

REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP

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	PCS P/N	NOTES
1	CONNECTOR	CON-2130	Black
1	WEDGELOCK	CON-2125	Red
2	TERMINAL	CON-2121	

C3 TRANS CONNECTOR			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-2150	
7	TERMINALS	CON-2140	
1	CAVITY PLUG	CON-xxxx	

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

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

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	

QTY	DESCRIPTION	P/N	NOTES
1	CONNECTOR	CON-0017	28-24
1	BACK SHEET	CON-0050	06/05/91
1	RIBBER SEAL	CON-0001	

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	GROUND	BLK
S2	12 VOLTS SWITCHED	YEL
S3	SENSOR GROUND	BLK/WHT
S4	CAN HIGH	WHT/RED
S5	CAN LOW	WHT/BLK

QTY	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 - 1	CON-2217	10A
2	CABLE SEAL	CON-1001	GRN

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

APPLICABLE STANDARDS

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

NOTES:

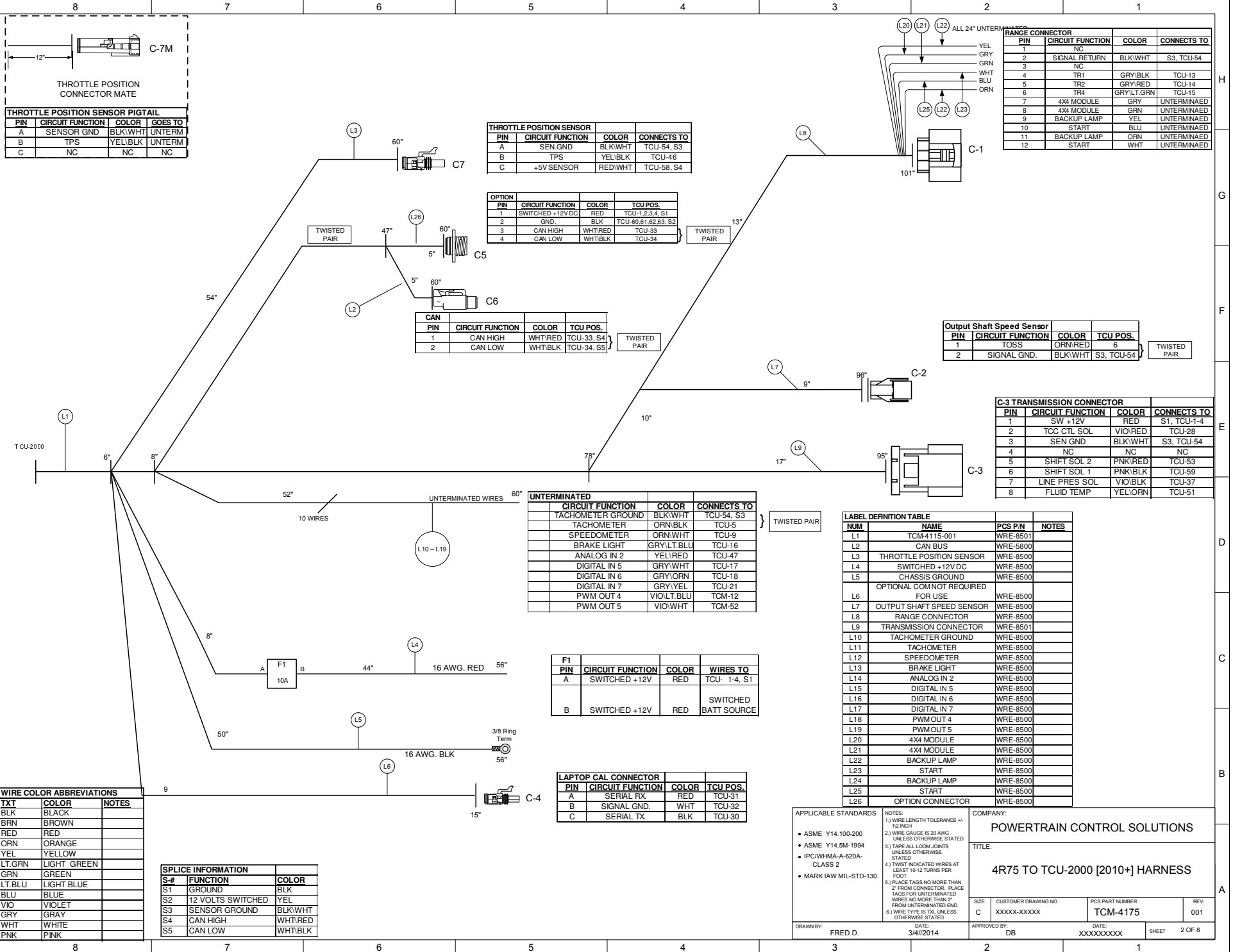
- 1) WIRE LENGTH TOLERANCE +/- .12 INCH
- 2) WIRE GAUGE IS 20 AWG UNLESS OTHERWISE STATED
- 3) TAPE ALL LOOM JOINTS UNLESS OTHERWISE STATED
- 4) TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
- 5) PLACE TAGS NO MORE THAN 2" FROM CONNECTOR. PLACE TAGS FOR UNTERMINATED WIRES NO MORE THAN 2" FROM UNTERMINATED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

