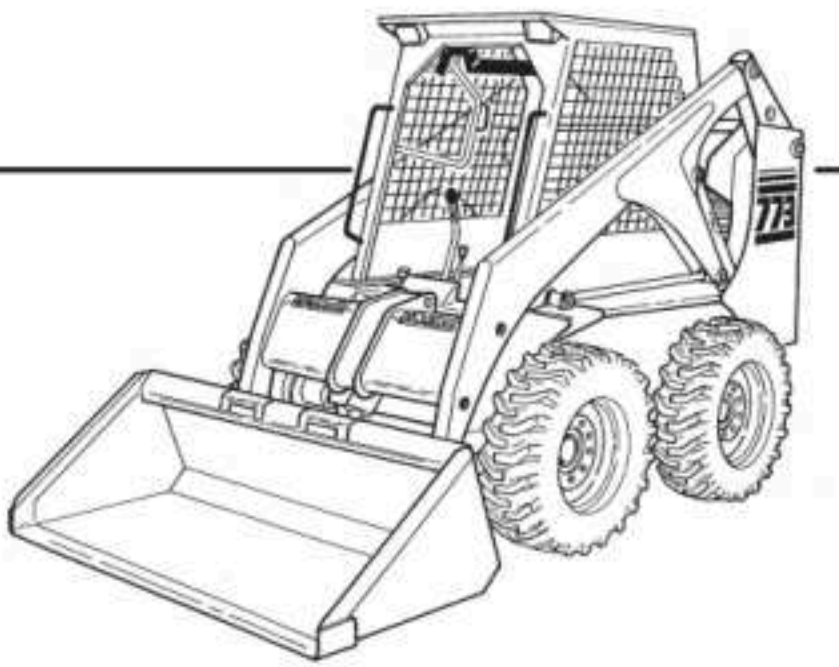
773

Bobcat®

Service Manual

(773 S/N 509635001 & Above)

(773 Europe Only S/N 509616001–509634999)



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6900092(6–97)

IR Bobcat

Printed in U.S.A.

© Bobcat Company 1997

MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97 Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

ACTUATOR VOLTAGE TEST 10–1
AHC COMPONENTS 10–1
AHC/PWM CONTROLLER 10–1
AIR CLEANER 7–1
AIR CLEANER SERVICE 1–1
ALTERNATOR 6–1
ALTERNATOR BELT 1–1
AXLE SEAL 4–1
AXLE, SPROCKET AND BEARINGS 4–1

BATTERY 6–1
BICS™ SYSTEM CONTROLLER 8–1
BICS™ VALVE 2–1, 10–1
BLOWER HOUSING/FAN GEARBOX 7–1
BOBCAT INTERLOCK CONTROL SYSTEM (BICS™) 8–1, 10–1
BOB–TACH 1–1, 5–1
BOSS® DIAGNOSTIC TOOL 8–1
BOSS® INSTRUMENT PANEL 8–1

CHAINCASE COVERS 4–1
CHAINCASE FLUID 4–1
CONTROL HANDLE (ADVANCED HAND CONTROL) (AHC) 10–1
CONTROL HANDLE (ADVANCED HAND CONTROL) (AHC) (W/PUSH BUTTON FLOAT) 10–1
CONTROL INTERLOCK LINKAGE 2–1
CONTROL PANEL 3–1
CONTROL PEDALS 2–1
CONTROL VALVE 2–1
CRANKSHAFT AND BEARINGS 7–1
CRANKSHAFT GEAR 7–1
CYLINDER BORE 7–1
CYLINDER HEAD 7–1

DECIMAL & MILLIMETER EQUIVALENTS 9–1
DRIVE BELT 1–1
DRIVE BELT HOUSING 3–1
DRIVE CHAIN 4–1

ELECTRICAL/HYDRAULIC CONTROLS REFERENCE 8–1
ELECTRICAL SYSTEM INFORMATION 6–1
ENGINE 7–1
ENGINE COMPRESSION 7–1
ENGINE COOLING SYSTEM 1–1
ENGINE LUBRICATION SYSTEM 1–1
ENGINE MUFFLER 7–1
ENGINE SPECIFICATIONS 9–1
ENGINE SPEED CONTROL 7–1

