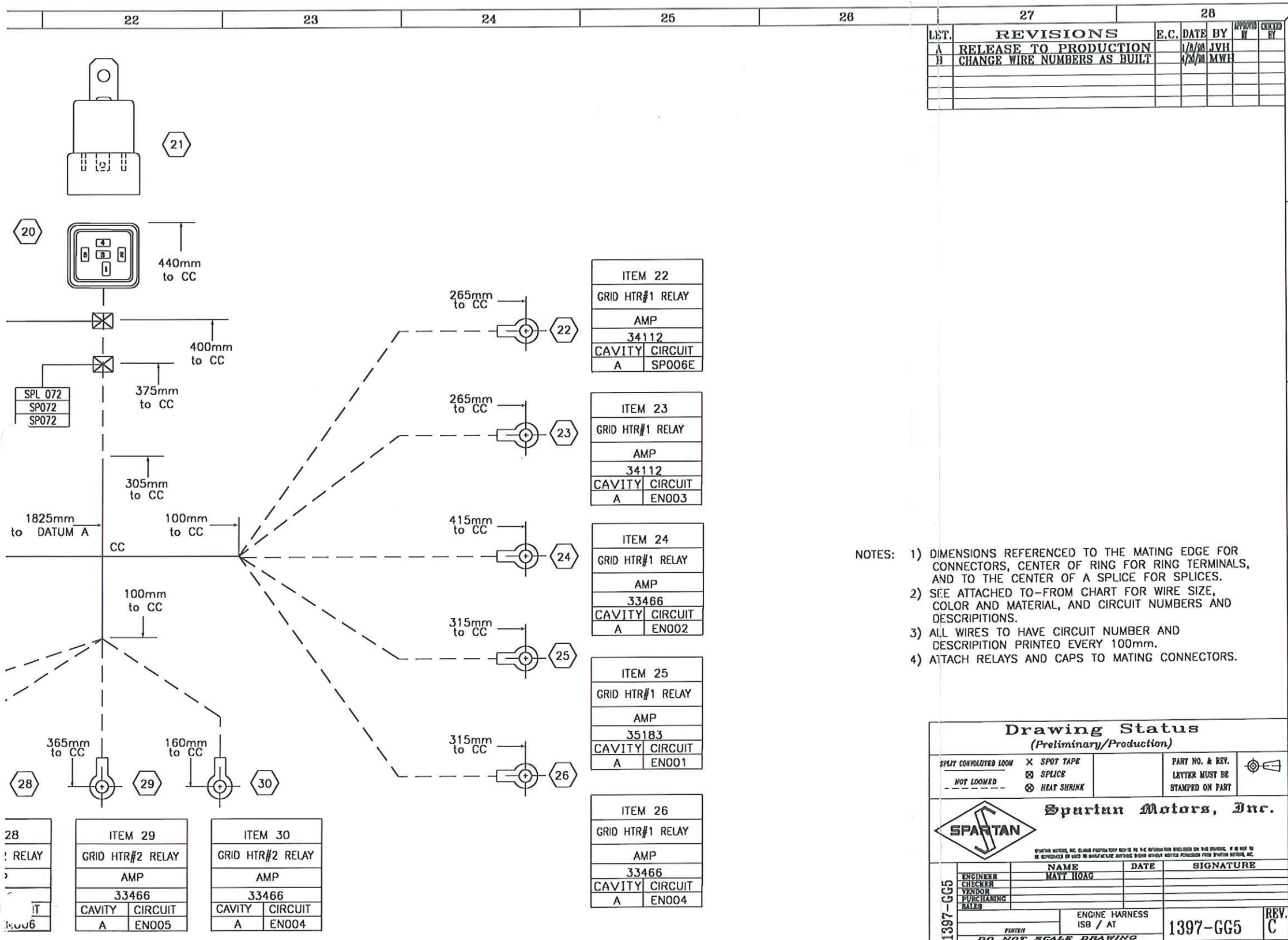


1397-665



REVOLUTIONS		E.C.	DATE	BY	APPROVED BY	CHECKED BY
A	RELEASE TO PRODUCTION		1/8/88	JVH		
B	CHANGE WIRE NUMBERS AS BUILT		2/2/88	MWH		

ITEM 22
GRID HTR#1 RELAY
AMP
34112
CAVITY CIRCUIT
A SPO06E

ITEM 23
GRID HTR#1 RELAY
AMP
34112
CAVITY CIRCUIT
A EN003

ITEM 24
GRID HTR#1 RELAY
AMP
33466
CAVITY CIRCUIT
A EN002

ITEM 25
GRID HTR#1 RELAY
AMP
35183
CAVITY CIRCUIT
A EN001

ITEM 26
GRID HTR#1 RELAY
AMP
33466
CAVITY CIRCUIT
A EN004

ITEM 28
RELAY
33466
CAVITY CIRCUIT
A EN006

ITEM 29
GRID HTR#2 RELAY
AMP
33466
CAVITY CIRCUIT
A EN005

ITEM 30
GRID HTR#2 RELAY
AMP
33466
CAVITY CIRCUIT
A EN004

- NOTES:
- 1) DIMENSIONS REFERENCED TO THE MATING EDGE FOR CONNECTORS, CENTER OF RING FOR RING TERMINALS, AND TO THE CENTER OF A SPLICE FOR SPLICES.
  - 2) SEE ATTACHED TO-FROM CHART FOR WIRE SIZE, COLOR AND MATERIAL, AND CIRCUIT NUMBERS AND DESCRIPTIONS.
  - 3) ALL WIRES TO HAVE CIRCUIT NUMBER AND DESCRIPTION PRINTED EVERY 100mm.
  - 4) ATTACH RELAYS AND CAPS TO MATING CONNECTORS.

**Drawing Status**  
(Preliminary/Production)

SPLIT CONVECTED LOOM	X SPOT TAPE	PARTY NO. & REV.
NOT LOOMED	⊗ SPLICE	LETTER MUST BE STAMPED ON PART
	⊗ HEAT SHRINK	

**Spartan Motors, Inc.**

**SPARTAN**

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NAME	DATE	SIGNATURE
ENGINEER		
CHECKER		
VENDOR		
PURCHASING		
SALES		

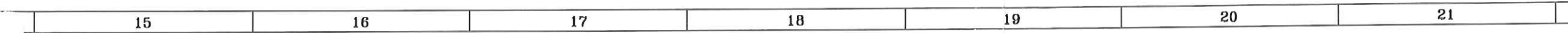
ENGINE HARNESS  
ISB / AT

1397-GG5

REV. C

DO NOT SCALE DRAWING

1397-665



ITEM 14	
START SOLENOID	
AMP	
33457	
CAVITY	CIRCUIT
A	SP073

ITEM 15	
+ STARTER POST	
RELAY FEED	
AMP	
35184	
CAVITY	CIRCUIT
A	EN001

ITEM 16	
+ STARTER POST	
AMP	
33220	
CAVITY	CIRCUIT
A	SP072

ITEM 17	
+ STARTER POST	
AMP	
33220	
CAVITY	CIRCUIT
A	SP215

ITEM 18	
+ STARTER POST	
AMP	
33463	
CAVITY	CIRCUIT
A	SP217

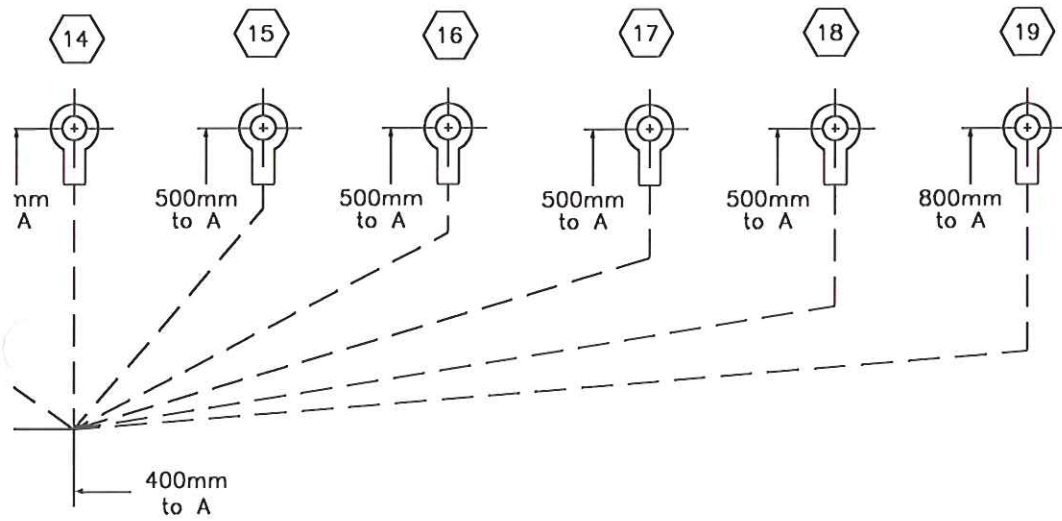
ITEM 19	
- STARTER POST	
AMP	
33220	
CAVITY	CIRCUIT
A	SP006C

