V518

Bobcat®

VersaHANDLER

Service Manual

S/N 367610501, 367611001 & Above
S/N 367711001 & Above



6902756 (1-07)

Ingersoll Rand
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ALPHABETICAL INDEX

ACCUMULATOR....20-210-01
AIR CLEANER....70-40-01
AIR CLEANER SERVICE....10-60-01
AIR CONDITIONING SERVICE....80-90-1
AIR CONDITIONING SYSTEM FLOW....80-10-1
AIR INTAKE COWLING....50-71-1
ALTERNATOR....60-30-1
APPROVED BOOM STOP....10-150-1
AXLE AND DIFFERENTIAL (FRONT) (FOR S/N 367611001 - 367612000 AND S/N 367711001 - 367712000)....40-20-1
AXLE AND DIFFERENTIAL (REAR) (For S/N 367611001 - 367612000 and S/N 367711001 - 367712000)....40-21-1
AXLE AND DIFFERENTIAL (FRONT) (For S/N 367612001 & Above, S/N 367712001 & Above)....40-22-11
AXLE AND DIFFERENTIAL (REAR) (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE)....40-23-1
AXLE PIVOT FRAME....40-01
AXLE TOE-IN (FOR S/N 367611001 - 367612000 and S/N 367711001 - 367712000)....40-40-1
AXLE TOE-IN (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE)....40-41-1
AXLES (FRONT AND REAR) (For S/N 367611001 - 367612000 and S/N 367711001 - 367712000)....10-110-1
AXLES (FRONT AND REAR) (For S/N 367612001 & Above, S/N 367712001 & Above)....10-111-1

BASIC TROUBLESHOOTING....80-50-1
BATTERY....60-20-1
BOOM ASSEMBLY....50-30-1
BRAKE LIGHT SWITCH....60-100-1
BRAKE VALVE....20-120-1
BUCKET POSITIONING CYLINDER....20-30-1
CANOPY....50-11-1
COMPONENTS....80-20-1
COMPRESSOR....80-110-1
CONDENSER....80-120-1
CONVERSIONS....SPEC-70-1

DASH COVER/STEERING COLUMN COVER....50-130-1
DRIVE BOX (For S/N 367611001 - 367612000 and S/N 367711001 - 367712000)....20-70-1
DRIVE BOX (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE)....20-71-1
DRIVESHAFT....40-70-1

ELECTRICAL SYSTEM INFORMATION....60-10-1
ENGINE AND ENGINE MOUNTS....70-60-1
ENGINE COMPONENTS AND TESTING....70-70-1
ENGINE COOLING SYSTEM....10-70-1
ENGINE COVER....10-160-1
ENGINE COVER....50-70-1
ENGINE/HYDROSTAT ASSEMBLY....70-80-1
ENGINE LUBRICATION SYSTEM....10-01
ENGINE SPECIFICATIONS....SPEC-01
ENGINE SPEED CONTROL....70-20-1
EVAPORATOR/BLOWER UNIT....80-150-1
EXPANSION VALVE....80-160-1
EXTENSION CYLINDER....20-40-1

FAN MOTOR....20-140-1
FENDER....50-110-1
FLOW CONTROL VALVE....20-240-1
FLYWHEEL AND HOUSING....70-90-1
FRONT AUXILIARY HYDRAULIC PRESSURE RELEASE VALVE....20-230-1
FRONT AXLE (FOR S/N 367611001 - 367612000 and S/N 367711001 - 367712000)....40-30-1
FRONT AXLE (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE)....40-31-1
FRONT WIPER MOTOR....60-110-1
FUEL SYSTEM....10-80-1
FUEL TANK....50-80-1

