

Powertrain Control Solutions, LLC.

11139 Air Park Rd. Suite 2 Ashland, VA 23005
 www.ptcs.us Phone: (804) 752-6025 Fax: (804) 752-3516

DRAWN BY: J. Ballenger DATE: 7/26/2004 PAGE: 1 OF 2

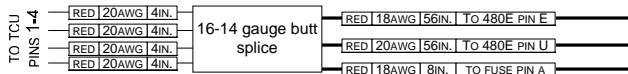
TITLE: **TCU 4T80E HARNESS OLD**

PART NUMBER: TCM - 4102

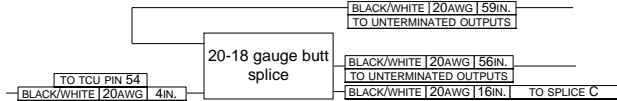
DESCRIPTION: 4T80E TRANSMISSION HARNESS

REV.	DESCRIPTION	DATE	BY
0	ORIGINAL REVISION	7/26/2004	JB
1	NEW FORMAT	5/25/2005	RC

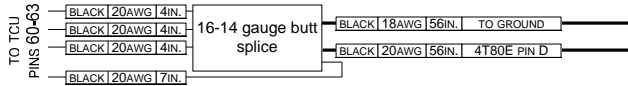
Splice B:



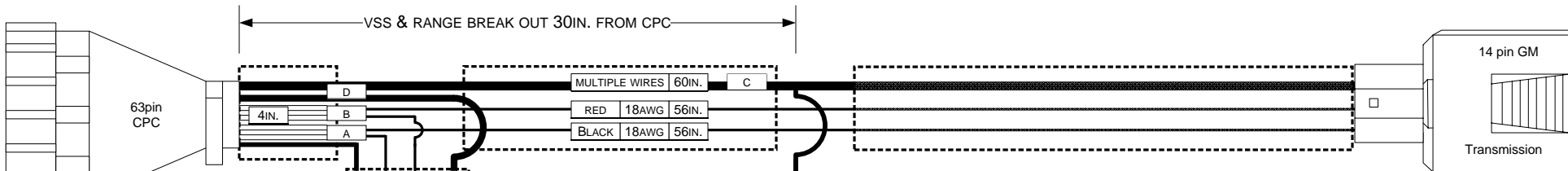
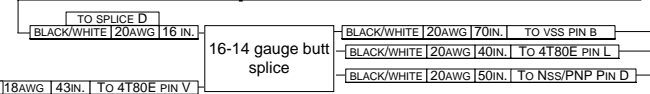
Splice D:



Splice A:



Splice C:



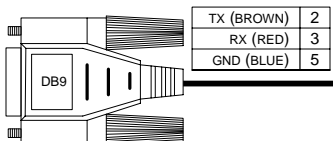
Part Numbers:

CONNECTOR ASSEMBLY:	CON-0031/205842-1
BACKSHELL:	CON-0005/206138-1
TERMINAL:	CON-0046/5-66504-9
SEAL:	CON-0043

PIN	PCS WIRE COLOR	PCS FUNCTION	TCU POS
A	PINK/BLACK	1-2 SHIFT	59
B	PINK/RED	2-3 SHIFT	53
C	VIOLET/BLACK	LP HIGH	37
D	BLACK 20AWG	LP LOW	60-63
E	RED 18AWG	+12V BUS	1-4
L	BLACK./WHITE	TFT LOW	54
M	YELLOW/ORANGE	TFT HIGH	51
N	GRAY/BLACK	RANGE A	13
P	GRAY/LT. GREEN	RANGE C	15
R	GRAY/RED	RANGE B	14
S	ORANGE/LT.GREEN	T. SPD HIGH	7
T	VIOLET/RED	TCC PWM	28
U	RED	TCC +12V	1-4
V	BLACK/WHITE	T. SPD LOW	54

Part Numbers:

CONNECTOR ASSEMBLY:	CON-21831/1505238
TPA:	Con 2182/12020832
TERMINAL(18AWG):	CON-2805/15359002
TERMINAL(20AWG):	Con-2804/15359001
SEAL:	Con-2153/12110694
CONDUIT CLIP:	CON-2008/12176394