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: 4R75 TO TCU-2000 [2010+] HARNESS

SIZE: CUSTOMER DRAWING NO. XXXXXX-XXXXX PCS PART NUMBER TCM-4175 REV: 001

DRAWN BY: FRED D. DATE: 3/4/2014 APPROVED BY: DB DATE: XXXXXXXX SHEET 1 OF 8



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

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

OPTION

PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	SWITCHED +12VDC	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

CAN

PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	CAN HIGH	WHT/RED	TCU-33, S4
2	CAN LOW	WHT/BLK	TCU-34, S5

Output Shaft Speed Sensor

PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	TOSS	ORN/RED	6
2	SIGNAL GND.	BLK/WHT	S3, TCU-54

C-3 TRANSMISSION CONNECTOR

PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	SW +12V	RED	S1, TCU-1,4
2	TCC CTL SOL	VIO/RED	TCU-28
3	SEN GND	BLK/WHT	S3, TCU-54
4	NC	NC	NC
5	SHIFT SOL 2	PNK/RED	TCU-53
6	SHIFT SOL 1	PNK/BLK	TCU-59
7	LINE PRES SOL	VIO/BLK	TCU-37
8	FLUID TEMP	YEL/ORN	TCU-51

UNTERMINATED

CIRCUIT FUNCTION	COLOR	CONNECTS TO
TACHOMETER GROUND	BLK/WHT	TCU-54, S3
TACHOMETER	ORN/BLK	TCU-5
SPEEDOMETER	ORN/WHT	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	SWITCHED +12V	RED	TCU- 1-4, S1
B	SWITCHED +12V	RED	SWITCHED BATT SOURCE

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

LABEL DEFINITION TABLE

NUM	NAME	PCS P/N	NOTES
L1	TCM-4115-001	WRE-8501	
L2	CAN BUS	WRE-5800	
L3	THROTTLE POSITION SENSOR	WRE-8500	
L4	SWITCHED +12V DC	WRE-8500	
L5	CHASSIS GROUND	WRE-8500	
L6	OPTIONAL COM NOT REQUIRED FOR USE	WRE-8500	
L7	OUTPUT SHAFT SPEED SENSOR	WRE-8500	
L8	RANGE CONNECTOR	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 IN 2	WRE-8500	
L15	DIGITAL IN 5	WRE-8500	
L16	DIGITAL IN 6	WRE-8500	
L17	DIGITAL IN 7	WRE-8500	
L18	PWM OUT 4	WRE-8500	
L19	PWM OUT 5	WRE-8500	
L20	4X4 MODULE	WRE-8500	
L21	4X4 MODULE	WRE-8500	
L22	BACKUP LAMP	WRE-8500	
L23	LAMP	WRE-8500	
L24	BACKUP LAMP	WRE-8500	
L25	START	WRE-8500	
L26	OPTION CONNECTOR	WRE-8500	

