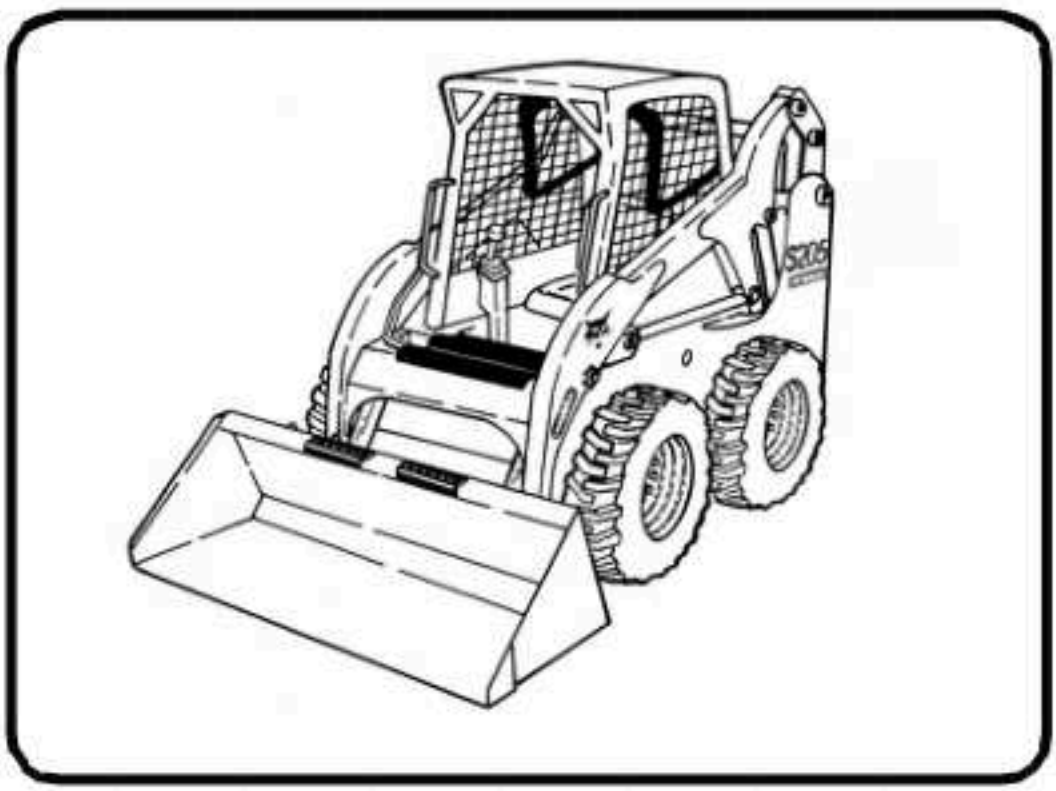
Bobcat®

Service Manual
S205 Skid-Steer Loader

S/N A3LJ11001 & Above
S/N A3LK11001 & Above
S/N ANLP11001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6987050 (2-11)

Printed in U.S.A.

© Bobcat Company 2011

MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

ACCESS PANEL (INSIDE) 50-01
ACCESS PANEL (INSIDE) (SJC) 50-01
AIR CLEANER 70-01
AIR CLEANER SERVICE 10-01
AIR CONDITIONING SYSTEM FLOW 80-01
ALTERNATOR 60-01

BACK-UP ALARM SYSTEM 60-01
BATTERY 60-01
BLOWER FAN 80-01
BOBCAT INTERLOCK CONTROL SYSTEM (BICS™) 60-01
BOBCAT CONTROLLER (ACS) 60-01
BOBCAT CONTROLLER (GATEWAY AND AUXILIARY) 60-01
BOBCAT CONTROLLER (SJC) (DRIVE) 60-01
BOB-TACH (HAND LEVER) 10-01, 50-01
BOB-TACH (POWER) 10-01, 50-01
BOB-TACH (POWER) BLOCK 20-01
BRAKE (SINGLE SPEED) 40-01
BRAKE (TWO-SPEED) 40-01
BUCKET POSITION VALVE 20-01

