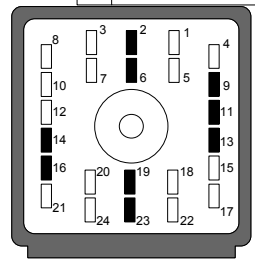


REVISION HISTORY			
LEVEL	DESCRIPTION	DATE	DRN APP
0	RELEASE	10/02/11	FD DB
1a	Pull-up Resistor Change To 1K OHM	10/11/2011	FD DB
2	New version Redraw	8/9/2012	FD DB
2a	CORRECTIONS TO NEW REVISION	8/13/2012	FD DB



C2 OUTPUT SHAFT SPEED SENSOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2138	
15	TERMINALS	CON-2140	
1	CONNECTOR COVER	CON-2139	

PLUG-IN RESISTOR PARTS			
QTY	DESCRIPTION	PCS P/N	NOTES
2	MOLDED RESISTOR	CON-1079	
2	ATTACH CLIP	WRE-8550	

C8, C9			
QTY	DESCRIPTION	P/N	
2	CONNECTOR	CON-1077	
4	TERMINAL	CON-1082	
2	TPA	CON-1087	
4	CABLE SEALS	CON-1090	

C2 OUTPUT SHAFT SPEED SENSOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2138	
3	TERMINALS	CON-2141	
3	CABLE SEALS	CON-2142	

C3 INPUT SHAFT SPEED SENSOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2137	
3	TERMINALS	CON-2141	
3	CABLE SEALS	CON-2142	
1	CAVITY PLUG	CON-2145	

C-5 OPTION			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-0065	
4	TERMINALS	CON-0051	

C-6 CAN BUS CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-5050	
2	TERMINALS	CON-5200 (20-18gauge)	
1	WEDGE LOCK	CON-5100 ORN	

C-4 LAPTOP CAL CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-3416	
3	TERMINALS	CON-1038	
1	TPA	CON-3417 CREAM	
3	CABLE SEALS	CON-1027 WHT	

C-7 THROTTLE POSITION CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2302	
3	TERMINALS	CON-1006	
3	CABLE SEALS	CON-1004 VIO	

C-7M THROTTLE POSITION SENSOR PIGTAIL			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2307	
2	TERMINALS	CON-1011 20 AWG	
2	CABLE SEALS	CON-1004 VIO	
1	PLUG	CON-0999 GRN	

CHASSIS GND			
QTY	DESCRIPTION	PCS P/N	NOTES
1	RING TERM.	CON-0350	

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

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: FORD 5R110 TO TCM2000 HARNESS

