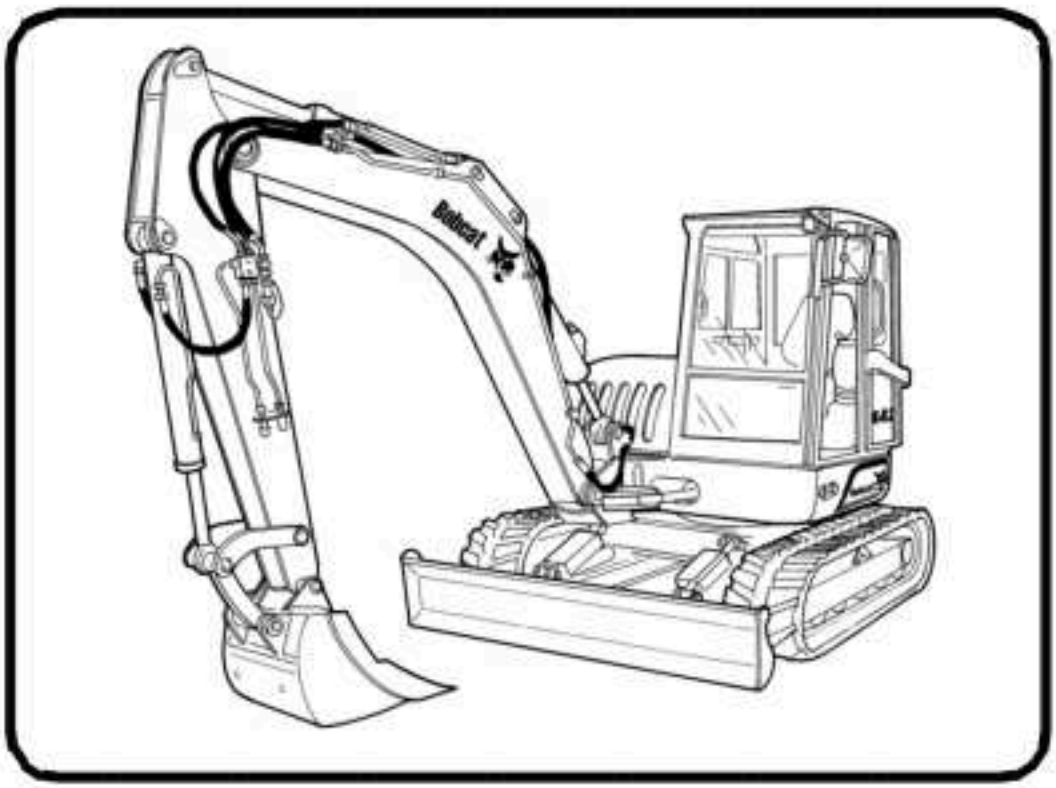
Bobcat®

Service Manual
442 Compact Excavator

S/N ADBR11001 & Above
S/N ADBS11001 & Above



6987204 (5-10)

Printed in U.S.A.

© Bobcat Company 2010

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10 Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

ACCUMULATOR 20-01
AIR CLEANER 10-01, 60-01
AIR CONDITIONING COMPRESSOR BELT 10-01
AIR CONDITIONING FAN 70-01
AIR CONDITIONING SERVICE 70-01
AIR CONDITIONING SYSTEM FLOW 70-01
ALTERNATOR 50-01
ALTERNATOR BELT 10-01
ARM 40-01
ARM CYLINDER 20-01
AUXILIARY HYDRAULIC FLOW CONTROL/ HYDRAULIC BREAKER APPLICATION VALVE 20-01
AUXILIARY HYDRAULICS SELECTOR VALVE 20-01

BASIC TROUBLESHOOTING 70-01
BATTERY 50-01
BATTERY DISCONNECT SWITCH 50-01
BLADE 30-01
BLADE CYLINDER 20-01
BLADE FLOAT VALVE 20-01
BLADE VALVE 20-01
BOOM 40-01
BOOM CYLINDER 20-01
BOOM LOAD HOLDING VALVE 20-01
BOOM OFFSET CYLINDER 20-01
BOOM OFFSET VALVE 20-01
BUCKET 40-01
BUCKET CYLINDER 20-01

