Front Left

LoadCellFL [4]

WheelSpeedSensorFL [4]

(1)

FLSensorGND [8]

Steering Axle Area

BPS1 [4] SteeringAngleSensor [4]

22.5 in

Under Seat

Telemetry [12]

IMU [12]

Chassis Mounted

InertiaSwitch [3]

22.5 in

8 in

18 in

Pedal Box

BOTS [3]

34.5 in

39 in

(3)

FW [1]

WSS5V [8]
LoadCell24V [8]
FrontSensorGND_A [8]

(2)

SteeringPotBPS5V [8]
PedalSensorGND [8]

16 in

(1)

TPS_GND [8] TPS1 [4]

22 in

TPS2 [4]

(1)

FrontSensorGND_B [8]

(1)

SPOT5V [8]

Hanging from under shocks

ShockPotsFL [4]

ShockPotsFR [4]

(1)

FrontGND [8]

DriverEStop [3]

SteeringWheel [1]

ICU [1]

BYP [3] GPS [2]

Driver Area

(1)

FRSensorGND [8]

WheelSpeedSensorFR [4] LoadCellFR [4]

Front Right

Sensor List	Pinout Type	Pinouts				
		A	C	D	E	F	G
Thermocouple	2 PIN	1 GND	2 SIG/PWR			
Shock Position	3 PIN	1 SIGNAL	2 GND	3 PWR		
Throttle Position	3 PIN	1 SIGNAL	2 GND	3 PWR		
Load Cells	3 PIN	1 SIGNAL	2 GND	3 PWR		
Wheel Speed	3 PIN	1 SIGNAL	2 GND	3 PWR		
Steering Position	3 PIN	1 SIGNAL	2 GND	3 PWR		
Brake Pressure	3 PIN	1 SIGNAL	2 GND	3 PWR		
Aero Load Cells	4 PIN S2C SPI	1 SIGNAL	2 GND	3 PWR		
Tire Temp	4 PIN CAN	1 GND	2 CAN L	3 CAN H	4 PWR	

	Title:	----
	Part Number:	SR15 Front Harness
	Description:	

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Flag	Quantity	Note
1	1	Shock Pot 12V, where should it come from? can maybe just splice it to both front shocks
2	1	Load cells & IMU both 24V, splice or no?
3	1	IMU maybe needs to rear harness, maybe telemetry should be moved?