ITEM 21	
START RELAY	
12034544	
PACKARD	

ITEM 20	
START RELAY	
12065686	
PACKARD	
CAVITY	CIRCUIT
1	SP073
2	SP057
3	---
4	SP072
5	SP006D

20

MOUNTED TO GRID HEATER RELAY PANEL

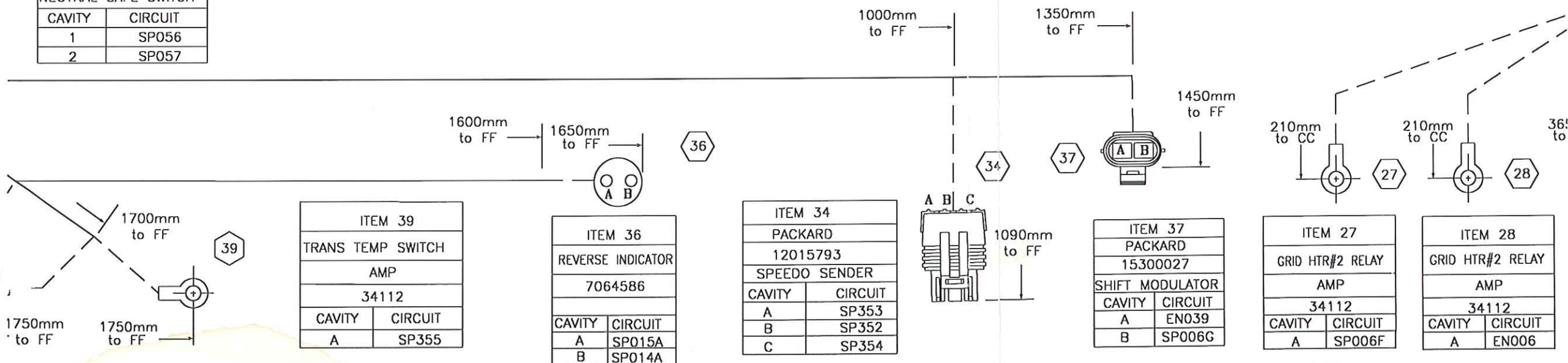


SPL 073
SP073

SPL 072
SP072
SP072

1825m to DATL

ITEM 33	
PACKARD	
02973781	
NEUTRAL SAFE SWITCH	
CAVITY	CIRCUIT
1	SP056
2	SP057



ITEM 39	
TRANS TEMP SWITCH	
AMP	
34112	
CAVITY	CIRCUIT
A	SP355

ITEM 36	
REVERSE INDICATOR	
7064586	
CAVITY	CIRCUIT
A	SP015A
B	SP014A

ITEM 34	
PACKARD	
12015793	
SPEEDO SENDER	
CAVITY	CIRCUIT
A	SP353
B	SP352
C	SP354

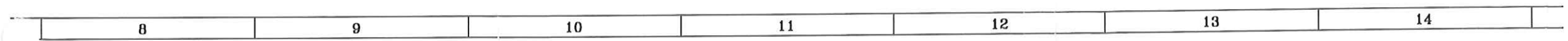
ITEM 37	
PACKARD	
15300027	
SHIFT MODULATOR	
CAVITY	CIRCUIT
A	EN039
B	SP006G

ITEM 27	
GRID HTR#2 RELAY	
AMP	
34112	
CAVITY	CIRCUIT
A	SP006F

ITEM 28	
GRID HTR#2 RELAY	
AMP	
34112	
CAVITY	CIRCUIT
A	EN006



1397-665

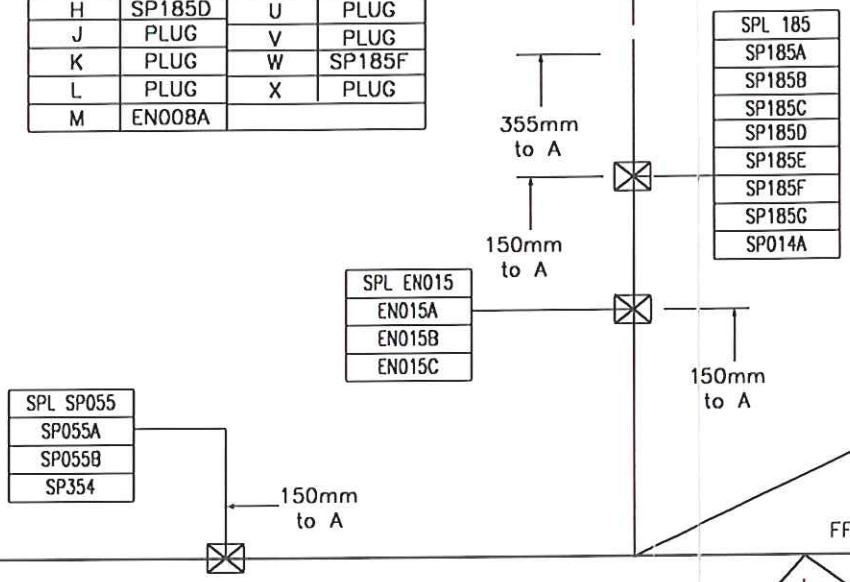
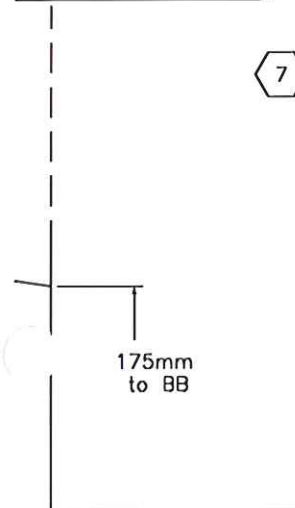
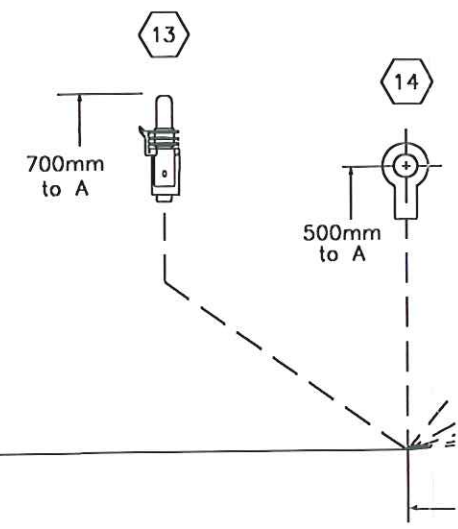
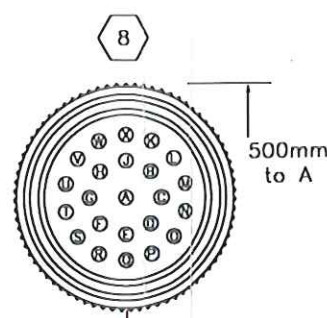
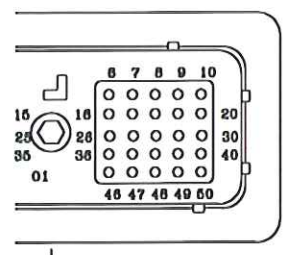