Part Numbers:

CONNECTOR ASSEMBLY:	WRE-2001
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Part Numbers:

CONNECTOR ASSEMBLY:	CON-2200/15300027
FUSE CAP:	CON-2201/ES10CAP
TERMINAL(18-16GAUGE):	CON-1016/12048159
TERMINAL(14-12GAUGE):	CON-1017/12129497
CABLE SEAL(20-16GAUGE):	CON-1004/12089679
CABLE SEAL(18-14GAUGE):	CON-1001/12015323
CABLE SEAL(16-12GAUGE):	CON-1002/12010293

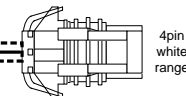
Unterminated Wires

FUNCTION	WIRE COLOR	TCU POS
2-SENSOR GND	BLACK/WHITE	54
RPM	ORANGE/BLACK	5
SPEEDOMETER DRIVE	ORANGE/WHITE	9
TPS	YELLOW/BLACK	46
MAP	YELLOW/RED	47
CLT	YELLOW/LT.GREEN	48
SPARE ANALOG 1	YELLOW/LT.BLUE	49
BRAKE LIGHT	GRAY/PINK	22
SPARE DIGITAL 1	BROWN/BLACK	23
SPARE DIGITAL 2	BROWN/RED	24
SPARE DIGITAL 3	BROWN/LT. GREEN	25

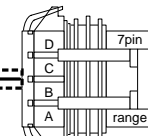
Part Numbers:
 Connector Assembly: CON-2169/12162195
 Terminal (20-22AWG): CON-1033/12124076
 Terminal (18AWG): CON-1034/12124075

2 PIN VSS CONNECTOR

PCS COLOR	GM FUNCTION	TCU Pos
A	ORANGE/RED	VSS+ 6
B	BLACK/WHITE	VSS- 54



Part Numbers:
 Connector Assembly: CON-2160/12191757
 Terminal (20-22AWG): CON-1038/12084200
 TPA: CON-2165/12129802



Part Numbers:
 Connector Assembly: CON-2156/12129840
 Terminal (20-22AWG): CON-1038/12084200
 Terminal (16AWG): CON-1020/12077411
 TPA: CON-2157/12129841

4 PIN RANGE CONNECTOR

PCS COLOR	GM FUNCTION	TCU Pos
A	GRAY/YELLOW	RANGE A 21
B	GRAY/WHITE	RANGE C 17
C	GRAY/ORANGE	RANGE P 18
D	GRAY/LT. BLUE	RANGE B 16

7 PIN NSS/PNP CONNECTOR

PCS COLOR	GM FUNCTION	TCU POS
A	-	-
B	WHITE/BLACK	PK/NE OUT 34
C	WHITE/RED	PK/NE IN+12V 33
D	BLACK/WHITE	RANGE S.GND 54
E	RED (16AWG)	START RELAY 1-4
F	BROWN/PINK	REV. LAMP 42
G	BLACK (16AWG)	NSS- P/N+12V 60-63

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TITLE:

TCU 4T80E HARNESS

PART NUMBER: TCM - 4102

DESCRIPTION:
HARNESS DIAGRAM FOR 4T80E
APPLICATIONS (GM 4SPEED)