Id	Type	Manufacturer	Part Number	Description	Quantity	Usage
1	Connector		MAIN_FW_CONNECTOR	Firewall Connector	3	FW, ICU, SteeringWheel
2	Connector	TE Connectivity / DEUTSCH	DTM06-6S	DTM Series 6 Position Triple Row Female Socket Free Hanging Plug Connector	1	GPS
3	Connector	TE Connectivity / DEUTSCH	DTM04-2P	Connector Sealed Housing Receptacle 2Position 4.19mm Crimp Straight Cable Mount box	4	BOTS, BYP, DriverEStop, InertiaSwitch
4	Connector	TE Connectivity	DTM04-3P	Conn Housing RCP 3 POS Crimp ST Cable Mount Automotive	10	BPS1, LoadCellFL, LoadCellFR, ShockPotsFL, ShockPotsFR, SteeringAngleSensor, TPS1, TPS2, WheelSpeedSensorFL, WheelSpeedSensorFR
5	Wire	Alpha Wire	1551 VI005	Hook-Up Wire, Tinned Copper, Insulation PVC, 22 AWG, 1551 Series | Alpha Wire 1551VI005	≥ 126 in	W1, W2, W3, W4
7	Wire		22 AWG Red	Generic Wire	≥ 481.5 in	W6, W7, W8, W9, W10, W11, W12, W18, W19, W20, W21, W22, W23, W24, W25, W26, W27
8	Splice	Molex	19199-0007	Rectangular Power Connector, 8 Contact(s), Male, Crimp Terminal	11	FLSensorGND, FRSensorGND, FrontGND, FrontSensorGND_A, FrontSensorGND_B, LoadCell24V, PedalSensorGND, SPOT5V, SteeringPotBPS5V, TPS_GND, WSS5V
10	Wire		UL1015 22 AWG Green	UL 1015 rated 22 AWG Green PVC Hook-up wire		W14
11	Wire	Alpha Wire	6823 GR001	Hook-Up Wire, EcoWire Plus, 6823, Green, 22 AWG, 7x30, mPPE Ins, 300V | Alpha Wire 6823 GR001	≥ 123 in	W15, W16, W65
12	Connector	TE Connectivity	DTM04-4P	Combination Line Connector, 4 Contact(s), Female, Crimp Terminal, Plug	2	IMU, Telemetry
13	Wire		UL1007 22 AWG Red	UL 1007 rated 22 AWG Red PVC Hook-up wire		W17
14	Wire		UL1015 22 AWG White	UL 1015 rated 22 AWG White PVC Hook-up wire	≥ 84 in	W28
15	Cable	Alpha Wire	6823 WH001	Hook-Up Wire, EcoWire Plus, 6823, White, 22 AWG, 7x30, mPPE Ins, 300V | Alpha Wire 6823 WH001	0 in	CBL1
16	Wire	Alpha Wire	6823 WH001	Hook-Up Wire, EcoWire Plus, 6823, White, 22 AWG, 7x30, mPPE Ins, 300V | Alpha Wire 6823 WH001	≥ 964.5 in	W29, W33, W39, W40, W41, W42, W43, W44, W47, W48, W50, W51, W52, W53, W54, W55, W56, W57, W58, W60, W61, W62, W63, W64
17	Wire	TE Connectivity / Raychem	CB4436-000	High Performance Cable 1Conductors 24AWG Tin Plated Copper Black 600Vac	≥ 150.5 in	W30, W31, W32, W59
18	Wire	Alpha Wire	6823 WH001	Hook-Up Wire, EcoWire Plus, 6823, White, 22 AWG, 7x30, mPPE Ins, 300V | Alpha Wire 6823 WH001	≥ 258 in	W34, W35, W36, W37, W38
20	Wire		UL1061 22 AWG Yellow	UL 1061 rated 22 AWG Yellow SR-PVC Hook-up wire	≥ 39 in	W46
21	Wire		UL1015 22 AWG Gray	UL 1015 rated 22 AWG Gray PVC Hook-up wire	≥ 181.5 in	W5, W13, W45, W49, W68, W69, W70, W71, W72, W73, W74, W75,

	Title:	----
Part Number:	SR15 Front Harness	
Description:		

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Id	Type	Manufacturer	Part Number	Description	Quantity	Usage
						W76, W77, W78
22	Wire		UL1015 22 AWG Yellow	UL 1015 rated 22 AWG Yellow PVC Hook-up wire	≥ 39 in	W66
23	Wire		UL1007 22 AWG Yellow	UL 1007 rated 22 AWG Yellow PVC Hook-up wire	≥ 39 in	W67

