Service Manual

ROBOT 190, 1110

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Sensing Switches

A Transmission Charge Pressure Switch.
Normally closed, opens at 2-3.4 bar (30-50 lbf/in²) falling.

B Transmission Oil Temperature Switch (servo).
Normally open, closes at 107-113 °C (225-235 °F) rising.

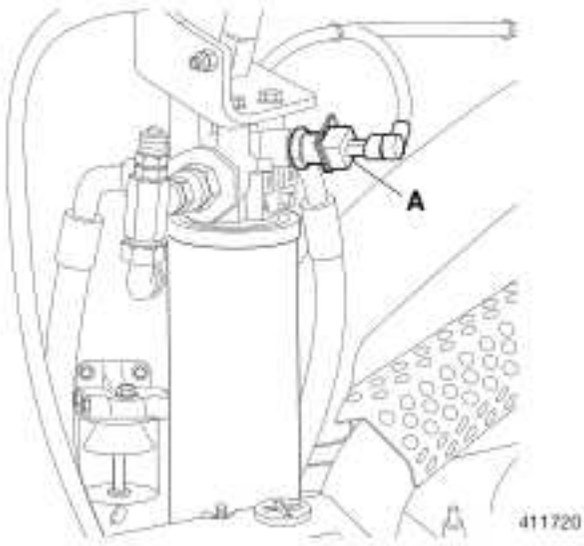
C Transmission Oil Temperature Switch (manual).
Normally open, closes at 107-113 °C (225-235 °F) rising.

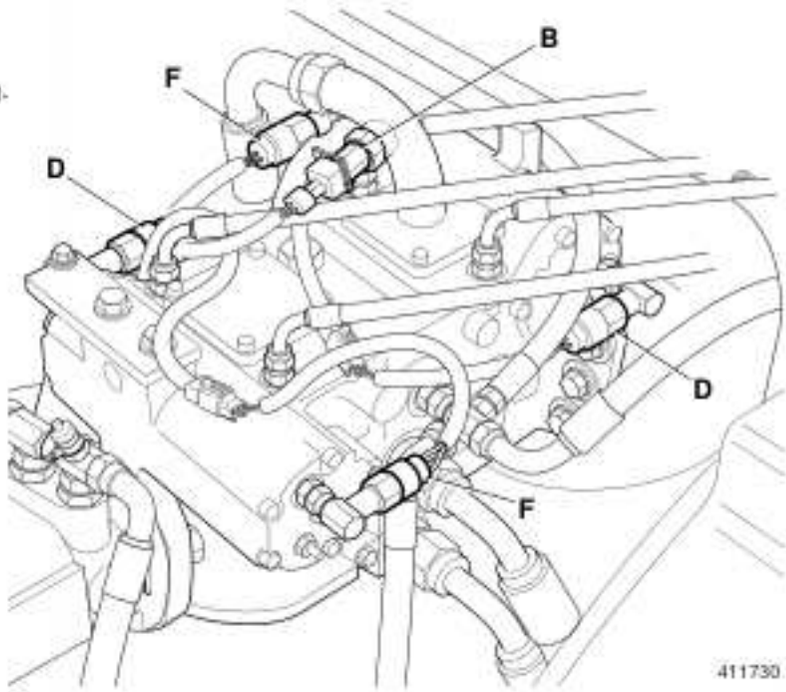
D Reverse Alarm Pressure Switches (servo).
Normally open, closes at 7 bar (100 lbf/in²) rising.

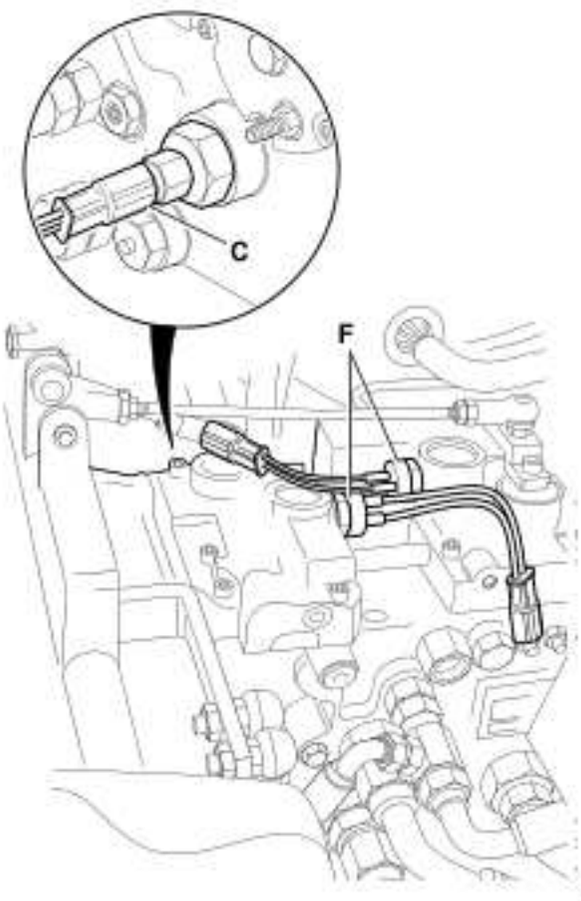
E Reverse Alarm Position Switches (manual).
Normally open, closes when lever turns 1.5-2° from neutral position.

