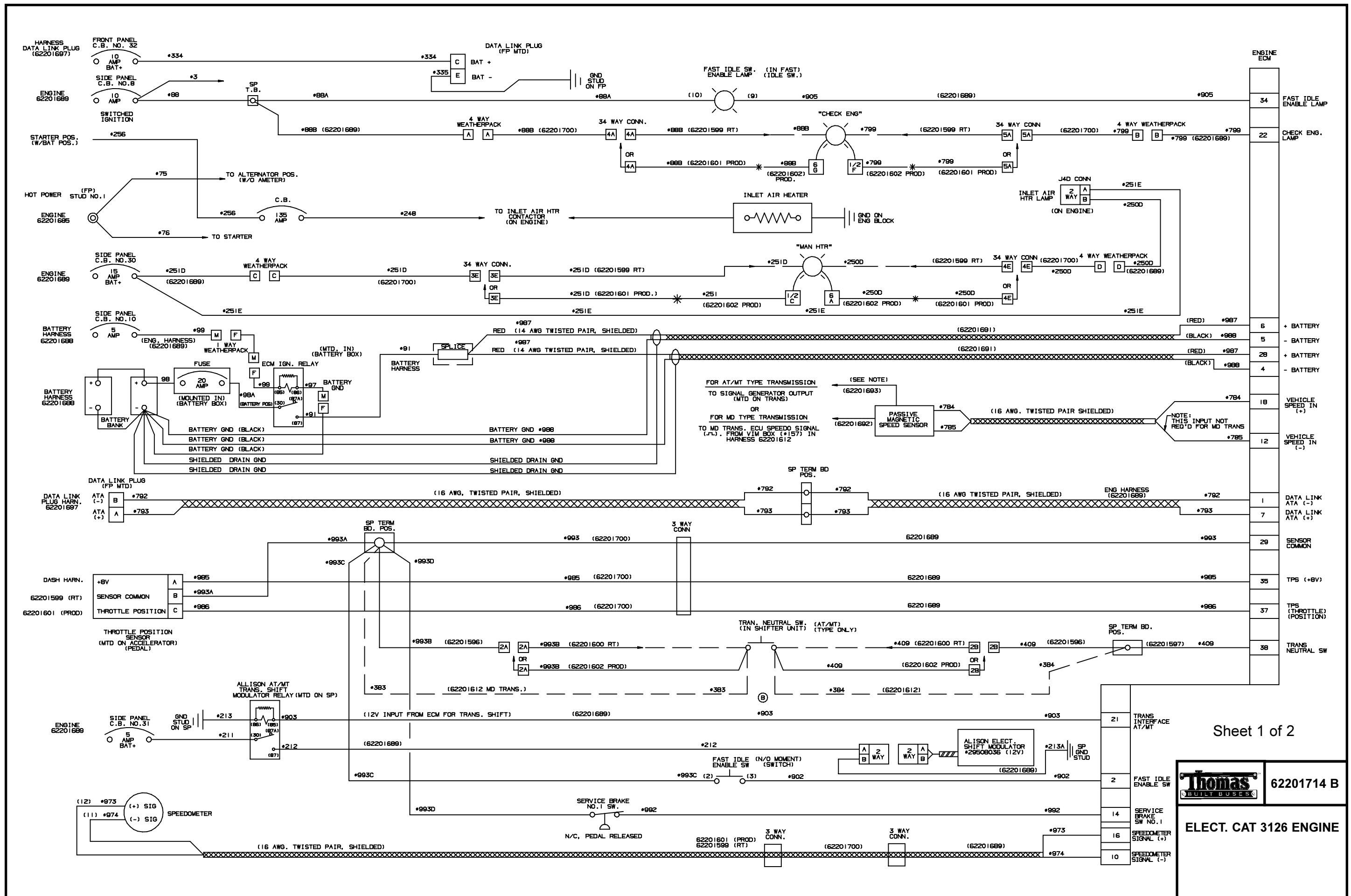


**ENGINE
SECTION**



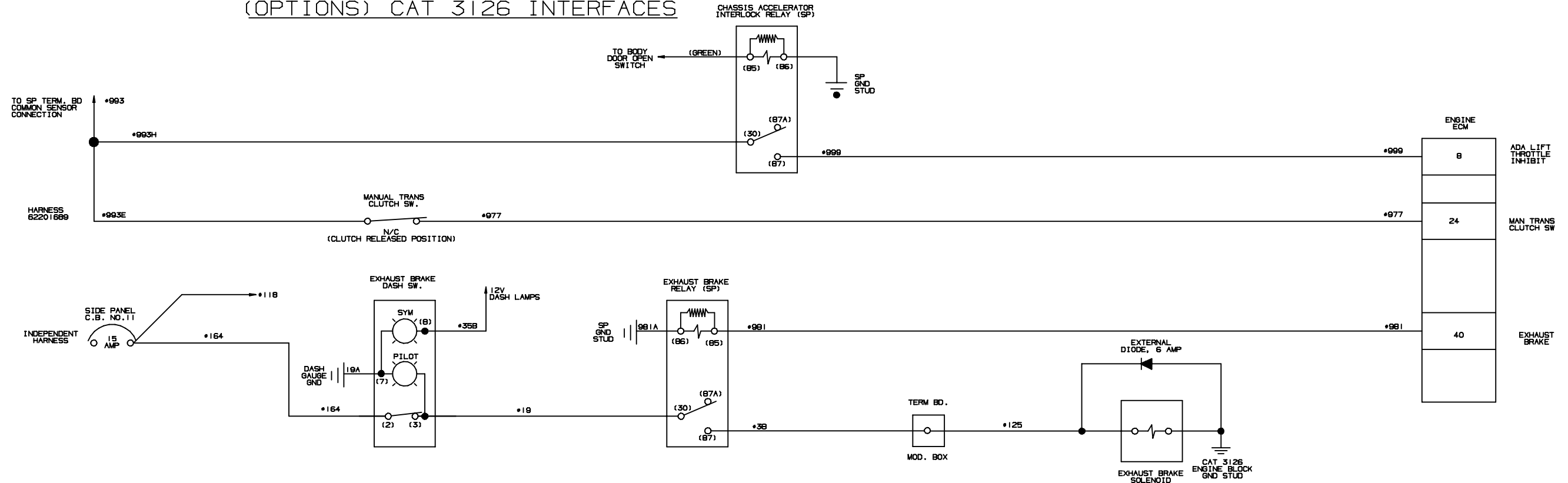
Sheet 1 of 2

Thomas BUILT BUSES

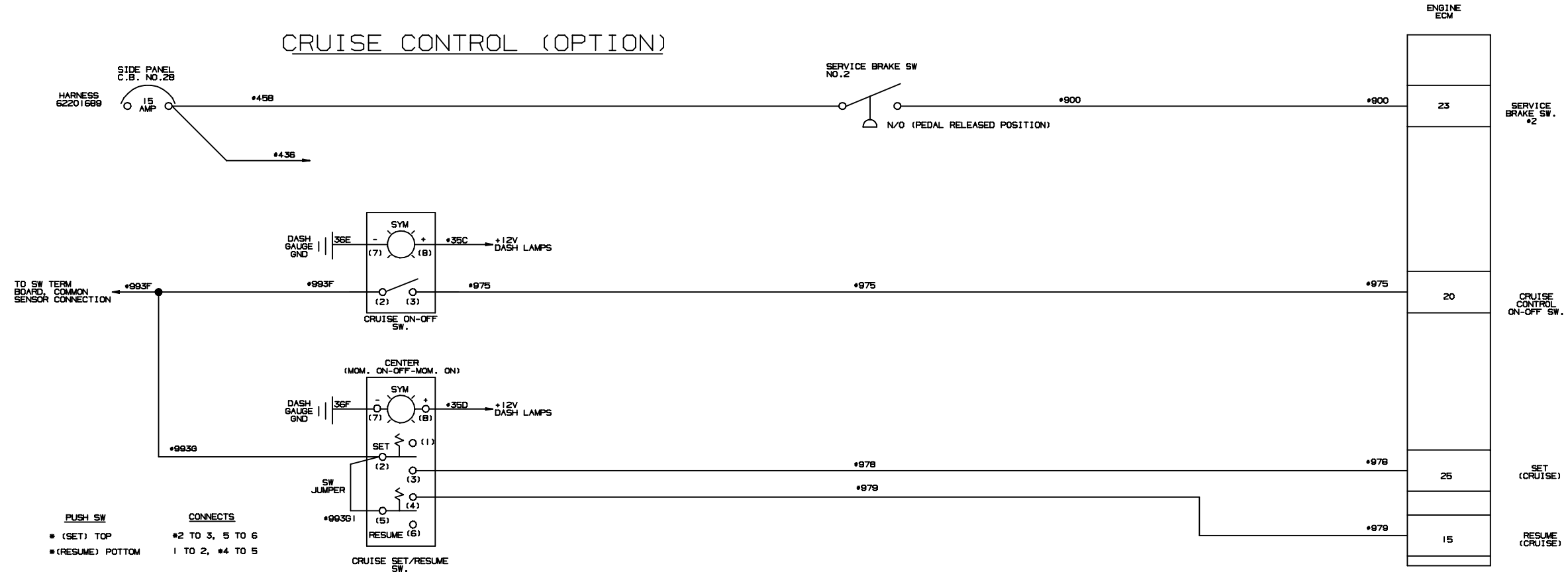
62201714 B

ELECT. CAT 3126 ENGINE

(OPTIONS) CAT 3126 INTERFACES



CRUISE CONTROL (OPTION)

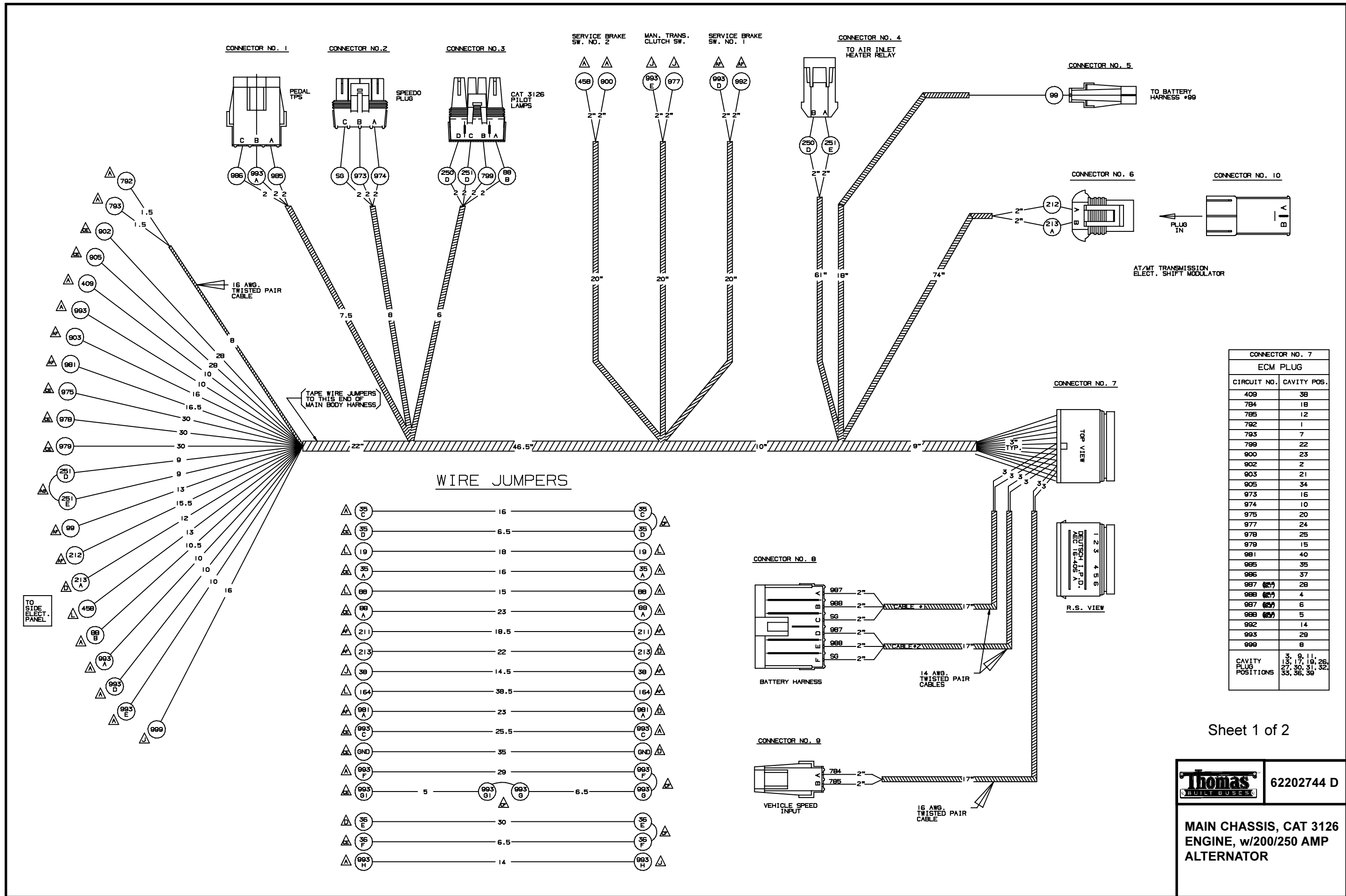


PUSH SW
 * (SET) TOP
 * (RESUME) BOTTOM

CONNECTS
 * 2 TO 3, 5 TO 6
 1 TO 2, * 4 TO 5

Sheet 2 of 2

Thomas BUILT BUSES	62201714 B
ELECT. CAT 3126 ENGINE	



CONNECTOR NO. 7	
ECM PLUG	
CIRCUIT NO.	CAVITY POS.
409	38
784	18
785	12
792	1
793	7
799	22
900	23
902	2
903	21
905	34
973	16
974	10
975	20
977	24
979	25
979	15
981	40
985	35
986	37
987 (25)	28
988 (25)	4
987 (25)	6
986 (25)	5
992	14
993	29
999	8
CAVITY PLUG POSITIONS	3, 9, 11, 13, 17, 19, 26, 27, 30, 31, 32, 33, 36, 39

Sheet 1 of 2

Thomas BUILT BUSES C

62202744 D

MAIN CHASSIS, CAT 3126 ENGINE, w/200/250 AMP ALTERNATOR

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	PACKARD	12010717	CONNECTOR ASM., WEATHERPACK, 3 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
2	PACKARD	12015793	CONNECTOR ASM., WEATHERPACK, 3 WAY FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
3	PACKARD	12015797	CONNECTOR ASM., WEATHERPACK, 4 WAY, FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	4
	PACKARD	12015323	CABLE SEAL	4
4	PACKARD	12162000	CONNECTOR ASM., METRI-PACK, 2 WAY, MALE	1
	PACKARD	12045773-L	WIRE TERMINAL, METRI-PACK, MALE, 18-20 AWG.	2
	PACKARD	12048086	CABLE SEAL	2
5	PACKARD	12052634	SECONDARY LOCK	1
	PACKARD	12010896	CONNECTOR ASM., WEATHERPACK, 1 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
6	PACKARD	12015323	CABLE SEAL	1
	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
	PACKARD	12129493	WIRE TERMINAL, METRI-PACK, FEMALE, 12-14 AWG.	2
7	PACKARD	12015323	CABLE SEAL	2
	PACKARD	15300014	SECONDARY LOCK	1
	DEUTSCH	AEC16-40SA	CONNECTOR BODY, 40 PIN, FEMALE	1
8	DEUTSCH	0462-201-16141	WIRE TERMINAL, FEMALE SOCKET, 16-18 AWG.	22
	DEUTSCH	0462-209-16141	WIRE TERMINAL, FEMALE SOCKET, 14 AWG.	4
	DEUTSCH	114017	CAVITY SEAL PLUG	14
9	PACKARD	12010975	CONNECTOR ASM., WEATHERPACK, 6 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	6
	PACKARD	12010293	CABLE SEAL	6
10	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
10	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2 WAY, MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG, 280 SERIES	2

TWISTED PAIR CABLE SPECIFICATIONS

AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN	8719
	ALPHA	561681601
14	BELDEN	8720
	ALPHA	561681401

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.


TERM	PART NO.	DESCRIPTION
CF	61201122	WIRE TERM., METRI-PACK, 630 SERIES, F, 12 AWG., *12052224
CE	61201121	WIRE TERM., METRI-PACK, 630 SERIES, F, 14-16 AWG., *12015870
AG	61200468	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
M	61200176	FEMALE PUSH-ON, 1/4", 10 AWG.
L	61200388	FEMALE PUSH-ON, 1/4", 14 AWG.
J	61200168	BUTT SPLICE, INSULATED, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
A	61200174	RING TERMINAL, *10 STUD, 14 AWG.

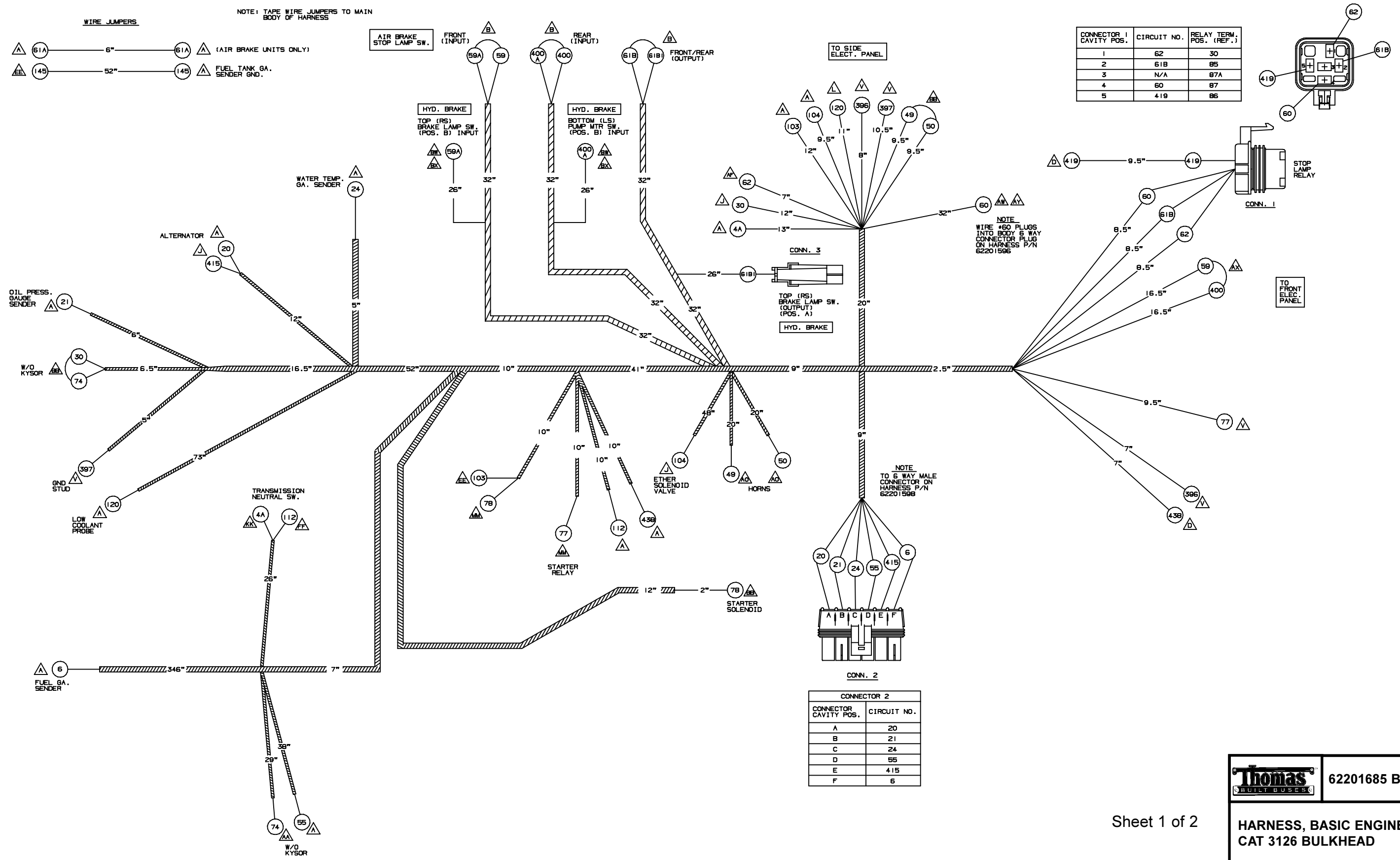
CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN)
19	14	YELLOW	EXHAUST BRAKE DASH SW. (POS.3) TO EXHAUST BRAKE RELAY (POS.30) (OPT.)	18
35A	16	LT. BLUE	FAST IDLE DASH SW. (POS.8) TO SIDE PANEL TERMINAL BD. (POS.* 35A) W/*35	16
38	14	BLUE	EXHAUST BRAKE RELAY (POS. 87) TO *38 EXHAUST BRAKE HARNESS (OPT.)	14.5
88	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 8 (W/*3) TO SIDE PANEL TERMINAL BD. (POS. *88) W/*88A & *88B	15
88A	16	BLUE	SIDE PANEL TERMINAL BD. (POS. *88A) W/ *88 & *88B TO FAST IDLE DASH SW. (POS.10) (FAST IDLE ENABLE LAMP +12V)	23
88B	16	BLUE	SIDE PANEL TERMINAL BD. (POS. *88B) W/ *88 & *88A TO "CHECK ENGINE" DASH INDICATOR LAMP (+12V)	40.5
99	16	GREEN	SIDE PANEL CIRCUIT BREAKER NO. 10 TO ECM IGNITION RELAY (POS.85) VIA BATTERY ECM HARNESS	109.5
164	14	GREEN	SIDE PANEL CIRCUIT BREAKER NO. 11 (W/*11B) TO EXHAUST BRAKE DASH SW. (POS.2) (OPT.)	38.5
211	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 31 TO ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (RELAY. 30) (OPT.)	18.5
212	16	RED	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. 87) TO CONNECTOR NO.6 (POS.A) (OPT.)	170
213	16	WHITE	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. 86) TO SIDE PANEL GND STUD (OPT.)	22
213A	16	WHITE	CONNECTOR NO.6 (POS.B) TO SIDE PANEL GND STUD (OPT.)	166.5
250D	16	WHITE	CONNECTOR NO.3 (POS.D) TO CONNECTOR NO.4 (POS.B) "MAN HTR" DASH INDICATOR LAMP GND	127.5
251D	16	RED	CONNECTOR NO.3 (POS.C) TO SIDE PANEL CIRCUIT BREAKER NO.30 (W/*251E) "MAN HTR DASH IND. LAMP +12V	39
251E	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 30 (W/*251D) TO CONNECTOR NO.4 (POS.A) (OPT.)	150.5
409	16	ORANGE	SIDE PANEL TERMINAL BD. (POS. *409) TO CONNECTOR NO. 7 (POS.38) ENGINE ECM (TRANS. NEUTRAL SW.) (OPT.)	100.5
458	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 28 TO SERVICE BRAKE SW. NO.2 (INPUT) (OPT.)	103.5
784	16	WHITE	CONNECTOR NO. 9 (POS.A) TO CONNECTOR NO. 7 (POS.18) ENGINE ECM (VEHICLE SPEED INPUT +)	22
785	16	BLACK	CONNECTOR NO.9 (POS. B) TO CONNECTOR NO.7 (POS.12) ENGINE ECM (VEHICLE SPEED INPUT -)	22
792	16	BLACK	SIDE PANEL TERMINAL BD. (POS. *792) TO CONNECTOR NO. 7 (POS.1) ENGINE ECM (DATA LINK ATA -)	100
793	16	WHITE	SIDE PANEL TERMINAL BD. (POS. *793) TO CONNECTOR NO. 7 (POS.7) ENGINE ECM (DATA LINK ATA +)	100
799	16	GREEN	CONNECTOR NO. 3 (POS.B) TO CONNECTOR NO. 7 (POS.22) ENGINE ECM ("CHECK ENGINE" DASH IND. LAMP GND)	76.5
900	16	BLUE	SERVICE BRAKE SW. NO.2 (OUTPUT) TO CONNECTOR NO. 7 (POS.23) ENGINE ECM (OPT.)	44
902	16	GREEN	FAST IDLE DASH SW. (POS.3) TO CONNECTOR NO. 7 (POS. 2) ENGINE ECM (FAST IDLE ENABLE)	118.5
903	16	VIOLET	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. 85) TO CONNECTOR NO. 7 (POS. 21) ENGINE ECM (OPT.)	106.5
905	16	RED	FAST IDLE DASH SW. (POS. 8) TO CONNECTOR NO. 7 (POS. 34) ENGINE ECM (FAST IDLE ENABLE LAMP GND)	118.5
973	16	BLACK	CONNECTOR NO. 2 (POS. B) TO CONNECTOR NO. 7 (POS. 16) ENGINE ECM (SPEEDOMETER SIGNAL +)	78.5
974	16	WHITE	CONNECTOR NO. 2 (POS. A) TO CONNECTOR NO. 7 (POS. 10) ENGINE ECM (SPEEDOMETER SIGNAL -)	78.5
99	16	SHIELD GND	CONNECTOR NO. 2 (POS. C) TO END OF TWISTED PAIR CABLE RUN AT CONNECTOR NO. 7 (SPEEDOMETER SIGNAL SG)	75.5
975	16	WHITE	CRUISE ON-OFF DASH SW. (POS. 3) TO CONNECTOR NO. 7 (POS. 20) ENGINE ECM (CRUISE CONTROL) (OPT.)	120.5
977	16	BLUE	MANUAL TRANSMISSION CLUTCH SW. (OUTPUT) TO CONNECTOR NO. 7 (POS. 24) ENGINE ECM (OPT.)	44
978	16	BROWN	CRUISE SET /RESUME DASH SW. (POS. 3) TO CONNECTOR NO. 7 (POS. 25) ENGINE ECM (CRUISE CONTROL) (OPT.)	120.5
979	16	ORANGE	CRUISE SET /RESUME DASH SW. (POS. 4) TO CONNECTOR NO. 7 (POS. 15) ENGINE ECM (CRUISE CONTROL) (OPT.)	120.5
981	16	GREEN	EXHAUST BRAKE RELAY (POS. 85) TO CONNECTOR NO. 7 (POS. 40) ENGINE ECM (OPT.)	107
981A	16	WHITE	EXHAUST BRAKE RELAY (POS. 86) TO SIDE PANEL GND STUD (OPT.)	23
985	16	RED	CONNECTOR NO. 1 (POS. A) TO CONNECTOR NO. 7 (POS. 35) ENGINE ECM (TPS +8V)	78
986	16	GREEN	CONNECTOR NO. 1 (POS. C) TO CONNECTOR NO. 7 (POS. 37) ENGINE ECM (TPS THROTTLE POSITION)	78
987	16	RED	CONNECTOR NO. 8 (POS. A) TO CONNECTOR NO. 7 (POS. 28) ENGINE ECM (CABLE NO. 1, BATTERY POS.)	22
988	14	BLACK	CONNECTOR NO. 8 (POS. B) TO CONNECTOR NO. 7 (POS. 4) ENGINE ECM (CABLE NO. 1, BATTERY NEG.)	22
99	14	SHIELD GND	CONNECTOR NO.8 (POS. C) TO END OF TWISTED PAIR CABLE RUN AT CONNECTOR NO. 7 (CABLE NO. 1, SHIELD GND)	19
987	14	RED	CONNECTOR NO. 8 (POS. D) TO CONNECTOR NO. 7 (POS. 6) ENGINE ECM (CABLE NO. 2, BATTERY POS.)	22
988	14	BLACK	CONNECTOR NO. 8 (POS. E) TO CONNECTOR NO. 7 (POS. 5) ENGINE ECM (CABLE NO. 2, BATTERY NEG.)	22
99	14	SHIELD GND	CONNECTOR NO.8 (POS. F) TO END OF TWISTED PAIR CABLE RUN AT CONNECTOR NO. 7 (CABLE NO. 2, SHIELD GND)	19
992	16	VIOLET	SERVICE BRAKE SW. NO. 1 (OUTPUT) TO CONNECTOR NO. 7 (POS. 14) ENGINE ECM	44
993	16	BROWN	SIDE PANEL TERMINAL BD. (W/*993A - *993G) TO CONNECTOR NO. 7 (POS. 29) ENGINE ECM (SENSOR COMMON)	100.5
993A	16	BROWN	SIDE PANEL TERMINAL BD. (W/*993) TO CONNECTOR NO. 1 (POS. B) (TPS SENSOR COMMON)	41.5
993C	16	BLUE	SIDE PANEL TERMINAL BD. (W/*993) TO FAST IDLE DASH SW. (POS. 2) (FAST IDLE SW. COMMON INPUT)	25.5
993D	16	BLUE	SIDE PANEL TERMINAL BD. (W/*993) TO SERVICE BRAKE SW. NO. 1 (INPUT)	100.5
993E	16	GREEN	SIDE PANEL TERMINAL BD. (W/*993) TO MANUAL TRANSMISSION CLUTCH SW. (INPUT) (OPT.)	100.5
993F	16	GREEN	SIDE PANEL TERMINAL BD. (W/*993) TO CRUISE ON-OFF DASH SW. (POS. 2) (OPT.)	29
993G	16	YELLOW	SIDE PANEL TERMINAL BD. (W/*993) TO CRUISE SET/RESUME DASH SW. (POS. 2) (OPT.)	6.5
993G1	16	YELLOW	CRUISE SET/RESUME DASH SW. (POS. 2) TO (POS. 5) (OPT.)	5
GND	16	WHITE	FAST IDLE DASH SW. (POS. 7) TO SIDE PANEL GND STUD	35
999	16	GREEN	CONNECTOR NO. 7 (POS. 8) ENG. ECM TO SIDE PANEL DROP OUT FOR BODY DOOR RELAY (30) ADA LIFT (OPT.)	106.5
993H	16	BROWN	SIDE PANEL TERMINAL BD (W/*993) TO BODY DOOR RELAY (87) ADA LIFT (OPT.)	14
35C	16	BLUE	SIDE PANEL TERMINAL BD (W/*35A) TO CRUISE ON-OFF SW. (POS. 8) (OPT.)	16
35D	16	BLUE	CRUISE ON-OFF SW. (POS. 8) TO CRUISE SET/RESUME SW. (POS. 8) (OPT.)	6.5
36E	16	WHITE	SIDE PANEL GND STUD TO CRUISE ON-OFF SW (POS. 7) (OPT.)	30
36F	16	WHITE	CRUISE ON-OFF SW. (POS. 7) TO CRUISE SET/RESUME SW. (POS. 7) (OPT.)	6.5

NOTES:

- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- 2) TAG HARNESS FOR IDENTIFICATION.
- 3) HARNESS TO COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
- 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- 5) ALL WIRING TO BE 6XL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.

Sheet 2 of 2

	62202744 D
MAIN CHASSIS, CAT 3126 ENGINE, w/200/250 AMP ALTERNATOR	



Sheet 1 of 2

Thomas BULLY BUSES	62201685 B
HARNESS, BASIC ENGINE CAT 3126 BULKHEAD	

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
3	PACKARD	12010996	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
	PACKARD	12015323	CABLE SEAL	1

GXL WIRE REQ'D	CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
	4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/ #98 AND #4B) TO TRANSMISSION NEUTRAL SW.(INPUT)	126
	6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
	20	14	DK. GREEN	ALTERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	133
	21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	141.5
	24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	126
	30	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO OIL PRESS./WATER TEMP. DUAL ALARM WARNING BUZZER (F)	165
	49	14	RED	HORN RELAY TO HORN	59.5
	50	14	RED	HORN RELAY TO HORN	59.5
	55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
	59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
*	60	14	RED	STOP LAMP RELAY CONTACT (87) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
	61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
*	61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (85)	84
*	62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BEAKER NO. 20	38
	74	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO HIGH WATER TEMP. SW. (W/O KYSOR)	109
	77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
	78	10	RED/BLACK	STARTER RELAY (LOAD) (W/#192) TO STARTER SOLENOID (+12V)	39
	103	14	DK. BLUE	STARTER RELAY (W/#78) TO SIDE PANEL TERMINAL BD. (W/#104)	92
	104	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/#103) TO ETHER SOLENOID VALVE	86.5
	112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
	120	14	DK. GREEN	KYSOR LOW COOLANT LEVEL MODULE (POS. 2) TO KYSOR LOW COOLANT LEVEL PROBE	216
	145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
	396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
	397	10	WHITE	SIDE PANEL GND STUD TO FRAME GND	162
	400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
	415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	133
*	419	14	WHITE	STOP LAMP RELAY CONTACT (86) TO FRONT PANEL GND STUD	9.5
	439	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	69.5
*	59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
*	400A	16	DK. BLUE/BLACK	LS REAR STOP LAMP SW. (AIR BRAKE) TO LS REAR STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
	61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58

NOTES:

1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
2. TAG HARNESS FOR IDENTIFICATION.
3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201065 - WIRE SPECIFICATIONS.
5. ALL WIRING TO BE SXL TYPE WIRE, EXCEPT WHERE NOTED TO USE GXL TYPE WIRE.

BX	61200819	CABLE SEAL, 150 SERIES, #12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., #12045773-L
AY	61200929	CABLE SEAL, WEATHERPACK, 14 AWG., #12010293
AX	61200950	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., #12092444-L
AW	61200927	FEMALE SLEEVE, WEATHERPACK, 14 AWG., #12124580-L
AO	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLAG, 16-14 AWG.
AG	61200468	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG.
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
MM	61200189	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
FF	61200151	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
EE	61200148	RING TERMINAL, 5/16" STUD, 14 AWG.
BB	61200133	SPRING SPADE TERMINAL, #10 STUD, 10 AWG.
AA	61200132	SPRING SPADE TERMINAL, #10 STUD, 14 AWG.
V	61200181	RING TERMINAL, 1/4" STUD, 10 AWG.
L	61200388	FEMALE PUSH-ON, 1/4", 14 AWG.
J	61200168	BUTT SPLICE, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
B	61200190	RING TERMINAL, #10 STUD, 10 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION

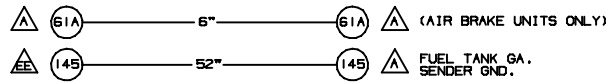


62201685 B

HARNESS, BASIC ENGINE
CAT 3126 BULKHEAD

Sheet 2 of 2

WIRE JUMPERS



CONNECTOR	
VENDOR	PART NUMBER
DEUTSCH	0462-209-16141

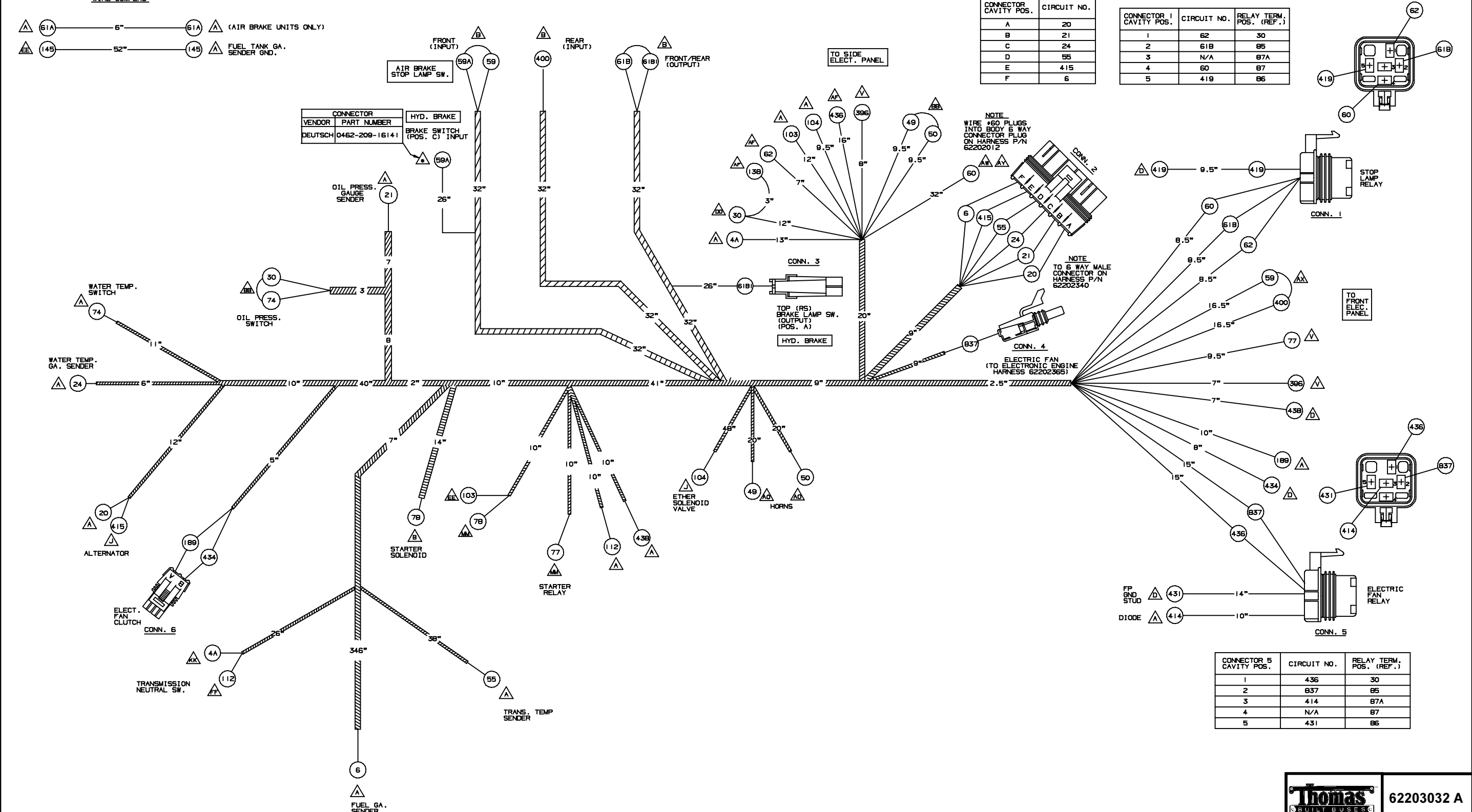
HYD. BRAKE
BRAKE SWITCH (POS. C) INPUT

CONNECTOR 2	
CONNECTOR CAVITY POS.	CIRCUIT NO.
A	20
B	21
C	24
D	55
E	415
F	6

CONNECTOR 1 CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	62	30
2	61B	65
3	N/A	87A
4	60	87
5	419	86

NOTE: WIRE #60 PLUGS INTO BODY 6 WAY CONNECTOR PLUG ON HARNESS P/N 62202012

NOTE: TO 6 WAY MALE CONNECTOR ON HARNESS P/N 62202340



Thomas BULL BUSSES
62203032 A

Sheet 1 of 2

HARNESS, BASIC ENGINE
CAT 3126 BULKHEAD

CONNECTOR LIST


CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1, 5	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
3	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
	PACKARD	12010986	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
4	PACKARD	12015323	CABLE SEAL	1
	PACKARD	12015791	CONNECTOR ASM., WEATHERPACK, 1WAY, FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	1
6	PACKARD	12015323	CABLE SEAL	1
	PACKARD	12015792	CONNECTOR, WEATHERPACK, 2 WAY, FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, FEMALE SLEEVE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL, 14-16 AWG.	2

GXL WIRE REQ'D	CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
	4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/ #98 AND #4B) TO TRANSMISSION NEUTRAL SW.(INPUT)	126
	6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
	20	14	DK. GREEN	ALTERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	133
	21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	86
	24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	127
	30	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO OIL PRESS./WATER TEMP. DUAL ALARM WARNING BUZZER (F)	105
	49	14	RED	HORN RELAY TO HORN	58.5
	50	14	RED	HORN RELAY TO HORN	58.5
	55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
	59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
*	60	14	RED	STOP LAMP RELAY CONTACT (87) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
	61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
*	61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (85)	84
*	62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BEAKER NO. 20	38
	74	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO HIGH WATER TEMP. SW. (W/O KYSOR)	72
	77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
	78	10	RED/BLACK	STARTER RELAY (LOAD) (W/#192) TO STARTER SOLENOID (+12V)	34
	103	14	DK. BLUE	STARTER RELAY (W/#78) TO SIDE PANEL TERMINAL BD. (W/#104)	92
	104	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/#103) TO ETHER SOLENOID VALVE	86.5
	112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
	138	16	PINK	DUAL ALARM WARNING BUZZER (F) (W/#30)	3
	145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
	396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
	400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
	415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	133
*	419	14	WHITE	STOP LAMP RELAY CONTACT (86) TO FRONT PANEL GND STUD	9.5
	438	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	59.5
*	59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
	61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58
*	189	16	BROWN	DIODE (OUTPUT) TO ELECT. FAN CLUTCH CONNECTOR POS. A	119.5
*	414	16	RED	ELECT. FAN CONTROL RELAY (87A) CONN. 5 POS. 3 TO DIODE (INPUT)	10
*	434	16	WHITE	ELECT. FAN CLUTCH CONNECTOR POS. B TO GND STUD ON FRONT PANEL	117.5
*	431	16	WHITE	ELECT. FAN CONTROL RELAY (86) (CONN. 5 POS. 5 TO FP GND STUD)	14
*	436	14	RED	C.B. NO. 24 TO ELECT. FAN CONTROL RELAY (30)	53.5
*	837	16	YELLOW	ELECT. FAN CONTROL RELAY (85) (CONN. 5 POS. 2 TO CONN. 4)	26.5

DD	61200950	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 10-12 AWG., #12084596-L
BX	61200819	CABLE SEAL, 150 SERIES, #12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., #12045773-L
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 12-14 AWG., #12065916-L
AY	61200928	CABLE SEAL, WEATHERPACK, 14 AWG., #12010293
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., #12082444-L
AW	61200927	FEMALE SLEEVE, WEATHERPACK, 14 AWG., #12124580-L
AQ	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLA6, 16-14 AWG.
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
MM	61200189	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
FF	61200151	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
EE	61200149	RING TERMINAL, 5/16" STUD, 14 AWG.
BB	61200133	SPRING SPADE TERMINAL, #10 STUD, 10 AWG.
V	61200181	RING TERMINAL, 1/4" STUD, 10 AWG.
J	61200168	BUTT SPLICE, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
B	61200190	RING TERMINAL, #10 STUD, 10 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION

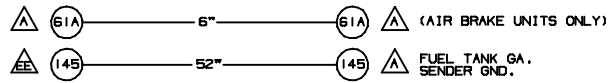
NOTES:

1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
2. TAG HARNESS FOR IDENTIFICATION.
3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVULGATED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 - WIRE SPECIFICATIONS.
5. ALL WIRING TO BE SXL TYPE WIRE, EXCEPT WHERE NOTED TO USE GXL TYPE WIRE.

