

Allison 3000 and 4000 Product Families

Table F–1. Abbreviation Guide (cont'd)

Termination Point Abbreviation	Connector Name
TRANS	Transmission Feed Through Harness
VIM	Vehicle Interface Module

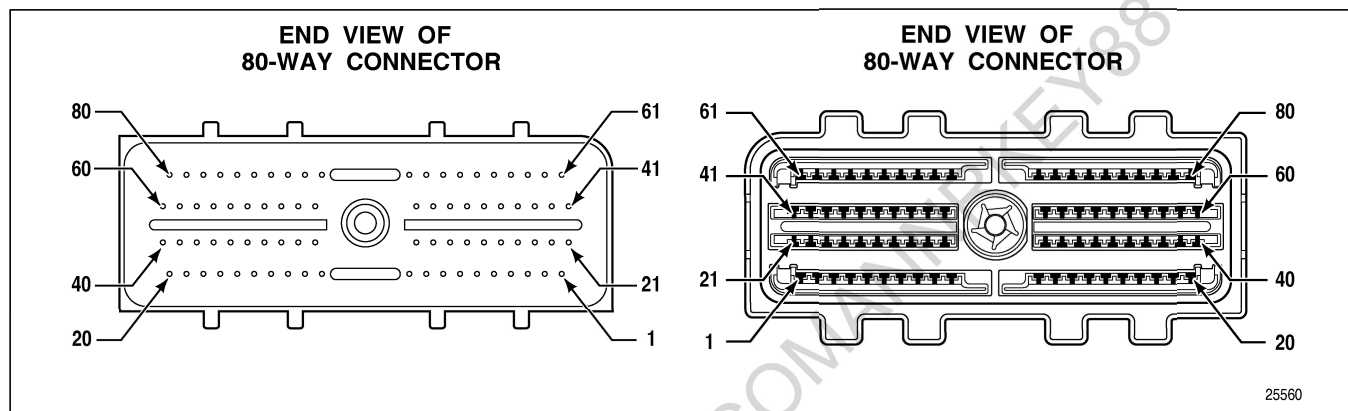


Figure F–1. 80-Way TCM Connector

Table F–2. 80-Way TCM CONNECTOR

Terminal No.	Color	Wire No.	Description	Termination Point(s)
1	Blue	101	GPI 6 (-)	Vehicle System
2	Yellow	102	GPI 2 (+)	Vehicle System
3	Yellow	103	TCM Digital Return	Vehicle System
4	Yellow	104	GPO 2 (-)	Vehicle System or VIM-B1
5	Orange	105	GPO 4 (-)	Vehicle System or VIM-C2
6	Yellow	106	CAN2 High (+)	IESCAN A or H
7	Yellow	107	Internal Terminating Resistor CAN1 (TCM)	Vehicle System
8	Green	108	CAN1 Low (-)	SAE J1939 B or L
9	Gray	109	Battery (-)	Vehicle System or VIM-A2
10	Pink	110	Battery (+)	Vehicle System or VIM-E2
11	Orange	111	High Side Driver Feed (HSD1)	Trans Connector (Pin 1)
			TransID (TIDB Only)	Trans Connector (Pin 6 TIDB Only)
				Unused TransID (Pin 20)
12	Pink	112	Signal Reference 5V	Trans Connector (Pin 16) TPS (Pin C)
13	White	113	GPO 8 (-)	Vehicle System
14	Blue	114	Strip Shift Selector Bit-4	Strip Shift Selector (Pin C)
15	White	115	Pressure Control Solenoid (PCS5)	Retarder Solenoid (Pin A) or T-Case (Pin A)
16	Blue	116	OLS	Trans Connector (Pin 15)
17	Blue	117	GPI 10 (-)	Vehicle System

Appendix F—WIRE/CONNECTOR/VIM CHARTS

Table F-2. 80-Way TCM CONNECTOR (cont'd)