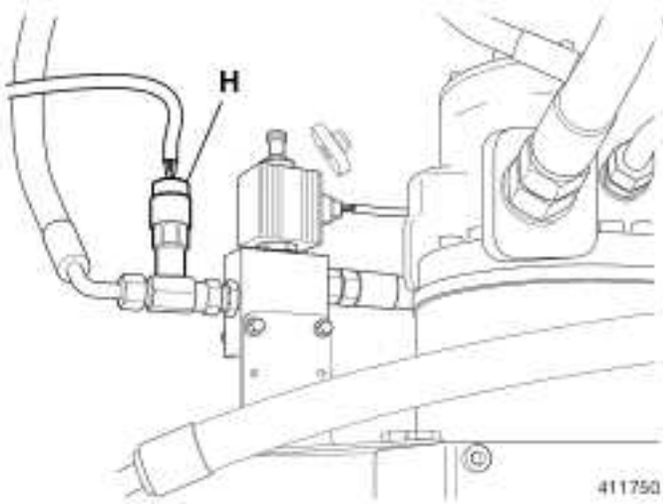
F Brake Light Pressure Switches (servo).
Normally open, closes at 4 bar (58 lbf/in²) rising.

H Float Pressure Switch (servo only).
Normally closed, opens at 40 bar (580 lbf/in²) rising.



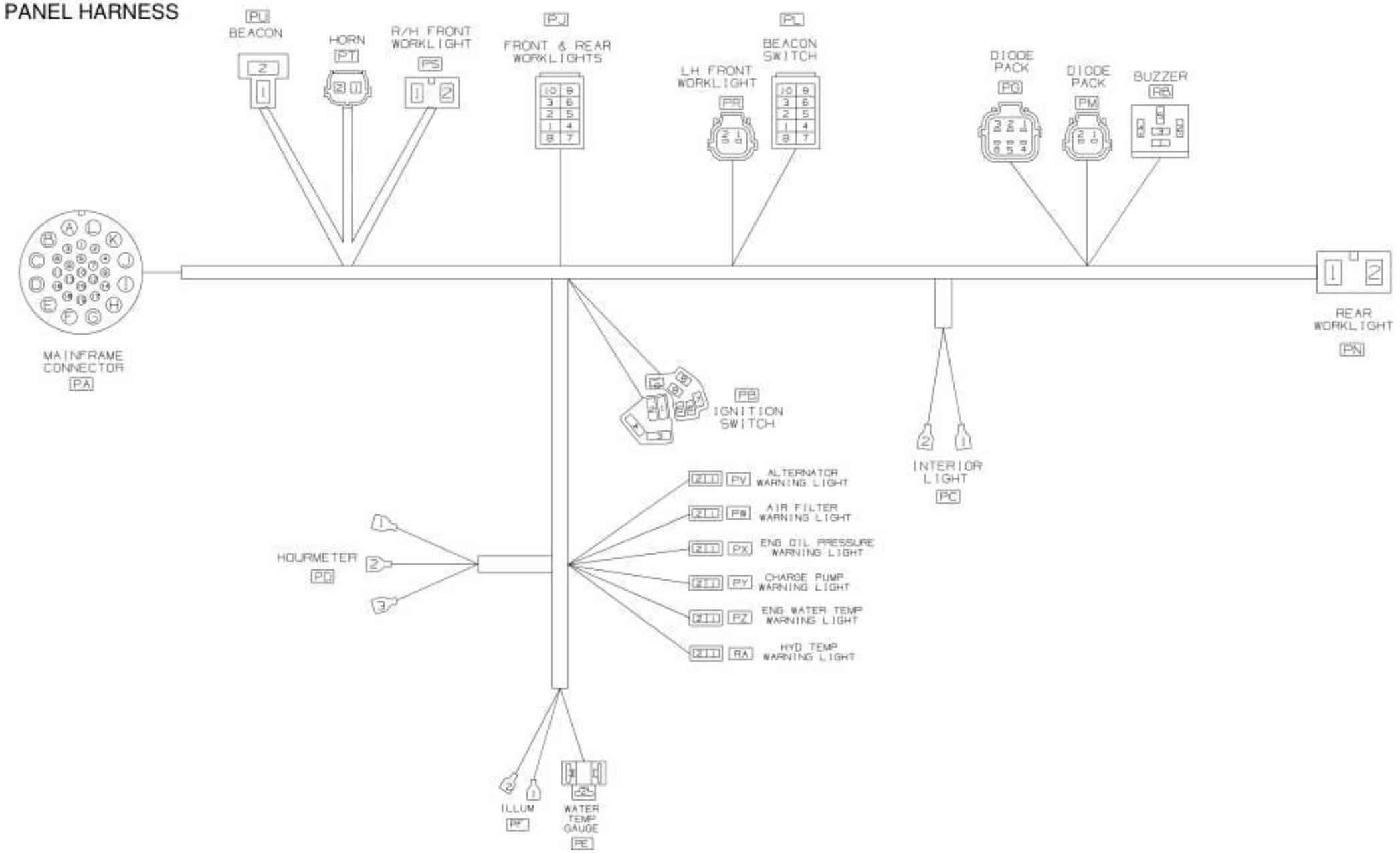






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*** Ground bearing pressure for Tracked Machines**

190 with 320mm Tracks:	4537 kg/m^2 (107,684 lbf/ft^2)
190 with 450mm Tracks:	3227 kg/m^2 (76,592 lbf/ft^2)
1110 with 450mm Tracks:	3368 kg/m^2 (79,938 lbf/ft^2)

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Self Level Valve

The optional self level valve diverts a small amount of oil to the Quickhitch tilt ram to give self levelling of the Quickhitch as the loader arm is raised. A solenoid valve allows the self level circuit to be switched in or out as required by the operator.