GEAR PUMP....20-130-1
GENERAL AIR CONDITIONING SERVICE GUIDELINES....80-60-1

HEATER ASSEMBLY....80-170-1
HYDRAULIC CONNECTION SPECIFICATIONS....SPEC-50-1
HYDRAULIC CONTROL VALVE....20-170-1
HYDRAULIC/HYDROSTATIC FLUID SPECIFICATIONS....SPEC-60-1
HYDRAULIC/HYDROSTATIC SYSTEM....10-100-1
HYDRAULIC RESERVOIR....20-150-1
HYDRAULIC SYSTEM INFORMATION....20-10-1
HYDROSTATIC DRIVE MOTOR....30-30-1
HYDROSTATIC PUMP....30-40-1
HYDROSTATIC SYSTEM INFORMATION....30-10-1

INCHING SWITCH....60-150-1
INNER BOOM....50-40-1
INSTRUMENT PANEL....60-80-1

JOYSTICK....20-180-1
JOYSTICK PANEL....50-120-1

LATERAL OPERATOR RESTRAINT SYSTEM (LORS)....10-170-1
LATERAL OPERATOR RESTRAINT SYSTEM (LOR'S™)....60-50-1
LIFT CYLINDER....20-20-1
LIFTING AND BLOCKING THE VERSAHANDLER....10-10-1
LIGHTS....60-60-1
LUBRICATION (For S/N 367611001 - 367612000 and S/N 367711001 - 367712000)....10-120-1
LUBRICATION (For S/N 367612001 & Above and S/N 367712001 & Above)....10-121-1

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ALPHABETICAL INDEX (CONT'D)

MACHINE TORQUE SPECIFICATIONS SPEC-30-1
MAIN RELIEF VALVE 20-80-1
MUFFLER 70-30-1

OIL COOLER 30-20-1
OPERATOR CAB/CANOPY 10-20-1
OPERATOR CAB 50-10-1
OPERATOR SEAT 50-20-1

PARKING BRAKE 20-190-1
PARKING BRAKE (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE) 40-51-1
PARKING BRAKE (FOR S/N 367611001 - 367612000 and S/N 367711001 - 367712000) 40-50-1
PEDAL ASSEMBLY 60-140-1
PORT RELIEF VALVES 20-100-1
PRESSURE REDUCING VALVE 20-200-1
PRESSURE SWITCH 80-140-1

QUICK TACH 50-90-1
QUICK TACH CYLINDER 20-90-1

OIL COOLER/RADIATOR 70-50-1
REAR AXLE (FOR S/N 367611001 - 367612000 and S/N 367711001 - 367712000) 40-90-1
REAR AXLE (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE) 40-91-1
REAR REAR WEIGHTS 50-100-1
REAR WIPER MOTOR 60-130-1
RECEIVER/DRIER 80-130-1
RECONDITIONING THE ENGINE 70-100-1
REGULAR MAINTENANCE 80-40-1

SAFETY 80-30-1
SERVICE BRAKE (FOR S/N 367611001 - 367612000 and S/N 367711001 - 367712000) 40-80-1
SERVICE BRAKE (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE) 40-81-1
SERVICE SCHEDULE 10-50-1
SPARK ARRESTOR MUFFLER 10-140-1
STARTER 60-40-1
STEERING ANGLE ADJUSTMENT (FOR S/N 367611001 - 367612000 and S/N 367711001 - 367712000) 40-60-1
STEERING ANGLE ADJUSTMENT (FOR S/N 367612001 & ABOVE, S/N 367712001 & ABOVE) 40-61-1
STEERING CYLINDER (FRONT)
STEERING CYLINDER (FRONT) (For S/N 367611001 - 367612000 and S/N 367711001 - 367612000) 20-60-1
STEERING CYLINDER (FRONT) (For S/N 367612001 & above, S/N 367712001 & above) 20-61-1
STEERING CYLINDER (REAR) (For S/N 367611001 - 367612000 and S/N 367711001 - 367712000) 20-61-1
STEERING CYLINDER (REAR) (For S/N 367612001 and above, S/N 367712001 and above) 20-63-1
STEERING MODE VALVE BLOCK 20-110-1
STEERING VALVE 20-160-1
SWITCH PANEL 60-90-1
SYSTEM CHARGING AND RECLAMATION 80-100-1
SYSTEM TROUBLESHOOTING CHART 80-70-1

