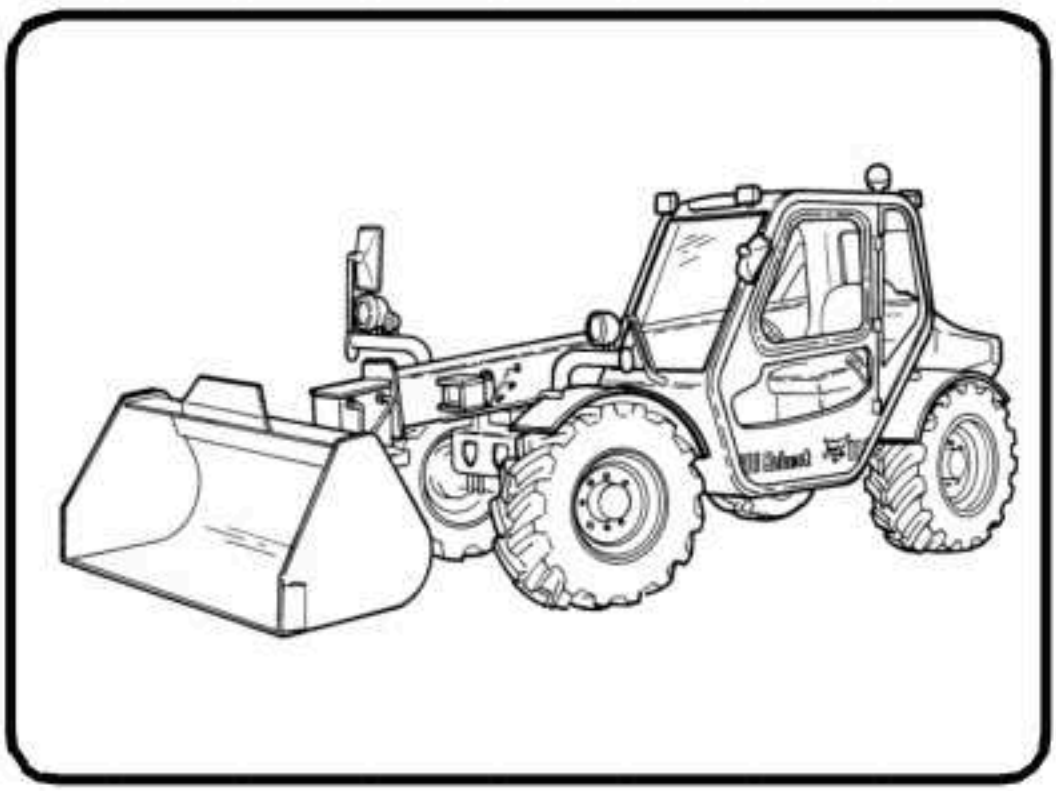
Bobcat

Service Manual
V723 VersaHANDLER®

S/N A8HL11001 & Above (with Cab)
S/N A8HP11001 & Above (with Cab and Frame Leveling)
S/N A8HK11001 & Above (with Canopy and Frame Leveling)



6986675 (4-10)

Printed in U.S.A.

© Bobcat Company 2010

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6986675_4_10 Order the manual at mid-west-tech.com >

CONTENTS

SAFETY AND MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

HYDROSTATIC SYSTEM 30-01

DRIVE SYSTEM 40-01

MAIN FRAME 50-01

ELECTRICAL SYSTEM & ANALYSIS 60-01

ENGINE SERVICE 70-01

HEATING, VENTILATION AND AIR CONDITIONING (HVAC) 80-01

SPECIFICATIONS SPEC-01

ALPHABETICAL INDEX INDEX-01

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6986675_4_10 Order the manual at mid-west-tech.com >

FOREWORD 1-7

SAFETY INSTRUCTIONS 1-9

FIRE PREVENTION 1-10
- Maintenance 1-10
- Operation 1-10
- Electrical 1-10
- Hydraulic System 1-11
- Fueling 1-11
- Starting 1-11
- Spark Arrestor Exhaust System 1-11
- Welding And Grinding 1-11
- Fire Extinguishers 1-11

SERIAL NUMBER LOCATION 1-12
- VersaHANDLER Serial Number 1-12
- Engine Serial Number 1-12
- Other Serial Numbers 1-12