Loader Arm Raise - Self Levelling (upper diagram)

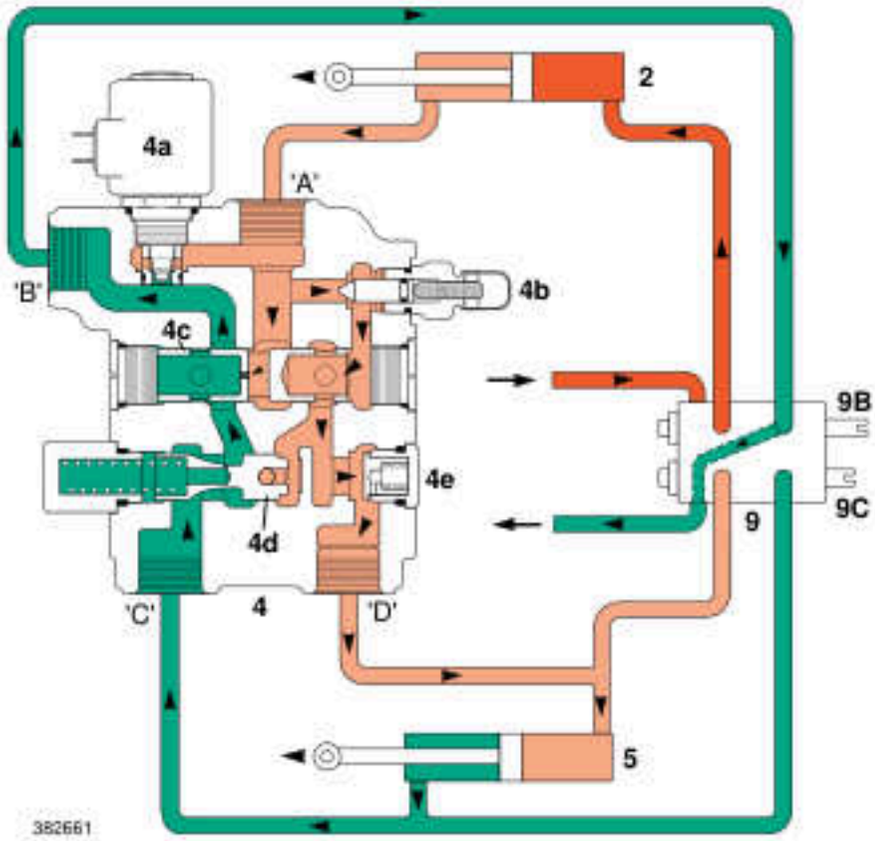
* With the Quickhitch tilt spool **9C** in neutral and the loader arm spool **9B** selected to 'raise', oil from the loader valve **9** enters the head side of the loader arm ram **2**. As the ram extends, flow from the rod side is directed to port 'A' on the self level valve **4**. When the self level function is switched on, solenoid valve **4a** is de-energised (closed) so oil passes through the adjustable orifice **4b** and also the fixed orifice in the flow divider spool **4c**. The proportion of the flow split is determined by the size of the adjustable orifice. The remainder of the flow passes through the fixed orifice and out of port 'B', returning to the loader valve and back to tank. The oil passing through the adjustable orifice **4b** lifts check valve **4e**, flows out of port 'D' and is fed to the head side of the tilt ram **5**. The resistance to movement of the tilt ram creates enough pressure to open the unloading spool **4d** in the self level valve.

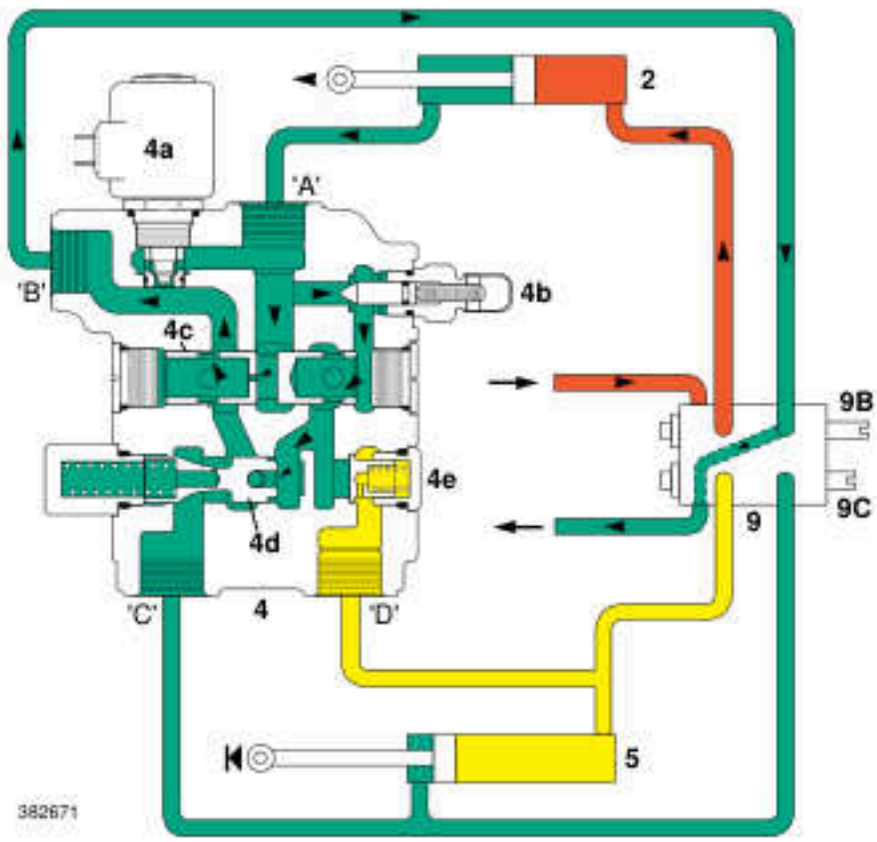
As the tilt ram extends the flow from the rod side enters port 'C' past the open unloading spool **4d**, around the flow divider spool **4c** and out of port 'B' back to the loader valve **9** and to tank. The purpose of the unloading spool **4d** is to prevent the tilt ram from dumping oil during the self level cycle.