DATE: 8/20/2012

REV: 002

SIZE: C

CUSTOMER DRAWING NO: XXXXX-XXXXX

PCS PART NUMBER: TCM-4119

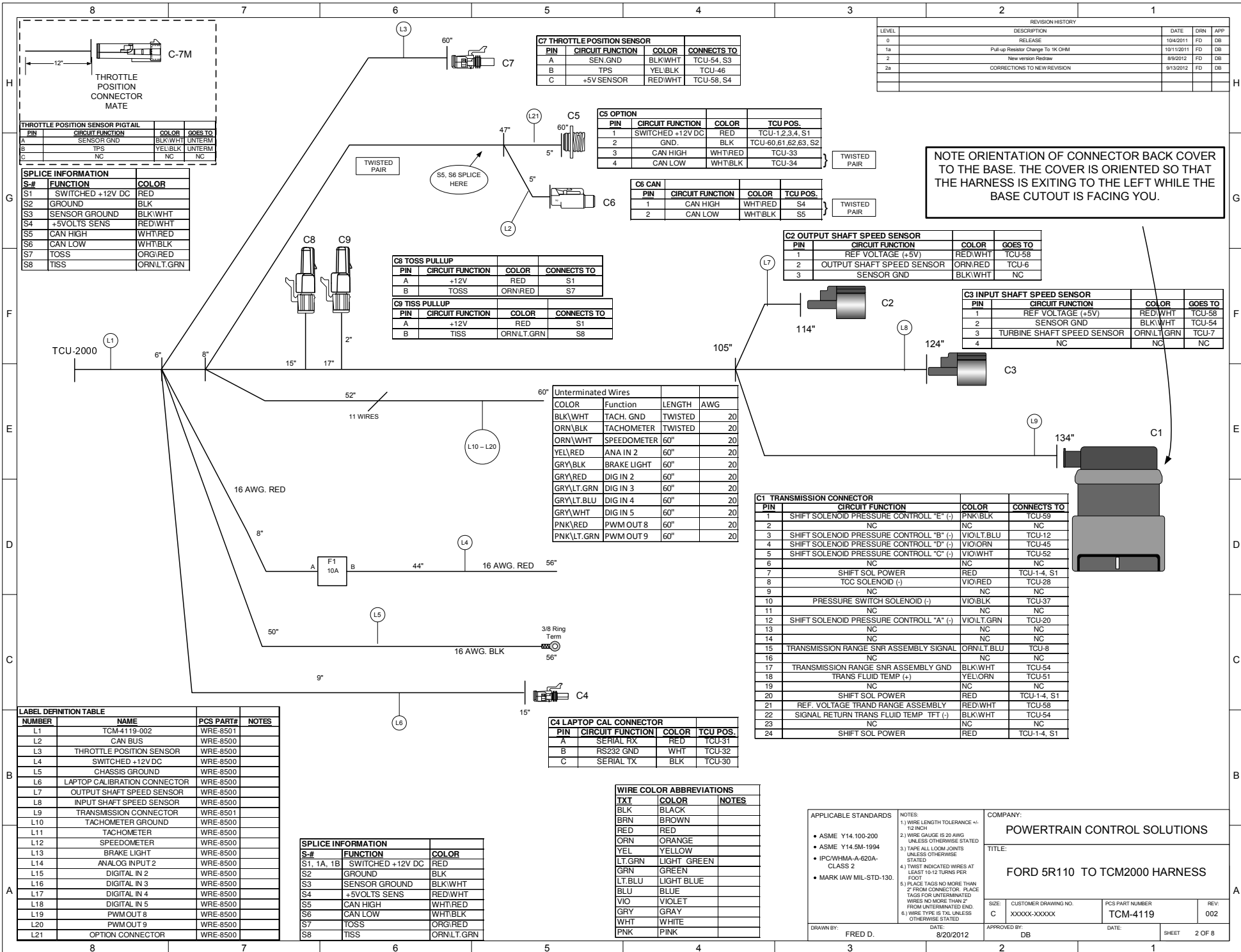
DATE: SHEET 1 OF 8

TCU2000 CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-0031	
37	TERMINALS	CON-0046	
1	BACK SHELL	CON-0005	
1	MULTI CABLE SEAL	CON-0043 BLK	

SPICE INFORMATION			
S#	FUNCTION	COLOR	
S1, 1A, 1B	SWITCHED +12V DC	RED	
S2	GROUND	BLK	
S3	SENSOR GROUND	BLK/WHT	
S4	+5VOLTS SENS	RED/WHT	
S5	CAN HIGH	WHT/RED	
S6	CAN LOW	WHT/BLK	
S7	TOSS	OR/RED	
S8	TISS	ORN/LT GRN	

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	

F1	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2200	
1	FUSE CAP:	CON-2201	BLK
1	TPA	CON-2202	BLU
2	TERMINAL	CON-1020	(18-16 AWG)
1	FUSE	CON-2221	10A
2	CABLE SEAL	CON-1001	GRN



REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
0	RELEASE	10/20/11	FD	DB
1a	Pull-up Resistor Change To 1K Ohm	10/11/2011	FD	DB
2	New version Redraw	8/9/2012	FD	DB
2a	CORRECTIONS TO NEW REVISION	8/13/2012	FD	DB

C7 THROTTLE POSITION SENSOR				
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO	
A	SEN GND	BLK\WHT	TCU-54, S3	
B	TPS	YEL\BLK	TCU-46	
C	+5V SENSOR	RED\WHT	TCU-58, S4	

C5 OPTION				
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.	
1	SWITCHED +12V DC	RED	TCU-1,2,3,4, S1	
2	GND.	BLK	TCU-60,61,62,63, S2	
3	CAN HIGH	WHT\RED	TCU-33	
4	CAN LOW	WHT\BLK	TCU-34	

C6 CAN				
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.	
1	CAN HIGH	WHT\RED	S4	
2	CAN LOW	WHT\BLK	S5	

C2 OUTPUT SHAFT SPEED SENSOR				
PIN	CIRCUIT FUNCTION	COLOR	GOES TO	
1	REF VOLTAGE (+5V)	RED\WHT	TCU-58	
2	OUTPUT SHAFT SPEED SENSOR	ORN\RED	TCU-6	
3	SENSOR GND	BLK\WHT	NC	

NOTE ORIENTATION OF CONNECTOR BACK COVER TO THE BASE. THE COVER IS ORIENTED SO THAT THE HARNESS IS EXITING TO THE LEFT WHILE THE BASE CUTOFF IS FACING YOU.

C3 INPUT SHAFT SPEED SENSOR				
PIN	CIRCUIT FUNCTION	COLOR	GOES TO	
1	REF VOLTAGE (+5V)	RED\WHT	TCU-58	
2	SENSOR GND	BLK\WHT	TCU-54	
3	TURBINE SHAFT SPEED SENSOR	ORN\LT.GRN	TCU-7	
4		NC	NC	

Unterminated Wires				
COLOR	Function	LENGTH	AWG	
BLK\WHT	TACH. GND	TWISTED	20	
ORN\BLK	TACHOMETER	TWISTED	20	
ORN\WHT	SPEEDOMETER	60"	20	
YEL\RED	ANA IN 2	60"	20	
GRY\BLK	BRAKE LIGHT	60"	20	
GRY\RED	DIG IN 2	60"	20	
GRY\LT.GRN	DIG IN 3	60"	20	
GRY\LT.BLU	DIG IN 4	60"	20	
GRY\WHT	DIG IN 5	60"	20	
PNK\RED	PWM OUT 8	60"	20	
PNK\LT.GRN	PWM OUT 9	60"	20	