CAB DOOR 50-01
CALIBRATION 60-01
CAMSHAFT AND TIMING GEARS 70-01
CASE DRAIN FILTER 30-01
CHAINCASE 40-01
CHARGE PRESSURE 30-01
COMPRESSOR 80-01
CONDENSER 80-01
CONTROL HANDLE / LEVER 50-01
CONTROL HANDLE / LEVER (ACS) 50-01
CONTROL HANDLE / LEVER (SJC) 50-01
CONTROL PANEL 50-01
CONTROL PANEL (SJC) 50-01
CONTROL PANEL SETUP 60-01
CONTROL PEDALS AND LINKAGES 50-01
CONTROL PEDALS (ACS) 50-01
CONTROL SYSTEM (ACS) 60-01
CONVERSIONS SPEC-01
CRANKSHAFT AND PISTONS 70-01
CYLINDER (BOB-TACH) 20-01
CYLINDER (LIFT) 20-01
CYLINDER (TILT) 20-01
CYLINDER HEAD 70-01

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

ELECTRICAL / HYDRAULIC CONTROLS 60-01
ELECTRICAL / HYDRAULIC CONTROLS (ACS) 60-01
ELECTRICAL / HYDRAULIC CONTROLS (SJC) 60-01
ELECTRICAL SYSTEM INFORMATION 60-01
EMERGENCY EXIT 10-01
ENGINE COOLING SYSTEM 10-01, 70-01
ENGINE LUBRICATION SYSTEM 10-01
ENGINE INFORMATION 70-01
ENGINE SPEED CONTROL 70-01
ENGINE SPEED CONTROL (SJC) 70-01
EVAPORATOR COIL 80-01
EVAPORATOR / HEATER UNIT 80-01
EXHAUST GAS RECIRCULATION (EGR) SYSTEM 70-01
EXPANSION VALVE 80-01

FINAL DRIVE TRANSMISSION (CHAINCASE) 10-01
FLYWHEEL AND HOUSING 70-01
FLYWHEEL RPM SENSOR 60-01
FRONT AUXILIARY HYDRAULIC COUPLER BLOCK 20-01
FUEL SYSTEM 10-01, 70-01
FUEL TANK 50-01

HEATER COIL 80-01
HEATER VALVE 80-01
HIGH FLOW VALVE 20-01
HYDRAULIC CONNECTION SPECIFICATIONS SPEC-01
HYDRAULIC CONTROL VALVE (ACS) OR (SJC) 20-01
HYDRAULIC CONTROL VALVE (STANDARD) 20-01
HYDRAULIC / HYDROSTATIC FILTERS 20-01
HYDRAULIC FLUID RESERVOIR 20-01
HYDRAULIC / HYDROSTATIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC / HYDROSTATIC SYSTEM 10-01
HYDRAULIC PUMP (STANDARD) 20-01
HYDRAULIC PUMP (STANDARD) (HIGH FLOW) 20-01
HYDRAULIC PUMP (SJC) 20-01
HYDRAULIC PUMP (SJC) (HIGH FLOW) 20-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDROSTATIC DRIVE MOTOR 30-01
HYDROSTATIC DRIVE MOTOR (TWO-SPEED) 30-01
HYDROSTATIC MOTOR CARRIER (SINGLE AND TWO-SPEED WITH MANUAL CONTROLS) 30-01
HYDROSTATIC MOTOR CARRIER (SINGLE AND TWO-SPEED WITH SJC CONTROLS) 30-01
HYDROSTATIC PUMP 30-01
HYDROSTATIC PUMP (SJC) 30-01
HYDROSTATIC SYSTEM INFORMATION 30-01

INSTRUMENT PANELS 60-01

MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

LIFT ARMS....50-01
LIFT ARM BYPASS CONTROL VALVE....20-01
LIFT ARM SUPPORT DEVICE....10-01
LIFTING AND BLOCKING THE LOADER....10-01
LIGHTS....60-01
(S205) LOADER SPECIFICATIONS....SPEC-01
LOADER STORAGE AND RETURN TO SERVICE 10-01
LUBRICATING THE LOADER....10-01
LUBRICATION SYSTEM....70-01

MAIN RELIEF VALVE....20-01
MAINTENANCE CLOCK....60-01
MUFFLER....70-01

OIL COOLER....20-01
OPERATOR CAB....10-01, 50-01
OPERATOR SEAT....50-01
OPERATOR SEAT (SUSPENSION)....50-01

PASSWORD SETUP (DELUXE INSTRUMENTATION PANEL)....60-01
PASSWORD SETUP (KEYLESS START PANEL)..60-01
PIVOT PINS....10-01

REAR AUXILIARY DIVERTER VALVE....20-01
REAR DOOR (TAILGATE)....50-01
REAR GRILLE....50-01
RECEIVER / DRIER....80-01
REGULAR MAINTENANCE....80-01
REMOTE START TOOL KIT-MEL1563....10-01
REMOTE START TOOL (SERVICE TOOL) KIT-6689779....10-01

