1850K
Tier 2
Crawler Dozer

Service Manual

9-54241

CASE CONSTRUCTION

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SECTION 0

GENERALITIES

TABLE OF CONTENTS

SUBJECT	PAGE
SAFETY RULES	III-X
IDENTIFICATION DATA	
Table of fluids used	0-4
Main dimensions	0-5
Technical data	0-6
1850K (LGP)	0-20
1850K (LT/XLT)	0-21
WEIGHT TABLE 1850K	0-22
LIST OF WEIGHTS FOR MAIN SERVICE COMPONENTS	0-23
STABILITY	0-25
GENERAL INSTRUCTIONS	0-26
TROUBLESHOOTING	0-32
UNITS OF MEASURE	0-33
TABLE OF TIGHTENING TORQUES	0-35

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SECTION 1

ENGINE

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
1.1	GENERAL SPECIFICATIONS	1-3
1.2	SERIES "C" ENGINE DATA	1-5
1.3	DIAGRAMS OF SERIES "C" ENGINE	1-8
1.4	MOUNTING OF ENGINE ON FRAME	1-11
1.5	AFTERCOOLER FAN DRIVE SYSTEM	1-12
1.6	THROTTLE LINKAGE	1-14

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SECTION 2

TRANSMISSION

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
2.1	GENERAL DESCRIPTION	2-3
2.1.1	Transmission torque converter hydraulic diagram	2-3
2.1.2	Transmission housing/propeller shaft/torque converter	2-7
2.2	TROUBLESHOOTING	2-8
2.3	TESTS	2-12
2.3.1	Torque converter stall test	2-12
2.3.2	Delivery pressure test procedure	2-13
2.3.3	Transmission gearshifting electric control valve	2-14
2.3.3.1	Positioning of diagnostic hoses	2-15
2.3.4	Transmission setting	2-16
2.4	PROCEDURES FOR THE REPAIR OF THE TORQUE CONVERTER	2-18
2.4.1	Removal	2-18
2.4.2	Re-Installation	2-19
2.4.3	Disassembly	2-20
2.4.4	Reassembly	2-31
2.5	PROCEDURES FOR THE REPAIR OF THE TRANSMISSION	2-32
2.5.1	Removal	2-32
2.5.2	Re-Installation	2-33
2.5.3	Disassembly	2-34
2.5.4	Overhaul of the forward speed clutch	2-51
2.5.5	Overhaul of the 3rd speed	2-53
2.5.6	Overhaul of the reverse speed clutch	2-58
2.5.7	Modulating valves (Disassembly/Assembly)	2-62
2.5.8	Pressure relief valve (Disassembly/Assembly)	2-63
2.6	SPECIFICATIONS AND DATA	2-67
2.6.1	General data	2-67
2.6.2	Tightening torques (Torque converter)	2-68
	Transmission housing	2-69
2.6.3	Transmission Data	2-70
	Transmission Clutch	2-70
	Transmission clutch discs	2-72
	1st - 2nd - 3rd speed Transmission Clutch modulating valves	2-72
	Lube oil pressure relief valve	2-73
	Forward/reverse modulating valves	2-74
	Transmission pressure relief and torque converter safety valve	2-75
	Torque converter/transmission feeding pump	2-76
	Oil filters	2-77
2.7	SPECIAL TOOLS	2-79

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TECHNICAL DATA 1850K

DRIVER'S COMPARTMENT	Recirculation percentage: No. of fans (type: SPAL 006-839-22 3 speed - total free flow 1160 m³/h, 40965 ft³/h)		2
	No. of fan speeds		3
	Max. cab air flow (free total air flow 1160 m³/h, 40965 ft³/h)	m³/h (ft³/h)	500 (17657)
	Max. pressurization	bar (psi)	0.0019 (0.028)
	Air conditioner group		
	Max. gas charge	gr. (lb)	1.6 (3.5)
	Cooling capacity (air inlet temp. +30 °C, 86 °F; air flow 600 m³/h; air relative humidity 55%)	kW (HP)	6 (8)
	Re-circulation percentage	%	na
	Compressor		
	Make		Sanden
	Model		SD7H1SMD7948
	Displacement (max. allowed speed 7000 rpm)	cc/rev	160
	Thermostat valve setting		+1 °C (33.8 °F) open: diff. temp. setting 3.5 °C (38.3 °F)
	Pressure switch (2 level type): LOW LEVEL: open 2 bar (29 psi), closed 2.1 bar (30.5 psi). HIGH LEVEL: open 25 bar (362.6 psi), closed 19 bar (275.6psi).		
	Expansion valve		2 TON - 6000 kcal/h
	Condenser		
	Size (front surface)	mm (in)	690 x 200 (27.2x7.9)
	No. of fans (type: SPAL VA 14-BP7/C-34A)	-	3
	Fan diameter	mm (in)	-
	Fan size	kW (HP)	-
	Tilting system		
	Tilt cylinder		
	Double stroke with stroke-end valves		
	Brand		Weber
	Diameter	mm (in)	45 (1.8)
	Hand pump		
	Double stroke with oil tank		
	Brand		Weber
	Nominal displacement	cm³ (in³)	3.6 (0.22)
ELECTRICAL SYSTEM	**Alternator**		
	Brand		Delco-Remy
	Model		EE9059
	Capacity		24 Volt-70 Amp