CAB 40-01
CAB TILT PROCEDURE 10-01
COMPONENTS 70-01
COMPRESSOR 70-01
CONDENSER 70-01
CONTROL LEVERS 40-01
CONVERSIONS SPEC-01
COOLING SYSTEM 10-01
COUNTER WEIGHT 40-01

DUMP VALVE 20-01

ELECTRICAL SYSTEM INFORMATION 50-01
ENGINE 60-01
ENGINE BOLT TORQUE SPEC-01
ENGINE COMPONENENTS AND TESTING 60-01
ENGINE LUBRICATION SYSTEM 10-01
ENGINE SPECIFICATIONS SPEC-01
ENGINE SPEED CONTROL 40-01
EVAPORATOR UNIT 70-01
EXCAVATOR BOLT TORQUE SPEC-01

FAN/FUEL PUMP BELT 10-01
FLOORMAT 40-01
FLYWHEEL 60-01
FRESH AIR FILTER 10-01
FRONT CAB LIGHT 50-01
FUEL COOLANT AND LUBRICANTS SPEC-01
FUEL LEVEL SENDER 50-01
FUEL SYSTEM 10-01
FUEL TANK 40-01

GENERAL AIR CONDITIONING SERVICE GUIDELINES 70-01
GREASE CYLINDER 30-01

HEATER/AC FAN 70-01
HEATER COIL 70-01
HEATER UNIT 70-01
HEATER VALVE 70-01
HORN 40-01
HYDRAULIC EXCAVATOR SPECIFICATIONS SPEC-01
HYDRAULIC FILTER MOUNT 20-01
HYDRAULIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC GEAR PUMP 20-01
HYDRAULIC PISTON PUMP 20-01
HYDRAULIC PISTON PUMP DRIVE COUPLER 20-01
HYDRAULIC RESERVOIR 20-01
HYDRAULIC SYSTEM 10-01
HYDRAULIC SYSTEM INFORMATION 20-01

INSTRUMENT PANEL 50-01

JOYSTICK CONTROL PATTERN SELECTOR VALVE 20-01
JOYSTICK LOCKOUT/TWO SPEED VALVE 20-01

LEFT CONSOLE 40-01
LEFT CONTROL LEVER (JOYSTICK) 20-01
LIFTING AND BLOCKING THE EXCAVATOR 10-01
LIFTING THE EXCAVATOR 10-01
LOWER TRACK ROLLER 30-01
LUBRICATION OF THE EXCAVATOR 10-01

MUFFLER 60-01

OIL COOLER 20-01
OIL TEMPERATURE COMPONENTS 50-01
OIL TEMPERATURE REGULATOR 20-01
OPERATOR CAB 10-01

PORT RELIEF VALVES 20-01
PRESSURE REDUCING VALVE 20-01
PRESSURE SWITCH 70-01

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10 Order the manual at mid-west-tech.com >

RADIATOR/OIL COOLER 60-01
REAR COVER 10-01, 40-01
RECEIVER/DRYER 70-01
RECONDITIONING THE ENGINE 60-01
REGULAR MAINTENANCE 70-01
RELIEF VALVES 20-01
RIGHT CONSOLE 40-01
RIGHT CONTROL LEVER (JOYSTICK) 20-01
RIGHT SIDE COVER 10-01, 40-01

SAFETY 70-01
SEAT AND SEAT MOUNT 40-01
SECONDARY FRONT AUXILIARY VALVE 20-01
SERVICE SCHEDULE 10-01
SIX SPOOL HYDRAULIC CONTROL VALVE 20-01
STARTER 50-01
SWING BRAKE RELEASE VALVE 20-01
SWING BRAKE VALVE 20-01
SWING FRAME 40-01
SWING MOTOR 20-01
SWING MOTOR DRIVE CARRIER 20-01
SWIVEL JOINT 20-01
SYSTEM CHARGING AND RECLAMATION 70-01
SYSTEM TROUBLESHOOTING CHART 70-01