ITEM 7			
DEUTSCH			
DRC26-50S05			
ENGINE ECM			
CAVITY	CIRCUIT	CAVITY	CIRCUIT
1	EN017	26	EN021
2	EN038	27	SP185B
3	EN419	28	PLUG
4	EN016	29	EN034
5	PLUG	30	EN916
6	PLUG	31	EN006
7	EN545	32	PLUG
8	SP352	33	EN011
9	PLUG	34	EN014
10	PLUG	35	EN023
11	EN037	36	EN022
12	PLUG	37	EN013
13	EN541	38	PLUG
14	EN544	39	PLUG
15	PLUG	40	EN035
16	PLUG	41	EN003
17	PLUG	42	PLUG
18	SP353	43	PLUG
19	EN952	44	PLUG
20	EN036	45	PLUG
21	EN039	46	PLUG
22	PLUG	47	PLUG
23	PLUG	48	PLUG
24	EN024	49	SP209
25	EN020	50	SP210

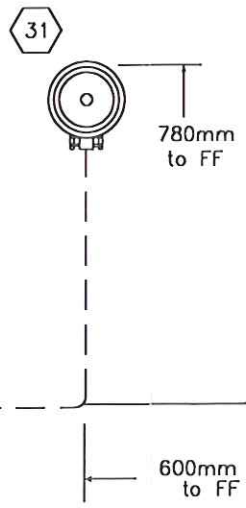
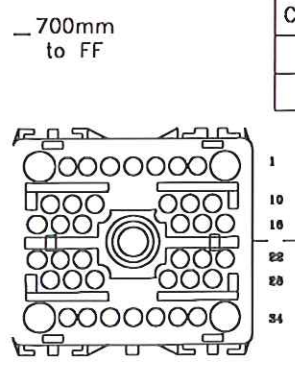
ITEM 8			
DEUTSCH			
HD36-24-23ST			
CUMMINS HARNESS			
INTERCONNECT			
CAVITY	CIRCUIT	CAVITY	CIRCUIT
A	SP055	N	PLUG
B	EN241	O	EN015
C	EN440	P	SP185E
D	EN240	Q	PLUG
E	SP185G	R	PLUG
F	SP185C	S	EN008B
G	PLUG	T	PLUG
H	SP185D	U	PLUG
J	PLUG	V	PLUG
K	PLUG	W	SP185F
L	PLUG	X	PLUG
M	EN008A		