SEAT BAR....50-01
SEAT BAR SENSOR....60-01
SERVICE PC (LAPTOP COMPUTER)....60-01
SERVICE SCHEDULE....10-01
SPARK ARRESTER MUFFLER....10-01
SPEED SENSOR (SJC)....60-01
STARTER....60-01
STEERING DRIFT COMPENSATION....60-01
STOPPING THE ENGINE AND LEAVING THE LOADER....10-01
SYSTEM CHARGING AND RECLAMATION....80-01

THERMOSTAT....80-01
TIRE MAINTENANCE....10-01
TORQUE SPECIFICATIONS FOR BOLTS....SPEC-01
TOWING THE LOADER....10-01
TRACK CARRIAGE COMPONENTS....40-01
TRACTION LOCK....60-01
TRANSPORTING THE LOADER ON A TRAILER..10-01
TROUBLESHOOTING....80-01
TURBOCHARGER....70-01
TWO-SPEED VALVE....30-01

WINDOW (FRONT DOOR)....50-01
WINDOW (REAR)....50-01
WINDOW (SIDE)....50-01
WINDOW (TOP)....50-01

MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD II

SAFETY INSTRUCTIONS V

FIRE PREVENTION VII

SERIAL NUMBER LOCATIONS IX

DELIVERY REPORT X

LOADER IDENTIFICATION XI

SAFETY & MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

HYDROSTATIC SYSTEM 30-01

DRIVE SYSTEM 40-01

MAINFRAME 50-01

ELECTRICAL SYSTEM & ANALYSIS 60-01

ENGINE SERVICE 70-01

HEATING, VENTILATION, AIR CONDITIONING 80-01

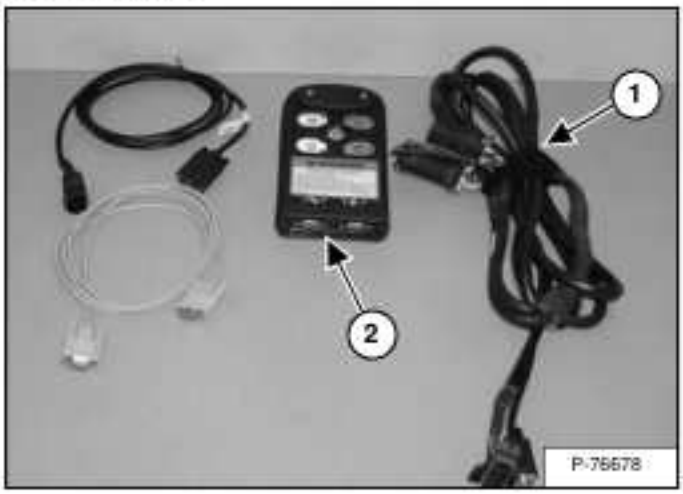
SPECIFICATIONS SPEC-01

MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

REMOTE START TOOL (SERVICE TOOL) KIT - 7003031 (CONT'D)