TEMPERATURE/PRESSURE 80-80-1
TIRE MAINTENANCE 10-130-1
TILT CYLINDER 20-50-1
TOP WIPER MOTOR 60-120-1
TORQUE SPECIFICATIONS FOR BOLTS SPEC-40-1
TOW VALVE 20-220-1
TOWING THE VersaHANDLER (For S/N 367611001 - 367612000 and S/N 367711001 - 367712000) 10-40-1
TOWING THE VersaHANDLER (S/N 367612001 & Above, S/N 367712001 & Above) 10-41-1
TRANSPORTING THE VERSAHANDLER 10-30-1
TRAVEL/SIGNAL LEVER 60-70-1
TROUBLESHOOTING 40-10-1, 70-01

VersaHANDLER SPECIFICATIONS SPEC-10-1

WEAR PADS (FRONT) 50-50-1
WEAR PADS (REAR) 50-60-1

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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

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Troubleshooting Chart (Control Valve)

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

⚠ WARNING

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

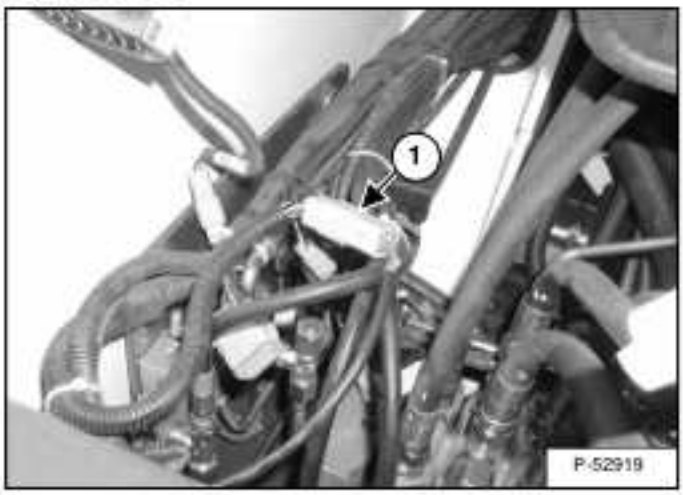
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PROBLEM	CAUSE	CORRECTION
Lack of strength at all actuators	Load sense relief cartridge defective	Replace relief cartridge
	Load sense relief cartridge out of adjustment	Make necessary adjustments
Lack of force on one actuator only	Secondary relief valve out of adjustment	Reset to original pressure
	Secondary relief valve blocked open	Replace relief valve
Lack of load hold	Load check valve failure	Replace load check valve
	Excessive clearance between housing and spool	Replace housing and spool
Simultaneous movement of controls	Blockage of individual compensator orifice	Remove and clean orifice
	Individual pressure compensator blocked	Replace housing and compensator
	Load sense line leakage	Replace load sense regulator
Engine remains under load after spools are returned to neutral	Flow regulator blocked	Replace flow regulator
	Flow regulator filter clogged	Replace filter
Detent malfunction	Controller defective	Replace controller
Spool return difficult	Tie rod bolts too tight	Re-torque tie rod bolts
Spool leaking oil	Defective spool seal	Replace spool seal
Oil leakage between valve section	Defective seals	Replace seals

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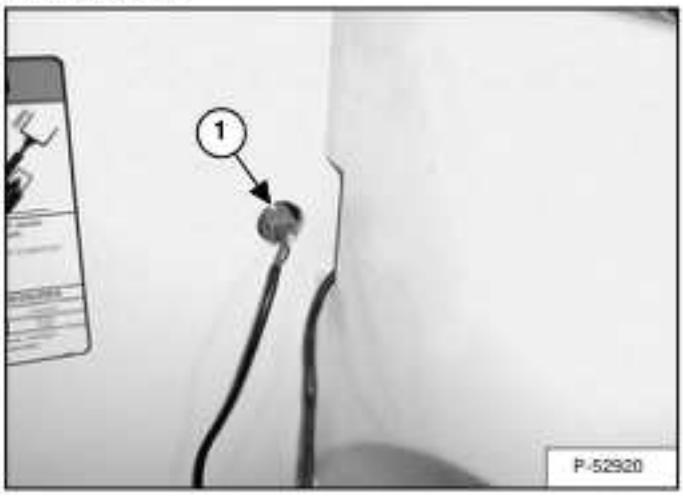
Removal And Installation (Cont'd)

