S150
S160
TURBO

Bobcat®

Service Manual

S/N 523811001 & Above
S/N 523911001 & Above
S/N 524011001 & Above
S/N 524111001 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)

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Ingersoll Rand

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ALPHABETICAL INDEX

ADVANCED CONTROL SYSTEM (ACS) 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

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

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

ELECTRICAL SYSTEM INFORMATION 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
FRONT AUXILIARY HYD. COUPLER BLOCK 20-01
FUEL SYSTEM 10-01
FUEL TANK 50-01

GENERAL AIR CONDITIOING 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 (ADVANCED CONTROL SYSTEM) (ACS) 20-01
HYDRAULIC CONTROL VALVE (FOOT CONTROL) 20-01
HYDRAULIC FILTER HOUSING 20-01
HYDRAULIC FLUID RESERVOIR 20-01
HYDRAULIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC/HYDROSTATIC SYSTEM 10-01
HYDRAULIC PUMP 20-01
HYDRAULIC PUMP (HI FLOW) 20-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDROSTATIC MOTOR 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 BOBCAT 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 >

RPM SENSOR 70-01
RADIATOR 70-01
REAR AUXILIARY DIVERTER VALVE 20-01
REAR DOOR 50-01
REAR GRILL 50-01
RECEIVER/DRIER 80-01
RECONDITIONING THE ENGINE 70-01
REGULAR MAINTENANCW 80-01
REMOTE START 10-01
RPM SENSOR 70-01

SAFETY 80-01
SEAT BAR 50-01
SEAT BAR SENSOR 60-01
SERVICE SCHEDULE 10-01
SPARK ARRESTOR MUFFLER 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
TURBOCHARGER 70-01

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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 50-01

ELECTRICAL SYSTEM 60-01

ENGINE SERVICE 70-01

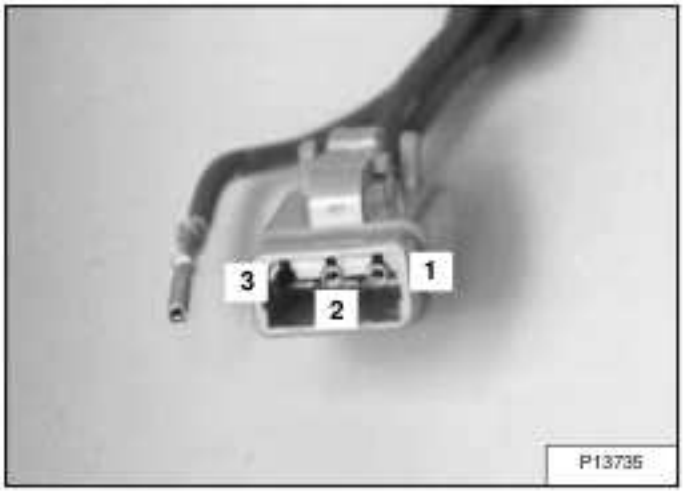
HEATING, VENTILATION, AIR CONDITIONING 80-01

SPECIFICATIONS SPEC-01

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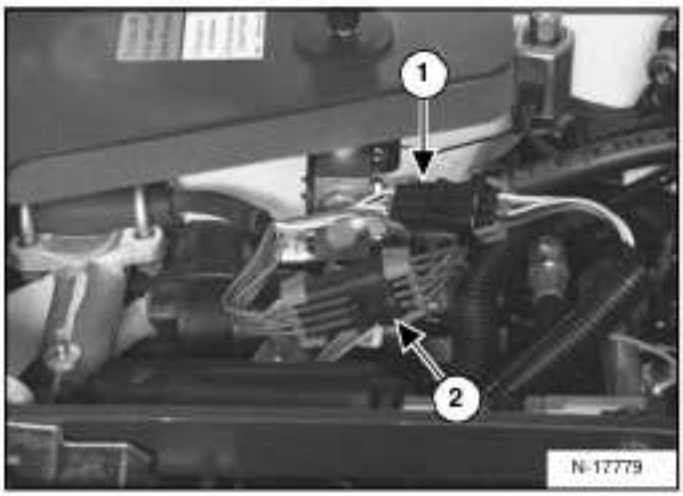
Switch Handle Removal (Cont'd)

