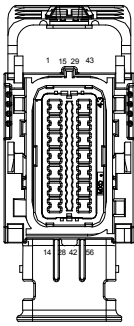


TCM-2800



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

THIS IS A PROTO

Print Date
2/22/21
1700

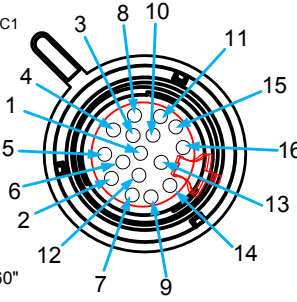
801

SPLICE INFORMATION		
S#	FUNCTION	COLOR
S1	SW +12V	YELLOW
S2	+12V BATTERY	RED
S3	GROUND	BLACK
S4	CAN HIGH	WHT/RED
S5	CAN LOW	WHT/BLK
S6	CAN 2 HIGH	YELLOW
S7	CAN 2 LOW	GREEN

REVISION HISTORY				
LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	7/31/19	FRD	
1A	C1 PINOUT UPDATE	8/5/19	FD	
1B	PARTS UPDATE	9/23/19	FD	
2	PARTS UPDATE	2/22/21	FD	

LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	7/31/19	FRD	
1A	C1 PINOUT UPDATE	8/5/19	FD	
1B	PARTS UPDATE	9/23/19	FD	
2	PARTS UPDATE	2/22/21	FD	

NC	01
NC	02
BLU/WHT	- E S LFT
TAN/WHT	+ E S LFT
YELLOW	+CAN 2
GREEN	- CAN 2
NC	07
NC	08
YELLOW	SW +12V
NC	10
NC	11
NC	12
RED	BATTERY +
BLACK	GROUND
TRK	PARK SIGNAL
NC	15
NC	16



FRONT SIDE OF TRANS CONNECTOR

C1 8HP TRANS CONNECTOR				
QTY	DESCRIPTION	PCS P/N	NOTES	MANF. P/N
1	CONNECTOR	CON-4450		09-4309-01
1	CONNECTOR BOOT	CON-4401		487290
7	TERMINAL	CON-2022		22124472200
5	SEAL	CON-2021		10800444521091
1	CAVITY PLUG	CON-2107		2822357-1
2	WHITE SEAL	CON-1027		WHT SEAL

C-8 LAPTOP CAL CONNECTOR				
QTY	DESCRIPTION	PCS P/N	NOTES	MANF. P/N
1	CONNECTOR	CON-3416		12110293
3	TERMINALS	CON-1038		12084200
1	TPA	CON-3417	CREAM	12052845
3	CABLE SEALS	CON-1027	WHT	15324976

C-2 OPTION				
QTY	DESCRIPTION	PCS P/N	NOTES	
1	CONNECTOR	CON-0065		
4	TERMINALS	CON-0051		

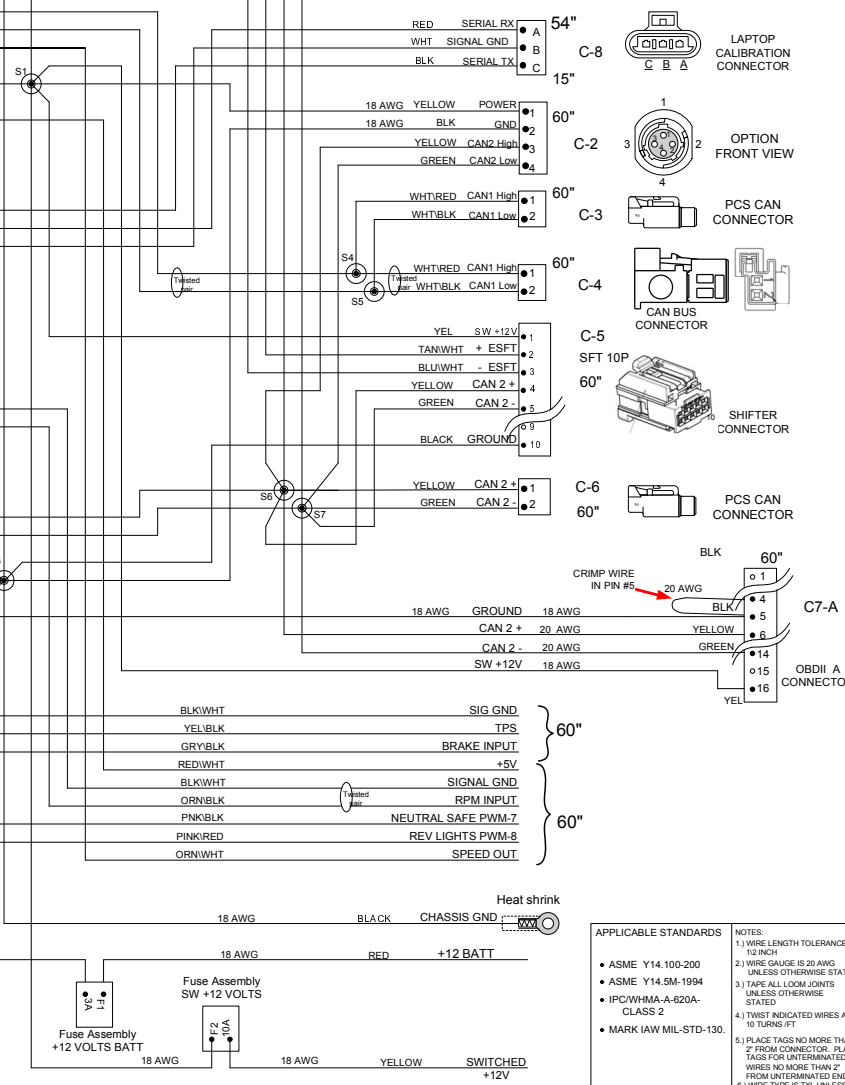
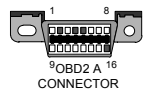
C-3 PCS CAN BUS CONNECTOR				
QTY	DESCRIPTION	PCS P/N	NOTES	
1	CONNECTOR	CON-5050		
2	TERMINALS	CON-5200	(20-18gauge)	
1	WEDGE LOCK	CON-5100	ORN	