Terminal No.	Color	Wire No.	Description	Termination Point(s)
18	Yellow	118	PS2	Trans Connector (Pin 17)
19	Blue	119	Shift Solenoid (SS2)	Trans Connector (Pin 17) or Retarder Accumulator Solenoid (Pin A)
20	Blue	120	Turbine Shaft Speed Sensor—Low	NT-B (4000) or Trans Connector (Pin 14) (3000)
21	Green	121	ABS/GPI 8 (–)	Vehicle System
22	Yellow	122	GPI 4 (–)	Vehicle System
23	Green	123	GPI 1 (+)	Vehicle System
24	White	124	GPO 5	Vehicle System
25	Tan	125	Vehicle Speed Signal	Input for Vehicle Speedometer or VIM-B2
26	Yellow	126	Internal Terminating Resistor CAN2 (TCM)	Vehicle System
27	Green	127	CAN2 Low (–)	IESCAN B or L
28	Yellow	128	CAN1 High (+)	SAE J1939 A or H
29	Green	129	CHECK TRANS (–)	Vehicle System
30	White	130	GPO 1 (+)	Vehicle System or VIM-D2
31	Yellow	131	HSD3	Trans Connector (Pin 11), Retarder Accumulator Solenoid (Pin B), and Retarder Solenoid (Pin B) or T-Case (Pin-B)
32	—	—	Not Used	—
33	Yellow	133	PCS3	Trans Connector (Pin 9)
34	No Color	134	Allison-supplied SAE J1939 Shift Selector	Allison SAE J1939 Shift Selector (Pin 11)
35	Blue	135	Engine Water Temperature	Engine Water Temp (Pin A)
36	Orange	136	PCS1	Trans Connector (Pin 4)
37	White	137	TCC Solenoid	Trans Connector (Pin 12)
38	Tan	138	Strip Shift Selector Bit-Parity	Strip Shift Selector (Pin E)
39	Orange	139	Engine Speed Sensor—Low	NE-B
40	Green	140	Output Shaft Speed Sensor—Low	NO-B or T-Case (Pin D)
41	Tan	141	Neutral Start Output (+)	To OEM supplied starter relay or VIM-D1
42	White	142	GPI 5 (–)	Vehicle System
43	Blue	143	GPI 3 (+)	Vehicle System
44	Blue	144	PWM/TPS Input	Vehicle System or TPS (Pin B)
45	Orange	145	GPO 3 (–)	Vehicle System or VIM-F3
46	—	—	Not Used	—
47	—	—	Not Used	—

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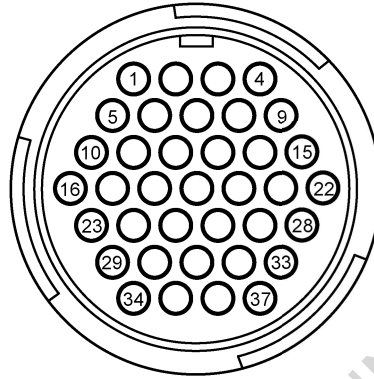
Table F-2. 80-Way TCM CONNECTOR (cont'd)