FAN GEARBOX 1–1, 7–1
FINAL DRIVE TRANSMISSION (CHAINCASE) 1–1
FIXED DRIVE BELT TENSIONER PULLEY 3–1
FLYWHEEL 7–1
FRONT LIGHTS 6–1
FUEL CAMSHAFT 7–1
FUEL INJECTION NOZZLES 7–1
FUEL INJECTION PUMP 7–1
FUEL SYSTEM 1–1
FUEL TANK 5–1

GLOW PLUGS 7–1

HANDLE CONTROL UNIT TEST 10–1
HYDRAULIC CONNECTION SPECIFICATIONS 9–1
HYDRAULIC CONTROL VALVE 10–1
HYDRAULIC CYLINDER IDENTIFICATION 2–1
HYDRAULIC CYLINDERS 2–1
HYDRAULIC FILTER HOUSING 2–1
HYDRAULIC FLUID RESERVOIR 2–1
HYDRAULIC/HYDROSTATIC FLUID SPECIFICATIONS 9–1
HYDRAULIC/HYDROSTATIC SYSTEM 1–1
HYDRAULIC PUMP 2–1
HYDRAULIC SYSTEM INFORMATION 2–1
HYDROSTATIC DRIVE MOTOR 3–1
HYDROSTATIC MOTOR 30 SERIES 3–1
HYDROSTATIC PUMP 3–1
HYDROSTATIC SYSTEM INFORMATION 3–1

IDLER GEAR AND CAMSHAFT 7–1

LIFT ARM LINK 5–1
LIFT ARMS 5–1
LIFT ARM SUPPORT DEVICE 1–1
LIFT CYLINDER(S) 2–1
LIFT LOCK BY–PASS VALVE 2–1
LIFTING AND BLOCKING THE LOADER 1–1
LIFTING THE LOADER 1–1
LOADER SPECIFICATIONS 9–1
LUBRICATION OF THE BOBCAT LOADER 1–1

MAIN RELIEF VALVE 2–1
MONITOR SERVICE CODES 8–1
MOTOR CARRIER 4–1

OIL COOLER 3–1
OIL PUMP 7–1
OPERATOR CAB 1–1, 5–1
OPERATOR CAB GAS CYLINDER 5–1
OPERATOR SEAT 5–1
OPERATION SENSING SYSTEM UNIT 8–1

PARKING BRAKE 4–1
PARKING BRAKE DISC 4–1
PISTON AND CONNECTING ROD 7–1
PIVOT PINS 1–1

RADIATOR 7–1
REAR DOOR 5–1
REAR GRILL 5–1
REAR LIGHTS 5–1
RELAY SWITCHES 6–1
REMOTE START SWITCH 1–1
ROCKER ARM AND SHAFT 7–1
RPM SENSOR 8–1

SEAT BAR (W/COMPRESSION SPRINGS) 5–1
SEAT BAR (W/GAS CYLINDER) 5–1
SEAT BAR RESTRAINT SYSTEM 1–1
SEAT BAR SENSOR 8–1
SEAT SENSOR 8–1
SENDER AND SENSOR 8–1
SERVICE SCHEDULE 1–1
SPARK ARRESTOR MUFFLER 1–1
SPRING LOADED DRIVE BELT TENSIONER PULLEY 3–1
STANDARD INSTRUMENT PANEL 6–1
STANDARD TORQUE SPECIFICATIONS FOR BOLTS 9–1
STARTER 6–1
STOPPING THE BOBCAT LOADER 1–1
STEERING LINKAGE 3–1
SWITCH HANDLE 10–1