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HARNESS, BASIC ENGINE CAT 3126 BULKHEAD	

Sheet 2 of 2

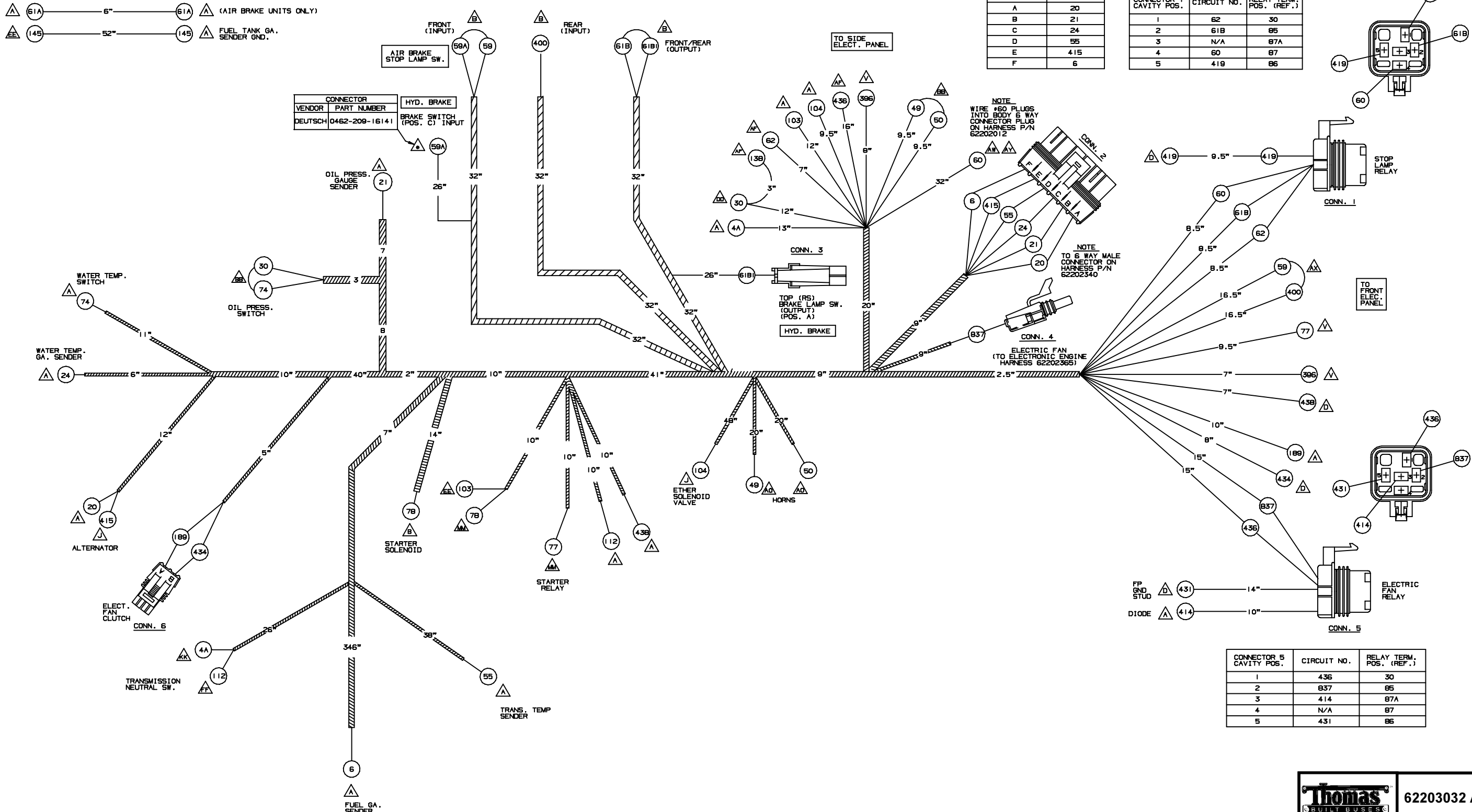
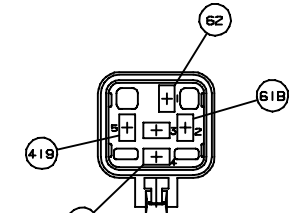
WIRE JUMPERS



NOTE: TAPE WIRE JUMPERS TO MAIN BODY OF HARNESS

CONNECTOR 2	
CONNECTOR CAVITY POS.	CIRCUIT NO.
A	20
B	21
C	24
D	55
E	415
F	6

CONNECTOR 1 CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	62	30
2	61B	65
3	N/A	87A
4	60	87
5	419	86



CONNECTOR 5 CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	436	30
2	837	85
3	414	87A
4	N/A	87
5	431	86

Thomas BULLY BUSES
62203032 A
HARNESS, BASIC ENGINE
CAT 3126 BULKHEAD

Sheet 1 of 2


CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1, 5	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
3	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
	PACKARD	12010986	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
4	PACKARD	12015323	CABLE SEAL	1
	PACKARD	12015791	CONNECTOR ASM., WEATHERPACK, 1WAY, FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	1
6	PACKARD	12015323	CABLE SEAL	1
	PACKARD	12015792	CONNECTOR, WEATHERPACK, 2 WAY, FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, FEMALE SLEEVE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL, 14-16 AWG.	2

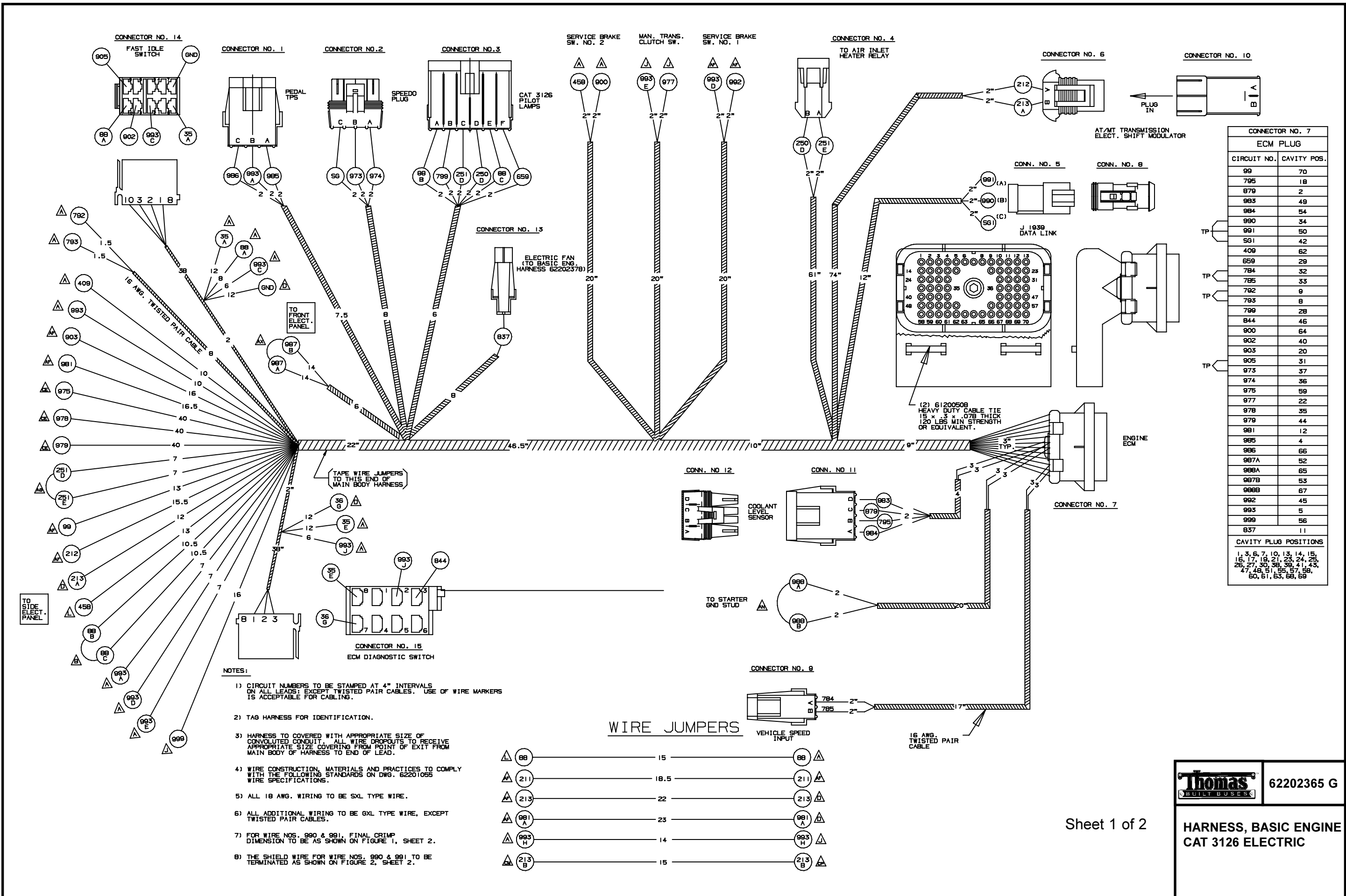
GXL WIRE REQ'D	CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
	4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/ *98 AND *4B) TO TRANSMISSION NEUTRAL SW.(INPUT)	126
	6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
	20	14	DK. GREEN	ALTERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	133
	21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	86
	24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	127
	30	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO OIL PRESS./WATER TEMP. DUAL ALARM WARNING BUZZER (F)	105
	49	14	RED	HORN RELAY TO HORN	58.5
	50	14	RED	HORN RELAY TO HORN	58.5
	55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
	59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
*	60	14	RED	STOP LAMP RELAY CONTACT (87) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
	61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
*	61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (85)	84
*	62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BEAKER NO. 20	38
	74	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO HIGH WATER TEMP. SW. (W/O KYSOR)	72
	77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
	78	10	RED/BLACK	STARTER RELAY (LOAD) (W/*192) TO STARTER SOLENOID (+12V)	34
	103	14	DK. BLUE	STARTER RELAY (W/*78) TO SIDE PANEL TERMINAL BD. (W/*104)	92
	104	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/*103) TO ETHER SOLENOID VALVE	86.5
	112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
	138	16	PINK	DUAL ALARM WARNING BUZZER (F) (W/*30)	3
	145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
	396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
	400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
	415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	133
*	419	14	WHITE	STOP LAMP RELAY CONTACT (86) TO FRONT PANEL GND STUD	9.5
	438	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	59.5
*	59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
	61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58
*	189	16	BROWN	DIODE (OUTPUT) TO ELECT. FAN CLUTCH CONNECTOR POS. A	119.5
*	414	16	RED	ELECT. FAN CONTROL RELAY (87A) CONN. 5 POS. 3 TO DIODE (INPUT)	10
*	434	16	WHITE	ELECT. FAN CLUTCH CONNECTOR POS. B TO GND STUD ON FRONT PANEL	117.5
*	431	16	WHITE	ELECT. FAN CONTROL RELAY (86) (CONN. 5 POS. 5 TO FP GND STUD)	14
*	436	14	RED	C.B. NO. 24 TO ELECT. FAN CONTROL RELAY (30)	53.5
*	837	16	YELLOW	ELECT. FAN CONTROL RELAY (85) (CONN. 5 POS. 2 TO CONN. 4)	26.5

DD	61200950	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 10-12 AWG., *12084596-L
BX	61200819	CABLE SEAL, 150 SERIES, *12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., *12045773-L
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 12-14 AWG., *12065916-L
AY	61200928	CABLE SEAL, WEATHERPACK, 14 AWG., *12010293
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., *12082444-L
AW	61200927	FEMALE SLEEVE, WEATHERPACK, 14 AWG., *12124580-L
AQ	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLA6, 16-14 AWG.
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
MM	61200189	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
FF	61200151	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
EE	61200149	RING TERMINAL, 5/16" STUD, 14 AWG.
BB	61200133	SPRING SPADE TERMINAL, #10 STUD, 10 AWG.
V	61200181	RING TERMINAL, 1/4" STUD, 10 AWG.
J	61200168	BUTT SPLICE, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
B	61200190	RING TERMINAL, #10 STUD, 10 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION

- NOTES:
1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
 2. TAG HARNESS FOR IDENTIFICATION.
 3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVULGATED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
 4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 - WIRE SPECIFICATIONS.
 5. ALL WIRING TO BE SXL TYPE WIRE, EXCEPT WHERE NOTED TO USE GXL TYPE WIRE.

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HARNESS, BASIC ENGINE CAT 3126 BULKHEAD	

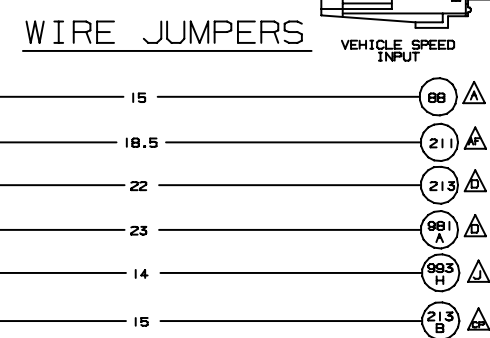
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CONNECTOR NO. 7	
ECM PLUG	
CIRCUIT NO.	CAVITY POS.
99	70
795	18
879	2
983	49
984	54
990	34
991	50
SG1	42
409	62
659	29
784	32
785	33
792	9
793	8
799	28
844	46
900	64
902	40
903	20
905	31
973	37
974	36
975	59
977	22
978	35
979	44
981	12
985	4
986	66
987A	52
988A	65
987B	53
988B	67
992	45
993	5
999	56
837	11

CAVITY PLUG POSITIONS	
1, 3, 6, 7, 10, 13, 14, 15,	16, 17, 18, 21, 23, 24, 25,
26, 27, 30, 38, 39, 41, 43,	47, 48, 51, 55, 57, 59,
60, 61, 63, 66, 69	

- NOTES:
- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
 - 2) TAG HARNESS FOR IDENTIFICATION.
 - 3) HARNESS TO COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
 - 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
 - 5) ALL 18 AWG. WIRING TO BE SXL TYPE WIRE.
 - 6) ALL ADDITIONAL WIRING TO BE 6XL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
 - 7) FOR WIRE NOS. 990 & 991, FINAL CRIMP DIMENSION TO BE AS SHOWN ON FIGURE 1, SHEET 2.
 - 8) THE SHIELD WIRE FOR WIRE NOS. 990 & 991 TO BE TERMINATED AS SHOWN ON FIGURE 2, SHEET 2.



Thomas BUILT BUSES
62202365 G
HARNESS, BASIC ENGINE
CAT 3126 ELECTRIC

CONNECTOR LIST				
CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	PACKARD	12010717	CONNECTOR ASM., WEATHERPACK, 3 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
2	PACKARD	12015793	CONNECTOR ASM., WEATHERPACK, 3 WAY FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
3	PACKARD	12010975	CONNECTOR BODY, WEATHERPACK, MALE, 6 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	6
4	PACKARD	12162000	CONNECTOR ASM., METRI-PACK, 2 WAY, MALE	1
	PACKARD	12045773-L	WIRE TERMINAL, METRI-PACK, MALE, 18-20 AWG.	2
	PACKARD	12048086	CABLE SEAL	2
5	PACKARD	12052634	SECONDARY LOCK	1
	DEUTSCH	DT04-3P-E008	CONNECTOR ASM., RECEPTACLE	1
	DEUTSCH	0460-247-1631	WIRE TERMINAL, MALE, 20AWG	3
6	DEUTSCH	W3P	WEDGE PLUG	3
	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
	PACKARD	12129493	WIRE TERMINAL, METRI-PACK, FEMALE, 12-14 AWG.	2
7	PACKARD	12015323	CABLE SEAL	2
	PACKARD	15300014	SECONDARY LOCK	1
	AMP	776241-1	CONNECTOR, BODY, 70 CAVITIES	1
8	AMP	776093-1	WIRE TERMINAL, FEMALE SOCKET, 14, 16, 18 AWG., GOLD PLATED	36
	AMP	638092-1	CONN., ENDBEL SHROUD	1
	DEUTSCH	114017	CAVITY SEAL PLUG	34
9	DEUTSCH	DT06-3S-E003	CONNECTOR ASM., PLUG	1
	DEUTSCH	W3S	WEDGE PLUG	1
	DEUTSCH	114017	CAVITY PLUG	3
10	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
11	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2 WAY, MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG, 280 SERIES	2
12	PACKARD	12010974	CONNECTOR ASM., WEATHERPACK, 4 WAY, MALE	1
	PACKARD	12089040	TERMINAL, WEATHERPACK, MALE, 18-20 AWG	3
	PACKARD	12015323	CABLE, SEAL, 18 AWG	3
13	PACKARD	12124582	TERMINAL, WEATHERPACK, MALE, 14-16 AWG	1
	PACKARD	12010293	CABLE, SEAL, 14 AWG	1
	PACKARD	12015797	CONNECTOR ASM., WEATHERPACK, 4-WAY, FEMALE	1
14	PACKARD	12010300	CAVITY PLUG	4
	PACKARD	12010986	CONNECTOR ASM., WEATHERPACK, 1 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
15	PACKARD	12015323	CABLE SEAL	1
	CARLING	190-17500-001	CONNECTOR BODY, SWITCH, 10 POSITION	1
	PACKARD	12015970	WIRE TERMINAL, METRI-PACK, 630 SERIES, 14-16 AWG.	6
15	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12015970	WIRE TERMINAL, METRI-PACK, 630 SERIES, 14-16 AWG.	4

CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN)
88	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 8 (W/+3) TO SIDE PANEL TERMINAL BD. (POS. #88) W/+88A & #88B	15
88B	16	BLUE	SIDE PANEL TERMINAL BD. (POS. #88B) W/ #88 & #88A TO "CHECK ENGINE" DASH INDICATOR LAMP (+12V)	40.5
89	16	GREEN	SIDE PANEL CIRCUIT BREAKER NO. 10 TO CONN. 7 POS. 70 ENGINE ECM (IGNITION KEY SW.)	109.5
211	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 31 TO ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (RELAY. 30) (OPT.)	18.5
212	16	RED	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. B7) TO CONNECTOR NO.6 (POS.A) (OPT.)	170
213	16	WHITE	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. B6) TO SIDE PANEL GND STUD	(OPT.) 22
213A	16	WHITE	CONNECTOR NO.6 (POS.B) TO SIDE PANEL GND STUD	(OPT.) 166.5
2500	16	WHITE	CONNECTOR NO.3 (POS.D) TO CONNECTOR NO.4 (POS.B) "MAN HTR" DASH INDICATOR LAMP GND	127.5
2510	16	RED	CONNECTOR NO.3 (POS.C) TO SIDE PANEL CIRCUIT BREAKER NO.30 (W/+251E) "MAN HTR DASH IND. LAMP +12V"	37
251E	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 30 (W/+251D) TO CONNECTOR NO.4 (POS.A)	148.5
409	16	ORANGE	SIDE PANEL TERMINAL BD. (POS. #409) TO CONNECTOR NO. 7 (POS.62) ENGINE ECM (TRANS. NEUTRAL SW.) (OPT.)	100.5
458	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 28 TO SERVICE BRAKE SW. NO.2 (INPUT) (OPT.)	103.5
784	16	WHITE	CONNECTOR NO. 9 (POS.A) TO CONNECTOR NO. 7 (POS.32) ENGINE ECM (VEHICLE SPEED INPUT +)	22
785	16	BLACK	CONNECTOR NO.9 (POS. B) TO CONNECTOR NO.7 (POS.33) ENGINE ECM (VEHICLE SPEED INPUT -)	22
792	16	BLACK	SIDE PANEL TERMINAL BD. (POS. #792) TO CONNECTOR NO. 7 (POS.9) ENGINE ECM (DATA LINK ATA -)	100
793	16	WHITE	SIDE PANEL TERMINAL BD. (POS. #793) TO CONNECTOR NO. 7 (POS.8) ENGINE ECM (DATA LINK ATA +)	100
798	16	GREEN	CONNECTOR NO. 3 (POS.B) TO CONNECTOR NO. 7 (POS.28) ENGINE ECM ("CHECK ENGINE" DASH IND. LAMP GND)	76.5
900	16	BLUE	SERVICE BRAKE SW. NO.2 (OUTPUT) TO CONNECTOR NO. 7 (POS.64) ENGINE ECM (OPT.)	44
902	16	GREEN	FAST IDLE DASH SW. (POS.3) TO CONNECTOR NO. 7 (POS. 40) ENGINE ECM (FAST IDLE ENABLE)	130.5
903	16	VIOLET	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. B5) TO CONNECTOR NO. 7 (POS. 20) ENGINE ECM (OPT.)	106.5
905	16	RED	FAST IDLE DASH SW. (POS. 8) TO CONNECTOR NO. 7 (POS. 31) ENGINE ECM (FAST IDLE ENABLE LAMP GND)	130.5
973	16	BLACK	CONNECTOR NO. 2 (POS. B) TO CONNECTOR NO. 7 (POS. 37) ENGINE ECM (SPEEDOMETER SIGNAL +)	78.5
974	16	WHITE	CONNECTOR NO. 2 (POS. A) TO CONNECTOR NO. 7 (POS. 36) ENGINE ECM (SPEEDOMETER SIGNAL -)	78.5
99	16	SHIELD GND	CONNECTOR NO. 2 (POS. C) TO END OF TWISTED PAIR CABLE RUN AT CONNECTOR NO. 7 (SPEEDOMETER SIGNAL 59)	75.5
975	16	WHITE	CRUISE ON-OFF DASH SW. (POS. 3) TO CONNECTOR NO. 7 (POS. 59) ENGINE ECM (CRUISE CONTROL) (OPT.)	130.5
977	16	BLUE	MANUAL TRANSMISSION CLUTCH SW. (OUTPUT) TO CONNECTOR NO. 7 (POS. 22) ENGINE ECM (OPT.)	44
978	16	BROWN	CRUISE SET /RESUME DASH SW. (POS. 3) TO CONNECTOR NO. 7 (POS. 35) ENGINE ECM (CRUISE CONTROL) (OPT.)	130.5
979	16	ORANGE	CRUISE SET /RESUME DASH SW. (POS. 4) TO CONNECTOR NO. 7 (POS. 44) ENGINE ECM (CRUISE CONTROL) (OPT.)	130.5
981	16	GREEN	EXHAUST BRAKE RELAY (POS. B5) TO CONNECTOR NO. 7 (POS. 12) ENGINE ECM (OPT.)	107
981A	16	WHITE	EXHAUST BRAKE RELAY (POS. B6) TO SIDE PANEL GND STUD	(OPT.) 23
985	16	RED	CONNECTOR NO. 1 (POS. A) TO CONNECTOR NO. 7 (POS. 4) ENGINE ECM (TPS +BV)	78
986	16	GREEN	CONNECTOR NO. 1 (POS. C) TO CONNECTOR NO. 7 (POS. 66) ENGINE ECM (TPS THROTTLE POSITION)	78
987B	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 34 TO CONNECTOR NO. 7 (POS. 53) ENGINE ECM (BATTERY POS.)	22
988B	14	BLACK	STARTER GROUND STUD TO CONNECTOR NO. 7 (POS. 67) ENGINE ECM (BATTERY NEG.)	22
987A	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 34 TO CONNECTOR NO. 7 (POS. 52) ENGINE ECM (BATTERY POS.)	86.5
988A	14	BLACK	STARTER GROUND STUD TO CONNECTOR NO. 7 (POS. 65) ENGINE ECM (BATTERY NEG.)	25
982	16	VIOLET	SERVICE BRAKE SW. NO. 1 (OUTPUT) TO CONNECTOR NO. 7 (POS. 45) ENGINE ECM	44
983	16	BROWN	SIDE PANEL TERMINAL BD. (W/+983A - #983G) TO CONNECTOR NO. 7 (POS. 5) ENGINE ECM (SENSOR COMMON)	100.5
983A	16	BROWN	SIDE PANEL TERMINAL BD. (W/+983) TO CONNECTOR NO. 1 (POS. B) (TPS SENSOR COMMON)	38.5
983D	16	BLUE	SIDE PANEL TERMINAL BD. (W/+983) TO SERVICE BRAKE SW. NO. 1 (INPUT)	97.5
983E	16	GREEN	SIDE PANEL TERMINAL BD. (W/+983) TO MANUAL TRANSMISSION CLUTCH SW. (INPUT) (OPT.)	97.5
989	16	GREEN	CONNECTOR NO. 7 (POS. 56) ENG. ECM TO SIDE PANEL DROP OUT FOR BODY DOOR RELAY (30) ADA LIFT	(OPT.) 106.5
983H	16	BROWN	SIDE PANEL TERMINAL BD (W/+983) TO BODY DOOR RELAY (87) ADA LIFT (OPT.)	14
88C	16	BLUE	DASH "WARNING" IND. LAMP (SIDE PNL TERM. BD POS. W/88 TO CONN. 3 POS. E)	40.5
659	16	PINK	DASH "WARNING" IND. LAMP (CONN. 7 POS. 29 TO CONN. 3 POS. F)	76.5
785	16	GREY	COOLANT LEVEL COMMON (CONN. 7 POS. 18 TO CONN. 11 POS. B) (OPT.)	9
879	16	ORANGE	COOLANT LEVEL +5V (CONN. 7 POS. 2 TO CONN. 11 POS. C) (OPT.)	9
983	16	WHITE	COOLANT LEVEL NORMAL (CONN. 7 POS. 49 TO CONN. 11 POS. D) (OPT.)	9
984	16	YELLOW	COOLANT LEVEL LOW (CONN. 7 POS. 54 TO CONN. 11 POS. A) (OPT.)	9
990	20	GREEN	J1939 DATA LINK - (CONN. 7 POS. 34 TO CONN. 5 POS. B) (OPT.)	26.5
991	20	YELLOW	J1939 DATA LINK + (CONN. 7 POS. 50 TO CONN. 5 POS. A) (OPT.)	26.5
591	16	SHIELD GND	DATA LINK SHIELD (CONN. 7 POS. 42 TO CONN. 5 POS. C) (OPT.)	26.5
837	16	YELLOW	ELECTRIC FAN (CONN. 7 POS. 11 TO CONN. 13)	76.5
213B	16	WHITE	CHASSIS ACCELERATOR INTERLOCK RELAY (POS. 86) TO SIDE PANEL GND STUD (OPT.)	15
35A	16	LT. BLUE	FAST IDLE DASH SW. (CONN. 14 POS. 8) TO SIDE PANEL TERMINAL BD.	50
88A	16	BLUE	FAST IDLE DASH SW. (CONN. 14 POS. 10) TO SIDE PANEL TERMINAL BD. (FAST IDLE INABLE LAMP +12V)	46
983C	16	BLUE	FAST IDLE DASH SW. (CONN. 14 POS. 2) TO SIDE PANEL TERMINAL BD. (W/+983)	44
GND	16	WHITE	FAST IDLE DASH SW. (CONN. 14 POS. 7) TO SIDE PANEL GROUND STUD	50
983J	16	WHITE	ECM DIAG. SW. (CONN.15 POS.2) TO SIDE PANEL TERMINAL BD. (W/+983)	44
844	16	PINK	CONN. 7 (POS.46) TO ECM DIAG. SW. (CONN.15 POS.3)	130.5
35E	16	LT. BLUE	ECM DIAG. SW. (CONN.15 POS.8) TO SIDE PANEL TERMINAL BD.	50
366	16	WHITE	ECM DIAG. SW. (CONN.15 POS.7) TO SIDE PANEL GROUND STUD	50

16 AWG. TWISTED PAIR

16 AWG. TWISTED PAIR

SXL WIRE TYPE

TWISTED PAIR

SXL WIRE TYPE

J1939 TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, DATA BUS CABLE. (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/DRAIN WIRE. 100% SHIELD COVERING. 300V - 600V RATING. 90°C - 150°C TEMP RATING FOR SAE J1939 USAGE. IMPEDANCE AT 120 OHMS ± 12 OHMS CONDUCTOR NO.1 (GREEN). CONDUCTOR NO.2 (YELLOW)

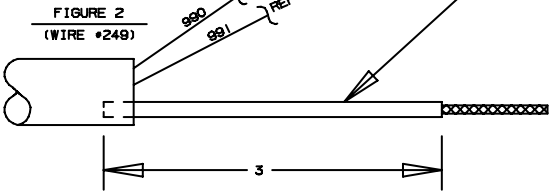
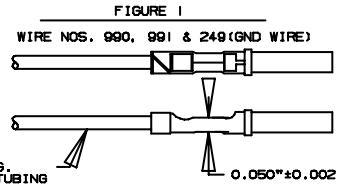
AWG.	APPROVED VENDORS OF CABLE	PART NO.
20	ANIXTER RAYCHEM/STAF-CO	CE3656065 301

TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, INSTRUMENTATION CABLE. (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/DRAIN WIRE. 100% SHIELD COVERING. 300V - 600V RATING. 80°C - 90°C TEMP RATING

AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN ALPHA	8719 561681601
14	BELDEN ALPHA	8720 561681401

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.

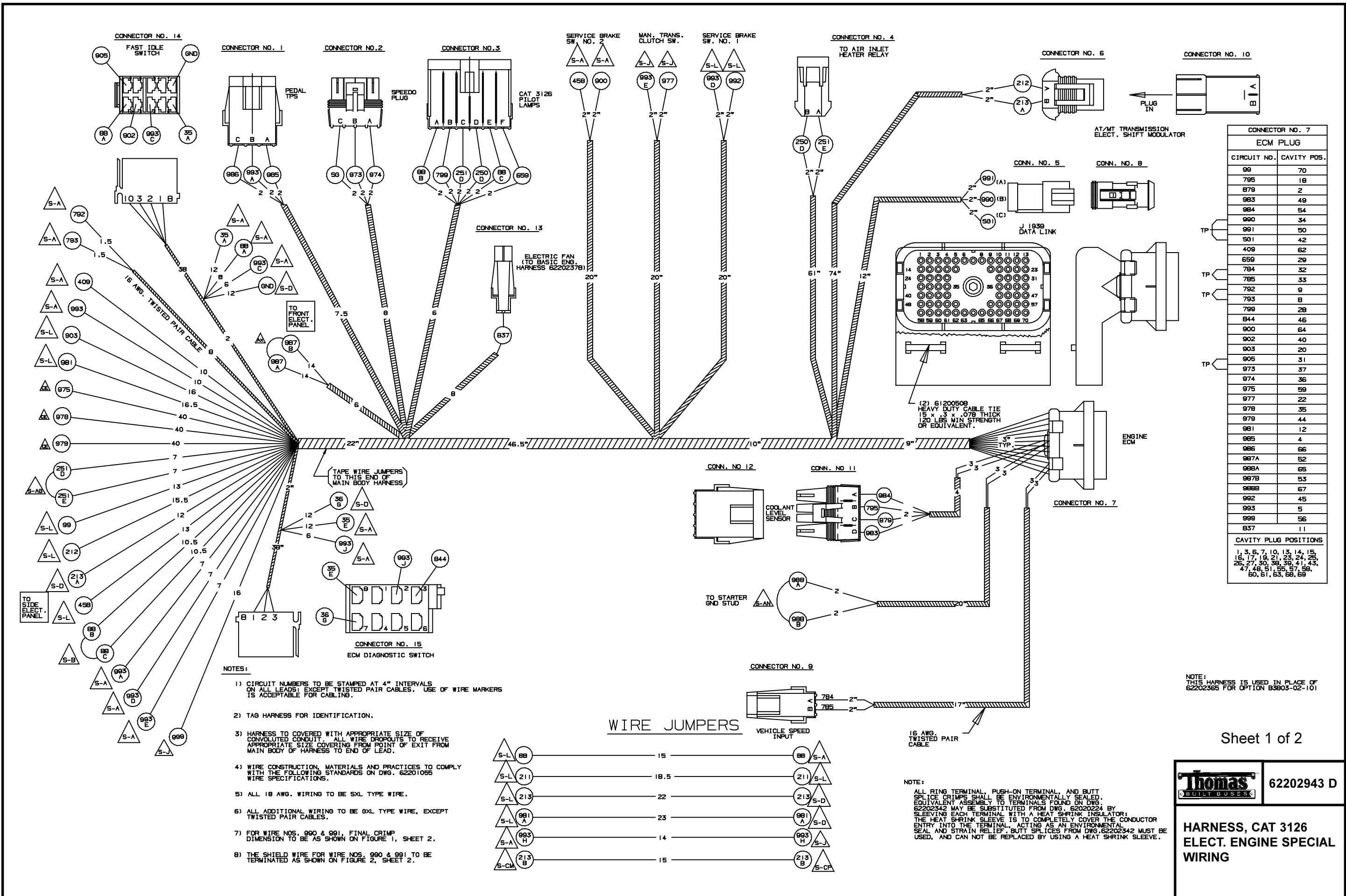


CP	61201228	RING TERMINAL, 1/4" STUD, 18 AWG
CM	61201226	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 18 AWG.
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., #12092444-L
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 12-14 AWG., #12065916-L
AN	61200747	RING TERMINAL, 1/2" STUD, 12-10 AWG
B	61200190	RING TERMINAL, #10 STUD, 10 AWG.
CF	61201122	WIRE TERM., METRI-PACK, 630 SERIES, F, 12 AWG., #12052224
CE	61201121	WIRE TERM., METRI-PACK, 630 SERIES, F, 14-16 AWG., #12015970
AG	61200468	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
M	61200176	FEMALE PUSH-ON, 1/4", 10 AWG.
L	61200388	FEMALE PUSH-ON, 1/4", 14 AWG.
J	61200168	BUTT SPLICE, INSULATED, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION

Sheet 2 of 2

Thomas BULB BUSES
62202365 G

HARNES, BASIC ENGINE CAT 3126 ELECTRIC



CONNECTOR NO. 7	
ECM PLUG	
CIRCUIT NO.	CAVITY POS.
99	70
795	18
879	2
983	49
984	54
990	34
991	50
991	42
409	62
659	29
784	32
785	33
792	9
793	8
799	28
844	46
900	64
902	40
903	20
905	31
973	37
974	36
975	59
977	22
978	35
979	44
981	12
985	4
986	66
987A	52
988A	65
987B	53
988B	67
992	45
993	5
999	56
837	11

CAVITY PLUG POSITIONS	
1, 3, 6, 7, 10, 13, 14, 15,	
16, 17, 19, 21, 23, 24, 25,	
26, 27, 30, 38, 39, 41, 43,	
47, 49, 51, 55, 57, 58,	
60, 61, 63, 68, 69	

Thomas BULB BUSES
62202943 D

**HARNESS, CAT 3126
ELECT. ENGINE SPECIAL
WIRING**

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	PACKARD	12010717	CONNECTOR ASM., WEATHERPACK, 3 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
2	PACKARD	12015793	CONNECTOR ASM., WEATHERPACK, 3 WAY FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
3	PACKARD	12010975	CONNECTOR BODY, WEATHERPACK, MALE, 6 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	6
4	PACKARD	12162000	CONNECTOR ASM., METRI-PACK, 2 WAY, MALE	1
	PACKARD	12045773-L	WIRE TERMINAL, METRI-PACK, MALE, 18-20 AWG.	2
	PACKARD	12049086	CABLE SEAL	2
5	DEUTSCH	DT04-3P-E008	CONNECTOR ASM., RECEPTACLE,	1
	DEUTSCH	0460-247-1631	WIRE TERMINAL, MALE, 20AWG	3
	DEUTSCH	W3P	WEDGE PLUG	3
6	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
	PACKARD	12129493	WIRE TERMINAL, METRI-PACK, FEMALE, 12-14 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
7	AMP	776241-1	CONNECTOR, BODY, 70 CAVITIES	1
	AMP	776093-1	WIRE TERMINAL, FEMALE SOCKET, 14, 16, 18 AWG., GOLD PLATED	36
	AMP	638092-1	CONN., ENDBEL SHROUD	1
8	DEUTSCH	114017	CAVITY SEAL PLUG	34
	DEUTSCH	DT06-3S-E003	CONNECTOR ASM., PLUG	1
	DEUTSCH	W3S	WEDGE PLUG	1
9	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
10	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2 WAY, MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG, 280 SERIES	2
11	PACKARD	12015797	CONNECTOR ASM., WEATHERPACK, 4 WAY, FEMALE	1
	PACKARD	12089188-L	TERMINAL, WEATHERPACK, FEMALE, 18-20 AWG	4
	PACKARD	12015323	CABLE SEAL	4
12	PACKARD	12010974	CONNECTOR ASM. WEATHERPACK, 4 WAY, MALE	1
	PACKARD	12010300	CAVITY PLUG	4
	PACKARD	12010966	CONNECTOR ASM., WEATHERPACK, 1 WAY, MALE	1
13	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
	PACKARD	12015323	CABLE SEAL	1
	PACKARD	12015323	CABLE SEAL	1
14	CARLING	190-17500-001	CONNECTOR BODY, SWITCH, 10 POSITION	1
	PACKARD	12015870	WIRE TERMINAL, METRI-PACK, 630 SERIES, 14-16 AWG.	6
	PACKARD	12015870	WIRE TERMINAL, METRI-PACK, 630 SERIES, 14-16 AWG.	4

J1939 TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, DATA BUS CABLE. (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/DRAIN WIRE. 100% SHIELD COVERING. 300V - 600V RATING. 90°C - 150°C TEMP RATING FOR SAE J1939 USAGE. IMPEDANCE AT 120 OHMS ± 12 OHMS CONDUCTOR NO. 1 (GREEN). CONDUCTOR NO. 2 (YELLOW)

AWG.	APPROVED VENDORS OF CABLE	PART NO.
20	ANIXTER RAYCHEM/STAF-CO	CE365606S 301

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED. MUST MEET SAE1939/11.15.21.

TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, INSTRUMENTATION CABLE. (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/DRAIN WIRE. 100% SHIELD COVERING. 300V - 600V RATING. 80°C - 90°C TEMP RATING

AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN ALPHA	8719 561681601
	BELDEN ALPHA	8720 561681401

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.

FIGURE 1
WIRE NOS. 990, 991 & 249 (GND WIRE)

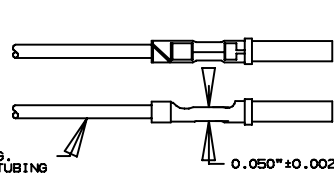
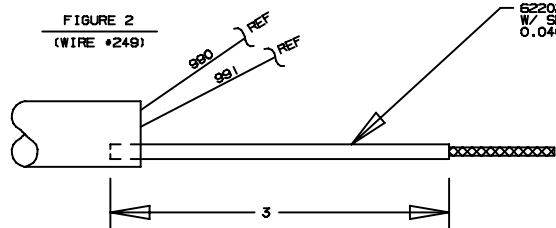


FIGURE 2
(WIRE #249)



62202325 HEAT SHRINK TUBING
W/ SEALANT 1/8" I.D. x 3"
0.040" RECOVERED

(WIRES 990 & 991) 20 AWG.
(WIRE 249) HEAT SHRINK TUBING

CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN)
88	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 8 (W/*3) TO SIDE PANEL TERMINAL BD. (POS. *88) W/*88A & *88B	15
88B	16	BLUE	SIDE PANEL TERMINAL BD. (POS. *88B) W/ *88 & *88A TO "CHECK ENGINE" DASH INDICATOR LAMP (+12V)	40.5
99	16	GREEN	SIDE PANEL CIRCUIT BREAKER NO. 10 TO CONN. 7 POS. 70 ENGINE ECM (IGNITION KEY SW.)	109.5
211	14	RED	SIDE PANEL CIRCUIT BREAKER NO. 31 TO ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (RELAY. 30) (OPT.)	18.5
212	16	RED	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. 87) TO CONNECTOR NO.6 (POS.A) (OPT.)	170
213	14	WHITE	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. 86) TO SIDE PANEL GND STUD (OPT.)	22
213A	16	WHITE	CONNECTOR NO.6 (POS.B) TO SIDE PANEL GND STUD (OPT.)	166.5
2500	16	WHITE	CONNECTOR NO.3 (POS.D) TO CONNECTOR NO.4 (POS.B) "MAN HTR" DASH INDICATOR LAMP GND	127.5
2510	16	RED	CONNECTOR NO.3 (POS.C) TO SIDE PANEL CIRCUIT BREAKER NO.30 (W/*251E) "MAN HTR DASH IND. LAMP +12V	37
251E	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 30 (W/*251D) TO CONNECTOR NO.4 (POS.A)	148.5
409	16	ORANGE	SIDE PANEL TERMINAL BD. (POS. *409) TO CONNECTOR NO. 7 (POS.62) ENGINE ECM (TRANS. NEUTRAL SW.) (OPT.)	100.5
458	16	RED	SIDE PANEL CIRCUIT BREAKER NO. 28 TO SERVICE BRAKE SW. NO.2 (INPUT) (OPT.)	103.5
784	16	WHITE	CONNECTOR NO. 9 (POS.A) TO CONNECTOR NO. 7 (POS.32) ENGINE ECM (VEHICLE SPEED INPUT +)	22
785	16	BLACK	CONNECTOR NO.9 (POS. B) TO CONNECTOR NO.7 (POS.33) ENGINE ECM (VEHICLE SPEED INPUT -)	22
782	16	BLACK	SIDE PANEL TERMINAL BD. (POS. *782) TO CONNECTOR NO. 7 (POS.9) ENGINE ECM (DATA LINK ATA -)	100
783	16	WHITE	SIDE PANEL TERMINAL BD. (POS. *783) TO CONNECTOR NO. 7 (POS.8) ENGINE ECM (DATA LINK ATA +)	100
789	16	GREEN	CONNECTOR NO. 3 (POS.B) TO CONNECTOR NO. 7 (POS.28) ENGINE ECM ("CHECK ENGINE" DASH IND. LAMP GND)	76.5
900	16	BLUE	SERVICE BRAKE SW. NO.2 (OUTPUT) TO CONNECTOR NO. 7 (POS.64) ENGINE ECM (OPT.)	44
902	16	GREEN	FAST IDLE DASH SW. (POS.3) TO CONNECTOR NO. 7 (POS. 40) ENGINE ECM (FAST IDLE ENABLE)	130.5
903	16	VIOLET	ALLISON AT/MT TRANS. SHIFT MODULATOR RELAY (POS. 85) TO CONNECTOR NO. 7 (POS. 20) ENGINE ECM (OPT.)	106.5
905	16	RED	FAST IDLE DASH SW. (POS. 9) TO CONNECTOR NO. 7 (POS. 31) ENGINE ECM (FAST IDLE ENABLE LAMP GND)	130.5
973	16	BLACK	CONNECTOR NO. 2 (POS. B) TO CONNECTOR NO. 7 (POS. 37) ENGINE ECM (SPEEDOMETER SIGNAL +)	78.5
974	16	WHITE	CONNECTOR NO. 2 (POS. A) TO CONNECTOR NO. 7 (POS. 36) ENGINE ECM (SPEEDOMETER SIGNAL -)	78.5
59	16	SHIELD GND	CONNECTOR NO. 2 (POS. C) TO END OF TWISTED PAIR CABLE RUN AT CONNECTOR NO. 7 (SPEEDOMETER SIGNAL SG)	75.5
975	16	WHITE	CRUISE ON-OFF DASH SW. (POS. 3) TO CONNECTOR NO. 7 (POS. 59) ENGINE ECM (CRUISE CONTROL) (OPT.)	130.5
977	16	BLUE	MANUAL TRANSMISSION CLUTCH SW. (OUTPUT) TO CONNECTOR NO. 7 (POS. 22) ENGINE ECM (OPT.)	44
978	16	BROWN	CRUISE SET /RESUME DASH SW. (POS. 3) TO CONNECTOR NO. 7 (POS. 35) ENGINE ECM (CRUISE CONTROL) (OPT.)	130.5
979	16	ORANGE	CRUISE SET /RESUME DASH SW. (POS. 4) TO CONNECTOR NO. 7 (POS. 44) ENGINE ECM (CRUISE CONTROL) (OPT.)	130.5
981	16	GREEN	EXHAUST BRAKE RELAY (POS. 85) TO CONNECTOR NO. 7 (POS. 12) ENGINE ECM (OPT.)	107
981A	14	WHITE	EXHAUST BRAKE RELAY (POS. 86) TO SIDE PANEL GND STUD (OPT.)	23
985	16	RED	CONNECTOR NO. 1 (POS. A) TO CONNECTOR NO. 7 (POS. 4) ENGINE ECM (TPS +8V)	78
986	16	GREEN	CONNECTOR NO. 1 (POS. C) TO CONNECTOR NO. 7 (POS. 66) ENGINE ECM (TPS THROTTLE POSITION)	78
987B	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 34 TO CONNECTOR NO. 7 (POS. 53) ENGINE ECM (BATTERY POS.)	22
988B	14	BLACK	STARTER GROUND STUD TO CONNECTOR NO. 7 (POS. 67) ENGINE ECM (BATTERY NEG.)	22
987A	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 34 TO CONNECTOR NO. 7 (POS. 52) ENGINE ECM (BATTERY POS.)	88.5
988A	14	BLACK	STARTER GROUND STUD TO CONNECTOR NO. 7 (POS. 65) ENGINE ECM (BATTERY NEG.)	25
982	16	VIOLET	SERVICE BRAKE SW. NO. 1 (OUTPUT) TO CONNECTOR NO. 7 (POS. 45) ENGINE ECM	44
993	16	BROWN	SIDE PANEL TERMINAL BD. (W/*993A - *993B) TO CONNECTOR NO. 7 (POS. 5) ENGINE ECM (SENSOR COMMON)	100.5
993A	16	BROWN	SIDE PANEL TERMINAL BD. (W/*993) TO CONNECTOR NO. 1 (POS. B) (TPS SENSOR COMMON)	38.5
993D	16	BLUE	SIDE PANEL TERMINAL BD. (W/*993) TO SERVICE BRAKE SW. NO. 1 (INPUT)	97.5
993E	16	GREEN	SIDE PANEL TERMINAL BD. (W/*993) TO MANUAL TRANSMISSION CLUTCH SW. (INPUT) (OPT.)	97.5
999	16	GREEN	CONNECTOR NO. 7 (POS. 56) ENG. ECM TO SIDE PANEL DROP OUT FOR BODY DOOR RELAY (30) ADA LIFT (OPT.)	106.5
993H	16	BROWN	SIDE PANEL TERMINAL BD (W/*993) TO BODY DOOR RELAY (87) ADA LIFT (OPT.)	14
88C	16	BLUE	DASH "WARNING" IND. LAMP (SIDE PNL TERM. BD POS. W/88 TO CONN. 3 POS. E)	40.5
659	16	PINK	DASH "WARNING" IND. LAMP (CONN. 7 POS. 29 TO CONN. 3 POS. F)	76.5
795	18	GREY	COOLANT LEVEL COMMON (CONN. 7 POS. 18 TO CONN. 11 POS. B) (OPT.)	9
879	18	ORANGE	COOLANT LEVEL +5V (CONN. 7 POS. 2 TO CONN. 11 POS. C) (OPT.)	9
983	18	WHITE	COOLANT LEVEL NORMAL (CONN. 7 POS. 49 TO CONN. 11 POS. D) (OPT.)	9
984	18	YELLOW	COOLANT LEVEL LOW (CONN. 7 POS. 54 TO CONN. 11 POS. A) (OPT.)	9
990	20	GREEN	J1939 DATA LINK - (CONN. 7 POS. 34 TO CONN. 5 POS. B) (OPT.)	26.5
991	20	YELLOW	J1939 DATA LINK + (CONN. 7 POS. 50 TO CONN. 5 POS. A) (OPT.)	26.5
591	18	SHIELD GND	DATA LINK SHIELD (CONN. 7 POS. 42 TO CONN. 5 POS. C) (OPT.)	26.5
837	16	YELLOW	ELECTRIC FAN (CONN. 7 POS. 11 TO CONN. 13)	76.5
213B	18	WHITE	CHASSIS ACCELERATOR INTERLOCK RELAY (POS. 861 TO SIDE PANEL GND STUD (OPT.)	15
35A	16	LT. BLUE	FAST IDLE DASH SW. (CONN. 14 POS. 8) TO SIDE PANEL TERMINAL BD.	50
88A	16	BLUE	FAST IDLE DASH SW. (CONN. 14 POS. 10) TO SIDE PANEL TERMINAL BD. (FAST IDLE INABLE LAMP +12V)	46
993C	16	BLUE	FAST IDLE DASH SW. (CONN. 14 POS. 2) TO SIDE PANEL TERMINAL BD. (W/*993)	44
GND	16	WHITE	FAST IDLE DASH SW. (CONN. 14 POS. 7) TO SIDE PANEL GROUND STUD	50
993J	16	WHITE	ECM DIAG. SW. (CONN.15 POS.2) TO SIDE PANEL TERMINAL BD. (W/*993)	44
944	16	PINK	CONN. 7 (POS.46) TO ECM DIAG. SW. (CONN.15 POS.3)	130.5
35E	16	LT. BLUE	ECM DIAG. SW. (CONN.15 POS.8) TO SIDE PANEL TERMINAL BD.	50
366	16	WHITE	ECM DIAG. SW. (CONN.15 POS.7) TO SIDE PANEL GROUND STUD	50

16 AWG. TWISTED PAIR

16 AWG. TWISTED PAIR

SXL WIRE TYPE

TWISTED PAIR

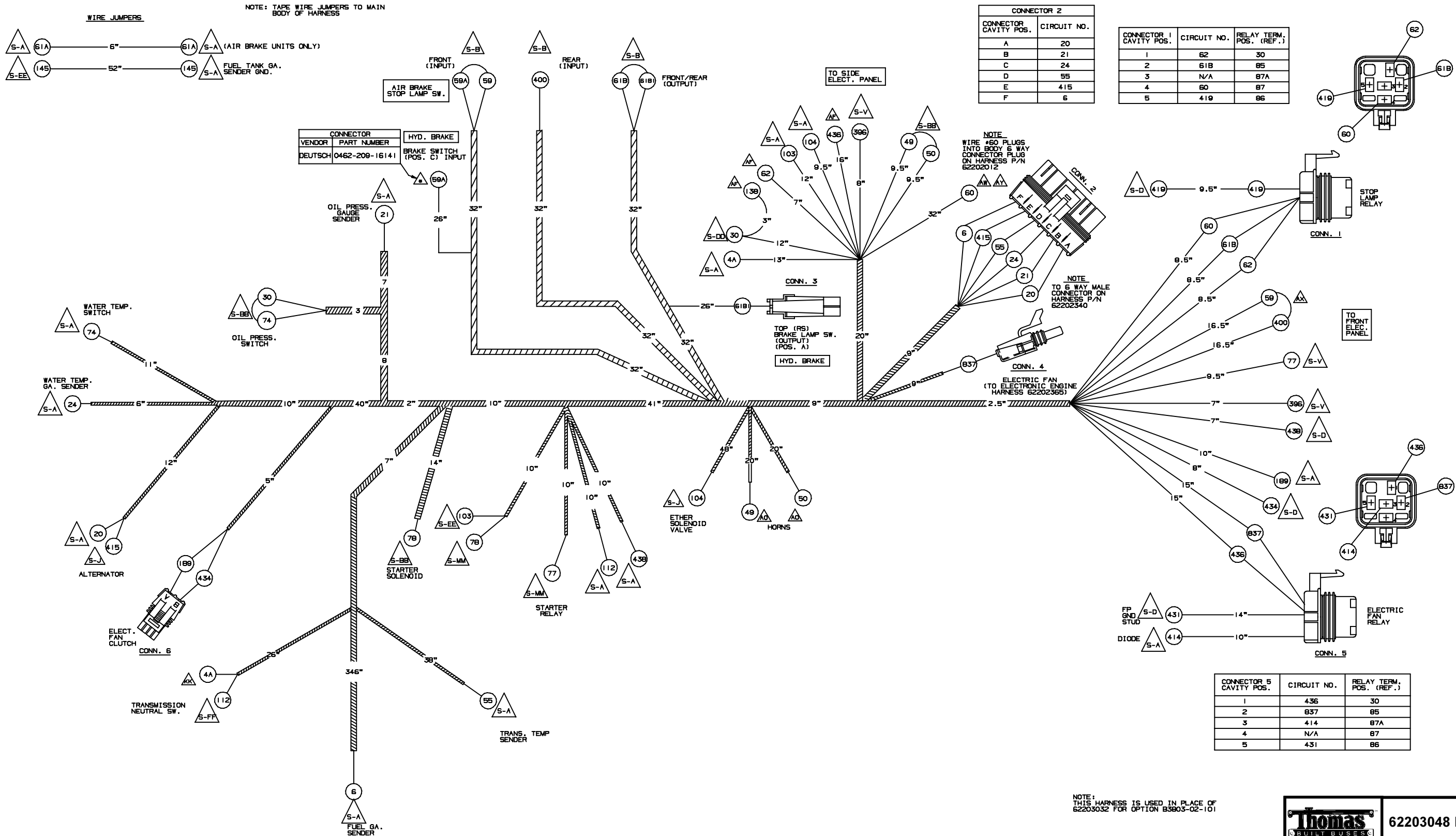
SXL WIRE TYPE

TERM Δ	PART NO.	DESCRIPTION
S-CP	61201358	RING TERMINAL, 1/4" STUD, 18 AWG
S-CW	61201357	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 18 AWG.
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., *12082444-L
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 12-14 AWG., *12065916-L
S-AN	61201339	RING TERMINAL, 1/2" STUD, 12-10 AWG
S-B	61201313	RING TERMINAL, *10 STUD, 10 AWG.
CF	61201122	WIRE TERM., METRI-PACK, 630 SERIES, F, 12 AWG., *12052224
CE	61201121	WIRE TERM., METRI-PACK, 630 SERIES, F, 14-16 AWG., *12015870
S-AG	61201337	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
S-M	61201319	FEMALE PUSH-ON, 1/4", 10 AWG.
S-L	61201318	FEMALE PUSH-ON, 1/4", 14 AWG.
S-J	61201316	BUTT SPLICE, INSULATED, 14 AWG.
S-D	61201314	RING TERMINAL, 1/4" STUD, 14 AWG.
S-A	61201312	RING TERMINAL, *10 STUD, 14 AWG.

Thomas
BUILT BUSES

62202943 D

**HARNESS, CAT 3126
ELECT. ENGINE SPECIAL
WIRING**



Sheet 1 of 2

Thomas BUILT BUSES	62203048 B
HARNESS, BULKHEAD BASIC ENGINE CAT 3126, SPECIAL WIRING	

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1, 5	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
3	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
	PACKARD	12010986	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
4	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
	PACKARD	12015323	CABLE SEAL	1
6	PACKARD	12015791	CONNECTOR ASM., WEATHERPACK, 1WAY, FEMALE	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	1
6	PACKARD	12015323	CABLE SEAL	1
	PACKARD	12015792	CONNECTOR, WEATHERPACK, 2 WAY, FEMALE	1
6	PACKARD	12124580-L	WIRE TERMINAL, FEMALE SLEEVE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL, 14-16 AWG.	2

GXL WIRE REQ'D	CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
	4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/ *98 AND *4B) TO TRANSMISSION NEUTRAL SW. (INPUT)	126
	6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
	20	14	DK. GREEN	ALTERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	133
	21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	86
	24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	127
	30	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO OIL PRESS./WATER TEMP. DUAL ALARM WARNING BUZZER (F)	105
	49	14	RED	HORN RELAY TO HORN	59.5
	50	14	RED	HORN RELAY TO HORN	59.5
	55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
	59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
*	60	14	RED	STOP LAMP RELAY CONTACT (B7) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
	61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
*	61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (B5)	84
*	62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BREAKER NO. 20	38
	74	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO HIGH WATER TEMP. SW. (W/O KYSOR)	72
	77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
	78	10	RED/BLACK	STARTER RELAY (LOAD) (W/*192) TO STARTER SOLENOID (+12V)	34
	103	14	DK. BLUE	STARTER RELAY (W/*7B) TO SIDE PANEL TERMINAL BD. (W/*104)	92
	104	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/*103) TO ETHER SOLENOID VALVE	86.5
	112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
	139	16	PINK	DUAL ALARM WARNING BUZZER (F) (W/*30)	3
	145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
	396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
	400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
	415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	133
*	419	14	WHITE	STOP LAMP RELAY CONTACT (B5) TO FRONT PANEL GND STUD	9.5
	438	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	69.5
*	59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
	61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58
*	189	16	BROWN	DIODE (OUTPUT) TO ELECT. FAN CLUTCH CONNECTOR POS. A	119.5
*	414	16	RED	ELECT. FAN CONTROL RELAY (B7A) CONN. 5 POS. 3 TO DIODE (INPUT)	10
*	434	16	WHITE	ELECT. FAN CLUTCH CONNECTOR POS. B TO GND STUD ON FRONT PANEL	117.5
*	431	16	WHITE	ELECT. FAN CONTROL RELAY (B6) (CONN. 5 POS. 5 TO FP GND STUD)	14
*	436	14	RED	C.B. NO. 24 TO ELECT. FAN CONTROL RELAY (30)	53.5
*	837	16	YELLOW	ELECT. FAN CONTROL RELAY (B5) (CONN. 5 POS. 2 TO CONN. 4)	26.5

NOTES:

1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
2. TAG HARNESS FOR IDENTIFICATION.
3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPPOINTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 - WIRE SPECIFICATIONS.
5. ALL WIRING TO BE SXL TYPE WIRE, EXCEPT WHERE NOTED TO USE 6XL TYPE WIRE.
6. ALL RING TERMINAL, PUSH-ON TERMINAL AND BUTT SPLICE CRIMPS SHALL BE ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62020224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR. THE HEAT SHRINK SLEEVE IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED, AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.

TERM	PART NO.	DESCRIPTION
S-DD	61201329	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 10-12 AWG., *12084596-L
BX	61200819	CABLE SEAL, 150 SERIES, *12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., *12045773-L
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 12-14 AWG., *12065916-L
AY	61200828	CABLE SEAL, WEATHERPACK, 14 AWG., *12010293
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., *12092444-L
AW	61200827	FEMALE SLEEVE, WEATHERPACK, 14 AWG., *12124580-L
AD	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLAS, 16-14 AWG.
AF	61200397	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
S-MM	61201334	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
S-FF	61201363	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
S-EE	61201330	RING TERMINAL, 5/16" STUD, 14 AWG.
S-BB	61201327	SPRING SPADE TERMINAL, #10 STUD, 10 AWG.
S-V	61201324	RING TERMINAL, 1/4" STUD, 10 AWG.
S-J	61201316	BUTT SPLICE, 14 AWG.
S-D	61201314	RING TERMINAL, 1/4" STUD, 14 AWG.
S-B	61201313	RING TERMINAL, #10 STUD, 10 AWG.
S-A	61201312	RING TERMINAL, #10 STUD, 14 AWG.

	62203048 B
HARNESS, BULKHEAD BASIC ENGINE CAT 3126, SPECIAL WIRING	

Sheet 2 of 2

P39-C			
CKT. #	POSITION	CKT. #	POSITION
-	1	250E	11
-	2	-	12
-	3	659A	13
409A	4	981A	14
993D	5	212A	15
458A	6	993	16
999B	7	993A	17
993E	8	903A	18
799A	9		
-	10		

P3-C	
CKT. #	POSITION
993H	5
IL36E	6
IL35E	12

J76: ENGINE BULKHEAD			
CKT. #	POSITION	CKT. #	POSITION
458A	1	902A	21
993D	2	978A	22
993E	3	-	23
212A	4	981A	24
993	5	985A	25
-	6	986A	26
-	7	999A	27
792B	8	250E	28
793B	9	979A	29
S61	10	799A	30
S62	11	AC9	31
990C	12	-	32
991C	13	-	33
409A	14	-	34
659A	15	-	35
-	16	-	36
844A	17	-	37
975A	18	-	38
903A	19	-	39
905A	20	-	40

P14-C	
CKT. #	POSITION
993B	1
IL36C	2
IL35C	3

P124A& P94C	
CKT. #	POSITION
991D	A
990D	B
S62	C

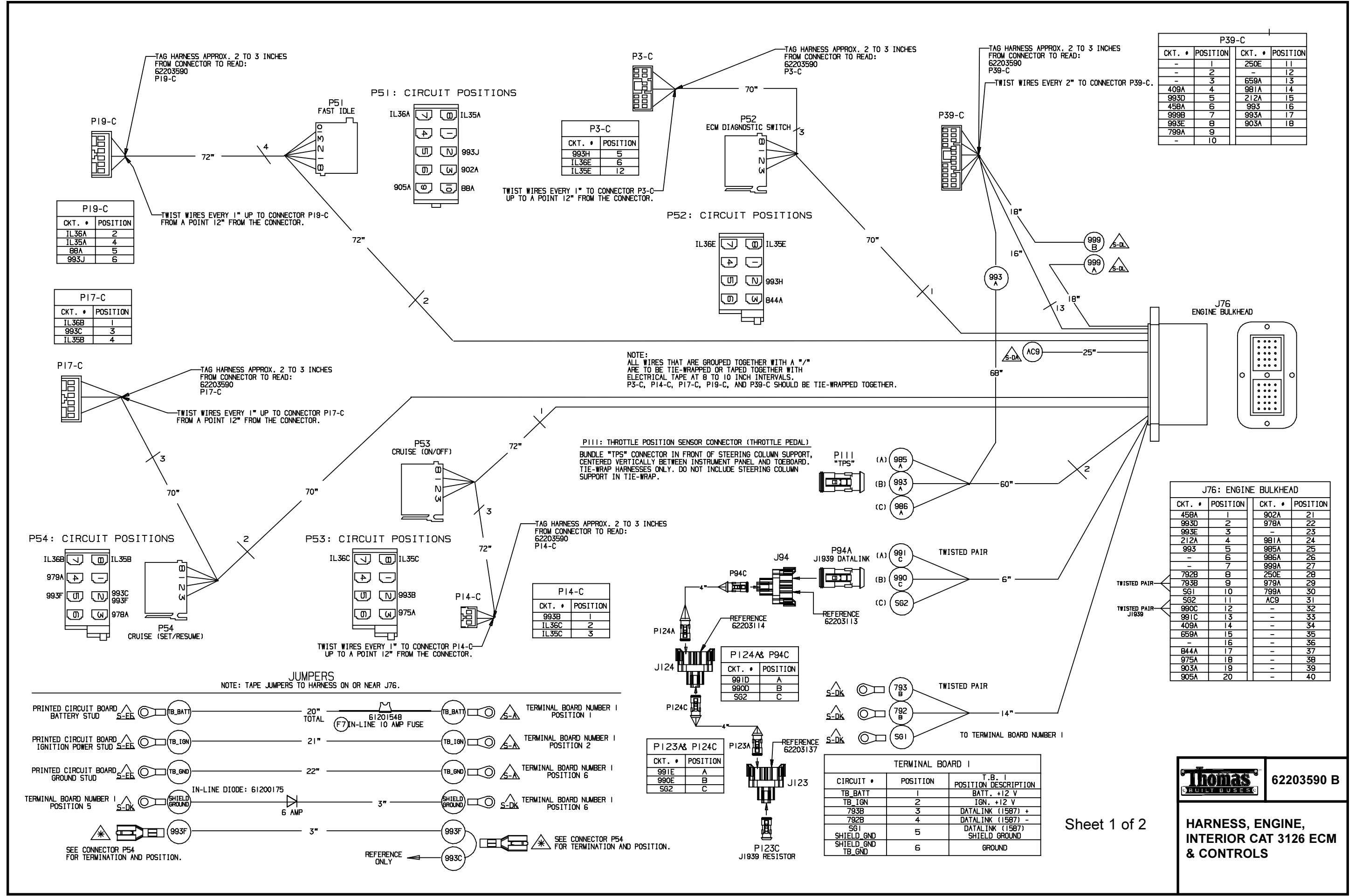
P123A& P124C	
CKT. #	POSITION
991E	A
990E	B
S62	C

TERMINAL BOARD 1		
CIRCUIT #	POSITION	T.B. 1 POSITION DESCRIPTION
TB_BATT	1	BATT. +12 V
TB_IGN	2	IGN. +12 V
793B	3	DATALINK (1587) +
792B	4	DATALINK (1587) -
S61	5	DATALINK (1587) SHIELD GROUND
SHIELD_GND	6	GROUND

Sheet 1 of 2

Thomas BULBUSES
62203590 B

HARNESS, ENGINE, INTERIOR CAT 3126 ECM & CONTROLS



TAG HARNESS APPROX. 2 TO 3 INCHES FROM CONNECTOR TO READ: 62203590 P19-C

TWIST WIRES EVERY 1" UP TO CONNECTOR P19-C FROM A POINT 12" FROM THE CONNECTOR.

TAG HARNESS APPROX. 2 TO 3 INCHES FROM CONNECTOR TO READ: 62203590 P17-C

TWIST WIRES EVERY 1" UP TO CONNECTOR P17-C FROM A POINT 12" FROM THE CONNECTOR.

TWIST WIRES EVERY 1" TO CONNECTOR P3-C UP TO A POINT 12" FROM THE CONNECTOR.

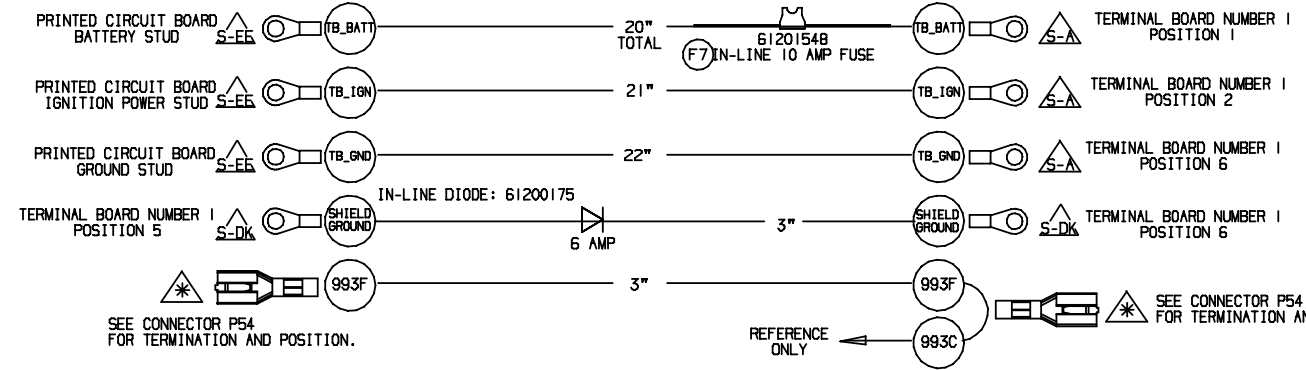
NOTE: ALL WIRES THAT ARE GROUPED TOGETHER WITH A "/>

P111: THROTTLE POSITION SENSOR CONNECTOR (THROTTLE PEDAL) BUNDLE "TPS" CONNECTOR IN FRONT OF STEERING COLUMN SUPPORT, CENTERED VERTICALLY BETWEEN INSTRUMENT PANEL AND TOEBOARD. TIE-WRAP HARNESSES ONLY. DO NOT INCLUDE STEERING COLUMN SUPPORT IN TIE-WRAP.

TAG HARNESS APPROX. 2 TO 3 INCHES FROM CONNECTOR TO READ: 62203590 P14-C

TWIST WIRES EVERY 1" TO CONNECTOR P14-C UP TO A POINT 12" FROM THE CONNECTOR.

JUMPERS NOTE: TAPE JUMPERS TO HARNESS ON OR NEAR J76.



CKT.	AWG.	COLOR	DESCRIPTION	LENGTH (INCHES)
S61	18	SHIELD GND	TWISTED PAIR CABLE SHIELD	-
S62	20	SHIELD GND	TWISTED PAIR CABLE SHIELD - J1939	-
TB BATT	14	RED	PRINTED CIRCUIT BOARD BATTERY STUD TO TERMINAL BOARD NUMBER 1 (POS. 1)	20
TB IGN	14	RED	PRINTED CIRCUIT BOARD IGNITION POWER STUD TO TERMINAL BOARD NUMBER 1 (POS. 2)	21
TB GND	14	WHITE	PRINTED CIRCUIT BOARD GROUND STUD TO TERMINAL BOARD NUMBER 1 (POS. 6)	22
SHIELD GND	18	WHITE	TERMINAL BOARD NUMBER 1 (POS. 5) THROUGH DIODE TO TERMINAL BOARD NUMBER 1 (POS. 6)	3 TYP.
IL35A	18	RED	P19-C (POS. 4) TO P51 (POS. 8)	72
IL35B	18	RED	P17-C (POS. 4) TO P54 (POS. 8)	70
IL35C	18	RED	P14-C (POS. 3) TO P53 (POS. 8)	72
IL35E	18	RED	P3-C (POS. 12) TO P52 (POS. 8)	70
IL36A	18	WHITE	P19-C (POS. 2) TO P51 (POS. 7)	72
IL36B	18	WHITE	P17-C (POS. 1) TO P54 (POS. 7)	70
IL36C	18	WHITE	P14-C (POS. 2) TO P53 (POS. 7)	72
IL36E	18	WHITE	P3-C (POS. 6) TO P52 (POS. 7)	70
88A	18	GREEN	P51 (POS. 10) TO P19-C (POS. 5)	72
212A	18	RED	J76 (POS. 4) TO P39-C (POS. 15)	16
250E	18	WHITE	J76 (POS. 28) TO P39-C (POS. 11)	16
409A	18	ORANGE	J76 (POS. 14) TO P39-C (POS. 4)	16
458A	18	RED	J76 (POS. 1) TO P39-C (POS. 6)	16
659A	18	PINK	J76 (POS. 15) TO P39-C (POS. 13)	16
792B	18	WHITE	DATA LINK -, J76 (POS. 8) TO TERMINAL BOARD NUMBER 1 (POS. 4)	14
793B	18	BLACK	DATA LINK +, J76 (POS. 9) TO TERMINAL BOARD NUMBER 1 (POS. 3)	14
799A	18	GREEN	J76 (POS. 30) TO P39-C (POS. 9)	16
844A	18	YELLOW	J76 (POS. 17) TO P52 (POS. 3)	70
902A	18	BLUE	J76 (POS. 21) TO P51 (POS. 3)	72
903A	18	BLUE	J76 (POS. 19) TO P39-C (POS. 18)	16
905A	18	WHITE	J76 (POS. 20) TO P51 (POS. 9)	72
975A	18	WHITE	J76 (POS. 18) TO P53 (POS. 3)	72
978A	18	BROWN	J76 (POS. 22) TO P54 (POS. 3)	70
979A	18	ORANGE	J76 (POS. 29) TO P54 (POS. 4)	70
981A	18	GREEN	J76 (POS. 24) TO P39-C (POS. 14)	16
985A	18	BLUE	J76 (POS. 25) TO P111 (POS. A)	60
986A	18	BROWN	J76 (POS. 26) TO P111 (POS. C)	60
990C	20	GREEN	J1939 DATA LINK -, J76 (POS. 12) TO P94A (POS. B)	6
991C	20	YELLOW	J1939 DATA LINK +, J76 (POS. 13) TO P94A (POS. A)	6
990D	20	GREEN	J1939 DATA LINK -, P94C (POS. B) TO P124A (POS. B)	4
991D	20	YELLOW	J1939 DATA LINK +, P94C (POS. A) TO P124A (POS. A)	4
990E	20	GREEN	J1939 DATA LINK -, P124C (POS. B) TO P123A (POS. B)	4
991E	20	YELLOW	J1939 DATA LINK +, P124C (POS. A) TO P123A (POS. A)	4
993	18	WHITE	J76 (POS. 5) TO P39-C (POS. 16)	16
993A	18	WHITE	P39-C (POS. 17) TO P111 (POS. B)	68
993B	18	WHITE	P14-C (POS. 1) TO P53 (POS. 2)	72
993C	18	WHITE	P17-C (POS. 3) TO P54 (POS. 2 - CRIMPED WITH 993F)	70
993D	18	WHITE	J76 (POS. 2) TO P39-C (POS. 5)	16
993E	18	WHITE	J76 (POS. 3) TO P39-C (POS. 8)	16
993F	18	WHITE	P54 (POS. 5) TO P54 (POS. 2 - CRIMPED WITH 993C)	3
993H	18	WHITE	P3-C (POS. 5) TO P52 (POS. 2)	70
993J	18	WHITE	P19-C (POS. 6) TO P51 (POS. 2)	72
999A	18	WHITE	J76 (POS. 27) TO BRAKE SWITCH RELAY RI (POS. 30), OPTION C2215-02-000	18
999B	18	WHITE	BRAKE SWITCH RELAY RI (POS. 87A) TO P39-C (POS. 7) OPTION C2215-02-000	18
AC9	16	BLACK	J76 (POS. 31) TO RELAY RI (BRAKE SW. RELAY PIN NO. 86)	25

TWISTED PAIR

TWISTED PAIR J1939

TWISTED PAIR J1939

TWISTED PAIR J1939

TWISTED PAIR J1939

TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, INSTRUMENTATION CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING. 300V - 600V RATING. 80°C - 90°C TEMP. RATING

AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
18	ALPHA	5616B1801
	BELDEN	8719
16	ALPHA	5616B1601
	BELDEN	8720
14	ALPHA	5616B1401

J1939 TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, DATA BUS CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 90°C - 150°C TEMP. RATING FOR SAE J1939 USAGE. IMPEDANCE AT 120Ω ± 12Ω CONDUCTOR NO. 1 (GREEN), CONDUCTOR NO. 2 (YELLOW)

AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
20	ANIXTER	CE3656065
	RAYCHEW/STAF-CO	301
	CHAMPLAIN	15-00037 (11875)

NOTES:

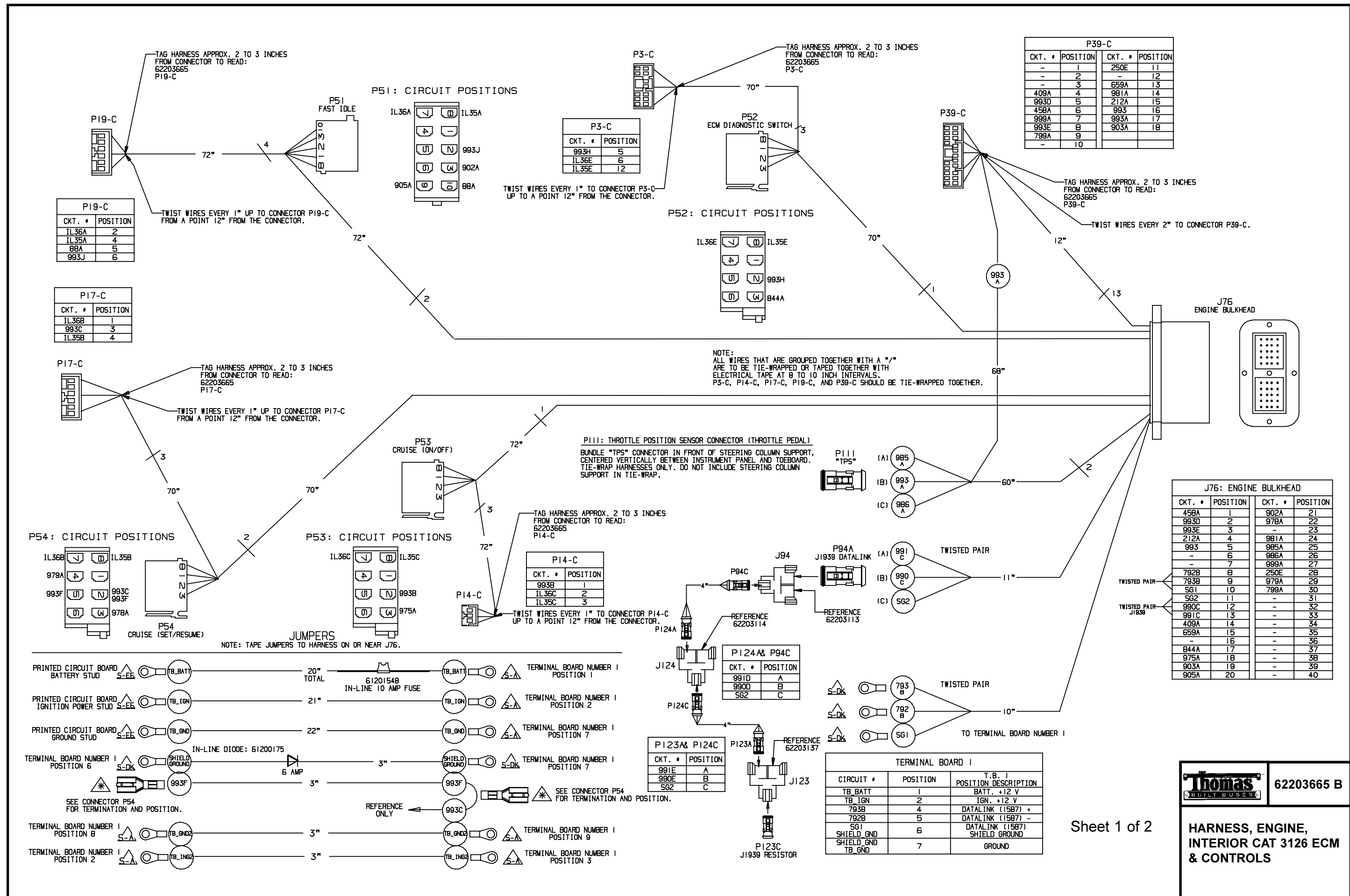
- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- 2) TAG HARNESS FOR IDENTIFICATION.
- 3) ALL WIRING TO BE GXL TYPE WIRES.
- 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201095 WIRE SPECIFICATIONS.
- 5) ALL RING TERMINALS, PUSH-ON TERMINALS, AND BUTT SPLICE CRIMPS SHALL BE SOLDERED OR MACHINE CRIMPED OR CRIMPED WITH A RATCHETING HAND TOOL THAT WILL NOT ALLOW ANY "BACKING OFF" OF A CRIMP, AND ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62020224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR: THE HEAT SHRINK IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.

