V723

Bobcat®

VersaHANDLER

Service Manual

S/N 367810501, 367811001 & Above (with Cab)
S/N 368011001 & Above (with Cab & Frame Leveling)
S/N 368110501, 368111001 & Above (with Canopy & Frame Leveling)



Ingersoll Rand
Compact Vehicle Technologies

6902760 (1-07)

Printed in U.S.A.

© Bobcat Company 2007

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6902760_1_07 Order the manual at mid-west-tech.com >

ALPHABETICAL INDEX

ACCUMULATOR 20-01
AIR CLEANER 70-01
AIR CLEANER SERVICE 10-01
AIR CONDITIONING SERVICE 80-01
AIR CONDITIONING SYSTEM FLOW 80-01
AIR INTAKE COWLING 50-01
ALTERNATOR 60-01
APPROVED BOOM STOP 10-01
AXLE AND DIFFERENTIAL (FRONT) (FOR S/N 367811001-367812000, S/N 368011001-368012000 AND S/N 368111001-368112000) 40-01
AXLE AND DIFFERENTIAL (FRONT) (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 40-01
AXLE AND DIFFERENTIAL (REAR) (FOR S/N 367811001-367812000, S/N 368011001-368012000 AND S/N 368111001-368112000) 40-01
AXLE AND DIFFERENTIAL (REAR) (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 40-01
AXLES (FRONT AND REAR) (FOR S/N 36781001-367812000, S/N 368011001-368012000, S/N 368111001-368112000) 10-01
AXLES (FRONT AND REAR) (FOR S/N 368112001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 10-01
AXLE PIVOT FRAME (FOR S/N 367811001-367812000, S/N 368011001-368012000 AND S/N 368111001-368112000) 40-01
AXLE TOE-IN (FOR S/N 367811001-367812000, S/N 368011001-368012000, (S/N 368111001-368112000) 40-01
AXLE TOE-IN (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 40-01

BASIC TROUBLESHOOTING 80-01
BATTERY 60-01
BOOM ASSEMBLY 50-01
BRAKE LIGHT SWITCH 60-01
BRAKE VALVE 20-01
BUCKET POSITION CYLINDER 20-01

CANOPY 50-01
COMPONENTS 80-01
COMPRESSOR 80-01
CONDENSER 80-01
CONVERSIONS SPEC-01

DASH COVER/STEERING COLUMN COVER 50-01
DRIVE BOX (FOR 367811001-367812000, S/N 368011001-368012000) AND S/N 368111001-368112000) 20-01
DRIVE BOX (FOR 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 20-01
DRIVESHAFT 40-01

ELECTRICAL SYSTEM INFORMATION 60-01
ENGINE AND ENGINE MOUNTS 70-01
ENGINE COMPONENTS AND TESTING 70-01
ENGINE COOLING SYSTEM 10-01
ENGINE COVER 10-01, 50-01
ENGINE/HYDROSTAT ASSEMBLY 70-01
ENGINE LUBRICATION SYSTEM 10-01
ENGINE SPECIFICATIONS SPEC-01
ENGINE SPEED CONTROL 70-01
ENGINE TIMING 70-01
EVAPORATOR/BLOWER UNIT 80-01
EXPANSION VALVE 80-01
EXTENSION CYLINDER 20-01

FAN MOTOR 20-01
FENDER 50-01
FLOW CONTROL VALVE 20-01
FRAME LEVELING CYLINDER 20-01
FRAME LEVELING SPEED SWITCH 60-01
FLYWHEEL AND HOUSING 70-01
FRONT AXLE (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 40-01
FRONT AXLE WITH FRAME LEVELING (FOR 368011001-368012000 AND S/N 368111001-368112000) 40-01
FRONT AXLE WITHOUT FRAME LEVELING (FOR 367811001-367812000) 40-01
FRONT WIPER MOTOR 60-01
FUEL SYSTEM 10-01
FUEL TANK 50-01

GEAR PUMP 20-01
GENERAL AIR CONDITIONING SERVICE GUIDELINES 80-01

HEATER ASSEMBLY 80-01
HYDRAULIC CONNECTION SPECS SPEC-01
HYDRAULIC CONTROL VALVE 20-01
HYDRAULIC RESERVOIR 20-01
HYDRAULIC / HYDROSTATIC FLUID SPECIFICATIONS SPEC-01
HYDRAULIC / HYDROSTATIC SYSTEM 10-01
HYDRAULIC SYSTEM INFORMATION 20-01
HYDROSTATIC DRIVE MOTOR 30-01
HYDROSTATIC PUMP 30-01
HYDROSTATIC SYSTEM INFORMATION 30-01