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	

SPLICE INFORMATION

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

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 TX UNLESS OTHERWISE STATED

COMPANY:
POWERTRAIN CONTROL SOLUTIONS

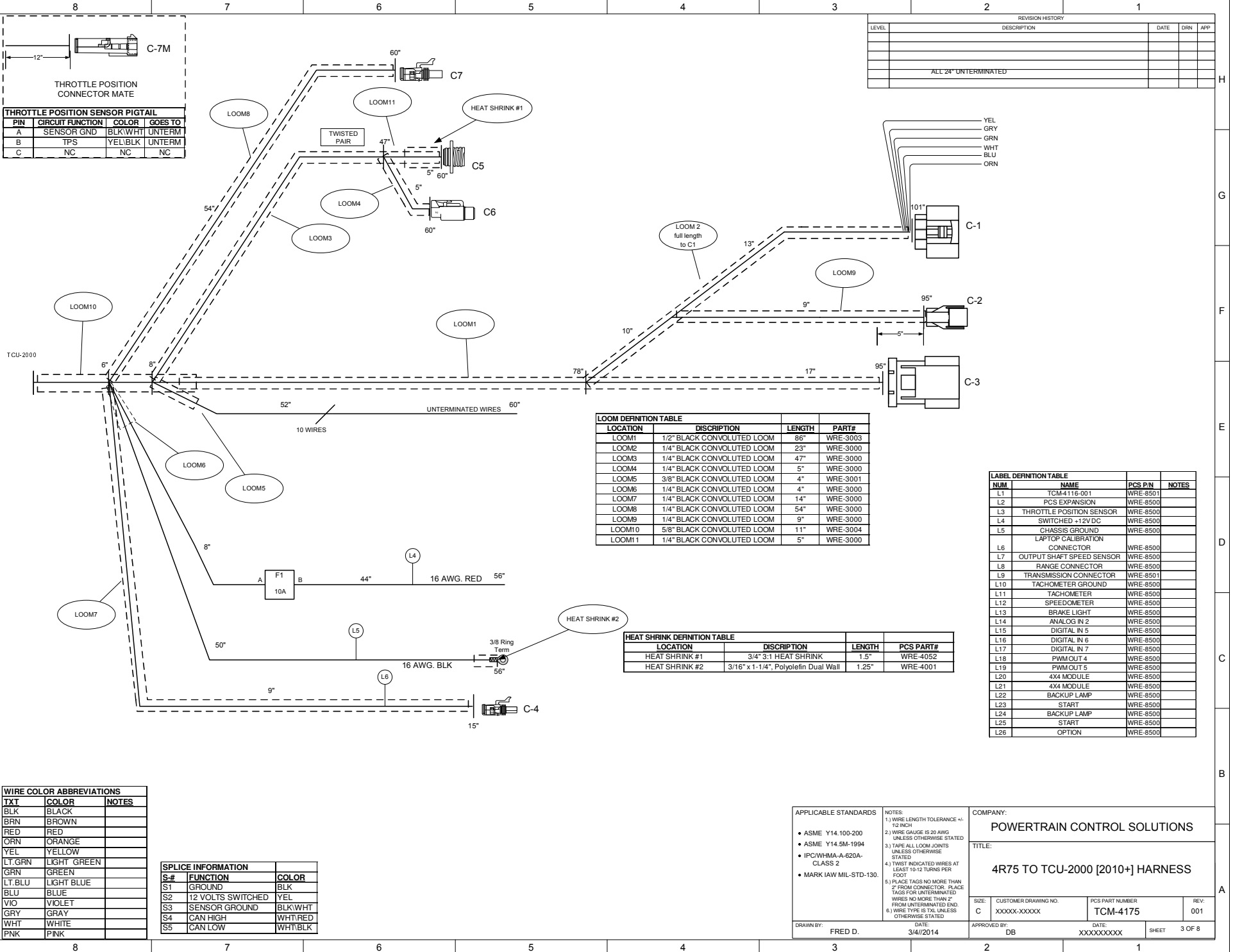
TITLE:
4R75 TO TCU-2000 [2010+] HARNESS

SIZE: CUSTOMER DRAWING NO. XXXXX-XXXXX
REV: 001

DATE: 3/4/2014
DATE: XXXXXXXX

DRAWN BY: FRED D.
APPROVED BY: DB

PCS PART NUMBER: TCM-4175
SHEET: 2 OF 8



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

REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
	ALL 24" UNTERMINATED			

LOCATION	DISCRIPTION	LENGTH	PART#
LOOM1	1/2" BLACK CONVOLUTED LOOM	86"	WRE-3003
LOOM2	1/4" BLACK CONVOLUTED LOOM	23"	WRE-3000
LOOM3	1/4" BLACK CONVOLUTED LOOM	47"	WRE-3000
LOOM4	1/4" BLACK CONVOLUTED LOOM	5"	WRE-3000
LOOM5	3/8" BLACK CONVOLUTED LOOM	4"	WRE-3001
LOOM6	1/4" BLACK CONVOLUTED LOOM	4"	WRE-3000
LOOM7	1/4" BLACK CONVOLUTED LOOM	14"	WRE-3000
LOOM8	1/4" BLACK CONVOLUTED LOOM	54"	WRE-3000
LOOM9	1/4" BLACK CONVOLUTED LOOM	9"	WRE-3000
LOOM10	5/8" BLACK CONVOLUTED LOOM	11"	WRE-3004
LOOM11	1/4" BLACK CONVOLUTED LOOM	5"	WRE-3000

NUM	NAME	PCS PIN	NOTES
L1	TCM-4116-001	WRE-8501	
L2	PCS EXPANSION	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	RANGE CONNECTOR	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 IN 2	WRE-8500	
L15	DIGITAL IN 5	WRE-8500	
L16	DIGITAL IN 6	WRE-8500	
L17	DIGITAL IN 7	WRE-8500	
L18	PWM OUT 4	WRE-8500	
L19	PWM OUT 5	WRE-8500	
L20	4X4 MODULE	WRE-8500	
L21	4X4 MODULE	WRE-8500	
L22	BACKUP LAMP	WRE-8500	
L23	START	WRE-8500	
L24	BACKUP LAMP	WRE-8500	
L25	START	WRE-8500	
L26	OPTION	WRE-8500	

LOCATION	DISCRIPTION	LENGTH	PCS PART#
HEAT SHRINK #1	3/4" 3:1 HEAT SHRINK	1.5"	WRE-4052
HEAT SHRINK #2	3/16" x 1-1/4", Polyolefin Dual Wall	1.25"	WRE-4001

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		

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

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 +/- .12 INCH
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- 4.) TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
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COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: 4R75 TO TCU-2000 [2010+] HARNESS

SIZE: C	CUSTOMER DRAWING NO. XXXXXX-XXXXX	PCS PART NUMBER TCM-4175	REV: 001
DRAWN BY: FRED D.	DATE: 3/4/2014	APPROVED BY: DB	DATE: XXXXXXXX SHEET 3 OF 8