ITEM 13	
EXHAUST BRAKE	
PACKARD	
12015791	
CAVITY	CIRCUIT
A	EN015B
B	SP006B

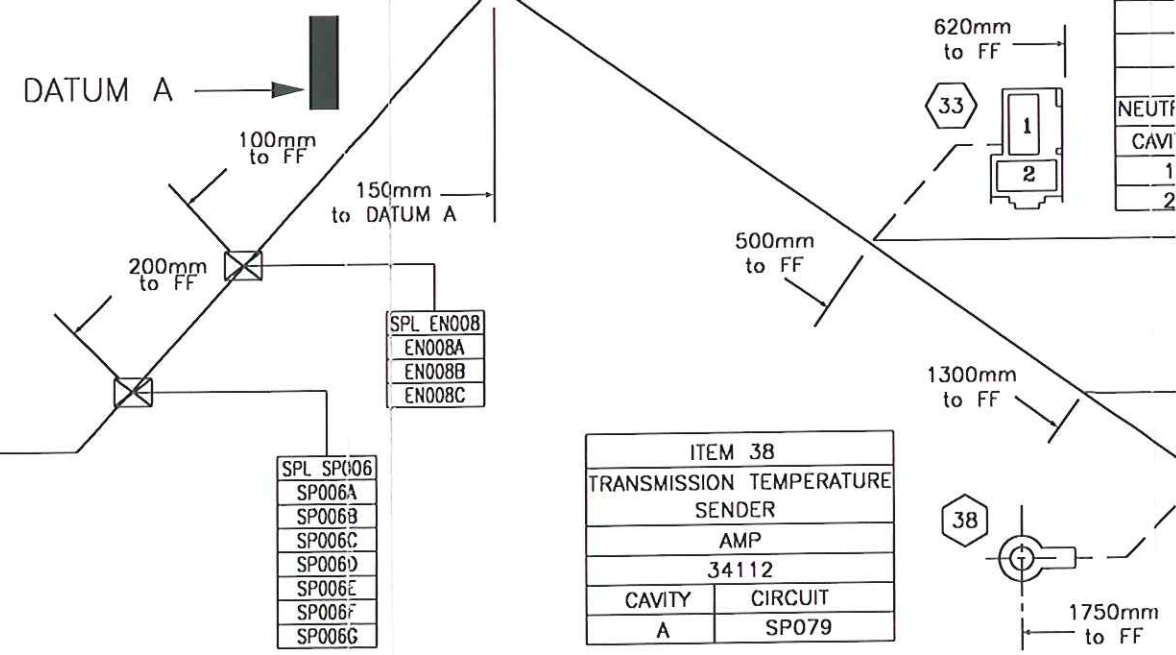
ITEM 14	
START	
A	
33	
CAVITY	
A	



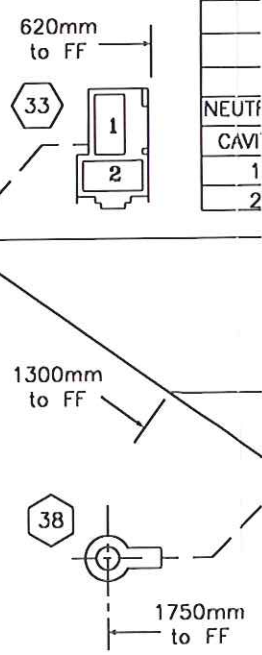
ITEM 31	
DEUTSCH	
DTHD04-1-8P	
CHASSIS INTERCONNECT	
CAVITY	WIRE #
A	SP217



PART # LABEL



ITEM 38	
TRANSMISSION TEMPERATURE SENDER	
AMP	
34112	
CAVITY	CIRCUIT
A	SP079



SPL	SP
SPL	SP006
SP006A	
SP006B	
SP006C	
SP006D	
SP006E	
SP006F	
SP006G	

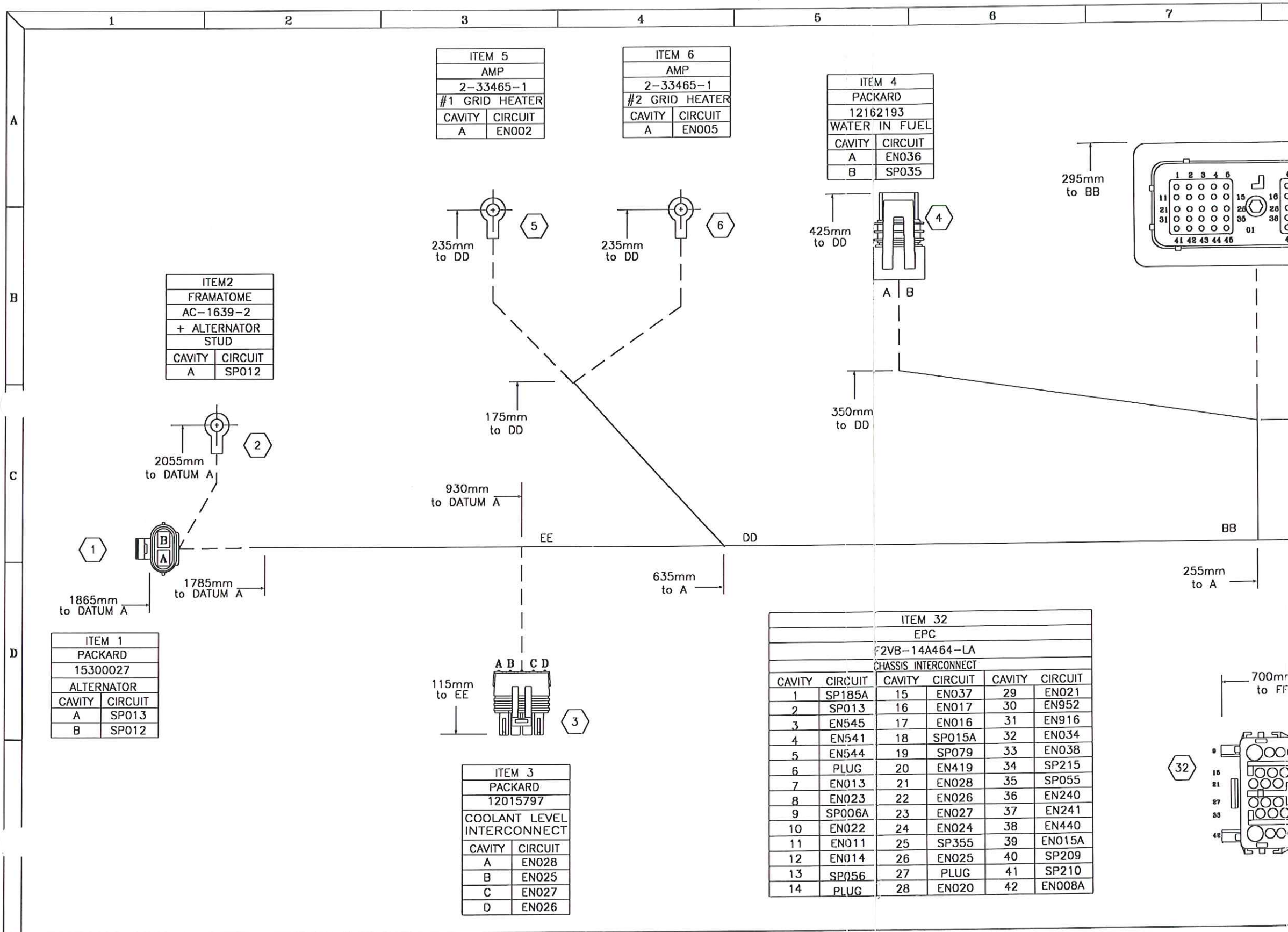
SPL	EN
SPL	EN008
EN008A	
EN008B	
EN008C	

SPL	EN
SPL	EN015
EN015A	
EN015B	
EN015C	

SPL	SP
SPL	SP055
SP055A	
SP055B	
SP354	

SPL	SP
SPL	SP185
SP185A	
SP185B	
SP185C	
SP185D	
SP185E	
SP185F	
SP185G	
SP014A	

1397-665



ITEM 5	
AMP	
2-33465-1	
#1 GRID HEATER	
CAVITY	CIRCUIT
A	EN002

ITEM 6	
AMP	
2-33465-1	
#2 GRID HEATER	
CAVITY	CIRCUIT
A	EN005

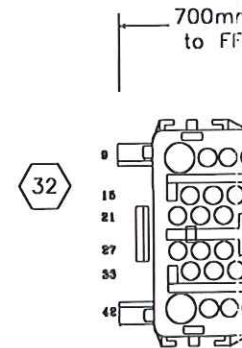
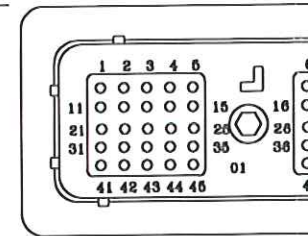
ITEM 4	
PACKARD	
12162193	
WATER IN FUEL	
CAVITY	CIRCUIT
A	EN036
B	SP035

ITEM 2	
FRAMATOME	
AC-1639-2	
+ ALTERNATOR	
STUD	
CAVITY	CIRCUIT
A	SP012

ITEM 1	
PACKARD	
15300027	
ALTERNATOR	
CAVITY	CIRCUIT
A	SP013
B	SP012

ITEM 3	
PACKARD	
12015797	
COOLANT LEVEL	
INTERCONNECT	
CAVITY	CIRCUIT
A	EN028
B	EN025
C	EN027
D	EN026

ITEM 32					
EPC					
F2VB-14A464-LA					
CHASSIS INTERCONNECT					
CAVITY	CIRCUIT	CAVITY	CIRCUIT	CAVITY	CIRCUIT
1	SP185A	15	EN037	29	EN021
2	SP013	16	EN017	30	EN952
3	EN545	17	EN016	31	EN916
4	EN541	18	SP015A	32	EN034
5	EN544	19	SP079	33	EN038
6	PLUG	20	EN419	34	SP215
7	EN013	21	EN028	35	SP055
8	EN023	22	EN026	36	EN240
9	SP006A	23	EN027	37	EN241
10	EN022	24	EN024	38	EN440
11	EN011	25	SP355	39	EN015A
12	EN014	26	EN025	40	SP209
13	SP056	27	PLUG	41	SP210
14	PLUG	28	EN020	42	EN008A



1404-GG5

15	16	17	18	19	20	21	22																																																
						<table border="1"> <thead> <tr> <th>LET.</th> <th colspan="2">REVISIONS</th> <th>E.C.</th> <th>DATE</th> <th>BY</th> <th>APPROV BY</th> <th>CHECKED BY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td colspan="2">INITIAL RELEASE</td> <td></td> <td>2/98</td> <td>JVH</td> <td></td> <td></td> </tr> <tr> <td>B</td> <td colspan="2">ADD HIGH IDLE</td> <td>C3021</td> <td>6/98</td> <td>MWH</td> <td></td> <td></td> </tr> <tr> <td></td> <td colspan="2"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td colspan="2"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td colspan="2"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		LET.	REVISIONS		E.C.	DATE	BY	APPROV BY	CHECKED BY	A	INITIAL RELEASE			2/98	JVH			B	ADD HIGH IDLE		C3021	6/98	MWH																										
LET.	REVISIONS		E.C.	DATE	BY	APPROV BY	CHECKED BY																																																
A	INITIAL RELEASE			2/98	JVH																																																		
B	ADD HIGH IDLE		C3021	6/98	MWH																																																		

ITEM 94	
INDICATOR LIGHTS CONNECTOR II	
640250-B	
AMP	
CAVITY	CIRCUIT
1	POL KEY
2	EN019
3	EN016A
4	EN038
5	EN037
6	---
7	---
8	POL KEY

ITEM 95	
INDICATOR LIGHTS CONNECTOR III	
640250-B	
AMP	
CAVITY	CIRCUIT
1	SP043A
2	SP068A
3	SP211A
4	SP355A
5	SP020A
6	EN017
7	---
8	POL KEY

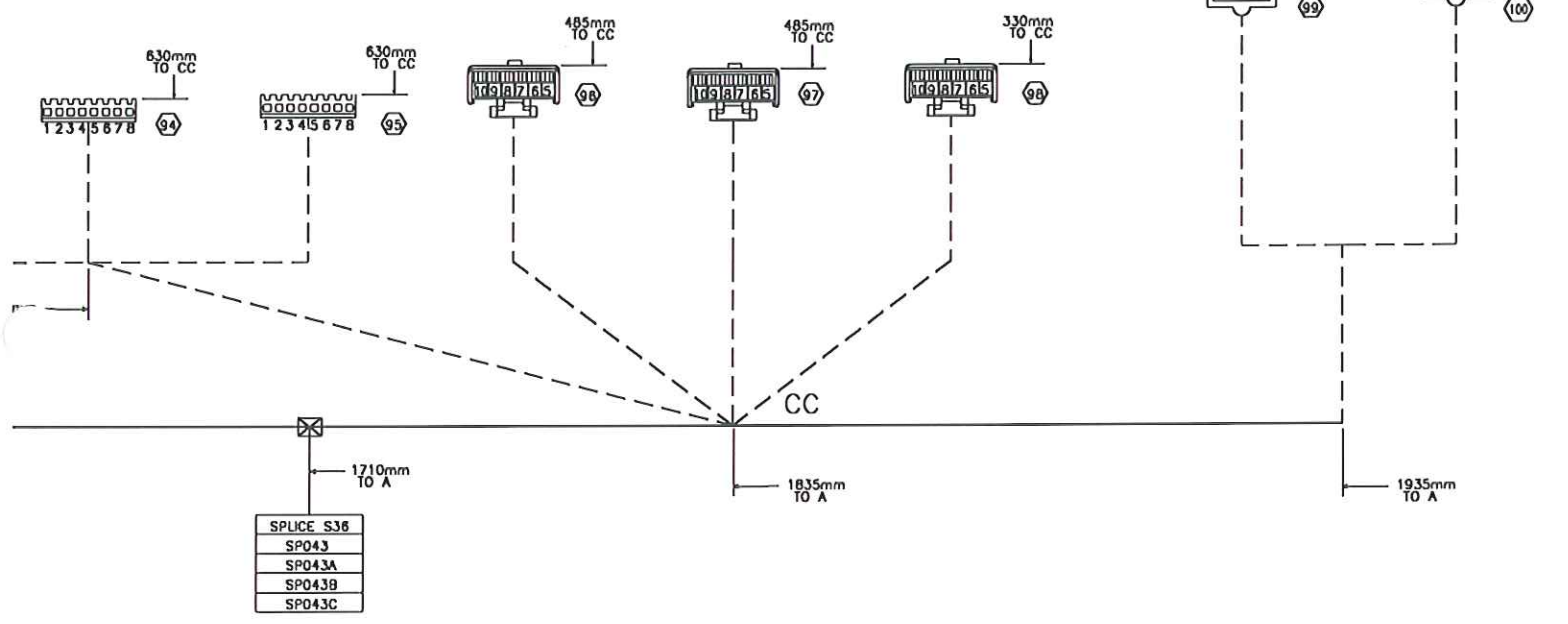
ITEM 96	
FUEL GAUGE	
12064993	
PACKARD	
CAVITY	CIRCUIT
5	SP020C
6	SP185B
7	SP040
8	SP009C
9	---
10	---