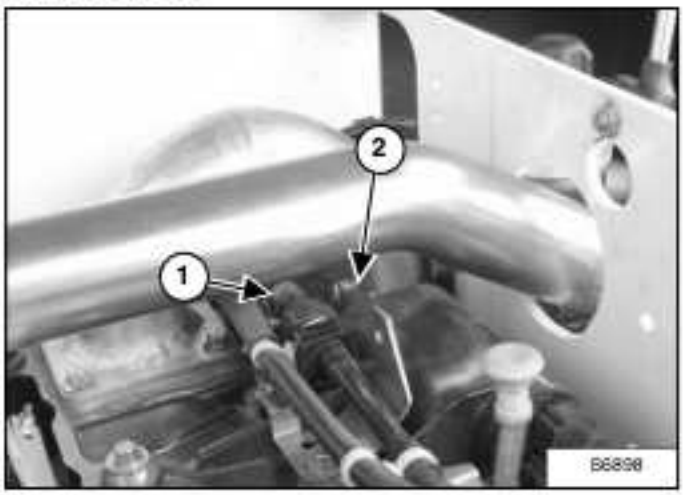
DELIVERY REPORT 1-13

BOBCAT VERSAHANDLER IDENTIFICATION 1-14

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6986675_4_10 Order the manual at mid-west-tech.com >

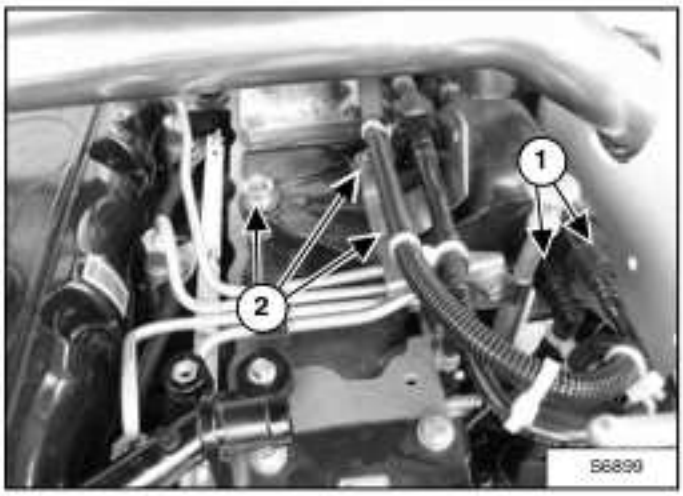
Fuel Lift Pump Removal And Installation

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.

Compression Checking

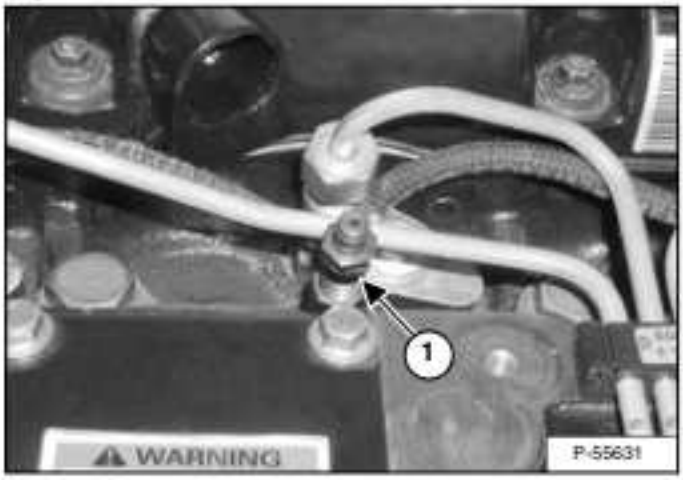
The tools listed will be needed to do the following procedure:

MEL10630 - Engine Compression Kit
MEL1352 - Compression Adapter

The engine must be at operating temperature.

Remove the glow plugs. (See Glow Plugs Removal And Installation on Page 70-70-12.)

Figure 70-70-37



Install the correct compression adapter (Item 1) **[Figure 70-70-37]** into the cylinder head.

Figure 70-70-38



Connect the compression gauge to the adapter **[Figure 70-70-38]**.