If the solenoid valve **4a** is not energised (open), the flow from the rod side of the lift ram is allowed to pass via port 'B' to the loader valve **9** and back to tank. Thus the self level circuit does not operate.

Tilt Ram Fully Extended (lower diagram)

* If the Quickhitch tilt ram **5** reaches the end of its stroke during the self level cycle, or the operator selects the tilt ram service, the loader arm will continue to raise. The unloading spool **4d** will shift to the left and unload the flow going to the tilt ram head side. The oil flows back to tank thus preventing the loader arm ram from stopping during the 'raise' function. Check valve **4e** closes to prevent pressure loss from the tilt ram.





Pressurised oil Exhaust oil Lock-up (trapped) oil

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Types of Rubber Track Damage (cont'd)

2.1 Steel Cord - Breaking


411820

Cause:
A The sprocket is not appropriate for the track (the pitch does not fit).
B Hard material (stone, metal) stuck between the track and the sprocket with excessive track tension.
C The steel cord has been exposed and rusted.

Prevention :
A Make sure that the sprocket is genuine JCB, ensure sprocket is in good condition.
B Check the tension regularly. Clean the tracks regularly as recommended, particularly after operation in clay soil.
C As soon as you see small cracks on the lug side, clean with water and repair immediately.

Additional Notes:
When the steel cord is broken, the track must be replaced. As a preventive measure always check the tension.

2.2 Steel Cord - Separation


411830

Cause:
A Excessive tension of the track
- during fitting
- excessive tension plus a foreign body
- shearing (sharp bend on hard surface)

B The sprocket is not appropriate for the track.

Prevention :
A Check the tension regularly.
B Make sure that the sprocket is genuine JCB, ensure sprocket is in good condition.

Additional Notes:
When the steel cord separates from the rubber at the junction, the track must be replaced.

2.3 Steel Cord - Exposure


411840

Cause:
A Stones and sharp material can tear the rubber and expose the steel cord.

Prevention:
A The life expectancy of a track is greatly reduced by working on a site where sharp and pointed materials are numerous. Operate the machine with attention to the ground surface in rough terrain, e.g. demolition sites, rocky ground etc.

Additional Notes:
Individual strands of steel cord sticking out of the track does not necessarily mean the track needs to be replaced. Individual strands can be cut off (the number of steel cord strands is always over specified), however exposed strands should be repaired immediately (see recommended repair procedures).

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M18	CAB ROOF CONN			BELOW
TERM	WIRE	SIZE	DEST	TYPE
A	210A	4.0	3R	BE
B	210B	4.0	3M	BE
C	-	-	-	-
D	604	0.8	M5/4	BE
E	609C	1.0	M5/3.5	CU
F	-	-	-	-
G	609J	4.0	M18/ M	BE
H	-	-	-	-
I	603B	0.8	M6/2.1	BE
J	-	-	-	-
K	816B	1.0	8D	CU
L	860B	1.0	8F	CU
1	021A	1.0	M6/2.1	BF
2	615	1.0	M6/2.2	BF
3	534	1.0	8C	BF
4	634	2.0	M18/ M	B6
5	117	1.5	M3/5.5	5B
6	116	1.5	M3/5.6	5B
7	106U	1.5	3D	5B
8	-	-	-	-
9	406	1.0	M18/2.1	BF
10	437	1.0	M18/2.4	BF
11	402	1.0	M18/ 1	BF
12	403	1.0	M18/2.2	BF
13	414	1.0	M18/2.3	BF
14	416	1.0	M18/2.1	BF
15	408	1.0	M18/ 1	BF
16	871	1.5	M6/2.7	BG
17	565	1.5	M6/2.12	BG
18	838L	1.5	M6/2.13	BF
19	865C	1.5	M6/2.15	BG

M19	IVB & HORN RELAY			AZ
TERM	WIRE	SIZE	DEST	TYPE
1	122	1.5	M3/2.3	8B
	122A	1.0	M6/2.5	
2	816	1.0	M18/2.2	8B
	816D	1.0	M3/2.2	
3	122A	1.0	M6/2.1	8J
4	810	1.0	8G	8J
5	809	1.0	M3/2.1	8J
6	812	1.5	M3/1.5	8B
	812A	1.0	M6/2.6	
7	871	1.5	M18/ M	8B
8	812A	1.0	M6/2.6	8J
9	-	-	-	-
10	870	1.5	M18/A	8J

M20	BRAKE VALVE			CB-CT
TERM	WIRE	SIZE	DEST	TYPE
1	609B	1.0	3F	CR
2	660DB	1.0	3L	CR

M80	2 SPEED SOLENOID			CB-CT
TERM	WIRE	SIZE	DEST	TYPE
1	68RA	1.0	3P	CR
2	660MB	1.0	3L	CR

M110	HORN SWITCH			T
TERM	WIRE	SIZE	DEST	TYPE
A	87B	1.0	M6/ M	VJW
B	660GZ	1.0	8M	VJW

M120	PRIMARY FUSE 15/3			N
TERM	WIRE	SIZE	DEST	TYPE
A	31B	6.0	5A	P
B	35B	4.0	M6/2.8	P

M130	PRIMARY FUSE 25/4			M
TERM	WIRE	SIZE	DEST	TYPE
A	37/0D	4.0	5B	P
B	30B	4.0	M6/ M	P

M140	CHARGE PRESS			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	47B	1.0	M18/ M	CR
2	660CS	1.0	8M	CR