From	To	Conductor	Conductor PN	Twisted With	Gauge	Length	From Contact PN	Notes
BOTS.1	DriverEStop.2	W1.Violet	1551 VI005		22 AWG	≥ 16 in		BOTS > Driver E-Stop [HVIL]
BOTS.2	FW.33	W2.Violet	1551 VI005		22 AWG	≥ 55 in		BOTS > Penthouse [HVIL]
BPS1.2	PedalSensorGND	W77.Gray	UL1015 22 AWG Gray		22 AWG	≥ 18 in		BPS1 Sensor GND
BYP.2	FW.12	W43.White	6823 WH001		22 AWG	≥ 39 in		BYPO
FW.1	FrontGND	W59.Black	CB4436-000		24 AWG	≥ 39 in		Front GND
FW.2	WSS5V	W7.Red	22 AWG Red		22 AWG	39 in		WSSFR & WSSFL Sensor 5V
FW.3	SteeringPotBPS5V	W18.Red	22 AWG Red		22 AWG	≥ 39 in		Steering Position, BPS 1 & 2 5V
FW.4	FrontSensorGND_A	W68.Gray	UL1015 22 AWG Gray		22 AWG	39 in		Sensor GND
FW.5	SteeringAngleSensor.2	W49.Gray	UL1015 22 AWG Gray		22 AWG	≥ 57 in		Steering Wheel GND (? might be wrong **)
FW.6	TPS_GND	W30.Black	CB4436-000		24 AWG	≥ 55 in		TPS 1 & 2 GND
FW.7	LoadCellFL.1	W28.White	UL1015 22 AWG White		22 AWG	≥ 84 in		Load Cell FL Signal
FW.8	SteeringWheel.N/C	W23.Red	22 AWG Red		22 AWG	≥ 39 in		Steering Wheel 5V
FW.9	ICU.N/C	W67.Yellow	UL1007 22 AWG Yellow		22 AWG	≥ 39 in		12V Dash
FW.10	GPS.4	W21.Red	22 AWG Red		22 AWG	≥ 39 in		GPS 5V
FW.11	WheelSpeedSensorFL.1	W36.White	6823 WH001		22 AWG	≥ 84 in		WSS FL Signal
FW.13	ICU.N/C	W58.White	6823 WH001		22 AWG	≥ 39 in		RTD Button In
FW.14	ICU.N/C	W60.White	6823 WH001		22 AWG	≥ 39 in		RTD Buzzer
FW.15	WheelSpeedSensorFR.1	W57.White	6823 WH001		22 AWG	≥ 39 in		WSS FR Signal
FW.16	ICU.N/C	W61.White	6823 WH001		22 AWG	≥ 39 in		SYS ERROR
FW.17	BPS1.1	W35.White	6823 WH001		22 AWG	≥ 57 in		BPS 1 Signal
FW.18	ICU.N/C	W65.Green	6823 GR001		22 AWG	≥ 39 in		AMS LED
FW.19	LoadCellFR.1	W34.White	6823 WH001		22 AWG	≥ 39 in		Load Cell FR Signal
FW.20	ICU.3	W46.Yellow	UL1061 22 AWG Yellow		22 AWG	≥ 39 in		ICU/S2C 12V
FW.21	SPOT5V	W11.Red	22 AWG Red		22 AWG	≥ 39 in		SPOT FL & FR Sensor 5V
FW.22	LoadCell24V	W16.Green	6823 GR001		22 AWG	39 in		Load Cell 24V
FW.23	ICU.N/C	W66.Yellow	UL1015 22 AWG Yellow		22 AWG	≥ 39 in		12V ICU/S2C
FW.24	ICU.N/C	W62.White	6823 WH001		22 AWG	≥ 39 in		HV LED Indicator
FW.25	SteeringWheel.N/C	W63.White	6823 WH001		22 AWG	≥ 39 in		ECO Button (Calibration)
FW.26	TPS1.1	W29.White	6823 WH001		22 AWG	≥ 89.5 in		TPS 1 Signal
FW.27	GPS.3	W44.White	6823 WH001		22 AWG	≥ 39 in		GPS RS232 RX
FW.28	ICU.N/C	W64.White	6823 WH001		22 AWG	≥ 39 in		LV LED Indicator
FW.29	SteeringAngleSensor.1	W39.White	6823 WH001		22 AWG	≥ 57 in		Steering Position Signal
FW.30	ICU.4	W50.White	6823 WH001		22 AWG	≥ 39 in		BSPD LED
FW.31	SteeringWheel.11	W51.White	6823 WH001		22 AWG	≥ 39 in		DRS Enable Button
FW.32	ICU.N/C	W52.White	6823 WH001		22 AWG	≥ 39 in		ECO LED (VCU Fault)
FW.34	ICU.N/C	W22.Red	22 AWG Red		22 AWG	≥ 39 in		ICU & S2C 5V
FW.35	TPS2.3	W10.Red	22 AWG Red		22 AWG	≥ 77 in		TPS2 (Throttle Position Sensor) 5V
FW.36	TPS1.3	W9.Red	22 AWG Red		22 AWG	≥ 89.5 in		TPS1 (Throttle Position Sensor) 5V
FW.37	ShockPotsFL.1	W38.White	6823 WH001		22 AWG	≥ 39 in		SPOT FL Signal
FW.38	TPS2.1	W40.White	6823 WH001		22 AWG	≥ 77 in		TPS2 Signal
FW.39	BYP.1	W41.White	6823 WH001		22 AWG	≥ 39 in		BYPI

