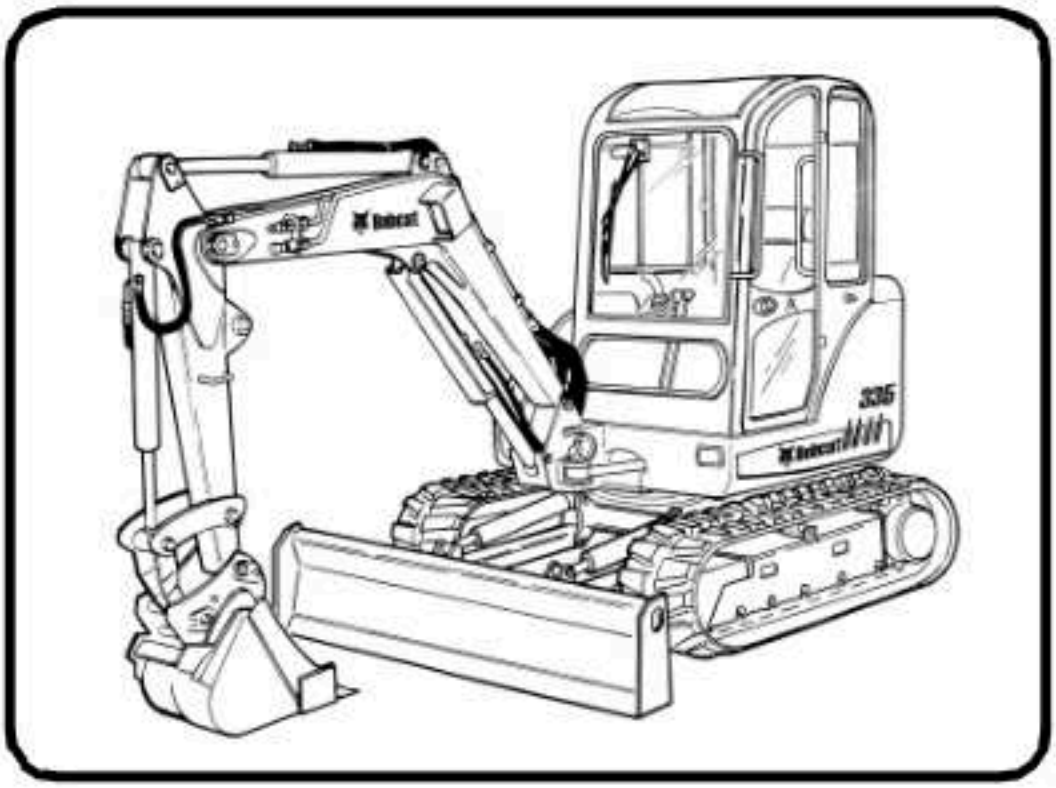
Bobcat®

Service Manual
335 Compact Excavator

S/N AAD111001 & Above
S/N A9KA11001 & Above



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ALPHABETICAL INDEX

ACCESSORY DRIVE BELT 10-01
AIR CLEANER 60-01
AIR CLEANER SERVICE 10-01
AIR CONDITIONING SYSTEM FLOW 70-01
ALTERNATOR 50-01
ANGLE BLADE 30-01
ANBLE BLADE ASSEMBLY 30-01
ANGLE BLADE CUTTING EDGE 30-01
ANGLE BLADE CYLINDER 20-01
ANGLE BLADE VALVE 20-01
ARM 40-01
ARM CYLINDER 20-01

BATTERY 50-01
BLADE 30-01
BLADE CONTROL 40-01
BLADE CYLINDER 20-01
BLOWER FAN 70-01
BOOM 40-01
BOOM CYLINDER 20-01
BOOM SWING CYLINDER 20-01
BOOM SWING LOCK VALVE 20-01
BOOM SWING PEDAL 20-01
BUCKET 40-01
BUCKET CYLINDER 20-01

CAB 40-01
CAMSHAFT AND TIMING GEARS 60-01
CANOPY 40-01
CASE DRAIN FILTER 20-01
COMPRESSOR 70-01
CONDENSOR 70-01
CONVERSIONS SPEC-01
CONTROL PATTERN SELECTOR VALVE 20-01
CRANKSHAFT AND PISTONS 60-01
CROSS PORT RELIEF VALVES 20-01
CYLINDER HEAD 60-01