Make sure the engine speed control is fully backward (engine idle).

Disconnect the fuel stop solenoid.

Crank the engine with the starter at 200-300 RPM.

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6986675_4_10 Order the manual at mid-west-tech.com >

Gauge Pressure Related Troubleshooting

Normal compressor suction (low side) and discharge (high side) pressure at ambient temperatures of 86° - 96° F (30° - 38° C) and compressor speed of approximately 2000 RPM are:

High pressure side pressure: 210 - 265 PSI

Low pressure side pressure: 15 - 33 PSI

As a rule of thumb the high side pressure will be around eight times greater then the low side pressure

POSSIBLE CAUSE	INSPECTION	SOLUTION
Low pressure side Too high.	The low pressure side pressure normally becomes too high when the high pressure side pressure is too high. As this is explained below, the following inspection is only used when the low pressure side is too high.	
1. Expansion valve opens too far.	Frost is present on the suction hose.	Replace expansion valve
2.Defective compressor	The high and low pressure side gauge pressures equalize when the magnetic clutch is disengaged.	Replace compressor.
Low pressure side Too low.		
1. Low refrigerant charge	The high side pressure will be low and bubbles may be present in sight glass on receiver drier.	Repair any leaks and recharge the refrigerant to the correct level.
2. Clogged or closed expansion valve.	The expansion valve's inlet side is frosted. Moisture or other Contaminants can be the cause.	Clean or replace the expansion Valve.
3. Restriction between drier and expansion valve.	Frost on the line between drier and expansion valve. A Negative low pressure reading may be shown.	Flush system or replace hose.
4. Thermostat malfunction.	The evaporator is frozen.	Replace Evaporator/Blower unit.
High pressure side Too high.		
1. Poor condenser performance.	Dirty or clogged condenser fins. Condenser fans not Operating.	Clean fins, and/or repair the fan.
2. Excessive refrigerant.	The high pressure side pressure will be high.	Use refrigerant recovery equipment to capture excess refrigerant. Charge to the correct refrigerant level.
3. Excessive oil charge	The high pressure side will be high.	Evacuate system. Remove oil from condenser and compressor. Measure oil from compressor and add correct oil charge back into compressor. Flush system with nitrogen. Replace drier.
4. Air in system.	Pressure is high on both high and low sides.	Evacuate and recharge with Refrigerant.
5. Restriction in drier, condenser or high pressure line.	High pressure side will be high, and low pressure side will be low.	Evacuate and flush system replacing defective parts.

MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6986675_4_10 Order the manual at mid-west-tech.com >

VERSAHANDLER SPECIFICATIONS (CONT'D)

Performance

Operating Weight	V723 15,805 lb. (7169 kg)	V723 w/Frame Level 15,827 lb. (7179 kg)
Maximum Rated Capacity	*7000 lb. (3175 kg)	*7000 lb. (3175 kg)
*Rated Load Capacity can change depending on which approved attachment is used		

- Where applicable, specifications conform to SAE, ASME or ISO standards and are subject to change without notice.