Figure 60-120-16



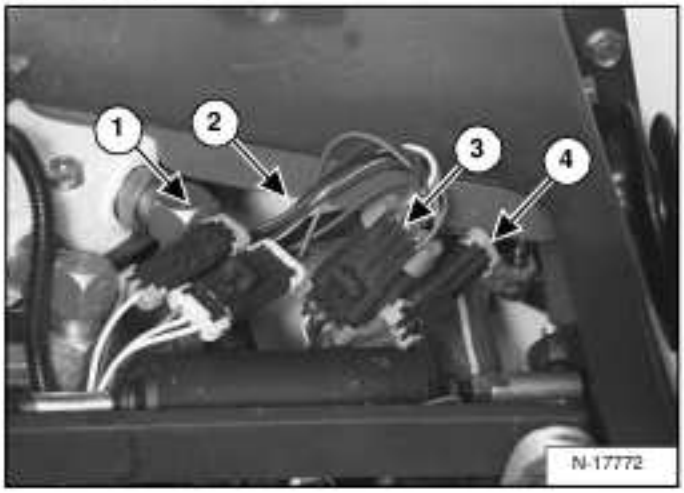
Using a pointed tool, press down on the tab (Item 1) **[Figure 60-120-16]** and pull the wire from the connector.

Figure 60-120-17



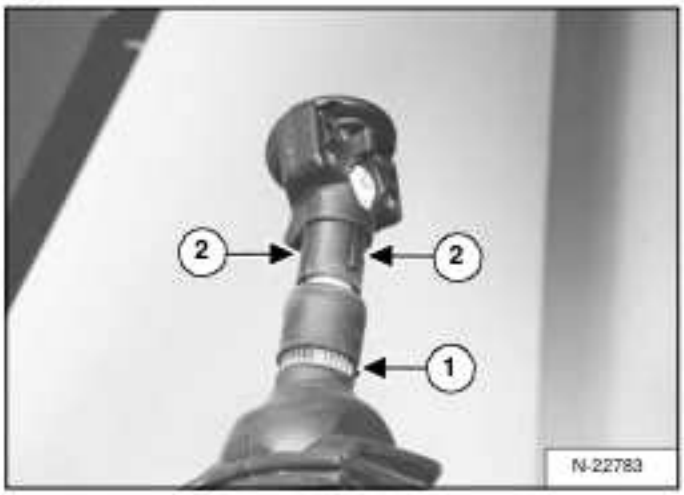
Disconnect the right switch handle connectors (Items 1 & 2) **[Figure 60-120-17]** from the loader wiring harness connectors.

Figure 60-120-18



Disconnect the left switch handle connectors (Items 1, 2, 3 & 4) **[Figure 60-120-18]** from the loader wiring harness connectors.

Figure 60-120-19



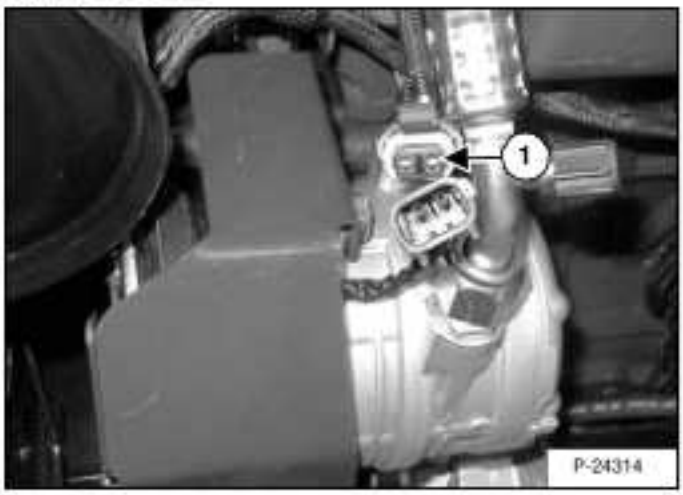
Roll the pistol grip handle cover (Item 1) **[Figure 60-120-19]** down.

Using a small screwdriver, lift the handle tabs (Item 2) **[Figure 60-120-19]** and slightly rotate the switch handle.