TEMPERATURE/PRESSURE 70-01
THERMOSTAT 70-01
THREE SPOOL HYDRAULIC CONTROL VALVE ... 20-01
TORQUE SPECIFICATIONS FOR BOLTS SPEC-01
TRACK DAMAGE IDENTIFICATION 30-01
TRACK FRAME 30-01
TRACK IDLER 30-01
TRACKS 30-01
TRANSPORTING THE EXCAVATOR 10-01
TRAVEL LEVER/FOOT PEDAL VALVE 20-01
TRAVEL MOTOR 10-01, 20-01
TROUBLESHOOTING 60-01
TWO SPEED SWITCH 50-01

UPPER TRACK ROLLER 30-01
UPPERSTRUCTURE 40-01

WIPER MOTOR 50-01

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10 Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD II

SAFETY INSTRUCTIONS IV

DELIVERY REPORT IX

SERIAL NUMBER LOCATIONS VIII

BOBCAT EXCAVATOR IDENTIFICATION X

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

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10

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

Troubleshooting Chart (Cont'd)

TROUBLESHOOTING THE SWING (SLEW) CIRCUIT		
PROBLEM	**CAUSE**	**CORRECTION**
Swing not operating.	Swing brake not releasing.	Repair or replace.
	Lower control console.	Lower control console.
	Control console lockout switch incorrectly adjusted or defective.	Readjust or replace.
	Swing motor gear defective.	Repair or replace.
	Joystick internal leakage excessive.	Repair or replace.
	Swing motor defective.	Repair or replace.
Swing force.	Pump pressure set too low.	Readjust or replace.
	Swing motor relief valve pressure too low.	Readjust or replace.
Swing speed too slow.	Swing brake not releasing.	Repair, replace or adjust.
	Engine RPM low.	Adjust.
	Pump flow low. (Gear pump)	Check, repair or adjust.
	Blocked or restricted line to swing motor.	Replace.
	Joystick internal leakage excessive.	Repair or replace.
	Control valve internal leakage excessive. (Three spool valve)	Repair or replace.
	Swing motor internal leakage excessive.	Repair or replace.
Swing over run excessive.	Control valve spool sticking.	Repair or replace.
	Joystick spool sticking.	Repair or replace.
	Swing motor relief valve set too low.	Repair or replace.
	Swing motor internal leakage excessive.	Repair or replace.
Swing motor seal leakage.	Return line filter plugged.	Inspect, clean or replace.
Swing stop/start too harsh.	Sequence valve shifting too early.	Repair, replace or adjust.

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10 Order the manual at mid-west-tech.com >

Connecting Rod, Checking (Cont'd)

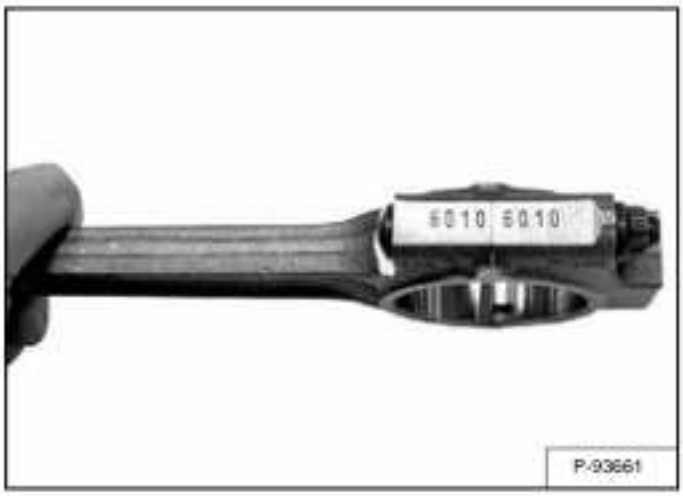
Figure 60-80-146



After pressing in the small end bushing, bore the bushing to the following dimensions **[Figure 60-80-146]**.