ITEM 97	
TRANS TEMP GAUGE	
12064993	
PACKARD	
CAVITY	CIRCUIT
5	SP020C
6	SP185C
7	SP079
8	SP009B
9	---
10	---

ITEM 98	
GAUGE DEMULTIPLEXER	
12064993	
PACKARD	
CAVITY	CIRCUIT
5	SP020B
6	SP185A
7	SP208A
8	SP210A
9	---
10	SP008A

ITEM 99	
ALARM A	
2-520264-2	
AMP	
CAVITY	CIRCUIT
A	SP221A

ITEM 100	
ALARM B	
2-520264-2	
AMP	
CAVITY	CIRCUIT
A	SP043B



- NOTES:
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  - 3) ALL WIRES TO HAVE CIRCUIT NUMBER AND DESCRIPTION PRINTED EVERY 100mm.
  - 4) ATTACH RELAYS AND CAPS TO MATING CONNECTORS.

**Drawing Status**  
(Preliminary/Production)

SPLIT CONVOLUTED LOOM	X SPOT TAPE	TOLERANCES UNLESS NOTED	PART NO. & REV.	THIRD ANGLE PROJECTION
NOT LOOMED	☒ SPLICE	X.X ± .08 X.XX ± .03 X.XXX ± .010 < ± 1°	LETTER MUST BE STAMPED ON PART	

**Spartan Motors, Inc.**  
WORLD WIDE VEHICLES AND CHASSIS  
1000 REYNOLDS RD.  
CHARLOTTE, MICHIGAN 48819

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NAME	DATE	SIGNATURE
ENGINEER		
CHECKER		
VENDOR		
PURCHASING		
SALES		

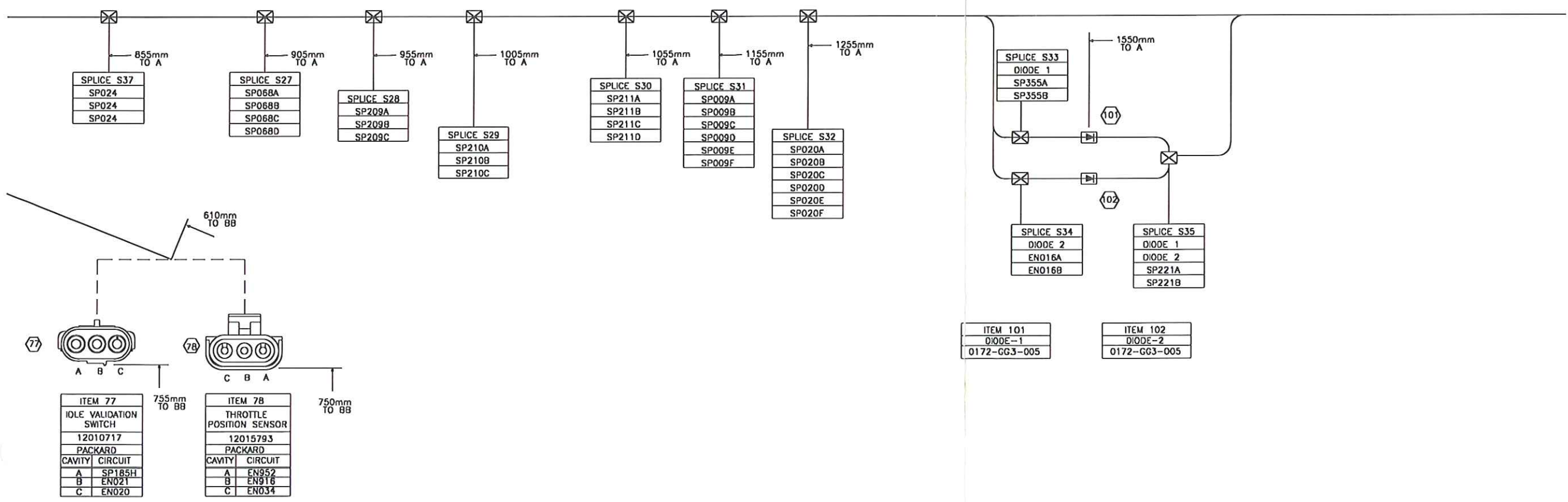
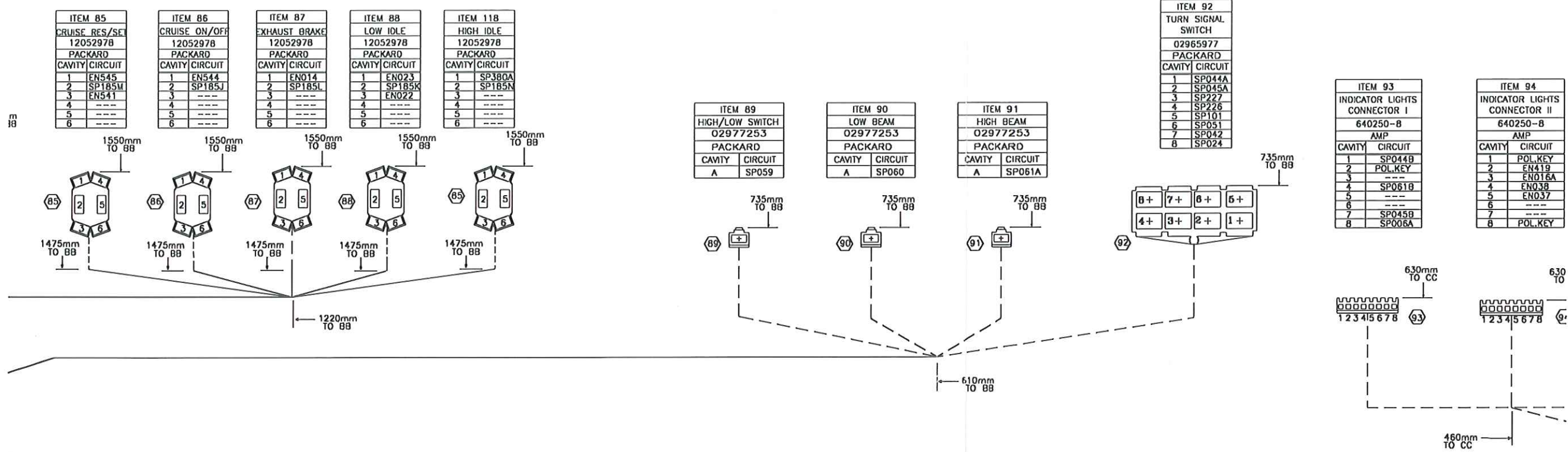
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TITLE: HARNESS\_CAB  
DRAWING NUMBER: 1404-GG5  
REV: B

