

**SECTION 7**  
**ELECTRICAL SYSTEM**

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**! SAFETY RULES**

**! WARNING**

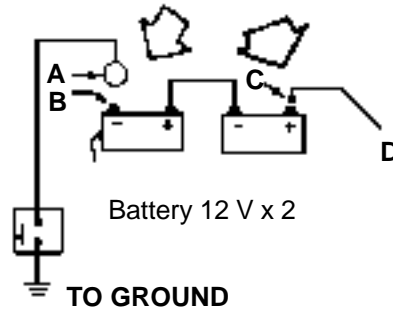
When working on the electrical system, always wear safety glasses and remove rings, wrist watches and any metal jewellery.



**DISCONNECT**

**! WARNING**

Prior to inspection or repair interventions on electrical components, DISCONNECT GROUND CABLE "A" from the battery negative terminal "B". DISCONNECT CABLE "D" FROM POSITIVE TERMINAL "D".



**! WARNING**

NEVER REST METAL OBJECTS on the battery to prevent dangerous short-circuits.



**! WARNING**

FUMES FROM THE BATTERY ELECTROLYTE ARE FLAMMABLE. Never generate sparks nor bring free flames near the batteries. The emission of fumes is stronger when recharging.

SM9500

**! WARNING**

BATTERY FUMES ARE DANGEROUS if in contact with the skin or materials.

**! WARNING**

Beware when maintaining the battery.



**WRONG**

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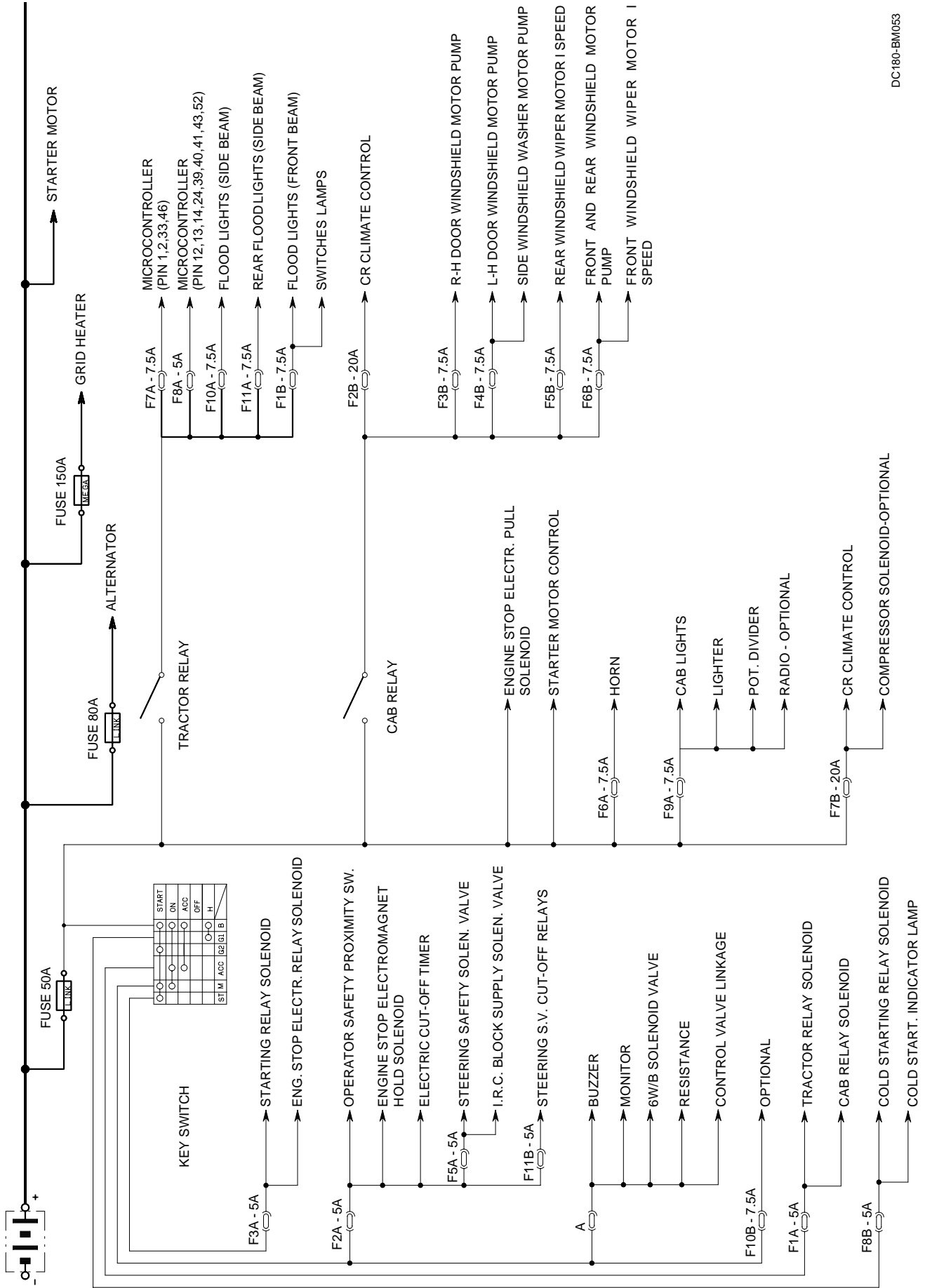
**CORRECT**

Use a flashlight to inspect the level of the battery electrolyte. Always perform the inspection with engine inoperative.

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Do not charge the battery or start the engine with jumper cables if the battery is frozen-up. warm-up the battery to 15 °C (59 °F) otherwise it could explode.

7.1 ELECTRICAL DIAGRAM OF PROTECTION TREE



DC180-BM053

### 7.1.1 FUSES

Fuses are located on the left side of the dashboard for the cab version and inside the front pocket (as indicated in the figure).

Remove the pressure fitted covers on fuse boxes (A) and (B).

The fuses protect:

#### FUSE BOX A

(upper mounted)

- 1 = Tractor relay solenoid - Cab relay solenoid - 5 A
- 2 = Operator safety proximity sw. - Engine stop electromagnet hold solenoid - Timer elettrostop - 5 A
- 3 = Starting relay solenoid - Eng. stop electr. relay solenoid - 5 A
- 4 = Buzzer - Monitor - 6W/B solenoid valve - Resistance - Control valve linkage - 5 A
- 5 = Steering safety solenoid valve - I.R.C. block supply solenoid valve - 5 A
- 6 = Horn - 7.5 A
- 7 = Micro controller (PIN 1,2,33,46) - 7.5 A
- 8 = Micro controller (PIN 12,13,14,24,39,40,41,43,52) - 5 A
- 9 = Cab lights - Lighter - Pot. divider - Radio (optional) - 7.5 A
- 10 = Flood lights (side beam) - 7.5 A
- 11 = Rear flood lights (side beam) - 7.5 A

#### FUSE BOX B

(lower mounted)

- 1 = Flood lights (front beam) - Switches lamps - 7.5 A
- 2 = CR climate control - 20 A
- 3 = R-H door windshield motor pump - 7.5 A
- 4 = L-H door windshield motor pump - Side windshield washer motor pump - 7.5 A
- 5 = Rear windshield wiper motor 1 speed - 7.5 A
- 6 = Front and rear windshield motor pump - Front windshield wiper motor 1 speed - 7.5 A
- 7 = CR climate control - Compressor solenoid (optional) - 20 A
- 8 = Cold starting relay solenoid - Cold start. indicator lamp - 5 A
- 10 = Optional - 7.5 A
- 11 = Steering s.v. cut-off relay - 5 A



#### WARNING

**Always disconnect the battery grounding cable prior to cleaning, repairing, connecting or disconnecting any wire of the electrical system, to prevent personal injuries.**

**Always keep all lights mounted on the machine in working conditions. Replace all burnt-out bulbs as soon as possible.**

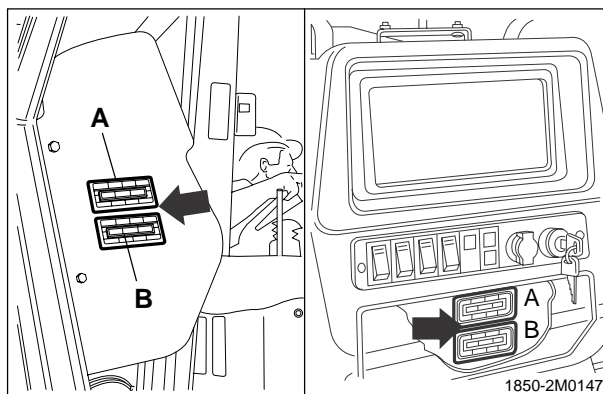


Fig. 7-2

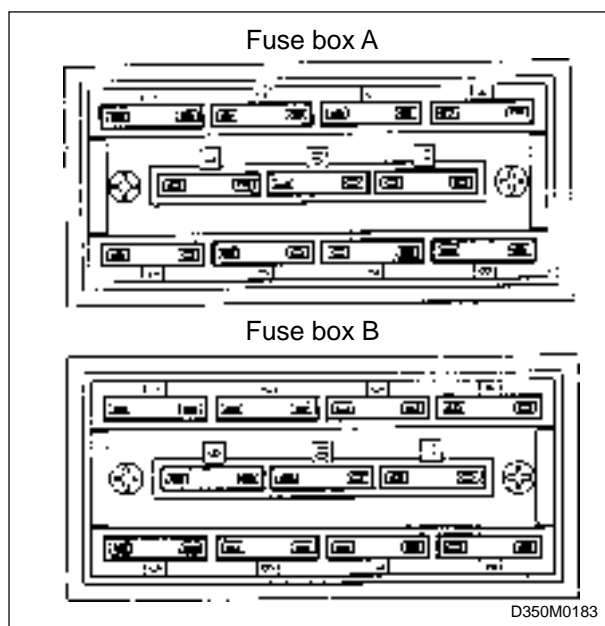


Fig. 7-3

**7.1.2 "LINK" FUSES AND COLD STARTING FUSE**

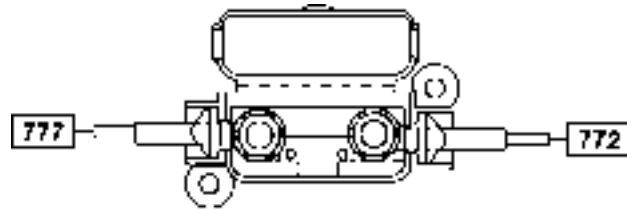
"LINK" fuses are seen when opening the left side engine hood, located on the inner side of the frame beam.

