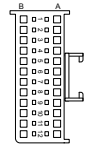
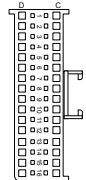


**TCU-21002300**

A1	GRYPNK	DIG IN 8
A2	GRYYEL	DIG IN 7
A3	GRYBLK	DIGITAL IN 1
A4	GRYRED	DIGITAL IN 2
A5	GRYLTRN	DIGITAL IN 3
A6	PNKRED	PWM 8
A7	PNKBLK	PWM 7
A8	GRYORN	DIGITAL IN 6
A9	NC	
A10	NC	
A11	NC	
A12	RED	+12VOLT BATT. 16 AWG RED
B1	NC	
B2	NC	
B3	GRYWHT	DIGITAL IN 5
B4	GRYLTLBLU	DIGITAL IN 4
B5	VIORED	PWM 2
B6	NC	
B7	NC	
B8	PNKLTBLU	DIGITAL OUT 4
B9	PNKLTGRN	PWM 9
B10	BLU	DIAG. ALDI
B11	DRNRED	SPEED 2
B12	BLKWHT	SIGNAL GND
C1	BLK	GROUND 16 AWG
C2	BLK	GROUND 16 AWG
C3	BLKWHT	SENSOR GND
C4	REDWHT	+5 VOLT SEN
C5	RED	SERIAL RX
C6	BLK	SERIAL TX
C7	WHTRED	CAN HIGH
C8	WHTBLK	CAN LOW
C9	NC	
C10	NC	
C11	NC	
C12	NC	
C13	VIOLTBLU	PWM 4
C14	VIOLTGRN	PWM 3
C15	VIOBLK	FORCE MOTOR LOW
C16	YEL	+12VOLTS SW. 18 AWG
D1	DRNLTBLU	SPEED OUT 1
D2	DRNWHT	SPEED OUT 2
D3	BLKWHT	SENSOR GND
D4	DRNLTGRN	SPEED 3
D5	NC	
D6	DRNBLK	SPEED 1
D7	WHT	SENSOR GND
D8	YELBLK	ANALOG 1
D9	NC	
D10	NC	
D11	NC	
D12	YELTLBLU	ANALOG 5
D13	YELORN	ANALOG 6
D14	NC	
D15	NC	
D16	GREEN	FORCE MOTOR HIGH



QTY	DESCRIPTION	P/N	NOTES
1	CONNECTOR 24P	CON-1953	24 PIN CONNECTOR
1	CONNECTOR 32P	CON-1950	32 PIN CONNECTOR
29	TERMINALS	CON-1980	
1	TEAL LOCK TPA A	CON-1951	32 PIN CONNECTOR
1	TEAL LOCK TPA B	CON-1952	32 PIN CONNECTOR
1	TEAL LOCK TPA A	CON-1954	32 PIN CONNECTOR
1	TEAL LOCK TPA B	CON-1955	32 PIN CONNECTOR



DATE  
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1200

WIRE COLOR ABBREVIATIONS	S-#	FUNCTION	COLOR
BLK	S1	GROUND	BLK
BLK	S2	12 VOLTS SWITCHED	YEL
BRN	S3	SENSOR GROUND	BLKWHT
RED	S4	CAN HIGH	WHT/RED
ORN	S5	CAN LOW	WHT/BLK
YEL			
LT GRN			
GRN			
LT BLU			
BLU			
VIO			
GRY			
WHT			
PNK			

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

F1 & F2	QTY	DESCRIPTION	PCS P/N	NOTES
	2	CONNECTOR	CON-2200	
	2	FUSE CAP.	CON-2201	BLK
	2	TPA	CON-2202	BLU
	4	TERMINAL	CON-1020	(18-16 AWG)
	1	FUSE - 1	CON-2217	3A
	1	FUSE - 2	CON-2221	10A
	4	CABLE SEAL	CON-1001	GRN

REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	9/1/16	FD	

C-1 RANGE CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2100	BLK
1	SECONDARY LOCK PLATE	CON-2102	YEL
10	TERMINAL	CON-2103	
4	CABLE SEAL	CON-2105	ORN
6	CABLE SEAL	CON-2106	VIO
2	CAVITY PLUG	CON-2107	BLK

C-2 OUTPUT SHAFT SPEED SENSOR			
QTY	DESCRIPTION	P/N	NOTES
1	CONNECTOR	CON-4110	
2	PINS	CON-1006	20 AWG
3	RUBBER SEALS	CON-1004	

C-3 TRANS CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2132	
7	TERMINALS	CON-2121	
1	WEDGE LOCK	CON-2127	BLK
1	MULTI CABLE SEAL	CON-2143	
1	CONNECTOR SEAL	CON-2144	
3	CAVITY PLUG	CON-1036	

C-4 OPTIONAL COM NOT REQUIRED FOR USE			
QTY	DESCRIPTION	P/N	NOTES
1	CONNECTOR	CON-3416	
3	TERMINALS	CON-1038	
1	TPA	CON-3417	CREAM
3	CABLE SEALS	CON-1027	WHT