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Checking The Electrical System (Cont'd)

Figure 80-50-11



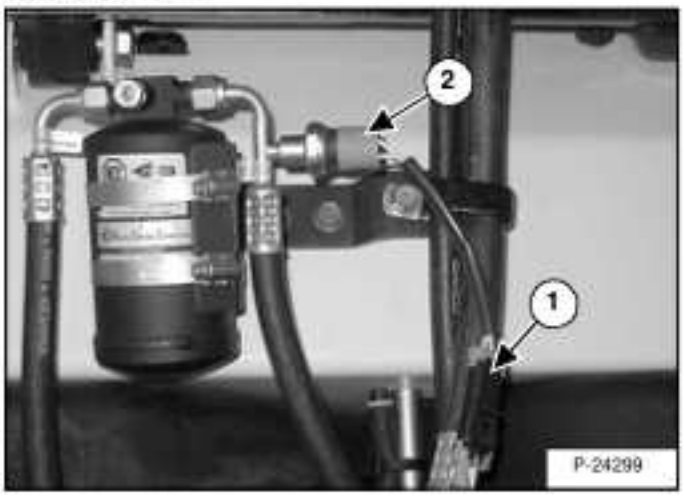
With a multimeter, check the voltage to the compressor clutch at the loader harness (Item 1) **[Figure 80-50-11]**

The voltage reading should be around 12 volts.

If there is no power at the clutch, check the wiring harness for broken wires.

If there is power at the clutch, reconnect the wiring harness to the compressor clutch.

Figure 80-50-12



Disconnect the loader harness (Item 1) from the pressure switch (Item 2) **[Figure 80-50-12]**.

Figure 80-50-13



Using a multimeter check the loader wiring harness (Item 1) **[Figure 80-50-13]** for voltage.

The voltage should be around 12 volts.

If there is no voltage at the wiring harness, check the harness for broken wires.

Figure 80-50-14



If there is voltage at the harness, check the resistance at the pressure switch (Item 1) **[Figure 80-50-14]**.

If there is no resistance value, check for low refrigerant level. (See Component Replacement And Refrigeration Leaks on Page 80-60-3.)

If a resistance value is observed, the pressure switch is good.

Reconnect the loader harness to the pressure switch.

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All dimensions are given in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.

Crankshaft

Crankshaft Alignment Allowable Limit	0.00079 (0,02)
Oil Clearance Between Crankshaft Journal & Bearing #1	0.0016-0.0046 (0,04-0,118)
Allowable Limit	0.0079 (0,2)
Crankshaft Journal O.D. #1	2.0441-2.0449 (51,921-51,94)
Crankshaft Bearing I.D. #1	2.0465-2.0488 (51,98-52,039)
Oil Clearance Between Crankshaft Journal & Bearing #2	0.0016-0.0041 (0,04-0,104)
Allowable Limit	0.0079 (0,2)
Crankshaft Journal O.D. #2	2.0441-2.0449 (51,921-51,94)
Crankshaft Bearing I.D. #2	2.0465-2.0482 (51,98-52,025)
Oil Clearance Between Crank Pin & Bearing	0.0009-0.0034 (0,025-0,087)
Allowable Limit	0.0079 (0,2)
Crank Pin O.D.	1.8488-1.8494 (46,959-46,975)
Crank Pin Bearing I.D.	1.8504-1.8522 (47,0-47,046)
Crankshaft Side Clearance	0.0059-0.0122 (0,15-0,31)
Allowable Limit	0.0197 (0,5)