DIAGNOSTICS SERVICE CODES 50-01
DIRECT TO TANK VALVE 20-01

ELECTRICAL SYSTEM INFORMATION 50-01
ENGINE COOLING SYSTEM 10-01, 60-01
ENGINE INFORMATION 60-01
ENGINE LUBRICATION SYSTEM 10-01
ENGINE SPEED CONTROL 60-01
EVAPORATOR COIL 70-01
EVAPORATOR/HEATER UNIT 70-01
EVAPORATOR SPECIFICATIONS SPEC-01
EXCAVATOR STORAGE AND RETURN TO SERVICE 10-01
EXPANSION VALVE 70-01
FAN 60-01
FLOORMAT AND FLOOR PANEL 40-01
FUEL LEVEL SENDER 50-01
FUEL SYSTEM 10-01, 60-01
FUEL TANK 40-01
FLYWHEEL AND HOUSING 60-01

HEATER COIL 70-01
HEATER VALVE 70-01
HORN 40-01
HYDRAULIC CONTROL VALVE 20-01
HYDRAULIC CONNECTION SPECIFICATIONS SPEC-01
HYDRAULIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC FILTER 20-01
HYDRAULIC PUMP 20-01
HYDRAULIC PUMP START-UP 20-01
HYDRAULIC RESERVOIR 20-01
HYDRAULIC SYSTEM 10-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDRAULIC X-CHANGE VALVE 20-01

LEFT CONTROL LEVER (JOYSTICK) 20-01
LEFT CONSOLE 40-01
LIFTING AND BLOCKING THE EXCAVATOR 10-01
LIFTING THE EXCAVATOR 10-01
LIGHTS 50-01
LUBRICATING THE EXCAVATOR 10-01
LUBRICATION SYSTEM 60-01

MAGNETIC LOCKOUT SENSOR 50-01
MAIN RELIEF VALVE 20-01
MANIFOLD ASSEMBLY/ACCUMULATOR 20-01

OIL COOLER 20-01
OPERATOR CAB (ROPS/TOPS) 10-01

PIVOT PINS 10-01
PORT RELIEF VALVES 20-01
PRESSURE REDUCING VALVE 20-01

RECEIVER/DRIER 70-01
REGULAR MAINTENANCE 70-01
RIGHT CONTROL LEVER (JOYSTICK) 20-01
RIGHT CONSOLE 40-01
RIGHT SIDE COVER 10-01, 40-01

Continued On Next Page

MidWestTech | Bobcat 335 Compact Excavator Service Manual | Publication 6986949_2_08 **Order the manual at mid-west-tech.com >**

SAFETY 70-01
SEAT AND SEAT MOUNT 40-01
SEAT BELT 10-01
SERVICE SCHEDULE 10-01
SPARK ARRESTOR MUFFLER 10-01, 60-01
STARTER 50-01
STOPPING THE ENGINE AND LEAVING THE EXCAVATOR 10-01
SWING CIRCLE GEAR 30-01
SWING FRAME 40-01
SWING MOTOR 20-01
SWING MOTOR DRIVE CARRIER 20-01
SWIVEL JOINT 20-01
SYSTEM CHARGING AND RECLAMATION 70-01

TAILGATE 10-01, 40-01
THERMOSTAT 70-01
TORQUE SPECIFICATIONS FOR BOLTS SPEC-01
TRACK FRAME COMPONENTS 30-01
TRANSPORTING THE EXCAVATOR ON A TRAILER 10-01
TRAVEL CONTROL VALVE 20-01
TRAVEL LEVER/PEDALS 40-01
TRAVEL MOTOR 10-01, 20-01
TROUBLESHOOTING 70-01

UPPERSTRUCTURE 40-01
UPPERSTRUCTURE SLEW LOCK 10-01, 40-01

X-CHANGE 40-01
X-CHANGE (HYDRAULIC) 40-01

MidWestTech | Bobcat 335 Compact Excavator Service Manual | Publication 6986949_2_08 Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD III

SAFETY INSTRUCTIONS V

SERIAL NUMBER LOCATIONS IX

DELIVERY REPORT X

EXCAVATOR IDENTIFICATION XI

SAFETY AND MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

UNDERCARRIAGE 30-01

UPPERSTRUCTURE & SWING SECTION 40-01

ELECTRICAL SYSTEM AND ANALYSIS 50-01

ENGINE SERVICE 60-01

HEATING, VENTILATION, AIR CONDITIONING 70-01

SPECIFICATIONS SPEC-01

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Troubleshooting The Cylinder Circuit

