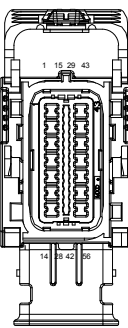


REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	10/20/16	FD	



56 PIN CONNECTOR Front View

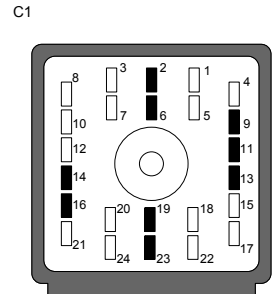
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2200	
3	TERMINALS	CON-2138	
21	CONNECTOR COVER	CON-2140	
21	CAVITY PLUG	CON-2142	

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	

S#	FUNCTION	COLOR
S1	SWITCHED +12V DC	YEL
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
S9	SENSOR GROUND	BLK/WHT

F1	DESCRIPTION	PCS P/N	NOTES	F2	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2200		1	CONNECTOR	CON-2200	
1	FUSE CAP.	CON-2201	BLK	1	FUSE CAP.	CON-2201	BLK
1	TPA	CON-2202	BLU	1	TPA	CON-2202	BLU
2	TERMINAL	CON-1020	(18-16 AWG)	2	TERMINAL	CON-1020	(18-16 AWG)
1	FUSE	CON-2221	10A	1	FUSE	CON-22XX	3A
2	CABLE SEAL	CON-1001	GRN	2	CABLE SEAL	CON-1001	GRN

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TRANSMISSION CONNECTOR FRONT VIEW

QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2138	
15	TERMINALS	CON-2140	
1	CONNECTOR COVER	CON-2139	

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

QTY	DESCRIPTION	PIN
2	CONNECTOR	CON-1077
4	TERMINAL	CON-1082
2	TPA	CON-1087
4	CABLE SEALS	CON-1090

QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2136	
3	TERMINALS	CON-2141	
3	CABLE SEALS	CON-2142	

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

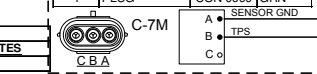
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-0065	
4	TERMINALS	CON-0051	

QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-8050	
2	TERMINALS	CON-8200	(20-18gauge)
1	WEDGE LOCK	CON-8100	ORN

QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-3416	
3	TERMINALS	CON-1039	
1	TPA	CON-3417	CREAM
3	CABLE SEALS	CON-1027	WHT

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

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



C-7M THROTTLE POSITION SENSOR PIGTAIL

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

CHASSIS GND

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

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: FORD 5R110 TO TCM2800 HARNESS

DATE: 10/17/2016

DESIGNED BY: FRED D.

APPROVED BY:

DATE: 10/17/2016

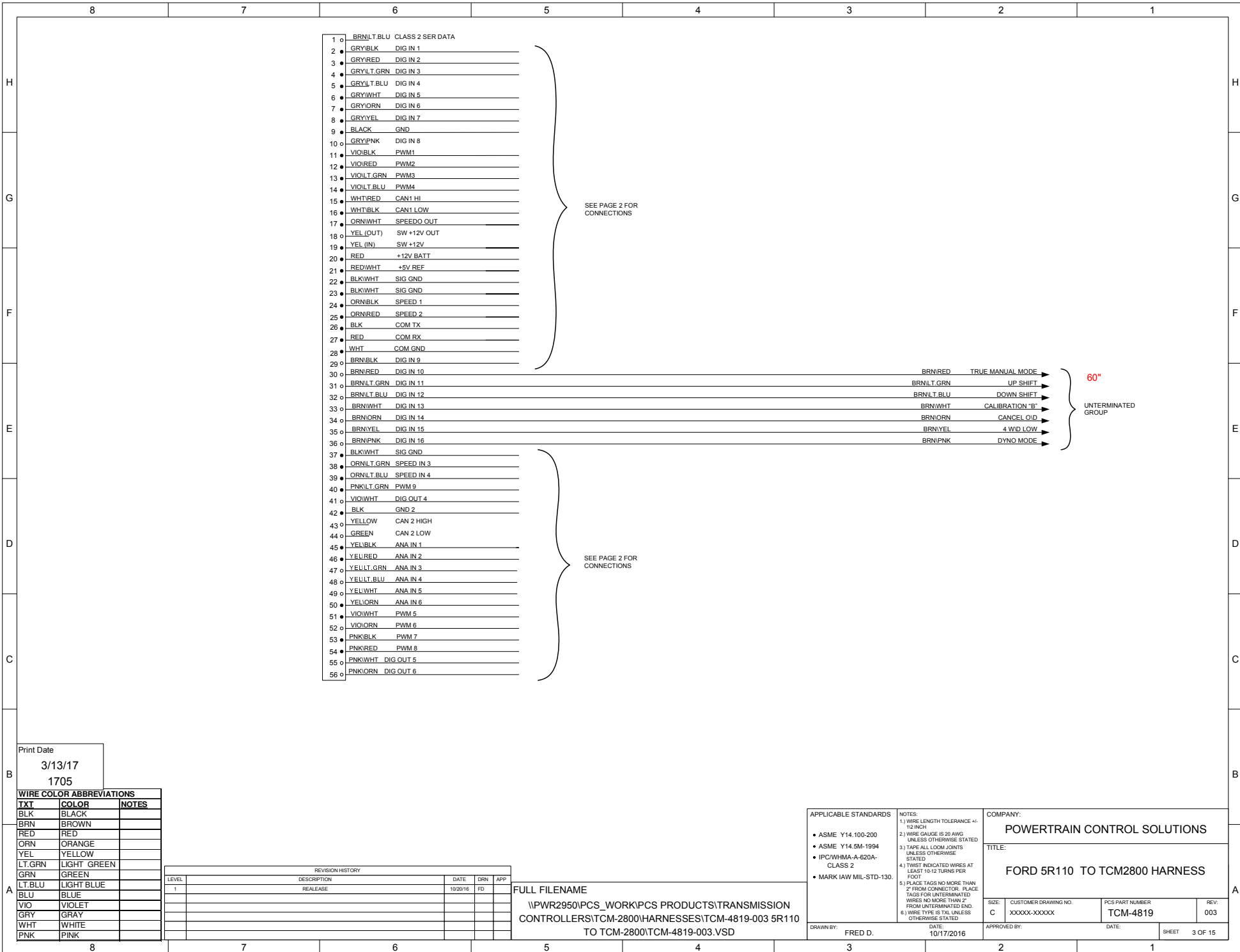
SHEET 2 OF 15

APPLICABLE STANDARDS

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

NOTES:

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



- 1 0 BRN/LT.BLU CLASS 2 SER DATA
- 2 0 GRY/BLK DIG IN 1
- 3 0 GRY/RED DIG IN 2
- 4 0 GRY/LT.GRN DIG IN 3
- 5 0 GRY/LT.BLU DIG IN 4
- 6 0 GRY/WHT DIG IN 5
- 7 0 GRY/ORN DIG IN 6
- 8 0 GRY/YEL DIG IN 7
- 9 0 BLACK GND
- 10 0 GRY/PNK DIG IN 8
- 11 0 VIO/BLK PWM1
- 12 0 VIO/RED PWM2
- 13 0 VIO/LT.GRN PWM3
- 14 0 VIO/LT.BLU PWM4
- 15 0 WHT/RED CAN1 HI
- 16 0 WHT/BLK CAN1 LOW
- 17 0 ORN/WHT SPEEDO OUT
- 18 0 YEL (OUT) SW +12V OUT
- 19 0 YEL (IN) SW +12V
- 20 0 RED +12V BATT
- 21 0 RED/WHT +5V REF
- 22 0 BLK/WHT SIG GND
- 23 0 BLK/WHT SIG GND
- 24 0 ORN/BLK SPEED 1
- 25 0 ORN/RED SPEED 2
- 26 0 BLK COM TX
- 27 0 RED COM RX
- 28 0 WHT COM GND
- 29 0 BRN/BLK DIG IN 9
- 30 0 BRN/RED DIG IN 10
- 31 0 BRN/LT.GRN DIG IN 11
- 32 0 BRN/LT.BLU DIG IN 12
- 33 0 BRN/WHT DIG IN 13
- 34 0 BRN/ORN DIG IN 14
- 35 0 BRN/YEL DIG IN 15
- 36 0 BRN/PNK DIG IN 16
- 37 0 BLK/WHT SIG GND
- 38 0 ORN/LT.GRN SPEED IN 3
- 39 0 ORN/LT.BLU SPEED IN 4
- 40 0 PNK/LT.GRN PWM 9
- 41 0 VIO/WHT DIG OUT 4
- 42 0 BLK GND 2
- 43 0 YELLOW CAN 2 HIGH
- 44 0 GREEN CAN 2 LOW
- 45 0 YEL/BLK ANA IN 1
- 46 0 YEL/RED ANA IN 2
- 47 0 YEL/LT.GRN ANA IN 3
- 48 0 YEL/LT.BLU ANA IN 4
- 49 0 YEL/WHT ANA IN 5
- 50 0 YEL/ORN ANA IN 6
- 51 0 VIO/WHT PWM 5
- 52 0 VIO/ORN PWM 6
- 53 0 PNK/BLK PWM 7
- 54 0 PNK/RED PWM 8
- 55 0 PNK/WHT DIG OUT 5
- 56 0 PNK/ORN DIG OUT 6