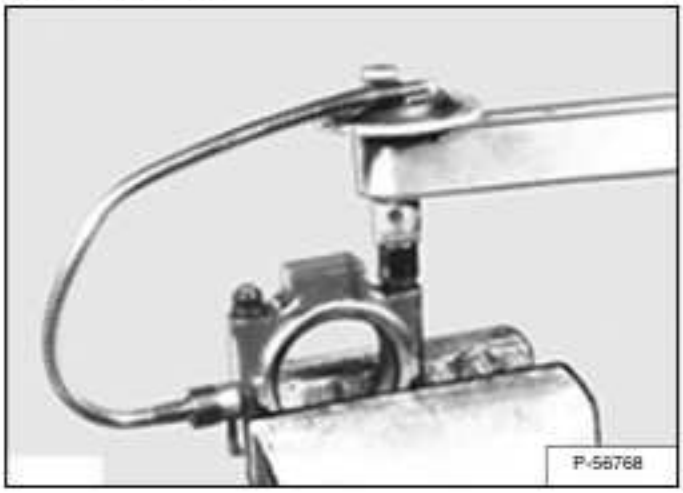
Specifications:
I.D. of Small End Bushing . . . . . 1.181 - 1.182 in.
(30,025 - 30,035 mm)

Figure 60-80-147



Install the correct cap on the correct rod **[Figure 60-80-147]**.

Figure 60-80-148



Tighten the connecting rod cap nuts as follows **[Figure 60-80-148]**.

Initial Torque . . . . . 22 ft.-lb. (30 N•m)
1st Step Angle . . . . . 60°
2nd Step Angle . . . . . 60°

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10 Order the manual at mid-west-tech.com >

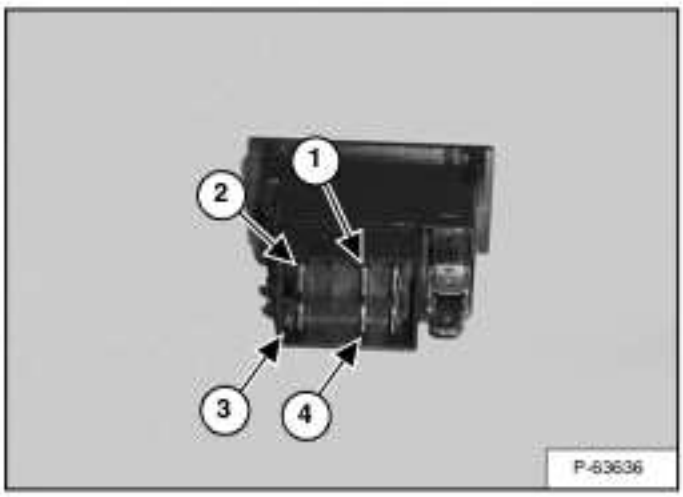
Checking The Electrical System (Cont'd)

Figure 70-80-34



Remove the switch (Item 1) **[Figure 70-80-34]**.

Figure 70-80-35



If there is voltage at the wiring harness, check the A/C switch **[Figure 70-80-35]** for resistance.

With the switch in the OFF position there should be no resistance between any of the 4 terminals (Item 1, 2, 3, 4) **[Figure 70-80-35]** on the A/C switch.

With the switch in the ON position there should be resistance between terminal (Item 1) and terminal (Item 2) **[Figure 70-80-35]**.