Fuse 1 protects the machine - 50.  
 Fuse 2 protects the alternator - 80.

**MACHINE SERVICES "LINK" FUSE (50 Amp)**

**WIRES**

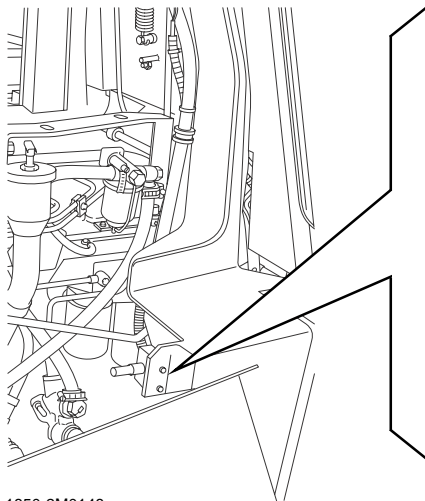
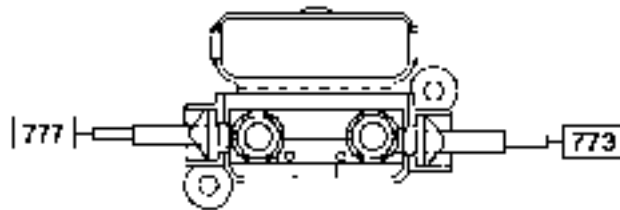
- 777 AL + batteries
- 772 To diverter box



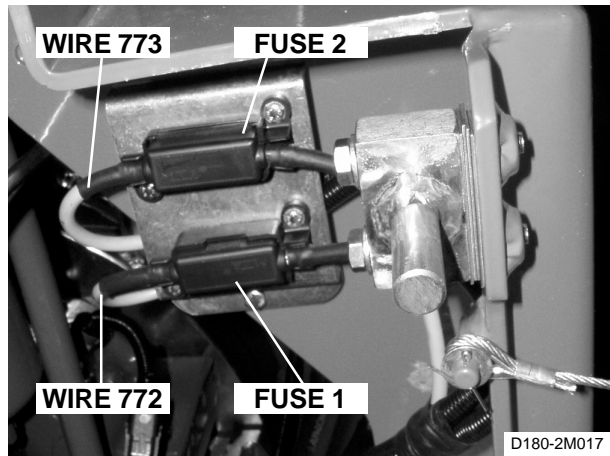
**ALTERNATOR "LINK" FUSE (80 Amp)**

**WIRES**

- 777 AL + batteries
- 773 To alternator



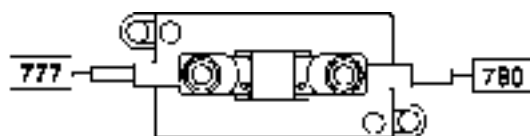
1850-2M0148



**COLD STARTER FUSE MEGA FUSE (150 Amp) Optional**

**WIRES**

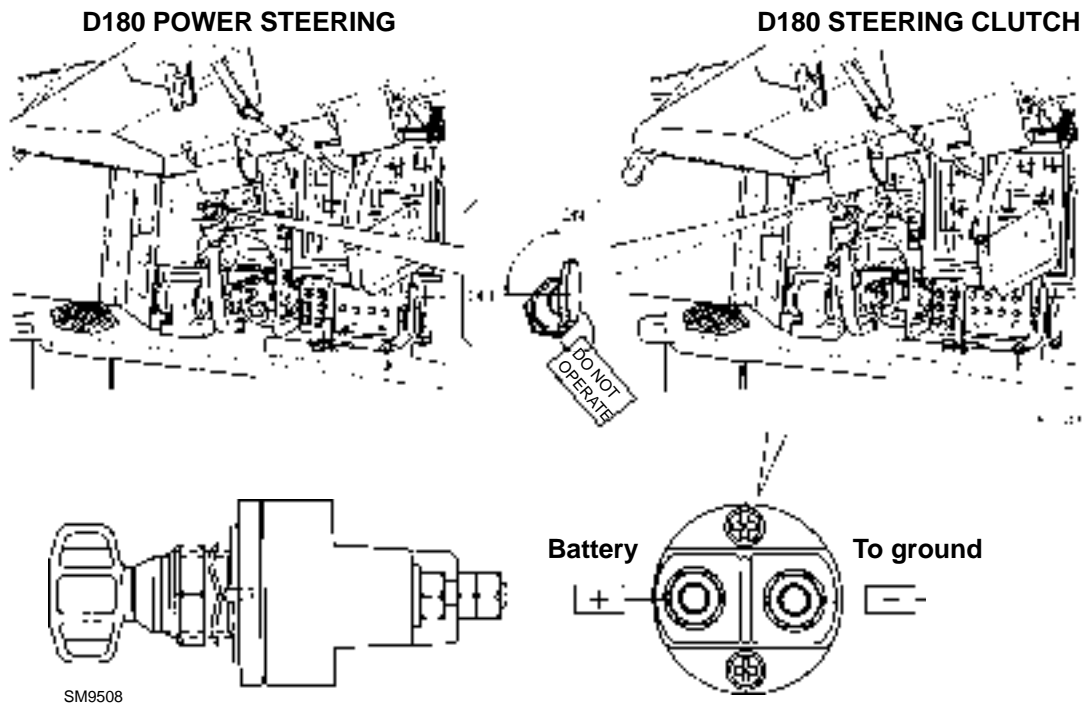
- 777 AL + batteries
- 780 To cold starter relay



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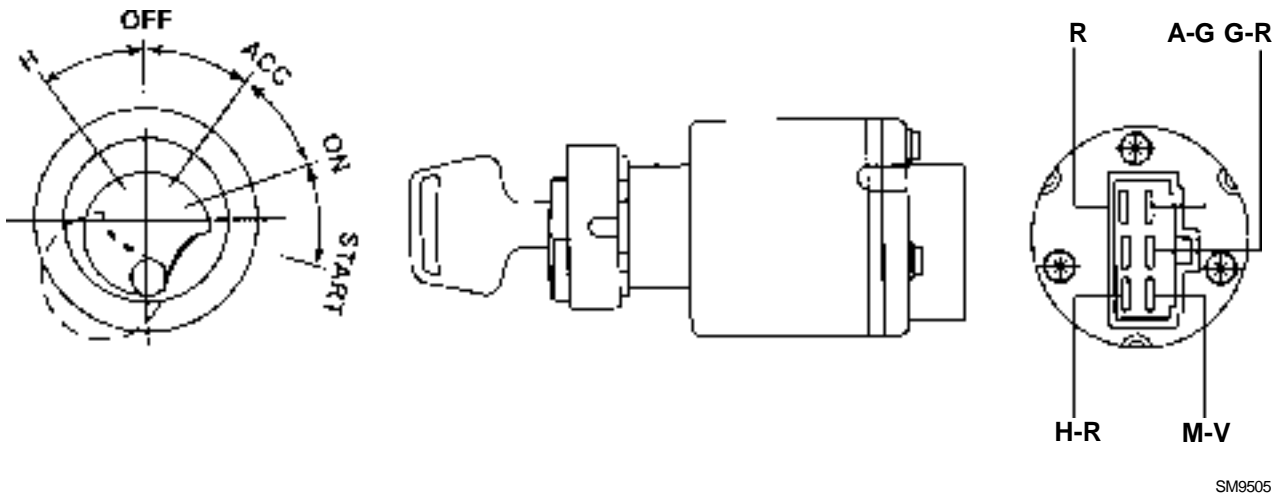
### 7.1.3 MAIN SWITCH

LOCATION - Inside the left panel, under the cab.



### 7.1.4 ENGINE STARTING SWITCH

LOCATION - Right console in the cab.