Figure 50-80-5



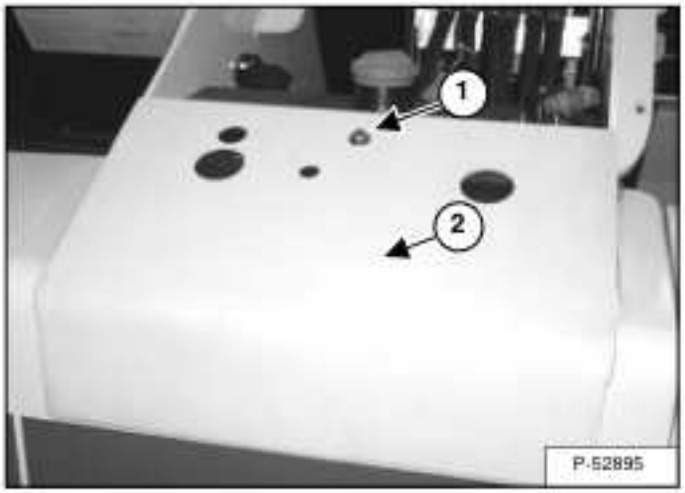
Unplug both tail light harnesses (Item 1) **[Figure 50-80-5]**.

Figure 50-80-6



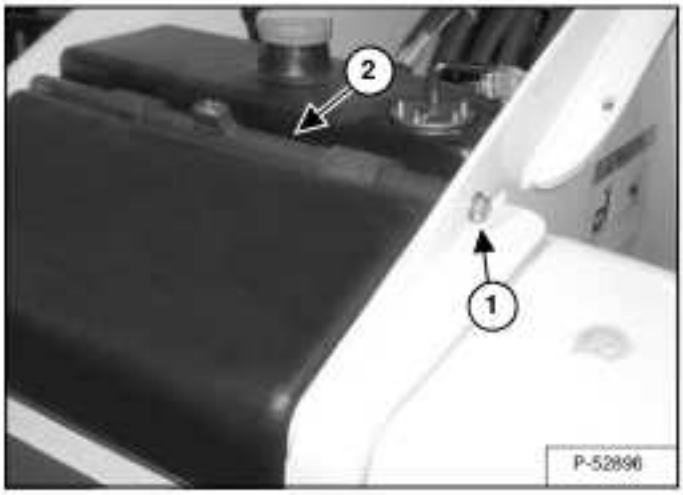
Remove the tail light harness (Item 1) **[Figure 50-80-6]** from the frame. (both sides)

Figure 50-80-7



Remove the bolt (Item 1) and rear plate (Item 2) **[Figure 50-80-7]**.

Figure 50-80-8



Remove the bolt (Item 1) (both sides) and remove the cross bracket (Item 2) **[Figure 50-80-8]**.

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Tires

Standard Tires	Dunlop T37 400/70x20-44 PSI (3 bar)
Optional Tires	Titan Lift Rigger II 400/70-20-58 PSI (4 bar)
	Continental Traction Farmer 15.0/55-17-51 PSI (3.5 bar)

Capacities

		Type
Fuel Tank	31.7 gals. (120 L)	Diesel #2 or #1
Hyd./Hydros. System	22 gals. (83 L)	6563328
Eng. Cooling System	18 qts. (17 L)	Antifreeze mixture (Ethylene Glycol)
Engine Oil Change w/Filter	9 qts (8,5 L)	See Oil Chart
Front Axle	11.1 qts (10,5 L)	100032-06A
Rear Axle	11qts. (10 L)	100032-06A
Front Reduction Gearbox	0.85 qts. (0,8 L)	100032-06A
Planetary Carrier	1.3 qts. (1,3 L)	100032-06A