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G

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E

D

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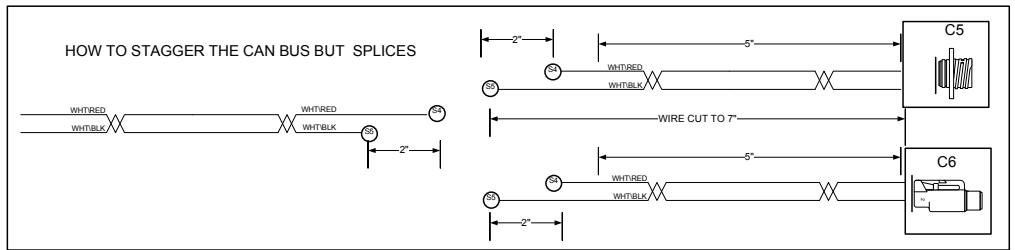
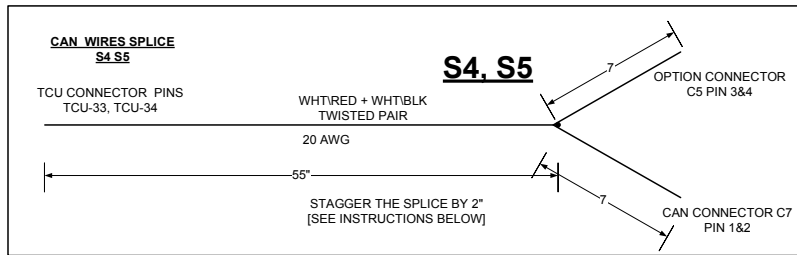
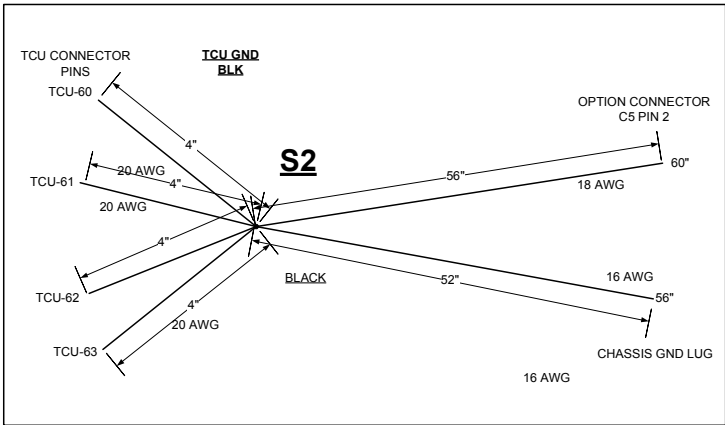
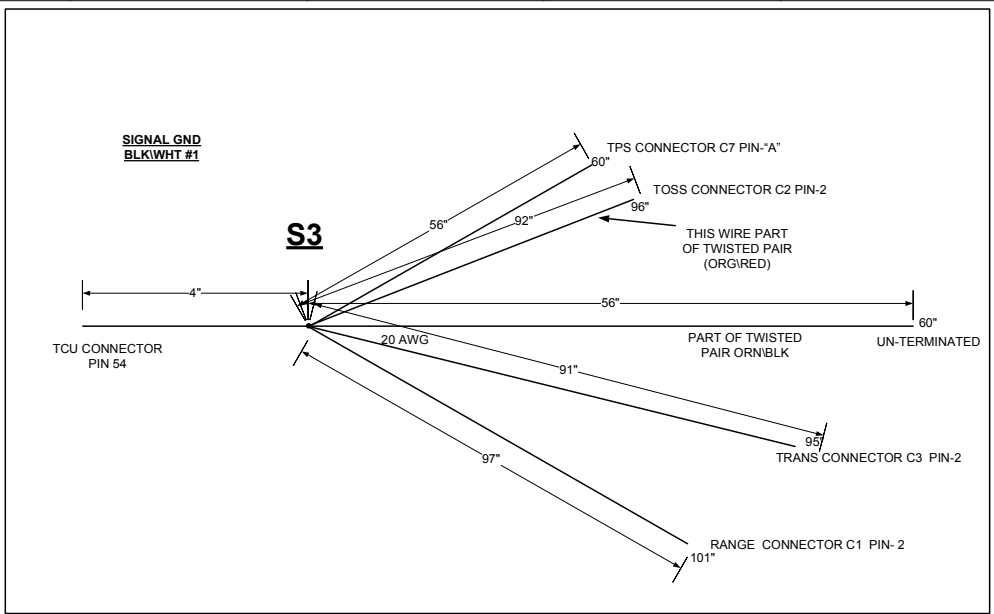
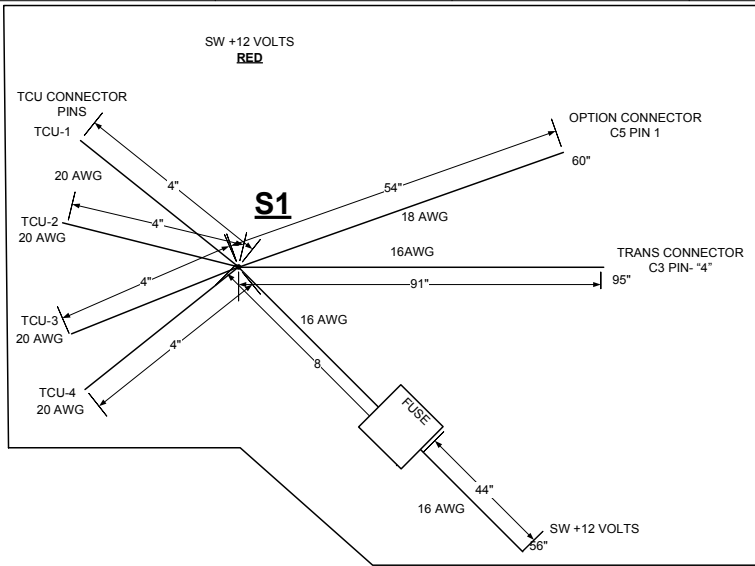
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CPC	Pin Function	Harness Function	4 R70 98+	colors
1	+12v	Battery Connection	+12v	red
2	+12v	Battery Connection	+12v	red
3	+12v	Battery Connection	+12v	red
4	+12v	Battery Connection	+12v	red
5	Speed Input 1	Engine Speed Input	RPM	orange/black
6	Speed Input 2	Transmission Speed Input	VSS	orange/red
7	Speed Input 3	nc	nc	orange/lt.grn
8	Speed Input 4	nc	nc	orange/lt.blu
9	Speed Output	Speedometer Drive Output	Speedometer In	orange/white
10	unused	-	-	-
11	unused	-	-	-
12	PWM Out 4/freq2	PWM/Solenoid Driver	spare out	violet/lt. blue
13	Digital Input 1	Digital Input	nc	gray/black
14	Digital Input 2	Digital Input	nc	gray/red
15	Digital Input 3	Digital Input	nc	gray/lt. green
16	Digital Input 4	Digital Input	brake light	gray/lt. blue
17	Digital Input 5	Digital Input	Spare Dig1	gray/white
18	Digital Input 6	Digital Input	Spare Dig2	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	Spare Dig3	gray/yellow
22	Digital Input 8	Digital Input	-	gray/pink
23	Digital Input 9	Digital Input	-	brown/black
24	Digital Input 10	Digital Input	-	brown/red
25	Digital Input 11	Digital Input	-	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 PWM Sol	violet/red
29	unused	-	-	-
30	RS-232 Transmit	Communications Cable	METRIPACK	BLK
31	RS-232 Receive	Communications Cable	METRIPACK	RED
32	CAN/RS-232 GND	Communications Cable	METRIPACK	WHT
33	CAN High	Communications Cable	-	white/red
34	CAN Low	Communications Cable	-	white/black
35	unused	-	-	-
36	Digital Out 3 / PWM 9	nc	nc	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	spare input	yellow/red
48	Analog Input 3	Analog Input	nc	yellow/lt. green
49	Analog Input 4	Analog Input	nc	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	Shift Sol B	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	Shift Sol A	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