TROUBLESHOOTING THE CYLINDER CIRCUIT		
PROBLEM	**CAUSE**	**CORRECTION**
Cylinder inoperable	Control console raised	Lower control console.
	Loose fittings or broken hoses	Repair or replace
	Low PSI at joystick	Check, repair or replace pressure reducing valve
	Lever linkage incorrectly adjusted	Readjust
	Control console lockout switch	Readjust or replace
	Cylinder internal leakage excessive	Repair or replace
	Joystick manifold pressure reducing valve defective	Repair or replace
	Joystick internal leakage excessive	Repair or replace
Cylinder for insufficient	Lever linkage incorrectly adjusted	Readjust
	Main relief valve pressure to low	Readjust or replace
	Lever linkage incorrectly adjusted	Readjust
Cylinder speed too slow	Cylinder internal leakage excessive	Repair or replace
	Joystick manifold solenoid valve defective	Repair or replace
	Joystick manifold pressure reducing valve defective	Repair or replace
	Control valve internal leakage excessive	Repair or replace
	Low tie rod torque on 3 spool & 6 spool control valves	Tighten tie rods to correct torque
	Joystick internal leakage excessive	Repair or replace
	Low or dirty fluid	Add or replace the hydraulic fluid
	Main relief valve malfunctioning	Readjust or replace

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Torque Values

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

Thread Size (Dia. x Pitch)	Material		
	Head Mark 4	Head Mark 7	Head Mark 10
M5 x 0.8		3 - 4 ft.-lb. (4 - 5 N•m)	
M6 x 1.0		6 - 7 ft.-lb. (8 - 9 N•m)	6 - 9 ft.-lb. (8 - 12 N•m)
M8 x 1.25	6 - 9 ft.-lb. (8 - 12 N•m)	11 - 16 ft.-lb. (15 - 22 N•m)	18 - 25 ft.-lb. (24 - 34 N•m)
M10 x 1.25	13 - 18 ft.-lb. (18 - 24 N•m)	22 - 30 ft.-lb. (30 - 41 N•m)	36 - 50 ft.-lb. (49 - 68 N•m)
M12 x 1.25	22 - 30 ft.-lb. (30 - 41 N•m)	40 - 54 ft.-lb. (54 - 73 N•m)	69 - 87 ft.-lb. (94 - 118 N•m)
M14 x 1.5	36 - 50 ft.-lb. (49 - 68 N•m)	58 - 80 ft.-lb. (79 - 108 N•m)	116 - 137 ft.-lb. (157 - 186 N•m)

Troubleshooting

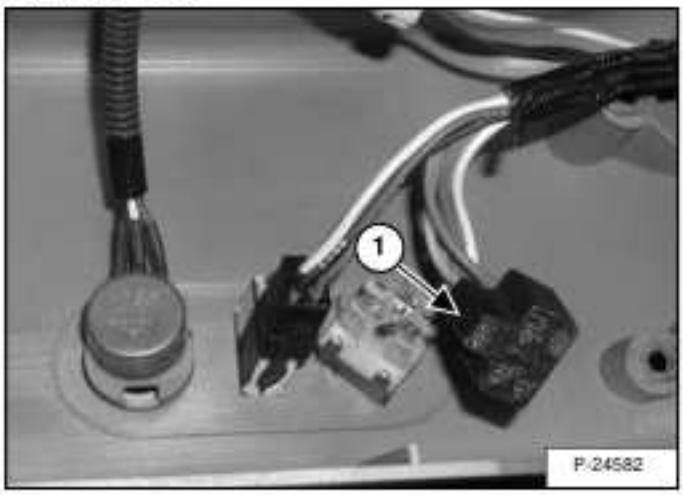
The following troubleshooting chart is provided for assistance in locating and correcting problems which are most common. Many of the recommended procedures must be done by authorized Bobcat Service Personnel only.