TILT CYLINDER 2–1
TILT LOCK VALVE 2–1
TIMING GEARS 7–1
TIMING GEARCASE COVER 7–1
TIRE MAINTENANCE 1–1
TORQUE SPECIFICATIONS FOR LOADER 9–1
TOWING THE LOADER 1–1
TRACTION LOCK 8–1
TRACTION LOCK GUIDES 4–1
TRANSPORTING THE LOADER 1–1
TROUBLESHOOTING 2–1, 3–1, 6–1, 7–1, 10–1
TROUBLESHOOTING THE BOSS® & L.C.D. DISPLAY 8–1

U.S. TO METRIC CONVERSION 9–1

VALVE CLEARANCE 7–1
VALVE, VALVE SEAT AND GUIDE 7–1

WATER PUMP 7–1

Revised June 01

MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97 Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD ii
SAFETY INSTRUCTIONS v
SERIAL NUMBER LOCATIONS vii
DELIVERY REPORT vii
BOBCAT LOADER IDENTIFICATION viii
PREVENTIVE MAINTENANCE 1–1
HYDRAULIC SYSTEM 2–1
HYDROSTATIC SYSTEM 3–1
DRIVE SYSTEM 4–1
MAIN FRAME 5–1
ELECTRICAL SYSTEM 6–1
ENGINE SERVICE 7–1
SYSTEMS ANALYSIS 8–1
SPECIFICATIONS 9–1
ADVANCED HAND CONTROL SYSTEM 10–1

CALIFORNIA
PROPOSITION 65 WARNING
Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97 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

Check for correct function after adjustments, repairs or service. Failure to make correct repairs or adjustments can cause injury or death.

W-2004-1285

PROBLEM	CAUSE
No drive on one side, in one direction.	1, 2
No drive on one side in both directions.	2, 3, 4, 5
The loader does not move in a straight line.	2, 3, 5, 6, 7
The hydrostatic system is overheating.	8, 9, 10, 11
Service code HP 2 appears. (Warnings, low charge pressure.)	8, 11, 12, 13

KEY TO CORRECT THE CAUSE

1. The hydrostatic pump replenishing valves not seating.
2. The steering linkage needs adjustment.
3. The hydrostatic pump has damage.
4. The final drive chains are broken.
5. The hydrostatic motor has damage.
6. The tires do not have the correct tire pressure.
7. The tires are not the same size.
8. The hydrostatic fluid is not at the correct level.
9. The oil cooler has a restriction.
10. The temperature sending switch is not operating correctly.
11. The loader is not being operated at the correct RPM.
12. The hydraulic charge pressure sender is defective.
13. Pump is defective or worn hydrostatics.

MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97 Order the manual at mid-west-tech.com >

Torque For General Metric Bolts

Thread Size (Dia. x Pitch)	Material		
	Head Mark 4	Head Mark 7	Head Mark 10
M 5 x 0.8		3–4 ft.–lbs. (4–5 Nm)	
M 6 x 1.0		6–7 ft.–lbs. (8–9 Nm)	6–9 ft.–lbs. (8–12 Nm)
M 8 x 1.25	6–9 ft.–lbs. (8–12 Nm)	11–16 ft.–lbs. (15–22 Nm)	18–25 ft.–lbs. (24–34 Nm)
M 10 x 1.25	13–18 ft.–lbs. (18–24 Nm)	22–30 ft.–lbs. (30–41 Nm)	36–50 ft.–lbs. (49–68 Nm)
M 12 x 1.25	22–30 ft.–lbs. (30–41 Nm)	40–54 ft.–lbs. (54–73 Nm)	69–87 ft.–lbs. (94–118 Nm)
M 14 x 1.25	36–50 ft.–lbs. (49–68 Nm)	58–80 ft.–lbs. (79–108 Nm)	116–137 ft.–lbs. (157–186 Nm)

MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97

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

AHC/PWM CONTROLLER

Removal And Installation

Raise the operator cab. (See Page 1–1.)

Remove the four mounting bolts (Item 1) **[A]** from the controller.