INCHING SWITCH 60-01
INNER BOOM 50-01
INSTRUMENT PANEL 60-01

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

ALPHABETICAL INDEX (CONT'D)

JOYSTICK 20-01
JOYSTICK PANEL 50-01

LATERAL OPERATOR RESTRAINT SYSTEM (LORS) 10-01, 60-01
LIFT CYLINDER 20-01
LIFTING AND BLOCKING THE VERSAHANDLER 10-01
LIGHTS 60-01
LUBRICATION (FOR S/N 367811001-367812000, S/N 368011001-368012000, S/N 368111001-368112000) 10-01
LUBRICATION (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368111001 & ABOVE) 10-01

MACHINE TORQUE SPECIFICATIONS SPEC-01
MAIN RELIEF VALVE 20-01
MUFFLER 70-01
OIL COOLER/RADIATOR 30-01, 70-01
OPERATOR CAB 50-01
OPERATOR CAB/CANOPY 10-01
OPERATOR SEAT 50-01

PARKING BRAKE 20-01
PARKING BRAKE (FOR S/N 367811001-367812000. S/N 368011001-368012000 AND S/N 368111001-368112000) 40-01
PARKING BRAKE (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE S/B 368112001 & ABOVE) 40-01
PEDAL ASSEMBLY 60-01
PIVOT LINK 50-01
PORT RELIEF VALVES 20-01
PRESSURE SWITCH 80-01
PRESSURE REDUCING VALVE 20-01

QUICK-TACH 50-01
QUICK TACH CYLINDER 20-01

REAR AXLE (FOR S/N 367811001-367812000, S/N 368011001-368012000 AND S/N 368111001-368112000) 40-01
REAR AXLE (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE AND S/N 368112001 & ABOVE) 40-01
REAR WEIGHTS 50-01
REAR WIPER MOTOR 60-01
RECEIVER / DRIER 80-01
RECONDITIONING THE ENGINE 70-01
REGULAR MAINTENANCE 80-01

SAFETY 80-01
SERVICE BRAKE (FOR S/N 367811001-367812000, S/N 368011001-368012000, S/N 368111001-368112000) 40-01
SERVICE BRAKE (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 40-01
SERVICE SCHEDULE 10-01
SERVICE SOFTWARE 60-01
SPARK ARRESTOR MUFFLER 10-01
STARTER 60-01
STEERING ANGLE ADJUSTMENT (FOR S/N 367811001-367812000, S/N 368011001-368012000, AND S/N 368111001-368112000) 40-01
STEERING ANGLE ADJUSTMENT (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, AND S/N 368112001 & ABOVE) 40-01
STEERING CYLINDER (FRONT) (FOR S/N 367811001-367812000, S/N 368011001-368012000 AND S/N 368111001-368112000) 20-01
STEERING CYLINDER (FRONT) (FOR S/N 367812001 & ABOVE, S/N 368012001 & ABOVE, S/N 368112001 & ABOVE) 20-01
STEERING CYLINDER (REAR) (FOR S/N 367811001-367812000, S/N 368011001-368012000 AND S/N 368111001-368112000) 20-01
STEERING CYLINDER (REAR) (FOR S/N 367812001 & ABOVE, S/N 3678012001 & ABOVE, S/N 368112001 & ABOVE) 20-01
STEERING MODE VALVE BLOCK 20-01
STEERING VALVE 20-01
SWITCH PANEL 60-01
SYSTEM CHARGING AND RECLAMATION 80-01
SYSTEM TROUBLESHOOTING CHART 80-01

TEMPERATURE/PRESSURE 80-01
TILT CYLINDER 20-01
TIRE MAINTENANCE 10-01
TOP WIPER MOTOR 60-01
TORQUE SPECIFICATIONS FOR BOLTS SPEC-01
TOW VALVE 20-01
TOWING THE VERSAHANDLER 10-01
TRANSPORTING THE VERSAHANDLER 10-01
TRAVEL/SIGNAL LEVER 60-01
TROUBLESHOOTING 40-01