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When the display shows one of the failure codes here below, identify the corresponding failed component, as per table 1.

TABLE 1

Failed component	Failure code
Forward speed "**F**" solenoid	**004**
Reverse speed "**R**" solenoid	**008**
1st speed solenoid	**016**
3rd speed solenoid	**032**

TABLE 2

Failed component	Sol. of Forw. speed "F"	**Sol. of Rev. speed "R"**	**Sol. of 1st speed**	Sol. of 3rd speed
Forward speed "F" solenoid	004	012	020	036
Reverse speed "R" solenoid		**008**	**024**	040
1st speed solenoid			**016**	048
3rd speed solenoid				032

Failure code of reverse speed "R" solenoid = 008

Failure code addition on display

Failure code of 1st speed solenoid = 016

In the event the failed components are two, refer to **TABLE 2** where the code is determined by the addition of the two single failure codes listed in **TABLE 1**. As an example, code 024 indicates that the failed parts are two: the top digit of the column identifies the solenoid of the "**1st speed**", whereas the left digit identifies the solenoid of the "**reverse speed R**".

The crossing in **TABLE 2** of the two components determines the failure code given by the addition of the two single codes 024.

Reverse speed "R" failure code	= 008 +
1st speed failure code	= 016
Failure code for both on the display	= 024

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6.4.2 HYDRAULIC POWER PUMP

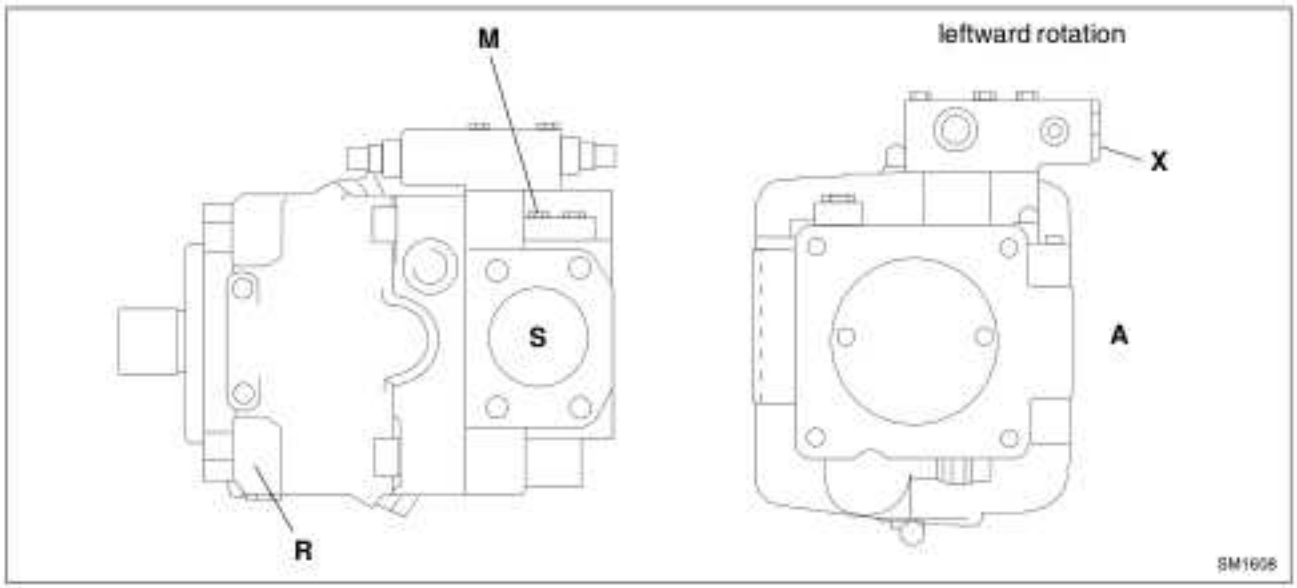


Fig. 6-29 Hydraulic pump

A. Power to control valve - **M.** Pressure pick-up - **R.** To powering block - **S.** Suction from tank - **X.** From control valve (load sense).