Terminal No.	Color	Wire No.	Description	Termination Point(s)
48	Yellow	148	CAN1 High	SAE J1939 A or H
49	N/A	149	CAN1 Shield	SAE J1939 C or S
50	Pink	150	GPO 7 (-)	Vehicle System
51	White	151	SS1	Trans Connector (Pin 10)
52	Green	152	PCS2	Trans Connector (Pin 5)
53	Green	153	Strip Shift Selector Bit-2	Strip Shift Selector (Pin B)
54	Tan	154	Sump Temp Sensor	Trans Connector (Pin 18)
55	White	155	PCS4	Trans Connector (Pin 2)
56	Yellow	156	Retarder Request Sensor	RMR (Pin B)
57	White	157	GPI 12 (-)	Vehicle System
58	Green	158	TCM Analog Return	Trans Connector (Pin 19), RMR (Pin A), TPS (Pin A), Engine Water Temp (Pin B), Retarder Temp (Pin B)
59	Tan	159	Engine Speed Sensor—High	NE-A
60	Yellow	160	Output Shaft Speed Sensor—High	NO-A or T-Case (Pin C)
61	Orange	161	GPI 7 (-)	Vehicle System
62	Yellow	162	GPI 9 (-)	Vehicle System or VIM-F1
63	Yellow	163	Ignition Power	Vehicle System or VIM-F1
64	Blue	164	GPO 6 (-)	Vehicle System
65	Tan	165	Reverse Warning	Vehicle System or VIM-F2
66	Yellow	166	CAN2 High	IESCAN A or H
67	N/A	167	CAN2 Shield	IESCAN C or S
68	—	—	Not Used	—
69	Gray	169	Battery (-)	Vehicle System or VIM-A
70	Pink	170	Battery (+)	Vehicle System or VIM-E1
71	Yellow	171	HSD2	Trans Connector (Pin 6)
			TransID (TIDB Only)	Trans Connector (Pin 1 TIDB Only)
72	—	—	Not Used	—
73	Orange	173	Strip Shift Selector Bit-1	Strip Shift Selector (Pin A)
74	Blue	174	MAIN MOD Solenoid	Trans Connector (Pin 8)
75	Orange	175	Retarder Temperature	Retarder Temp (Pin A)
76	Yellow	176	OEM Optional	Unused Obsolete TransID
77	Green	177	PS1	Trans Connector (Pin 3)
78	White	178	PCS6	Trans Connector (Pin 7)
79	Pink	179	GPI 11 (-)	Vehicle System
80	Orange	180	Turbine Shaft Speed Sensor—High	NT-A (4000) or Trans Connector (Pin 13) (3000)

Appendix F—WIRE/CONNECTOR/VIM CHARTS

**5th GEN 37-WAY ITT-CANNON APD CONNECTOR
(A63 TCM Compatible)**

Connector View:
viewed from wire
insertion point of
OEM-supplied
Plug connector



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Figure F–2. 37–Way ITT-Cannon APD Connector

Table F–3. 37–Way ITT-Cannon APD Connector

Terminal Number	Color	Wire Number	Description
1	Blue	119	Air Solenoid/SS2
2	Orange	111	HSD1
3	Yellow	133	PCS3
4	White	151	SS1
5	Pink	112	Sensor Supply
6	—	—	Not Used
7	Blue	174	Main Mod
8	White	115	Retarder Solenoid
9	White	178	PCS6
10	Yellow	131	HSD3
11	—	—	Not Used
12	Orange	136	PCS1
13	Yellow	118	PS2
14	White	137	TCC
15	Blue	135	Water Temperature
16	—	—	Not Used
17	Green	152	PCS2
18	—	—	Not Used
19	Yellow	171	HSD2
20	White	155	PCS4
21	Orange	175	Retarder Temperature
22	Green	158	Sensor Ground
23	—	—	Not Used
24	—	—	Not Used

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Table F-3. 37-Way ITT-Cannon APD Connector (cont'd)

Terminal Number	Color	Wire Number	Description
25	—	—	Not Used
26	Tan	154	Sump Temperature
27	—	—	Not Used
28	Blue	144	EBS
29	Green	140	No-
30	—	—	Not Used
31	Green	177	PS1
32	Blue	116	Oil Level
33	Tan	159	Ne+
34	Yellow	160	No+
35	Orange	180	Nt+
36	Blue	120	Nt-
37	Orange	139	Ne-