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

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

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

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

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

COMPANY: <b>POWERTRAIN CONTROL SOLUTIONS</b>			
TITLE: <b>FORD 4R70W 98-03 / 4R70E 04-09 / SIMPLE SHIFT TCM2300 HARNESS</b>			
SIZE: C	CUSTOMER DRAWING NO. XXXXX-XXXXX	PCS PART NUMBER: TCM-4350	REV: 003
DRAWN BY: FRED D.	DATE: 9/1/2016	APPROVED BY:	DATE: SHEET 2 OF 12

NUM	NAME	PCS P/N	NOTES
L1	TCM-4350-003	WRE-8501	P352
L2	PCS EXPANSION	WRE-8500	P133
L3	THROTTLE POSITION SENSOR	WRE-8500	P31
L4	SWITCHED +12V DC	WRE-8500	P31
L5	BATTERY +12 VOLTS	WRE-8500	P30
L6	CHASSIS GROUND	WRE-8500	P32
L7	OPTIONAL CANNOT REQUIRED FOR USE	WRE-8500	P4
L8	OUTPUT SHAFT SPEED SENSOR	WRE-8500	P8
L9	RANGE CONNECTOR	WRE-8500	P48
L10	TRANSMISSION CONNECTOR	WRE-8501	P107
L11	TACHOMETER GROUND	WRE-8500	P33
L12	TACHOMETER	WRE-8500	P34
L13	SPEEDOMETER	WRE-8500	P39
L14	BRAKE LAMP IN	WRE-8500	P38
L15	4X4 MODULE	WRE-8500	P53
L16	4X4 MODULE	WRE-8500	P53
L17	BACKUP LAMP	WRE-8500	P182
L18	START	WRE-8500	P124
L19	BACKUP LAMP	WRE-8500	P182
L20	START	WRE-8500	P124
L21	MAN MODE	WRE-8500	P347
L22	UP SHIFT	WRE-8500	P348
L23	DOWN SHIFT	WRE-8500	P349
L24	CANCEL O/D SW	WRE-8500	P350
L25	CANCEL O/D LAMP	WRE-8500	P351

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2/21/2019  
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S-#	FUNCTION	COLOR
S1	GROUND	BLK
S2	12 VOLTS SWITCHED	YEL
S3	SENSOR GROUND	BLK/WHT
S4	CAN HIGH	WHT/RED
S5	CAN LOW	WHT/BLK

REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	9/1/16	FD	

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	POWER	YEL	C16, S2
2	GND.	BLK	C1, C2, S1
3	CAN HIGH	WHT/RED	TCU-C7
4	CAN LOW	WHT/BLK	TCU-C8

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	CAN HIGH	WHT/RED	TCU-C7, S4
2	CAN LOW	WHT/BLK	TCU-C8, S5

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
A	SEN.GND	BLK/WHT	TCU-C3, S3
B	TPS	YEL/BLK	TCU-D8
C	+5V SENSOR	RED/WHT	TCU-C4

PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
A	SERIAL RX	RED	C5
B	SIGNAL GND.	WHT	D7
C	SERIAL TX	BLK	C6

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

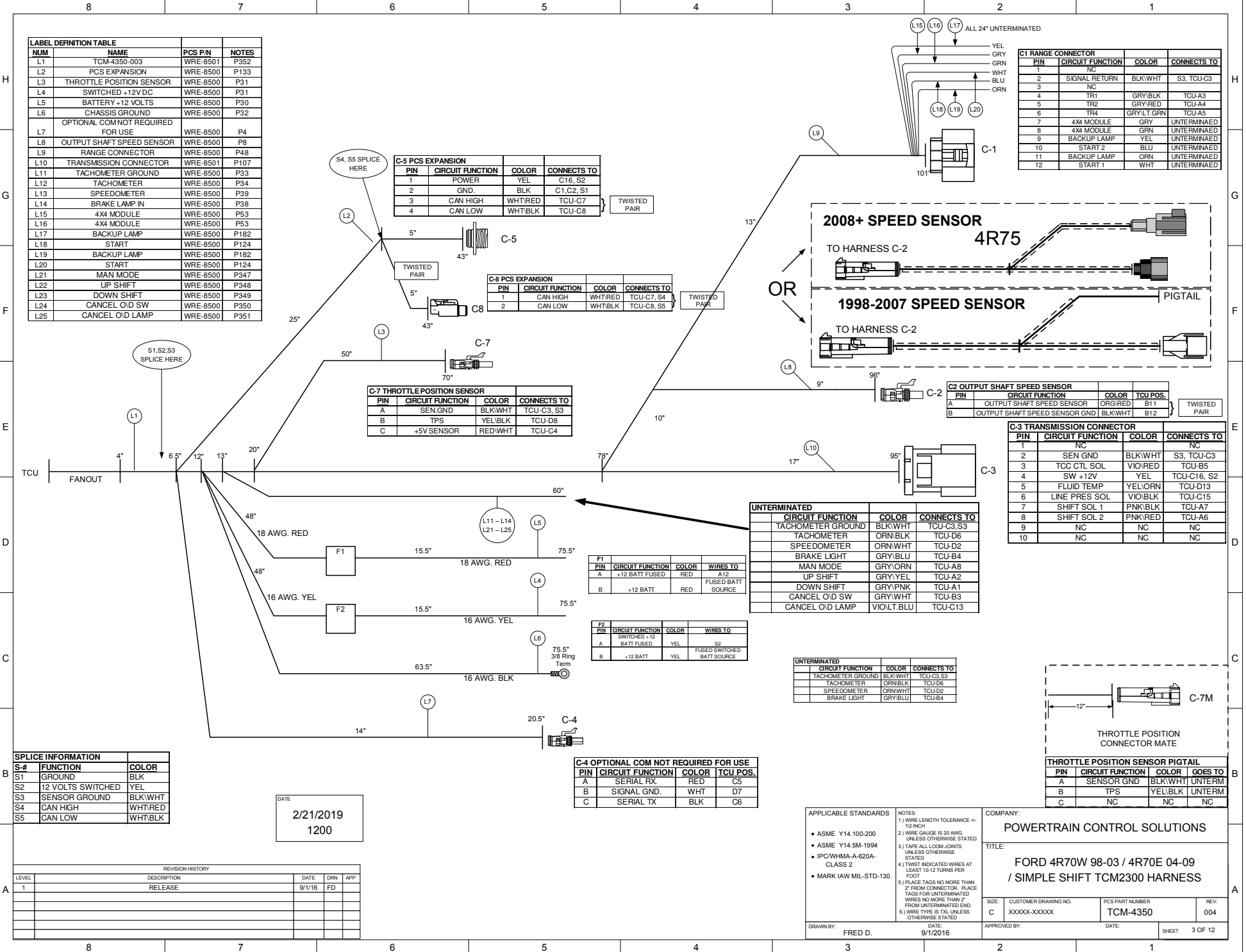
- NOTES
- 1.) WIRE LENGTH TOLERANCE +/- 1/2 INCH.
  - 2.) WIRE GAUGE IS 20 AWG UNLESS OTHERWISE STATED
  - 3.) TAPE ALL LOOM JOINTS UNLESS OTHERWISE STATED
  - 4.) TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
  - 5.) PLACE TAGS NO MORE THAN 2" FROM CONNECTOR. PLACE TAGS FOR UNTERMINATED WIRES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

COMPANY:  
**POWERTRAIN CONTROL SOLUTIONS**

TITLE:  
**FORD 4R70W 98-03 / 4R70E 04-09 / SIMPLE SHIFT TCM2300 HARNESS**

SIZE: C CUSTOMER DRAWING NO. PCS PART NUMBER REV: 004  
XXXXX-XXXXX TCM-4350

DRAWN BY: FRED D. DATE: 9/1/2016 APPROVED BY: DATE: SHEET 3 OF 12



PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	NC		NC
2	SIGNAL RETURN	BLK/WHT	S3, TCU-C3
3	NC		NC
4	TR1	GRY/BLK	TCU-A3
5	TR2	GRY/RED	TCU-A4
6	TR4	GRY/LT.GRN	TCU-A5
7	4X4 MODULE	GRN	UNTERMINAED
8	4X4 MODULE	GRN	UNTERMINAED
9	BACKUP LAMP	YEL	UNTERMINAED
10	START 2	BLU	UNTERMINAED
11	BACKUP LAMP	ORN	UNTERMINAED
12	START 1	WHT	UNTERMINAED

PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
A	OUTPUT SHAFT SPEED SENSOR	ORG/RED	B11
B	OUTPUT SHAFT SPEED SENSOR GND	BLK/WHT	B12

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	NC		NC
2	SEN GND	BLK/WHT	S3, TCU-C3
3	TCC CTL SOL	YEL/RED	TCU-B5
4	SW +12V	YEL	TCU-C16, S2
5	FLUID TEMP	YEL/ORN	TCU-D13
6	LINE PRES SOL	VIO/BLK	TCU-C15
7	SHIFT SOL 1	PNK/BLK	TCU-A7
8	SHIFT SOL 2	PNK/RED	TCU-A6
9	NC	NC	NC
10	NC	NC	NC

PIN	CIRCUIT FUNCTION	COLOR	WIRES TO
F1	+12 BATT FUSED	RED	A12
B	+12 BATT	RED	FUSED BATT SOURCE

F2	PIN	CIRCUIT FUNCTION	COLOR	WIRES TO
A		SWITCHED +12 BATT FUSED	YEL	S2
B		+12 BATT	YEL	FUSED SWITCHED BATT SOURCE

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
	TACHOMETER GROUND	BLK/WHT	TCU-C3, S3
	TACHOMETER	ORN/BLK	TCU-D6
	SPEEDOMETER	ORN/WHT	TCU-D2
	BRAKE LIGHT	GRY/BLU	TCU-B4

PIN	CIRCUIT FUNCTION	COLOR	GOES TO
A	SENSOR GND	BLK/WHT	UNTERM
B	TPS	YEL/BLK	UNTERM
C	NC	NC	NC