VERSAHANDLER SPECIFICATIONS SPEC-01

WEAR PADS (FRONT) 50-01
WEAR PADS (REAR) 50-01

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

CONTENTS

DELIVERY REPORT. X

FOREWORD. III

SAFETY INSTRUCTIONS V

SERIAL NUMBER LOCATION IX

BOBCAT VERSAHANDLER 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 AND ANALYSIS 60-01

ENGINE SERVICE 70-01

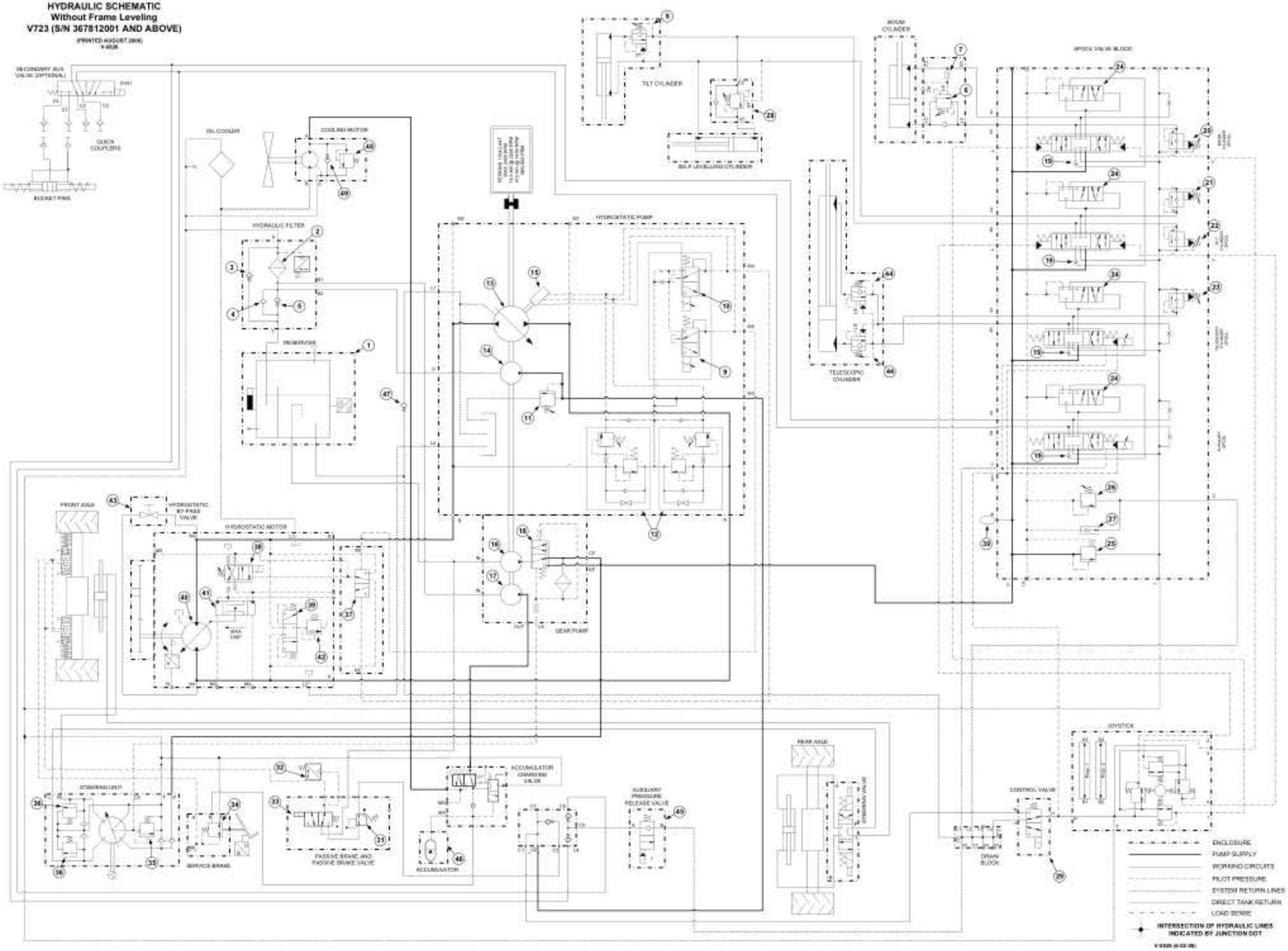
HEATING, VENTILATION, AIR CONDITIONING 80-01