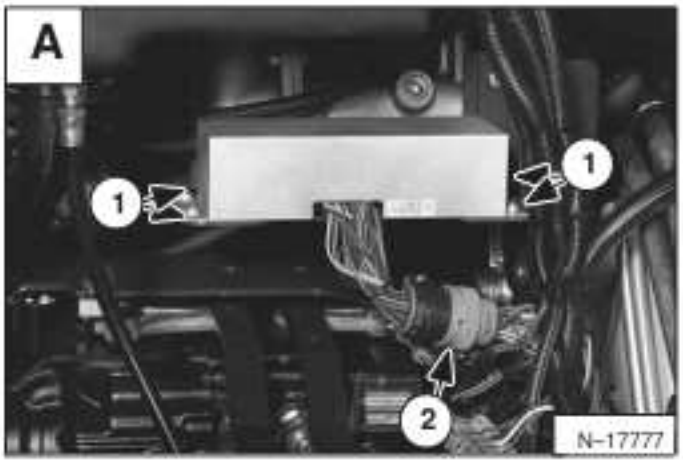
Disconnect the wiring harness connectors (Item 2) **[A]** from the controller.

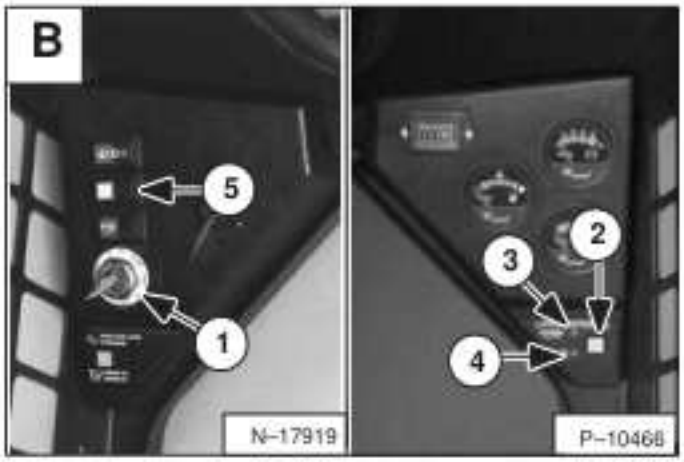
Remove the controller from the loader.

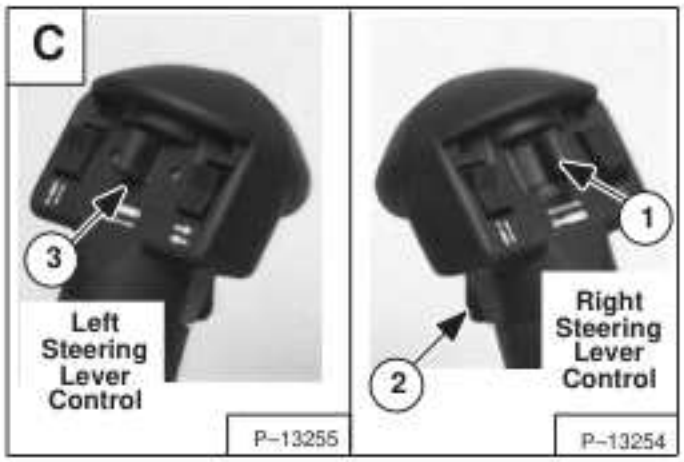
Test

- The wiring harness connectors must be connected to the controller **[A]**.
- Take voltage measurements by probing into wires near the controller shown in figure **[A]**. All connectors must remain plugged into their respectful harness.
- Turn the key to the ON position (Item 1) **[B]** with the engine OFF.
- Turn the switches ON to get their appropriate readings. (See chart listed below for switch locations.)
- Press the auxiliary hydraulic switch (Item 2) **[B]** twice. Both Green lights will be ON.
- For individual voltage readings see Page 10–16.