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	GROUND	BLK
S2	12 VOLTS SWITCHED	YEL
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 +/- .12 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 UNTERMINATED END. 6.) WIRE TYPE IS TXL UNLESS OTHERWISE STATED	COMPANY: POWERTRAIN CONTROL SOLUTIONS TITLE: 4R75 TO TCU-2000 [2010+] HARNESS
SIZE: C	CUSTOMER DRAWING NO.: XXXXX-XXXXX	PCS PART NUMBER: TCM-4175	REV.: 001
DRAWN BY: FRED D.	DATE: 3/4/2014	APPROVED BY: DB	DATE: XXXXXXXX SHEET 4 OF 8



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	

SPLICE INFORMATION		
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	8/14/2012	FD		

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 +/- .12 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 UNTERMINATED END. 6.) WIRE TYPE IS TXL UNLESS OTHERWISE STATED.		COMPANY: POWERTRAIN CONTROL SOLUTIONS TITLE: 4R75 TO TCU-2000 [2010+] HARNESS	
SIZE: C	CUSTOMER DRAWING NO.: XXXXXX-XXXXX	PCS PART NUMBER: TCM-4175	REV: 001	DATE: XXXXXXXX	
DRAWN BY: FRED D.		DATE: 3/4/2014	APPROVED BY: DB	SHEET 5 OF 8	DATE: XXXXXXXX