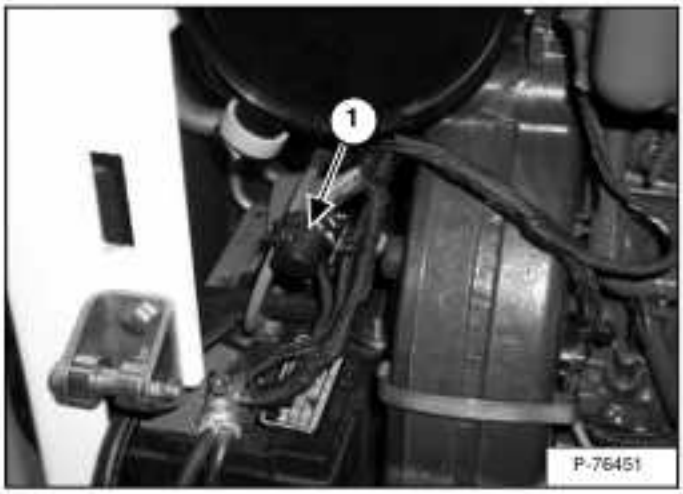
Loader Service Tool Harness - 6689747

Figure 10-61-3



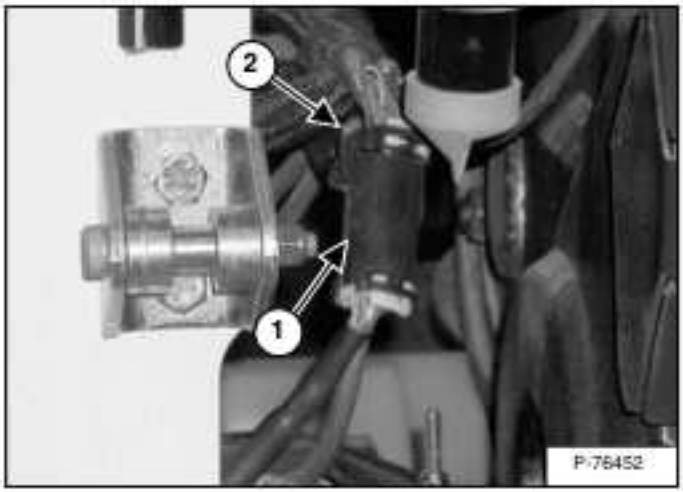
The loader service tool harness (Item 1) **[Figure 10-61-3]** is used to connect the remote start tool (service tool) (Item 2) **[Figure 10-61-3]** to the electrical system on the loader.

Figure 10-61-4



Loaders without an attachment control harness, remove the loader harness cap (Item 1) **[Figure 10-61-4]** and connect the Loader Service Tool Harness from the Remote Start Tool (Service Tool).

Figure 10-61-5



Loaders with an attachment control harness (7 pin or 14 pin), the attachment harness (Item 1) must be disconnected from the loader harness (Item 2) **[Figure 10-61-5]**.

When the remote start procedure is completed, replace the loader connector cap (Item 1) **[Figure 10-61-4]** or reconnect the attachment control harness to the loader harness **[Figure 10-61-5]**.

MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

HYDROSTATIC SYSTEM INFORMATION

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.

If a service code appears in the left instrument panel (See DIAGNOSTIC SERVICE CODES on Page 60-90-1.)

⚠ 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, 10
The hydrostatic system is overheating.	8, 9

KEY TO CORRECT THE CAUSE
1. The hydrostatic pump relief / 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 hydrostatic pump is not properly calibrated, and / or incorrect steering drift compensation setting.

MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

Specifications

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

Fuel Injection Nozzles

Opening Pressure	18636,5 - 20098,2 kPa (186,4 - 201 bar) (2703 - 2915 psi)
Fuel Tightness Nozzle Seat	Dry Nozzle at 16671,5 kPa (166,7 bar) (2418 psi)

Fuel Injection Pump

Injection Timing	1.00° B.T.D.C. - 0.50° A.T.D.C. (Engine S/N 8W0001 & Above) 0.50° B.T.D.C. - 1.00° A.T.D.C. (Engine S/N 8G0001 - 8V9999)
High Idle	2760 - 2900 rpm
Low Idle	1175 - 1325 rpm

Cylinder Head

Cylinder Head Surface Distortion	0,05 (0.002) Maximum
Top Clearance (Piston to Head)	0,60 - 0,80 (0.024 - 0.031)
Compression	3199,2 kPa (32 bar) (464 psi)
Allowable Limit	2199,4 kPa (22 bar) (319 psi)
Difference Between Cylinders	10% or less

Valves

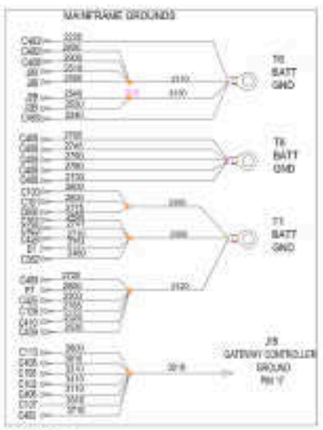
Valve Seat Width (Intake and Exhaust)	3,3 - 3,6 (0.013 - 0.14)
Valve Seat Angle (Intake and Exhaust)	45 degree
O.D. of Valve Stems (Intake)	5,968 - 5,980 (0.2350 - 0.2354)
O.D. of Valve Stems (Exhaust)	5,593 - 5,965 (0.2344 - 0.2348)
I.D. of Valve Guides (Intake and Exhaust)	6,010 - 6,025 (0.2367 - 0.2372)
Clearance Between Valve Stem And Guide (Intake)	0,030 - 0,0570 (0.0012 - 0.0022)
Allowable Limit	0,10 (0.0039)
Clearance Between Valve Stem And Guide (Exhaust)	0,045 - 0,072 (0.0018 - 0.0028)
Allowable Limit	0,10 (0.0039)
Valve Clearance (Cold)	0,13 - 0,17 (0.0052 - 0.0068)
Valve Recessing (Intake and Exhaust)	0,65 - 0,85 (0.026 - 0.033)
Allowable Limit	1,20 (0.0472)