SPECIFICATIONS. SPEC-01

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6902760_1_07 Order the manual at mid-west-tech.com >

HYDRAULIC SCHEMATIC
Without Frame Leveling
V723 (S/N 367812001 AND ABOVE)

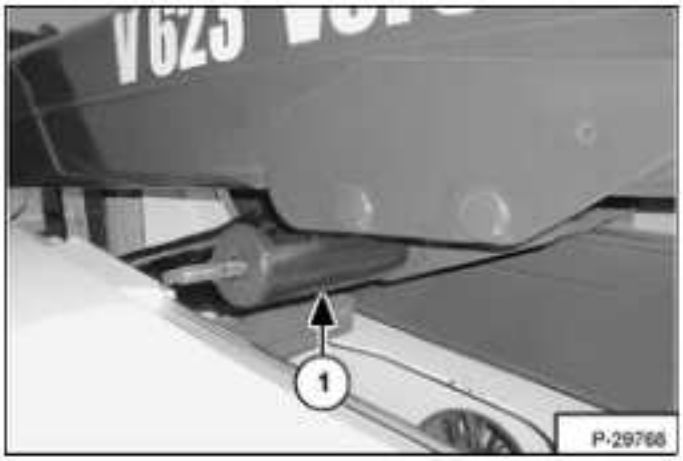
(PRINTED AUGUST 2006)
V-6926



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

Removal And Installation (Cont'd)

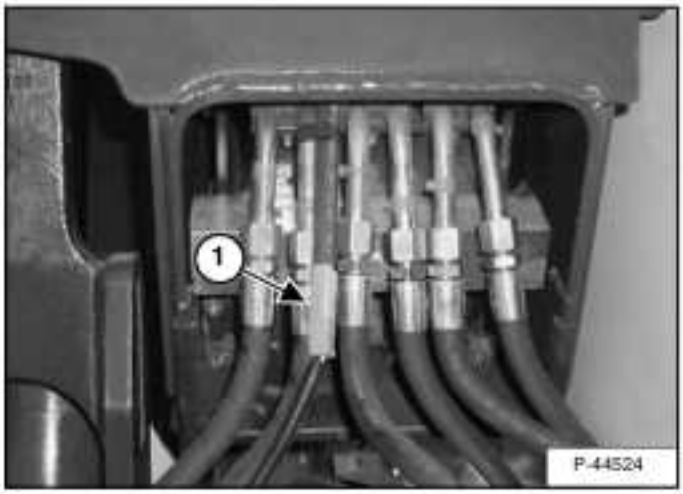
Figure 50-30-5



Remove the lift cylinder pivot pin using a pin removal tool (Item 1) **[Figure 50-30-5]**. Lower the cylinder onto the block.

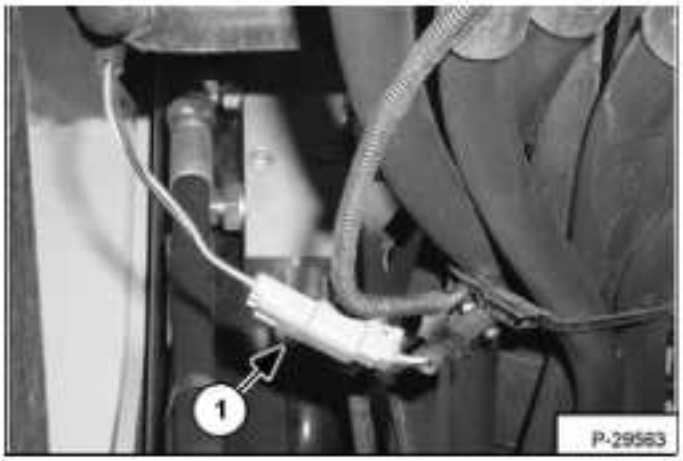
NOTE: For additional information on removing the lift cylinder. (See Removal And Installation on Page 20-20-1.)