C1 TRANSMISSION CONNECTOR				
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO	
1	SHIFT SOLENOID PRESSURE CONTROLL "E" (-)	PNK\BLK	TCU-59	
2	NC	NC	NC	
3	SHIFT SOLENOID PRESSURE CONTROLL "B" (-)	VIO\LT.BLU	TCU-12	
4	SHIFT SOLENOID PRESSURE CONTROLL "D" (-)	VIO\ORN	TCU-45	
5	SHIFT SOLENOID PRESSURE CONTROLL "C" (-)	VIO\WHT	TCU-52	
6	NC	NC	NC	
7	SHIFT SOL POWER	RED	TCU-1-4, S1	
8	TCC SOLENOID (-)	VIO\RED	TCU-28	
9	NC	NC	NC	
10	PRESSURE SWITCH SOLENOID (-)	VIO\BLK	TCU-37	
11	NC	NC	NC	
12	SHIFT SOLENOID PRESSURE CONTROLL "A" (-)	VIO\LT.GRN	TCU-20	
13	NC	NC	NC	
14	NC	NC	NC	
15	TRANSMISSION RANGE SNR ASSEMBLY SIGNAL	ORN\LT.BLU	TCU-8	
16	NC	NC	NC	
17	TRANSMISSION RANGE SNR ASSEMBLY GND	BLK\WHT	TCU-54	
18	TRANS FLUID TEMP (+)	YEL\ORN	TCU-51	
19	NC	NC	NC	
20	SHIFT SOL POWER	RED	TCU-1-4, S1	
21	REF. VOLTAGE TRANSD RANGE ASSEMBLY	RED\WHT	TCU-58	
22	SIGNAL RETURN TRANS FLUID TEMP TFT (-)	BLK\WHT	TCU-54	
23	NC	NC	NC	
24	SHIFT SOL POWER	RED	TCU-1-4, S1	

C4 LAPTOP CAL CONNECTOR				
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.	
A	SERIAL RX	RED	TCU-31	
B	RS232 GND	WHT	TCU-32	
C	SERIAL TX	BLK	TCU-30	

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, 1A, 1B	SWITCHED +12V DC	RED
S2	GROUND	BLK
S3	SENSOR GROUND	BLK\WHT
S4	+5VOLTS SENS	RED\WHT
S5	CAN HIGH	WHT\RED
S6	CAN LOW	WHT\BLK
S7	TOSS	ORG\RED
S8	TISS	ORN\LT.GRN

THROTTLE POSITION SENSOR PIGTAIL				
PIN	CIRCUIT FUNCTION	COLOR	GOES TO	
A	SENSOR GND	BLK\WHT	UNTERM	
B	TPS	YEL\BLK	UNTERM	
C	NC	NC	NC	

SPLICE INFORMATION		
S-#	FUNCTION	COLOR
S1	SWITCHED +12V DC	RED
S2	GROUND	BLK
S3	SENSOR GROUND	BLK\WHT
S4	+5VOLTS SENS	RED\WHT
S5	CAN HIGH	WHT\RED
S6	CAN LOW	WHT\BLK
S7	TOSS	ORG\RED
S8	TISS	ORN\LT.GRN

LABEL DEFINITION TABLE				
NUMBER	NAME	PCS PART#	NOTES	
L1	TCM-4119-002	WRE-8501		
L2	CAN BUS	WRE-8500		
L3	THROTTLE POSITION SENSOR	WRE-8500		
L4	SWITCHED +12V DC	WRE-8500		
L5	CHASSIS GROUND	WRE-8500		
L6	LAPTOP CALIBRATION CONNECTOR	WRE-8500		
L7	OUTPUT SHAFT SPEED SENSOR	WRE-8500		
L8	INPUT SHAFT SPEED SENSOR	WRE-8500		
L9	TRANSMISSION CONNECTOR	WRE-8501		
L10	TACHOMETER GROUND	WRE-8500		
L11	TACHOMETER	WRE-8500		
L12	SPEEDOMETER	WRE-8500		
L13	BRAKE LIGHT	WRE-8500		
L14	ANALOG INPUT 2	WRE-8500		
L15	DIGITAL IN 2	WRE-8500		
L16	DIGITAL IN 3	WRE-8500		
L17	DIGITAL IN 4	WRE-8500		
L18	DIGITAL IN 5	WRE-8500		
L19	PWMOUT 8	WRE-8500		
L20	PWMOUT 9	WRE-8500		
L21	OPTION CONNECTOR	WRE-8500		

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.) TAPES 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:
FORD 5R110 TO TCM2000 HARNESS

SIZE: CUSTOMER DRAWING NO. XXXXX-XXXXX
 PCS PART NUMBER: **TCM-4119**
 REV: 002

DRAWN BY: FRED D. DATE: 8/20/2012
 APPROVED BY: DB DATE: SHEET 2 OF 8