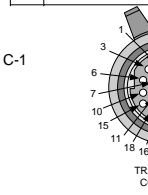


REVISION LEVEL				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE			



TRANSMISSION CONNECTOR		
QTY	DESCRIPTION	PI/N
1	CONNECTOR	88953329
1	BOOT	
18	TERMINALS (20-22AWG)	CON-4402/008 545 7726



C-2 LAPTOP CAL CONNECTOR			
QTY	DESCRIPTION	PCS PIN	NOTES
1	CONNECTOR	CON-3416	
3	TERMINALS	CON-1038	
1	TPA	CON-3417	CREAM
3	CABLE SEALS	CON-1027	WHT



C-3 OPTION FRONT VIEW			
QTY	DESCRIPTION	PCS PIN	NOTES
1	CONNECTOR	CON-0065	
4	TERMINALS	CON-0051	



C-4 CAN BUS CONNECTOR			
QTY	DESCRIPTION	PCS PIN	NOTES
1	CONNECTOR	CON-5050	
2	TERMINALS	CON-5200 (20-18gauge)	
1	WEDGE LOCK	WM-2s	ORANGE



C-5 THROTTLE POSITION CONNECTOR			
QTY	DESCRIPTION	PCS PIN	NOTES
1	CONNECTOR	CON-2302	
3	TERMINALS	CON-1006	
3	CABLE SEALS	CON-1004	VIO

CHASSIS GND			
QTY	DESCRIPTION	PI/N	NOTES
1	RING TERM.	327732	CON-0350

TCU2000 CONNECTOR	QTY	DESCRIPTION	PCS PIN	NOTES
1	CONNECTOR	CON3001		
37	TERMINALS	CON3006		
1	BACK SHELL	CON3005		
1	MULTI-CABLE SEAL	CON3004	BLK	

TXT	COLOR	NOTES
BLK	BLACK	
BRN	BROWN	
RED	RED	
ORN	ORANGE	
YEL	YELLOW	
LT.GRN	LIGHT GREEN	
GRN	GREEN	
LT.BLU	LIGHT BLUE	
BLU	BLUE	
VIO	VIOLET	
GRY	GRAY	
WHT	WHITE	
PNK	PINK	

SPLICE INFORMATION		
S#	FUNCTION	COLOR
S1	12 VOLTS SWITCHED	RED
S1B	12 VOLTS SWITCHED	RED
S2	GROUND	BLK
S3	SENSOR GROUND	BLK/WHT
S4	CAN HIGH	WHT/RED
S5	CAN LOW	WHT/BLK

APPLICABLE STANDARDS

- ASME Y14.100-200
- ASME Y14.5M-1994
- IPC-WHMA-A-620A CLASS 2
- MARK IAW MIL-STD-130.

NOTES:

- 1.) WIRE LENGTH TOLERANCE +/- 1/2 INCH
- 2.) WIRE GAUGE IS 20 AWG UNLESS OTHERWISE STATED
- 3.) TAPE ALL LOOM JOINTS UNLESS OTHERWISE STATED
- 4.) TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
- 5.) PLACE TAGS NO MORE THAN 2" FROM CONNECTOR. PLACE TAGS FOR UNTERMINATED WIRES NO MORE THAN 2" FROM UNTERMINATED END.
- 6.) WIRE TYPE IS TXL UNLESS OTHERWISE STATED

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: 5L40\5L50 TCU-2000 HARNESS