Figure 50-30-6



Disconnect the secondary auxiliary harness connector (Item 1) **[Figure 50-30-6]**. (If Equipped)

Figure 50-30-7



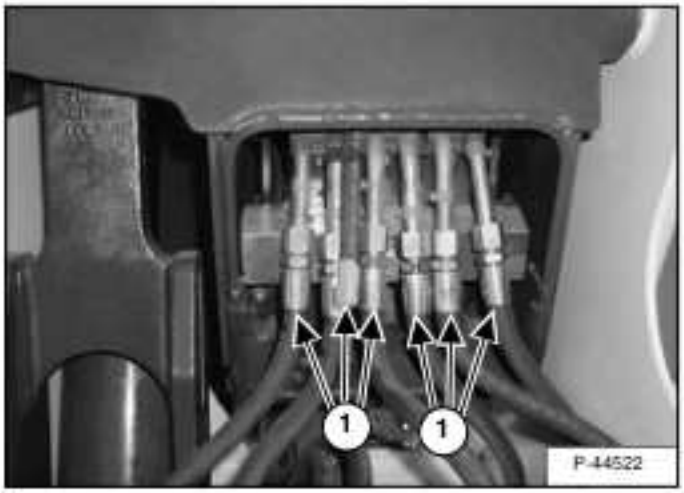
Disconnect the light harness connector (Item 1) **[Figure 50-30-7]**. (If Equipped)

IMPORTANT

When repairing hydrostatic and hydraulic systems, clean the work area before disassembly and keep all parts clean. Always use caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

I-2003-0888

Figure 50-30-8



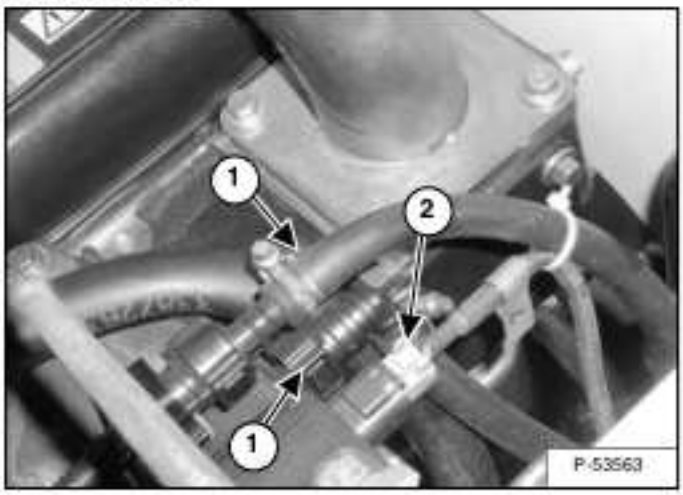
Disconnect the six hydraulic hoses (Item 1) **[Figure 50-30-8]** from the tubelines.

NOTE: Mark the hoses for correct installation.

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6902760_1_07 Order the manual at mid-west-tech.com >

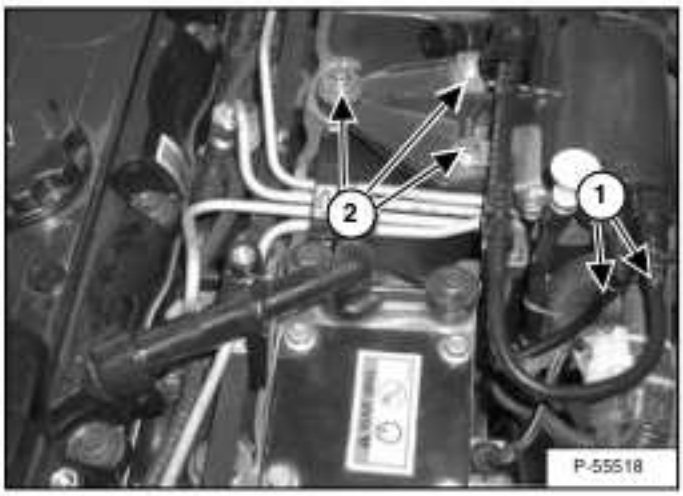
Fuel Lift Pump Removal And Installation

Figure 70-70-35



Remove the two fuel lines (Item 1) and electrical harness (Item 2) **[Figure 70-70-35]** from the fuel lift pump/filter assembly.