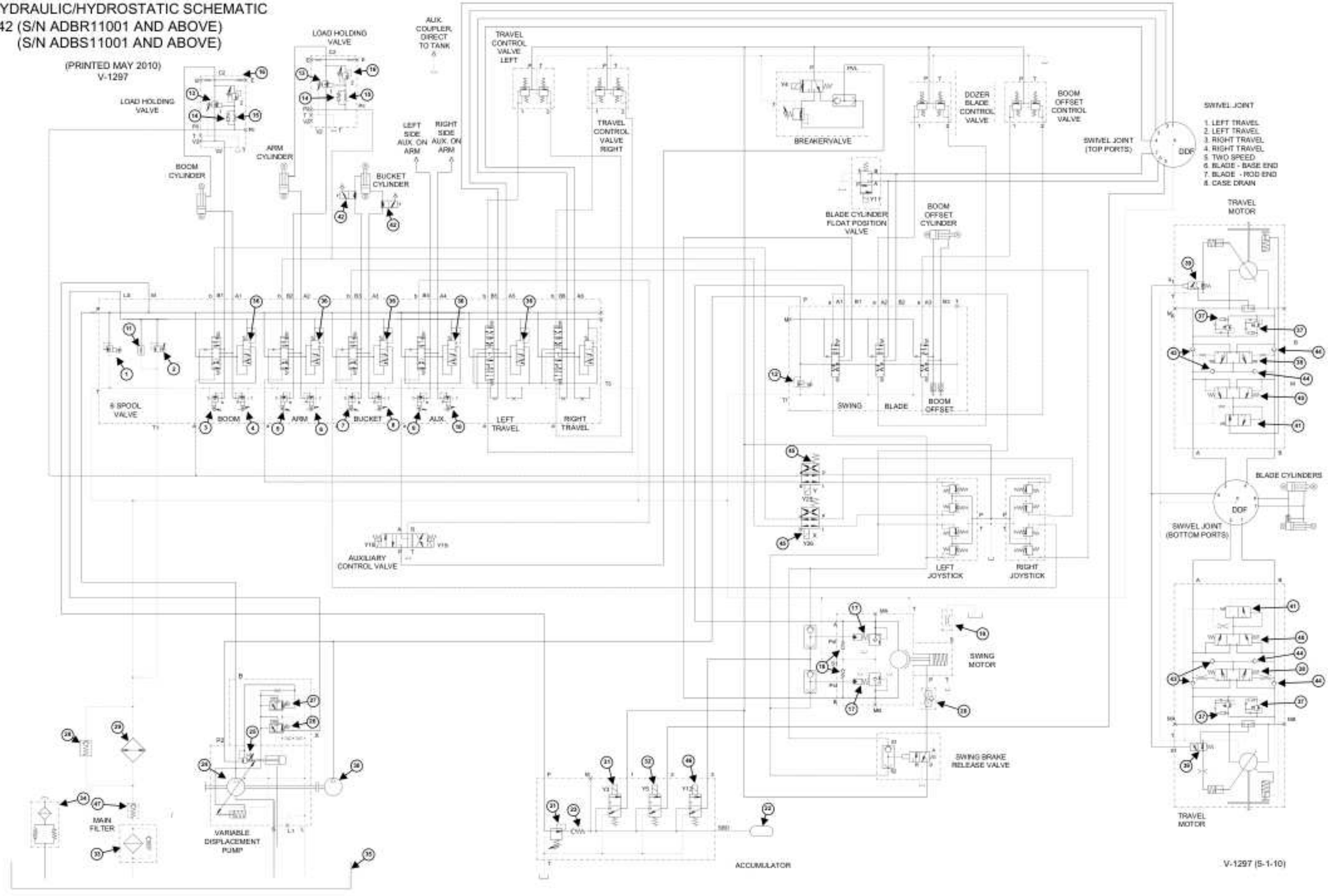
If no resistance value is found, replace the A/C switch.

Check the resistance between the wire terminal **C** and wire terminal **B** frame **[Figure 70-80-35]** should be approximately 39K Ohm's.

MidWestTech | Bobcat 442 Compact Excavator Service Manual | Publication 6987204_5_10 Order the manual at mid-west-tech.com >

HYDRAULIC/HYDROSTATIC SCHEMATIC
442 (S/N ADBR11001 AND ABOVE)
(S/N ADBS11001 AND ABOVE)

(PRINTED MAY 2010)
V-1297



V-1297 (5-1-10)

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