SIZE: C CUSTOMER DRAWING NO. XXXXX-XXXXX PCS PART NUMBER TCM-4135 REV: 001

DRAWN BY: FRED D. DATE: 2/20/2013 APPROVED BY: XXXXX DATE: SHEET 1 OF 6

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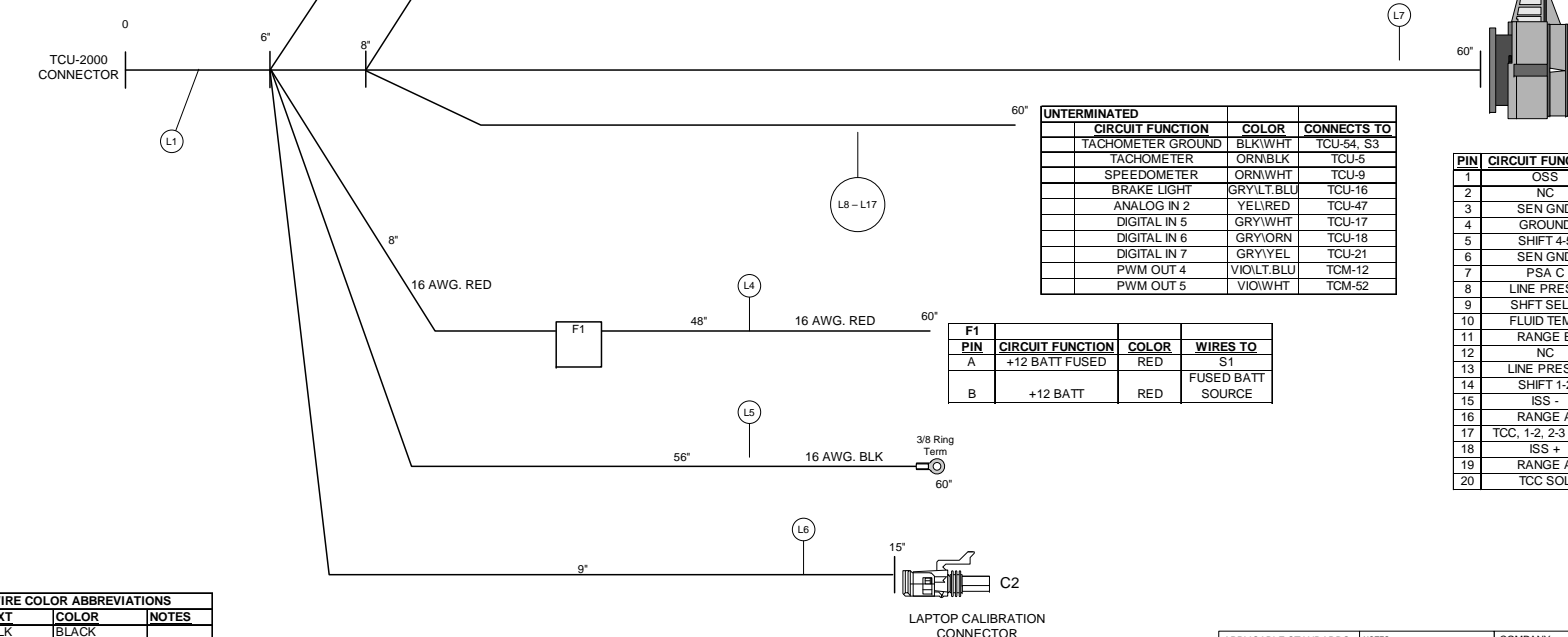
REVISION LEVEL				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE			

LABEL DEFINITION TABLE			
NUM	NAME	PCS P/N	NOTES
L1	TCM-4135-001	WRE-8501	
L2	CAN CONNECTOR	WRE-8500	
L3	THROTTLE POSITION SENSOR	WRE-8500	
L4	CAHASSIS GROUND	WRE-8500	
L5	SW +12 VOLTS	WRE-8500	
L6	LAPTOP CALIBRATION CONNECTOR	WRE-8500	
L7	TRANSMISSION CONNECTOR	WRE-8501	
L8	TACHOMETER GROUND	WRE-8500	
L9	TACHOMETER	WRE-8500	
L10	SPEEDOMETER	WRE-8500	
L11	BRAKE LIGHT	WRE-8500	
L12	ANALOG IN 2	WRE-8500	
L13	DIGITAL IN 5	WRE-8500	
L14	DIGITAL IN 6	WRE-8500	
L15	DIGITAL IN 7	WRE-8500	
L16	PWM OUT 4	WRE-8500	
L17	PWM OUT 5	WRE-8500	
L18	OPTION CONNECTOR	WRE-8500	

C3 THROTTLE POSITION SENSOR			
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
A	SEN GND	BLKWHT	S3
B	TPS	YELBLK	TCU-46
C	+5V SENSOR	REDWHT	TCU-58

C3 OPTION			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	POWER	RED	S1
2	GND.	BLK	S2
3	CAN HIGH	WHTRED	TCU-33, S4
4	CAN LOW	WHTBLK	TCU-34, S5