PROBLEM	CAUSE
Slow cranking speed.	1, 2, 3, 4
Engine will not start.	2, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17,19, 27, 28, 29
Difficult to start.	5, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 25, 27, 28, 29
No power from engine.	8, 9, 10, 11, 12, 13, 15, 16, 17, 21, 22, 24, 25, 26, 28, 29
Engine is mis-firing.	8, 9, 11, 12, 13, 15, 16, 17, 21, 22, 24, 25, 26, 28
Too much fuel consumption.	10, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24, 25, 27, 28, 29
Black exhaust.	10, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24, 25, 27, 28, 29
Blue/white exhaust.	4, 10, 15, 16, 17, 21, 23, 27, 29, 30, 50
Low oil pressure.	4, 31, 32, 33, 34, 35, 37, 38, 39, 52
Engine knocking.	13, 15, 16, 19, 22, 24, 25, 27, 29, 31, 40, 41, 53
Engine running rough.	7, 8, 9, 10, 11, 12, 13, 17, 18, 22, 24, 25, 26, 29, 40, 53
Vibration.	12, 13, 17, 21, 22, 25, 26, 29, 40, 42, 43
High oil pressure.	4, 33, 36
Overheating.	10, 12, 13, 15, 16, 20, 21, 40, 44, 45, 46, 47, 48, 51
Too much crankcase pressure.	22, 27, 29, 30, 40, 49
Poor compression.	10, 16, 21, 24, 25, 27, 28, 29, 30, 41, 53
Start and stop.	9, 10, 11

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Electrical System (Cont'd)

Figure 70-80-28

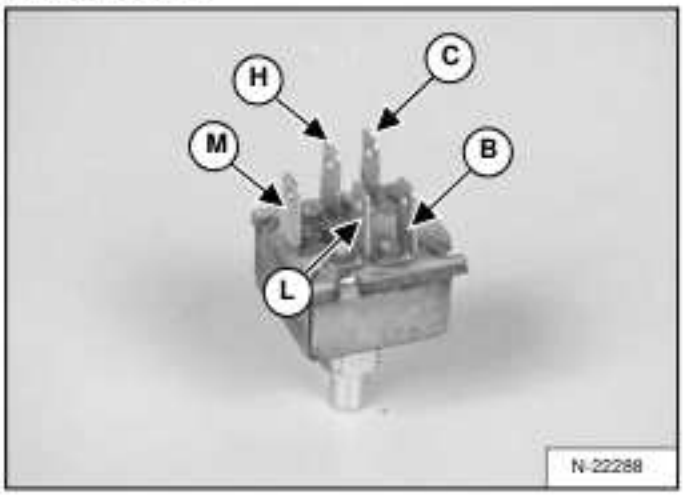


Disconnect the wiring harness (Item 1) **[Figure 70-80-28]** from the blower switch.

Check the harness for voltage. The voltage should be approximately 12 volts.

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

Figure 70-80-29



If there is voltage at the wiring harness, check the blower switch **[Figure 70-80-29]** for resistance.

With the switch in the OFF position, there should be zero resistance between all terminals.

With the switch in the **1** position, there should be resistance between **C** terminal and the **B** terminal. And also between the **C** terminal and the **L** terminal frame **[Figure 70-80-29]**.

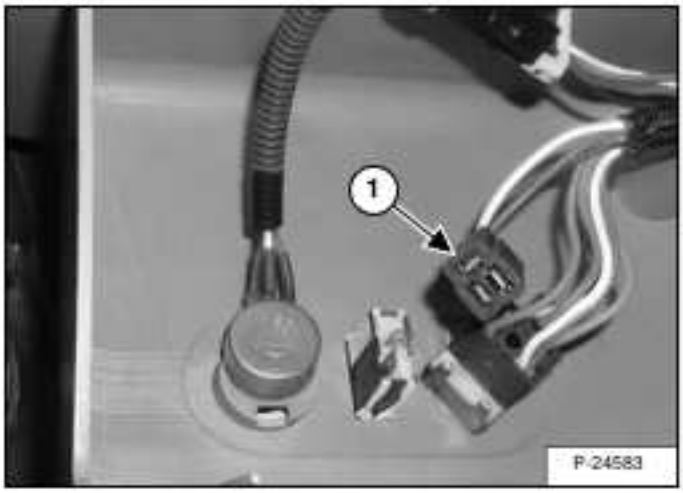
With the switch in the **2** position, there should be resistance between **C** terminal and the **B** terminal. And also between the **C** terminal and the **M** terminal frame **[Figure 70-80-29]**.

With the switch in the **3** position, there should be resistance between **C** terminal and the **B** terminal. And also between the **C** terminal and the **H** terminal frame **[Figure 70-80-29]**.