**WIRES**

- Red** position "B"
- Yellow/Red** position "G1"
- Brown/Green** position "ACC"
- Grey/Red** position "M"
- Light blue/Yell** position "ST"

	B	G1	G2	ACC	M	ST
H	○	○				
OFF						
ACC	○			○		
ON	○			○	○	
START	○		○		○	○

**POSITION**



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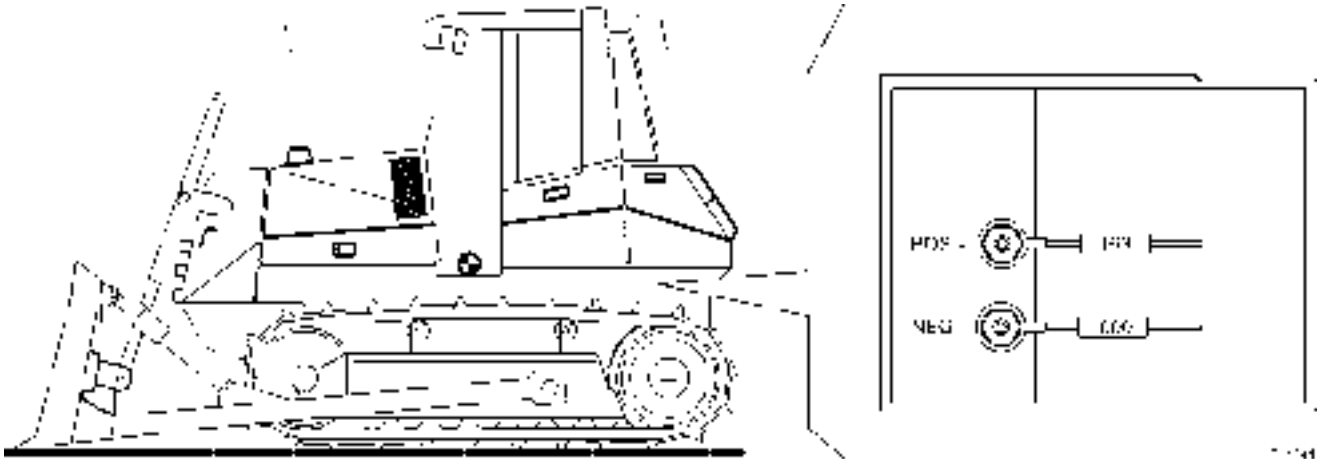
### 7.1.5 BACK-UP ALARM

#### WIRES

**163** To electronic controller

**000** To ground

LOCATION - Left side of machine under the fuel reservoir.

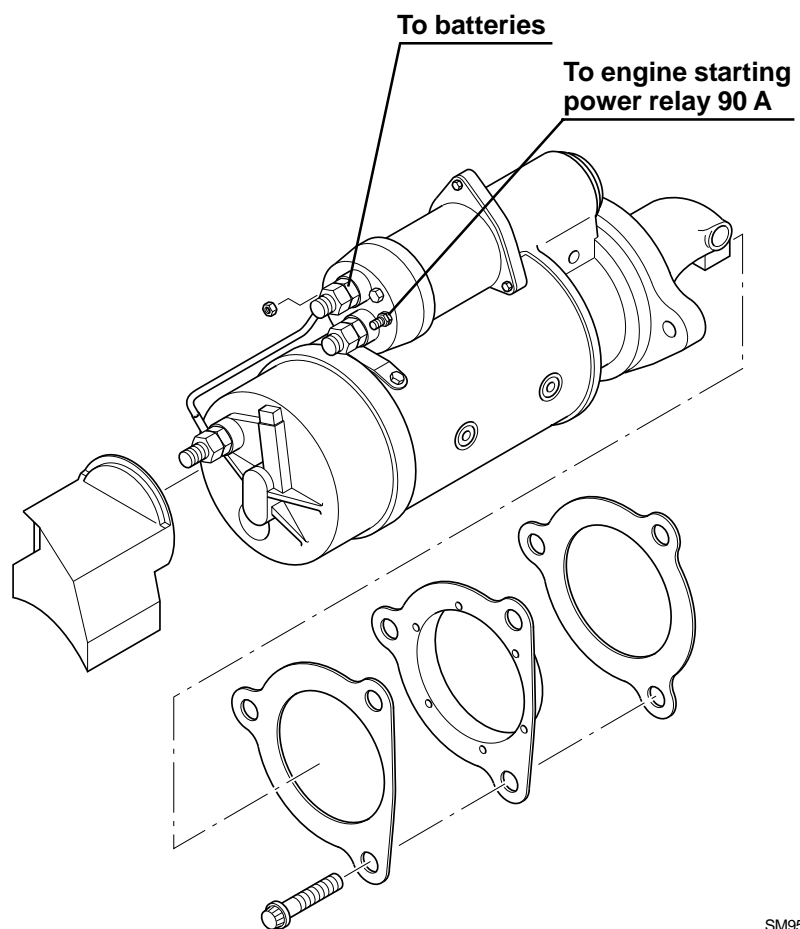


### 7.1.6 STARTER MOTOR

Brand: DELCO - REMY

Type: 42 MT-7.8 kW (10.5 Hp)

LOCATION: on engine.

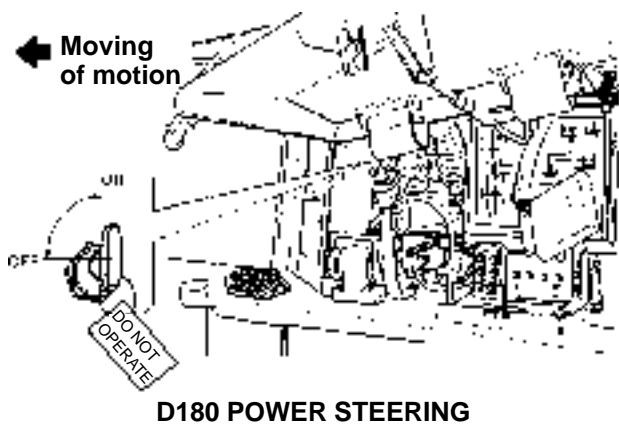


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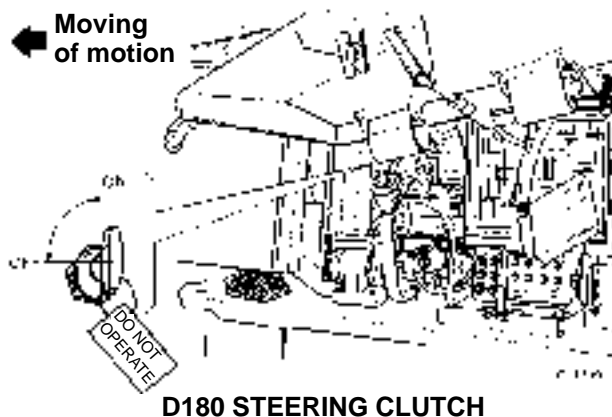


### 7.2 INSTRUMENT PANEL / MONITOR

The monitor is seen in the cab, in front of the operator's seat and is made of a panel on which no repair intervention are possible, including a circuit board and L.E.D.s.



- Turn the electrical system main switch indicated into "ON", for the cab or ROPS structure version.
- Turn the starter motor switch in the cab into the first step.



#### Operation

When activated, the instrument performs a short test for 1 second switching all LEDs, segments of the display and buzzer ON; then the display (ref. S) indicates the engine hours.

The indicator lights and instruments indicate the state of the machine. Once the engine is started, pointer (R) shows the engine r.p.m., with 100 rpm increments.

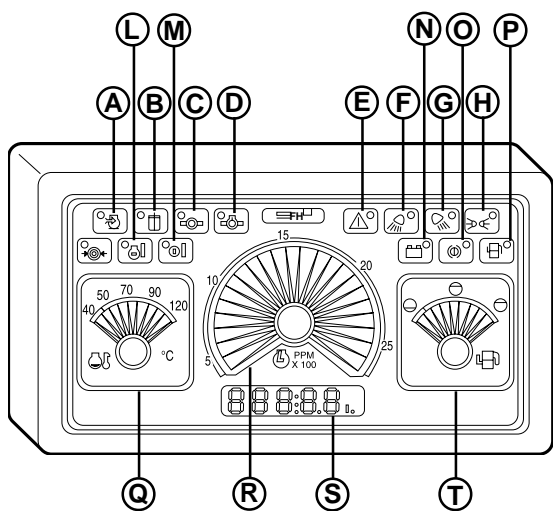
To return visualising the engine hours, it is necessary to switch off and re-power the system using the key; the hours stay ON until the engine is cut-off.

In the event of any malfunction, this is signalled by the relevant LED indicators, identified by the appropriate "ISO standard" symbols, and, for part of them, a sound alarm during 3 seconds is associated; in case the malfunction persists, the alarm warns the operator with one minute cycles, lasting one second.

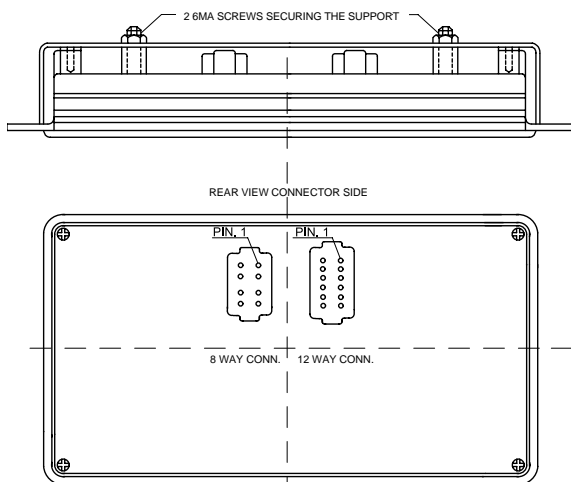
The engine work hours are recorded only when the engine speed exceeds 500 rpm.

The instrument receives data from an outer control unit, through serial line RX for the indication of the speed selected and eventual error codes.