From	To	Conductor	Conductor PN	Twisted With	Gauge	Length	From Contact PN	Notes
FW.40	SteeringWheel.N/C	W53.White	6823 WH001		22 AWG	≥ 39 in		Launch Control Button
FW.41	ShockPotsFR.1	W37.White	6823 WH001		22 AWG	≥ 39 in		SPOT FR Signal
FW.42	GPS.2	W42.White	6823 WH001		22 AWG	≥ 39 in		GPS RS232 TX
FW.43	ICU.N/C	W54.White	6823 WH001		22 AWG	≥ 39 in		RTD LED Indicator
FW.44	ICU.N/C	W55.White	6823 WH001		22 AWG	≥ 39 in		PDU Blown Fuse
FW.45	ICU.N/C	W56.White	6823 WH001		22 AWG	≥ 39 in		IMD LED Indicator
FW.46	ICU.2	W33.White	6823 WH001		22 AWG	≥ 39 in		Data Marker Button
FW.56	Telemetry.1					≥ 61.5 in		
FW.60	ICU.1					≥ 39 in		
FW.66	SteeringWheel.1					≥ 39 in		
FrontSensorGND_A	FLSensorGND	W70.Gray	UL1015 22 AWG Gray		22 AWG	45 in		Front Left Sensor GND
FrontSensorGND_A	FRSensorGND	W71.Gray	UL1015 22 AWG Gray		22 AWG			Front Right Sensor GND
FrontSensorGND_A	FrontSensorGND_B	W72.Gray	UL1015 22 AWG Gray		22 AWG			Sensor GND
FrontSensorGND_A	IMU.1	W45.Gray	UL1015 22 AWG Gray		22 AWG	≥ 22.5 in		IMU Sensor GND
FrontSensorGND_A	PedalSensorGND	W73.Gray	UL1015 22 AWG Gray		22 AWG			Sensor GND to BPS1 & Steering Angle Sensor
FrontSensorGND_B	GPS.1	W78.Gray	UL1015 22 AWG Gray		22 AWG			GPS Sensor GND
FrontSensorGND_B	ShockPotsFL.2	W5.Gray	UL1015 22 AWG Gray		22 AWG			Shock Position Front Left Sensor GND
FrontSensorGND_B	ShockPotsFR.2	W13.Gray	UL1015 22 AWG Gray		22 AWG			Shock Position Front Right Sensor GND
InertiaSwitch.1	FW.47	W3.Violet	1551 VI005		22 AWG	47 in		PDU > Inertia [HVIL]
InertiaSwitch.2	DriverEStop.1	W4.Violet	1551 VI005		22 AWG	≥ 8 in		Inertia Switch > Driver E-Stop [HVIL]
LoadCell24V	LoadCellFL.3	W15.Green	6823 GR001		22 AWG	≥ 45 in		
LoadCell24V	LoadCellFR.3	W14.Green	UL1015 22 AWG Green		22 AWG			Load Cell FR 24V
LoadCellFL.2	FLSensorGND	W75.Gray	UL1015 22 AWG Gray		22 AWG			Load Cell FL Sensor GND
LoadCellFR.2	FRSensorGND	W76.Gray	UL1015 22 AWG Gray		22 AWG			Load Cell FR Sensor GND
SPOT5V	ShockPotsFL.3	W12.Red	22 AWG Red		22 AWG			SPOT FL Sensor 5V
SPOT5V	ShockPotsFR.3	W17.Red	UL1007 22 AWG Red		22 AWG			SPOT FR Sensor 5V
SteeringPotBPS5V	BPS1.3	W19.Red	22 AWG Red		22 AWG	≥ 18 in		BPS1 5V
SteeringPotBPS5V	SteeringAngleSensor.3	W20.Red	22 AWG Red		22 AWG	≥ 18 in		Steering Angle Sensor 5V
TPS_GND	TPS1.2	W31.Black	CB4436-000		24 AWG	34.5 in		TPS1 GND
TPS_GND	TPS2.2	W32.Black	CB4436-000		24 AWG	22 in		TPS 2 GND
WSS5V	WheelSpeedSensorFL.3	W8.Red	22 AWG Red		22 AWG	≥ 45 in		WSSFL Sensor 5V
WSS5V	WheelSpeedSensorFR.3	W6.Red	22 AWG Red		22 AWG			WSSFR Sensor 5V
WheelSpeedSensorFL.2	FLSensorGND	W69.Gray	UL1015 22 AWG Gray		22 AWG			Wheel Speed Sensor FL Sensor GND
WheelSpeedSensorFR.2	FRSensorGND	W74.Gray	UL1015 22 AWG Gray		22 AWG			Wheel Speed Sensor FR Sensor GND