DO NOT SCALE DRAWING

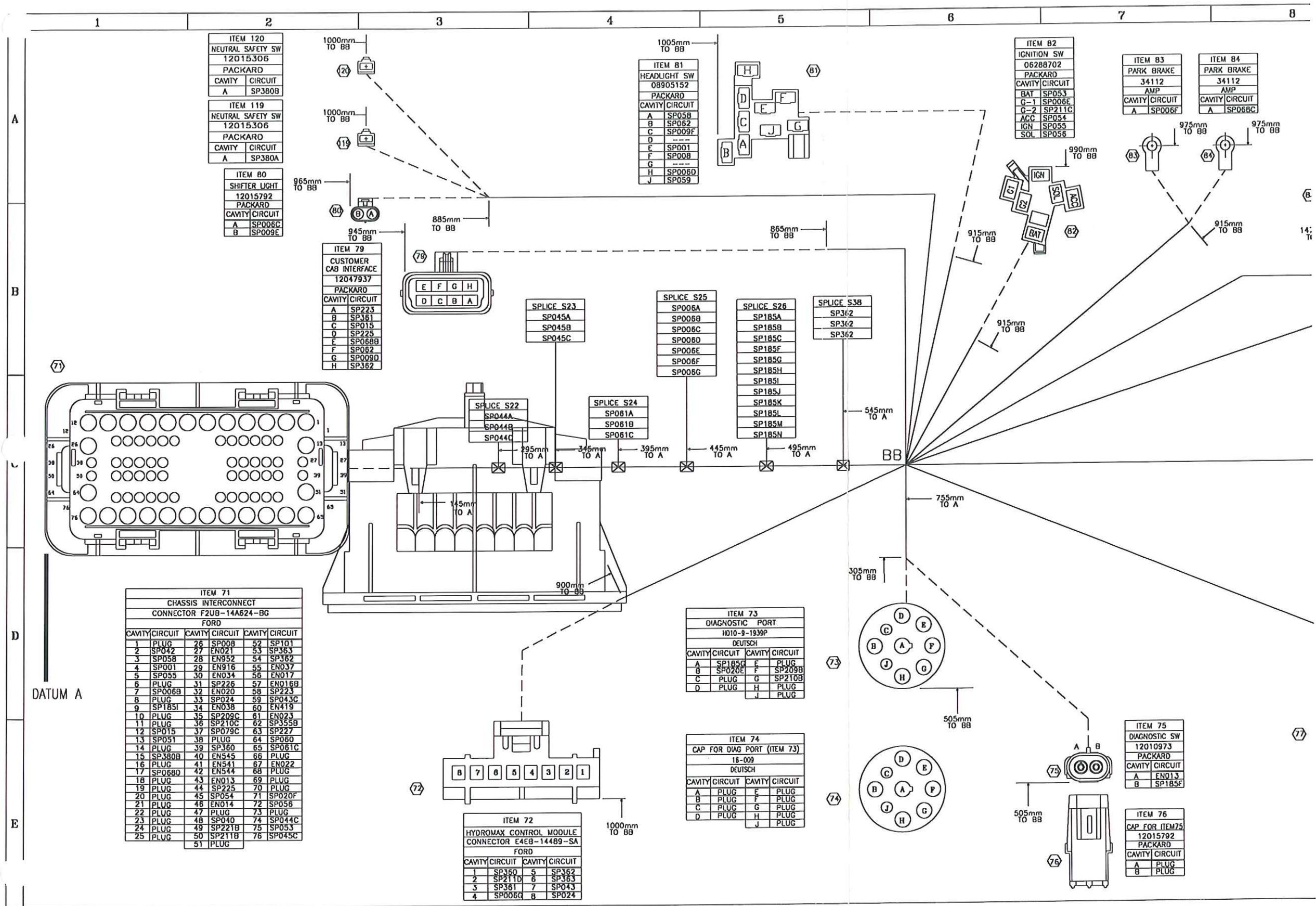


1404-665

9 10 11 12 13 14 15



1404-665



ITEM 120  
NEUTRAL SAFETY SW  
12015306  
PACKARD  
CAVITY CIRCUIT  
A SP380B

ITEM 119  
NEUTRAL SAFETY SW  
12015306  
PACKARD  
CAVITY CIRCUIT  
A SP380A

ITEM 80  
SHIFTER LIGHT  
12015792  
PACKARD  
CAVITY CIRCUIT  
A SP006C  
B SP009E

ITEM 81  
HEADLIGHT SW  
08905152  
PACKARD  
CAVITY CIRCUIT  
A SP05B  
B SP062  
C SP009F  
D ---  
E SP001  
F SP008  
G SP006D  
J SP059

ITEM 82  
IGNITION SW  
06288702  
PACKARD  
CAVITY CIRCUIT  
BAT SP053  
C-1 SP006E  
C-2 SP211C  
ACC SP054  
IGN SP055  
SOL SP056

ITEM 83  
PARK BRAKE  
34112  
AMP  
CAVITY CIRCUIT  
A SP006F

ITEM 84  
PARK BRAKE  
34112  
AMP  
CAVITY CIRCUIT  
A SP068C

ITEM 79  
CUSTOMER  
CAB INTERFACE  
12047937  
PACKARD  
CAVITY CIRCUIT  
A SP223  
B SP361  
C SP015  
D SP225  
E SP068B  
F SP062  
G SP009D  
H SP362

SPLICE S23  
SP045A  
SP045B  
SP045C

SPLICE S25  
SP006A  
SP006B  
SP006C  
SP006D  
SP006E  
SP006F  
SP006G

SPLICE S26  
SP185A  
SP185B  
SP185C  
SP185F  
SP185G  
SP185H  
SP185I  
SP185J  
SP185K  
SP185L  
SP185M  
SP185N

SPLICE S38  
SP332  
SP362

SPLICE S24  
SP081A  
SP081B  
SP081C

SPLICE S22  
SP044A  
SP044B  
SP044C

ITEM 73  
DIAGNOSTIC PORT  
H10-9-1939P  
DEUTSCH  
CAVITY CIRCUIT CAVITY CIRCUIT  
A SP185G E PLUG  
B SP020E F SP209B  
C PLUG G SP210B  
D PLUG H PLUG  
J PLUG

ITEM 74  
CAP FOR DIAG PORT (ITEM 73)  
16-009  
DEUTSCH  
CAVITY CIRCUIT CAVITY CIRCUIT  
A PLUG E PLUG  
B PLUG F PLUG  
C PLUG G PLUG  
D PLUG H PLUG  
J PLUG

ITEM 75  
DIAGNOSTIC SW  
12010973  
PACKARD  
CAVITY CIRCUIT  
A EN013  
B SP185F

ITEM 76  
CAP FOR ITEM 75  
12015792  
PACKARD  
CAVITY CIRCUIT  
A PLUG  
B PLUG

ITEM 71  
CHASSIS INTERCONNECT  
CONNECTOR F2UB-14A824-BG  
FORD  
CAVITY CIRCUIT CAVITY CIRCUIT CAVITY CIRCUIT  
1 PLUG 26 SP068 52 SP101  
2 SP042 27 EN021 53 SP363  
3 SP058 28 EN952 54 SP362  
4 SP001 29 EN916 55 EN037  
5 SP055 30 EN034 56 EN017  
6 PLUG 31 SP226 57 EN016B  
7 SP006B 32 EN020 58 SP223  
8 PLUG 33 SP024 59 SP043C  
9 SP185I 34 EN038 60 EN419  
10 PLUG 35 SP209C 61 EN023  
11 PLUG 36 SP210C 62 SP355B  
12 SP015 37 SP079C 63 SP227  
13 SP051 38 PLUG 64 SP060  
14 PLUG 39 SP360 65 SP061C  
15 SP380B 40 EN545 66 PLUG  
16 PLUG 41 EN541 67 EN022  
17 SP068D 42 EN544 68 PLUG  
18 PLUG 43 EN013 69 PLUG  
19 PLUG 44 SP225 70 PLUG  
20 PLUG 45 SP054 71 SP020F  
21 PLUG 46 EN014 72 SP056  
22 PLUG 47 PLUG 73 PLUG  
23 PLUG 48 SP040 74 SP044C  
24 PLUG 49 SP221B 75 SP053  
25 PLUG 50 SP211B 76 SP045C  
51 PLUG

ITEM 72  
HYDROMAX CONTROL MODULE  
CONNECTOR E4EB-14489-SA  
FORD  
CAVITY CIRCUIT CAVITY CIRCUIT  
1 SP360 5 SP362  
2 SP211D 6 SP363  
3 SP361 7 SP043  
4 SP006G 8 SP024

