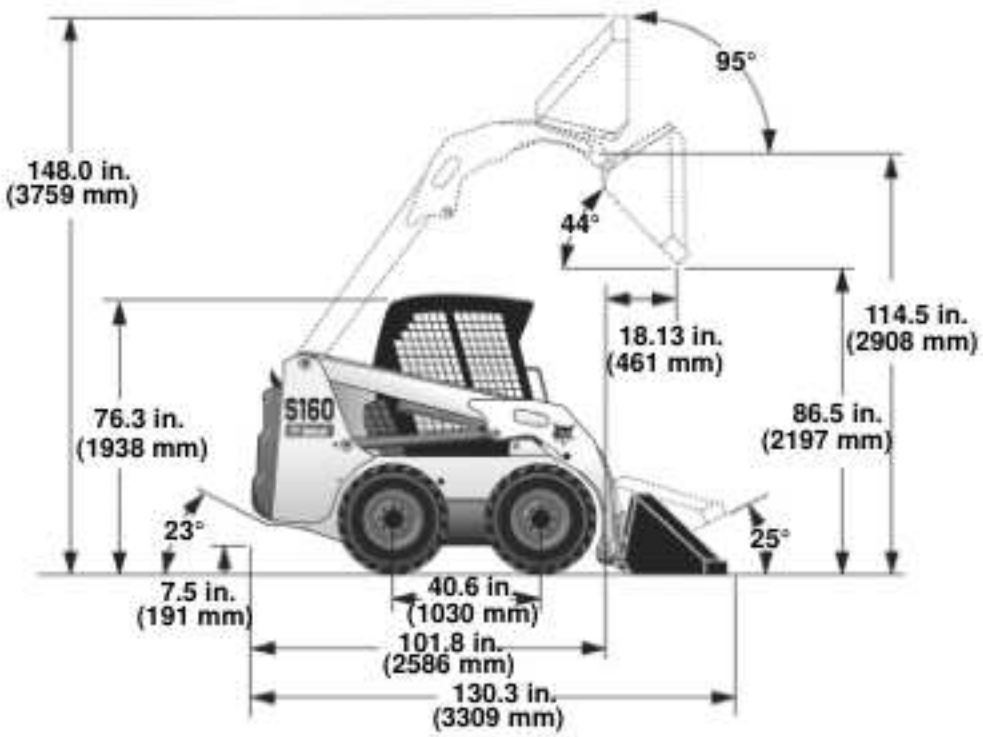
Tape half of the wires back and half forward **[Figure 60-120-22]** to keep the harness small enough to route through the control lever tube.

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

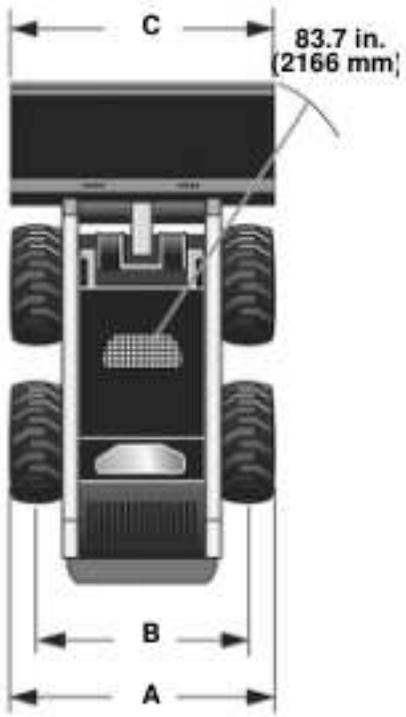
LOADER SPECIFICATIONS

Machine Dimensions

- Dimensions are given for loader equipped with standard tires and dirt bucket and may vary with other bucket types. All dimensions are shown in inches. Respective metric dimensions are given in millimeters inclosed by parentheses.
- Where applicable, specification conform to SAE or ISO standards and are subject to change without notice.



B-22355



B-22354

	A	B
TIRE DESCRIPTION	WIDTH (OVER TIRES)	WHEEL TREAD
10-16.5 TIRES	66.0in. (1676mm) or 60.0in (1524mm)	54.5in. (1385mm) or 48.5in. (1232mm)
31-15x15 TIRES	72.0in. (1829mm)	55.9in. (1420mm)
31.5x13-16.5 Tires	66.0 in. (1676 mm)	52.3in. (1328 mm)

	C
BUCKET WIDTH	WIDTH (OVER BUCKET)
62"	62.0in. (1575mm)
68"	68.0in. (1727mm)
74"	74.0in. (1880mm)