These codes are indicated on the 5-digit numerical display (S).



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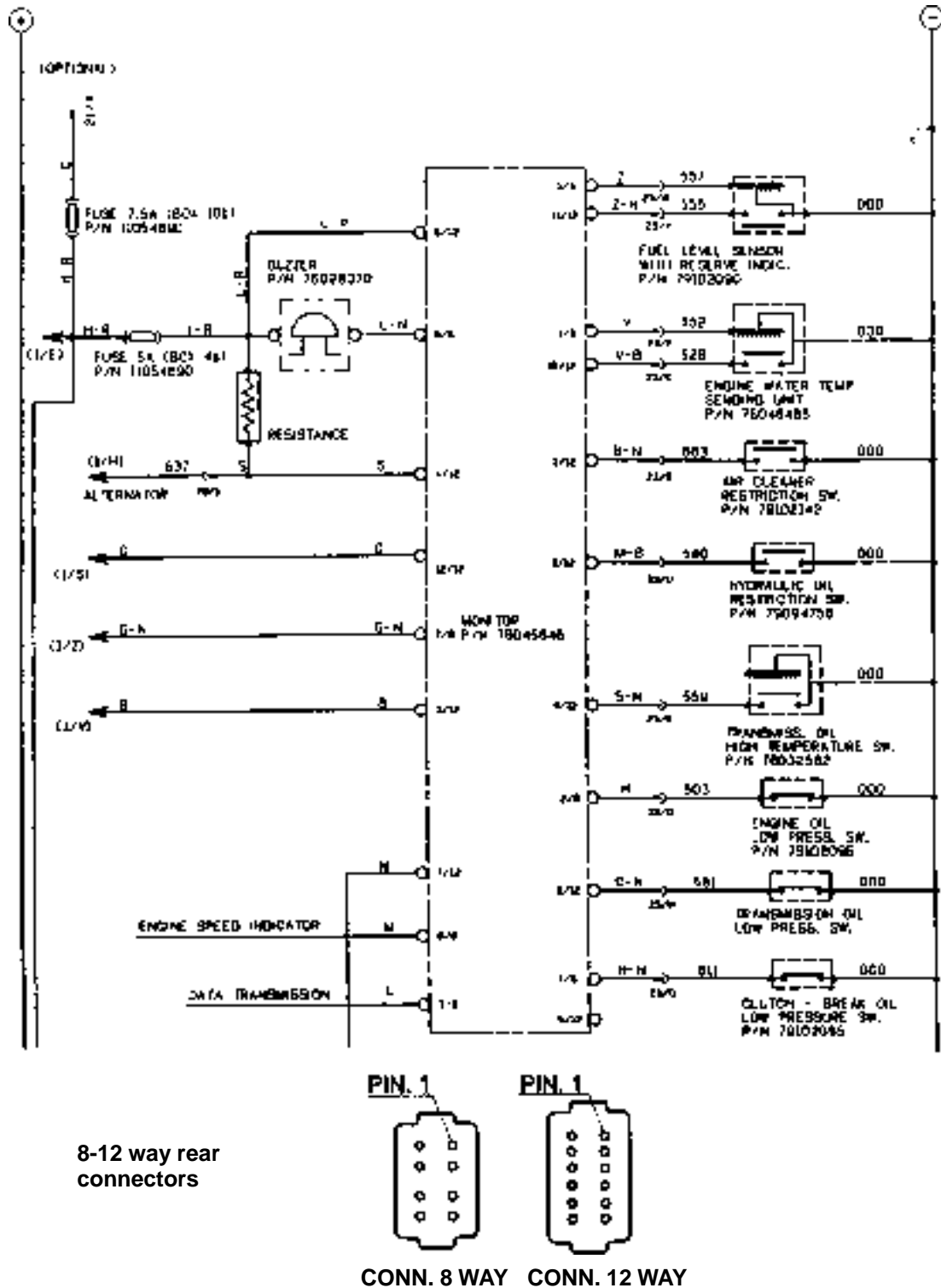
SM9512

REF.	DESCRIPTION	ALARM	SIGNAL	12 WAY CONN.	8 WAY CONN.
A	Red LED, engine air cleaner	NO	IN (-)	2	
B	Red LED, hydraulic oil filter	NO	IN (-)	1	
C	Red LED, transmission oil pressure	YES	IN (-)	8	
D	Red LED, Engine oil pressure	YES	IN (-)		2
E	Red LED, general alarm	YES	activated by ind.	C, D, L, M, N, O, P	
F	Green LED, front work lights	NO	IN (+ 24V)	3	
G	Green LED, rear work lights	NO	IN (+ 24V)		7
H	Green LED, head lights + instr. light.	NO	IN (+ 24V)	12	
L	Red LED, engine coolant temperature	YES	IN (-)	10	
M	Red LED, transmission oil temperature	YES	IN (-)	9	
N	Red LED, battery	YES	IN (-)	4	
O	Red LED, brakes failure	YES	IN (-)		4
P	Red LED, fuel reserve	NO	IN (-)	11	
Q	Engine coolant temperature indicator at 10 lcd	YES	IN (var. -)		1
R	Engine rpm analogical display at 24 lcd	-	IN (+ 24V)		6
S	5 digit display for No. speeds and "engine hours"	NO	IN (-) (NPN -NO)		3 (RX)
T	Fuel level indicator at 10 lcd	YES	IN (var. -)		5
	BUZZER OUTPUT	-	OUT (-)		8
	POWER INLET "positive"	-	IN (+ 24V)	6	
	GROUND INPUT (GND)	-	IN (-)	7	

Then connectors are male, one 8-way and one 12-way.

The corresponding connectors for the harness are of a female type, 12-way and 8-way, both with female contacts.

7.2.1 ELECTRICAL DIAGRAM OF INSTRUMENT PANEL/MONITOR



8-12 way rear connectors

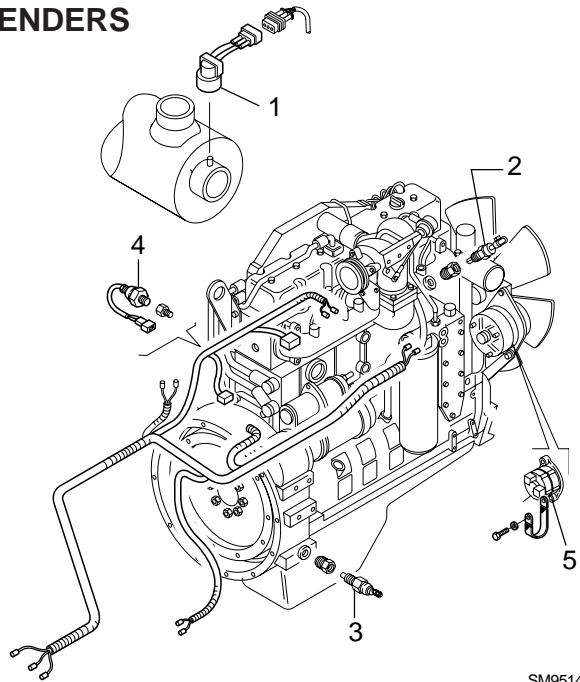
CONN. 8 WAY    CONN. 12 WAY

SM9513

### 7.3 MONITOR SENDERS

#### Location on engine

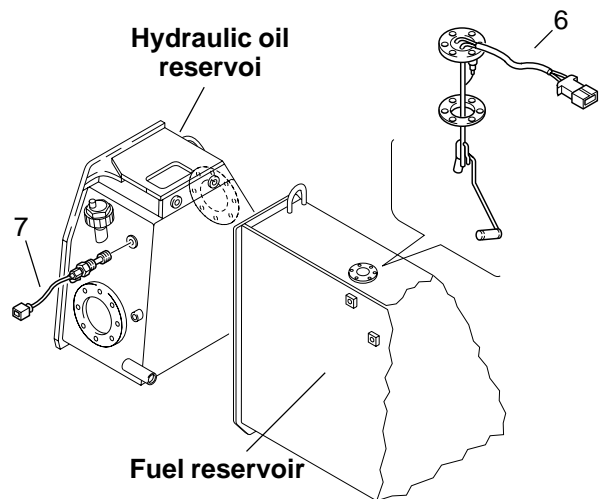
1. Air cleaner clogging sensor.
2. Engine coolant max. temperature switch.
3. Engine rpm sensor.
4. Engine oil low pressure sensor.
5. Alternator.



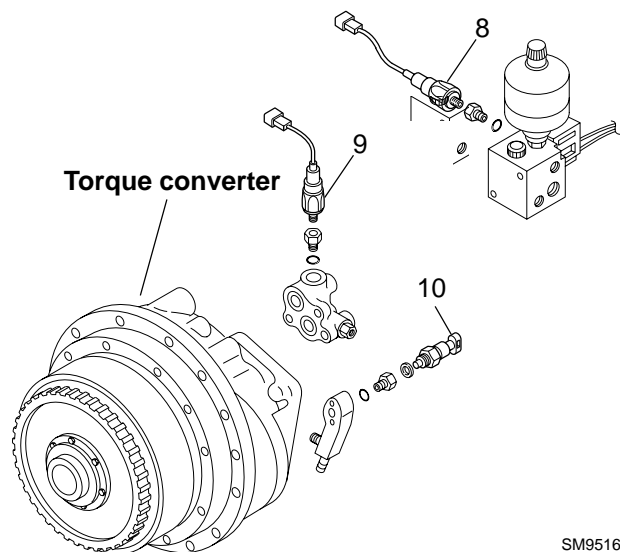
SM9514

#### Location on oil - fuel reservoirs

6. Fuel level sensor.
7. Hydraulic oil filter clogging sensor.
8. Brakes - clutches low oil pressure sensor (set at 11.5 bar) (166.79 psi).
9. Transmission oil low pressure sensor (set at 11.5 bar) (166.79 psi).
10. Transmission oil temperature sensor (119 °C - 246 °F).