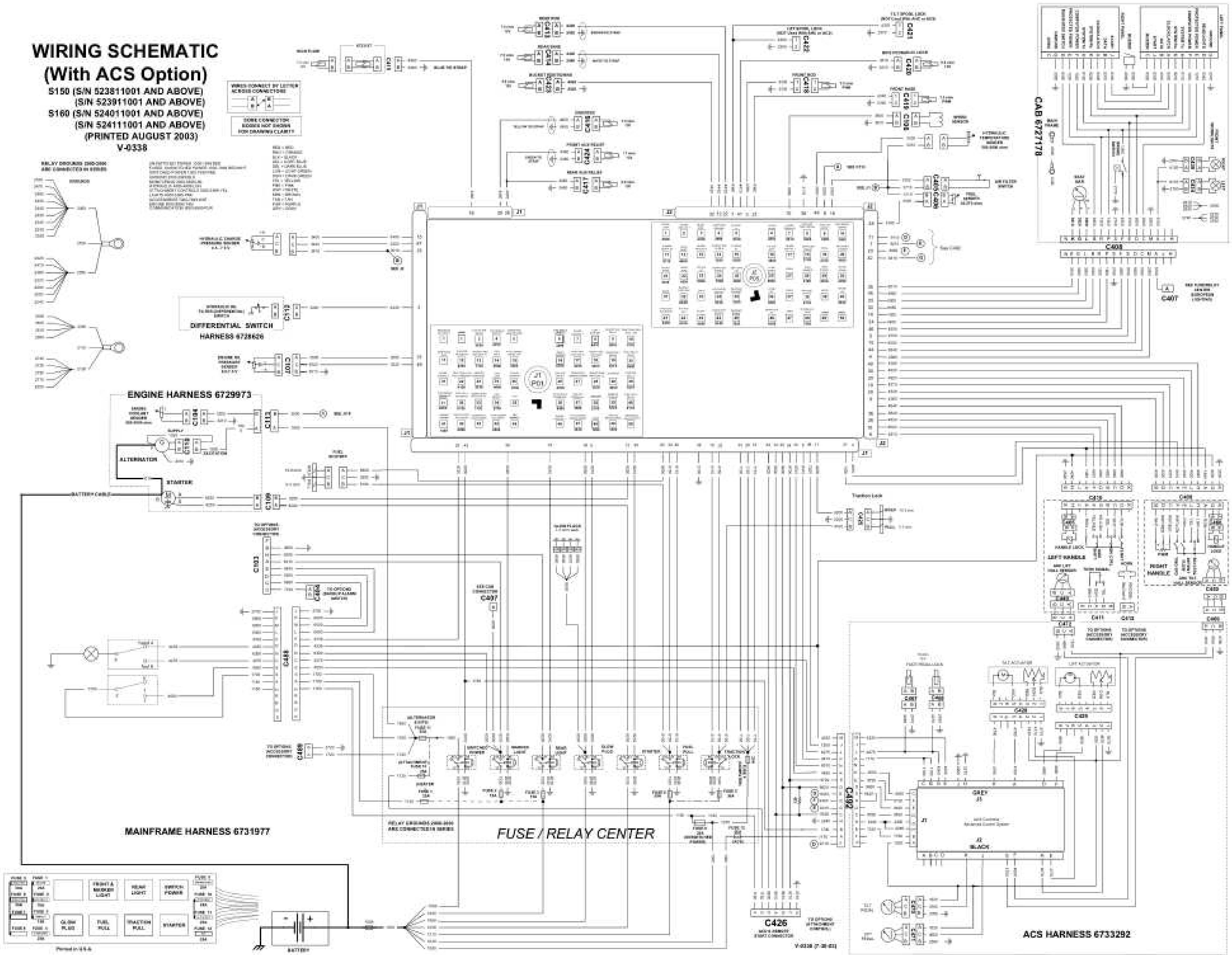
Timing Gear

Timing Gear Backlash:	
Crank Gear-Idle Gear	0.0016-0.0044 (0,0415-0,1122)
Allowable Limit	0.0059 (0,15)
Idle Gear-Cam Gear	0.0016-0.0045 (0,0415-0,1154)
Allowable Limit	0.0059 (0,15)
Idle Gear-Injection Pump Gear	0.0016-0.0045 (0,0415-0,1154)
Allowable Limit	0.0059 (0,15)
Crank Gear-Oil Pump Gear	0.0016-0.0043 (0,0415-0,109)
Allowable Limit	0.0059 (0,15)
Clearance Between Idle Gear Shaft & Idle Gear Bushing	0.001-0.0026 (0,025-0,066)
Allowable Limit	0.0039 (0,10)
Idle Gear Bushing I.D.	1.2598-1.2608 (32,0-32,025)
Idle Gear Shaft O.D.	1.2582-1.2589 (31,959-31,975)
Idle Gear Side Clearance Idle Gear	0.0079-0.020 (0,2-0,51)
Allowable Limit	0.0354 (0,9)

Thermostat

Valve Opening Temperature	157.1-162.5°F (69.5-72.5°C)
Valve Fully Open	185°F (85°C)

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