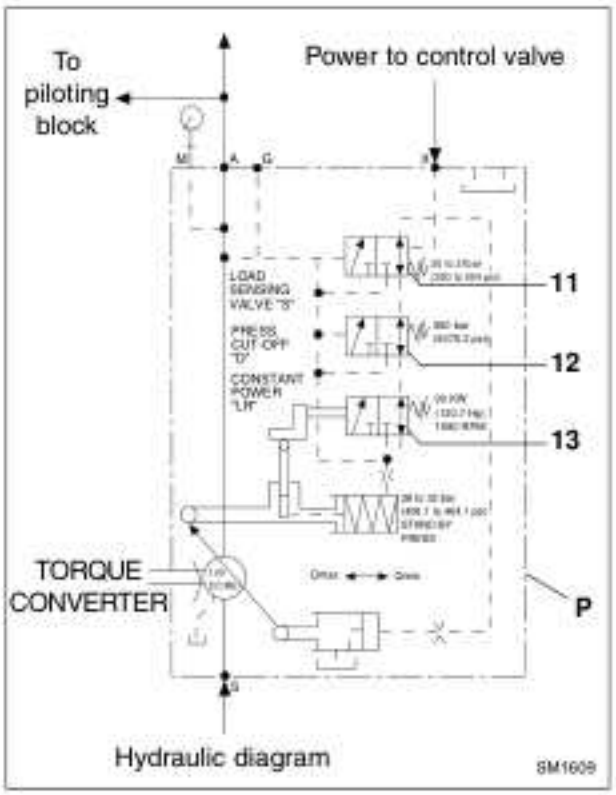
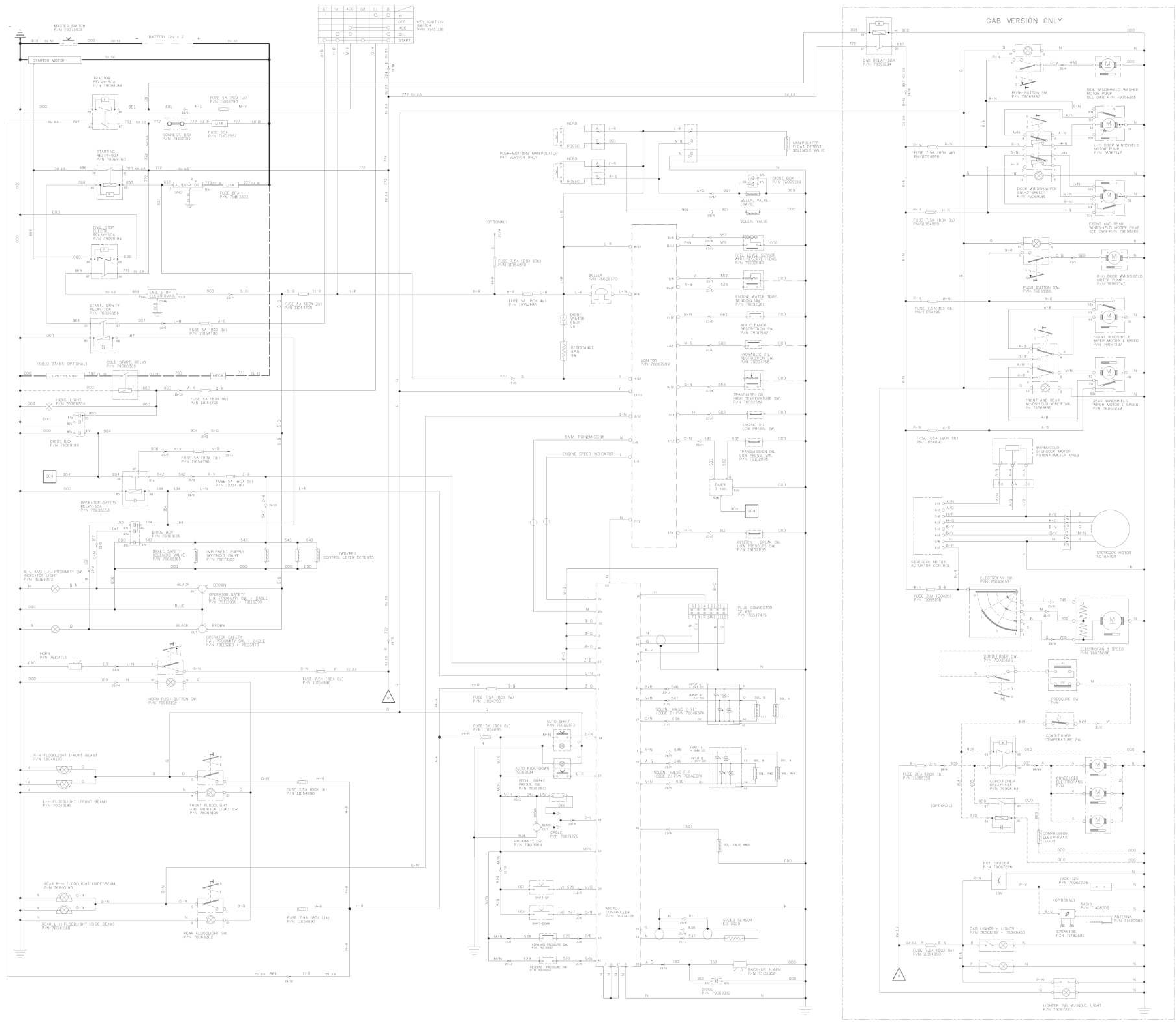