SEE PAGE 2 FOR CONNECTIONS

SEE PAGE 2 FOR CONNECTIONS

BRN/RED TRUE MANUAL MODE
 BRN/LT.GRN UP SHIFT
 BRN/LT.BLU DOWN SHIFT
 BRN/WHT CALIBRATION 'B'
 BRN/ORN CANCEL O/D
 BRN/YEL 4 W/D LOW
 BRN/PNK DYN0 MODE

60°
 UNTERMINATED GROUP

Print Date
 3/13/17
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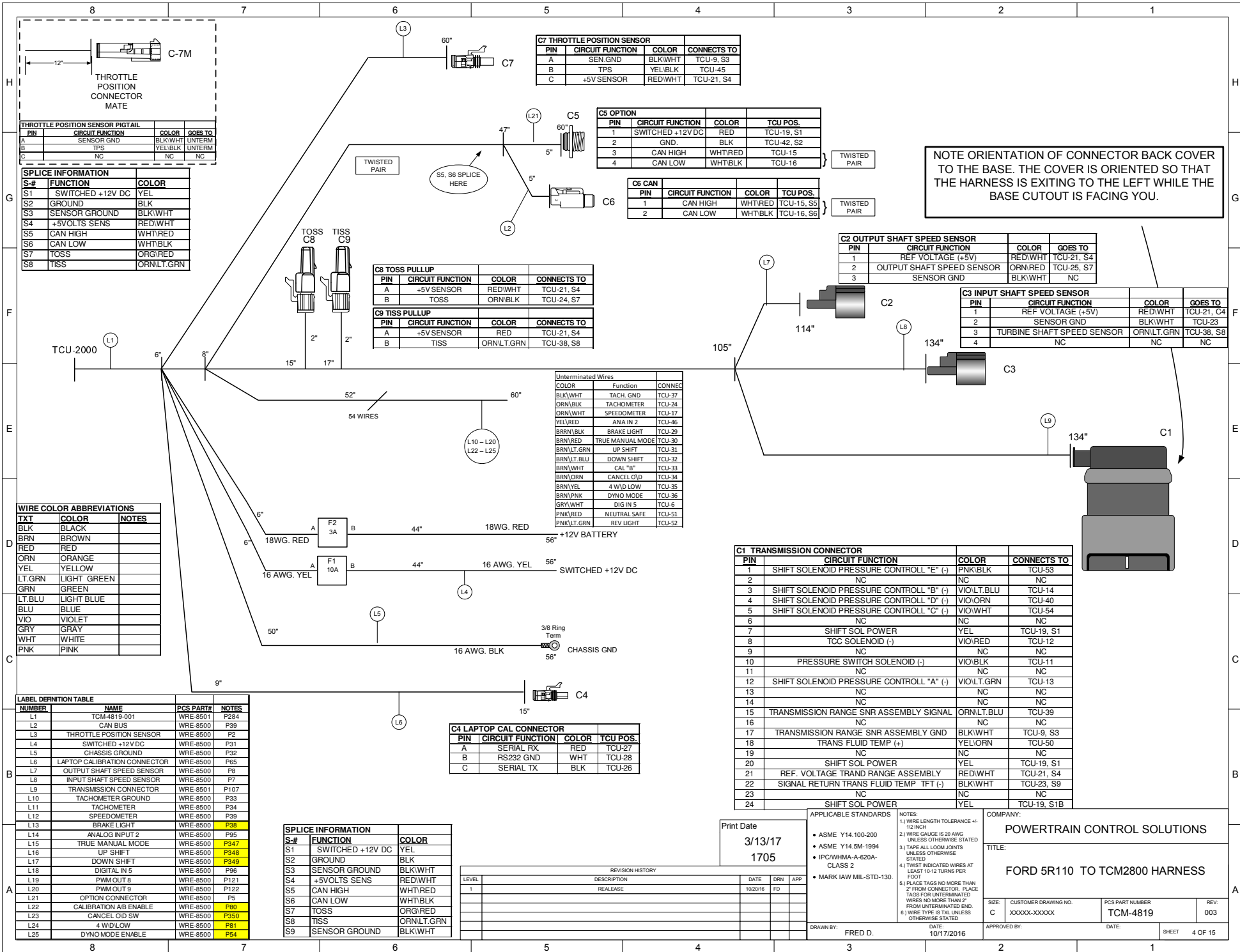
WIRE COLOR ABBREVIATIONS		
TXI	COLOR	NOTES
BLK	BLACK	
BRN	BROWN	
RED	RED	
ORN	ORANGE	
YEL	YELLOW	
LT.GRN	LIGHT GREEN	
GRN	GREEN	
LT.BLU	LIGHT BLUE	
BLU	BLUE	
VIO	VIOLET	
GRY	GRAY	
WHT	WHITE	
PNK	PINK	

REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	10/20/16	FD	

FULL FILENAME
 \PWR2950\PCS_WORK\PCS PRODUCTS\TRANSMISSION
 CONTROLLERS\TCM-2800\HARNESSES\TCM-4819-003 5R110
 TO TCM-2800\TCM-4819-003.VSD

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
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COMPANY: POWERTRAIN CONTROL SOLUTIONS			
TITLE: FORD 5R110 TO TCM2800 HARNESS			
SIZE: C	CUSTOMER DRAWING NO: XXXXX-XXXXX	PCS PART NUMBER: TCM-4819	REV: 003
DRAWN BY: FRED D.	DATE: 10/17/2016	APPROVED BY:	DATE:
SHEET 3 OF 15			



C7 THROTTLE POSITION SENSOR			
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
A	SEN.GND	BLK/WHT	TCU-9, S3
B	TPS	YEL/BLK	TCU-45
C	+5V SENSOR	RED/WHT	TCU-21, S4

C5 OPTION			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	SWITCHED +12V DC	RED	TCU-19, S1
2	GND.	BLK	TCU-42, S2
3	CAN HIGH	WHT/RED	TCU-15
4	CAN LOW	WHT/BLK	TCU-16

C6 CAN			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	CAN HIGH	WHT/RED	TCU-15, S5
2	CAN LOW	WHT/BLK	TCU-16, S6

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.

C2 OUTPUT SHAFT SPEED SENSOR			
PIN	CIRCUIT FUNCTION	COLOR	GOES TO
1	REF VOLTAGE (+5V)	RED/WHT	TCU-21, S4
2	OUTPUT SHAFT SPEED SENSOR	ORN/RED	TCU-25, S7
3	SENSOR GND	BLK/WHT	NC

C3 INPUT SHAFT SPEED SENSOR			
PIN	CIRCUIT FUNCTION	COLOR	GOES TO
1	REF VOLTAGE (+5V)	RED/WHT	TCU-21, C4
2	SENSOR GND	BLK/WHT	TCU-23
3	TURBINE SHAFT SPEED SENSOR	ORN/LT.GRN	TCU-38, S8
4		NC	NC

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	YEL
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

C8 TOSS PULLUP			
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
A	+5V SENSOR	RED/WHT	TCU-21, S4
B	TOSS	ORN/BLK	TCU-24, S7

C9 TISS PULLUP			
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
A	+5V SENSOR	RED	TCU-21, S4
B	TISS	ORN/LT.GRN	TCU-38, S8

Color	Function	CONNECT
BLK/WHT	TACH. GND	TCU-37
ORN/BLK	TACHOMETER	TCU-24
ORN/WHT	SPEEDOMETER	TCU-17
YEL/RED	ANA IN 2	TCU-46
BRN/BLK	BRAKE LIGHT	TCU-29
BRN/RED	TRUE MANUAL MODE	TCU-30
BRN/LT.GRN	UP SHIFT	TCU-31
BRN/LT.BLU	DOWN SHIFT	TCU-32
BRN/WHT	CAL "B"	TCU-33
BRN/ORN	CANCEL O/D	TCU-34
BRN/YEL	4 WID/LOW	TCU-35
BRN/PNK	DYNO MODE	TCU-36
GRY/WHT	DIG IN 5	TCU-6
PNK/RED	NEUTRAL SAFE	TCU-51
PNK/LT.GRN	REV LIGHT	TCU-52