Hydraulic System

Hydraulic Pump	Engine driven, 22 GPM (83 L/min)
Hydraulic Pressure	3626 PSI (250 bar)
Auxiliary Flow	

Electrical System

Alternator	12-Volt, 100 amp open frame with internal regulator
Battery	12 Volt - 900 CCA @ 0° F (-18° C)

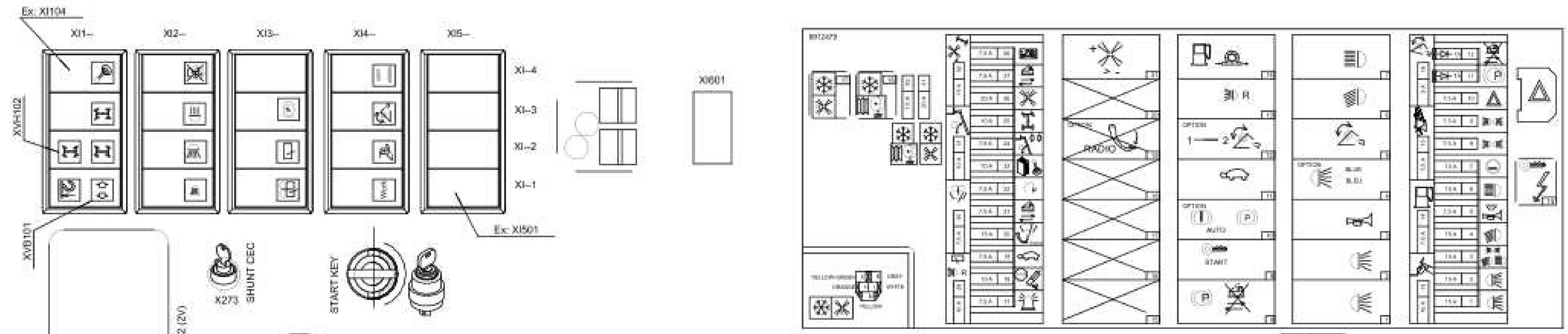
Instrument Panel

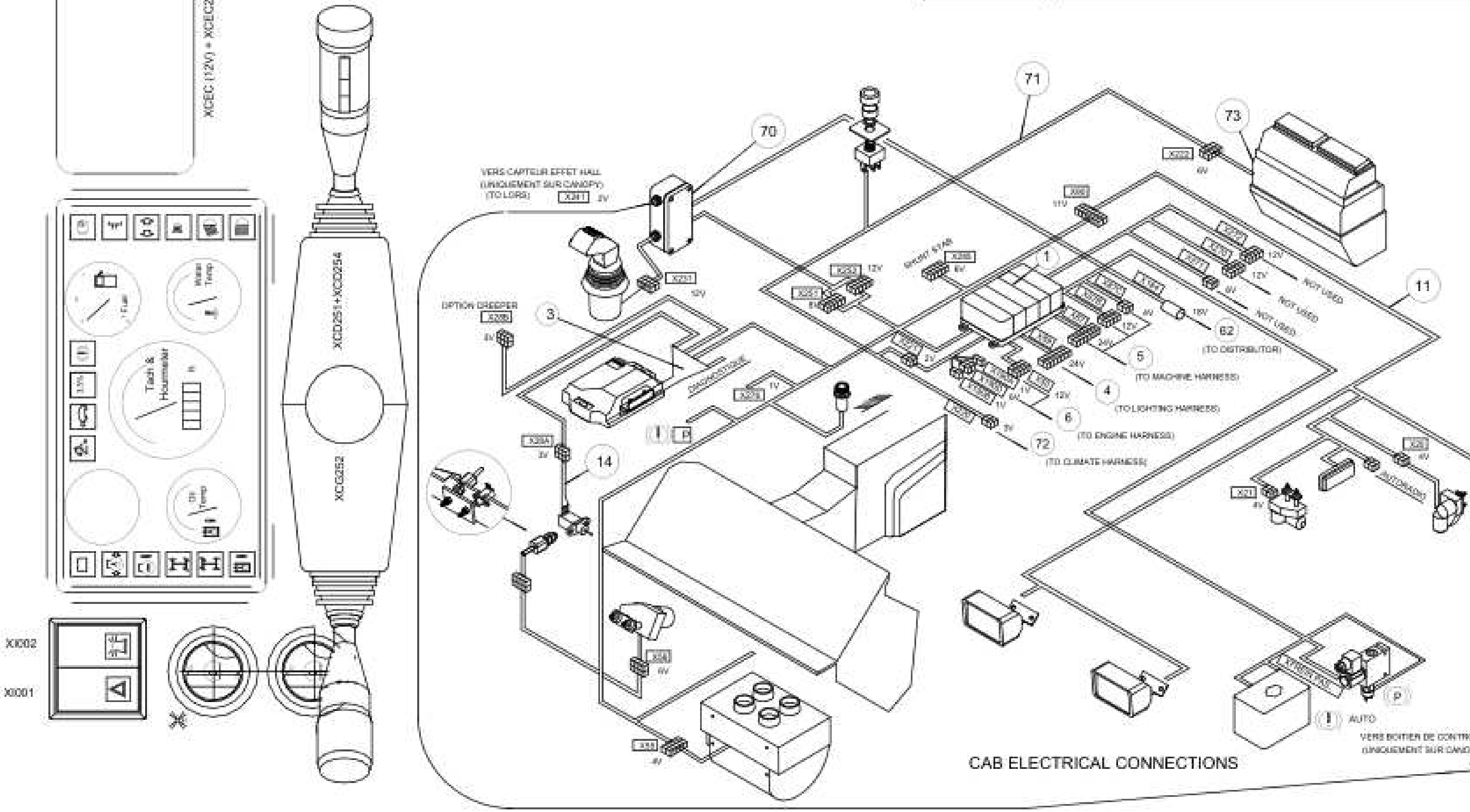
Full compliment of instrumentation for engine, hydraulic and machine functions.