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SM9516

## 1. AIR CLEANER CLOGGING SENSOR WIRES

**663** To monitor  
**000** To ground

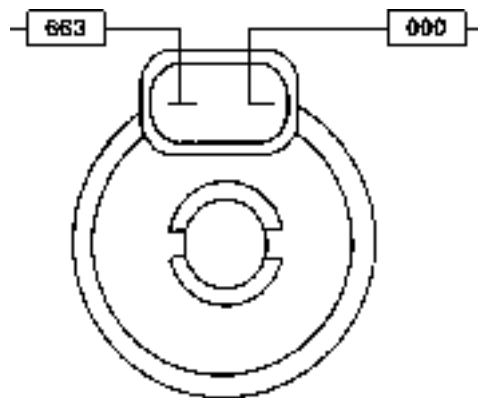
Setting: (closing of contact) 62 mbar (0.899 psi)  
 $\pm 8\text{ }^{\circ}\text{C}$  - (46.4  $^{\circ}\text{F}$ ).

LOCATION - Left front side of machine, over the air cleaner.

### Installation notes

The depression switch must be tightened manually, without using tools.

SM9517



## 2. ENGINE COOLANT MAX. TEMPERATURE SWITCH

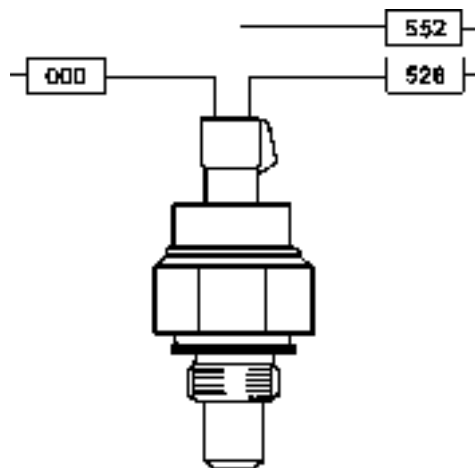
### WIRES

**552** to monitor  
**000** To ground

Thread: M16 x 1.5  
 Setting:  $100^{\circ} \pm 3\text{ }^{\circ}\text{C}$  ( $212 \pm 37.4\text{ }^{\circ}\text{F}$ )  
 Wrench: 22 mm (0.866 in)  
 Torque wrench: 2.5 daNm (18.44 lbf.ft)

LOCATION - Right front side of machine, on engine.

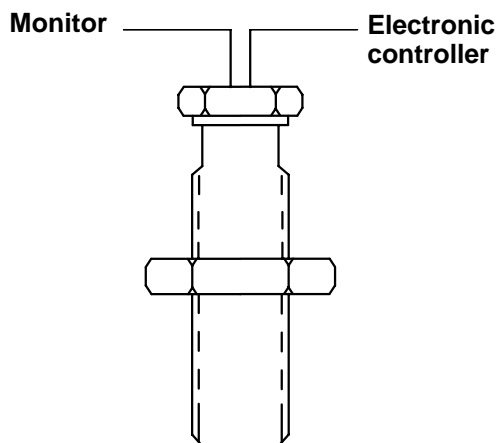
SM9518



## 3. ENGINE RPM

Thread:  $3/4 - 16\text{ UNF}$   
 Wrench: 29 mm (1.142 in)  
 Torque wrench:  $1.9 \div 2.5\text{ daNm}$   
 ( $14.01 \div 18.44\text{ lbf.ft}$ )

LOCATION - On engine flywheel housing



SM9519

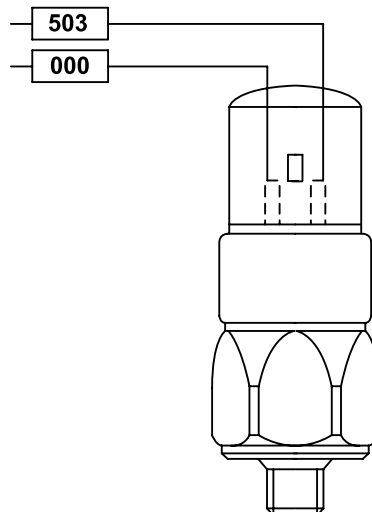
**4. ENGINE OIL LOW PRESSURE SENSOR**

**WIRES**

- 503** To monitor
- 000** To ground

- Thread: M10 x 1 taper
- Setting: 1.2 ÷ 0.8 bar
- Wrench: 27 mm
- Torque wrench: 3.5 daNm

The sensor is normally closed, it opens when the pressure drops or reaches the setting value.

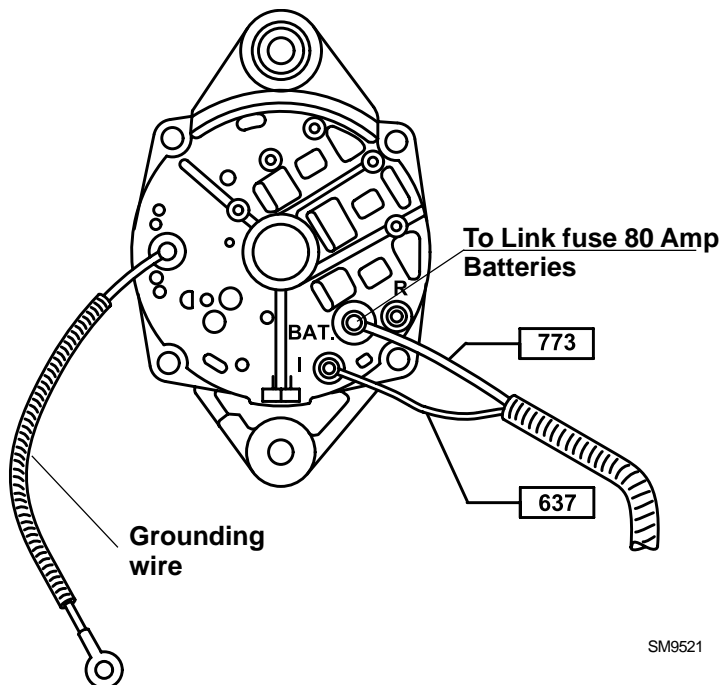


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**5. ALTERNATOR**

BRAND: DELCO - REMY 70 Amp  
Power voltage: 24 VOLT

LOCATION - on engine



SM9521

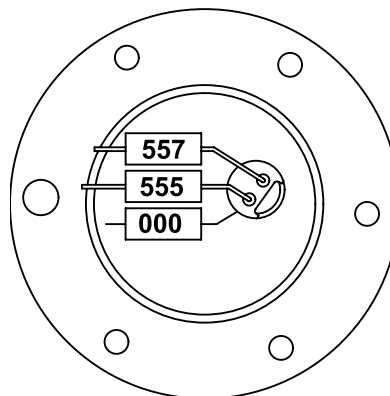
**6. FUEL LEVEL SENSOR**

**WIRES**

- 555** To monitor
- 557** To monitor
- 000** To ground

- Thread: M10 x 1 taper
- Setting: 1.2 to 0.8 bar (17.4 to 11.6 psi)
- Wrench: 27 mm (1.063 in)
- Torque wrench: 3.5 daNm (25.8 lbf.ft)

LOCATION - Rear side of machine over the fuel reservoir



SM9522

## 7. HYDRAULIC OIL FILTER CLOGGING SENSOR

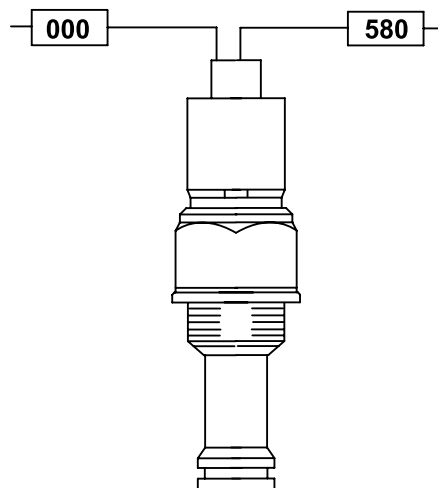
### WIRES

**580** To monitor

**000** To ground

Thread: M18 x 1,5  
 Setting: 2 ÷ 2.2 bar (29 ÷ 31.91 psi)  
 Wrench: 22 mm (0.866 in)

LOCATION - On hydraulic oil reservoir.



SM9523

## 8. BRAKES AND STEERING CLUTCHES OIL LOW PRESSURE SENSOR

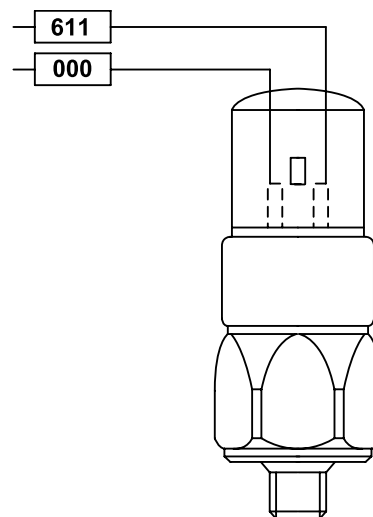
### WIRES

**611** To monitor

**000** To ground

Thread: M10 x 1 taper  
 Setting: 12.5 ÷ 11 bar  
 (181.30 ÷ 159.54 psi)  
 Wrench: 27 mm (1.063 in)  
 Torque wrench: 3.5 daNm (25.84 lbf.ft)

The sensor is normally closed, it opens when the pressure drops or reaches the setting value.