Fig. 6-30

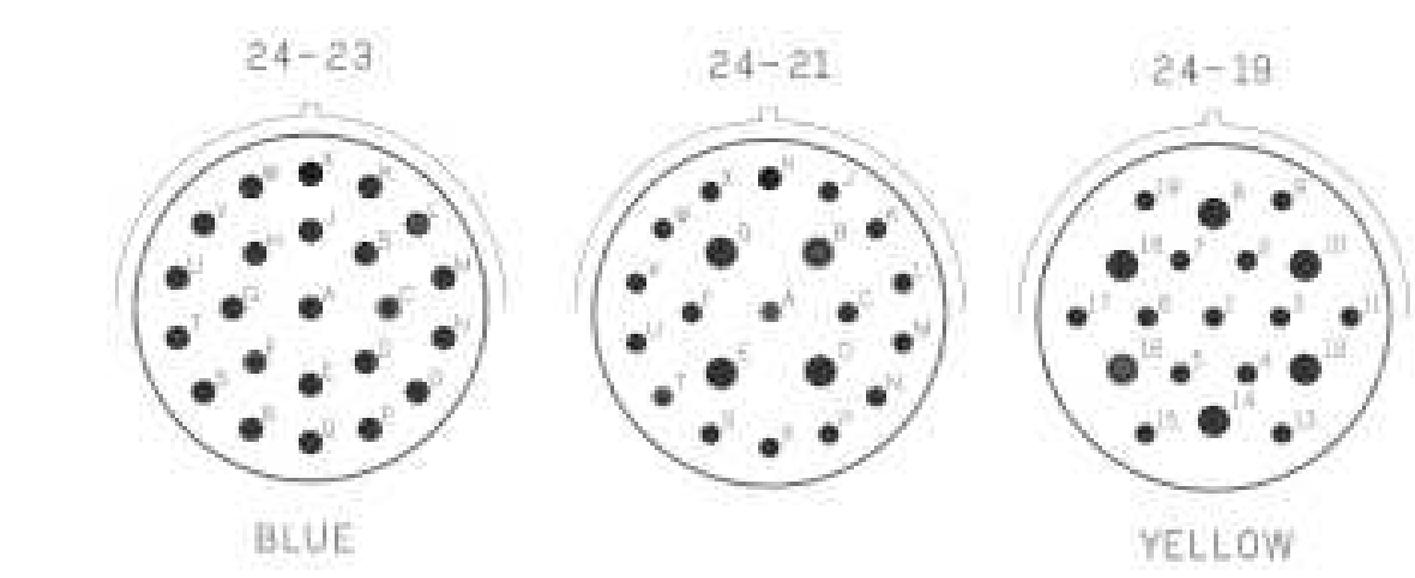
Brand	REXROTH
Variable displacement piston type	A11V0
Total nominal delivery at 2000 rpm	280 lt/min (74 gpm)