A

B

D

E

DATUM A

14: T1

77



1405-GG5

26

27

28

29

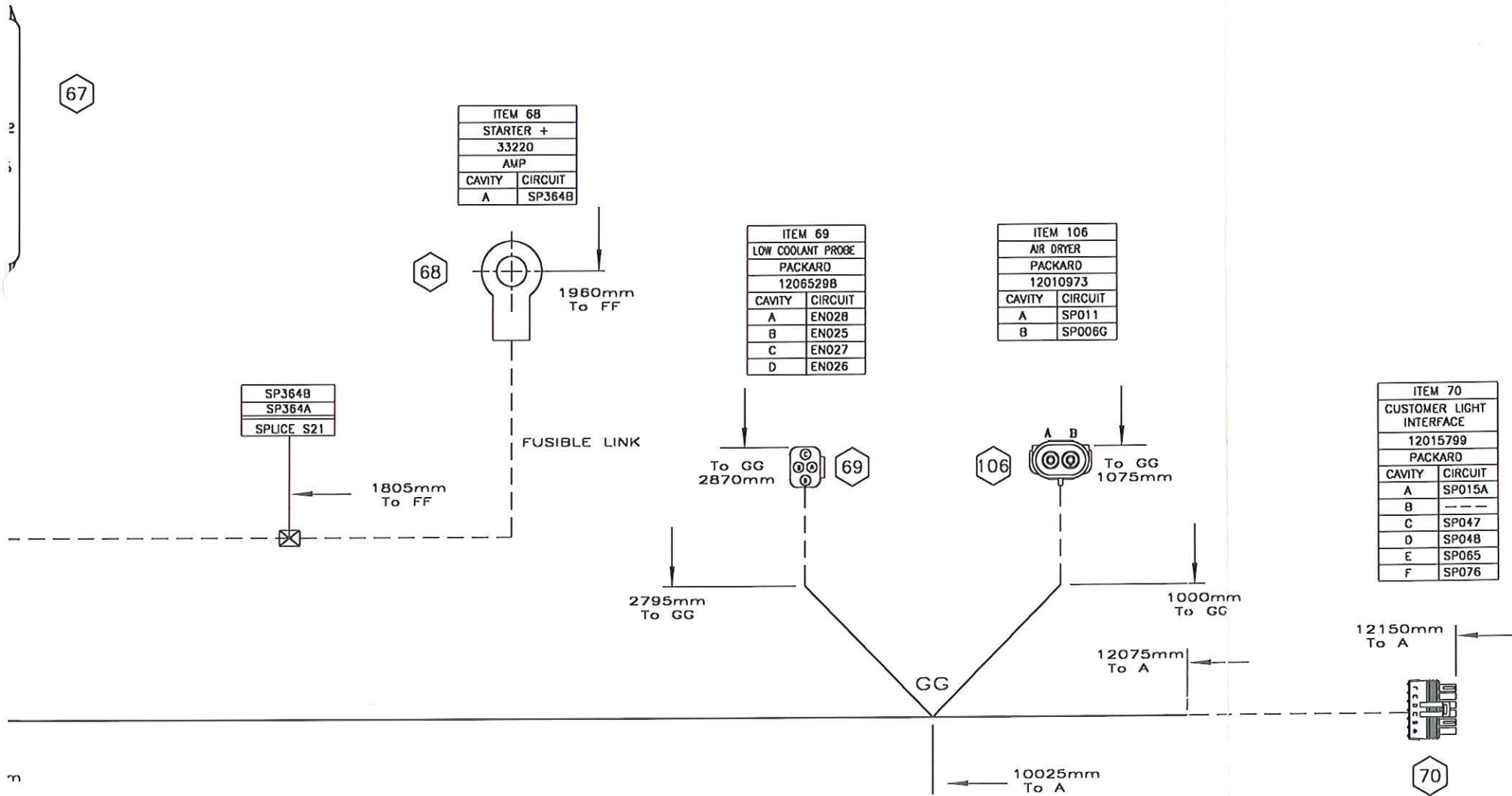
30

31

32

33

LET.	REVISIONS	E.C.	DATE	BY	APPROVED BY	CHECKED BY
A	INITIAL RELEASE		2/98	JVH		
B	ADD HIGH IDLE	C3021	6/98	MWH		



- NOTES:
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  - 4) ATTACH RELAYS AND CAPS TO MATING CONNECTORS.

**Drawing Status**  
(Preliminary/Production)

SPLIT CONVOLUTED LOOM	X SPOT TAPE	TOLERANCES UNLESS NOTED	PART NO. & REV.	THIRD ANGLE PROJECTION
NOT LOOMED	X SPLICE	X.X ± .08 X.XX ± .03 X.XXX ± .010 < ± 1"	LETTER MUST BE STAMPED ON PART	
	X HEAT SHRINK			

**Spartan Motors, Inc.**  
WORLD WIDE VEHICLES AND CHASSIS  
1000 REYNOLDS RD.  
CHARLOTTE, MICHIGAN 48013

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NAME	DATE	SIGNATURE
ENGINEER		
CHECKER		
VENDOR		
PURCHASING		
SALES		

DRAWING NUMBER: 1405-GG5

MATERIAL: MATERIAL_1	TITLE: CHASSIS HARNESS	DRAWING NUMBER: 1405-GG5	REV. B
FINISH: FINISH			

**DO NOT SCALE DRAWING**



1405-665

18 19 20 21 22 23 24 25

ITEM 59  
HYDROMAX PUMP RELAY  
12085686  
PACKARD

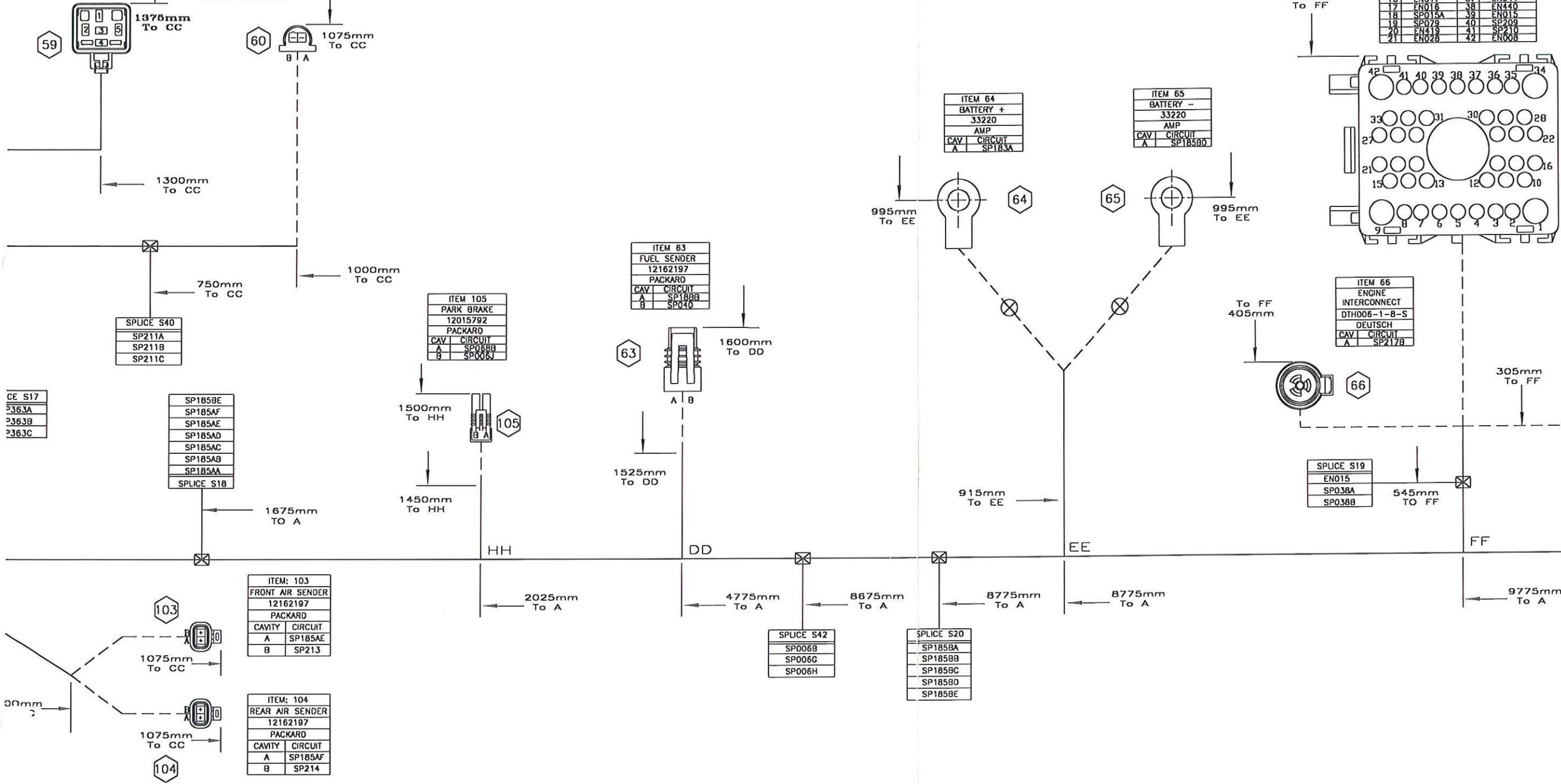
CAV	CIRCUIT
1	SP364A
2	SP360B
3	---
4	SP363A
5	SP362