Title:	----		
Part Number:	SR15 Front Harness		
Description:			

#	Type	Reference Designator	Manufacturer	Part Number	Color	Gauge	Length	Twisted With
1	Cable	CBL1	Alpha Wire	6823 WH001	White		0 in	
2	Wire	W1	Alpha Wire	1551 VI005	Violet	22 AWG	≥ 16 in	
3	Wire	W2	Alpha Wire	1551 VI005	Violet	22 AWG	≥ 55 in	
4	Wire	W3	Alpha Wire	1551 VI005	Violet	22 AWG	47 in	
5	Wire	W4	Alpha Wire	1551 VI005	Violet	22 AWG	≥ 8 in	
6	Wire	W5		UL1015 22 AWG Gray	Gray	22 AWG		
7	Wire	W6		22 AWG Red	Red	22 AWG		
8	Wire	W7		22 AWG Red	Red	22 AWG	39 in	
9	Wire	W8		22 AWG Red	Red	22 AWG	≥ 45 in	
10	Wire	W9		22 AWG Red	Red	22 AWG	≥ 89.5 in	
11	Wire	W10		22 AWG Red	Red	22 AWG	≥ 77 in	
12	Wire	W11		22 AWG Red	Red	22 AWG	≥ 39 in	
13	Wire	W12		22 AWG Red	Red	22 AWG		
14	Wire	W13		UL1015 22 AWG Gray	Gray	22 AWG		
15	Wire	W14		UL1015 22 AWG Green	Green	22 AWG		
16	Wire	W15	Alpha Wire	6823 GR001	Green	22 AWG	≥ 45 in	
17	Wire	W16	Alpha Wire	6823 GR001	Green	22 AWG	39 in	
18	Wire	W17		UL1007 22 AWG Red	Red	22 AWG		
19	Wire	W18		22 AWG Red	Red	22 AWG	≥ 39 in	
20	Wire	W19		22 AWG Red	Red	22 AWG	≥ 18 in	
21	Wire	W20		22 AWG Red	Red	22 AWG	≥ 18 in	
22	Wire	W21		22 AWG Red	Red	22 AWG	≥ 39 in	
23	Wire	W22		22 AWG Red	Red	22 AWG	≥ 39 in	
24	Wire	W23		22 AWG Red	Red	22 AWG	≥ 39 in	
25	Wire	W24		22 AWG Red	Red	22 AWG	0 in	
26	Wire	W25		22 AWG Red	Red	22 AWG	0 in	
27	Wire	W26		22 AWG Red	Red	22 AWG	0 in	
28	Wire	W27		22 AWG Red	Red	22 AWG	0 in	
29	Wire	W28		UL1015 22 AWG White	White	22 AWG	≥ 84 in	
30	Wire	W29	Alpha Wire	6823 WH001	White	22 AWG	≥ 89.5 in	
31	Wire	W30	TE Connectivity / Raychem	CB4436-000	Black	24 AWG	≥ 55 in	
32	Wire	W31	TE Connectivity / Raychem	CB4436-000	Black	24 AWG	34.5 in	
33	Wire	W32	TE Connectivity / Raychem	CB4436-000	Black	24 AWG	22 in	
34	Wire	W33	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
35	Wire	W34	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
36	Wire	W35	Alpha Wire	6823 WH001	White	22 AWG	≥ 57 in	
37	Wire	W36	Alpha Wire	6823 WH001	White	22 AWG	≥ 84 in	
38	Wire	W37	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
39	Wire	W38	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
40	Wire	W39	Alpha Wire	6823 WH001	White	22 AWG	≥ 57 in	
41	Wire	W40	Alpha Wire	6823 WH001	White	22 AWG	≥ 77 in	