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	1650K	1850K
BATTERY	P/N 71418183 12V-100AH-440A	P/N 71421088 12V-180AH-660
STARTER MOTOR	ST 9081 DELCO-REMY TYPE 28MT 6.6 KW	ST 9899 DELCO-REMY TYPE 42MT 7.8 KW
ALTERNATOR	EE 9059 DELCO 24V 70A	EE 9059 DELCO 24V 70A
ENG. STOP ELECTROMAG.	FV 9187 24V	FV 9187 24V
GRID HEATER	AH 9046 24V 181A	AH 9046 24V 133A
MEGA FUSE	P/N 76046236 300A	P/N 76046235 150A
ENGINE OIL PRESS. SW.	P/N 79102098	P/N 76072520

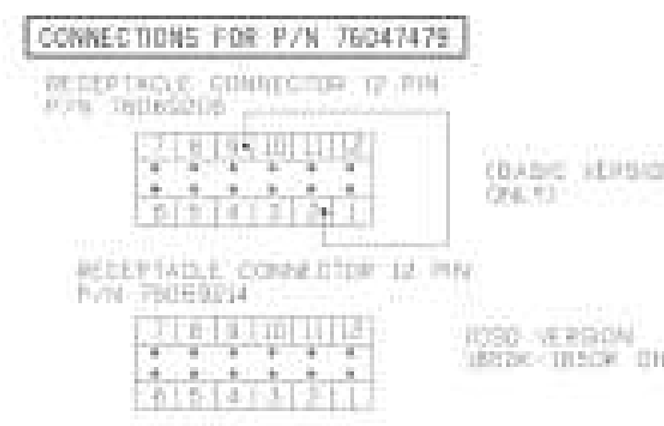
PROTECTION FUSES					
BOX A (UPPER)			BOX B (LOWER)		
FUSE	FUNCTION	AMP	FUSE	FUNCTION	AMP
1A	TRACTOR RELAY-86, CAB RELAY	5	1B	FLOOD LIGHTS (FRONT BEAM) SWITCHES LAMPS	7.5
2A	PROXIMITY OPERATOR SAFETY ENGINE STOP ELECTROMAGNET	5	2B	ELECTROFAN - STOPCOCK MOTOR	20
3A	STARTING SAFETY	5	3B	R-H DOOR WINDSHIELD MOTOR PUMP	7.5
4A	BUZZER-MONITOR-OPTIONAL SWITCH	5	4B	L-H DOOR WINDSHIELD MOTOR PUMP	7.5
5A	OPERATOR SAF. RELAY-E.V. MANIP.	5	5B	REAR WINDSHIELD WIPER MOTOR	7.5
6A	HORN	7.5	6B	FRONT WINDSHIELD WIPER MOTOR FRONT AND REAR WINDSH. MOTOR PUMP	7.5
7A	MICRO-CONTROLLER	7.5	7B	CONDENSER ELECTROFANS	20
8A	A-S-AL-BRAKE	5	8B	COLD START RELAY AND INDIC. LIGHT	5
9A	CAB LIGHTS-LIGHTER-POT. DIVIDER	7.5	9B	EMPTY	
10A	EMPTY	7.5	10B	OPTIONAL	7.5
11A	REAR FLOOD LIGHTS (SIDE BEAM)	7.5	11B	CUT-OFF RELAY-86 STEERING S. V.	5



TRANSMISSION SOLENOID TABLE

	SPEED	F	R	I	III
FWD	III	1	0	0	1
	II	1	0	0	0
	I	1	0	1	0
N					
REV	I	0	1	1	0
	II	0	1	0	0
	III	0	1	0	1

CONNECTIONS FOR P/N 76047479



COLORS CODE					
A	LIGHT BLUE	H	GREY	R	RED
B	WHITE	L	BLUE	S	PINK
C	ORANGE	M	BROWN	V	GREEN
G	YELLOW	N	BLACK	Z	PURPLE

- REPRESENTATION SWITCHES WITH ENGINE STOP WITHOUT FAILURES (KEY POSITION OFF)

NOTE

- WIRES NUMBERED ARE LOCATED OUTSIDE THE CAB
- WIRES LABBELED WITH COLORS INSIDE THE CAB
- THE WIRES NOT INDICATED ARE SIZE CU1 mm²

THE WIRES M, L, G, N, 536, 537 ARE SHIELDED

6-77810

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