ITEM 60  
BRAKE PRESSURE DIFFERENTIAL SW.  
E2EB-14A464-AB  
FORD

CAV	CIRCUIT
A	SP211B
B	SP211A

ITEM 67  
ENGINE INTERCONNECT  
CONN# F2VB-14A624-JA  
FORD

CAV	CIRCUIT	CAV	CIRCUIT
1	SP185BC	22	EN026
2	SP013	23	EN027
3	EN545	24	PLUG
4	EN541	25	SP355
5	EN544	26	EN025
6	EN031	27	PLUG
7	EN013	28	EN020
8	EN023	29	EN021
9	SP006H	30	EN952
10	EN022	31	EN916
11	EN011	32	EN034
12	EN014	33	EN038
13	SP056	34	SP215
14	SP038A	35	SP055A
15	EN037	36	EN240
16	EN017	37	EN241
17	EN016	38	EN440
18	SP015A	39	EN015
19	SP019	40	SP009
20	SP019	41	SP210
21	EN028	42	EN008



CE S17

3363A
3363B
3363C

1405-665

10

11

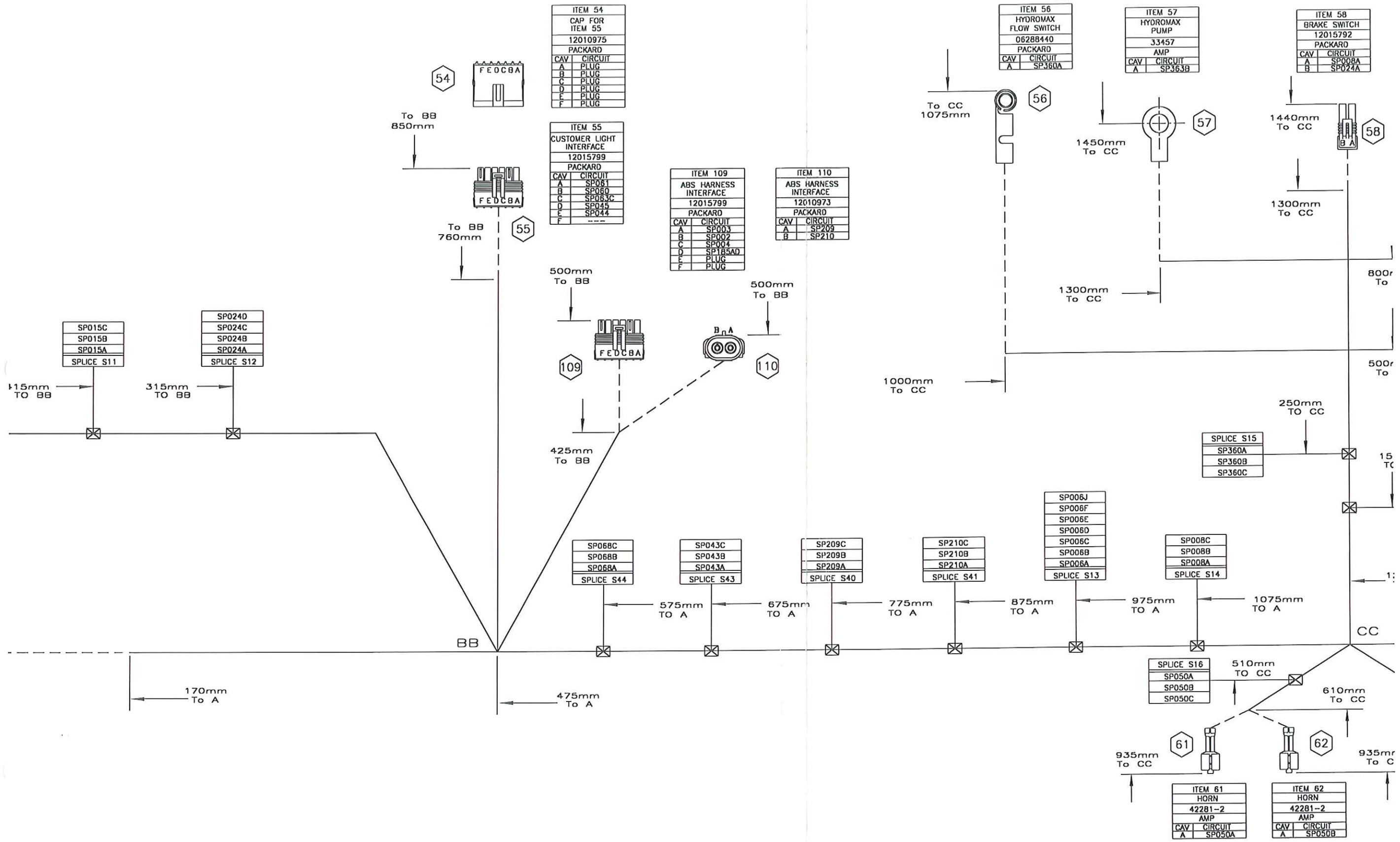
12

13

14

15

16



ITEM 54  
CAP FOR  
ITEM 55  
12010975  
PACKARD

CAV	CIRCUIT
A	PLUG
B	PLUG
C	PLUG
D	PLUG
E	PLUG
F	PLUG

ITEM 55  
CUSTOMER LIGHT  
INTERFACE  
12015799  
PACKARD

CAV	CIRCUIT
A	SP081
B	SP080
C	SP083C
D	SP045
E	SP044
F	---

ITEM 109  
ABS HARNESS  
INTERFACE  
12015799  
PACKARD

CAV	CIRCUIT
A	SP003
B	SP002
C	SP004
D	SP185AD
E	PLUG
F	PLUG

ITEM 110  
ABS HARNESS  
INTERFACE  
12010973  
PACKARD

CAV	CIRCUIT
A	SP209
B	SP210

ITEM 56  
HYDROMAX  
FLOW SWITCH  
06288440  
PACKARD

CAV	CIRCUIT
A	SP360A

ITEM 57  
HYDROMAX  
PUMP  
33457  
AMP

CAV	CIRCUIT
A	SP363B

ITEM 58  
BRAKE SWITCH  
12015792  
PACKARD

CAV	CIRCUIT
A	SP008A
B	SP024A

SPLICE S44

SP068C
SP068B
SP068A

SPLICE S43

SP043C
SP043B
SP043A

SPLICE S40

SP209C
SP209B
SP209A

SPLICE S41

SP210C
SP210B
SP210A

SPLICE S13

SP006J
SP006F
SP006E
SP006D
SP006C
SP006B
SP006A

SPLICE S14

SP008C
SP008B
SP008A

SPLICE S16

SP050A
SP050B
SP050C

ITEM 61  
HORN  
42281-2  
AMP

CAV	CIRCUIT
A	SP050A

ITEM 62  
HORN  
42281-2  
AMP

CAV	CIRCUIT
A	SP050B