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## 9. TRANSMISSION OIL LOW PRESSURE SENSOR

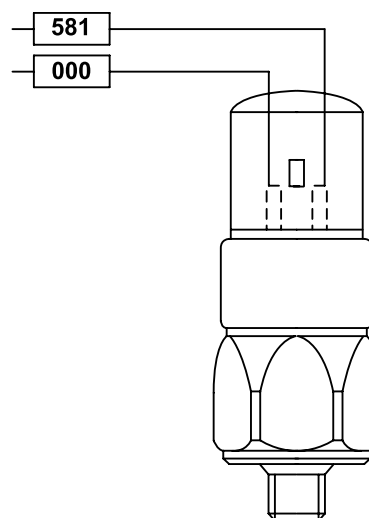
### WIRES

**581** To monitor

**000** To ground

Thread: M10 x 1 taper  
 Setting: 12.5 ÷ 11 bar  
 Wrench: 27 mm (1.063 in)  
 Torque wrench: 3.5 daNm (3.5 lbf.ft)

The sensor is normally closed, it opens when the pressure drops or reaches the setting value.



SM9525

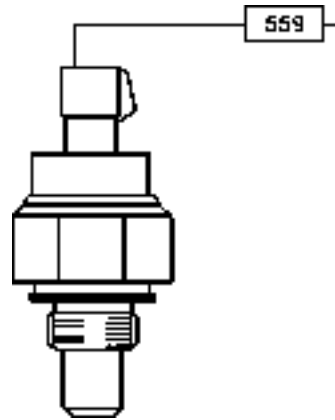
## 10. TRANSMISSION OIL MAX TEMPERATURE SWITCH

### WIRES

**559** To monitor

**000** To ground

Thread: M16 x 1.5  
 Setting:  $119^{\circ} \pm 3^{\circ}\text{C}$  ( $246 \div 37.4^{\circ}\text{F}$ )  
 Wrench: 22 mm (0.87 in)  
 Torque wrench: 2.5 daNm (18.44 lbf.ft)



SM9526

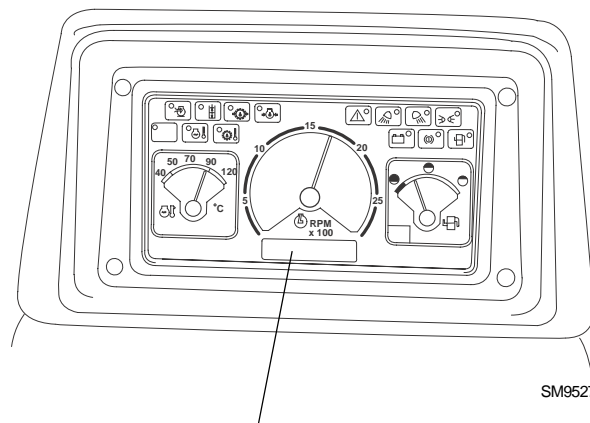
## 7.4 DISPLAY

The display indicates three functions:

- A) - **Digital hourmeter**, indicating the total hours work and is automatically actuated when the engine operates.
- B) - **Speed engaged**
- C) - **Troubleshooting the transmission operation**

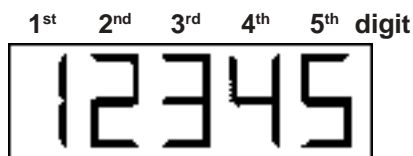
### 7.4.1 DIAGNOSIS ON DISPLAY

The display has 5 digit fields providing the following messages.



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**DISPLAY**



A - **Work hour indication**

B - **Speed engaged indication + failure code**

### Work hourmeter indication

The engine hours are indicated when the instrument panel is switched ON, for about one second, when the instrument undergoes a general test. To return visualising the engine hours, cut-off and re-power with the starter key.

The hours stay On until the engine is cut-off.



**Speed engaged signal + failure code**

The first digit indicates the speed engaged (ex. 1<sup>st</sup> speed).

The second indicates (in case of failure) letter E.



↑ 1<sup>st</sup>    ↑ 2<sup>nd</sup> (digit)

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The 3<sup>rd</sup> and 4<sup>th</sup> digits identify the failure code (ex. failure code No. 024).

When the components failed is one only, the codes listed in **TABLE 1** appear.

For each failure code, identify the corresponding component listed.



↑ 3<sup>rd</sup>    ↑ 4<sup>th</sup>    ↑ 5<sup>th</sup> (digit)

SM9528

<b>Failed component</b>	<b>Failure code</b>
<b>Left proportional solenoid valve coil</b>	<b>001</b>
<b>Right proportional solenoid valve coil</b>	<b>002</b>
<b>Forward "F" speed solenoid</b>	<b>004</b>
<b>Rear "R" speed solenoid</b>	<b>008</b>
<b>1<sup>st</sup> speed solenoid</b>	<b>016</b>
<b>3<sup>rd</sup> speed solenoid</b>	<b>032</b>
<b>Left steering lever solenoid</b>	<b>064</b>
<b>Right steering lever solenoid</b>	<b>128</b>

<b>Failed component</b>	<b>LH prop. sol. valve coil</b>	<b>RH prop. sol. valve coil</b>	<b>For. "F" speed solen.</b>	<b>Rev. "R" speed solen.</b>	<b>1<sup>st</sup> speed solen.</b>	<b>3<sup>rd</sup> speed solen.</b>	<b>LH steer. lever solen.</b>	<b>RH steer. lever solen.</b>
<b>Left prop. solenoid valve coil</b>	001	003	005	009	017	033	065	129
<b>Right prop. solenoid valve coil</b>		002	006	010	018	034	066	130
<b>Forward "F" speed solenoid</b>			004	012	020	036	068	132
<b>Reverse "R" speed solenoid</b>				008	024	040	072	136
<b>1<sup>st</sup> speed solenoid</b>					016	048	080	144
<b>3<sup>rd</sup> speed solenoid</b>						032	096	160
<b>Left steering lever solenoid</b>							064	192
<b>Right steering lever solenoid</b>								128

**Example of identification of a trouble code**

When the failed components are two, the display shows a trouble code listed in **TABLE 2**, (given by the addition of two single codes listed in **TABLE 1**). As an example, code 024 indicates that two parts are in trouble. On the top, the column identifies, in correspondence with the "1<sup>st</sup> speed " solenoid (first failed component).

TABLE 2								
Failed component	LH prop. sol. valve coil	RH prop. sol. valve coil	For. "F" speed solen.	Rever. "R" speed solen.	1 <sup>st</sup> speed solen.	3 <sup>rd</sup> speed solen.	LH steer lever solen.	LH steer lever solen.
Left prop. solenoid valve coil	001	003	005	009	017	033	065	129
Right prop. solenoid valve coil		002	006	010	018	034	066	130
Forward "F" speed solenoid			004	012	020	036	068	132
<b>Reverse "R" speed solenoid</b>				<b>008</b>	<b>024</b>	040	072	136
1 <sup>st</sup> speed solenoid					<b>016</b>	048	080	144
3 <sup>rd</sup> speed solenoid						032	096	160
Left steering lever solenoid							064	192
Right steering lever solenoid								128

Reverse "R" speed solenoid trouble code

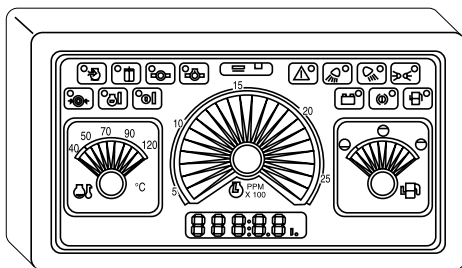
Trouble code on display

1<sup>st</sup> speed solenoid trouble code

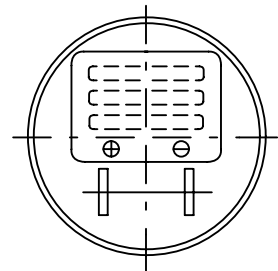
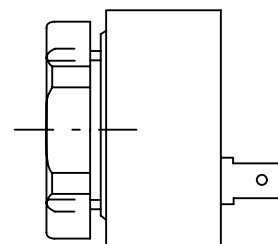
Whereas, on the left, it identifies the reverse speed "R" the crossing of the two components determines the trouble code, given by the addition of the two.

$$\begin{array}{rcl}
 \text{Reverse "R" speed solenoid trouble code} & = & 008 + \\
 \text{1<sup>st</sup> speed solenoid trouble code} & = & 016 \\
 \hline
 \text{Trouble code for both} & = & 024
 \end{array}$$