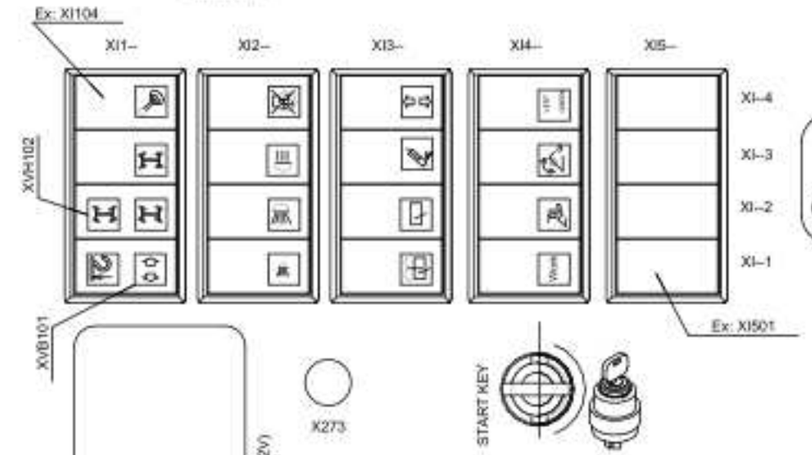
Figure 70-70-36

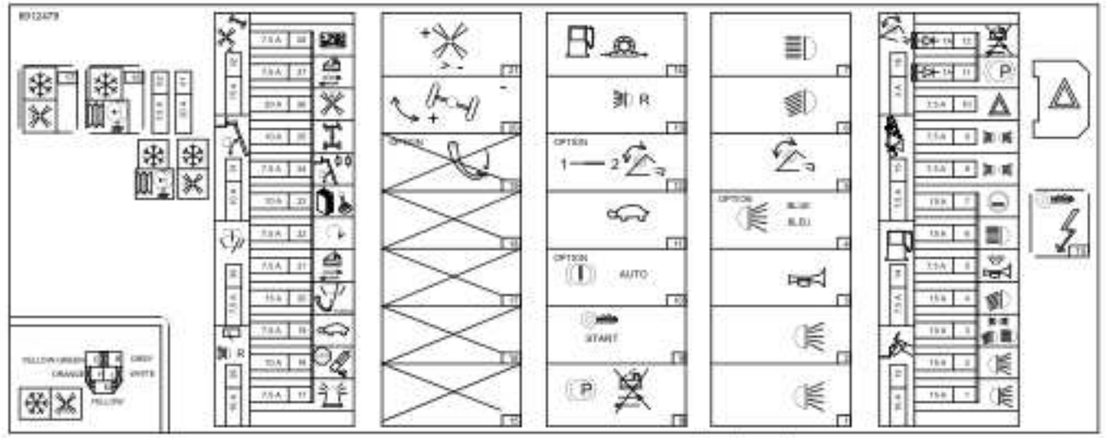


Remove the two fuel lines (Item 1) and three bolts (Item 2) **[Figure 70-70-36]** and remove the fuel lift pump/filter assembly.