C-4 MPR CAN BUS CONNECTOR and type.....				
QTY	DESCRIPTION	PCS P/N	NOTES	
1	CONNECTOR	CON-9203	CAN HIGH	
2	TERMINALS	CON-9204	CAN LOW	

C5 SHIFTER CONNECTOR				
QTY	DESCRIPTION	PCS P/N	NOTES	
1	CONNECTOR	CON-4460		
6	TERMINALS	CON-4702		

C-6 PCS 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	

C7A - 7B OBDII CONNECTORS				
QTY	DESCRIPTION	P/N	NOTES	
1	ODBIII CONNECTOR	CON-7001		
5	TERMINAL PINS	CON-7003		
1	WEDGE LOCK	CON-7002	BLUE	



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.) TAPES ALL LOOM JOINTS UNLESS OTHERWISE STATED
 4.) TWIST INDICATED WIRES AT 10 TURNS /FT
 5.) PLACE TAGS NO MORE THAN 2" FROM UNTERMINATED ENDS. PLACE TAGS FOR UNTERMINATED WIRES NO MORE THAN 2" FROM UNTERMINATED ENDS.
 6.) WIRE TYPE IS TXL UNLESS OTHERWISE STATED

COMPANY:
POWERTRAIN CONTROL SOLUTIONS

TITLE:
**ZF 8HP TRANSMISSION HARNESS
CUSTOM FOR RUSSELL DRAKE**

SIZE: C CUSTOMER DRAWING NO. PCS PART NUMBER
 REV: - - TCM-4894

DRAWN BY: FRED D. DATE: 5/11/19 APPROVED BY: - DATE: SHEET PAGE 1

C-4 MPR CAN BUS CONNECTOR and type.....			
QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-9203	CAN HIGH
2	TERMINALS	CON-9204	CAN LOW

C4 CAN	PIN	CIRCUIT FUNCT	COLOR	TCU POS.
1	1	CAN HIGH	WHT/RED	TCU-15, S4
2	2	CAN LOW	WHT/BLK	TCU-16, S5

C2 OPTION CONNECTOR	PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	1	POWER	YEL	TCU-19, S1
2	2	GND.	BLK	TCU-9, 42, S3
3	3	CAN HIGH	YELLOW	TCU-43, S6
4	4	CAN LOW	GREEN	TCU-47, S7

C3 PCS CAN CONNECTOR	PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	1	CAN HIGH	WHT/RED	TCU-15, S4
2	2	CAN LOW	WHT/BLK	TCU-16, S5

INTERM GROUPS			
PIN	FUNCTION	COLOR	CONNECTS TO
TCM-22	SIG GND	BLK/WHT	UNTERM
TCM-45	TPS	YEL/BLK	UNTERM
TCM-01	BRAKE IN	GRY/BLK	UNTERM
TCM-21	+5V REF	RED/WHT	UNTERM
TCM-23	SIG GND	BLK/WHT	UNTERM
TCM-38	RPM INPUT	ORN/BLK	UNTERM
TCM-53	PWM-7	PNK/BLK	UNTERM
TCM-54	PWM-8	PNK/RED	UNTERM
TCM-17	SPEED OUT	ORN/WHT	UNTERM