**7.5 BUZZER**



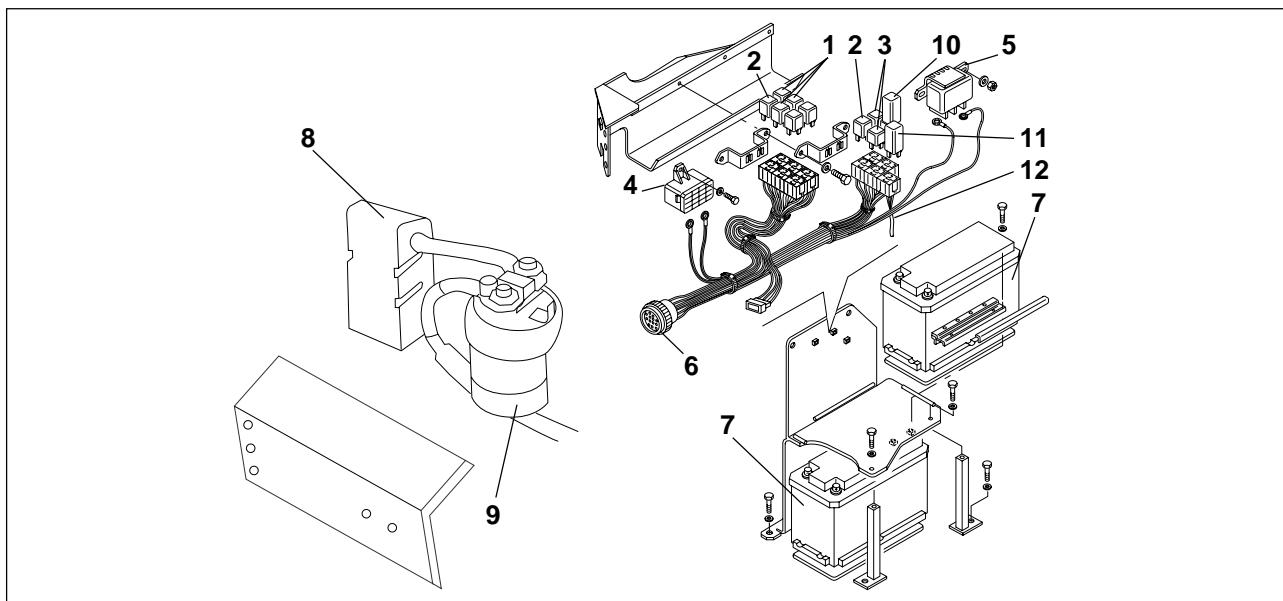
LOCATION - Inside the cab, behind the instrument panel.



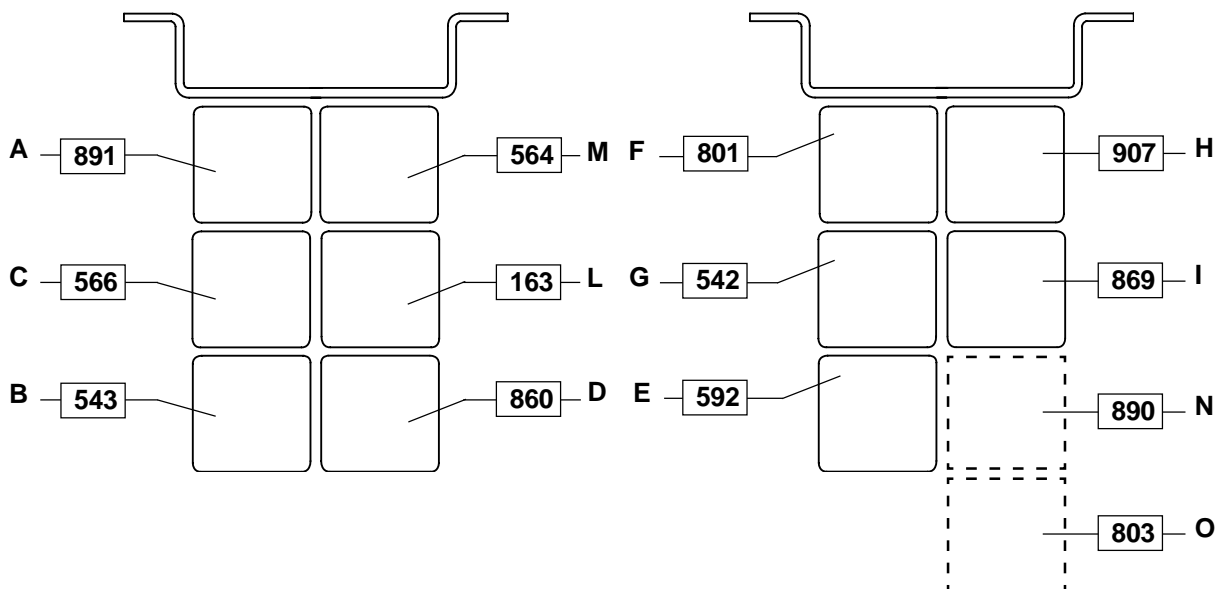
SM9529

### 7.6 RELAYS - DIODES - DIVERTER BOX GROUP

The group is seen opening the left rear panel of the machine, near the batteries.



1. Diodes box - 2. Relay 24 Volt - 50 Amp - 3. Relay 24 Volt - 10/20 Amp - 4. Diverter box - 5. Power relay 90 Amp - 6. 19 way connector - 7. Batteries 12 Volt x 2 - 8. Cold starting relay - 9. Fuse - 10. Time elettrostop - 11. Timer - 12. Timer wire assembly.



**1 - Diode boxes**

- B.** Steering safety solenoid valve
- D.** Cut-off/cold starting
- L.** Operator safety indicators

**2 - Relay 24 Volt - 50 Amp**

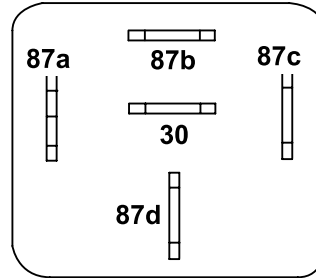
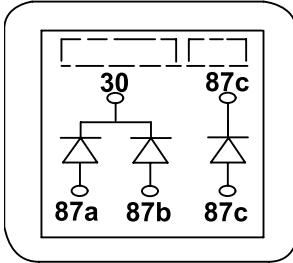
- A.** Cab services
- F.** Machine services
- O.** Air conditioner 50 Amp (opt.)

**3 - Relay 24 Volt - 10/20 Amp**

- C.** Steering solenoid valve (only D180)
- M.** Steering solenoid valve (only D180)
- G.** Operator's safety
- H.** Starter safety
- N.** Air conditioner relay 10/20 Amp (opt.)

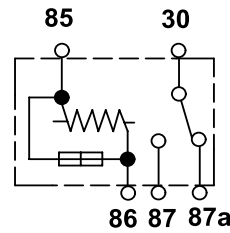
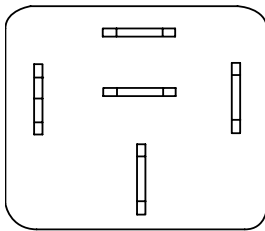
1. DIODE BOXES (REF. B - D - L)

- For the wires and the connections of the components, please refer to the principle electrical diagram.



SM9532

2. RELAY 24 VOLT - 50 Amp (REF. A - F - O)



SM9533

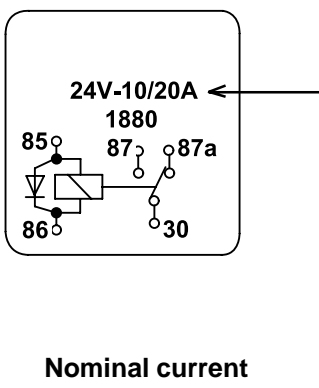
3. RELAY 24 VOLT - 10/20 Amp (REF. C - M - G - H - N)

The relay is a magnetically activated mechanical switch.

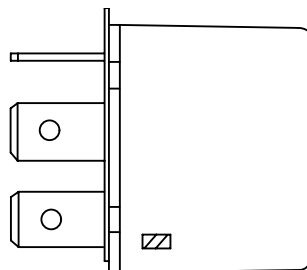
Pins 86 and 85 are used to activate the relay.

Pins 30 to 87a form a N/C (normally closed) switch.

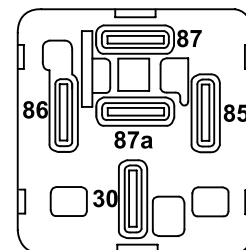
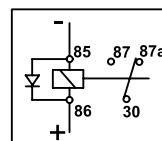
Pins 30 to 87 form a N/O (normally open) switch.