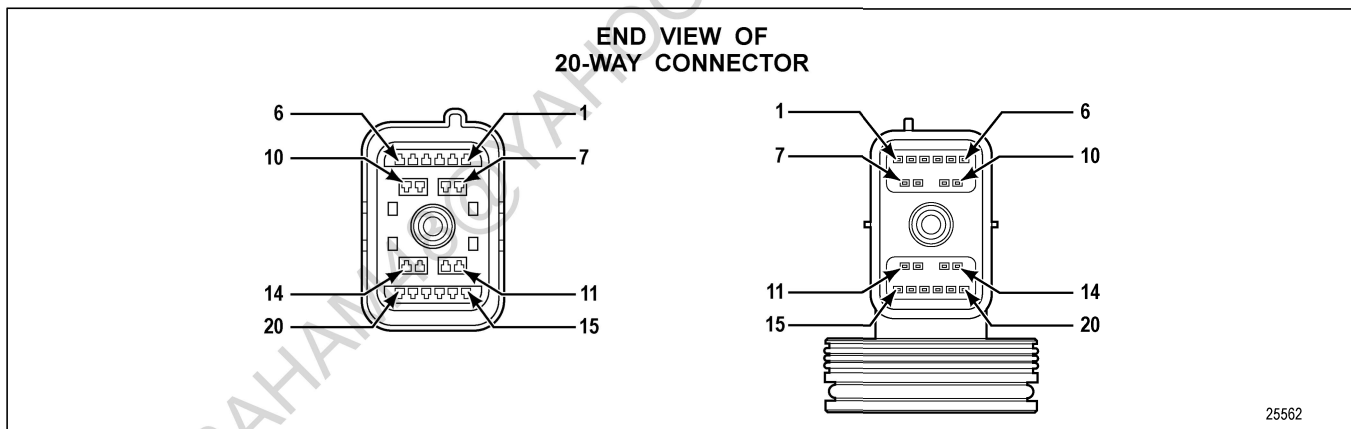


Figure F-3. 20-Way AFL Transmission Connector

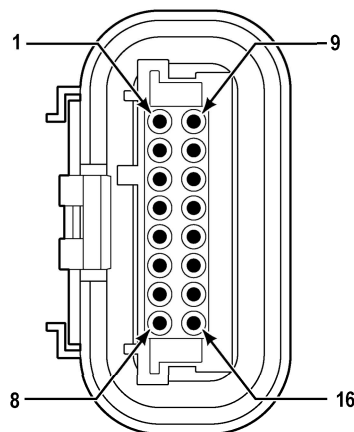
Table F-4. 20-Way AFL Transmission Connector

Terminal No.	Color	Wire No.	Description	Termination Point(s)
1	Orange	111	HSD1, Unused TransID, HSD2 (TIDB Only)	TCM-11, MAIN MOD-A, PCS4-A, PCS6-A, Internal WH-20, TCM 76 (OEM Optional), HSD2 (TIDB Only)
2	White	155	PCS4, Low	TCM-55, PCS4-B
3	Green	177	PS1 Input	TCM-77, PS1-A
4	Orange	136	PCS1, Low	TCM-36, PCS1-B
5	Green	152	PCS2, Low	TCM-52, PCS2-B
6	Yellow	171	HSD1, HSD2 (TIDB Only)	TCM-71, PCS1-A, PCS2-A, PCS3-A, SS1-A, HSD2 (TIDB Only)
7	White	178	PCS6, Low (7-speed only)	TCM-78, PCS6-B

Appendix F—WIRE/CONNECTOR/VIM CHARTS

Table F–4. 20-Way AFL Transmission Connector (*cont'd*)

Terminal No.	Color	Wire No.	Description	Termination Point(s)
8	Blue	174	MAIN MOD Solenoid, Low	TCM-74, MAIN MOD-B
9	Yellow	133	PCS3, Low	TCM-33, PCS3-B
10	White	151	SS1, Low	TCM-51, SS1-B
11	Yellow	131	HSD3	TCM-31, TCC-A, SS2-A (7-speed only)
12	White	137	TCC Solenoid, Low	TCM-37, TCC-B
13	Orange	180	Turbine Shaft Speed Sensor, High (3000 only)	TCM-80, NT-A
14	Blue	120	Turbine Shaft Speed Sensor, Low (3000 only)	TCM-20, NT-B
15	Blue	116	OLS Input	TCM-16, OLS-B
16	Pink	112	5V Reference Voltage	TCM-12, OLS-C, TPS-C, RMR-C
17	Blue	118	PS2	TCM-18, PS2-A
17	Blue	119	SS2, Low (7-speed only)	TCM-19, SS2-B
18	Tan	154	Sump Temperature Sensor Input	TCM-54 Sump Temp-B
19	Green	158	Analog Return	TCM-58, OLS-A, Sump Temp-A, PS1-B, PS2-B, RMR-A, TPS-A, RTR Temp-B, Engine Water Temp-B
20	Yellow	176	Unused TransID	TCM-76 (OEM Optional), TCM-11, Internal WH-1, HSD1, Main Mod-A, PCS4-A, PCS6-A