M150	AIR FILTER			AC
TERM	WIRE	SIZE	DEST	TYPE
1	40D	1.0	M18/ M	KD,AS
2	660CF	1.0	8M	AD,AS

M160	HI FLOW SOLENOID			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	877	1.0	M6/8.1	CR
2	660DH	1.0	8H	CR

M170	FUEL SENDER			Y,Z
TERM	WIRE	SIZE	DEST	TYPE
1	46B	1.0	M6/2.13	AA,AB
2	660CE	1.0	5M	AA,AB

M180	REVERSE ALARM			EG
TERM	WIRE	SIZE	DEST	TYPE
1	867B	1.0	M6/2.5	A,B
2	609CD	1.0	8M	A,B

M080	SELF LEVEL SOL			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	68S	1.0	M28/ 1	CR
2	660LV	1.0	8M	CR

M230	RESTRAINT SWITCH			HJ
TERM	WIRE	SIZE	DEST	TYPE
1	86B	1.0	M6/ 5	A,B
2	-	-	-	E
3	660HB	1.0	8H	A,B

M210	2 SPEED SWITCH			Y
TERM	WIRE	SIZE	DEST	TYPE
A	161A	1.0	8E	VJW
B	80H	1.0	8D/E/J	VJW

M215	FLOAT HOLD COIL			Y
TERM	WIRE	SIZE	DEST	TYPE
A	161C	1.0	8E	VJW
B	660HE	1.0	8L	VJW

M220	SPOOL LOCK 2			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	824B	1.0	8D	CR
2	660DM	1.0	8L	CR

M230	SPOOL LOCK 1			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	824C	1.0	8D	CR
2	660CL	1.0	8L	CR

M240	ROADLIGHT CONN			BR/MP
TERM	WIRE	SIZE	DEST	TYPE
1	90BK	1.0	0B	A,B
2	34BP	2.0	8E	C,D
3	138	2.0	M18/ M	C,D
4	625	2.0	M28/ M	C,D
5	625	1.0	M28/ M	A,B
6	835	1.0	M28/ M	A,B
7	134	1.5	M6/ 4	C,D
8	350	2.0	M28/14	C,D
9	608B	2.0	8H	C,D
10	660DQ	2.0	8M	C,D
11	127A	1.5	M6/2.6	C,D
12	838L	1.0	M18/ M	A,B
13	838C	1.5	M6/2.10	C,D
14	60H	2.0	M18/ 4	C,D

M250	ROADLIGHT LINK			BR,B/I
TERM	WIRE	SIZE	DEST	TYPE
1	-	-	-	E
2	-	-	-	E
3	-	-	-	E
4	-	-	-	E
5	-	-	-	E
6	-	-	-	E
7	-	-	-	E
8	-	-	-	E
9	-	-	-	E
10	-	-	-	E
11	-	-	-	E
12	L.84K	1.5	M28/ 10	BH,B
13	L.84K	1.5	M28/ 10	BH,B
14	-	-	-	E

M260	ACCESSORY SOC			F,G
TERM	WIRE	SIZE	DEST	TYPE
1	18S	2.0	M28/4	C,D
2	660CC	2.0	8L	C,D

M270	PARKBRAKE LIGHT			CA
TERM	WIRE	SIZE	DEST	TYPE
1	81BC	1.0	8M	BY
2	660DC	1.0	8L	BY

M275	2 SPEED LIGHT			CA
TERM	WIRE	SIZE	DEST	TYPE
1	660C	1.0	8F	BY
2	660MZ	1.0	8L	BY

M280	PARKBRAKE SWITCH			BX
TERM	WIRE	SIZE	DEST	TYPE
1	86B	1.0	M6/2.1	BY
2	81SD	1.5	M6/ 3	BY
3	99S	1.5	8F	BY
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	808F	1.5	8L	BY
8	108AH	1.5	8E	BY
9	-	-	-	-
10	-	-	-	-

M290	SELF LEVEL SWITCH			BX
TERM	WIRE	SIZE	DEST	TYPE
1	88S	1.5	M18/ 1	BY
2	161D	1.5	8E	BY
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	808LW	1.5	8L	BY
8	108AM	1.5	8E	BY
9	-	-	-	-
10	-	-	-	-

M300	HI FLOW SWITCH			BX
TERM	WIRE	SIZE	DEST	TYPE
1	80T	1.5	M18/1	BY
	810A	1.5	M18/	
2	129	1.5	M28/ 2	BY
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	809DE	1.5	8L	BY
8	108AK	1.5	8E	BY
9	-	-	-	-
10	-	-	-	-

M310	HEATER BLWR			CC,CD
TERM	WIRE	SIZE	DEST	TYPE
A	-	-	-	CN
B	-	-	-	CN
C	-	-	-	CN
D	-	-	-	CN
E	-	-	-	CP
F	-	-	-	CN
G	-	-	-	CP

M320	HEATER/AIR CON			CE,CF
TERM	WIRE	SIZE	DEST	TYPE
A	182	1.5	M28/14	CL,CG
B	108R	1.5	8E	CL,CG
C	86T	1.5	M18/11	CL,CG
D	-	-	-	CN
E	118	4.0	M28/ 8	CM,CJ
F	-	-	-	CN
G	809GR	4.0	M18/ 9	CM,CJ