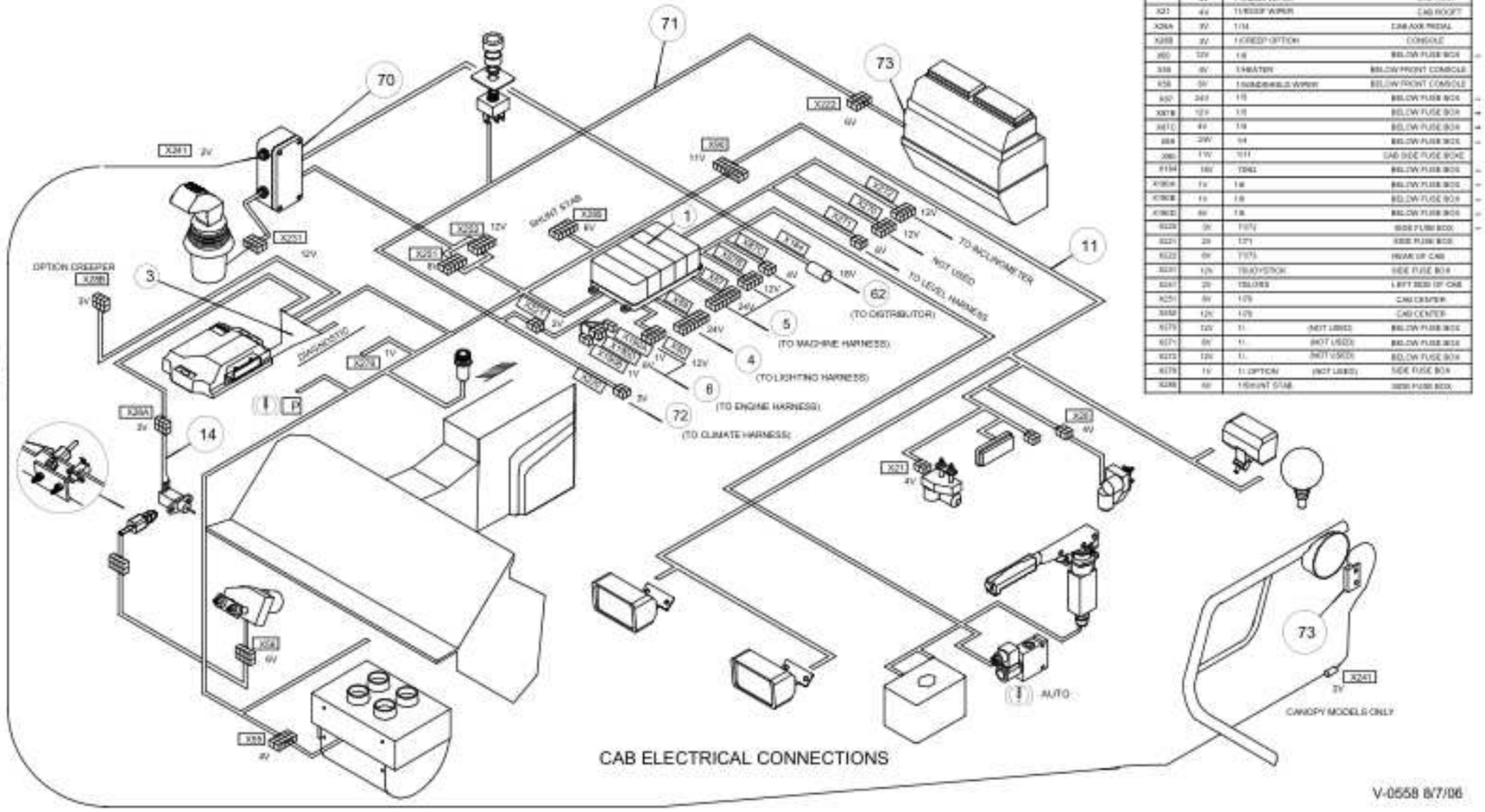
MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6902760_1_07 Order the manual at mid-west-tech.com >

ELECTRICAL SCHEMATIC
V723 (S/N 367811001 - 367812000)
V723 (S/N 368011001 - 368012000)
V723 (S/N 368111001 - 368112000)
(Printed August 2006)
V-0558
Sheet 10 of 11





Connector No.	No. of pins	CONNECTIONS (XX/YY)	LOCATION	
X001	4V		BELOW FUSE BOX	
X20	4V	1 WIPER MTR	CAB ROOF	
X21	4V	1 ROOF WIPER	CAB ROOF	
X26A	3V	1 HI	CAB ACC PEDAL	
X26B	3V	1 HORDP OPTION	CONSOLE	
X50	12V	1 B	BELOW FUSE BOX	+
X58	6V	1 HEATER	BELOW FRONT CONSOLE	
X59	3V	1 WINDSHIELD WIPER	BELOW FRONT CONSOLE	
X70	24V	1 B	BELOW FUSE BOX	+
X87B	12V	1 B	BELOW FUSE BOX	+
X87C	4V	1 B	BELOW FUSE BOX	+
X88	24V	1 A	BELOW FUSE BOX	+
X90	1V	1 ECU	CAB SIDE FUSE BOXE	
X104	16V	12V(2)	BELOW FUSE BOX	+
X105A	1V	1 B	BELOW FUSE BOX	+
X105B	1V	1 B	BELOW FUSE BOX	+
X105C	6V	1 B	BELOW FUSE BOX	+
X220	3V	1 ECU	SIDE FUSE BOX	+
X221	2V	1 ECU	SIDE FUSE BOX	
X222	6V	1 ECU	REAR OF CAB	
X231	12V	1 BODYSTICK	SIDE FUSE BOX	
X247	2V	1 SLOTS	LEFT SIDE OF CAB	
X251	6V	1 ECU	CAB CENTER	
X252	12V	1 ECU	CAB CENTER	
X270	12V	1	(NOT USED)	BELOW FUSE BOX
X271	6V	1	(NOT USED)	BELOW FUSE BOX
X272	12V	1	(NOT USED)	BELOW FUSE BOX
X276	1V	1 OPTION	(NOT USED)	SIDE FUSE BOX
X288	6V	1 RHINT STAR		SIDE FUSE BOX



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