Nominal current

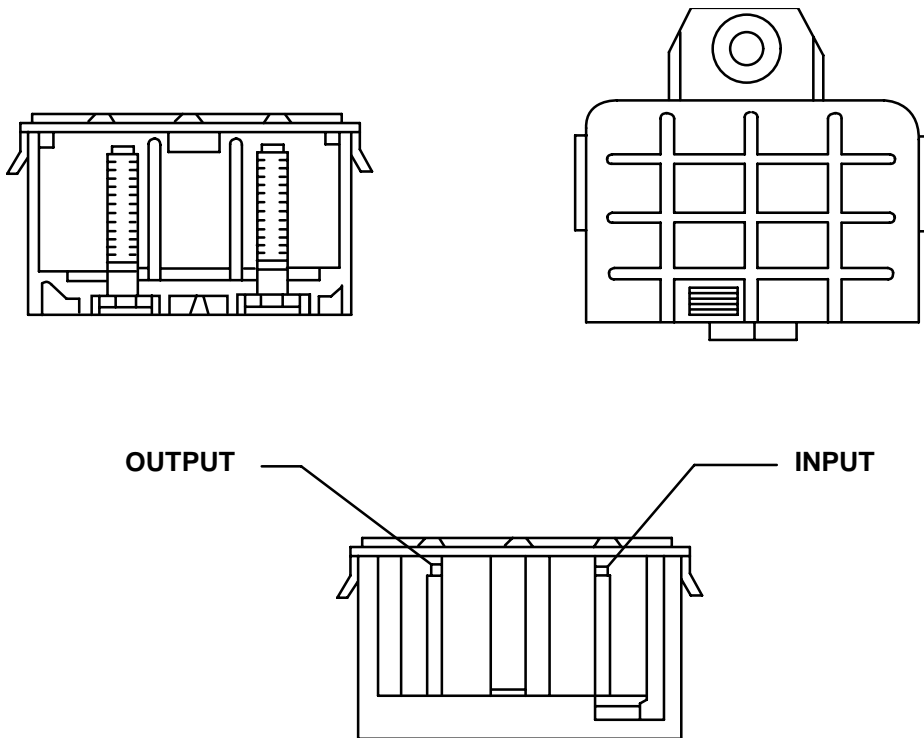


Electrical diagram



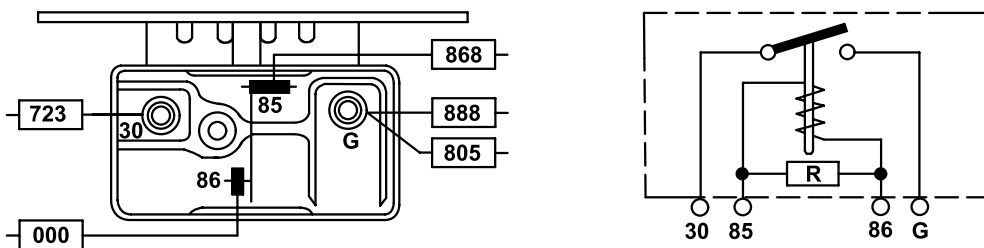
SM9534

### 4. DIVERTER BOX



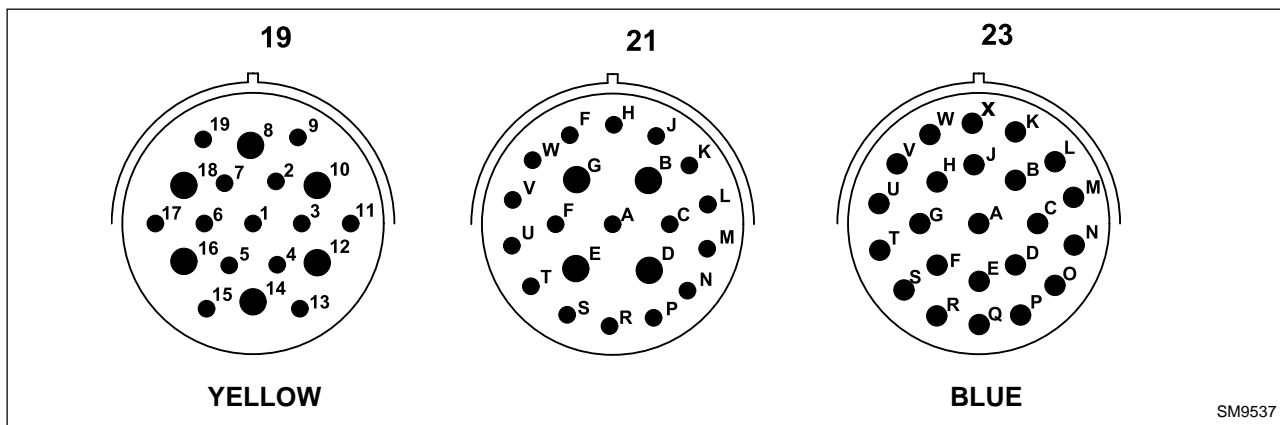
SM9535

### 5. POWER RELAY (ENGINE STARTING)



SM9536

## 7.7 MAIN CONNECTORS 19 - 21 - 23 WAYS



## MACHINE - CAB INTERFACE OF 19 WAY CONNECTOR

CONTACT NUMBER	CABE WIRE SECTION	ROUTING	WIRE NUMBER	MACHINE WIRE COLOUR	WIRE SECTION
1	1	FROM FUSE 11 SWITCH ACC	801	H-L	1
2	1	CUT-OFF DIODE 15	904	S-G	1
3	1	FROM FUSE 17 SWITCH	907	L-B	1
4	1	TO FUSE 24 FOR EV	542	A-V	1
5	1	FROM ALTERNATOR I	637	S	1
6	1	FROM DIODES CONNECTING PROXIM. OPERAT. SAFETY	164	L-N	1
7	-	NOT USED	-	-	-
8	2.5	CONDITIONER RELAY 87	809	G-N	2.5
9	-	NOT USED	-	-	-
10	2.5	KEY STARTER SWITCH POWER	724	R	2.5
11	-	NOT USED	-	-	-
12	2.5	SERVICES UNDER ACC	864	H-R	2.5
13	-	NOT USED	-	-	-
14	2.5	CONDITIONER RELAY 30	803	A	2.5
15	1	BRAKE SAFETY SOLENOID VALVE	543	Z-B	1
16	2.5	CAB SERVICES FROM RELAY 73	887	R-N	2.5
17	-	NOT USED	-	-	-
18	2.5	POWER. OF SERVICES NOT UNDER KEY	772	R	2.5
19	1	COLD STARTING RELAY	860	A/R	

## MACHINE - CAB INTERFACE OF 21 WAY CONNECTOR

CONTACT NUMBER	CABE WIRE SECTION	ROUTING	WIRE NUMBER	MACHINE WIRE COLOUR	WIRE SECTION
A	1	4WEG SOLENOID VALVE	597	C	1
B	2.5	(III SPEED) ELECTRIC FAN	706	B	2.5
C	1	CONDITIONER THERMOSTAT	824	M	1
D	2.5	(II SPEED) ELECTRIC FAN	709	M	2.5
E	2.5	GROUNDING FOR CAB	000	N	2.5
F	-	NOT USED	-	-	-
G	2.5	(I SPEED) ELECTRIC FAN	745	L	2.5
H	1	ENGINE RPM SENSOR +	536	G	1
J	1	ENGINE OUT RPM SENSOR	537	N	1
K	1	DOOR WINDOW WASHERS ELECTRIC PUMP	885	G-V	1
L	1	FRONT/REAR WINDOW WASHERS ELECTRIC PUMP	886	C-B	1
M	1	FROM R.H. PROX. SW. TO DISCONN. DIODE	156	B	1
N	1	TRANSM. F/R SV - GND	009	V-N	1
P	1.5	F INPUT TRANSM. SV	549	A-G	1
R	1	R INPUT TRANSM. SV	548	A-N	1
S	1	FROM L.H. PROX. SW. TO DISCONN. DIODE	157	G-N	1
T	1	1 <sup>ST</sup> / 3 <sup>RD</sup> TRANSM. SV - GND	008	C/B	1
U	1	1 <sup>ST</sup> / 3 <sup>RD</sup> TRANSM SV INPUT 1 <sup>ST</sup>	546	B/R	1
V	1	1 <sup>ST</sup> / 3 <sup>RD</sup> TRANSM SV INPUT 3 <sup>RD</sup>	547	V/B	1
W	-	NOT USED	-	-	-
X	1	SCREENED CABLE GROUND SLEEVE	011	SCREEN	1

## MACHINE - CAB INTERFACE OF 23 WAY CONNECTOR

CONTACT NUMBER	CABE WIRE SECTION	ROUTING	WIRE NUMBER	MACHINE WIRE COLOUR	WIRE SECTION
A	1	FROM BRAKE PEDAL VALVE PRESS. SWITCH TO CONTROLLER	166	C-L	1
B	1	AIR CLEANER CLOGGING	663	B-N	1
C	1	FROM ACC TO BRAKE PEDAL VALVE PRESS. SWITCH (+)	143	M-N	1
D	1	COOLANT HUGH TEMP. INDIC.	528	V-B	1
E	-	NOT USED	-	-	-
F	1	COOLANT TEMP. SENSOR (TEMP. GAUGE)	552	V	1
G	-	NOT USED	-	-	-
H	1	TRANSM. OIL LOW PRESS. IND.	581	C-N	1
J	-	NOT USED	-	-	-
K	1	TRANSM. OIL HUGH TEMP. INDIC.	559	S-N	1
L	1.5	HORN + (1 <sup>ST</sup> WIREE)	119	L-N	1
M	1.5	HORN GROUND (2 <sup>ND</sup> WIREE)	000	N	1
N	-	NOT USED	-	-	-
O	1	LH PRESS. TRANSDUCER (+)	503	H	1
P	1	ELECTR. CUT-OFF (HOLD COIL)	903	S-G	1
Q	1	BRAKES OIL LOW PRESS. IND.	611	H-N	1
R	-	NOT USED	-	-	-
S	1	BACK-UP ALARM	163	A-B	1
T	-	NOT USED	-	-	-
U	1	EQUIPM. OIL FILTER CLOGGING INDIC.	580	M-B	1
V	1	FUEL RESERVE INDICATOR	555	Z-N	1
W	1	FUEL LEVEL SENSOR	557	Z	1
X	-	NOT USED	-	-	-

## COLOUR CODE

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