M330	F+K WIPER AND WASH			HJ
TERM	WIRE	SIZE	DEST	TYPE
1	183	2.5	M6/ 6	C,D
2	80EJF	2.5	8L	C,D
3	184H	1.5	8H	A,M

M340	WIPER BLMR			BT
TERM	WIRE	SIZE	DEST	TYPE
1	-	-	-	E
2	-	-	-	E
3	-	-	-	E

M350	2 SPEED RELAY			CM,CB
TERM	WIRE	SIZE	DEST	TYPE
1	-	-	-	AD
2	80H	1.0	M18/ 6	CR
3	161B	1.5	8E	CR
4	68B	1.5	8F	CR
5	80HN	1.5	8L	CR
6	-	-	-	AD

M360	2 SPEED BLMR			CF
TERM	WIRE	SIZE	DEST	TYPE
1	-	-	-	KD
2	-	-	-	KD
3	-	-	-	KD
4	-	-	-	KD
5	-	-	-	KD
6	-	-	-	KD

M370	BRAKELIGHT DIODE			FJ
TERM	WIRE	SIZE	DEST	TYPE
1	84B	1.0	M28/ 1	KJ
2	810D	1.0	8G	AJK

M380	IGNITION RELAY 2			FY
TERM	WIRE	SIZE	DEST	TYPE
2	80B	4.0	M6/11	BC
4	609W	1.0	3L	BA
5	-	-	-	-
6	081L	1.5	M6/ 6	BA
8	33T	4.0	M6/8.1	BC

M390	SRS			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	131E	1.5	8E	DD
2	660SH	1.5	8L	DD

M400	BOSTAGH			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	16B	1.5	M6/2.10	DD
2	660EL	1.5	8L	DD

M410	ELEC AUX			CS.CT
TERM	WIRE	SIZE	DEST	TYPE
1	126A	1.5	M6/ 2	DD
2	660TV	1.5	8L	DD

M420	BATTERY +			-
TERM	WIRE	SIZE	DEST	TYPE
1	28DK	6.0	M6/2.1	DE,DF

M430	PRE FUSE 6			EG,DH
TERM	WIRE	SIZE	DEST	TYPE
1	28DK	6.0	M6/2.1	P
2	33T	4.0	M6/2.9	P

ITEM	DESCRIPTION	MAKE	PART No	QTY
A	12way SOCKET TERMINALS	SUMITOMO	7201/0001	10
B	12way WIRE SEAL	SUMITOMO	7216/0002	10
C	2.8mm SOCKET TERMINALS	SUMITOMO	7201/0002	14
D	2.8mm WIRE SEAL	SUMITOMO	7216/0003	14
E	3WAY SEAL	SUMITOMO	7216/0001	16
F	2 WAY SOCKET HOUSING	SUMITOMO	7213/0001	3
G	2WAY SOCKET RETAINER	SUMITOMO	7213/0003	3
H	3 WAY SOCKET HOUSING	SUMITOMO	7213/0002	2
J	3 WAY SOCKET RETAINER	SUMITOMO	7213/0007	2
M	2 WAY RECEPTACLE HSG (BLUE)	MTA	7232/0008	1
N	2 WAY RECEPTACLE HSG (GREY)	MTA	7232/0009	1
P	RECEPTACLE FOR MTA HOUSINGS	MTA	7281/0079	9
T	2 WAY WEDGE TOWER HOUSING	DELPHI	7212/0006	3
V	1.0mm SOCKET TERMINAL	DELPHI	7281/0012	8
W	1.0mm WIRE SEAL (PURPLE)	DELPHI	7216/0042	8
Y	2 WAY METPACK SOCKET HSG	DELPHI	7212/0014	1
Z	2WAY METPACK SOCKET RET	DELPHI	7212/0015	1
AA	METPACK SOCKET TERMINAL	DELPHI	7281/0020	2
AB	M6 SUPPOR WIRE SEAL	DELPHI	7216/0029	2
AC	2 WAY BLOCK JUNIOR TIMER HSG (NO LOCK	AMP	7212/0013	1
AD	TMDP SOCKET TERMINAL	AMP	7221/0060	2
AE	TIMER WIRE SEAL	AMP	7216/0012	2
AG	CAVITY SEAL	DEUTSCH	7216/0659	12
AJ	HDP 12WAY BULKHEAD CONN	DEUTSCH	7212/0625	1
AK	PLASTIC JAMNUT SIZE 24	DEUTSCH	7212/0648	1
AL	RING, LOCKWASHER	DEUTSCH	7212/0647	1
AM	SIZE 12 PIN TERMINAL (2.5-4.0)	DEUTSCH	7284/0626	5
AR	SIZE 16 PIN TERMINAL (0.75-1.5)	DEUTSCH	7284/0628	18
AS	10 WAY FUSE BOX	G + H	7241/0001	2
AT	FUSE 20Q RETAINER	G + H	7241/0002	2
AU	5 WAY FUSE BOX TERMINAL 4-6	G + H	7281/0054	2
AW	2 WAY FUSE BOX TERMINAL 1.0-2.5	G + H	7281/0045	1
AY	RELAY BASE	G + H	7241/0003	3
AZ	MICRO RELAY BASE	G + H	7241/0003	1
BA	12W-3 TERMINAL (0.5-1.0)	G + H	7281/0044	9
BB	12W-3 TERMINAL (1.0-2.5)	G + H	7281/0045	20
BC	12W-3 TERMINAL (2.5-4.0)	G + H	7281/0046	5
BD	12-12 WAY FEMALE CONNECTOR	ITT CANNON	7235/0028	1
BE	PIN TERMINAL POWER (2.5-4.0)	ITT CANNON	7284/0005	5
BF	PIN TERMINAL (SIGNAL 0.5-1.0)	ITT CANNON	7284/0003	15
BG	PIN TERMINAL (SIGNAL) 2.0	ITT CANNON	7284/0004	7
BH	1.0mm PIN TERMINAL	SUMITOMO	7284/0001	3
BJ	M81 TERMINAL 0.5-1.0	G + H	7281/0049	9
BL	IN LINE SPLICE	SUPPLIER	7000/0184	18
BM	HEATSHRINK SLEEVE (NOT PVC)	3M	-	A/R
BN	14 WAY SOCKET HOUSING	SUMITOMO	7218/0000	1
BP	14 WAY SOCKET RETAINER	SUMITOMO	7218/0007	1
BR	14 WAY PIN HOUSING	SUMITOMO	7218/0006	1
BS	14 WAY PIN RETAINER	SUMITOMO	7218/0008	1
BT	2 WAY PIN HOUSING	SUMITOMO	7213/0000	1
BU	KEYED RELAY BRACKET (PASSIVE)	G + H	7241/0004	1
BV	KEYED RELAY BRACKET (ACTIVE)	G + H	7241/0003	1
BX	CABLE BINDER TIES (BOX)	EMKA BANDMAT	7218/0010	3
BY	0.2 RED SPLICE 0.5-0.7	AMP	7221/0000	17
BZ	50 DEG CONDUIT .5T W REFRACE	HARNESSFLEX	7216/0046	1