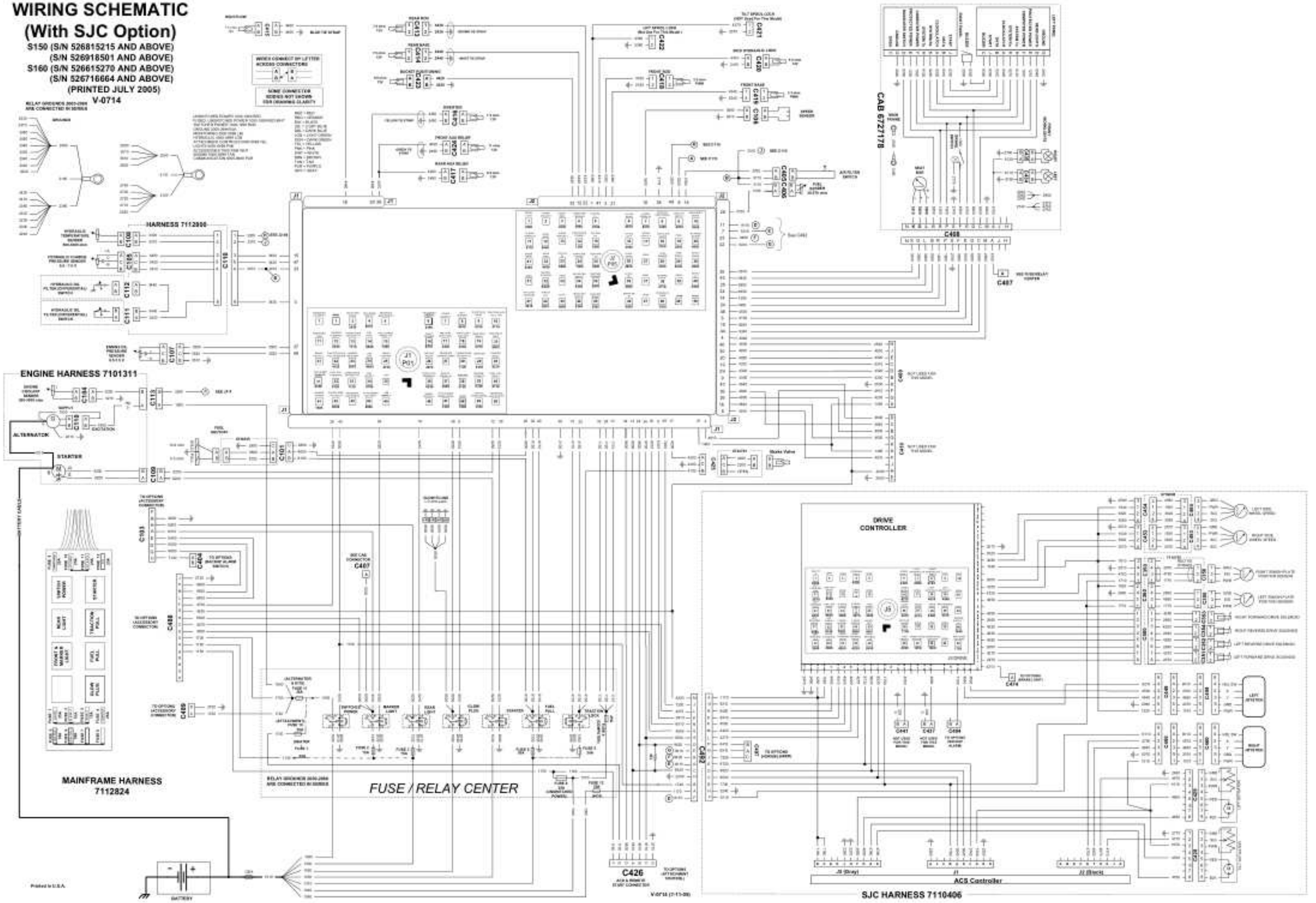
* Recommended Pressure-Inflate tires to MAXIMUM pressure shown on the side wall of the tire. DO NOT mix brands of tires used on the same loader.

Changes of structure or weight distribution of the loader can cause changes in control and steering response and can cause failure of the loader parts.

MidWestTech | Bobcat S150 Turbo, S160 Turbo Skid Steer Loader Service Manual | Public... Order the manual at mid-west-tech.com >

WIRING SCHEMATIC
(With SJC Option)

S150 (S/N 526815215 AND ABOVE)
(S/N 526918501 AND ABOVE)
S160 (S/N 526615270 AND ABOVE)
(S/N 526716664 AND ABOVE)
(PRINTED JULY 2005)
V-0714



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