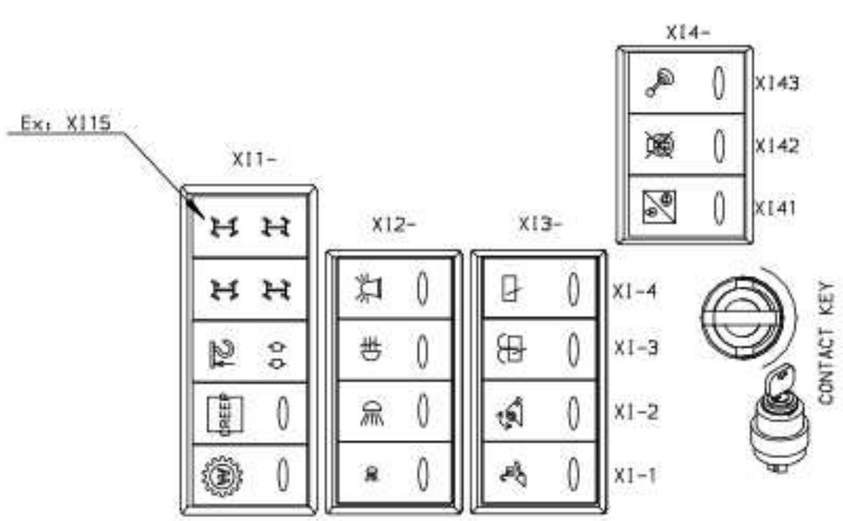
Engine

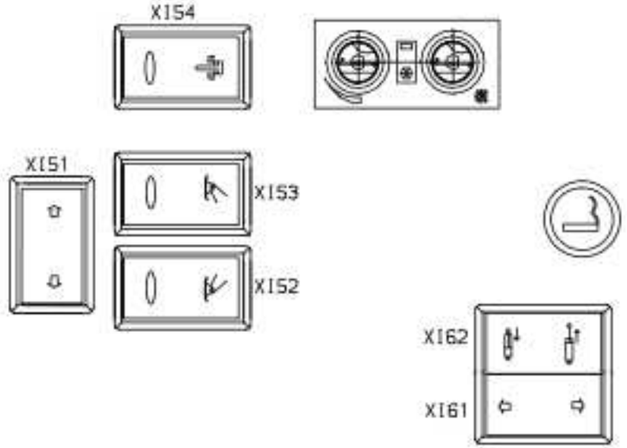
Make/Model	PERKINS 1104D-44TA (Turbo-charged)
Fuel/Cooling	Diesel/Liquid
Horsepower (SAE Net)	100 HP (74,5 kW)
Number of Cylinders	Four
Lubrication	Pressure System W/Filter
Air Cleaner	Dry replaceable cartridge w/safety element
Max Torque (ISO 14396)	410 N•m @ 1400 rpm

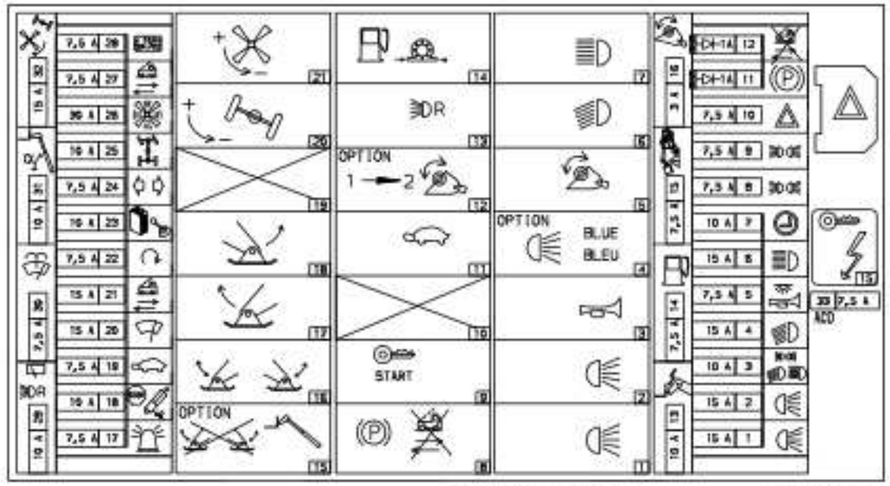
Fan Pump

Cylinder capacity	16 cm^3
Max work pressure	175 bar
ventilator speed: normal/ reducted (motor 2400 rpm)	3200 rpm
ventilator speed: normal/ reducted (motor 810 rpm)	1100 rpm

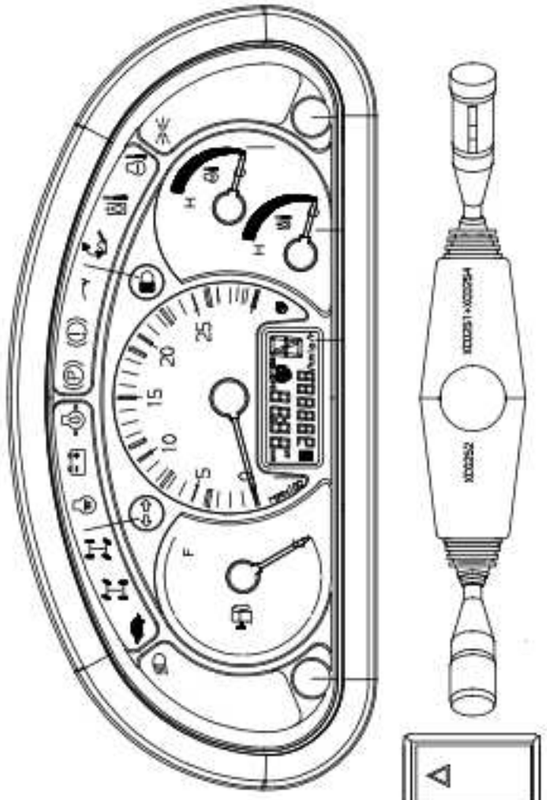
MidWestTech | Bobcat V723 VersaHANDLER Service Manual | Publication 6986675_4_10 Order the manual at mid-west-tech.com >