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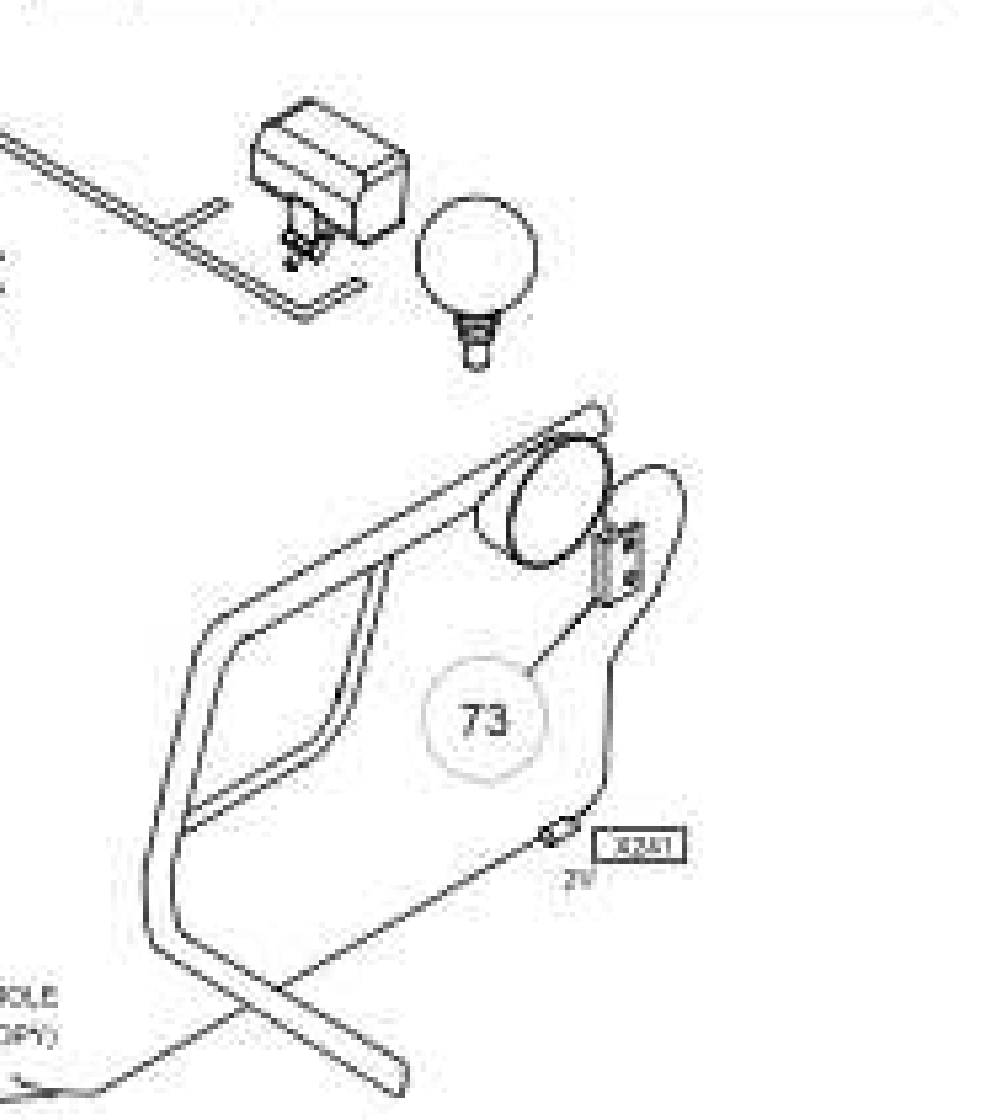
ELECTRICAL SCHEMATIC
V518 (S/N 367612001 AND ABOVE)
V518 (S/N 367712001 AND ABOVE)

(Printed August 2006)
V-0812
Sheet 8 of 9





Connector No.	Number of pins	CONNECTIONS XX / YY	LOCATION
X20	4V	1 T/REAR WIPER	CAB ROOF
X21	4V	11/ROOF WIPER	CAB ROOF
X28A	3V	1116	CAB AXE PEDAL
X28B	3V	1 X/CREEP OPTION	CONSOLE
X32	12V	1/6	BELOW FUSE BOX
X36	4V	1 HEATER	BELOW FRONT CONSOLE
X38	5V	1 WINDSHIELD WIPER	BELOW FRONT CONSOLE
X87	24V	1/8	BELOW FUSE BOX
X87B	12V	1/5	BELOW FUSE BOX
X87C	4V	1/8	BELOW FUSE BOX
X88	24V	1/4	BELOW FUSE BOX
X90	11V	T/11	CAB SIDE FUSE BOX
X134	18V	T/042	BELOW FUSE BOX
X180A	1V	1/8	BELOW FUSE BOX
X180B	1V	1/8	BELOW FUSE BOX
X180D	6V	1/8	BELOW FUSE BOX
X220	3V	T/T1	SIDE FUSE BOX
X221	2V	1/T1	SIDE FUSE BOX
X222	6V	T/T1	REAR OF CAB
X231	12V	T/JOYSTICK	SIDE FUSE BOX
X241	2V	T/GLOBE	LEFT SIDE OF CAB
X251	8V	1/70	CAB CENTER
X252	12V	1/70	CAB CENTER
X270	12V	[illegible] (NOT USED)	BELOW FUSE BOX
X271	6V	[illegible] (NOT USED)	BELOW FUSE BOX
X272	12V	[illegible] (NOT USED)	BELOW FUSE BOX
X278	1V	[illegible] OPTION (NOT USED)	SIDE FUSE BOX
X288	6V	1/SHUNT STAB	SIDE FUSE BOX



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