CUT AND MACHINE SETUP TABLE TCM-4115 HARNESS							
Color	Cut Length	Strip Data	AWG	Destination Connector	NOTES		
GRY\BLK	101"	12, 17-2, 3	20	C1-4			
GRY\RED	101"	12, 17-2, 3	20	C1-5			
GRY\LT.GRN	101"	12, 17-2, 3	20	C1-6			
PNK\RED	95"	12, 17-2, 3	20	C3-2			
PNK\BLK	95"	12, 17-2, 3	20	C3-3			
VIO\RED	95"	12, 17-2, 3	20	C3-4			
YEL\ORN	95"	12, 17-2, 3	20	C3-7			
VIO\BLK	95"	12, 17-2, 3	20	C3-11			
RED	15"	12, 17-2, 3	20	C4-A	LAPTOP CALIBRATION CONNECTOR		
WHT	15"	12, 17-2, 3	20	C4-B	LAPTOP CALIBRATION CONNECTOR		
BLK	15"	12, 17-2, 3	20	C4-C	LAPTOP CALIBRATION CONNECTOR		
RED\WHT	60"	12, 17-2, 3	20	TCU-58 TO C7 PIN-C			
YEL\BLK	60"	12, 17-2, 3	20	TCU-46 TO C7 PIN A			
ORN\RED				C2-1			
BLK\WHT	96"(97.44")	12, 17-2, 3	20	S3			
FOLLOWING WIRES REPRESENT UTERM GROUP							
ORN\WHT	60"	12, 17-3, 09	20	UTERM			
GRY\LT.BLU	60"	12, 17-3, 09	20	UTERM			
YEL\RED	60"	12, 17-3, 09	20	UTERM			
GRY\WHT	60"	12, 17-3, 09	20	UTERM			
GRY\ORN	60"	12, 17-3, 09	20	UTERM			
GRY\YEL	60"	12, 17-3, 09	20	UTERM			
VIO\LT.BLU	60"	12, 17-3, 09	20	UTERM			
VIO\WHT	60"	12, 17-3, 09	20	UTERM			
WHT	24"	2, 3-3, 09	16	C1-12			
ORN	24"	2, 3-3, 09	16	C1-11			
BLU	24"	2, 3-3, 09	16	C1-10			
YEL	24"	2, 3-3, 09	16	C1-9			
GRN	24"	2, 3-3, 09	16	C1-8			
GRY	24"	2, 3-3, 09	16	C1-7			
YEL\BLK	12"	2, 3-3, 09	20	C7-M PIN-B TO UTERMINATED	TPS MATE CONNECTOR		
BLK\WHT	12"	2, 3-3, 09	20	C7-M PIN-A TO UTERMINATED	TPS MATE CONNECTOR		
THE FOLLOWING TABLE REPRESENTS WIRES THAT ARE PART OF THE EXTRA WIRE KIT							
ORN\LT.BLU	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
PNK\WHT	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
VIO\LT.GRN	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
GRY\PNK	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\BLK	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\RED	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\LT.GRN	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\LT.BLU	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
PNK\ORN	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\WHT	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\ORN	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\YEL	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
BRN\PNK	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
PNK\LT.BLU	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
VIO\ORN	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
YEL\LT.GRN	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
YEL\LT.BLU	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
YEL\WHT	60"	12, 17-3, 09	20	EXTRA WIRE KIT	D-SUB PIN TO UTERMINATED		
THE FOLLOWING TABLE REPRESENTS WIRES THAT ARE PART OF A SPICED RUN IN THE HARNESS							
BLK	4"	12, 17-32, 1	20	TCU-60 S2	SPLICE S2 TO TCU		
BLK	4"	12, 17-32, 1	20	TCU-61 S2	SPLICE S2 TO TCU		
BLK	4"	12, 17-32, 1	20	TCU-62 S2	SPLICE S2 TO TCU		
BLK	4"	12, 17-32, 1	20	TCU-63 S2	SPLICE S2 TO TCU		
BLK	56"	2, 3-32, 1	18	S2 TO C5-2	SPLICE S2 TO OPTION		
BLK	52"	2, 3-3, 1	16	S2 TO RING TERM	TO RING TERM		
RED	4"	12, 17-32, 1	20	TCU-4 S1			
RED	4"	12, 17-32, 1	20	TCU-4 S1			
RED	4"	12, 17-32, 1	20	TCU-4 S1			
RED	4"	12, 17-32, 1	20	TCU-4 S1			
RED	56"	2, 3-32, 1	18	S1 TO C5-1	OPTION CONNECTOR		
RED	3"	2, 3-32, 1	18	F1 PIN-A TO S1	FUSE CONNECTOR		
RED	48"	2, 3-3, 09	16	F1 PIN-B	TO UTERMINATED		
RED	91"	2, 3-32, 1	16	S1 TO C3-4	TRANS CON		
BLK\WHT	4"	12, 17-32, 1	20	TCU-54 TO SPICE			
BLK\WHT	91"	2, 3-32, 1	20	C3-2	TRANS SIG GND		
BLK\WHT	97"	2, 3-32, 1	20	C1-2	RANGE SIG GND		
BLK\WHT	58"	32, 1-2, 3	20	C7-A	TPS		
ORG\BLK					THESE WIRES ARE MANUALLY STRIPPED		
BLK\WHT	60"(60.9)	0-0	20	UTERM TACH / TACH GND	Manual strip at 2, 3-32, 1	BLACK/WHITE IS CRIMPED IN S3	
CAN BUS					THESE WIRES ARE MANUALLY STRIPPED		
WHT\RED					THESE WIRES ARE MANUALLY STRIPPED		
WHT\BLK	55"(55.825)	12, 17-32, 1	20	TCU TO SPLICE S4, S5			
WHT\RED					THESE WIRES ARE MANUALLY STRIPPED		
WHT\BLK	7"(7.105)	2, 3-32, 1	20	SPLICE S4, S5 TO C5 OPTION			
WHT\RED					THESE WIRES ARE MANUALLY STRIPPED		
WHT\BLK	7"(7.105)	2, 3-32, 1	20	SPLICE S4, S5 TO C6 CAN BUS			