Key Switch	Item 1 **[B]**
Auxiliary Hydraulic Switch	Item 2 **[B]**
Momentary Light	Item 3 **[B]**
Detent Light	Item 4 **[B]**
High Flow Switch	Item 5 **[B]**
Proportional Flow Switch	Item 1 **[C]**
Detent Switch	Item 2 **[C]**
Rear Aux. Switch (Base & Rod)	Item 3 **[C]**



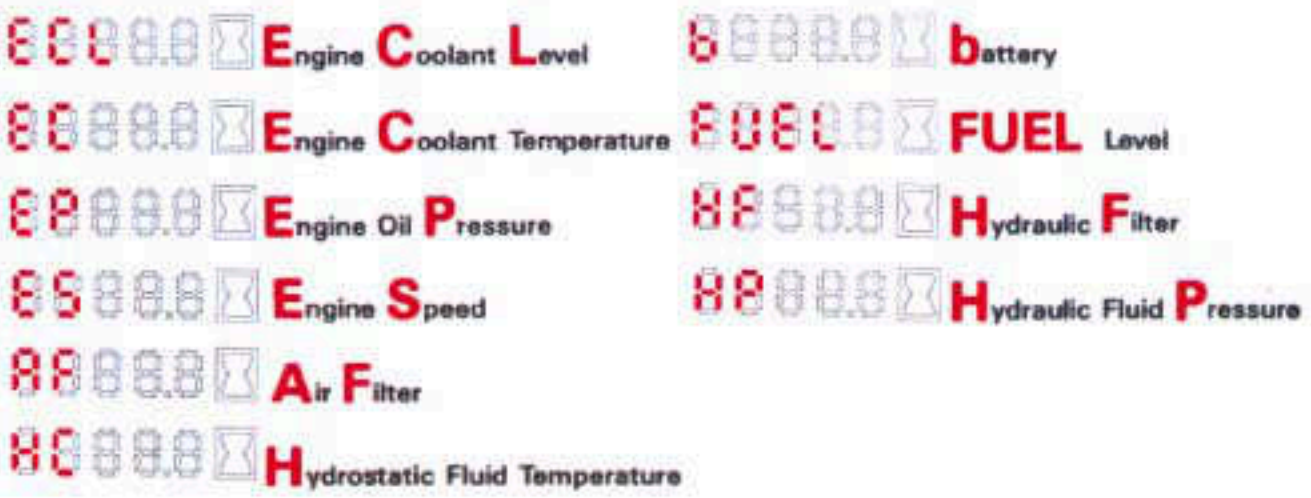




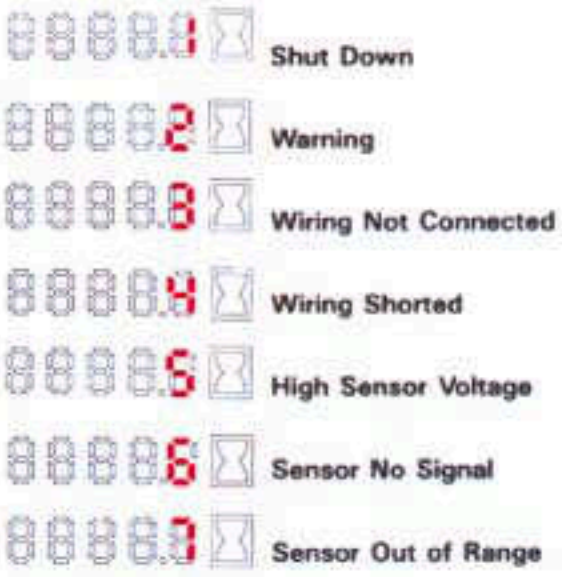
MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97
Order the manual at mid-west-tech.com >

MONITOR SERVICE CODES

One of the following Alphabetic Codes may appear on your monitor.