TXI	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	

NUMBER	NAME	PCS PART#	NOTES
L1	TCM-4819-001	WRE-8501	P284
L2	CAN BUS	WRE-8500	P39
L3	THROTTLE POSITION SENSOR	WRE-8500	P2
L4	SWITCHED +12V DC	WRE-8500	P31
L5	CHASSIS GROUND	WRE-8500	P32
L6	LAPTOP CALIBRATION CONNECTOR	WRE-8500	P65
L7	OUTPUT SHAFT SPEED SENSOR	WRE-8500	P8
L8	INPUT SHAFT SPEED SENSOR	WRE-8500	P7
L9	TRANSMISSION CONNECTOR	WRE-8501	P107
L10	TACHOMETER GROUND	WRE-8500	P33
L11	TACHOMETER	WRE-8500	P34
L12	SPEEDOMETER	WRE-8500	P39
L13	BRAKE LIGHT	WRE-8500	P38
L14	ANALOG INPUT 2	WRE-8500	P95
L15	TRUE MANUAL MODE	WRE-8500	P347
L16	UP SHIFT	WRE-8500	P348
L17	DOWN SHIFT	WRE-8500	P349
L18	DIGITAL IN 5	WRE-8500	P36
L19	PWM OUT 8	WRE-8500	P121
L20	PWM OUT 9	WRE-8500	P122
L21	OPTION CONNECTOR	WRE-8500	P5
L22	CALIBRATION AB ENABLE	WRE-8500	P60
L23	CANCEL O/D SW	WRE-8500	P350
L24	4 WID/LOW	WRE-8500	P81
L25	DYNO MODE ENABLE	WRE-8500	P54

S-#	FUNCTION	COLOR
S1	SWITCHED +12V DC	YEL
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
S9	SENSOR GROUND	BLK/WHT

C4 LAPTOP CAL CONNECTOR			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
A	SERIAL RX	RED	TCU-27
B	RS232 GND	WHT	TCU-28
C	SERIAL TX	BLK	TCU-26

C1 TRANSMISSION CONNECTOR			
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	SHIFT SOLENOID PRESSURE CONTROLL "E" (-)	PNK/BLK	TCU-53
2	NC	NC	NC
3	SHIFT SOLENOID PRESSURE CONTROLL "B" (-)	VIO/LT.BLU	TCU-14
4	SHIFT SOLENOID PRESSURE CONTROLL "D" (-)	VIO/ORN	TCU-40
5	SHIFT SOLENOID PRESSURE CONTROLL "C" (-)	VIO/WHT	TCU-54
6	NC	NC	NC
7	SHIFT SOL POWER	YEL	TCU-19, S1
8	TCC SOLENOID (-)	VIO/RED	TCU-12
9	NC	NC	NC
10	PRESSURE SWITCH SOLENOID (-)	VIO/BLK	TCU-11
11	NC	NC	NC
12	SHIFT SOLENOID PRESSURE CONTROLL "A" (-)	VIO/LT.GRN	TCU-13
13	NC	NC	NC
14	NC	NC	NC
15	TRANSMISSION RANGE SNR ASSEMBLY SIGNAL	ORN/LT.BLU	TCU-39
16	NC	NC	NC
17	TRANSMISSION RANGE SNR ASSEMBLY GND	BLK/WHT	TCU-9, S3
18	TRANS FLUID TEMP (+)	YEL/ORN	TCU-50
19	NC	NC	NC
20	SHIFT SOL POWER	YEL	TCU-19, S1
21	REF. VOLTAGE TRAN RANGE ASSEMBLY	RED/WHT	TCU-21, S4
22	SIGNAL RETURN TRANS FLUID TEMP (-)	BLK/WHT	TCU-23, S9
23	NC	NC	NC
24	SHIFT SOL POWER	YEL	TCU-19, S1B

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

LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	10/20/16	FD	

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: FORD 5R110 TO TCM2800 HARNESS

DATE: 10/17/2016

DRAWN BY: FRED D.

APPROVED BY:

SIZE: C

CUSTOMER DRAWING NO: XXXXX-XXXXX

PCS PART NUMBER: TCM-4819

REV: 003

SHEET 4 OF 15