C6 CAN CONNECTOR			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
1	CAN HIGH	YELLOW	TCU-43, S6
2	CAN LOW	GREEN	TCU-44, S7

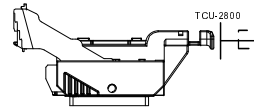
C1 TRANS CONNECTOR		
PIN	CIRCUIT FUNCTION	COLOR
1	NC	NC
2	NC	NC
3	E-SLFT	BLU/WHT
4	+E-SLFT	TAN/WHT
5	+CAN 2	YELLOW
6	-CAN 2	GREEN
7	NC	NC
8	NC	NC
9	Sw +12v	YELLOW
10	NC	NC
11	NC	NC
12	NC	NC
13	BATTERY +	RED
14	GROUND	BLK
15	NC	NC
16	NC	NC

C5 SHIFTER CONNECTOR			
PIN	CIRCUIT FUNCTION	COLOR	CONNECTS TO
1	12V SW	YEL	TCU-19, S1, F2
2	+ESHIFT	TAN/WHT	C1-4
3	-ESHIFT	BLU/WHT	C1-3
4	CAN 2 HIGH	YELLOW	TCU-43, C1-5
5	CAN 2 LOW	GREEN	TCU-44, C1-6
6	NC	NC	
7	NC	NC	
8	NC	NC	
9	NC	NC	
10	GROUND	BLACK	TCU-42, S2, RING TERM

F1			
PIN	CIRCUIT FUNCTION	COLOR	WIRES TO
A	+12V BATT	RED	TCU- 20
B	+12V BATT	RED	+12V BATT

F2			
PIN	CIRCUIT FUNCTION	COLOR	WIRES TO
A	SWITCHED +12V	YEL	TCU-19, S1
B	SWITCHED +12V	YEL	SWITCHED +12V

C8 LAPTOP CAL CONNECTOR			
PIN	CIRCUIT FUNCTION	COLOR	TCU POS.
A	SERIAL RX	RED	TCU-27
B	SIGNAL GND.	WHT	TCU-28
C	SERIAL TX	BLK	TCU-26



TCU-2800

S-#	FUNCTION	COLOR
S1	SW +12V	YELLOW
S2	+12V BATTERY	RED
S3	GROUND	BLACK
S4	CAN HIGH	WHT/RED
S5	CAN LOW	WHT/BLK
S6	CAN 2 HIGH	YELLOW
S7	CAN 2 LOW	GREEN

NUM	NAME	STOCK #	NOTES
L1	TCM-4894 ZF 8HP TRANS HARNESS	594-01105	P503
L2	TRANSMISSION CONNECTOR	594-01105	P107
L3	LAPTOP CALIBRATION CONNECTOR	594-09105	P65
L4	SWITCHED +12V	594-09105	P31
L5	CHASSIS GROUND	594-09105	P32
L6	+12V BATT	594-01105	P30
L7	OPTION CONNECTOR	594-01105	P5
L8	C4 CAN BUS	594-01105	P495
L9	PCS CAN CONNECTOR	594-01105	P496
L10	ODBIII CONNECTOR	594-01105	P165
L11	SFT CONNECTOR	594-01105	P497
L12	PCS CAN BUS	594-01105	P-496
L13	SIG GROUND	594-01105	P240
L14	TPS	594-01105	P2
L15	BRAKE	594-01105	P38
L16	+5VREF	594-01105	P76
L17	SIG GND	594-01105	P240
L19	PWM-7 NEUT / SAFE	594-01105	P274
L20	PWM-8 REV/LIGHTS	594-01105	P272
L21	SPEED OUT	594-01105	P448
L22			
L23			

LEVEL	DESCRIPTION	DATE	DRN	APP
1	RELEASE	7/31/19	FAD	
1A	C1 PINOUT UPDATE	8/5/19	FD	
1B	PARTS UPDATE	9/23/19	FD	
2	PARTS UPDATE	2/22/21	FD	

Print Date
2/22/21
1700

Include com connector protective cap

QTY	DESCRIPTION	PCS P/N	NOTES
1	CONNECTOR	CON-3415	
1	TPA	CON-3417	CREAM
3	BLOCK PINS	CON-1029	

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 90 DEGREES
 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

DRAWN BY: FRED D.
DATE: 5/11/19

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: ZF 8HP TRANSMISSION HARNESS CUSTOM FOR RUSSELL DRAKE

SIZE: C CUSTOMER DRAWING NO: PCS PART NUMBER: TCM-4894 REV: 002

APPROVED BY: DATE: SHEET PAGE 2

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