ITEM	DESCRIPTION	MAKE	PART No	QTY
CA	2 WAY LIGHT BASE	HALEO	7232/0002	2
CB	JUMPER FOR ITEM BC	ITT CANNON	7231/0007	1
CC	1 WAY MINI-MET PINBOX PIN HSG	DELPHI	7237/0008	1
CD	PIN HOUSING 1 Pin	DELPHI	7237/0018	1
CE	1 WAY MINI-MET PINBOX SOCKET HSG	DELPHI	7237/0007	1
CF	SOCKET HOUSING 1 Pin	DELPHI	7237/0008	1
CG	0.5SI SERIES SOCKET TERMINAL 1.0mm	DELPHI	7301/0008	3
CJ	0.5SI SOCKET TERMINAL 0.5mm	DELPHI	7301/0109	3
CL	0.5 SI WIRE SEAL (WHITE)	DELPHI	7231/0026	3
CM	0.5SI WIRE SEAL RED	DELPHI	7231/0064	3
CN	0.5SI BLANK SEAL	DELPHI	7231/0015	7
CP	0.5SI BLANK SEAL	DELPHI	7231/0065	3
CR	SOCKET TERMINAL 0.5-1.0	DEUTSCH	7301/0125	19
CS	3 WAY DT 06 SOCKET HOUSING	DEUTSCH	7212/0052	10
CT	3 WAY DT 06 SOCKET RETAINER	DEUTSCH	7212/0051	10
CU	0.5-1.0 POWER PIN TERMINAL	ITT CANNON	7301/0013	2
CW	6 WAY DT 06 SOCKET HOUSING (PLUG)	DEUTSCH	7212/0018	1
CX	6 WAY DT 06 SOCKET RETAINER	DEUTSCH	7212/0016	1
CY	DT 06 PIN HOUSING	DEUTSCH	7216/0047	1
DA	3 WAY DELPHI SUBMIN PLUG	SUPPLIER	7117/0000	1
DB	2 WAY FUSE BOX TERMINAL 4.3-6.0	G + H	7301/0051	1
DC	6 WAY FEMALE TERMINAL 6.0-8.0	G + H	7301/0052	1
DD	SOCKET TERMINAL 1.0-1.5	DEUTSCH	7301/0076	6
DE	M6 RING TERMINAL 4.0-10.0	G + H	7301/1400	1
DF	RED HEATSHRINK SLEEVE (ADHESIVE LINED)	SUPPLIER	-	A/R
DG	SINGLE PRIMARY FUSE HOUSING WITH WIRE LOOP	MTA	7241/0028	1
DH	SINGLE PRIMARY FUSE HOUSING COVER	MTA	7241/0029	1
DJ	3 WAY BTH SELECTED SEALING	SUPPLIER	7105/0000	3
DK	PARKBRAKE DECAL	SUPPLIER	8171/1279	4
DL	IGNITION SWITCH 1 DECAL	SUPPLIER	8171/1288	2
DM	KEY START DECAL	SUPPLIER	8171/1276	1
DN	H FLOW DECAL	SUPPLIER	8171/1320	2
DP	LEVEL RESET/SELF LEVEL DECAL	SUPPLIER	8171/1318	1
DR	HEATER FAN DECAL	SUPPLIER	8171/1283	1
DS	FRONT WASH WIPE DECAL	SUPPLIER	8171/1281	1
DT	HEADLAMPS DECAL	SUPPLIER	8171/1278	1
DU	SRS DECAL	SUPPLIER	8171/1588	1
DW	M DIS 2 WAY DEUTSCH INTERFACE ADAPTER	HARNESSFLEX	7243/0033	1

M30	FUSE BOX B								ADJUST	
TERM	WIRE	SIZE	DEST	TYPE	TERM	WIRE	SIZE	DEST	TYPE	FUSE
1	032	4.0	M6/2.1	ALI	2	122	1.5	M6/2.3	8B	B1
					122A		1.0	M6/2.5		
2					4	108	1.5	M28/2.7	8B	B2
3					6	151	2.0	M28/ 1	8B	B3
4					8	117	1.5	M6/5	8B	B4
5					10	151	2.0	3B	8B	B5
6	038	4.0	M6/2.1	ALI	12	135	2.0	M28/3	8B	B6
7					14	103	1.0	M28/4	8A	B7
8					16	133	2.0	M28/ 1	8B	B8
9					18	127A	1.5	M28/ TI		
10						127	1.0	M18/8	8B	B9
	SUPPLY				20	185	1.5	M6/2.1	8B	B10
						DISTRIBUTION				