CONNECTOR LIST				
CONN.	VENDOR	PART NUMBER	DESCRIPTION	QTY.
P3-C	AMP	173851-1	CONNECTOR, 12-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	3
P14-C	AMP	174921-1	CONNECTOR, 3-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	3
P17-C	AMP	174923-1	CONNECTOR, 6-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	3
P19-C	AMP	174923-1	CONNECTOR, 6-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	4
P39-C	AMP	173853-1	CONNECTOR, 18-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	13
P51	CARLING	190-17500-001	CONNECTOR BODY, SWITCH, 10 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	6
P52	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	4
P53	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	4
P54	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	5
	PACKARD	12015870	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	1
J76	DEUTSCH	DRC12-40PB	CONNECTOR BODY, SEALED, 40 PIN	1
	DEUTSCH	1060-16-0122	PIN, 16-18 AWG.	27
	DEUTSCH	114017	CAVITY PLUG	14
P94A, P123A, & P124A	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	TERMINAL, SOCKET, 20 AWG.	2
	DEUTSCH	W3S-P012	WEDGE LOCK, KEYS PLUG "A"	1
	DEUTSCH	0462-221-1631	TERMINAL, SOCKET, SHIELD DRAIN WIRE	1
	DEUTSCH	DT3S-BT	DT SERIES CONNECTOR BOOT	1
P94C & P124C	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	TERMINAL, SOCKET, 20 AWG.	2
	DEUTSCH	W3S-1939-P012	WEDGE LOCK, KEYS PLUG "B"	1
	DEUTSCH	0462-221-1631	TERMINAL, SOCKET, SHIELD DRAIN WIRE	1
	DEUTSCH	DT3S-BT	DT SERIES CONNECTOR BOOT	1
J94, J123, & J124	DEUTSCH	DT04-3P-P007	3 PIN "WYE"	1
P111	DEUTSCH	DT06-3S-E003	PLUG ASM., 3-WAY	1
	DEUTSCH	1062-16-0122	SOCKET, 16-18 AWG.	3
	DEUTSCH	W3S	WEDGE LOCK	1
P123C	DEUTSCH	DT06-3S-P006	120Ω TERMINATION ASSEMBLY	1

TERMINAL Δ	PART #	DESCRIPTION
S-A	61201312	RING TERMINAL, #10 STUD, 14 AWG.
S-DA	61201340	FEMALE PUSH-ON 1/4" 16 AWG
S-DK	61201359	RING TERMINAL, #10 STUD, 18 AWG.
S-DL	61201758	FEMALE PUSH-ON, 1/4" X 1/32", 18-22 AWG
S-EE	61201330	RING TERMINAL, 5/16" STUD, 14 AWG.
S-GG	61201331	RING TERMINAL, 5/16" STUD, 2 AWG.
S-T	61201322	RING TERMINAL, 3/8" STUD, 2 AWG.

Sheet 2 of 2

	62203590 B
HARNESS, ENGINE, INTERIOR CAT 3126 ECM & CONTROLS	



P39-C			
CKT. #	POSITION	CKT. #	POSITION
-	1	250E	11
-	2	-	12
-	3	659A	13
409A	4	981A	14
993D	5	212A	15
458A	6	993	16
999A	7	993A	17
993E	8	903A	18
799A	9	-	-
-	10	-	-

P3-C	
CKT. #	POSITION
993H	5
IL36E	6
IL35E	12

P19-C	
CKT. #	POSITION
IL36A	2
IL35A	4
88A	5
993J	6

P17-C	
CKT. #	POSITION
IL36B	1
993C	3
IL35B	4

J76: ENGINE BULKHEAD			
CKT. #	POSITION	CKT. #	POSITION
458A	1	902A	21
993D	2	978A	22
993E	3	-	23
212A	4	981A	24
993	5	985A	25
-	6	986A	26
-	7	999A	27
792B	8	250E	28
793B	9	979A	29
SG1	10	799A	30
SG2	11	-	31
990C	12	-	32
991C	13	-	33
409A	14	-	34
659A	15	-	35
-	16	-	36
844A	17	-	37
975A	18	-	38
903A	19	-	39
905A	20	-	40

TERMINAL BOARD I		
CIRCUIT #	POSITION	T.B. I POSITION DESCRIPTION
TB_BATT	1	BATT. +12 V
TB_IGN	2	IGN. +12 V
793B	4	DATALINK (1587) +
792B	5	DATALINK (1587) -
SG1	6	DATALINK (1587) SHIELD GROUND
SHIELD_GND	7	GROUND

Sheet 1 of 2

Thomas BULBUSES
62203665 B

HARNESS, ENGINE, INTERIOR CAT 3126 ECM & CONTROLS

CKT.	AWG.	COLOR	DESCRIPTION
S61	18	SHIELD GND	TWISTED PAIR CABLE SHIELD
S62	20	SHIELD GND	TWISTED PAIR CABLE SHIELD - J1939
TB BATT	14	RED	PRINTED CIRCUIT BOARD BATTERY STUD TO TERMINAL BOARD NUMBER 1 (POS. 1)
TB IGN	14	RED	PRINTED CIRCUIT BOARD IGNITION POWER STUD TO TERMINAL BOARD NUMBER 1 (POS. 2)
TB GND	14	WHITE	PRINTED CIRCUIT BOARD GROUND STUD TO TERMINAL BOARD NUMBER 1 (POS. 7)
SHIELD_GND	18	WHITE	TERMINAL BOARD NUMBER 1 (POS. 6) THROUGH DIODE TO TERMINAL BOARD NUMBER 1 (POS.7)
IL35A	18	RED	P19-C (POS. 4) TO P51 (POS. 8)
IL35B	18	RED	P17-C (POS. 4) TO P54 (POS. 8)
IL35C	18	RED	P14-C (POS. 3) TO P53 (POS. 8)
IL35E	18	RED	P3-C (POS. 12) TO P52 (POS. 8)
IL36A	18	WHITE	P19-C (POS. 2) TO P51 (POS. 7)
IL36B	18	WHITE	P17-C (POS. 1) TO P54 (POS. 7)
IL36C	18	WHITE	P14-C (POS. 2) TO P53 (POS. 7)
IL36E	18	WHITE	P3-C (POS. 6) TO P52 (POS. 7)
88A	18	GREEN	P51 (POS. 10) TO P19-C (POS. 5)
212A	18	RED	J76 (POS. 4) TO P39-C (POS. 15)
250E	18	WHITE	J76 (POS. 28) TO P39-C (POS. 11)
409A	18	ORANGE	J76 (POS. 14) TO P39-C (POS. 4)
458A	18	RED	J76 (POS. 1) TO P39-C (POS. 6)
659A	18	PINK	J76 (POS. 15) TO P39-C (POS. 13)
792B	18	WHITE	DATA LINK -, J76 (POS. 8) TO TERMINAL BOARD NUMBER 1 (POS. 4)
793B	18	BLACK	DATA LINK +, J76 (POS. 9) TO TERMINAL BOARD NUMBER 1 (POS. 3)
799A	18	GREEN	J76 (POS. 30) TO P39-C (POS. 9)
844A	18	YELLOW	J76 (POS. 17) TO P52 (POS. 3)
902A	18	BLUE	J76 (POS. 21) TO P51 (POS. 3)
903A	18	BLUE	J76 (POS. 19) TO P39-C (POS. 18)
905A	18	WHITE	J76 (POS. 20) TO P51 (POS. 9)
975A	18	WHITE	J76 (POS. 18) TO P53 (POS. 3)
978A	18	BROWN	J76 (POS. 22) TO P54 (POS. 3)
979A	18	ORANGE	J76 (POS. 29) TO P54 (POS. 4)
981A	18	GREEN	J76 (POS. 24) TO P39-C (POS. 14)
985A	18	BLUE	J76 (POS. 25) TO P111 (POS. A)
986A	18	BROWN	J76 (POS. 26) TO P111 (POS. C)
990C	20	GREEN	J1939 DATA LINK -, J76 (POS. 12) TO P94A (POS. B)
991C	20	YELLOW	J1939 DATA LINK +, J76 (POS. 13) TO P94A (POS. A)
990D	20	GREEN	J1939 DATA LINK -, P94C (POS. B) TO P124A (POS. B)
991D	20	YELLOW	J1939 DATA LINK +, P94C (POS. A) TO P124A (POS. A)
990E	20	GREEN	J1939 DATA LINK -, P124C (POS. B) TO P123A (POS. B)
991E	20	YELLOW	J1939 DATA LINK +, P124C (POS. A) TO P123A (POS. A)
993	18	WHITE	J76 (POS. 5) TO P39-C (POS. 16)
993A	18	WHITE	P39-C (POS. 17) TO P111 (POS. B)
993B	18	WHITE	P14-C (POS. 1) TO P53 (POS. 2)
993C	18	WHITE	P17-C (POS. 3) TO P54 (POS. 2 - CRIMPED WITH 993F)
993D	18	WHITE	J76 (POS. 2) TO P39-C (POS. 5)
993E	18	WHITE	J76 (POS. 3) TO P39-C (POS. 8)
993F	18	WHITE	P54 (POS. 5) TO P54 (POS. 2 - CRIMPED WITH 993C)
993H	18	WHITE	P3-C (POS. 5) TO P52 (POS. 2)
993J	18	WHITE	P19-C (POS. 6) TO P51 (POS. 2)
999A	18	WHITE	J76 (POS. 27) TO P39-C (POS. 7)
TB ING2	14	RED	TBI POS. 2 TO TBI POS. 3
TB GND2	14	WHITE	TBI POS. 8 TO TBI POS. 9

TWISTED PAIR

TWISTED PAIR J1939

TWISTED PAIR J1939

TWISTED PAIR J1939

TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, INSTRUMENTATION CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 80°C - 90°C TEMP. RATING

AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
18	ALPHA	5616B1801
	BELDEN	8719
16	ALPHA	5616B1601
	BELDEN	8720
14	ALPHA	5616B1401

J1939 TWISTED PAIR CABLE SPECIFICATIONS

TYPE - COMMUNICATION, CONTROL, DATA BUS CABLE, (1) TWISTED PAIR, 2 CONDUCTOR(STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 90°C - 150°C TEMPRATING FOR SAE J1939 USAGE, IMPEDANCE AT 120Ω ± 12Ω CONDUCTOR NO. 1 (GREEN), CONDUCTOR NO. 2 (YELLOW)

AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
20	ANIXTER	CE3656065
	RAYCHEM/STAF-CO	301
	CHAMPLAIN	15-00037 (11875)

NOTE - ALTERNATE BUILD:
CONNECTORS J94, J123, & J124 MAY BE REPLACED
BY EQUIVALENT SPLICE CIRCUITS WHICH MUST
CONFORM TO THE STANDARDS OF SAE J1939-111, APPENDIX C.

NOTES:

- CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- TAG HARNESS FOR IDENTIFICATION.
- ALL WIRING TO BE 6XL TYPE WIRES.
- WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- ALL RING TERMINALS, PUSH-ON TERMINALS, AND BUTT SPLICE CRIMPS SHALL BE SOLDERED OR MACHINE CRIMPED OR CRIMPED WITH A RATCHETING HAND TOOL THAT WILL NOT ALLOW ANY "BACKING OFF" OF A CRIMP, AND ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62020224 BY SLEEVEING EACH TERMINAL WITH A HEAT SHRINK INSULATOR: THE HEAT SHRINK IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.
- ALL DIMENSIONS SHOWN ARE ACTUAL WIRE LENGTHS.

CONNECTOR LIST

CONN.	VENDOR	PART NUMBER	DESCRIPTION	QTY.
P3-C	AMP	173851-1	CONNECTOR, 12-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	3
P14-C	AMP	174921-1	CONNECTOR, 3-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	3
P17-C	AMP	174923-1	CONNECTOR, 6-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	3
P19-C	AMP	174923-1	CONNECTOR, 6-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	4
P39-C	AMP	173853-1	CONNECTOR, 18-PIN, PCB WITH SECONDARY LOCK	1
	AMP	173631-6	WIRE TERMINAL, FEMALE, 18 AWG.	13
P51	CARLING	190-17500-001	CONNECTOR BODY, SWITCH, 10 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	6
P52	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	4
P53	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	4
P54	CARLING	999-16716-001	CONNECTOR BODY, SWITCH, 8 POSITION	1
	PACKARD	12020035	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 18-20 AWG.	5
	PACKARD	12015870	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	1
J76	DEUTSCH	DRC12-40PB	CONNECTOR BODY, SEALED, 40 PIN	1
	DEUTSCH	1060-16-0122	PIN, 16-18 AWG.	26
	DEUTSCH	114017	CAVITY PLUG	14
P94A, P123A, & P124A	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	TERMINAL, SOCKET, 20 AWG.	2
	DEUTSCH	W3S-P012	WEDGE LOCK, KEYS PLUG "A"	1
	DEUTSCH	0462-221-1631	TERMINAL, SOCKET, SHIELD DRAIN WIRE	1
P94C & P124C	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	TERMINAL, SOCKET, 20 AWG.	2
	DEUTSCH	W3S-1939-P012	WEDGE LOCK, KEYS PLUG "B"	1
	DEUTSCH	0462-221-1631	TERMINAL, SOCKET, SHIELD DRAIN WIRE	1
J94, J123, & J124	DEUTSCH	DT04-3P-P007	3 PIN "WYE"	1
P111	DEUTSCH	DT06-3S-E003	PLUG ASM., 3-WAY	1
	DEUTSCH	1062-16-0122	SOCKET, 16-18 AWG.	3
	DEUTSCH	W3S	WEDGE LOCK	1
P123C	DEUTSCH	DT06-3S-P006	120Ω TERMINATION ASSEMBLY	1

TERMINAL Δ	PART #	DESCRIPTION
S-A	61201312	RING TERMINAL, #10 STUD, 14 AWG.
S-DK	61201359	RING TERMINAL, #10 STUD, 18 AWG.
S-EE	61201330	RING TERMINAL, 5/16" STUD, 14 AWG.
S-GG	61201331	RING TERMINAL, 5/16" STUD, 2 AWG.
S-T	61201322	RING TERMINAL, 3/8" STUD, 2 AWG.

Sheet 2 of 2

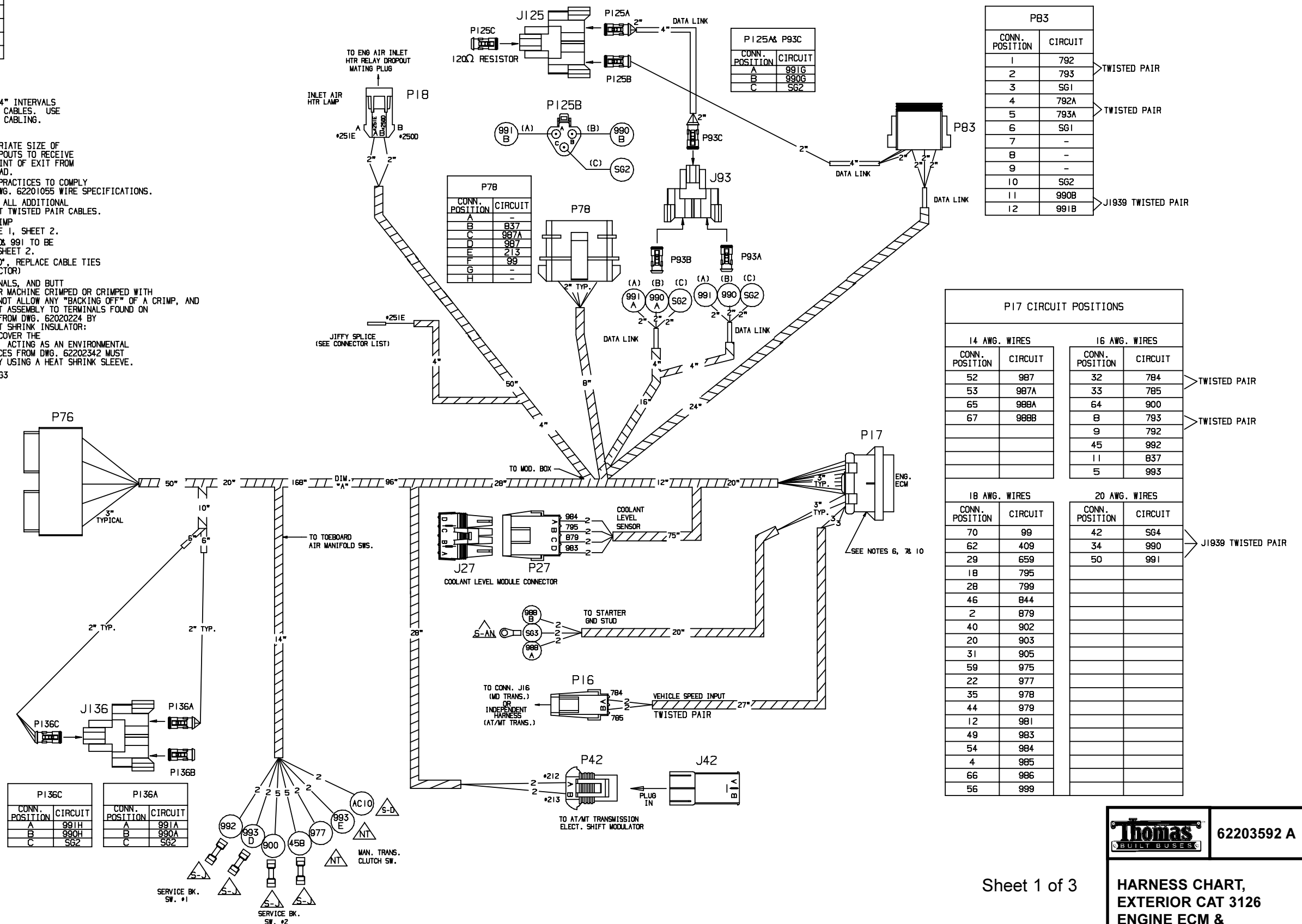
	62203665 B
HARNESS, ENGINE, INTERIOR CAT 3126 ECM & CONTROLS	

HARNESS PART NUMBER	WHEELBASE (IN.)	DIM. "A"
62203593	181	84
62203594	209	112
62203595	238	141
62203596	267	170
62203597	277	180

NOTES:

- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS: EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- 2) TAG HARNESS FOR IDENTIFICATION.
- 3) HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
- 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- 5) ALL 18 AWG. WIRE TO BE SXL TYPE. ALL ADDITIONAL WIRING TO BE GXL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
- 6) FOR WIRE NOS. 990& 991, FINAL CRIMP DIMENSION TO BE AS SHOWN ON FIGURE 1, SHEET 2.
- 7) THE SHIELD WIRE FOR WIRE NOS. 990& 991 TO BE TERMINATED AS SHOWN ON FIGURE 2, SHEET 2.
- 8) REMOVE CABLE TIES, TURN SHROUD 180°, REPLACE CABLE TIES (WIRES NOW EXIT FROM TOP OF CONNECTOR)
- 9) ALL RING TERMINALS, PUSH-ON TERMINALS, AND BUTT SPlice CRIMPS SHALL BE SOLDERED OR MACHINE CRIMPED WITH A RATCHETING HAND TOOL THAT WILL NOT ALLOW ANY "BACKING OFF" OF A CRIMP, AND ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62020224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR: THE HEAT SHRINK IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.
- 10) SPLICE SHIELD DRAIN WIRE S62 TO S63 AND S64 PER FIGURE 2, SHEET 2.

P76 ENGINE BULKHEAD	
CONN. POSITION	CIRCUIT
1	45B
2	993D
3	993E
4	212
5	993
8	792A
9	793A
10	S61
11	S62
12	990H
13	991H
14	409
15	659
17	844
18	975
19	903
20	905
21	902
22	97B
24	981
25	985
26	986
27	999
28	2500
29	979
30	799
31	AC10



Sheet 1 of 3

Thomas
BUILT BUSES

62203592 A

**HARNESS CHART,
EXTERIOR CAT 3126
ENGINE ECM &
CONTROLS**

CIRCUIT	AWG.	COLOR	DESCRIPTION	LENGTH (INCHES)
SG1	18	SHIELD GND	TWISTED PAIR CABLE SHIELD	-
SG2	20	SHIELD GND	TWISTED PAIR CABLE SHIELD	-
99	18	RED	P17 ENGINE ECM CONNECTOR (PIN 70) TO P78 VEC BLACK CONNECTOR (PIN F)	45
212	16	BLACK	P42 SHIFT MODULATOR CONN. (PIN A) TO P76 ENGINE BULKHEAD CONN. (PIN 4)	367 + DIM. "A"
213	18	WHITE	P78 VEC BLACK CONN. (PIN E) TO P42 SHIFT MODULATOR (PIN B)	68
250D	16	WHITE	P76 ENGINE BULKHEAD CONN. (PIN 28) TO P18 INLET AIR HEATER LAMP CONN. (PIN B)	421 + DIM. "A"
251E	16	BLACK	P18 INLET AIR HEATER LAMP CONN. (PIN A) TO JIFFY SPLICE TO INLET AIR HEATER COIL	56
409	18	ORANGE	P76 ENGINE BULKHEAD CONN. (PIN 14) TO P17 ENGINE ECM CONN. (PIN 62)	400 + DIM. "A"
458	16	RED	P76 ENGINE BULKHEAD CONN. (PIN 1) TO SERVICE BRAKE SW. # 2 (INPUT)	110
659	16	PINK	P76 ENGINE BULKHEAD CONN. (PIN 15) TO P17 ENGINE ECM CONN. (PIN 29)	400 + DIM. "A"
784	18	WHITE	P17 ENGINE ECM CONN. (PIN 32) TO P16 VEHICLE SPEED INPUT CONN. (PIN A)	32
785	18	BLACK	P17 ENGINE ECM CONN. (PIN 33) TO P16 VEHICLE SPEED INPUT CONN. (PIN B)	32
792	18	WHITE	DATA LINK -, P83 REAR BOX DATA LINK CONN. (PIN 1) TO P17 ENGINE ECM CONN. (PIN 6)	61
793	18	BLACK	DATA LINK +, P83 REAR BOX DATA LINK CONN. (PIN 2) TO P17 ENGINE ECM CONN. (PIN 8)	61
792A	16	WHITE	DATA LINK -, P83 REAR BOX DATA LINK CONN. (PIN 4) TO P76 ENGINE BULKHEAD CONN. (PIN 8)	391 + DIM. "A"
793A	16	BLACK	DATA LINK +, P83 REAR BOX DATA LINK CONN. (PIN 5) TO P76 ENGINE BULKHEAD CONN. (PIN 9)	391 + DIM. "A"
795	18	GREY	P17 ENGINE ECM CONN. (PIN 18) TO P27 COOLANT LEVEL SENSOR CONN. (PIN B)	100
799	18	GREEN	P17 ENGINE ECM CONN. (PIN 28) TO P76 ENGINE BULKHEAD CONN. (PIN 30)	400 + DIM. "A"
837	18	YELLOW	P17 ENGINE ECM CONN. (PIN 11) TO P78 VEC BLACK CONN. (PIN B)	45
844	18	PINK	P17 ENGINE ECM CONN. (PIN 46) TO P76 ENGINE BULKHEAD CONN. (PIN 17)	400 + DIM. "A"
879	18	ORANGE	P17 ENGINE ECM CONN. (PIN 2) TO P27 LOW COOLANT LEVEL CONN. (PIN C)	100
900	16	WHITE	P17 ENGINE ECM CONN. (PIN 64) TO SERVICE BRAKE SWITCH # 2 (OUTPUT)	346 + DIM. "A"
902	18	GREEN	P17 ENGINE ECM CONN. (PIN 40) TO P76 ENGINE BULKHEAD CONN. (PIN 21)	400 + DIM. "A"
903	18	BLUE	P17 ENGINE ECM CONN. (PIN 20) TO P76 ENGINE BULKHEAD CONN. (PIN 19)	400 + DIM. "A"
905	18	RED	P17 ENGINE ECM CONN. (PIN 31) TO P76 ENGINE BULKHEAD CONN. (PIN 20)	400 + DIM. "A"
975	18	WHITE	P17 ENGINE ECM CONN. (PIN 59) TO P76 ENGINE BULKHEAD CONN. (PIN 18)	400 + DIM. "A"
977	18	BLUE	P17 ENGINE ECM CONN. (PIN 22) TO MANUAL TRANSMISSION CLUTCH SWITCH (OUTPUT)	343 + DIM. "A"
978	18	BROWN	P17 ENGINE ECM CONN. (PIN 35) TO P76 ENGINE BULKHEAD CONN. (PIN 22)	400 + DIM. "A"
979	18	ORANGE	P17 ENGINE ECM CONN. (PIN 44) TO P76 ENGINE BULKHEAD CONN. (PIN 29)	400 + DIM. "A"
981	18	GREEN	P17 ENGINE ECM CONN. (PIN 12) TO P76 ENGINE BULKHEAD CONN. (PIN 24)	400 + DIM. "A"
983	18	WHITE	P17 ENGINE ECM CONN. (PIN 49) TO P27 LOW COOLANT LEVEL CONN. (PIN D)	100
984	18	YELLOW	P17 ENGINE ECM CONN. (PIN 54) TO P27 LOW COOLANT LEVEL CONN. (PIN A)	100
985	18	BLUE	P17 ENGINE ECM CONN. (PIN 4) TO P76 ENGINE BULKHEAD CONN. (PIN 25)	400 + DIM. "A"
986	18	BROWN	P17 ENGINE ECM CONN. (PIN 66) TO P76 ENGINE BULKHEAD CONN. (PIN 26)	400 + DIM. "A"
987	14	RED	P17 ENGINE ECM CONN. (PIN 52) TO P78 VEC BLACK CONN. (PIN D)	45
987A	14	RED	P17 ENGINE ECM CONN. (PIN 53) TO P78 VEC BLACK CONN. (PIN C)	45
988A	14	BLACK	P17 ENGINE ECM CONN. (PIN 65) TO STARTER GND STUD	25
988B	14	BLACK	P17 ENGINE ECM CONN. (PIN 67) TO STARTER GND STUD	25
990	20	GREEN	DATA LINK -, P17 ENGINE ECM CONN. (PIN 34) TO P93A "WYE" (PIN B)	55
991	20	YELLOW	DATA LINK +, P17 ENGINE ECM CONN. (PIN 50) TO P93A "WYE" (PIN A)	55
990A	20	GREEN	DATA LINK -, P93B "WYE" (PIN B) TO P136A (PIN B)	352 + DIM. "A"
991A	20	YELLOW	DATA LINK +, P93B "WYE" (PIN A) TO P136A (PIN A)	352 + DIM. "A"
990B	20	GREEN	DATA LINK -, P125B "WYE" (PIN B) TO P83 REAR BOX DATA LINK CONN. (PIN 11)	8
991B	20	YELLOW	DATA LINK +, P125B "WYE" (PIN A) TO P83 REAR BOX DATA LINK CONN. (PIN 12)	8
990C	20	GREEN	DATA LINK -, P93C (PIN B) TO P125A (PIN B)	8
991C	20	YELLOW	DATA LINK +, P93C (PIN A) TO P125A (PIN A)	8
990H	20	GREEN	DATA LINK -: P136C (PIN B) TO P76 ENGINE BULKHEAD CONN. (PIN 12)	71
991H	20	YELLOW	DATA LINK +: P136C (PIN A) TO P76 ENGINE BULKHEAD CONN. (PIN 13)	71
992	16	VIOLET	P17 ENGINE ECM CONN. (PIN 45) TO SERVICE BRAKE SWITCH # 1 (OUTPUT)	343 + DIM. "A"
993	16	WHITE	P17 ENGINE ECM CONN. (PIN 5) TO P76 ENGINE BULKHEAD CONN. (PIN 5)	400 + DIM. "A"
993D	16	WHITE	P76 ENGINE BULKHEAD CONN. (PIN 2) TO SERVICE BRAKE SWITCH # 1 (INPUT)	89
993E	18	WHITE	P76 ENGINE BULKHEAD CONN. (PIN 3) TO MANUAL TRANSMISSION CLUTCH SWITCH (INPUT)	89
999	18	GREEN	P17 ENGINE ECM CONN. (PIN 56) TO P76 ENGINE BULKHEAD CONN. (PIN 27)	400 + DIM. "A"
SG3	20	WHITE	SG2 SPLICE THROUGH DIODE TO STARTER GROUND STUD	22
SG4	20	WHITE	SG2 SPLICE TO P17 ENGINE ECM CONN. (PIN 42)	3
SG3A	20	WHITE	SG2 SPLICE TO DIODE	3
AC10	16	BLACK	P76 (POS. NO. 31) TO BRAKE SWITCH 3	84

TERM.	PART #	DESCRIPTION
S-A	61201312	RING TERMINAL, #10 STUD, 14 AWG.
S-AN	61201339	RING TERMINAL, 1/2" STUD, 10 AWG.
S-AR	61201342	MALE BLADE, 1/4", 16-14 AWG.
S-D	61201314	RING TERMINAL, 1/4" STUD, 16 AWG.
NT	-	NO TERMINATION REQUIRED, HEAT SHRINK INSULATE END OF WIRE LEAD
S-J	61201316	BUTT SPLICE, 14 AWG.
S-CL	61201360	BUTT SPLICE, 18 AWG.

TWISTED PAIR, UNSHIELDED, 18 AWG.

TWISTED PAIR, SHIELDED, 18 AWG.

TWISTED PAIR, SHIELDED, 16 AWG.

TWISTED PAIR, SHIELDED, 20 AWG. J1939

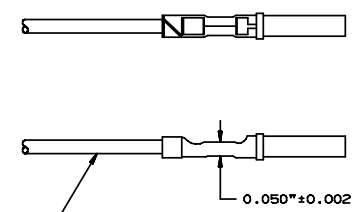
TWISTED PAIR, SHIELDED, 20 AWG. J1939

TWISTED PAIR, SHIELDED, 20 AWG. J1939

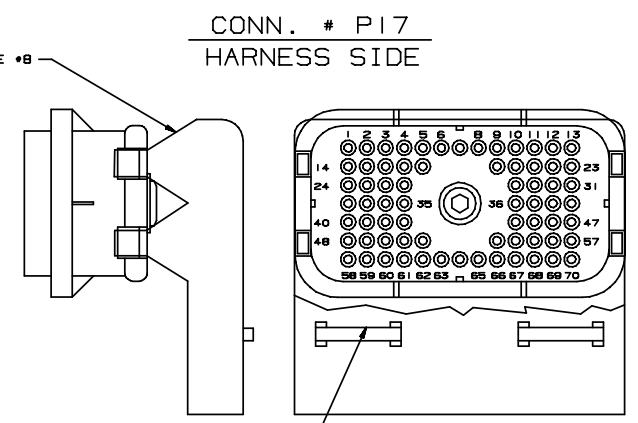
TWISTED PAIR, SHIELDED, 20 AWG. J1939

TWISTED PAIR, SHIELDED, 20 AWG. J1939

FIGURE 1
WIRE NOS. 990, 991 & SG4 (GND WIRE)

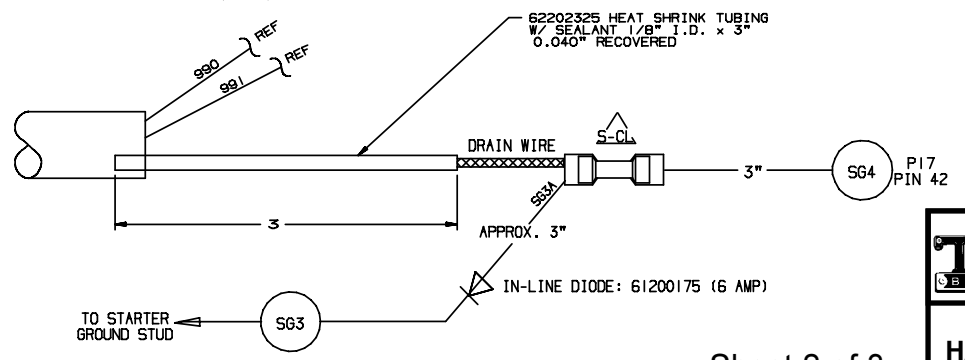


(WIRES 990, 991, & SG4) 20 AWG.



(2) 61200508
HEAVY DUTY CABLE TIE
15 x .3 x .078 THICK
120 LBS MIN STRENGTH
OR EQUIVALENT.