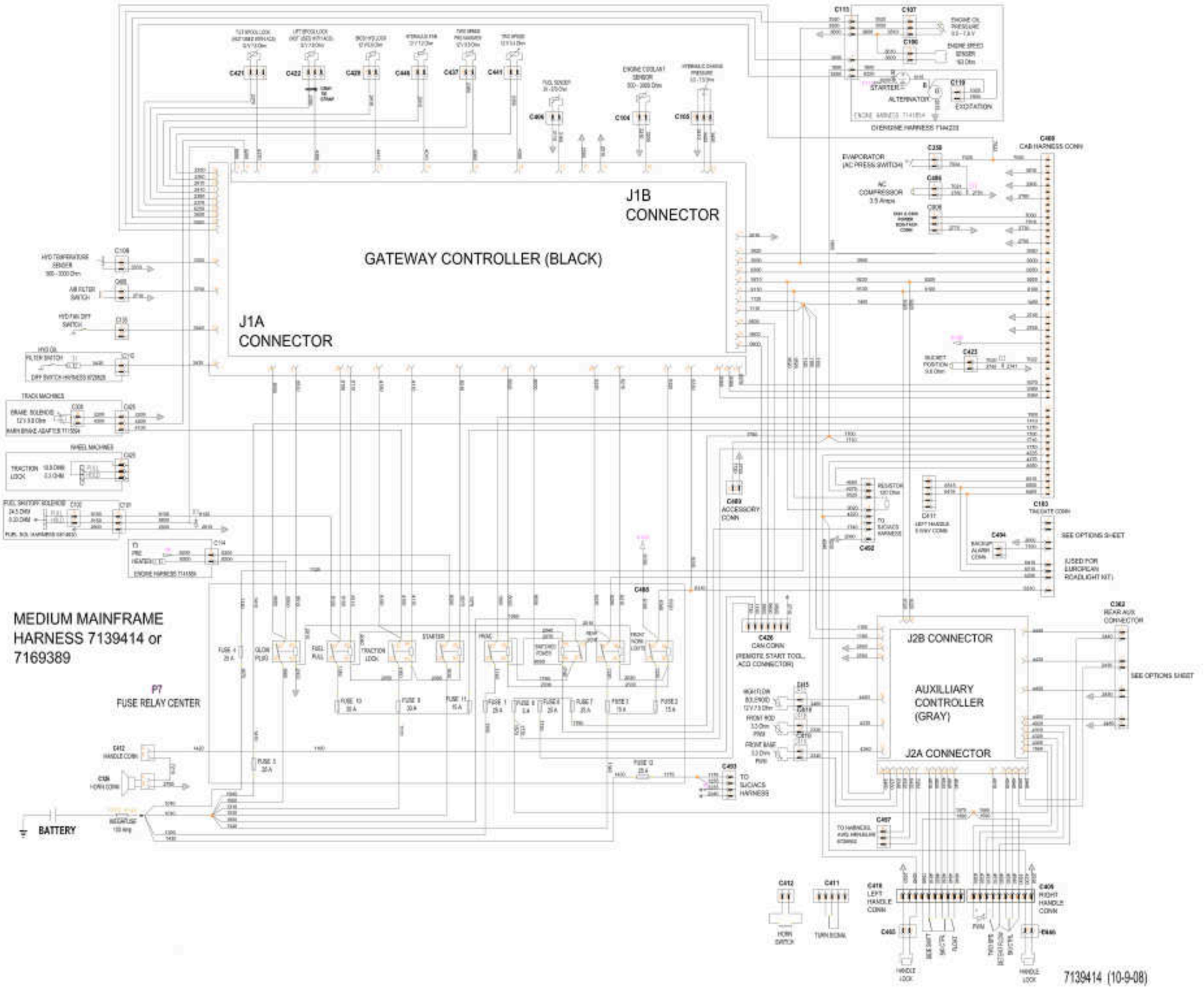
MidWestTech | Bobcat S205 Skid Steer Loader Service Manual | Publication 6987050_2_11 Order the manual at mid-west-tech.com >

WIRING SCHEMATIC
MAINFRAME
S205 (S/N A3LJ11001 AND ABOVE)
(S/N A3LK11001 AND ABOVE)

(PRINTED MARCH 2008)
7139414 or 7169389







PRINTED IN U.S.A.

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