If any of the above resistance tests fail, replace the blower switch.

If the above resistance tests are good, check the A/C switch.

Figure 70-80-30



At the excavator cab, disconnect the wire harness (Item 1) **[Figure 70-80-30]** from the A/C switch.

Check the harness for voltage. The voltage should be approximately 12 volts.

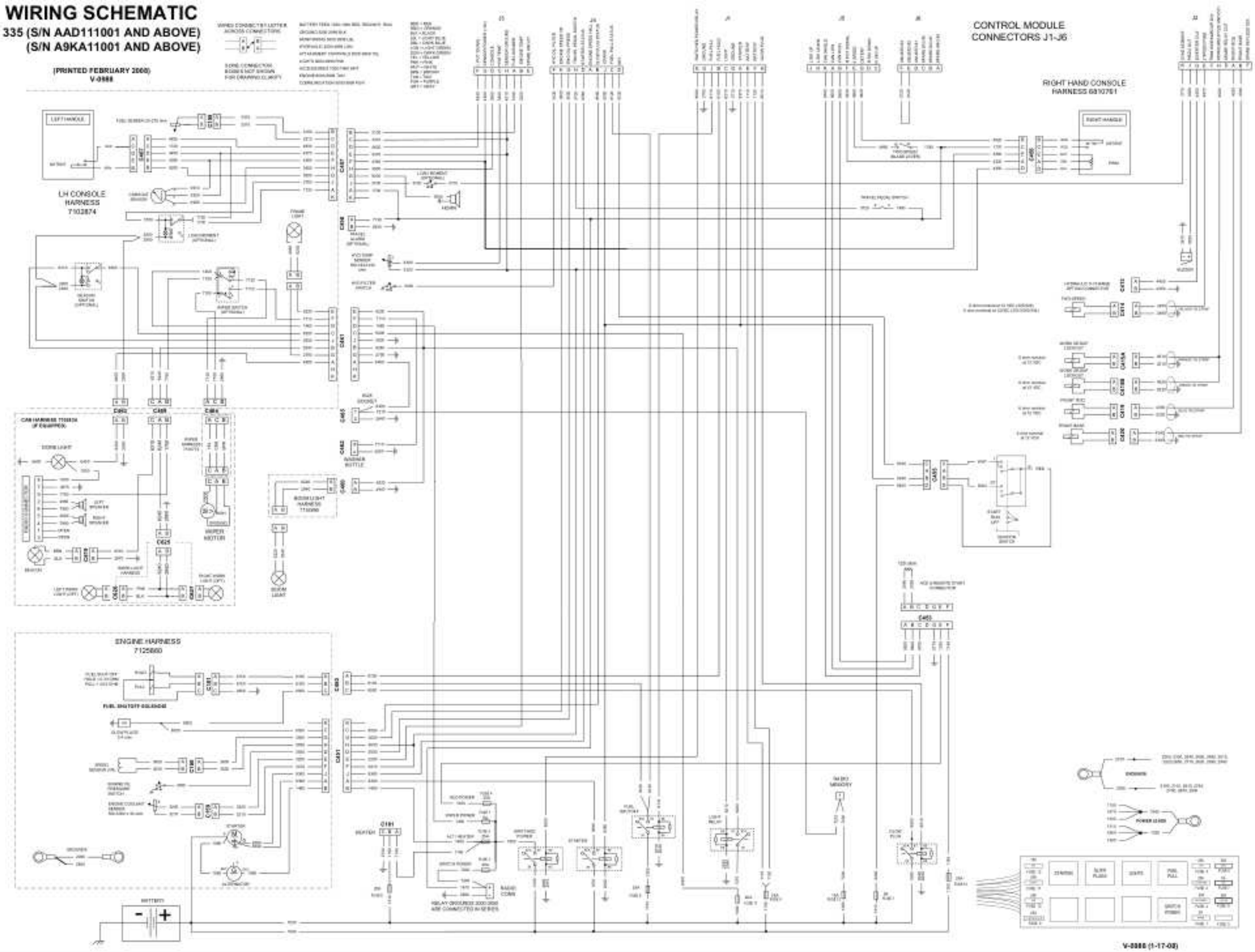
If there is no voltage at the wiring harness, check the harness for broken wires.

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WIRING SCHEMATIC

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