FIGURE 2
(WIRES SG2, SG3, AND SG4)



Thomas
BUILT BUSES
62203592 A

Sheet 2 of 3

**HARNESS CHART,
EXTERIOR CAT 3126
ENGINE ECM &
CONTROLS**

CONNECTOR LIST				
CONN.	VENDOR	PART #	DESCRIPTION	QTY.
P16	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
P17	AMP	776241-1	CONNECTOR BODY, 70 CAVITIES	1
	AMP	776093-1	WIRE TERMINAL, FEMALE SOCKET, 14, 16, 18 AWG., GOLD PLATED	35
	AMP	638092-1	CONN., ENDBEL SHROUD	1
	DEUTSCH	114017	CAVITY PLUG	35
P18	PACKARD	12162000	CONNECTOR ASM., METRI-PACK, 2-WAY, MALE	1
	PACKARD	12045773-1	WIRE TERMINAL, METRI-PACK, MALE, 18-20 AWG.	2
	PACKARD	12048086	CABLE SEAL	2
	PACKARD	12052634	SECONDARY LOCK	1
J27	PACKARD	12015797	CONNECTOR ASM., WEATHERPACK, 4-WAY, FEMALE	1
	PACKARD	12010300	CAVITY PLUG	4
P27	PACKARD	12010974	CONNECTOR ASM., WEATHERPACK, 4-WAY, MALE	1
	PACKARD	12089040-L	TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	4
	PACKARD	12015323	CABLE SEAL	4
J42	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2-WAY, MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG	2
P42	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2-WAY, FEMALE	1
	PACKARD	12077411-L	WIRE TERMINAL, METRI-PACK, FEMALE, 18, 18, 20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
	PACKARD	15300014	SECONDARY LOCK	1
P76	DEUTSCH	DRC18-40SB	CONNECTOR BODY, SEALED, 40 PIN WITH MOUNTING SCREW	1
	DEUTSCH	1062-16-0122	SOCKET, STAMPED & FORMED, NICKEL PLATED, 16-18 AWG.	27
	DEUTSCH	114017	CAVITY PLUG	14
P78	BUSSMANN	32006-A22	BUSSMANN AUTOMOTIVE TECHNOLOGIES CONNECTOR ASM., SEALED, TANGED, BLACK	1
	BUSSMANN	32006-TP2	TPA FOR SEALED CONNECTOR	1
	PACKARD	12077411	WIRE TERMINAL, METRI-PACK 280 SERIES, FEMALE, 18-16 AWG.	3
	PACKARD	12089444	CABLE SEAL, METRI-PACK, 18 AWG.	3
	PACKARD	12129493	WIRE TERMINAL, METRI-PACK 280 SERIES, FEMALE, 14-12 AWG.	2
	PACKARD	12015284	CABLE SEAL, METRI-PACK, 14 AWG.	2
P83	DEUTSCH	DT06-12S-F005	CONNECTOR ASM., 12-WAY DT SERIES PLUG	1
	DEUTSCH	1062-16-0122	SOCKET, STAMPED & FORMED, NICKEL PLATED, 16-18 AWG.	9
	DEUTSCH	114017	CAVITY PLUG	3
	DEUTSCH	W12S	SECONDARY LOCKING WEDGE, 12 POSITION SOCKET/PLUG	1
	DEUTSCH	DT12S-BT	DT SERIES CONNECTOR BOOT	1
J93, J125, & J136	DEUTSCH	DT04-3P-P007	3 PIN "WYE"	1
P93A, P125A, & P136A	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	SOCKET, 20 AWG.	2
	DEUTSCH	W3S-P012	WEDGE LOCK, KEYED PLUG "A"	1
	DEUTSCH	0462-221-1631	SOCKET, SHIELD DRAIN WIRE	1
	DEUTSCH	DT3S-BT	DT SERIES CONNECTOR BOOT	1
P93B, P93C, P125B, & P136C	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	SOCKET, 20 AWG.	2
	DEUTSCH	W3S-1939-P012	WEDGE LOCK, KEYED PLUG "B"	1
	DEUTSCH	0462-221-1631	SOCKET, SHIELD DRAIN WIRE	1
	DEUTSCH	DT3S-BT	DT SERIES CONNECTOR BOOT	1
P125C	DEUTSCH	DT06-3S-P006	120Q2 PLUG ASSEMBLY	1
P136B	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	W3S-1939-P012	WEDGE LOCK, KEYED PLUG "B"	1
	DEUTSCH	114017	CAVITY PLUG	3
JIFFY SPLICE	DEUTSCH	JS-16-00	JIFFY SPLICE, 16-18 AWG.	1
	DEUTSCH	1060-16-0122	PIN, 16-18 AWG.	1

TWISTED PAIR CABLE SPECIFICATIONS		
TYPE - COMMUNICATION, CONTROL, INSTRUMENTATION CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING. 300V - 600V RATING. 80°C - 90°C TEMP. RATING		
AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
18	ALPHA	5616B1801
16	BELDEN	8719
	ALPHA	5616B1601
14	BELDEN	8720
	ALPHA	5616B1401

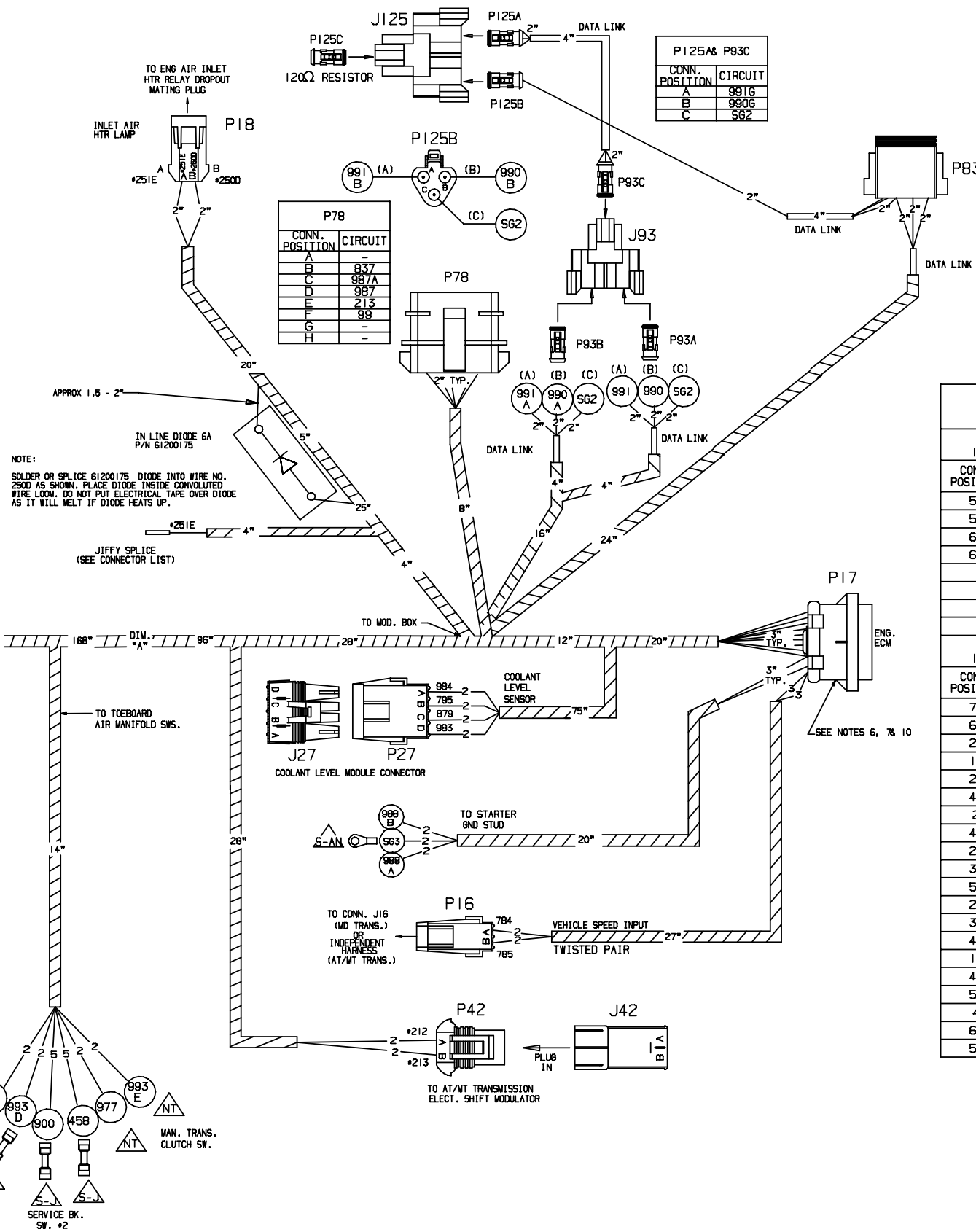
J1939 TWISTED PAIR CABLE SPECIFICATIONS		
TYPE - COMMUNICATION, CONTROL, DATA BUS CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 90°C - 150°C TEMPRATING FOR SAE J1939 USAGE. IMPEDANCE AT 120Ω ± 12Ω CONDUCTOR NO. 1 (GREEN), CONDUCTOR NO. 2 (YELLOW)		
AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
20	ANIXTER	CE3656065
	RAYCHEM/STAF-CO	301
	CHAMPLAIN	15-00037 (11875)



HARNESS PART NUMBER	WHEELBASE (IN.)	DIM. "A"
62203544	181	84
62203545	209	112
62203546	238	141
62203547	267	170
62203548	277	180

NOTES:

- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- 2) TAG HARNESS FOR IDENTIFICATION.
- 3) HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
- 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- 5) ALL 18 AWG. WIRE TO BE SXL TYPE. ALL ADDITIONAL WIRING TO BE GXL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
- 6) FOR WIRE NOS. 990& 991, FINAL CRIMP DIMENSION TO BE AS SHOWN ON FIGURE 1, SHEET 2.
- 7) THE SHIELD WIRE FOR WIRE NOS. 990& 991 TO BE TERMINATED AS SHOWN ON FIGURE 2, SHEET 2.
- 8) REMOVE CABLE TIES, TURN SHROUD 180°, REPLACE CABLE TIES (WIRES NOW EXIT FROM TOP OF CONNECTOR)
- 9) ALL RING TERMINALS, PUSH-ON TERMINALS, AND BUTT SPLICE CRIMPS SHALL BE SOLDERED OR MACHINE CRIMPED OR CRIMPED WITH A RATCHETING HAND TOOL THAT WILL NOT ALLOW ANY "BACKING OFF" OF A CRIMP, AND ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62202024 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR; THE HEAT SHRINK IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.
- 10) SPLICE SHIELD DRAIN WIRE SG2 TO SG3 AND SG4 PER FIGURE 2, SHEET 2.



NOTE:
SOLDER OR SPLICE 6/200175 DIODE INTO WIRE NO. 2500 AS SHOWN. PLACE DIODE INSIDE CONVOLUTED WIRE LOOM. DO NOT PUT ELECTRICAL TAPE OVER DIODE AS IT WILL MELT IF DIODE HEATS UP.

CONN. POSITION	CIRCUIT
A	991G
B	990G
C	SG2

CONN. POSITION	CIRCUIT
A	837
B	987A
C	987
D	213
E	99
F	-
G	-
H	-

CONN. POSITION	CIRCUIT	
1	792	TWISTED PAIR
2	793	
3	SG1	
4	792A	TWISTED PAIR
5	793A	
6	SG1	
7	-	
8	-	
9	-	
10	SG2	
11	990B	J1939 TWISTED PAIR
12	991B	

CONN. POSITION	CIRCUIT	
1	458	
2	993D	
3	993E	
4	212	
5	993	
8	792A	TWISTED PAIR
9	793A	
10	SG1	
11	SG2	
12	990H	J1939 TWISTED PAIR
13	991H	
14	409	
15	659	
17	844	
18	975	
19	903	
20	905	
21	902	
22	978	
24	981	
25	985	
26	986	
27	999	
28	2500	
29	979	
30	799	

CONN. POSITION	CIRCUIT
A	991H
B	990H
C	SG2

CONN. POSITION	CIRCUIT
A	991A
B	990A
C	SG2

14 AWG. WIRES		16 AWG. WIRES		
CONN. POSITION	CIRCUIT	CONN. POSITION	CIRCUIT	
52	987	32	784	TWISTED PAIR
53	987A	33	785	
65	988A	64	900	TWISTED PAIR
67	988B	8	793	
		9	792	
		45	992	
		11	837	
		5	993	

18 AWG. WIRES		20 AWG. WIRES		
CONN. POSITION	CIRCUIT	CONN. POSITION	CIRCUIT	
70	99	42	SG4	J1939 TWISTED PAIR
62	409	34	990	
29	659	50	991	
18	795			
28	799			
46	844			
2	879			
40	902			
20	903			
31	905			
59	975			
22	977			
35	978			
44	979			
12	981			
49	983			
54	984			
4	985			
66	986			
56	999			

Sheet 1 of 3

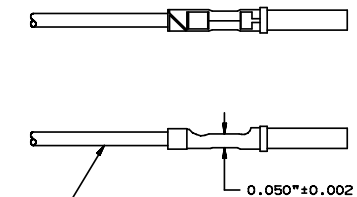
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HARNESS CHART,
EXTERIOR CAT 3126
ENGINE ECM &
CONTROLS

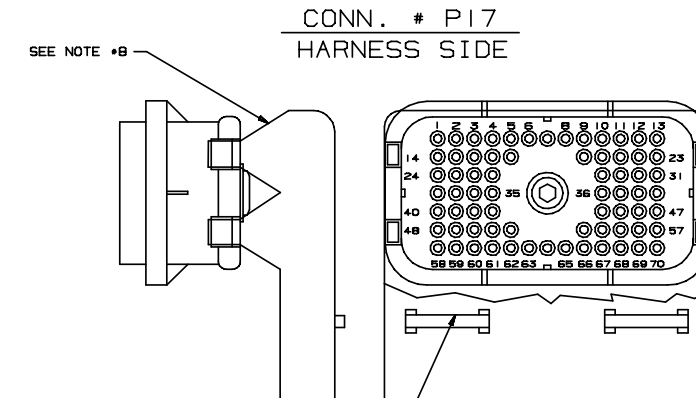
CIRCUIT	AWG.	COLOR	DESCRIPTION	LENGTH (INCHES)
S61	18	SHIELD GND	TWISTED PAIR CABLE SHIELD	-
S62	20	SHIELD GND	TWISTED PAIR CABLE SHIELD	-
99	18	RED	P17 ENGINE ECM CONNECTOR (PIN 70) TO P78 VEC BLACK CONNECTOR (PIN F)	45
212	16	BLACK	P42 SHIFT MODULATOR CONN. (PIN A) TO P76 ENGINE BULKHEAD CONN. (PIN 4)	367 + DIM. "A"
213	18	WHITE	P78 VEC BLACK CONN. (PIN E) TO P42 SHIFT MODULATOR (PIN B)	68
250D	16	WHITE	P76 ENGINE BULKHEAD CONN. (PIN 28) TO P18 INLET AIR HEATER LAMP CONN. (PIN B)	421 + DIM. "A"
251E	16	BLACK	P18 INLET AIR HEATER LAMP CONN. (PIN A) TO JIFFY SPLICE TO INLET AIR HEATER COIL	56
409	18	ORANGE	P76 ENGINE BULKHEAD CONN. (PIN 14) TO P17 ENGINE ECM CONN. (PIN 62)	400 + DIM. "A"
458	16	RED	P76 ENGINE BULKHEAD CONN. (PIN 1) TO SERVICE BRAKE SW. * 2 (INPUT)	110
659	16	PINK	P76 ENGINE BULKHEAD CONN. (PIN 15) TO P17 ENGINE ECM CONN. (PIN 29)	400 + DIM. "A"
784	18	WHITE	P17 ENGINE ECM CONN. (PIN 32) TO P16 VEHICLE SPEED INPUT CONN. (PIN A)	32
785	18	BLACK	P17 ENGINE ECM CONN. (PIN 33) TO P16 VEHICLE SPEED INPUT CONN. (PIN B)	32
792	18	WHITE	DATA LINK -, P83 REAR BOX DATA LINK CONN. (PIN 1) TO P17 ENGINE ECM CONN. (PIN 9)	61
793	18	BLACK	DATA LINK +, P83 REAR BOX DATA LINK CONN. (PIN 2) TO P17 ENGINE ECM CONN. (PIN 8)	61
792A	16	WHITE	DATA LINK -, P83 REAR BOX DATA LINK CONN. (PIN 4) TO P76 ENGINE BULKHEAD CONN. (PIN 8)	391 + DIM. "A"
793A	16	BLACK	DATA LINK +, P83 REAR BOX DATA LINK CONN. (PIN 5) TO P76 ENGINE BULKHEAD CONN. (PIN 9)	391 + DIM. "A"
795	18	GREY	P17 ENGINE ECM CONN. (PIN 18) TO P27 COOLANT LEVEL SENSOR CONN. (PIN B)	100
799	18	GREEN	P17 ENGINE ECM CONN. (PIN 28) TO P76 ENGINE BULKHEAD CONN. (PIN 30)	400 + DIM. "A"
837	18	YELLOW	P17 ENGINE ECM CONN. (PIN 11) TO P78 VEC BLACK CONN. (PIN B)	45
844	18	PINK	P17 ENGINE ECM CONN. (PIN 46) TO P76 ENGINE BULKHEAD CONN. (PIN 17)	400 + DIM. "A"
879	18	ORANGE	P17 ENGINE ECM CONN. (PIN 2) TO P27 LOW COOLANT LEVEL CONN. (PIN C)	100
900	16	WHITE	P17 ENGINE ECM CONN. (PIN 64) TO SERVICE BRAKE SWITCH * 2 (OUTPUT)	346 + DIM. "A"
902	18	GREEN	P17 ENGINE ECM CONN. (PIN 40) TO P76 ENGINE BULKHEAD CONN. (PIN 21)	400 + DIM. "A"
903	18	BLUE	P17 ENGINE ECM CONN. (PIN 20) TO P76 ENGINE BULKHEAD CONN. (PIN 19)	400 + DIM. "A"
905	18	RED	P17 ENGINE ECM CONN. (PIN 31) TO P76 ENGINE BULKHEAD CONN. (PIN 20)	400 + DIM. "A"
975	18	WHITE	P17 ENGINE ECM CONN. (PIN 59) TO P76 ENGINE BULKHEAD CONN. (PIN 18)	400 + DIM. "A"
977	18	BLUE	P17 ENGINE ECM CONN. (PIN 22) TO MANUAL TRANSMISSION CLUTCH SWITCH (OUTPUT)	343 + DIM. "A"
978	18	BROWN	P17 ENGINE ECM CONN. (PIN 35) TO P76 ENGINE BULKHEAD CONN. (PIN 22)	400 + DIM. "A"
979	18	ORANGE	P17 ENGINE ECM CONN. (PIN 44) TO P76 ENGINE BULKHEAD CONN. (PIN 29)	400 + DIM. "A"
981	18	GREEN	P17 ENGINE ECM CONN. (PIN 12) TO P76 ENGINE BULKHEAD CONN. (PIN 24)	400 + DIM. "A"
983	18	WHITE	P17 ENGINE ECM CONN. (PIN 49) TO P27 LOW COOLANT LEVEL CONN. (PIN D)	100
984	18	YELLOW	P17 ENGINE ECM CONN. (PIN 54) TO P27 LOW COOLANT LEVEL CONN. (PIN A)	100
985	18	BLUE	P17 ENGINE ECM CONN. (PIN 4) TO P76 ENGINE BULKHEAD CONN. (PIN 25)	400 + DIM. "A"
986	18	BROWN	P17 ENGINE ECM CONN. (PIN 66) TO P76 ENGINE BULKHEAD CONN. (PIN 26)	400 + DIM. "A"
987	14	RED	P17 ENGINE ECM CONN. (PIN 52) TO P78 VEC BLACK CONN. (PIN D)	45
987A	14	RED	P17 ENGINE ECM CONN. (PIN 53) TO P78 VEC BLACK CONN. (PIN C)	45
988A	14	BLACK	P17 ENGINE ECM CONN. (PIN 65) TO STARTER GND STUD	25
988B	14	BLACK	P17 ENGINE ECM CONN. (PIN 67) TO STARTER GND STUD	25
990	20	GREEN	DATA LINK -, P17 ENGINE ECM CONN. (PIN 34) TO P93A "WYE" (PIN B)	55
991	20	YELLOW	DATA LINK +, P17 ENGINE ECM CONN. (PIN 50) TO P93A "WYE" (PIN A)	55
990A	20	GREEN	DATA LINK -, P93B "WYE" (PIN B) TO P136A (PIN B)	352 + DIM. "A"
991A	20	YELLOW	DATA LINK +, P93B "WYE" (PIN A) TO P136A (PIN A)	352 + DIM. "A"
990B	20	GREEN	DATA LINK -, P125B "WYE" (PIN B) TO P83 REAR BOX DATA LINK CONN. (PIN 11)	8
991B	20	YELLOW	DATA LINK +, P125B "WYE" (PIN A) TO P83 REAR BOX DATA LINK CONN. (PIN 12)	8
990G	20	GREEN	DATA LINK -, P93C (PIN B) TO P125A (PIN B)	8
991G	20	YELLOW	DATA LINK +, P93C (PIN A) TO P125A (PIN A)	8
990H	20	GREEN	DATA LINK -: P136C (PIN B) TO P76 ENGINE BULKHEAD CONN. (PIN 12)	71
991H	20	YELLOW	DATA LINK +: P136C (PIN A) TO P76 ENGINE BULKHEAD CONN. (PIN 13)	71
992	16	VIOLET	P17 ENGINE ECM CONN. (PIN 45) TO SERVICE BRAKE SWITCH * 1 (OUTPUT)	343 + DIM. "A"
993	16	WHITE	P17 ENGINE ECM CONN. (PIN 5) TO P76 ENGINE BULKHEAD CONN. (PIN 5)	400 + DIM. "A"
993D	16	WHITE	P76 ENGINE BULKHEAD CONN. (PIN 2) TO SERVICE BRAKE SWITCH * 1 (INPUT)	89
993E	18	WHITE	P76 ENGINE BULKHEAD CONN. (PIN 3) TO MANUAL TRANSMISSION CLUTCH SWITCH (INPUT)	89
999	18	GREEN	P17 ENGINE ECM CONN. (PIN 56) TO P76 ENGINE BULKHEAD CONN. (PIN 27)	400 + DIM. "A"
S63	20	WHITE	S62 SPLICE THROUGH DIODE TO STARTER GROUND STUD	22
S64	20	WHITE	S62 SPLICE TO P17 ENGINE ECM CONN. (PIN 42)	3
S63A	20	WHITE	S62 SPLICE TO DIODE	3

TERM.	PART #	DESCRIPTION
S-A	61201312	RING TERMINAL, #10 STUD, 14 AWG.
S-AN	61201339	RING TERMINAL, 1/2" STUD, 10 AWG.
S-AR	61201342	MALE BLADE, 1/4", 16-14 AWG.
NT	-	NO TERMINATION REQUIRED, HEAT SHRINK INSULATE END OF WIRE LEAD
S-J	61201316	BUTT SPLICE, 14 AWG.
S-CL	61201360	BUTT SPLICE, 18 AWG.

FIGURE 1
WIRE NOS. 990, 991 & S64 (GND WIRE)

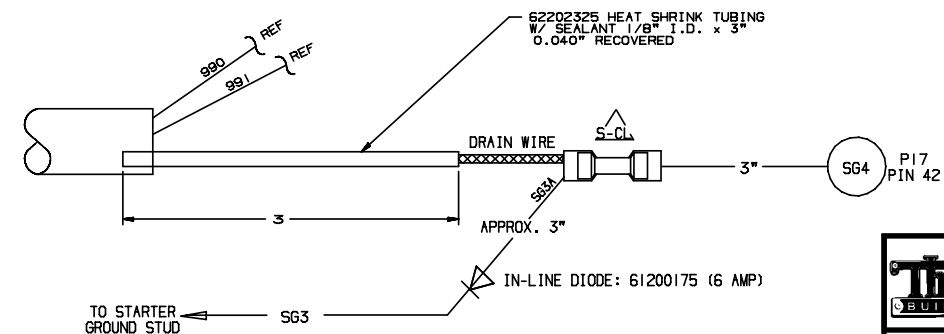


(WIRES 990, 991, & S64) 20 AWG.



(2) 61200508
HEAVY DUTY CABLE TIE
15 x .3 x .078 THICK
120 LBS MIN STRENGTH
OR EQUIVALENT.

FIGURE 2
(WIRES S62, S63, AND S64)



Sheet 2 of 3



**HARNES CHART,
EXTERIOR CAT 3126
ENGINE ECM &
CONTROLS**

CONNECTOR LIST				
CONN.	VENDOR	PART #	DESCRIPTION	QTY.
P16	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2-WAY, MALE	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
P17	AMP	776241-1	CONNECTOR BODY, 70 CAVITIES	1
	DEUTSCH	3662-204--1690	WIRE TERMINAL, FEMALE SOCKET, 14, 16, 18 AWG., GOLD PLATED	35
	AMP	638092-1	CONN., ENDBEL SHROUD	1
	DEUTSCH	114017	CAVITY PLUG	35
P18	PACKARD	12162000	CONNECTOR ASM., METRI-PACK, 2-WAY, MALE	1
	PACKARD	12045773-1	WIRE TERMINAL, METRI-PACK, MALE, 18-20 AWG.	2
	PACKARD	12049086	CABLE SEAL	2
	PACKARD	12052634	SECONDARY LOCK	1
J27	PACKARD	12015797	CONNECTOR ASM., WEATHERPACK, 4-WAY, FEMALE	1
	PACKARD	12010300	CAVITY PLUG	4
P27	PACKARD	12010974	CONNECTOR ASM., WEATHERPACK, 4-WAY, MALE	1
	PACKARD	12089040-L	TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	4
	PACKARD	12015323	CABLE SEAL	4
J42	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2-WAY, MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG	2
P42	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2-WAY, FEMALE	1
	PACKARD	12077411-L	WIRE TERMINAL, METRI-PACK, FEMALE, 16, 18, 20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
	PACKARD	15300014	SECONDARY LOCK	1
P76	DEUTSCH	DRC18-405B	CONNECTOR BODY, SEALED, 40 PIN WITH MOUNTING SCREW	1
	DEUTSCH	1062-16-0122	SOCKET, STAMPED & FORMED, NICKEL PLATED, 16-18 AWG.	26
	DEUTSCH	114017	CAVITY PLUG	14
P78	BUSSMANN	32006-A22	BUSSMANN AUTOMOTIVE TECHNOLOGIES CONNECTOR ASM., SEALED, TANGED, BLACK	1
	BUSSMANN	32006-TP2	TPA FOR SEALED CONNECTOR	1
	PACKARD	12077411	WIRE TERMINAL, METRI-PACK 280 SERIES, FEMALE, 18-16 AWG.	3
	PACKARD	12089444	CABLE SEAL, METRI-PACK, 18 AWG.	3
	PACKARD	12129493	WIRE TERMINAL, METRI-PACK 280 SERIES, FEMALE, 14-12 AWG.	2
	PACKARD	12015284	CABLE SEAL, METRI-PACK, 14 AWG.	2
P83	DEUTSCH	DT06-12S-E005	CONNECTOR ASM., 12-WAY DT SERIES PLUG	1
	DEUTSCH	1062-16-0122	SOCKET, STAMPED & FORMED, NICKEL PLATED, 16-18 AWG.	9
	DEUTSCH	114017	CAVITY PLUG	3
	DEUTSCH	W12S	SECONDARY LOCKING WEDGE, 12 POSITION SOCKET/PLUG	1
	DEUTSCH	DT12S-BT	DT SERIES CONNECTOR BOOT	1
J93, J125, & J136	DEUTSCH	DT04-3P-P007	3 PIN "WYE"	1
P93A, P125A, & P136A	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	SOCKET, 20 AWG.	2
	DEUTSCH	W3S-P012	WEDGE LOCK, KEYED PLUG "A"	1
	DEUTSCH	0462-221-1631	SOCKET, SHIELD DRAIN WIRE	1
	DEUTSCH	DT3S-BT	DT SERIES CONNECTOR BOOT	1
P93B, P93C, P125B, & P136C	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	3662-204-1690	SOCKET, 20 AWG.	2
	DEUTSCH	W3S-1939-P012	WEDGE LOCK, KEYED PLUG "B"	1
	DEUTSCH	0462-221-1631	SOCKET, SHIELD DRAIN WIRE	1
	DEUTSCH	DT3S-BT	DT SERIES CONNECTOR BOOT	1
P125C	DEUTSCH	DT06-3S-P006	1200 PLUG ASSEMBLY	1
P136B	DEUTSCH	DT06-3S-P032	PLUG ASM., 3-WAY	1
	DEUTSCH	W3S-1939-P012	WEDGE LOCK, KEYED PLUG "B"	1
	DEUTSCH	114017	CAVITY PLUG	3
JIFFY SPLICE	DEUTSCH	JS-16-00	JIFFY SPLICE, 16-18 AWG.	1
	DEUTSCH	1060-16-0122	PIN, 16-18 AWG.	1

TWISTED PAIR CABLE SPECIFICATIONS		
TYPE - COMMUNICATION, CONTROL, INSTRUMENTATION CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 80°C - 90°C TEMP. RATING		
AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
18	ALPHA	5616B1801
16	BELDEN	8719
	ALPHA	5616B1601
14	BELDEN	8720
	ALPHA	5616B1401

J1939 TWISTED PAIR CABLE SPECIFICATIONS		
TYPE - COMMUNICATION, CONTROL, DATA BUS CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 90°C - 150°C TEMPRATING FOR SAE J1939 USAGE, IMPEDANCE AT 120Ω ± 12Ω CONDUCTOR NO. 1 (GREEN), CONDUCTOR NO. 2 (YELLOW)		
AWG.	APPROVED VENDORS OF CABLE	PART NUMBER
20	ANIXTER	CE3656065
	RAYCHEM/STAF-CO	301
	CHAMPLAIN	15-00037 (11875)

Sheet 3 of 3



**HARNESS CHART,
EXTERIOR CAT 3126
ENGINE ECM &
CONTROLS**

NOTE - ALTERNATE BUILD:
CONNECTORS J93, J136, & J125 MAY BE REPLACED
BY EQUIVALENT SPLICE CIRCUITS WHICH MUST
CONFORM TO THE STANDARDS OF SAE J1939-11, APPENDIX C.

CONNECTOR PARTS LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	DEUTSCH	HD10-6-12P	SQUARE FLANGE RECEPTACLE, 6 POSITION, MALE	1
	DEUTSCH	0460-220-1231	PIN CONTACT, 14-16 AWG.	4
	DEUTSCH	HDC16-6	SEAL CAP	1
	DEUTSCH	HD18-006	STRAIN RELIEF	1
	DEUTSCH	114017	SEAL PLUG	2

TWISTED PAIR CABLE SPECIFICATION

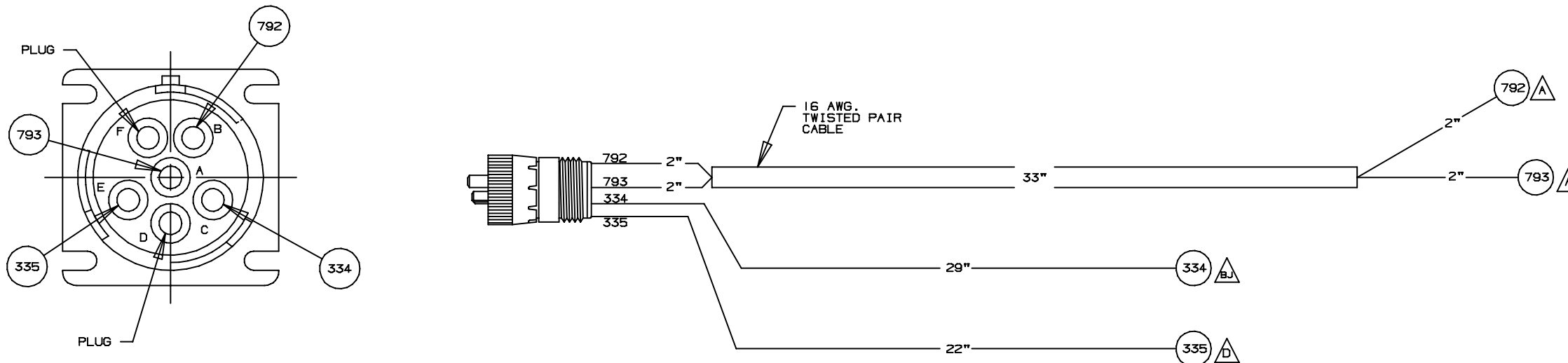
TYPE - COMMUNICATION, CABLE, INSTRUMENTATION. (1) TWISTED PAIR, 2 CONDUCTOR, (STRANDED) W/DRAIN WIRE. 100% SHIELD COVERING. 300V - 600V RATING. 80°C - 90°C TEMP. RATING.

AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN	8719
	ALPHA	5616B1601

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.

CIRCUIT	GA	COLOR	DESCRIPTION	LENGTH (IN)
334	14	RED	DATA LINK PLUG (CONNECTOR NO.1, POS.C) TO FRONT PANEL MAXI FUSEBLOCK C.B. NO.32	29
335	14	WHITE	DATA LINK PLUG (CONNECTOR NO.1, POS.E) TO FRONT PANEL GND STUD	22
792	16 TP	BLACK	DATA LINK PLUG (CONNECTOR NO.1 POS.B) TO SIDE PANEL TERMINAL BD. POS. *792 (ATA-)	37
793		WHITE	DATA LINK PLUG (CONNECTOR NO.1, POS.A) TO SIDE PANEL TERMINAL BD. POS. *793 (ATA+)	37

- NOTES:
- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS, EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS ACCEPTABLE FOR CABLING LEADS.
 - 2) TAG HARNESS FOR IDENTIFICATION.
 - 3) NO CONVOLUTED CONDUIT TUBING IS REQUIRED ON HARNESS.
 - 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
 - 5) ALL WIRING TO BE GXL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.



BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 14-12 AWG. PACKARD #12065916-L
D	61200173	RING TERMINAL, 1/4" STUD, 14-16 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14-16 AWG.
△	TERMINAL	PART NO. DESCRIPTION

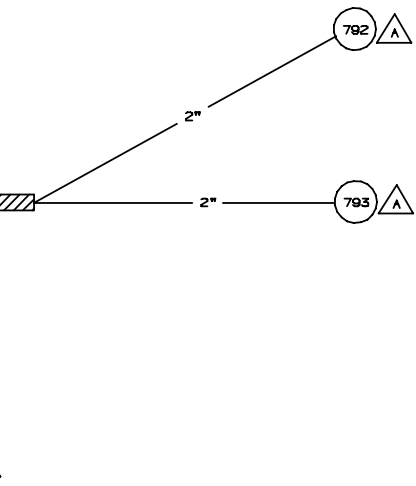
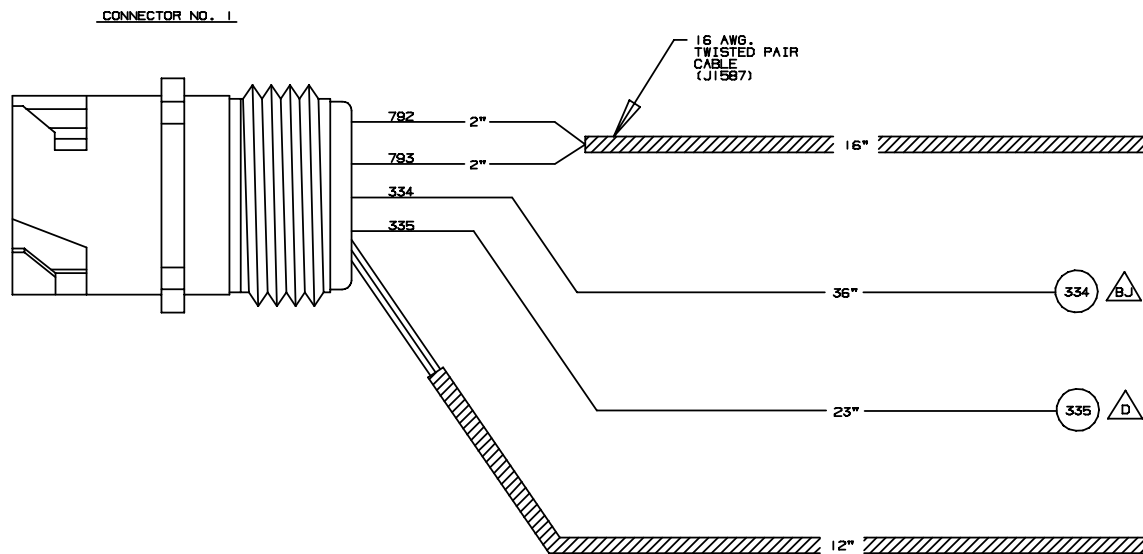
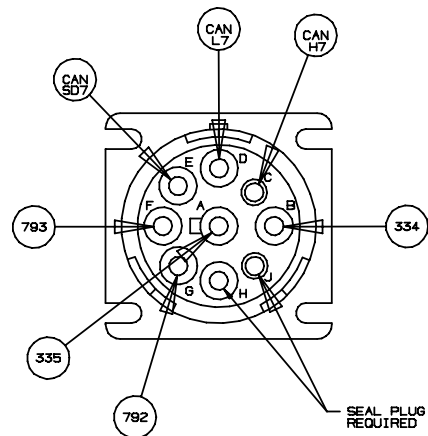
Thomas BUILT BUSES	62201697 B
HARNESS, DATA LINK CAT 3126	

CONNECTOR PARTS LIST				
CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	DEUTSCH	HD10-9-1939P	SQUARE FLANGE RECEPTACLE, 9 POSITION, FEMALE	1
	DEUTSCH	0460-215-16141	PIN CONTACT, 14-16 AWG.	4
	DEUTSCH	HDC16-9	SEAL CAP	1
	DEUTSCH	0460-202-1631	PIN CONTACT, 16-18 AWG.	3
	DEUTSCH	114017	SEAL PLUG	2
R16	DEUTSCH	DT04-3P-E008	CONNECTOR ASM., RECEPTACLE, 3 WAY	1
	DEUTSCH	0460-247-1631	WIRE TERMINAL, MALE PIN, GOLD PLATED, 16-18 AWG.	3
	DEUTSCH	W3P	WEDGE, RECEPTACLE	1
3	DEUTSCH	DT06-3S-E003	CONNECTOR ASM., PLUG	1
	DEUTSCH	W3S	WEDGE PLUG	1
	DEUTSCH	114017	CAVITY PLUG	3

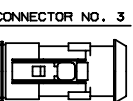
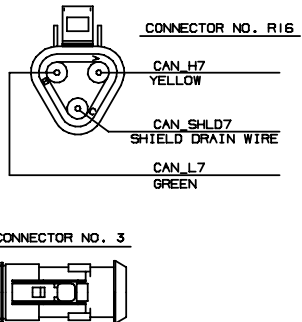
TWISTED PAIR CABLE SPECIFICATION		
TYPE - COMMUNICATION, CABLE, INSTRUMENTATION. (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/DRAIN WIRE, 100% SHIELD COVERING. 300V - 600V RATING. 80° C - 90° C TEMP. RATING.		
AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN	8719
	ALPHA	5616B1601

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.

CIRCUIT	GA	COLOR	DESCRIPTION	LENGTH (IN)
334	14	RED	DATA LINK PLUG (CONNECTOR NO.1, POS.B) TO FRONT PANEL MAXI FUSEBLOCK C.B. NO.32	36
335	14	WHITE	DATA LINK PLUG (CONNECTOR NO.1, POS.A) TO FRONT PANEL GND STUD	23
792	16 TP	BLACK	DATA LINK PLUG (CONNECTOR NO.1, POS.G) TO SIDE PANEL TERMINAL BD. POS. #792 (ATA-)	20
793		WHITE	DATA LINK PLUG (CONNECTOR NO.1, POS.F) TO SIDE PANEL TERMINAL BD. POS. #793 (ATA+)	20
CAN_H7	20 TP	YELLOW	DATA LINK PLUG (CONNECTOR NO. 1, POS.C) TO CONNECTOR R16 J1939 (+) SIGNAL HIGH (POS.A)	12
CAN_SHLD7		SHIELD DRAIN WIRE	DATA LINK PLUG (CONNECTOR NO. 1, POS.E) TO CONNECTOR R16 J1939 SHIELD DRAIN (POS.C)	12
CAN_L7		GREEN	DATA LINK PLUG (CONNECTOR NO. 1, POS.D) TO CONNECTOR R16 J1939 (-) SIGNAL LOW (POS.B)	12



NOTE: CONNECTOR SHOWN FROM WIRE ENTRY SIDE OF CONNECTOR



CAN_SHLD	SHIELD	DRAIN WIRE	C OR S (SHIELD)
CAN_L	GREEN	INVERTED (-) SIGNAL, J1939	B OR L (LOW)
CAN_H	YELLOW	NON-INVERTED (+) SIGNAL, J1939	A OR H (HIGH)
CIRCUIT	COLOR	DESCRIPTION	CONN. PIN CAVITY

J1939 DATABUS CABLE/CONNECTOR CIRCUIT I.D.