#	Type	Reference Designator	Manufacturer	Part Number	Color	Gauge	Length	Twisted With
42	Wire	W41	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
43	Wire	W42	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
44	Wire	W43	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
45	Wire	W44	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
46	Wire	W45		UL1015 22 AWG Gray	Gray	22 AWG	≥ 22.5 in	
47	Wire	W46		UL1061 22 AWG Yellow	Yellow	22 AWG	≥ 39 in	
48	Wire	W47	Alpha Wire	6823 WH001	White	22 AWG	0 in	
49	Wire	W48	Alpha Wire	6823 WH001	White	22 AWG	0 in	
50	Wire	W49		UL1015 22 AWG Gray	Gray	22 AWG	≥ 57 in	
51	Wire	W50	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
52	Wire	W51	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
53	Wire	W52	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
54	Wire	W53	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
55	Wire	W54	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
56	Wire	W55	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
57	Wire	W56	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
58	Wire	W57	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
59	Wire	W58	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
60	Wire	W59	TE Connectivity / Raychem	CB4436-000	Black	24 AWG	≥ 39 in	
61	Wire	W60		6823 WH001	White	22 AWG	≥ 39 in	
62	Wire	W61	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
63	Wire	W62	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
64	Wire	W63	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
65	Wire	W64	Alpha Wire	6823 WH001	White	22 AWG	≥ 39 in	
66	Wire	W65	Alpha Wire	6823 GR001	Green	22 AWG	≥ 39 in	
67	Wire	W66		UL1015 22 AWG Yellow	Yellow	22 AWG	≥ 39 in	
68	Wire	W67		UL1007 22 AWG Yellow	Yellow	22 AWG	≥ 39 in	
69	Wire	W68		UL1015 22 AWG Gray	Gray	22 AWG	39 in	
70	Wire	W69		UL1015 22 AWG Gray	Gray	22 AWG		
71	Wire	W70		UL1015 22 AWG Gray	Gray	22 AWG	45 in	
72	Wire	W71		UL1015 22 AWG Gray	Gray	22 AWG		
73	Wire	W72		UL1015 22 AWG Gray	Gray	22 AWG		
74	Wire	W73		UL1015 22 AWG Gray	Gray	22 AWG		
75	Wire	W74		UL1015 22 AWG Gray	Gray	22 AWG		
76	Wire	W75		UL1015 22 AWG Gray	Gray	22 AWG		
77	Wire	W76		UL1015 22 AWG Gray	Gray	22 AWG		
78	Wire	W77		UL1015 22 AWG Gray	Gray	22 AWG	≥ 18 in	
79	Wire	W78		UL1015 22 AWG Gray	Gray	22 AWG		
80		FW.56 - Telemetry.1					≥ 61.5 in	
81		FW.60 - ICU.1					≥ 39 in	
82		FW.66 - SteeringWheel.1					≥ 39 in	

Title:	----
Part Number:	SR15 Front Harness
Description:	

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#	Manufacturer	Part Number	Description	Label Text