DRAWN BY: J. Ballenger DATE: 7/26/2004 PAGE: 2 OF 2

CPC	Pin Function	Harness Function	4T80E	colors
1	+12v	Battery Connection	+12v	red
2	+12v	Battery Connection	+12v	red
3	+12v	Battery Connection	+12v	red
4	+12v	Battery Connection	+12v	red
5	Speed Input 1	Engine Speed Input	RPM	orange/black
6	Speed Input 2	Transmission Speed Input	VSS	orange/red
7	Speed Input 3	TCC Speed Input	Turbine Speed	orange/lt. green
8	Speed Input 4	Optional Speed Input	-	orange/lt. blue
9	Speed Output	Speedometer Drive Output	Speedometer In	orange/white
10	unused	-	-	-
11	unused	-	-	-
12	PWM Out 4/freq2	PWM/Solenoid Driver	-	violet/lt. blue
13	Digital Input 1	Digital Input	range a	gray/black
14	Digital Input 2	Digital Input	range b	gray/red
15	Digital Input 3	Digital Input	range c	gray/lt. green
16	Digital Input 4	Digital Input	range 1/d	gray/lt. blue
17	Digital Input 5	Digital Input	range 2/b	gray/white
18	Digital Input 6	Digital Input	range 3/c	gray/orange
19	Digital Out 5	Digital Driver	-	pink/white
20	PWM Out 3/freq2	PWM/Solenoid Driver	-	violet/lt. green
21	Digital Input 7	Digital Input	range 4/a	gray/yellow
22	Digital Input 8	Digital Input	brake light	gray/pink
23	Digital Input 9	Digital Input	Spare Dig 1	brown/black
24	Digital Input 10	Digital Input	Spare Dig 2	brown/red
25	Digital Input 11	Digital Input	Spare Dig 3	brown/lt. green
26	Digital Input 12	Digital Input	-	brown/lt. blue
27	Digital Out 6	Digital Driver	-	pink/orange
28	PWM Out 2/freq1	PWM/Solenoid Driver	Tcc Pressure	violet/red
29	unused	-	-	-
30	RS-232 Transmit	Communications Cable	db9	white/orange
31	RS-232 Receive	Communications Cable	db9	white/lt. blue
32	CAN/RS-232 GND	Communications Cable	db9	white/lt. green
33	CAN High	Communications Cable	-	white/red
34	CAN Low	Communications Cable	-	white/black
35	unused	-	-	-
36	Digital Out 3/PWM9	Digital Driver	-	pink/lt. green
37	PWM Out 1/freq 1	PWM/Solenoid Driver	Line Pressure	violet/black
38	unused	-	-	-
39	Digital Input 13	Digital Input	-	brown/white
40	Digital Input 14	Digital Input	-	brown/orange
41	Digital Input 15	Digital Input	-	brown/yellow
42	Digital Input 16	Digital Input	-	brown/pink
43	unused	-	-	-
44	Digital Out 4	Digital Driver	-	pink/lt. blue
45	PWM Out 6/freq1	PWM/Solenoid Driver	-	violet/orange
46	Analog Input 1	Analog Input	tps	yellow/black
47	Analog Input 2	Analog Input	map	yellow/red
48	Analog Input 3	Analog Input	cit	yellow/lt. green
49	Analog Input 4	Analog Input	Spare Analog	yellow/lt. blue
50	Analog Input 5/temp	Analog Input	-	yellow/white
51	Analog Input 6/temp	Analog Input	fluid temp	yellow/orange
52	Pwm Out 5/freq1	PWM/Solenoid Driver	-	violet/white
53	Digital Out 2/PWM 8	Digital Driver	2-3 Shift	pink/red
54	Sensor/AD Gnd	Sensor or reference Gnd	fluid temp/vss	black/white
55	unused	-	-	-
56	unused	-	-	-
57	unused	-	-	-
58	Ref Voltage (+5v)	Sensor/reference Voltage	-	red/white
59	Digital Out 1/PWM 7	Digital Driver	1-2 Shift	pink/black
60	Gnd	Battery Connection	Gnd	black
61	Gnd	Battery Connection	Gnd	black
62	Gnd	Battery Connection	Gnd	black
63	Gnd	Battery Connection	Gnd	black

REV.	DESCRIPTION	DATE	BY
0	ORIGINAL REVISION	7/26/2004	JB
1	NEW FORMAT	5/25/2005	RC

db9 pinout	DB9
1	none
2	transmit
3	receive
4	none
5	gnd
6	none
7	none
8	none
9	none

Extra Wires List	
1	orange/lt. blue
2	violet/lt. blue
3	pink/white
4	violet/lt. green
5	brown/lt. blue
6	pink/orange
7	white/red
8	white/black
9	pink/lt. green
10	brown/white
11	brown/orange
12	brown/yellow
13	brown/pink
14	pink/lt. blue
15	violet/orange
16	yellow/white
17	violet/white
18	red/white