TWISTED PAIR/TRIAD CABLE SPECIFICATIONS		
TYPE - COMMUNICATION, CONTROL, DATABUS CABLE. (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING. 300V - 600V RATING. 125° C - 150° C TEMP. RATING FOR SAE J1939 USAGE. IMPEDANCE AT 120 OHMS CONDUCTOR NO. 1 (GREEN). CONDUCTOR NO. 2 (YELLOW)		
AWG.	APPROVED VENDORS OF CABLE	PART NO.
20	ANIXTER	CE3056005
	RAYCHEM/STAF-CO	301

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED. MUST MEET SAE J1939/11 (5.2).

- NOTES:
- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS, EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING LEADS.
 - 2) TAG HARNESS FOR IDENTIFICATION.
 - 3) NO CONVOLUTED CONDUIT TUBING IS REQUIRED ON HARNESS.
 - 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
 - 5) ALL WIRING TO BE 6XL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
 - 6) CONSTRUCTION PRACTICES AND GUIDELINES FOR THIS HARNESS SHALL COMPLY WITH THE FOLLOWING SPECS: TMC RPI42(T), SAE J1939/11.
 - 7) INSTALL CONNECTOR NO. 3 PLUG ASM. INTO CONNECTOR NO. R16.

NOTE: CIRCUIT NO.'S CAN_H7, CAN_SHLD7, CAN_L7 (REF. HARNESS 62202205) ARE SHOWN HERE. CONNECTOR R16 PLUGS INTO CONNECTOR P16 ON ABOVE HARNESSES.

TERMINAL	PART NO.	DESCRIPTION
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 14-12 AWG. PACKARD #12065916-L
D	61200173	RING TERMINAL, 1/4" STUD, 14-16 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14-16 AWG.

Thomas
BUILT BUSES

62202231 B

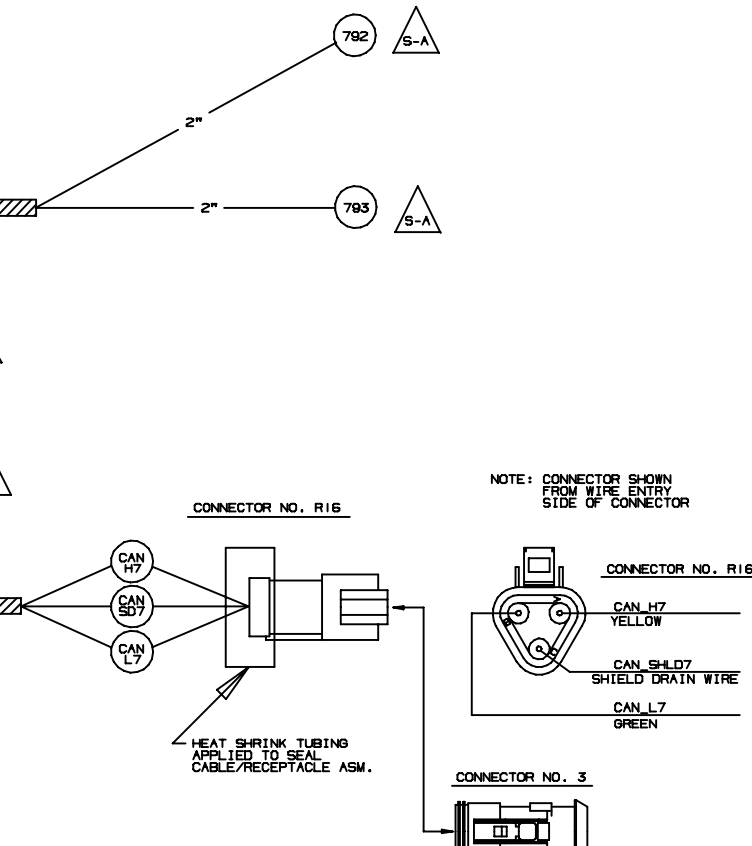
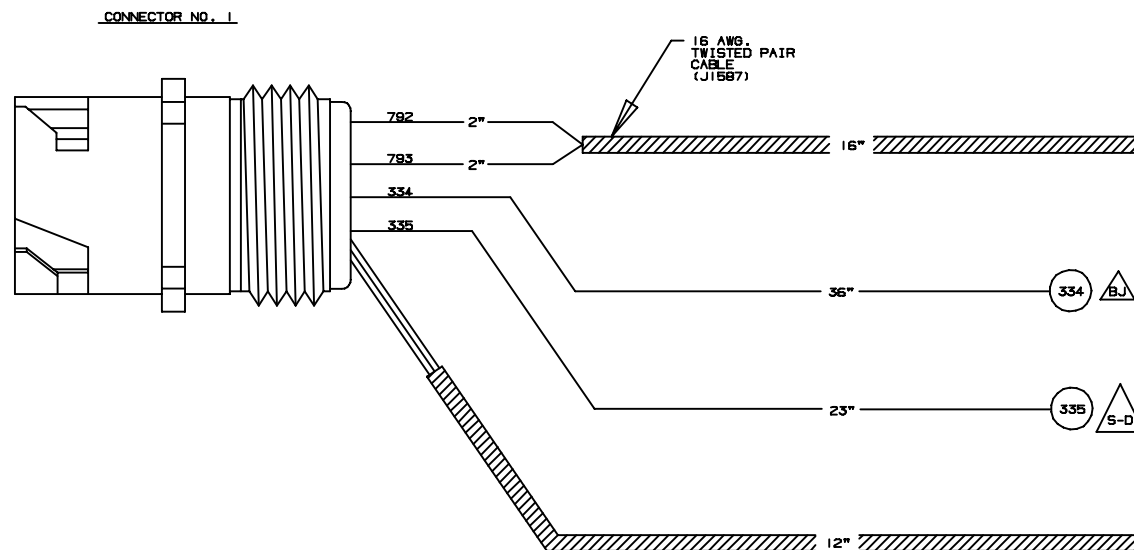
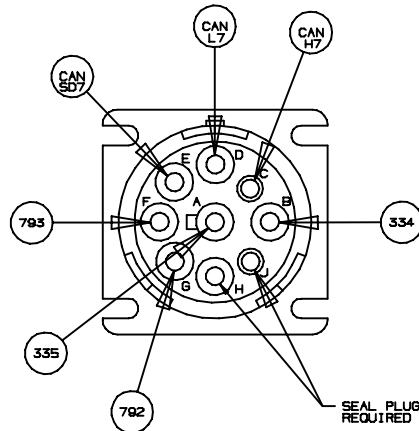
**HARNESS, DATALINK 98
ELECTRONIC ENGINES
J1587/J1939**

CONNECTOR PARTS LIST				
CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	DEUTSCH	HD10-9-1939P	SQUARE FLANGE RECEPTACLE, 9 POSITION, FEMALE	1
	DEUTSCH	0460-215-16141	PIN CONTACT, 14-16 AWG.	4
	DEUTSCH	HDC16-9	SEAL CAP	1
	DEUTSCH	0460-202-1631	PIN CONTACT, 16-18 AWG.	3
	DEUTSCH	114017	SEAL PLUG	2
R16	DEUTSCH	DT04-3P-E008	CONNECTOR ASM., RECEPTACLE, 3 WAY	1
	DEUTSCH	0460-247-1631	WIRE TERMINAL, MALE PIN, GOLD PLATED, 16-18 AWG.	3
	DEUTSCH	W3P	WEDGE, RECEPTACLE	1
3	DEUTSCH	DT06-3S-E003	CONNECTOR ASM., PLUG	1
	DEUTSCH	W3S	WEDGE PLUG	1
	DEUTSCH	114017	CAVITY PLUG	3

TWISTED PAIR CABLE SPECIFICATION		
TYPE - COMMUNICATION, CABLE, INSTRUMENTATION, (1) TWISTED PAIR, 2 CONDUCTOR, (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 60°C - 90°C TEMP. RATING.		
AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN	8719
	ALPHA	561681601

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.

CIRCUIT	GA	COLOR	DESCRIPTION	LENGTH (IN)
334	14	RED	DATA LINK PLUG (CONNECTOR NO.1, POS.B) TO FRONT PANEL MAXI FUSEBLOCK C.B. NO.32	36
335	14	WHITE	DATA LINK PLUG (CONNECTOR NO.1, POS.A) TO FRONT PANEL GND STUD	23
792	16 TP	BLACK	DATA LINK PLUG (CONNECTOR NO.1, POS.G) TO SIDE PANEL TERMINAL BD. POS. *792 (ATA-)	20 (J1587)
793		WHITE	DATA LINK PLUG (CONNECTOR NO.1, POS.F) TO SIDE PANEL TERMINAL BD. POS. *793 (ATA+)	20 (J1587)
CAN_H7	20 TP	YELLOW	DATA LINK PLUG (CONNECTOR NO. 1, POS.C) TO CONNECTOR R16 J1939 (+) SIGNAL HIGH (POS.A)	12
CAN_SHLD7		SHIELD DRAIN WIRE	DATA LINK PLUG (CONNECTOR NO. 1, POS.E) TO CONNECTOR R16 J1939 SHIELD DRAIN (POS.C)	12
CAN_L7		GREEN	DATA LINK PLUG (CONNECTOR NO. 1, POS.D) TO CONNECTOR R16 J1939 (-) SIGNAL LOW (POS.B)	12



NOTE: CONNECTOR SHOWN FROM WIRE ENTRY SIDE OF CONNECTOR

NOTE: THIS HARNESS IS USED IN PLACE OF 62202231 FOR OPTION B5803-02-101

CAN_SHLD	SHIELD	DRAIN WIRE	C OR S (SHIELD)
CAN_L	GREEN	INVERTED (-) SIGNAL, J1939	B OR L (LOW)
CAN_H	YELLOW	NON-INVERTED (+) SIGNAL, J1939	A OR H (HIGH)
CIRCUIT	COLOR	DESCRIPTION	CONN. PIN CAVITY

J1939 DATABUS CABLE/CONNECTOR CIRCUIT I.D.

TERMINAL	PART NO.	DESCRIPTION
BJ	61200848	FUSE HOLDER CONTACT, MAXI-FUSE, 14-12 AWG. PACKARD #12065916-L
S-D	61201314	RING TERMINAL, 1/4" STUD, 14-16 AWG.
S-A	61201312	RING TERMINAL, #10 STUD, 14-16 AWG.

TWISTED PAIR/TRIAD CABLE SPECIFICATIONS		
TYPE - COMMUNICATION, CONTROL, DATABUS CABLE, (1) TWISTED PAIR, 2 CONDUCTOR (STRANDED) W/ DRAIN WIRE, 100% SHIELD COVERING, 300V - 600V RATING, 125°C - 150°C TEMP. RATING FOR SAE J1939 USAGE, IMPEDANCE AT 120 OHMS, CONDUCTOR NO. 1 (GREEN), CONDUCTOR NO. 2 (YELLOW)		
AWG.	APPROVED VENDORS OF CABLE	PART NO.
20	ANIXTER	CE3666065
	RAYCHEM/STAF-CO	301

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED. MUST MEET SAE J1939/11 (5.2).

- NOTES:
- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS, EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING LEADS.
 - 2) TAG HARNESS FOR IDENTIFICATION.
 - 3) NO CONVOLUTED CONDUIT TUBING IS REQUIRED ON HARNESS.
 - 4) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
 - 5) ALL WIRING TO BE 60L TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
 - 6) CONSTRUCTION PRACTICES AND GUIDELINES FOR THIS HARNESS SHALL COMPLY WITH THE FOLLOWING SPECS: TMC RP142(T), SAE J1939/11.
 - 7) INSTALL CONNECTOR NO. 3 PLUG ASM. INTO CONNECTOR NO. R16.
 - 8) ALL RING TERMINAL PUSH-ON TERMINAL, AND BUTT SPLICE CRIMPS SHALL BE ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 6220224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR. THE HEAT SHRINK SLEEVE IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED, AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.

NOTE: CIRCUIT NO. *S CAN H7, CAN SHLD7, CAN L7 (REF. HARNESS 62202205) ARE SHOWN HERE. CONNECTOR R16 PLUGS INTO CONNECTOR P16 ON ABOVE HARNESSES.

Thomas
BUILT BUSES

62202940 D

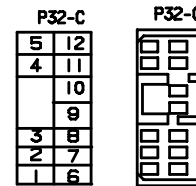
**HARNESS, DATA LINK 98
ELECT. ENGINES
J1587/J1939, SPECIAL
WIRING**

CIRCUIT NO.	(FROM) CONNECTOR	FROM PIN NO.	(TO) CONNECTOR	TO PIN NO.	COLOR	GAUGE	CIRCUIT DESCRIPTION
AC11	P32-C	3	A/C INTERLOCK RELAY 2	30	BLACK	16	AC INTERLOCK
AC12	P10-C	5	A/C INTERLOCK RELAY 2	86	GREEN	16	NEUTRAL CONTROL
AC13	P32-C	6	A/C INTERLOCK RELAY 2	85	WHITE	16	NEUTRAL CONTROL
AC14	BK 3	BK 3 SW 3	BK 2	SW 2	YELLOW	16	BRAKE CONTROL
AC15	A/C INTERLOCK RELAY 2	87	BUTT SPLICE	-	YELLOW	16	+12 VOLTS FROM SIDE PANEL AC SW
AC16	A/C BRAKE SW RELAY	85	T.B. NO. 1	STUD NO. 7	WHITE	16	GND. FOR A/C BK SW RELAY

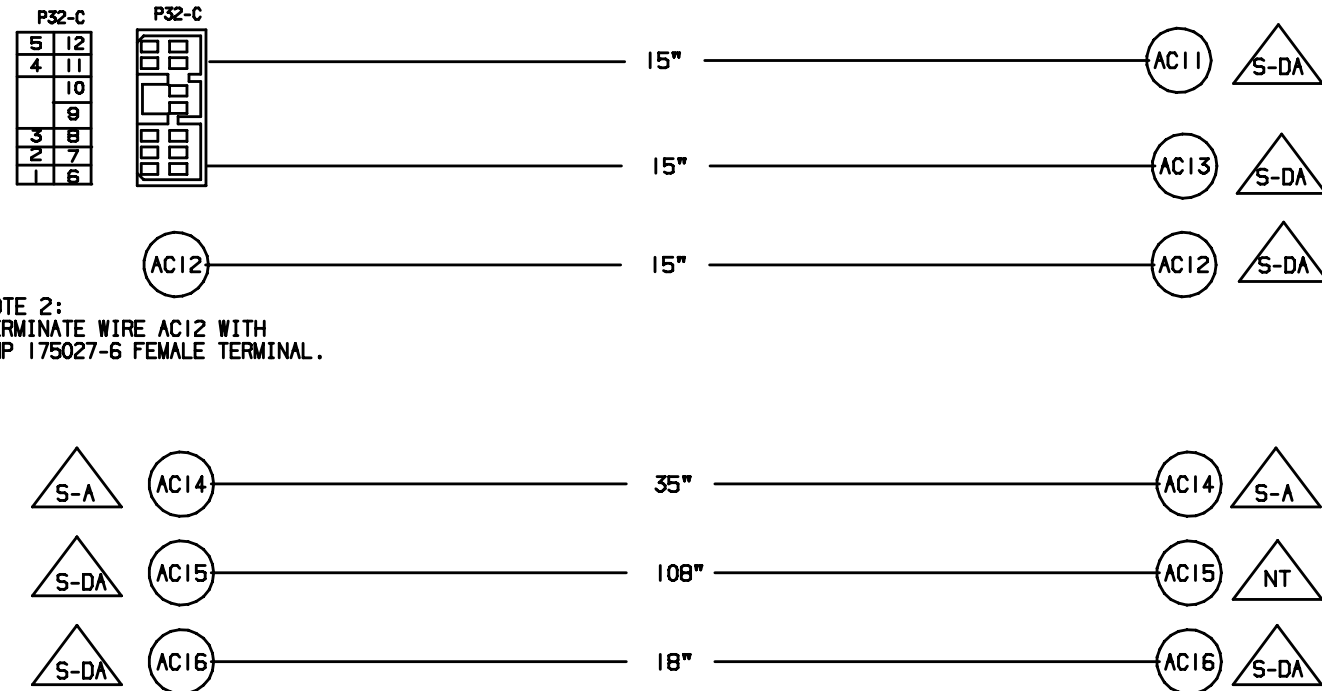
TERMINAL LIST		
TERMINAL	PART NO.	DESCRIPTION
S-DA	61201340	FEMALE PUSH-ON 1/4" 16 AWG
S-D	61201314	RING TERMINAL, 1/4" STUD, 16 AWG

CONNECTOR LIST				
CONN.	VENDOR	PART NUMBER	DESCRIPTION	QTY.
J32	AMP	175027-6	WIRE TERMINAL, FEMALE, 16 AWG	2
SEE NOTE 2	AMP	173851-1	CONNECTOR, 12 PIN, PCB	1
	AMP	175027-6	WIRE TERMINAL, FEMALE, 16 AWG	1

CONNECTOR P32-C	
CAVITY NO.	CIRCUIT NO.
1	-
2	-
3	AC11
4	-
5	-
6	AC13
7	-
8	-
9	-
10	-
11	-
12	-



NOTE 2:
TERMINATE WIRE AC12 WITH
AMP 175027-6 FEMALE TERMINAL.



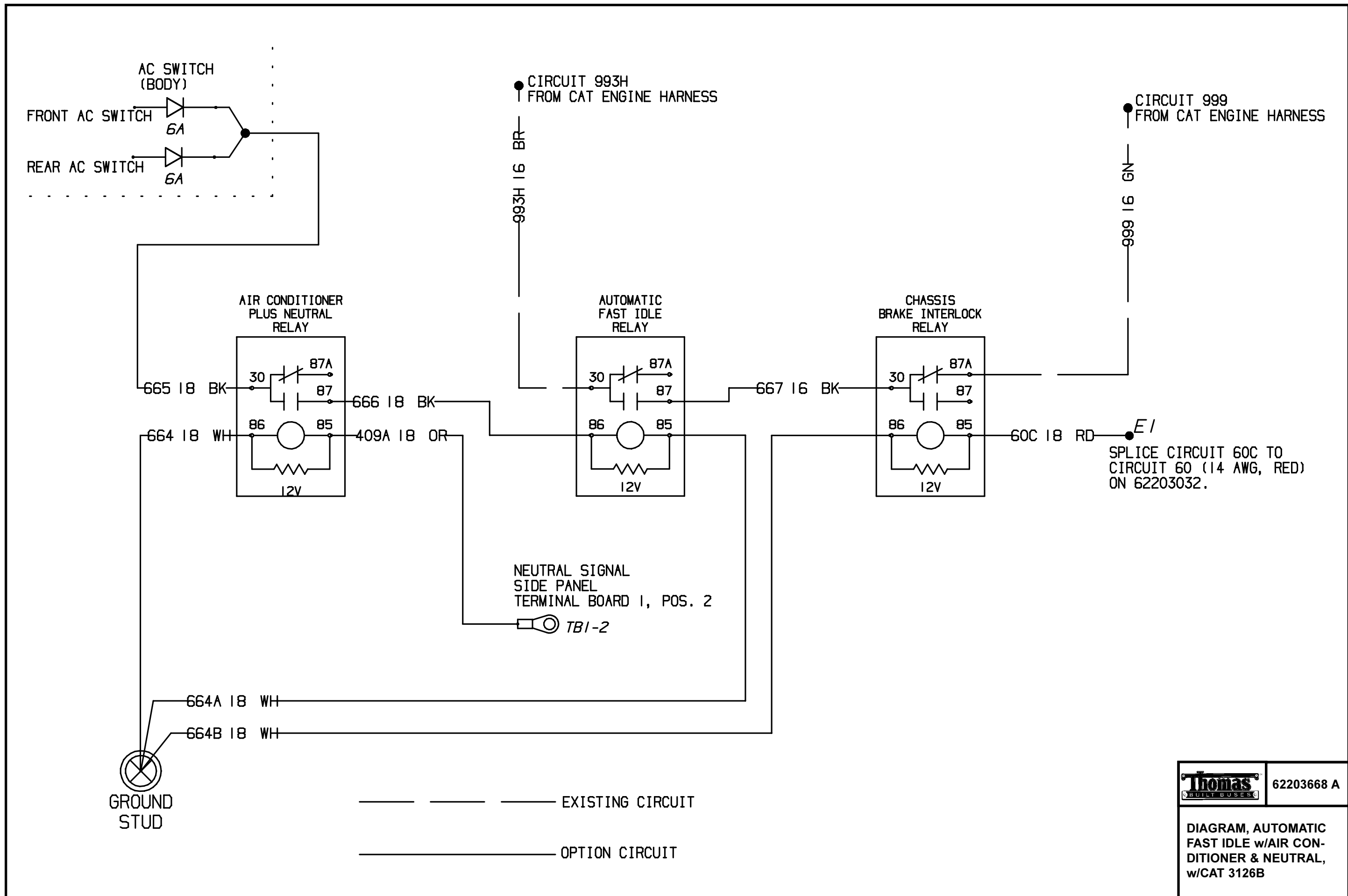
NOTE: USE DIAGRAM 62203588 FOR CIRCUIT POINT TO POINT CONNECTIONS.

NOTE:

- 1) CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- 2) ALL WIRING TO BE GXL TYPE WIRES.
- 3) WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- 4) ALL RING TERMINALS, PUSH-ON TERMINALS, AND BUTT SPLICE CRIMPS SHALL BE SOLDERED OR MACHINE CRIMPED OR CRIMPED WITH A RATCHETING HAND TOOL THAT WILL NOT ALLOW ANY "BACKING OFF" OF A CRIMP, AND ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62020224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR: THE HEAT SHRINK IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF. BUTT SPLICES FROM DWG. 62202342 MUST BE USED AND CAN NOT BE REPLACED BY USING A HEAT SHRINK SLEEVE.

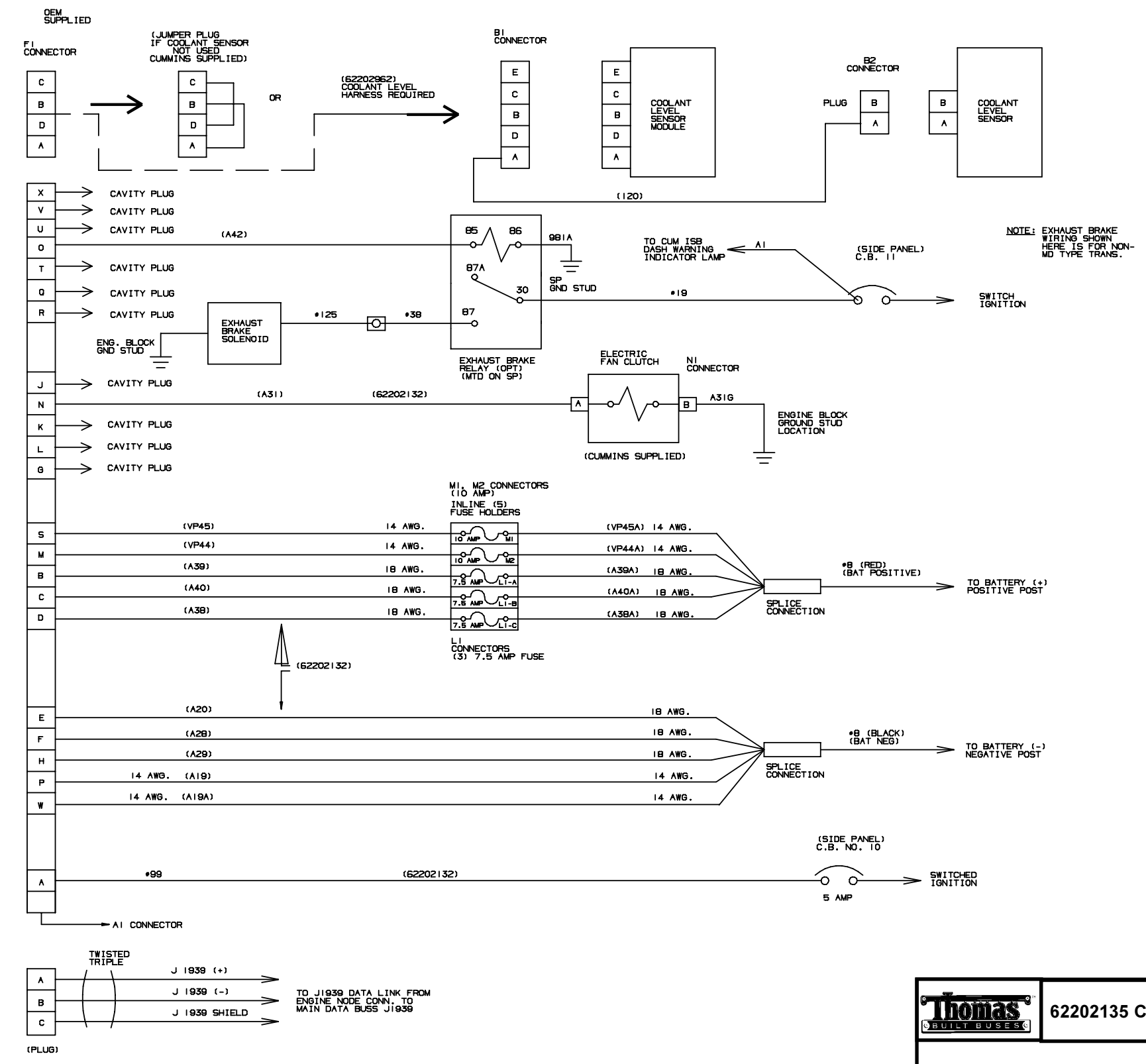
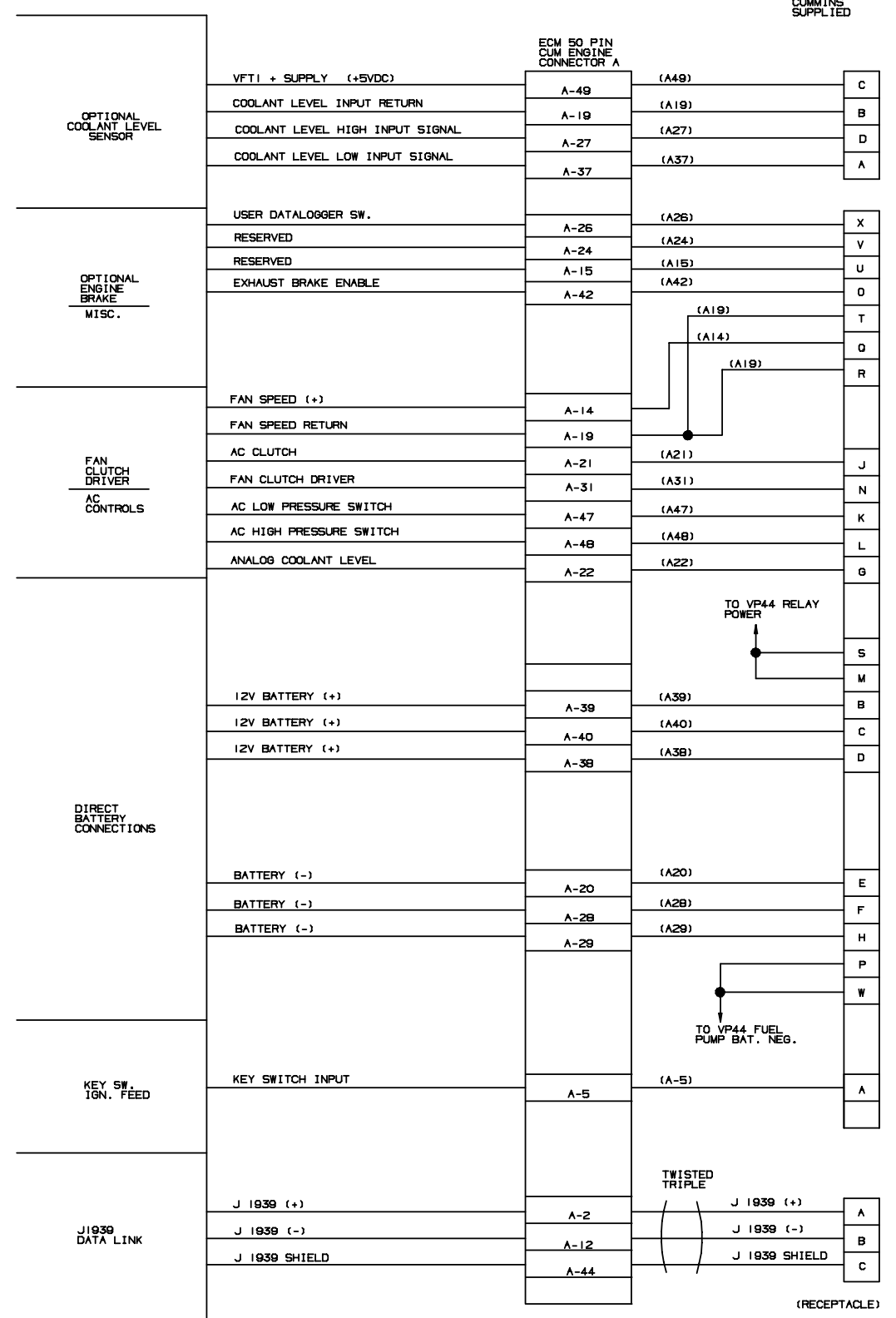
OPTION: C2215-02-000

	62203589 B
HARNES, JUMPER AUTOMATIC FAST IDLE w/A/C CAT 3126	



Thomas
BUILT BUSES
62203668 A

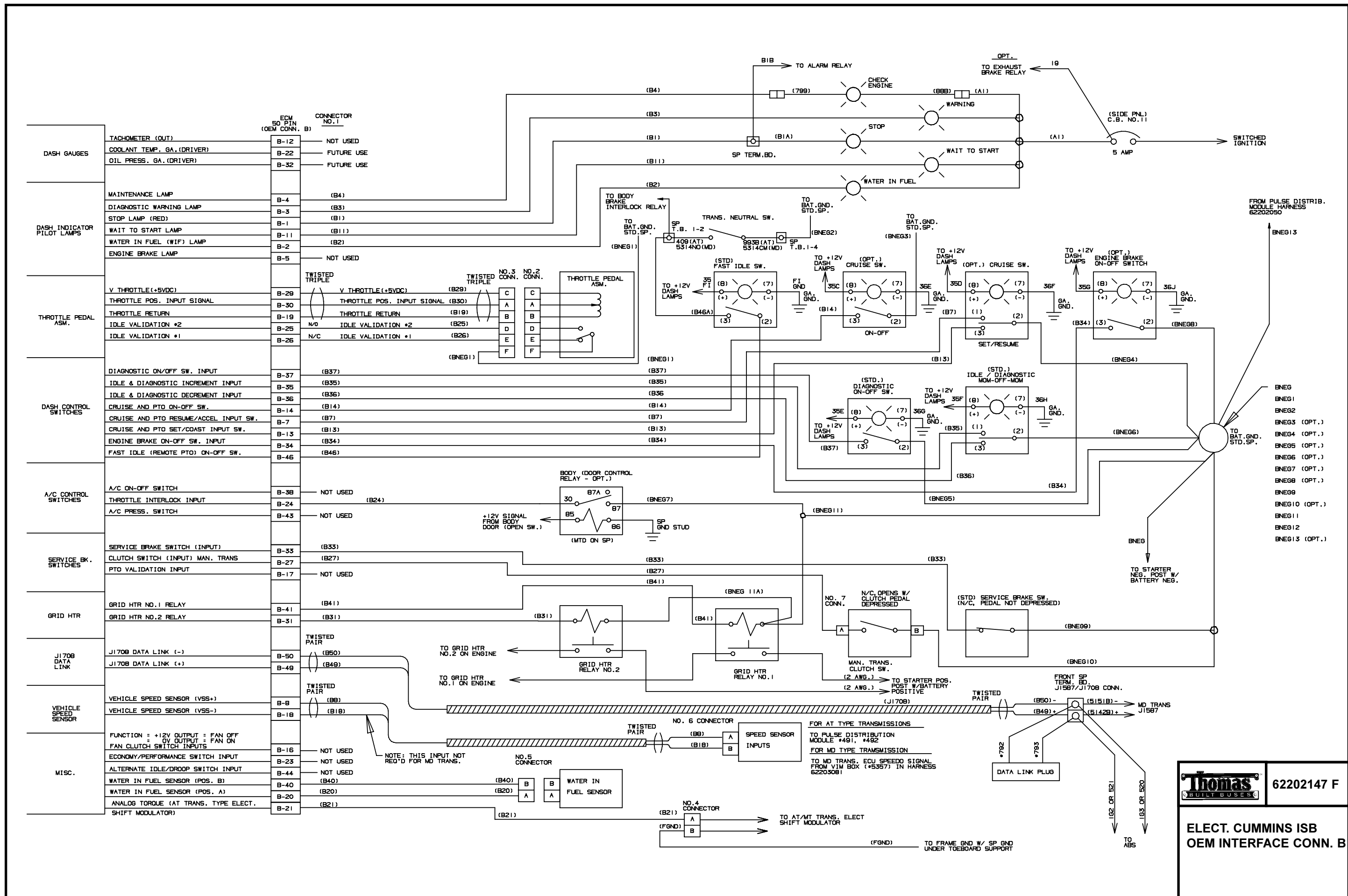
DIAGRAM, AUTOMATIC FAST IDLE w/AIR CONDITIONER & NEUTRAL, w/CAT 3126B



Thomas
BUILT BUSES

62202135 C

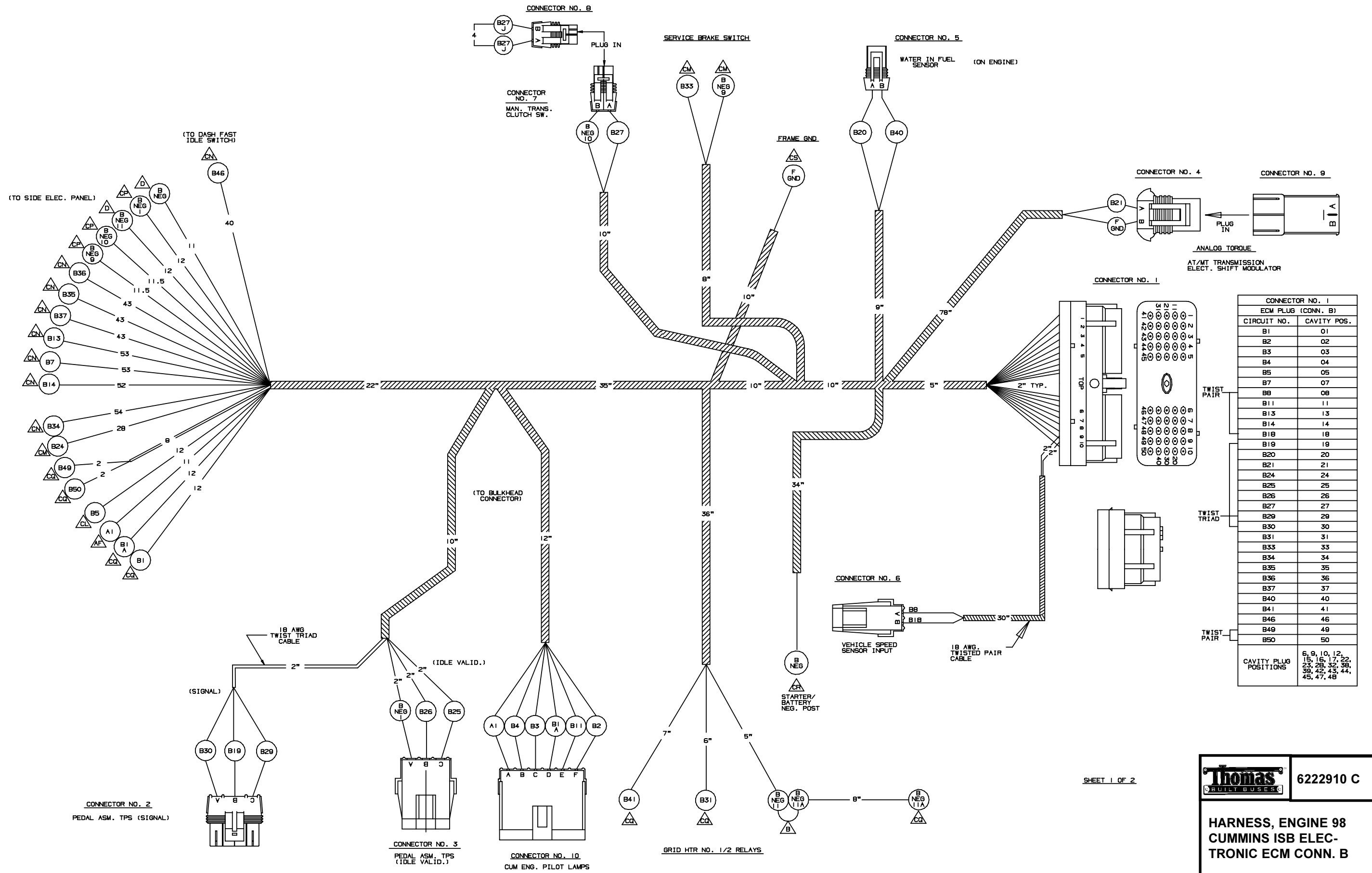
**CUMMINS ISB ENGINE,
OEM INTERFACE CONN A**



Thomas BULB BUSES

62202147 F

**ELECT. CUMMINS ISB
OEM INTERFACE CONN. B**



CONNECTOR NO. 1	
ECM PLUG (CONN. B)	
CIRCUIT NO.	CAVITY POS.
B1	01
B2	02
B3	03
B4	04
B5	05
B7	07
B8	08
B11	11
B13	13
B14	14
B18	18
B19	19
B20	20
B21	21
B24	24
B25	25
B26	26
B27	27
B29	29
B30	30
B31	31
B33	33
B34	34
B35	35
B36	36
B37	37
B40	40
B41	41
B46	46
B49	49
B50	50
CAVITY PLUG POSITIONS	6, 9, 10, 12, 15, 16, 17, 22, 23, 28, 32, 38, 39, 42, 43, 44, 45, 47, 48

SHEET 1 OF 2

Thomas
BUILT BUSES

6222910 C

**HARNES, ENGINE 98
CUMMINS ISB ELEC-
TRONIC ECM CONN. B**

CONNECTOR PARTS LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	DEUTSCH	DRC26-50505	CONNECTOR BODY, FEMALE, 50 WAY	1
	DEUTSCH	0462-201-2031	WIRE TERMINAL, FEMALE, SOCKET, GOLD PLATED, 18-20 AWG.	31
	DEUTSCH	0413-204-2005	CAVITY PLUG	19
2	PACKARD	12015793	CONNECTOR ASM., WEATHERPACK, 3 WAY, FEMALE	1
	PACKARD	12089189-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 18-20 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
3	PACKARD	12010717	CONNECTOR ASM., WEATHERPACK, 3 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
4	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
	PACKARD	12077411	WIRE TERMINAL, METRI PACK, FEMALE, 18-20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
	PACKARD	15300014	SECONDARY LOCK	1
5	PACKARD	12162193	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
	PACKARD	12103881-L	WIRE TERMINAL, METRI-PACK, 150 SERIES, 16-18 AWG.	2
6	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
7	PACKARD	12015792	CONNECTOR ASM., WEATHERPACK, 2 WAY, FEMALE	1
	PACKARD	12089189-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 18-20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
8	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
9	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2 WAY MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG, 280 SERIES	2
10	PACKARD	12010975	CONNECTOR ASM., WEATHERPACK, 6 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	6
	PACKARD	12015323	CABLE SEAL	6

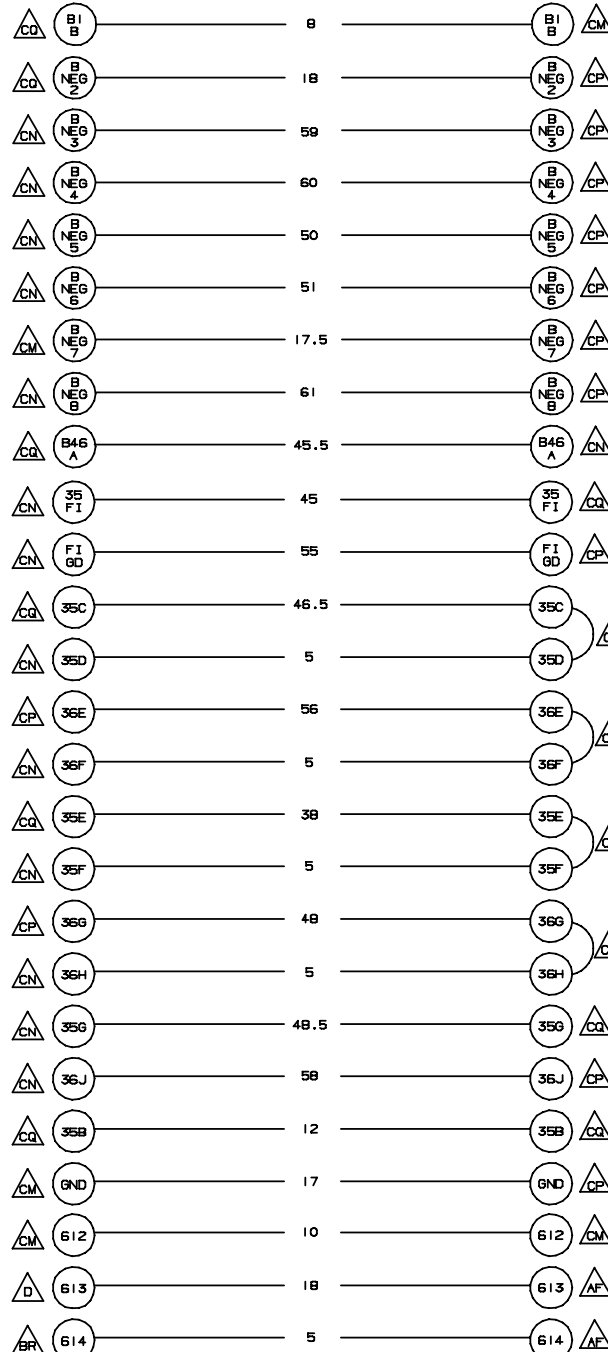
TWISTED PAIR/TRIAD CABLE SPECIFICATIONS

AWG.	APPROVED VENDORS OF CABLE	PART NO.
16	BELDEN	8719
	ALPHA	561681501
	BELDEN	88760
18	BELDEN	561681801
	ALPHA	561681801
AWG.	APPROVED VENDORS OF CABLE	PART NO.
18	ALCATEL	897417 VNTC
	ALPHA	564681801

NOTE: OPTIONAL WIRE VENDORS ARE APPROVED IF ABOVE SPECIFICATIONS FOR CABLE CONSTRUCTION ARE MET OR EXCEEDED.