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Figure F–4. SAE J1939 Shift Selector (Pushbutton, Bump Lever, Strip) Connector

Table F–5. SAE J1939 Shift Selector (Pushbutton, Bump Lever, Strip)

Terminal No.	Color	Wire No.	Description	Termination Point(s)
1				
2				

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Table F–5. SAE J1939 Shift Selector (Pushbutton, Bump Lever, Strip) (cont'd)

Terminal No.	Color	Wire No.	Description	Termination Point(s)
3			Dimmer Input	Vehicle System
4				
5			Battery Ground	
6			Shift Selector 2 ID	Battery Ground
7			Internal Termination Resistor Jumper, if used	Shift Selector Pin 16
8			CAN1 or CAN2 High	A or H
9				
10				
11		134	PWM Directional Signal	TCM-34
12			Ignition Sense	Vehicle System
13			Battery Voltage	Vehicle System
14			CAN1 or CAN2 Shield	
15			CAN1 or CAN2 Low	B or L
16			Internal Terminal Resistor Jumper, if used	Shift Selector Pin 7

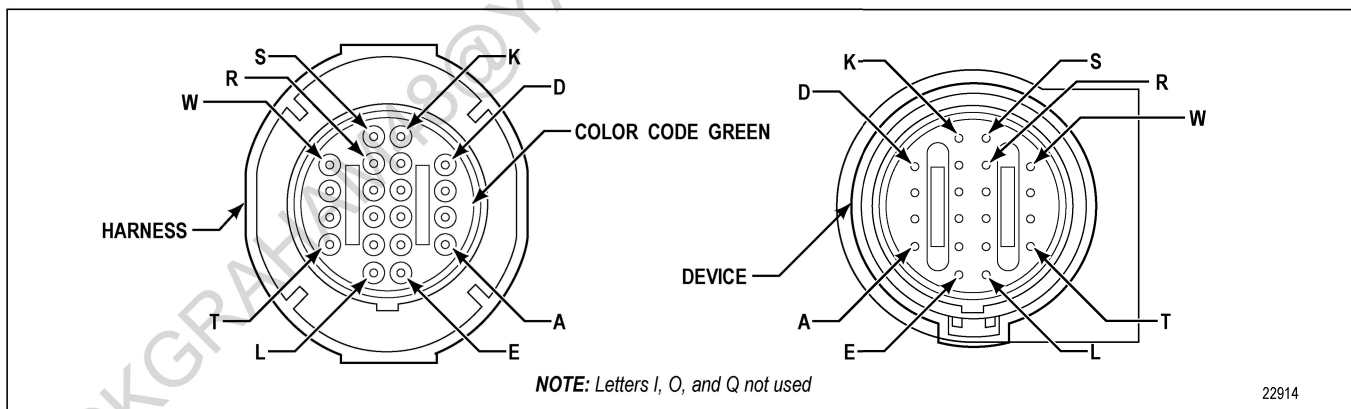


Figure F–5. Analog (PDL) Shift Selector (Non-SAE J1939) Connector

Table F–6. Analog (PDL) Shift Selector (Non-SAE J1939)

Terminal No.	Color	Wire No.	Description	Termination Point(s)
A	Orange	173	Strip Selector, Data Bit 1	TCM-73
B	Green	153	Strip Selector, Data Bit 2	TCM-53
C	Blue	114	Strip Selector, Data Bit 4	TCM-14
D				
E	Tan	138	Strip Selector, Parity	TCM-38
F				