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	

SPICE INFORMATION		
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

APPLICABLE STANDARDS:

- ASME Y14.100-20
- ASME Y14.5M-1994
- IPC-WHMA-A-620A-CLASS 2
- MARK AWI MIL-STD-1301

NOTES:

1. WIRE LENGTH TOLERANCE +/-
2. WIRE GAUGE IS 20AWG
3. TYPICAL ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED
4. TIGHT TOLERANCE DIMENSIONS AT FOOT TO 1/2 INCH PER FOOT
5. PLACE TAPS NO MORE THAN 1/2 INCH FROM UTERMINATED END
6. DIMENSIONS ARE UNLESS OTHERWISE SPECIFIED

DATE: 3/4/2014

APPROVED BY: FRED D.

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: 4R75 TO TCU-2000 [2010+1] HARNESS

SIZE: CUSTOMER DRAWING NO. C XXXXX-XXXX

DATE: TCM-4175

REV: 001

7 OF 8

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Kit Contents:

- 1.) TCM-4175 Harness (Including TPS Mating Pigtail), Complete and Tested.
- 2.) Customer Drawing. Drawing is page 1 and page 2 of this document printed double sided on a single sheet of paper.
- 3.) Extra Wire Kit and Removal Tool (Part #TOL-1006). These should be sealed in a separate bag with a label containing the following text:

G

G

4.) TCM-4180 – SERIAL CALIBRATION CABLE ASSEMBLY.

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ALL KIT CONTENTS SHOULD BE SEALED IN A BAG WITH THE FOLLOWING TEXT:

E

E

TCM-4175-001

D

D

C

C

B

B

A

A

APPLICABLE STANDARDS • ASME Y14.100-200 • ASME Y14.5M-1994 • IPC-NHMA-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: 4R75 TO TCU-2000 [2010+] HARNESS			
DRAWN BY: FRED D.		DATE: 3/4/2014		APPROVED BY: DB	
		SIZE: C		CUSTOMER DRAWING NO. XXXXX-XXXXX	
		PCS PART NUMBER TCM-4175		REV: 001	
		DATE: XXXXXXXXXX		SHEET 8 OF 8	