TERM	PART NO.	DESCRIPTION
CT	61201243	WIRE TERM., METRI-PACK, 630 SERIES, F, (2) 18-20 AWG., *12020035
CS	61201262	RING TERMINAL, 5/16" STUD, 18 AWG.
CR	61201232	RING TERMINAL, 1/2" STUD, 14 AWG.
BR	61200949	WIRE TERM., METRI-PACK, 630 SERIES, F, 14-16 AWG., *12015870-L
CP	61201228	RING TERMINAL, 1/4" STUD, 18 AWG.
CN	61201227	WIRE TERM., METRI-PACK, 630 SERIES, F, 18-20 AWG., *12015869
BB	61200133	SPRING SPADE TERMINAL, *10 STUD, 10 AWG
NT	-----	NO TERMINATION REQUIRED
CM	61201226	FEMALE PUSH-ON, 1/4", FULLY INSUL., 18 AWG.
CL	61201225	BUTT SPLICE, INSULATED, 18 AWG.
CQ	61201231	RING TERMINAL, *10 STUD, 18 AWG.
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
AA	61200132	SPRING SPADE TERMINAL, *10 STUD, 14 AWG
M	61200176	FEMALE PUSH-ON, 1/4", 10 AWG.
L	61200388	FEMALE PUSH-ON, 1/4", 14 AWG.
J	61200168	BUTT SPLICE, INSULATED, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14-16 AWG.
B	61200190	RING TERMINAL, *10 STUD, 10 AWG
A	61200174	RING TERMINAL, *10 STUD, 14 AWG.

WIRE JUMPERS (TAPE TO SIDE PANEL END OF HARNESS)



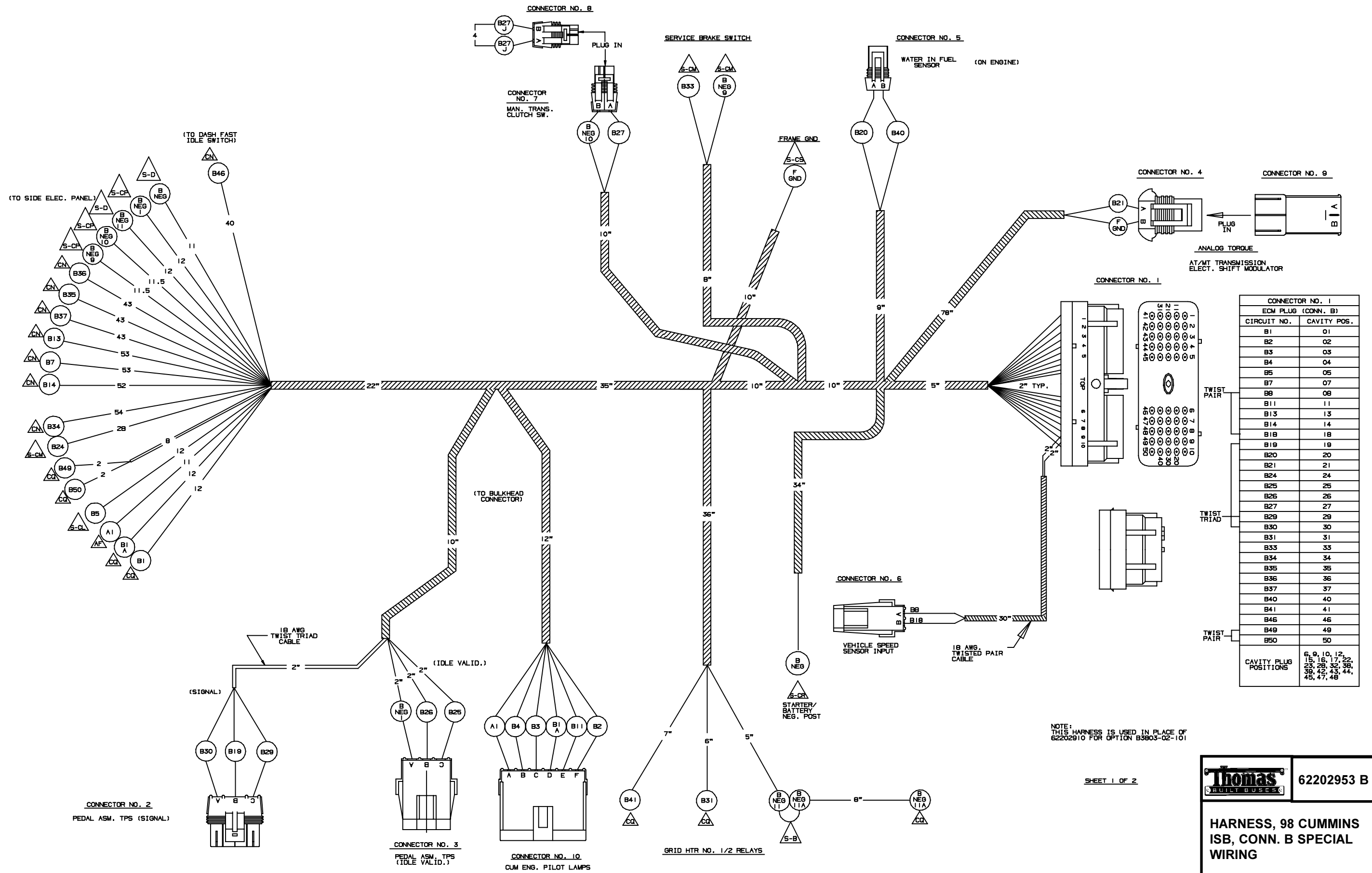
NOTES:

- CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- TAG HARNESS FOR IDENTIFICATION.
- HARNESS TO COVERED WITH APPROPRIATE SIZE OF CONVULGATED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
- WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- ALL WIRING TO BE 6XL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
- USE CONVULGATED CONDUIT (BLACK W/GRAY STRIPE) NYLON PACKARD, RATED AT 300°F HIGH TEMP. ENGINE COMPARTMENT USAGE OR EQUIVALENT.

CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN)
A1	16	RED	CIRCUIT BREAKER NO. 11 (AT SP) TO CUM ENG. PILOT LAMPS (+ 12 V COMMON INPUT)	45
B1	18	RED	ECM CONNECTOR NO. 1 (POS. 01) TO SIDE PANEL TERMINAL BD. POS. (W/B1 & B1B)	96
B1A	18	RED	SIDE PANEL TERM. BD. POS. (W/B1 & B1B) TO CONN. NO. 10 (POS.D) "STOP" DASH IND. LAMP GND	46
B1B	18	RED	SIDE PANEL TERM BD POS. (W/B1 & B1A) TO STOP ENGINE ALARM RELAY (POS. B6)	8
B2	18	BLUE	ECM CONN. NO. 1 (POS. 02) TO CONNECTOR NO. 10 (POS. F) "WATER IN FUEL" DASH IND. LAMP GND	74
B3	18	YELLOW	ECM CONNECTOR NO. 1 (POS. 03) TO CONNECTOR NO. 10 (POS. C) "WARNING" DASH IND. LAMP GND	74
B4	18	RED	ECM CONN. NO.1(POS. 04) TO CONNECTOR NO. 10 (POS. B)	74
B46A	18	GREEN	FAST IDLE ON-OFF SW., POS.3 TO SP TERM. BD. W/*409(AT) OR *5314 NO(MD)	45.5
B5	18	RED	ECM CONN. 1 (POS.05) TO SIDE PANEL DUAL ALARM BUZZER INPUT(FAST), STOP ENG.WARNING(ECM DRIVEN SIGNAL)	96
B7	18	GREEN	ECM CONNECTOR NO. 1 (POS.07) TO SP SW. LOCATION, CRUISE SET/RESUME SW. POS.1 (CRUISE/RESUME ACCEL)	137
B8	18	WHITE	ECM CONNECTOR NO. 1 (POS.08) TO CONNECTOR NO. 6, POS.A VEHICLE SPEED SENSOR INPUT(VSS+)	32
B11	18	WHITE	ECM CONNECTOR NO. 1 (POS.11) TO CONNECTOR NO. 10(POS.E) "WAIT TO START" DASH IND. LAMP GND	74
B13	18	YELLOW	ECM CONNECTOR NO. 1 (POS.13) TO SP SW. LOCATION, CRUISE SET/RESUME SW., POS.3 (CRUISE SET/COAST)	137
B14	18	RED	ECM CONNECTOR NO. 1 (POS.14) TO SP SW. LOCATION, CRUISE ON-OFF SW., POS.3	136
B18	18	BLACK	ECM CONNECTOR NO. 1 (POS.18) TO CONNECTOR NO. 6, POS.B VEHICLE SPEED SENSOR INPUT(VSS-)	32
B19	18	WHITE	ECM CONN. NO. 1 (POS.19) TO CONNECTOR NO. 2, POS.B THROTTLE PEDAL ASM.(TPS SIGNAL THROTTLE RETURN)	74
B20	18	WHITE	ECM CONNECTOR NO. 1 (POS. 20) TO CONN. 5, POS.A WATER IN FUEL SENSOR	16
B21	18	RED	ECM CONNECTOR NO. 1 (POS.21) TO CONN. NO. 4, POS.A AT/MT TRANSMISSION ELECT SHIFT MODULATOR	85
B24	18	RED	ECM CONNECTOR NO. 1 (POS.24) TO BODY DOOR CONTROL RELAY (POS.30) THROTTLE INTERLOCK INPUT	112
B25	18	GREEN	ECM CONNECTOR NO. 1 (POS.25) TO CONN. NO. 3, POS.C THROTTLE PEDAL ASM. (TPS IDLE VALID. *2) N/D	74
B26	18	YELLOW	ECM CONNECTOR NO. 1 (POS.26) TO CONN. NO.3, POS.B THROTTLE PEDAL ASM.(TPS IDLE VALID * 1) N/C	74
B27	18	RED	ECM CONNECTOR NO. 1 (POS.27) TO CONN. NO. 7, POS.A MANUAL TRANSMISSION CLUTCH SWITCH	27
B27J	18	WHITE	CONNECTOR NO. 8, POS.A TO POS.B (JUMPER) MANUAL TRANSMISSION CLUTCH SWITCH	4
B29	18	RED	ECM CONN. NO. 1 (POS.29) TO CONN. NO. 2, POS.C THROTTLE PEDAL ASM.(TPS SIGNAL V THROTTLE+5VDC)	74
B30	18	BLACK	ECM CONN. NO. 1 (POS. 30) TO CONNECTOR NO. 2, POS.A THROTTLE PEDAL ASM.(TPS SIGNAL POSITION INPUT)	74
B31	18	BLUE	ECM CONNECTOR NO. 1 (POS. 31) TO GRID HTR. RELAY NO. 2 (COIL, +12V)	69
B33	18	YELLOW	ECM CONNECTOR NO. 1 (POS 33) TO SERVICE BRAKE SWITCH, INPUT	25
B34	18	GREEN	ECM CONNECTOR NO. 1 (POS. 34) TO SP SW. LOCATION, ENGINE BRAKE ON-OFF SW., POS.3	139
B35	18	BLUE	ECM CONNECTOR NO. 1 (POS. 35) TO SP SW. LOCATION, IDLE/DIAGNOSTIC SW., POS.1(IDLE/DIAG. INCREMENT)	127
B36	18	RED	ECM CONNECTOR NO. 1 (POS. 36) TO SP SW. LOCATION, IDLE/DIAGNOSTIC SW., POS.3(IDLE/DIAG. DECREMENT)	127
B37	18	YELLOW	ECM CONNECTOR NO. 1 (POS 37) TO SP SW. LOCATION, DIAGNOSTIC ON-OFF SW., POS.3	127
B40	18	RED	ECM CONNECTOR NO. 1 (POS. 40) TO CONNECTOR NO. 5, POS.B WATER IN FUEL SENSOR	16
B41	18	RED	ECM CONNECTOR NO. 1 (POS. 41) TO GRID HTR. RELAY NO. 1 (COIL, +12V)	70
B46	18	GREEN	ECM CONNECTOR NO. 1 (POS.46) TO FAST IDLE ON-OFF SW., POS.2	133
B49	18	BLACK	ECM CONNECTOR NO. 1 (POS. 49) TO FRONT SP TERMINAL BD. DATALINK (+) J1708	94
B50	18	WHITE	ECM CONNECTOR NO. 1 (POS.50) TO FRONT SP TERMINAL BD. DATA LINK (-) J1708	94
FND	18	WHITE	CONNECTOR NO. 4, POS.B TO FRAME GND CONNECTION	108
BNEG	14	WHITE	SIDE PANEL BATTERY GND STUD TO STARTER/BATTERY GND CABLE CONNECTION POINT	122
BNEG1	18	WHITE	THROTTLE PEDAL ASM.(TPS IDLE VALID. COMMON) CONNECTOR NO.3, POS.A TO SP BATTERY GND STUD	46
BNEG2	18	WHITE	SP TERM. BD. W/*9938(AT) OR *5314CM(CD) TO SIDE PANEL BATTERY GND STUD (STD.)	18
BNEG3	18	WHITE	CRUISE ON-OFF SW., POS.2 TO SIDE PANEL BATTERY GND STUD JUNCTION POINT (4 POS. TERM. BD) (OPT.)	59
BNEG4	18	WHITE	CRUISE SET/RESUME SW., POS.2 TO SIDE PANEL BATTERY GND STUD JUNCTION POINT (4 POS. TERM BD) (OPT.)	60
BNEG5	18	WHITE	DIAGNOSTIC ON-OFF SW., POS.2 TO SIDE PANEL BATTERY GND STUD (STD.)	50
BNEG6	18	WHITE	IDLE/DIAGNOSTIC SW., POS.2 TO SIDE PANEL BATTERY GND STUD (STD.)	51
BNEG7	18	WHITE	BODY DOOR CONTROL RELAY, POS.87 TO SIDE PANEL BATTERY GND STUD (THROTTLE INTERLOCK) (OPT.)	17.5
BNEG8	18	WHITE	ENGINE BRAKE ON-OFF SW., POS.2 TO SIDE PANEL BATTERY GND STUD (4 POS. TERM. BD) (OPT.)	61
BNEG9	18	WHITE	SERVICE BRAKE SW. TO SIDE PANEL BATTERY GND STUD (STD.)	86.5
BNEG10	18	WHITE	MANUAL TRANSMISSION CLUTCH SW. TO SIDE PANEL BATTERY GND STUD (OPT.)	88.5
BNEG11	16	WHITE	GRID HTR RELAY NO. 2, COIL GND TO SIDE PANEL BATTERY GND STUD (STD.)	110
BNEG11A	16	WHITE	GRID HTR RELAY NO. 2 TO GRID HTR RELAY NO. 1	8
35F1	18	LT.BLUE	FAST IDLE SW. (SYMBOL) LAMP (POS.8) TO SP. TERM. BD. W/35, +12V (STD.)	45
F18D	18	WHITE	FAST IDLE SW. (SYMBOL) LAMP (POS.7) TO SP GND STUD (STD.)	55
35C	18	LT.BLUE	CRUISE CONTROL ON-OFF SW. (SYM.)LAMP (POS.8) TO SP TERM. BD., +12V (OPT.)	46.5
35D	18	LT.BLUE	CRUISE CONTROL ON-OFF SW. (SYM.)LAMP (POS.8) TO CRUISE SET/RESUME SW. (POS.8) (OPT.)	5
35E	18	LT.BLUE	DIAGNOSTIC ON-OFF SW. (SYM.)LAMP (POS.8) TO SP TERM. BD., +12V (STD.)	38
35F	18	LT.BLUE	DIAGNOSTIC ON-OFF SW. (SYM.)LAMP (POS.8) TO IDLE/DIAG. SW. (POS.8) (STD.)	5
35G	18	LT.BLUE	EXHAUST BRAKE ON-OFF SW. (SYM.) LAMP (POS.8) TO SP TERM. BD., +12V (OPT.)	48.5
35B	18	LT.BLUE	SP TERM. BD. W/35 TO SP TERM. BD. (SYM.) LAMP, +12V (OPT.)	12
36E	18	WHITE	CRUISE CONTROL ON-OFF SW. (SYM.) LAMP (POS.7) TO SP GND STUD (OPT.)	56
36F	18	WHITE	CRUISE CONTROL ON-OFF SW. (SYM.) LAMP (POS.7) TO CRUISE SET/RESUME SW. (POS.7) (OPT.)	5
36G	18	WHITE	DIAGNOSTIC ON-OFF SW. (SYM.) LAMP (POS.7) TO SP GND STUD (STD.)	48
36H	18	WHITE	DIAGNOSTIC ON-OFF SW. (SYM.) LAMP (POS.7) TO IDLE/DIAG SW. (POS.7) (STD.)	5
36J	18	WHITE	EXHAUST BRAKE ON-OFF SW. (SYM.) LAMP (POS.7) TO SP GND STUD (OPT.)	58
GND	18	WHITE	BRAKE/ACCEL INT. RELAY (TERM B6) TO SP GND STUD (OPT.)	17
B12	18	RED	CIRCUIT BREAKER NO. 22 TO STOP ENGINE ALARM RELAY (POS. B5) (STD.)	10
B13	18	WHITE	SP GNS STUD TO STOP ENGINE ALARM RELAY (POS. B7) (STD.)	18
B14	16	WHITE	SIDE PANEL DUAL ALARM RELAY BUZZER (FAST) TO STOP ENGINE ALARM RELAY (POS. 30) (STD.)	5

Thomas BULLY BUSS® 62202910 C

HARNESS, ENGINE 98 CUMMINS ISB ELEC-TRONIC ECM CONN. B



Thomas
BUILT BUSES

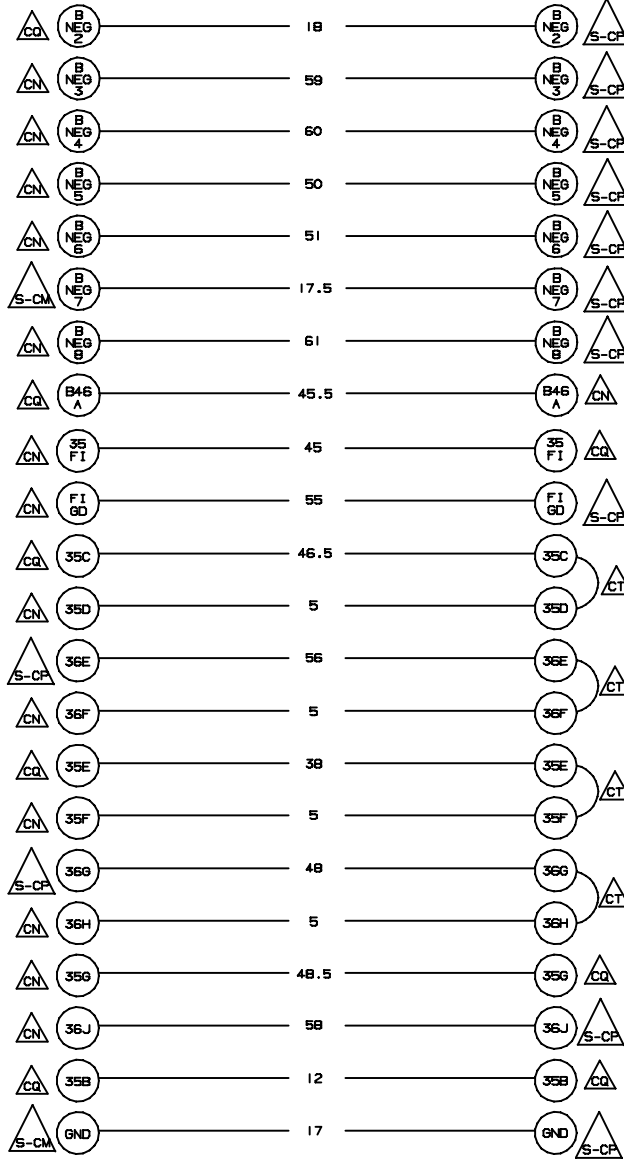
62202953 B

HARNESS, 98 CUMMINS ISB, CONN. B SPECIAL WIRING

CONNECTOR PARTS LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY.
1	DEUTSCH	DRC26-50505	CONNECTOR BODY, FEMALE, 50 WAY	1
	DEUTSCH	0462-201-2031	WIRE TERMINAL, FEMALE, SOCKET, GOLD PLATED, 18-20 AWG.	31
	DEUTSCH	0413-204-2005	CAVITY PLUG	19
2	PACKARD	12015793	CONNECTOR ASM., WEATHERPACK, 3 WAY, FEMALE	1
	PACKARD	12089188-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 18-20 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
3	PACKARD	12010717	CONNECTOR ASM., WEATHERPACK, 3 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	3
	PACKARD	12015323	CABLE SEAL	3
4	PACKARD	15300027	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
	PACKARD	12077411	WIRE TERMINAL, METRI PACK, FEMALE, 18-20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
5	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12162193	CONNECTOR ASM., METRI-PACK, 2 WAY, FEMALE	1
6	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	2
7	PACKARD	12015323	CABLE SEAL	2
	PACKARD	12015792	CONNECTOR ASM., WEATHERPACK, 2 WAY, FEMALE	1
	PACKARD	12089188-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 18-20 AWG.	2
8	PACKARD	12010973	CONNECTOR ASM., WEATHERPACK, 2 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	2
	PACKARD	12015323	CABLE SEAL	2
9	PACKARD	15300002	CONNECTOR ASM., METRI-PACK, 2 WAY MALE	1
	PACKARD	15300014	SECONDARY LOCK	1
	PACKARD	12010300	CAVITY PLUG, 280 SERIES	2
10	PACKARD	12010975	CONNECTOR ASM., WEATHERPACK, 6 WAY, MALE	1
	PACKARD	12089040-L	WIRE TERMINAL, WEATHERPACK, MALE, 18-20 AWG.	6
11	PACKARD	12015323	CABLE SEAL	6

WIRE JUMPERS (TAPE TO SIDE PANEL END OF HARNESS)



NOTES:

- CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS; EXCEPT TWISTED PAIR CABLES. USE OF WIRE MARKERS IS ACCEPTABLE FOR CABLING.
- TAG HARNESS FOR IDENTIFICATION.
- HARNESS TO COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
- WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 WIRE SPECIFICATIONS.
- ALL WIRING TO BE GXL TYPE WIRE, EXCEPT TWISTED PAIR CABLES.
- USE CONVOLUTED CONDUIT (BLACK W/GRAY STRIPE) NYLON, PACKARD, RATED AT 300°F HIGH TEMP. ENGINE COMPARTMENT USAGE OR EQUIVALENT.
- ALL RING TERMINAL, PUSH-ON TERMINAL, AND BUTT SPLICE CRIMPS SHALL BE ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 6220224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR. THE HEAT SHRINK SLEEVE IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF.

CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN)
A1	16	RED	CIRCUIT BREAKER NO. 11 (AT SP) TO CLM ENG. PILOT LAMPS (+ 12 V COMMON INPUT)	45
B1	18	RED	ECM CONNECTOR NO. 1 (POS. 01) TO SIDE PANEL TERMINAL BD. POS. (W/B1A & B1B)	96
B1A	18	RED	SIDE PANEL TERM. BD. POS. (W/B1 & B1B) TO CONN. NO. 10 (POS. D) "STOP" DASH IND. LAMP GND	46
B2	18	BLUE	ECM CONN. NO. 1 (POS. 02) TO CONNECTOR NO. 10 (POS. F) "WATER IN FUEL" DASH IND. LAMP GND	74
B3	18	YELLOW	ECM CONNECTOR NO. 1 (POS. 03) TO CONNECTOR NO. 10 (POS. C) "WARNING" DASH IND. LAMP GND	74
B4	18	RED	ECM CONN. NO. 1 (POS. 04) TO SIDE PANEL TERM. BD. POS. (W/B4A&B4B) "STOP ENGINE" OUTPUT COMMON	74
B46A	18	GREEN	FAST IDLE ON-OFF SW., POS. 3 TO SP TERM. BD. W/*409(AT) OR *5314 NO(MD)	45.5
B5	18	RED	ECM CONN. 1 (POS.05) TO SIDE PANEL DUAL ALARM BUZZER INPUT (FAST), STOP ENG. WARNING (ECM DRIVEN SIGNAL)	96
B7	18	GREEN	ECM CONNECTOR NO. 1 (POS.07) TO SP SW. LOCATION, CRUISE SET/RESUME SW. POS. 1 (CRUISE/RESUME ACCEL)	137
B8	18	WHITE	ECM CONNECTOR NO. 1 (POS.08) TO CONNECTOR NO. 6, POS.A VEHICLE SPEED SENSOR INPUT (VSS+)	32
B11	18	WHITE	ECM CONNECTOR NO. 1 (POS.11) TO CONNECTOR NO. 10 (POS.E) "WAIT TO START" DASH IND. LAMP GND	74
B13	18	YELLOW	ECM CONNECTOR NO. 1 (POS.13) TO SP SW. LOCATION, CRUISE SET/RESUME SW., POS.3 (CRUISE SET/COAST)	137
B14	18	RED	ECM CONNECTOR NO. 1 (POS.14) TO SP SW. LOCATION, CRUISE ON-OFF SW., POS.3	136
B18	18	BLACK	ECM CONNECTOR NO. 1 (POS.18) TO CONNECTOR NO. 6, POS.B VEHICLE SPEED SENSOR INPUT (VSS-)	32
B19	18	WHITE	ECM CONN. NO. 1 (POS.19) TO CONNECTOR NO. 2, POS.B THROTTLE PEDAL ASM. (TPS SIGNAL THROTTLE RETURN)	74
B20	18	WHITE	ECM CONNECTOR NO. 1 (POS. 20) TO CONN. 5, POS.A WATER IN FUEL SENSOR	16
B21	18	RED	ECM CONNECTOR NO. 1 (POS.21) TO CONN. NO. 4, POS.A AT/MT TRANSMISSION ELECT SHIFT MODULATOR	85
B24	18	RED	ECM CONNECTOR NO. 1 (POS.24) TO BODY DOOR CONTROL RELAY (POS.30) THROTTLE INTERLOCK INPUT	112
B25	18	GREEN	ECM CONNECTOR NO. 1 (POS.25) TO CONN. NO. 3, POS.C THROTTLE PEDAL ASM. (TPS IDLE VALID. #2) N/O	74
B26	18	YELLOW	ECM CONNECTOR NO. 1 (POS. 26) TO CONN. NO.3, POS.B THROTTLE PEDAL ASM. (TPS IDLE VALID # 1) N/C	74
B27	18	RED	ECM CONNECTOR NO. 1 (POS.27) TO CONN. NO. 7, POS.A MANUAL TRANSMISSION CLUTCH SWITCH	27
B27J	18	WHITE	CONNECTOR NO. 8, POS.A TO POS.B (JUMPER) MANUAL TRANSMISSION CLUTCH SWITCH	4
B29	18	RED	ECM CONN. NO. 1 (POS.29) TO CONN. NO. 2, POS.C THROTTLE PEDAL ASM. (TPS SIGNAL V THROTTLE+5VDC)	74
B30	18	BLACK	ECM CONN. NO. 1 (POS. 30) TO CONNECTOR NO. 2, POS.A THROTTLE PEDAL ASM. (TPS SIGNAL POSITION INPUT)	74
B31	18	BLUE	ECM CONNECTOR NO. 1 (POS. 31) TO GRID HTR. RELAY NO. 2 (COIL, +12V)	69
B33	18	YELLOW	ECM CONNECTOR NO. 1 (POS 33) TO SERVICE BRAKE SWITCH, INPUT	25
B34	18	GREEN	ECM CONNECTOR NO. 1 (POS. 34) TO SP SW. LOCATION, ENGINE BRAKE ON-OFF SW., POS.3	138
B35	18	BLUE	ECM CONNECTOR NO. 1 (POS. 35) TO SP SW. LOCATION, IDLE/DIAGNOSTIC SW., POS.1 (IDLE/DIAG. INCREMENT)	127
B36	18	RED	ECM CONNECTOR NO. 1 (POS. 36) TO SP SW. LOCATION, IDLE/DIAGNOSTIC SW., POS.3 (IDLE/DIAG. DECREMENT)	127
B37	18	YELLOW	ECM CONNECTOR NO. 1 (POS 37) TO SP SW. LOCATION, DIAGNOSTIC ON-OFF SW., POS.3	127
B40	18	RED	ECM CONNECTOR NO. 1 (POS. 40) TO CONNECTOR NO. 5, POS.B WATER IN FUEL SENSOR	16
B41	18	RED	ECM CONNECTOR NO. 1 (POS. 41) TO GRID HTR. RELAY NO. 1 (COIL, +12V)	70
B46	18	GREEN	ECM CONNECTOR NO. 1 (POS.46) TO FAST IDLE ON-OFF SW., POS.2	133
B49	18	BLACK	ECM CONNECTOR NO. 1 (POS. 49) TO FRONT SP TERMINAL BD. DATALINK (+) J1708	94
B50	18	WHITE	ECM CONNECTOR NO. 1 (POS.50) TO FRONT SP TERMINAL BD. DATA LINK (-) J1708	94
FGND	18	WHITE	CONNECTOR NO. 4, POS.B TO FRAME GND CONNECTION	108
BNEG	14	WHITE	SIDE PANEL BATTERY GND STUD TO STARTER/BATTERY GND CABLE CONNECTION POINT	122
BNEG1	18	WHITE	THROTTLE PEDAL ASM. (TPS IDLE VALID. COMMON) CONNECTOR NO.3, POS.A TO SP BATTERY GND STUD	46
BNEG2	18	WHITE	SP TERM. BD. W/*9938(AT) OR *5314CM(CD) TO SIDE PANEL BATTERY GND STUD (STD.)	18
BNEG3	18	WHITE	CRUISE ON-OFF SW., POS.2 TO SIDE PANEL BATTERY GND STUD JUNCTION POINT (4 POS. TERM. BD) (OPT.)	59
BNEG4	18	WHITE	CRUISE SET/RESUME SW., POS.2 TO SIDE PANEL BATTERY GND STUD JUNCTION POINT (4 POS. TERM BD) (OPT.)	60
BNEG5	18	WHITE	DIAGNOSTIC ON-OFF SW., POS.2 TO SIDE PANEL BATTERY GND STUD (STD.)	50
BNEG6	18	WHITE	IDLE/DIAGNOSTIC SW., POS.2 TO SIDE PANEL BATTERY GND STUD (STD.)	51
BNEG7	18	WHITE	BODY DOOR CONTROL RELAY, POS.87 TO SIDE PANEL BATTERY GND STUD (THROTTLE INTERLOCK) (OPT.)	17.5
BNEG8	18	WHITE	ENGINE BRAKE ON-OFF SW., POS.2 TO SIDE PANEL BATTERY GND STUD (4 POS. TERM. BD) (OPT.)	61
BNEG9	18	WHITE	SERVICE BRAKE SW. TO SIDE PANEL BATTERY GND STUD (STD.)	86.5
BNEG10	18	WHITE	MANUAL TRANSMISSION CLUTCH SW. TO SIDE PANEL BATTERY GND STUD (OPT.)	88.5
BNEG11	16	WHITE	GRID HTR RELAY NO. 2, COIL GND TO SIDE PANEL BATTERY GND STUD (STD.)	110
BNEG11A	16	WHITE	GRID HTR RELAY NO. 2 TO GRID HTR RELAY NO. 1 (STD.)	8
35FI	18	LT.BLUE	FAST IDLE SW. (SYMBOL) LAMP (POS.8) TO SP. TERM. BD. W/35, +12V (STD.)	45
F1G0	18	WHITE	FAST IDLE SW. (SYMBOL) LAMP (POS.7) TO SP GND STUD (STD.)	55
35C	18	LT.BLUE	CRUISE CONTROL ON-OFF SW. (SYM.) LAMP (POS.8) TO SP TERM. BD., +12V (OPT.)	46.5
35D	18	LT.BLUE	CRUISE CONTROL ON-OFF SW. (SYM.) LAMP (POS.8) TO CRUISE SET/RESUME SW. (POS.8) (OPT.)	5
35E	18	LT.BLUE	DIAGNOSTIC ON-OFF SW. (SYM.) LAMP (POS.8) TO SP TERM. BD., +12V (STD.)	38
35F	18	LT.BLUE	DIAGNOSTIC ON-OFF SW. (SYM.) LAMP (POS.8) TO IDLE/DIAG. SW. (POS.8) (STD.)	5
35G	18	LT.BLUE	EXHAUST BRAKE ON-OFF SW. (SYM.) LAMP (POS.8) TO SP TERM. BD., +12V (OPT.)	48.5
35B	18	LT.BLUE	SP TERM. BD. W/35 TO SP TERM. BD. (SYM.) LAMP, +12V (OPT.)	12
36E	18	WHITE	CRUISE CONTROL ON-OFF SW. (SYM.) LAMP (POS.7) TO SP GND STUD (OPT.)	56
36F	18	WHITE	CRUISE CONTROL ON-OFF SW. (SYM.) LAMP (POS.7) TO CRUISE SET/RESUME SW. (POS.7) (OPT.)	5
36G	18	WHITE	DIAGNOSTIC ON-OFF SW. (SYM.) LAMP (POS.7) TO SP GND STUD (STD.)	48
36H	18	WHITE	DIAGNOSTIC ON-OFF SW. (SYM.) LAMP (POS.7) TO IDLE/DIAG SW. (POS.7) (STD.)	5
36J	18	WHITE	EXHAUST BRAKE ON-OFF SW. (SYM.) LAMP (POS.7) TO SP GND STUD (OPT.)	58
GND	18	WHITE	BRAKE/ACCEL INT. RELAY (TERM 86) TO SP GND STUD (OPT.)	17