One of the following Numeric Codes will appear following one of the above Alphabetic Codes. Example: HP 1.2

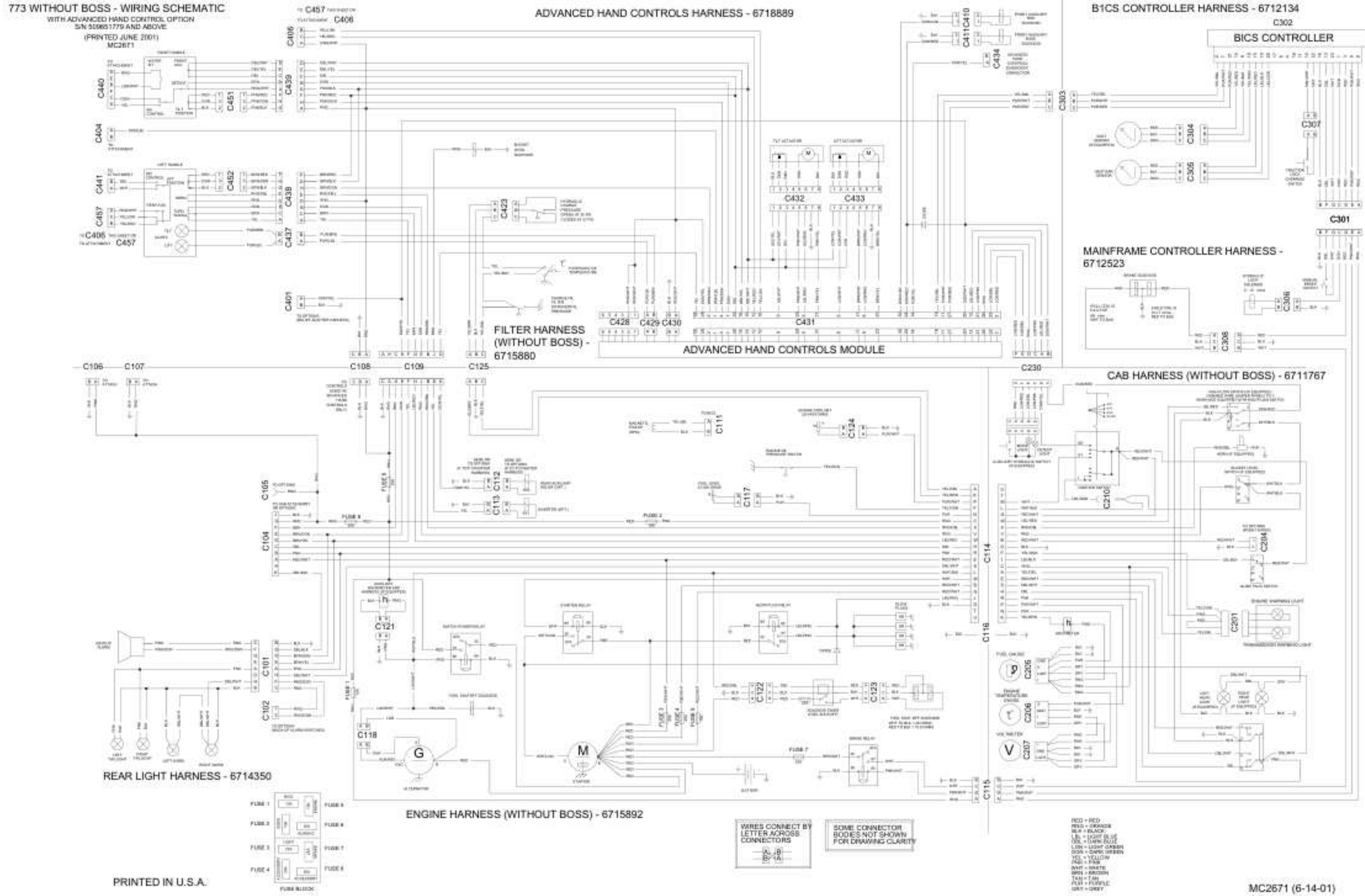


(See Pages 8–29 & 8–30 for additional code information)

MidWestTech | Bobcat 773 Skid Steer Loader Service Manual | Publication 6900092_6_97 Order the manual at mid-west-tech.com >

773 WITHOUT BOSS - WIRING SCHEMATIC

WITH ADVANCED HAND CONTROL OPTION
S/N 509651779 AND ABOVE
(PRINTED JUNE 2001)
MC2671



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