C4 CAN			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	CAN HIGH	WHTRED	S4
2	CAN LOW	WHTBLK	S5



WIRE COLOR ABBREVIATIONS		
TXT	COLOR	NOTES
BLK	BLACK	
BRN	BROWN	
RED	RED	
ORN	ORANGE	
YEL	YELLOW	
LT.GRN	LIGHT GREEN	
GRN	GREEN	
LT.BLU	LIGHT BLUE	
BLU	BLUE	
VIO	VIOLET	
GRY	GRAY	
WHT	WHITE	
PNK	PINK	

SPLICE INFORMATION		
S-#	FUNCTION	COLOR
S1	12 VOLTS SWITCHED	RED
S1B	12 VOLTS SWITCHED	RED
S2	GROUND	BLK
S3	SENSOR GROUND	BLKWHT
S4	CAN HIGH	WHTRED
S5	CAN LOW	WHTBLK

C2 LAPTOP CAL CONNECTOR			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
A	SERIAL RX	RED	TCU-31
B	SIGNAL GND.	WHT	TCU-32
C	SERIAL TX	BLK	TCU-30

UNTERMINATED			
CIRCUIT FUNCTION	COLOR	CONNECTS TO	
TACHOMETER GROUND	BLKWHT	TCU-54, S3	
TACHOMETER	ORNBLK	TCU-5	
SPEEDOMETER	ORNWHT	TCU-9	
BRAKE LIGHT	GRY/LT.BLU	TCU-16	
ANALOG IN 2	YEL/RED	TCU-47	
DIGITAL IN 5	GRY/WHT	TCU-17	
DIGITAL IN 6	GRY/ORN	TCU-18	
DIGITAL IN 7	GRY/YEL	TCU-21	
PWM OUT 4	VIO/LT.BLU	TCM-12	
PWM OUT 5	VIO/WHT	TCM-52	

F1			
PIN	CIRCUIT FUNCTION	COLOR	WIRES TO
A	+12 BATT FUSED	RED	S1
B	+12 BATT	RED	FUSED BATT SOURCE

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	OSS	ORG/RED	TCU-6
2	NC		
3	SEN GND	BLKWHT	S3
4	GROUND	BLK	S2
5	SHIFT 4-5	PNK/BLU	TCU-36
6	SEN GND	BLKWHT	S3
7	PSA C	GRY/RED	TCU-14
8	LINE PRES -	VIO/BLK	TCU-37
9	SHFT SEL 2	PNK/RED	TCU-53
10	FLUID TEMP	YEL/ORG	TCU-51
11	RANGE B	GRY/BLU	TCU-16
12	NC		
13	LINE PRES +	RED	TCU-54
14	SHIFT 1-2	PNK/BLK	TCU-59
15	ISS -	BLKWHT	S3
16	RANGE A	GRY/BLK	TCU-13
17	TCC, 1-2, 2-3 HIGH	RED (16 AWG)	S4
18	ISS +	ORG/GRE	TCU-7
19	RANGE A	GRY/GRE	TCU-15
20	TCC SOL	VIO/RED	TCU-28

APPLICABLE STANDARDS

- ASME Y14.100-200
- ASME Y14.5M-1994
- IPC/WHMA-A-620A-CLASS 2
- MARK IAW MIL-STD-130.

NOTES:

- 1.) WIRE LENGTH TOLERANCE +/- 1/2 INCH
- 2.) WIRE GAUGE IS 20 AWG UNLESS OTHERWISE STATED
- 3.) TIE ALL LOOM JOINTS UNLESS OTHERWISE STATED
- 4.) TIE INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
- 5.) PLACE TAGS NO MORE THAN 2" FROM CONNECTOR. PLACE TAGS FOR UNTERMINATED WIRES NO MORE THAN 2" FROM UNTERMINATED END.
- 6.) WIRE TYPE IS TX UNLESS OTHERWISE STATED

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: 5L40/5L50 TCU-2000 HARNESS

DRAWN BY: FRED D. DATE: 2/20/2013

APPROVED BY: XXXXXX DATE: _____

CUSTOMER DRAWING NO. XXXXX-XXXXX PCS PART NUMBER TCM-4135 REV: 001

SHEET 2 OF 6

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