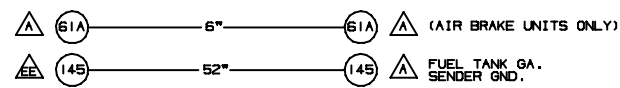
SHEET 2 OF 2



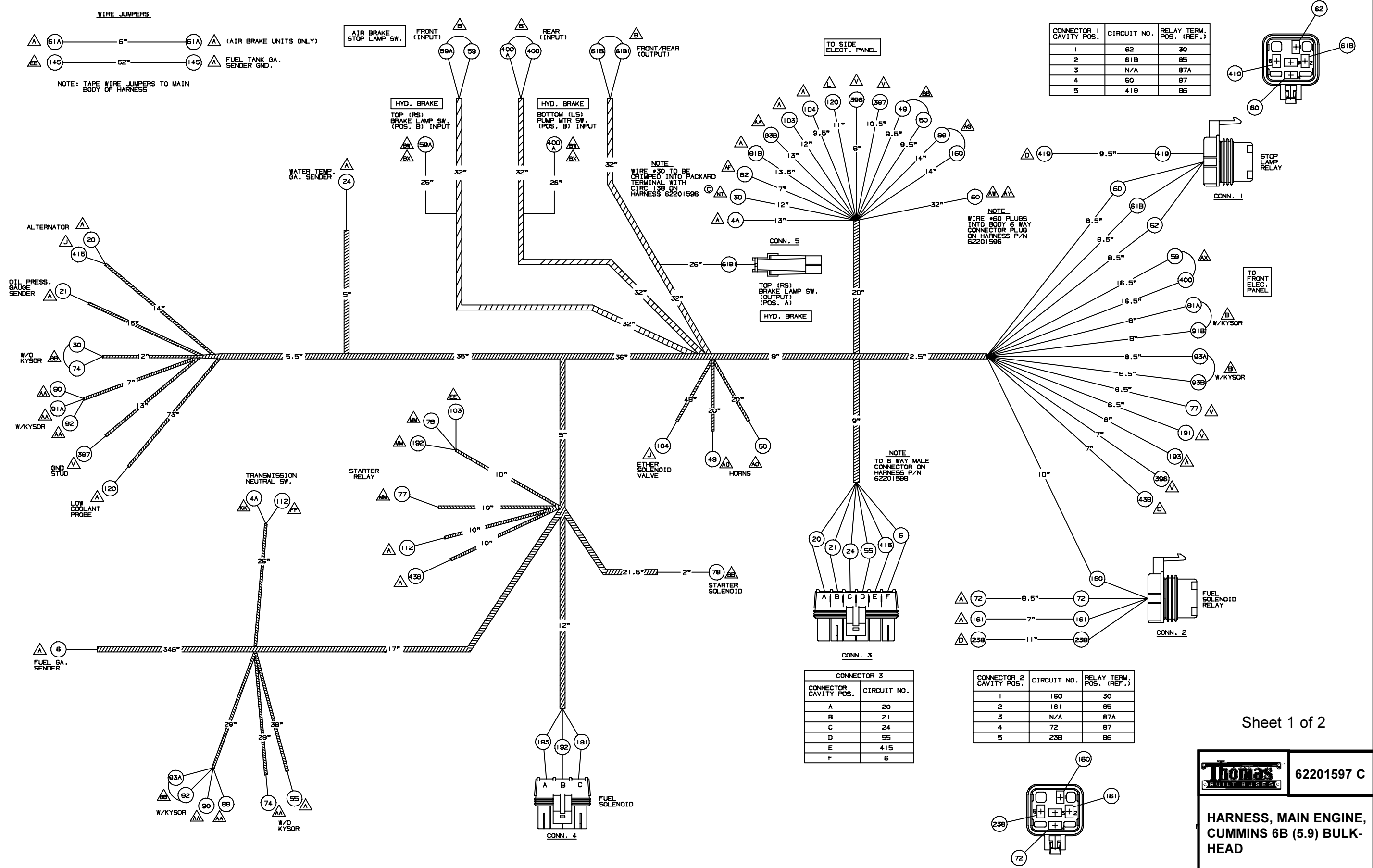
62202953 B

HARNESS, 98 CUMMINS ISB, CONN. B SPECIAL WIRING

WIRE JUMPERS



NOTE: TAPE WIRE JUMPERS TO MAIN BODY OF HARNESS



NOTE: WIRE #30 TO BE CRIMPED INTO PACKARD TERMINAL WITH CIRC 138 ON HARNESS 62201596

NOTE: WIRE #60 PLUGS INTO BODY 6 WAY CONNECTOR PLUG ON HARNESS P/N 62201596

NOTE: TO 6 WAY MALE CONNECTOR ON HARNESS P/N 62201596

CONNECTOR 1 CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	62	30
2	61B	85
3	N/A	87A
4	60	87
5	419	86

CONNECTOR 3	
CONNECTOR CAVITY POS.	CIRCUIT NO.
A	20
B	21
C	24
D	55
E	415
F	6

CONNECTOR 2		
CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	160	30
2	161	85
3	N/A	87A
4	72	87
5	238	86

Sheet 1 of 2

Thomas BULB BUSES
62201597 C
HARNESS, MAIN ENGINE, CUMMINS 6B (5.9) BULK-HEAD

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
3	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
4	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
	PACKARD	12015793	CONNECTOR ASM., WEATHERPACK, FEMALE, 3 WAY	1
	PACKARD	12015917-L	WIRE TERMINAL, WEATHERPACK, FEMALE SLEEVE, 12 AWG.	2
	PACKARD	12015193	CABLE SEAL, 12 AWG.	2
5	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE SLEEVE, 14 AWG.	1
	PACKARD	12010293	CABLE SEAL, 14 AWG.	1
	PACKARD	12010986	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
	PACKARD	12089305	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
PACKARD	12015323	CABLE SEAL	1	

GXL WIRE REQ'D	CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
	4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/*98 AND *4B) TO TRANSMISSION NEUTRAL SW.(INPUT)	126
	6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
	20	14	DK. GREEN	ALERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	108.5
	21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	109.5
	24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	94
	30	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO OIL PRESS./WATER TEMP. DUAL ALARM WARNING BUZZER (F)	129.5
	49	14	RED	HORN RELAY TO HORN	58.5
	50	14	RED	HORN RELAY TO HORN	58.5
	55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
	59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
*	60	14	RED	STOP LAMP RELAY CONTACT (87) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
	61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
*	61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (85)	84
*	62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BEAKER NO. 20	38
*	72	14	RED	FUEL SOLENOID RELAY CONTACT (87) TO FRONT PANEL TERMINAL BD. (W/*193)	8.5
	74	14	DK. BLUE	LOW OIL PRESS. SW. (W/O KYSOR) TO HIGH WATER TEMP. SW. (W/O KYSOR)	103.5
	77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
	78	10	RED/BLACK	STARTER RELAY (LOAD) (W/*192) TO STARTER SOLENOID (+12V)	33.5
	89	14	RED/BLACK	SIDE PANEL CIRCUIT BREAKER NO. 18 TO KYSOR ALARMSTAT (C)	130
	90	14	DK. GREEN	KYSOR PRESSURESTAT (C) TO KYSOR ALARMSTAT (N/C)	108.5
	91A	14	DK. GREEN	KYSOR PRESSURESTAT (N/O) TO FRONT PANEL TERMINAL BD. (W/*161 & *91B)	113
	91B	14	DK. GREEN	FRONT PANEL TERMINAL BD. (W/*91A AND *161) TO SIDE PANEL TERMINAL BD. (W/*91C OR *91D)	44
	92	14	DK. GREEN	KYSOR PRESSURESTAT (N/C) TO KYSOR ALARMSTAT (N/O)	108.5
	93A	14	DK. GREEN	KYSOR ALARMSTAT (N/O) TO FRONT PANEL TERMINAL BD. (W/*93B)	107
	93B	14	DK. GREEN	FRONT PANEL TERMINAL BD. (W/*93A) TO KYSOR SHUTDOWN WARNING BUZZER (POS.) (W/*94)	44
	103	14	DK. BLUE	STARTER RELAY (W/*78) TO SIDE PANEL TERMINAL BD. (W/*104)	92
	104	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/*103) TO ETHER SOLENOID VALVE	86.5
	112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
	120	14	DK. GREEN	KYSOR LOW COOLANT LEVEL MODULE (POS. 2) TO KYSOR LOW COOLANT LEVEL PROBE	189.5
	145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
*	160	14	RED	SIDE PANEL CIRCUIT BREAKER NO. 18 TO FUEL SOLENOID RELAY (30)	46.5
*	161	14	RED	FUEL SOLENOID RELAY CONTACT (85) TO FRONT PANEL TERMINAL BD. (W/*91A & *91B)	7
	191	12	BLACK	FUEL SOLENOID GND TO FRONT PANEL GND STUD	71
	192	12	WHITE	FUEL SOLENOID (PULL-IN COIL) TO STARTER RELAY (LOAD) (W/*78)	22
	193	14	RED	FUEL SOLENOID (HOLD-IN COIL) TO FRONT PANEL TERMINAL BD. (W/*72)	72.5
*	238	14	WHITE	FUEL SOLENOID RELAY CONTACT (86) TO FRONT PANEL GND STUD	11
	396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
	397	10	WHITE	SIDE PANEL GND STUD TO FRAME GND	129
	400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
	415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	108.5
*	419	14	WHITE	STOP LAMP RELAY CONTACT (86) TO FRONT PANEL GND STUD	9.5
	438	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	69.5
*	59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
*	400A	16	DK. BLUE/BLACK	LS REAR STOP LAMP SW. (AIR BRAKE) TO LS REAR STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
	61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58

NOTES:

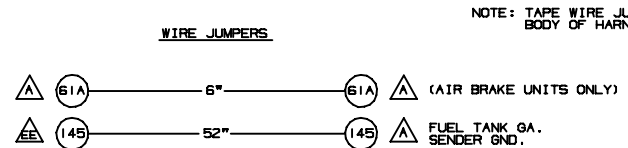
1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
2. TAG HARNESS FOR IDENTIFICATION.
3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVULATED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 - WIRE SPECIFICATIONS.
5. ALL WIRING TO BE SXL TYPE WIRE, EXCEPT WHERE NOTED TO USE GXL TYPE WIRE.

BX	61200819	CABLE SEAL, 150 SERIES, *12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., *12045773-L
AY	61200928	CABLE SEAL, WEATHERPACK, 14 AWG., *12010293
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., *12092444-L
AW	61200927	FEMALE SLEEVE, WEATHERPACK, 14 AWG., *12124580-L
AO	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLAG, 16-14 AWG.
AG	61200468	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG.
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
MM	61200189	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
FF	61200151	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
EE	61200149	RING TERMINAL, 5/16" STUD, 14 AWG.
BB	61200133	SPRING SPADE TERMINAL, *10 STUD, 10 AWG.
AA	61200132	SPRING SPADE TERMINAL, *10 STUD, 14 AWG.
V	61200181	RING TERMINAL, 1/4" STUD, 10 AWG.
L	61200388	FEMALE PUSH-ON, 1/4", 14 AWG.
J	61200168	BUTT SPLICE, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
B	61200190	RING TERMINAL, *10 STUD, 10 AWG.
A	61200174	RING TERMINAL, *10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION



Sheet 2 of 2

HARNESS, MAIN ENGINE, CUMMINS 6B (5.9) BULK-HEAD



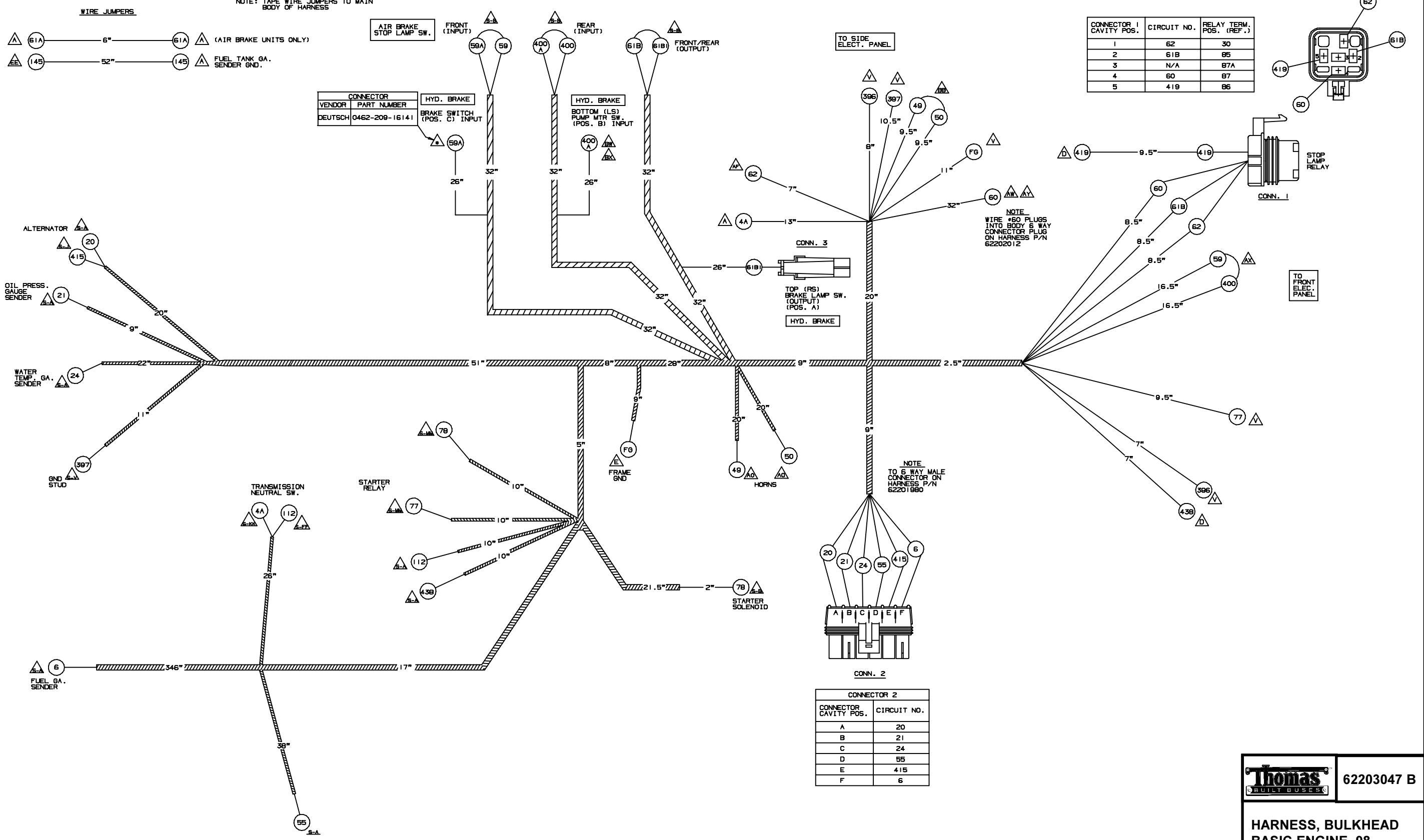
NOTE: TAPE WIRE JUMPERS TO MAIN BODY OF HARNESS

CONNECTOR		HYD. BRAKE
VENDOR	PART NUMBER	BRAKE SWITCH (POS. C) INPUT
DEUTSCH	0462-208-16141	

CONNECTOR		HYD. BRAKE
VENDOR	PART NUMBER	BOTTOM (LS) PUMP MTR SW. (POS. B) INPUT
DEUTSCH	0462-208-16141	

CONNECTOR 2	
CONNECTOR CAVITY POS.	CIRCUIT NO.
A	20
B	21
C	24
D	55
E	415
F	6

CONNECTOR 1 CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	62	30
2	61B	65
3	N/A	67A
4	60	67
5	419	66



SHEET 1 OF 2

Thomas BULLY BUSES

62203047 B

HARNESS, BULKHEAD BASIC ENGINE, 98 CUMMINS 6B (5.9)

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1	PACKARD	12077983	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066514-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
3	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
	PACKARD	12010996	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
	PACKARD	12015323	CABLE SEAL	1

CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/ #98 AND #4B) TO TRANSMISSION NEUTRAL SW. (INPUT)	126
6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
20	14	DK. GREEN	ALTERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	125
21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	114
24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	127
49	14	RED	HORN RELAY TO HORN	58.5
50	14	RED	HORN RELAY TO HORN	58.5
55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
60	14	RED	STOP LAMP RELAY CONTACT (B7) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (B6)	84
62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BREAKER NO. 20	38
77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
78	10	RED/BLACK	STARTER RELAY (LOAD) (W/#192) TO STARTER SOLENOID (+12V)	33.5
112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
397	10	WHITE	SIDE PANEL GND STUD TO OIL PRESS MANIFOLD BLOCK MTG.	137.5
400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	125
419	14	WHITE	STOP LAMP RELAY CONTACT (B6) TO FRONT PANEL GND STUD	9.5
439	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	69.5
59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
400A	16	DK. BLUE/BLACK	LS REAR STOP LAMP SW. (AIR BRAKE) TO LS REAR STOP LAMP SW. (HYD. BRAKE) (INPUT)	58
61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58
FG	10	WHITE	SIDE PANEL GND STUD TO FRAME GND	77

BX
BW
AY
AX
AW
AO

S-B	61201313	RING TERMINAL, #10 STUD, 14 AWG
S-A	61201312	RING TERMINAL, #10 STUD, 10 AWG
S-V	61201324	RING TERMINAL, 1/4" STUD, 10 AWG
S-KK	61200850	BULLET TERMINAL, MALE, .176 DIA 14 AWG
S-FF	61201363	BULLET TERMINAL, FEMALE, .176 DIA., 14 AWG
S-MM	61201334	RING TERMINAL, 5/16" STUD, 10 AWG
BX	61200819	CABLE SEAL, 150 SERIES, #12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., #12045773-L
AY	61200628	CABLE SEAL, WEATHERPACK, 14 AWG., #12010293
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., #12092444-L
AW	61200827	FEMALE SLEEVE, WEATHERPACK, 14 AWG., #12124580-L
AO	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLAG, 16-14 AWG.
AG	61200468	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG.
AF	61200397	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
MM	61200189	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
FF	61200151	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
EE	61200149	RING TERMINAL, 5/16" STUD, 14 AWG.
BB	61200133	SPRING SPADE TERMINAL, #10 STUD, 10 AWG.
AA	61200132	SPRING SPADE TERMINAL, #10 STUD, 14 AWG.
V	61200181	RING TERMINAL, 1/4" STUD, 10 AWG.
L	61200388	FEMALE PUSH-ON, 1/4", 14 AWG.
J	61200168	BUTT SPLICE, 14 AWG.
D	61200173	RING TERMINAL, 1/4" STUD, 14 AWG.
B	61200190	RING TERMINAL, #10 STUD, 10 AWG.
A	61200174	RING TERMINAL, #10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION

SEE NOTE 6

NOTES:

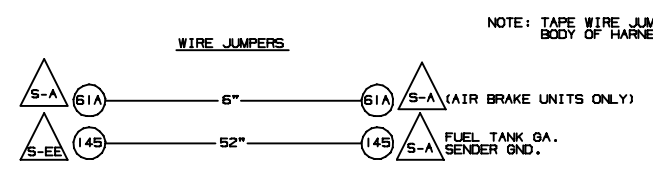
1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
2. TAG HARNESS FOR IDENTIFICATION.
3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 - WIRE SPECIFICATIONS.
5. ALL WIRING TO BE GXL TYPE WIRE.
6. SEALED TERMINAL INFORMATION IS FOUND ON DRAWING 62202342.

SHEET 2 OF 2



62203047 B

HARNESS, BULKHEAD
BASIC ENGINE, 98
CUMMINS 6B (5.9)

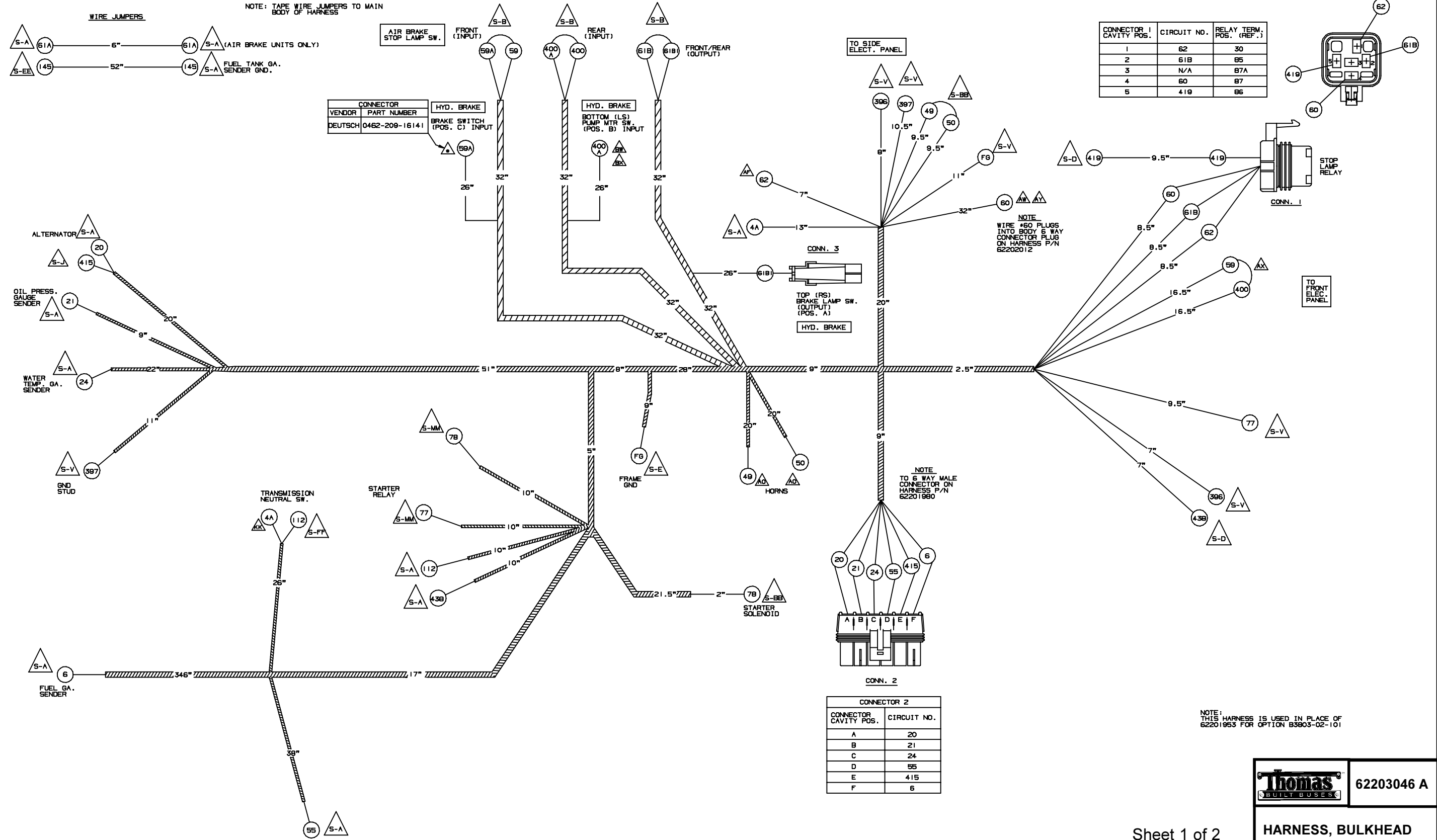


NOTE: TAPE WIRE JUMPERS TO MAIN BODY OF HARNESS

CONNECTOR		HYD. BRAKE
VENDOR	PART NUMBER	BRAKE SWITCH (POS. C) INPUT
DEUTSCH	0462-209-16141	

CONNECTOR		HYD. BRAKE
VENDOR	PART NUMBER	PUMP MTR SW (POS. B) INPUT
DEUTSCH	0462-209-16141	

CONNECTOR 1 CAVITY POS.	CIRCUIT NO.	RELAY TERM. POS. (REF.)
1	62	30
2	61B	85
3	N/A	87A
4	60	87
5	419	86



CONNECTOR 2	
CONNECTOR CAVITY POS.	CIRCUIT NO.
A	20
B	21
C	24
D	55
E	415
F	6

NOTE: THIS HARNESS IS USED IN PLACE OF 62201953 FOR OPTION B3803-02-101

Thomas BUILT BUSES
62203046 A

**HARNESS, BULKHEAD
BASIC ENGINE, 98
CUMMINS 6B (5.9),
SPECIAL WIRING**

CONNECTOR LIST

CONN.	VENDOR	PART NO.	DESCRIPTION	QTY
1	PACKARD	12077993	CONNECTOR, RELAY, METRI-PACK, 630 SERIES, SEALED, 5 WAY	1
	PACKARD	12066614-L	WIRE TERMINAL, METRI-PACK, 630 SERIES, FEMALE, 14-16 AWG.	4
2	PACKARD	12015799	CONNECTOR ASM., WEATHERPACK, FEMALE, 6 WAY	1
	PACKARD	12124580-L	WIRE TERMINAL, WEATHERPACK, FEMALE, 14-16 AWG.	6
	PACKARD	12015323	CABLE SEAL, 16 AWG.	3
3	PACKARD	12010293	CABLE SEAL, 14 AWG.	3
	PACKARD	12010986	CONNECTOR ASM., WEATHERPACK, MALE, 1 WAY	1
	PACKARD	12124582-L	WIRE TERMINAL, WEATHERPACK, MALE, 14-16 AWG.	1
	PACKARD	12015323	CABLE SEAL	1

CIRCUIT	GA.	COLOR	DESCRIPTION	LENGTH (IN.)
4A	14	DK. BLUE	SIDE PANEL TERMINAL BD. (W/ #98 AND #48) TO TRANSMISSION NEUTRAL SW.(INPUT)	126
6	14	BLACK	FUEL GAUGE TO FUEL TANK SENDER	422
20	14	DK. GREEN	ALTERNATOR TACHOMETER SIGNAL TO TACHOMETER GAUGE	126
21	16	GREEN	OIL PRESS. GAUGE SENDER TO OIL PRESS. GAUGE	114
24	16	GREEN	WATER TEMP. SENDER TO WATER TEMP. GAUGE	127
49	14	RED	HORN RELAY TO HORN	59.5
50	14	RED	HORN RELAY TO HORN	59.5
55	16	GREEN	TRANSMISSION TEMP. SENDER TO TRANSMISSION TEMP. GAUGE	114
59	14	RED	FRONT PANEL CIRCUIT BREAKER NO. 5 TO RS FRONT STOP LAMP SW. (AIR BRAKE) (INPUT)	92
60	14	RED	STOP LAMP RELAY CONTACT(87) TO 6 POSITION BODY CONNECTOR PLUG (BRAKE LIGHTS)	63
61A	14	RED	RS REAR STOP LAMP SW. TO LS FRONT STOP LAMP SW. (AIR BRAKE JUMPER ONLY)	6
61B	14	GREEN	RS FRONT STOP LAMP SW. (AIR BRAKE) TO STOP LAMP RELAY (86)	84
62	14	RED	STOP LAMP RELAY CONTACT (30) TO SIDE PANEL CIRCUIT BEAKER NO. 20	39
77	10	RED/BLACK	MAIN 150 AMP CIRCUIT BREAKER (AUX. LOADSIDE) TO STARTER RELAY (POWER) CONTACT	72
78	10	RED/BLACK	STARTER RELAY (LOAD) (W/*192) TO STARTER SOLENOID (+12V)	33.5
112	14	RED	STARTER RELAY COIL TO TRANSMISSION NEUTRAL SW. (OUTPUT)	53
145	14	WHITE	FUEL TANK SENDER GND TO FRAME GND	52
396	14	WHITE	FRONT PANEL GND STUD TO SIDE PANEL GND STUD	37.5
397	10	WHITE	SIDE PANEL GND STUD TO OIL PRESS MANIFOLD BLOCK MTG.	137.5
400	14	DK. BLUE	FRONT PANEL CIRCUIT BREAKER NO. 5 TO LS REAR STOP LAMP SW. (AIR BRAKE) (INPUT)	92
415	14	RED	IGNITION SW. (IGN. RUN) TO ALTERNATOR "IGN." POST	125
419	14	WHITE	STOP LAMP RELAY CONTACT (86) TO FRONT PANEL GND STUD	9.5
438	14	WHITE	STARTER RELAY COIL GND TO FRONT PANEL GND STUD	69.5
59A	16	RED/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (INPUT)	59
400A	16	DK. BLUE/BLACK	LS REAR STOP LAMP SW. (AIR BRAKE) TO LS REAR STOP LAMP SW. (HYD. BRAKE) (INPUT)	59
61B1	14	GREEN/BLACK	RS FRONT STOP LAMP SW. (AIR BRAKE) TO RS FRONT STOP LAMP SW. (HYD. BRAKE) (OUTPUT)	58
FG	10	WHITE	SIDE PANEL GND STUD TO FRAME GND	77

NOTES:

1. CIRCUIT NUMBERS TO BE STAMPED AT 4" INTERVALS ON ALL LEADS.
2. TAG HARNESS FOR IDENTIFICATION.
3. HARNESS TO BE COVERED WITH APPROPRIATE SIZE OF CONVOLUTED CONDUIT. ALL WIRE DROPOUTS TO RECEIVE APPROPRIATE SIZE COVERING FROM POINT OF EXIT FROM MAIN BODY OF HARNESS TO END OF LEAD.
4. WIRE CONSTRUCTION, MATERIALS AND PRACTICES TO COMPLY WITH THE FOLLOWING STANDARDS ON DWG. 62201055 - WIRE SPECIFICATIONS.
5. ALL WIRING TO BE GXL TYPE WIRE.
6. ALL RING TERMINAL, PUSH-ON TERMINAL, AND BUTT SPLICE CRIMPS SHALL BE ENVIRONMENTALLY SEALED. EQUIVALENT ASSEMBLY TO TERMINALS FOUND ON DWG. 62202342 MAY BE SUBSTITUTED FROM DWG. 62020224 BY SLEEVING EACH TERMINAL WITH A HEAT SHRINK INSULATOR. THE HEAT SHRINK SLEEVE IS TO COMPLETELY COVER THE CONDUCTOR ENTRY INTO THE TERMINAL, ACTING AS AN ENVIRONMENTAL SEAL AND STRAIN RELIEF.

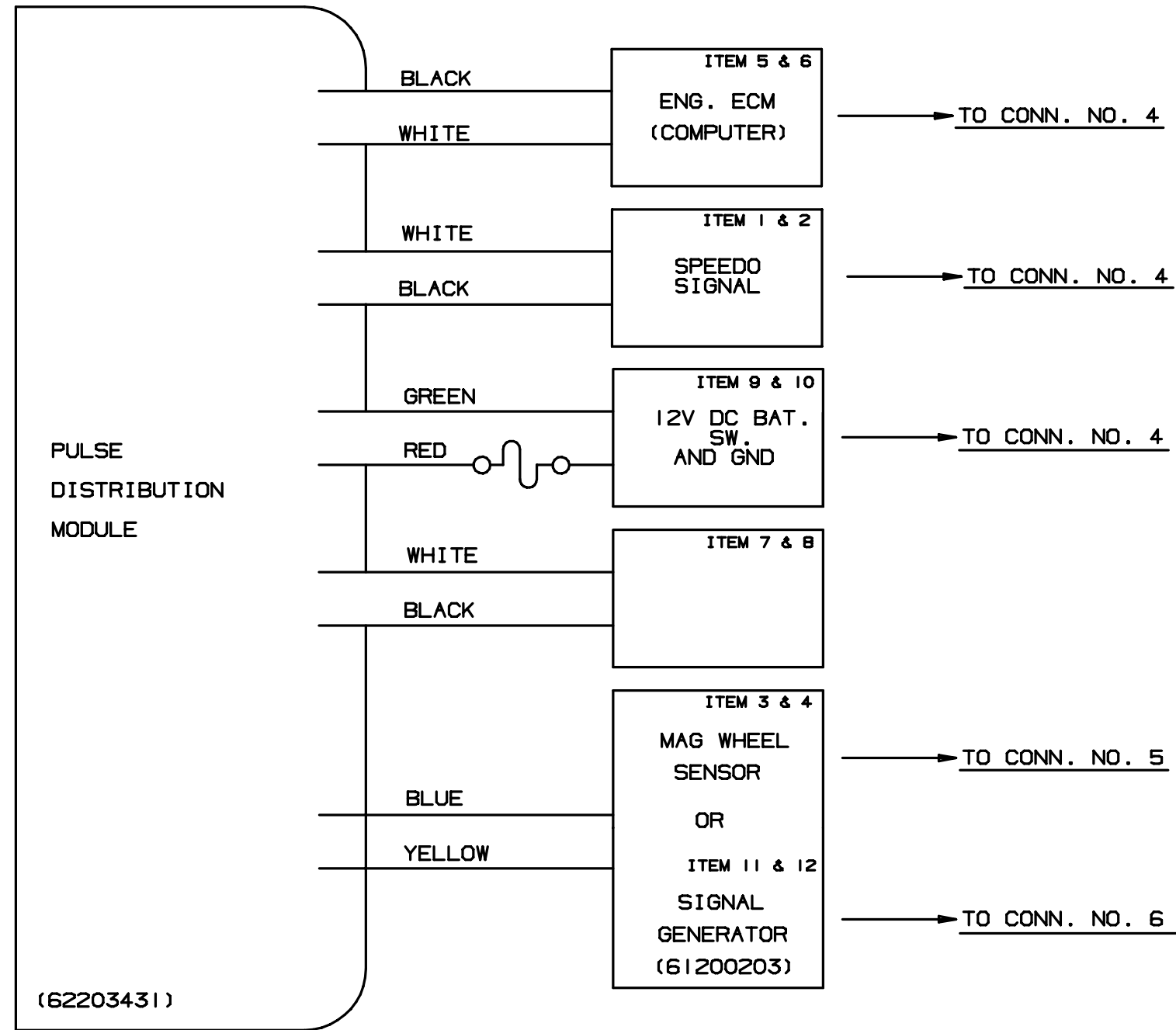
SHEET 2 OF 2

S-E	61201315	RING TERMINAL, 3/8" STUD, 10 AWG.
BX	61200819	CABLE SEAL, 150 SERIES, #12048086
BW	61201036	WIRE TERMINAL, METRI-PACK, 150 SERIES, MALE, 18 AWG., #12045773-L
AY	61200928	CABLE SEAL, WEATHERPACK, 14 AWG., #12010293
AX	61200850	FUSE HOLDER CONTACT, MAXI-FUSE, (2) 12 AWG., #12092444-L
AW	61200927	FEMALE SLEEVE, WEATHERPACK, 14 AWG., #12124580-L
AQ	61200792	FEMALE PUSH-ON, .250 x .032, FULLY INSULATED, 90° FLAG, 16-14 AWG.
S-AG	61201337	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 12-10 AWG.
AF	61200387	FEMALE PUSH-ON, 1/4", FULLY INSULATED, 16-14 AWG.
S-MM	61201334	RING TERMINAL, 5/16" STUD, 10 AWG.
KK	61200154	BULLET TERMINAL CONNECTOR, MALE, .176 DIA., 14 AWG.
S-FF	61201363	BULLET TERMINAL CONNECTOR, FEMALE, .176 DIA., 14 AWG.
S-EE	61201330	RING TERMINAL, 5/16" STUD, 14 AWG.
S-BB	61201327	SPRING SPADE TERMINAL, #10 STUD, 10 AWG.
S-AA	61201326	SPRING SPADE TERMINAL, #10 STUD, 14 AWG.
S-V	61201324	RING TERMINAL, 1/4" STUD, 10 AWG.
S-L	61201318	FEMALE PUSH-ON, 1/4", 14 AWG.
S-J	61201316	BUTT SPLICE, 14 AWG.
S-D	61201314	RING TERMINAL, 1/4" STUD, 14 AWG.
S-B	61201313	RING TERMINAL, #10 STUD, 10 AWG.
S-B	61201312	RING TERMINAL, #10 STUD, 14 AWG.
TERM Δ	PART NO.	DESCRIPTION



62203046 A

**HARNESS, BULKHEAD
BASIC ENGINE, 98
CUMMINS 6B (5.9),
SPECIAL WIRING**




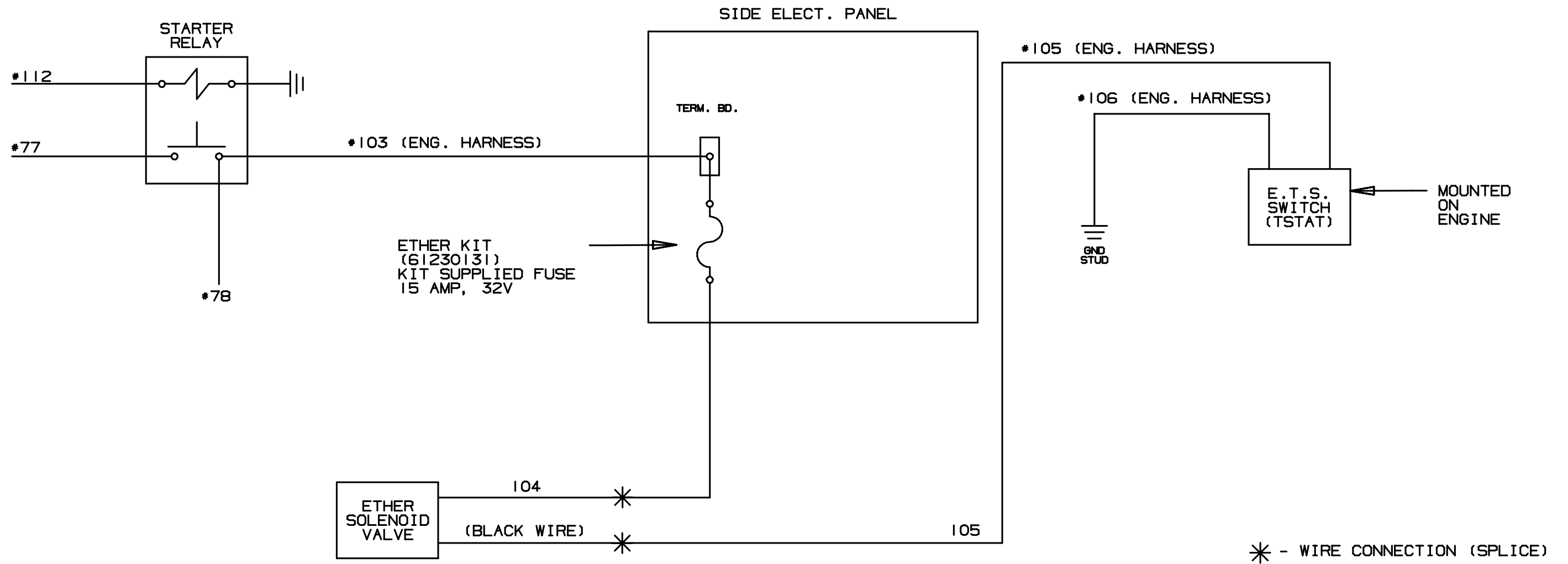
ITEM	WIRE NO. AND/OR TWISTED PAIR	AWG	PULSE DISTRIB. MODULE WIRE COLOR	FUNCTION
1	T.P.#493	18	BLACK	SIG (-) TO SPEEDOMETER
2	T.P.#494	18	WHITE	SIG (+) TO SPEEDOMETER
3	T.P.#491	18	BLUE	SIG (-) MAG SENSOR
4	T.P.#492	18	YELLOW	SIG (+) MAG SENSOR
5	T.P.#B8	18	WHITE	ENG. ECM VSS+
6	T.P.#B18	18	BLACK	ENG. ECM VSS-
7	N/A	18	WHITE	
8	N/A	18	BLACK	
9	BNEG13	18	GREEN	BATTERY NEGATIVE
10	#490	18	RED	IGN. FEED +12VDC
11	T.P.#488	18	YELLOW	SIG. GENERATOR (+)
12	T.P.#489	18	BLUE	SIG. GENERATOR (-)


PULSE DISTRIBUTION MODULE

(62203431)

NOTE: 50mA MAX LOAD DRIVEN
3 AMP FUSE OR C.B.
REQ'D IN IGN. (RED)

	62202310 B
DIAGRAM w/CIRCUIT DESC. PULSE DISTRIBU- TION MODULE AT TRAN. 98 CUMMINS 6B	



	62201443 A
ETHER START CUMMIINS 6B ENGINE	