M40	FUSE BOX A								ADJUST	
TERM	WIRE	SIZE	DEST	TYPE	TERM	WIRE	SIZE	DEST	TYPE	FUSE
1	081B	4.0	M6/4	DC	2	122	1.5	M6/2.1	BB	A1
3					4	185	1.5	5B	BB	A2
5					6	105	1.5	M18/7	BB	A3
7					8	116	1.5	M18/8	BB	A4
9	310D	4.0	8B	DB	10	312	1.5	M6/2.6	BB	A5
11					12	303	1.5	M18/17	BB	A6
13					14	380	2.0	M28/8	BB	A7
15	828	2.0	M6/2.4	AV	16	530	1.0	M28/8	BA	A8
17					18	828	1.0	M28/8	BA	A9
19	38S	4.0	M6/2.8	BC	20	119	4.0	M6/2.8	BC	A10
SUPPLY					DISTRIBUTION					

M45	IGNITION RELAY 1			AF
TERM	WIRE	SIZE	DEST	TYPE
2	80E	4.0	M6/ 1	BD
4	660FT	1.0	8L	BA
5	-	-	-	-
6	081A	1.0	M18/ 1	BB
	081L	1.0	M6/6.4	
8	33B	4.0	M18/ 8	BC

M50	HEAT START RELAY			AF
TERM	WIRE	SIZE	DEST	TYPE
2	-	-	-	-
4	660V	1.0	8L	BA
5	842	3.0	M18/ M	BC
6	818A	1.0	M28/ 1	BA
8	80H	3.0	M18/ 6	BC

M100	ENGINE CONN			FLW A
TERM	WIRE	SIZE	DEST	TYPE
1	40B	1.0	M18/ 6	AR
2	60D	1.0	M6/12	AR
3	61B	1.0	M6/15	AR
4	40T	1.0	M6/13	AR
5	807B	1.0	M18/ 1	AR
6	127	1.5	M28/16	AR
7	165	1.5	M28/4	AR
8	-	-	-	AR
9	836A	1.0	8F	AR
10	606J	4.0	M18/ G	AM
11	86H	1.0	M6/2.2	AR
12	842	3.0	M18/ 6	AR
13	003C	1.0	M18/ 6	AR
14	598L	4.0	8M	AM
15	-	-	-	AD
16	680A	4.0	8L	AM
17	-	-	-	AD
18	660GR	4.0	M28/ 8	AM
19	-	-	-	AD

PRE FUSE FEED 1		
5A		BL,BM
WIRE	SIZE	DEST
31D	6.0	M18/4
31BA	4.0	M18/4
31BB	4.0	M18/4

PRE FUSE FEED 2		
5B		BL,BM
WIRE	SIZE	DEST
31BD	4.0	M18/4
31BC	4.0	M18/4
31BF	3.0	M28/2

SPOOL LOCK SPLICE		
SC		BL,BM
WIRE	SIZE	DEST
824	1.0	M6/2.5
824B	1.0	M28/1
824C	1.0	M28/1

ILLUMINATION		
5D		BL,BM
WIRE	SIZE	DEST
18D	1.0	M28/4
108J	1.0	M18/7
108T	1.0	M28/8
108H	1.0	M6/2.3
108K	1.0	M6/2.1
108AK	1.0	M6/2.5
108AH	1.0	M6/2.6
108AM	1.0	M6/2.9

FUSE A7		
5E		BL,BM
WIRE	SIZE	DEST
15T	2.0	M18/ M
151A	1.0	M18/8
151B	1.0	M28/2
151C	1.0	M28/4
151D	1.0	M28/2
151E	1.0	M28/1

BRAKE SPLICE		
5F		BL,BM
WIRE	SIZE	DEST
108L	1.5	M28/3
108A	1.0	M18/8
81BB	1.0	M6/1

PARKBRAKE LIGHT		
5G		BL,BM
WIRE	SIZE	DEST
81D	1.0	M6/4
81BB	1.0	M18/6
81BC	1.0	M28/1
81BD	1.0	M6/1

EARTH 1		
5L		BL,BM
WIRE	SIZE	DEST
080A	4.0	M18/ M
80BV	1.0	M6/4
660CM	1.0	M28/2
660CC	2.0	M28/2
660CL	1.0	M28/2
660JF	2.0	M28/3
660FF	1.0	M6/4
660LW	1.0	M28/7
660DC	1.0	M28/3
660GN	1.0	M6/3
660MD	1.0	M6/2
660BF	1.0	M28/7
660DE	1.0	M28/7
660HZ	1.0	M28/8
660MZ	1.0	M28/3
660HN	1.0	M28/8
80BR	1.0	M28/2
660SH	1.5	M28/3
660SL	1.5	M28/3
660TV	1.5	M18/2

EARTH 2		
5M		BL,BM
WIRE	SIZE	DEST
080L	4.0	M18/ M
660CF	1.0	M18/2
660GZ	1.0	M18/8
660CS	1.0	M18/2
660CD	1.0	M18/2
660HB	1.0	M28/3
660CE	1.0	M28/2
660LV	1.0	M18/2
660DH	1.0	M18/2
60BG	2.0	M28/8
660CQ	2.0	M28/10

2 SPEED EXT FEED		
5P		BL,BM
WIRE	SIZE	DEST
68B	1.0	M28/4
68BA	1.0	M6/1
80BG	1.0	M18/L
660C	1.0	M28/1

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