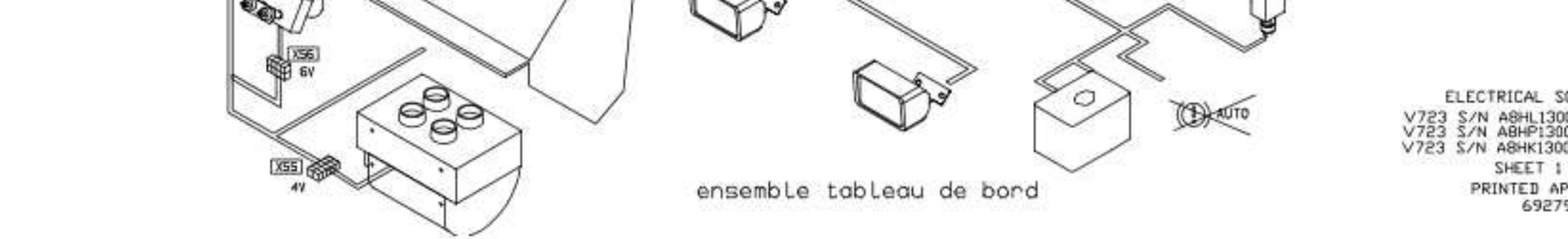






N°	VOIES	CONNECTIONS	LOCALISATION
X001	4V	CEC/CAPTEUR PONT AR	SOUS LA CABINE
X20	4V	11/ESSUIE GL. AR	CAB. TOIT
X21	4V	11/ESSUIE GL. TOIT	CAB. TOIT
X28A	3V	1/14	CAB.AXE PEDALE
X28B	3V	1/OPT CREEPER	TAB DE BORD
X50	12V	1/6	SOUS LA CABINE
X55	4V	1/CHAUFFAGE	CAB. AVANT PUPITRE
X56	6V	1/ESSUIE GL. AV	CAB. AVANT PUPITRE
X87	24V	1/5	SOUS LA CABINE
X87B	12V	1/5	SOUS LA CABINE
X87C	4V	1/5	SOUS LA CABINE
X88	24V	1/4	SOUS LA CABINE
X90	11V	1/11	CAB. COTE BOITE FUSIBLE
X184	18V	70/62	SOUS LA CABINE
X198A	1V	1/6	SOUS LA CABINE
X198B	1V	1/6	SOUS LA CABINE
X198D	6V	1/6	SOUS LA CABINE
X231	1V	1/71	COTE BOITE FUSIBLE
X231	12V	70/JOYSTICK	COTE BOITE FUSIBLE
U7	56V	1/70	CAB.CENTRE D.
X241	2V	1/..	(Cars barre only canopy va)
X270	12V	1/62	SOUS LA CABINE
X271	6V	1/63	SOUS LA CABINE
X272	12V	1/INCLINOMETER	SOUS LA CABINE
X276	1V	1/..OPT LIBRE OVDT USED)	COTE BOITE FUSIBLE
X285	6V	1/SHUNT STAB.	COTE BOITE FUSIBLE
J1A-J1B	34V-36V	1/CONTROLEUR	CAB.CENTRE D.





ensemble tableau de bord

ELECTRICAL SCHEMATIC
V723 S/N A8HL13001 AND ABOVE
V723 S/N A8HP13001 AND ABOVE
V723 S/N A8HK13001 AND ABOVE
SHEET 1 OF 12
PRINTED APRIL 2010
6927971

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