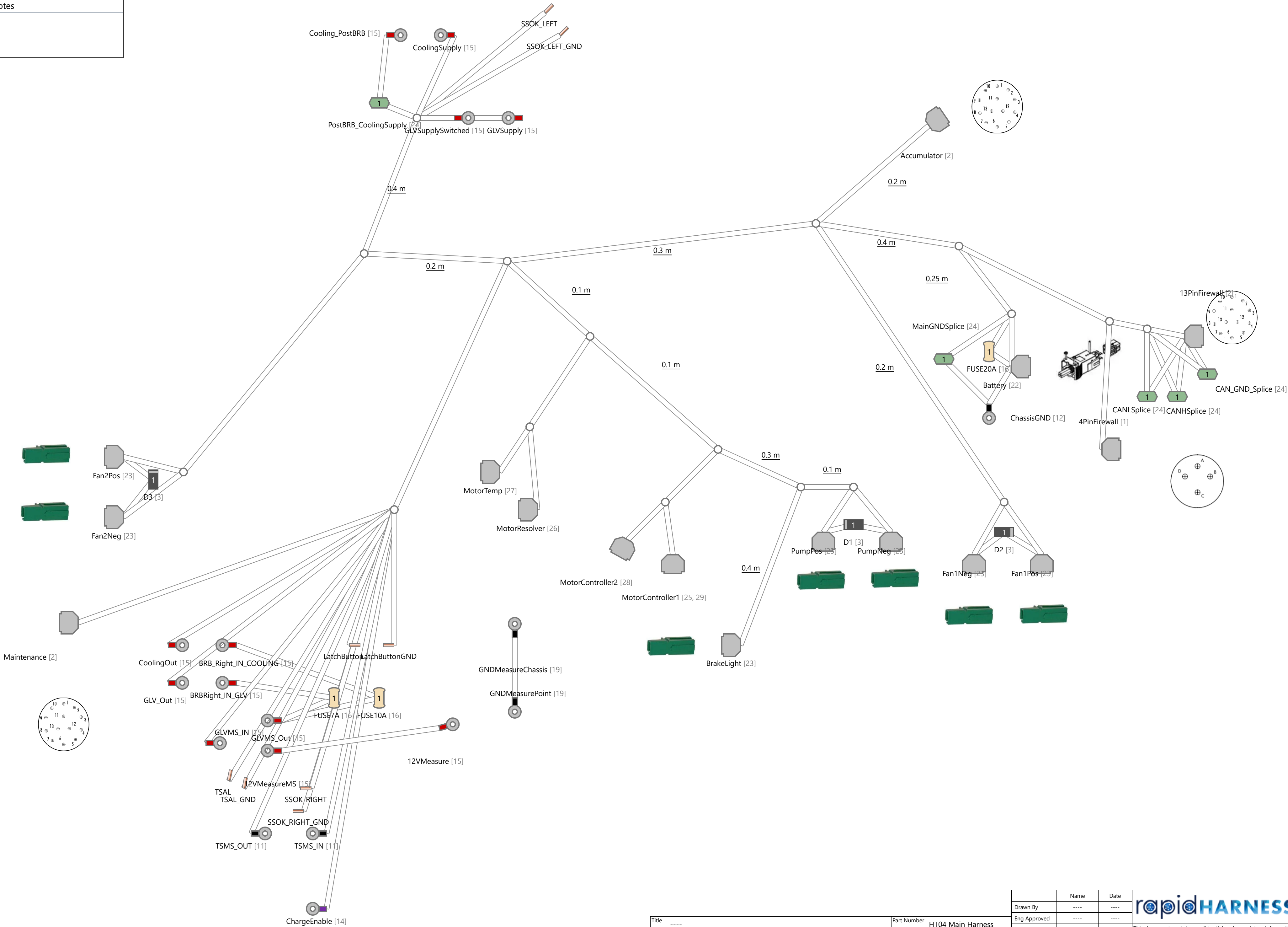



Revisions			
Rev.	Date	Author	Description
A	1/27/2019	Jefferson Jones	

Notes



Title ----		Part Number HT04 Main Harness		Revision ----	
Description				QA	
Drawn By ----		Name		Date	
Eng Approved ----					
Mfg Approved ----					



This document contains confidential and proprietary information that cannot be reproduced or divulged, in whole or in part, without written authorization.
































<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	

Id	Type	Manufacturer	Part Number	Description	Quantity	Usage
1	Connector	TE:Deutsch	AS612-04SN	4 Pin Plug, 16 Gauge	1	4PinFirewall
2	Connector	TE	AS610-35PN Plug	13 Pin Autosport Connector	3	13PinFirewall, Accumulator, Maintenance
3	Diode		Generic Diode	Generic Diode	3	D1, D2, D3
4	Wire		16 AWG Red	Generic Wire	≥ 8.65 m	12VBattery_toFuse, 12VMeasureCable, 12V_IntoMainECU, BatteryFuse_toGLVMS, CoolingPWR, Cooling_RightBRB_toLeftBRB, Cooling_toRightBRB, Fan1PWR, Fan2PWR, GLV_RightBRB_toLeftBRB, GLV_ToCoolingFuse, GLV_ToECUFuse, LVFused_toRightBRB, PumpPWR, SSOKL, SSOKR, TSALPWR
5	Wire		16 AWG Brown	Generic Wire	0 in	W10, W11, W12, W13, W14, W15
6	Wire		22 AWG White	Generic Wire	≥ 1.5 m	DASH12, MCMaintFaultIndication, MCMaintRX, MCMaintTX, MCMaintXDCR_PWR, MotorCosNeg, MotorCosPos, MotorExcNeg, MotorExcPos, MotorSinNeg, MotorSinPos, MotorTempNeg
7	Wire		22 AWG Red	Generic Wire	≥ 1.6 m	BrakeLightPWR, BrakePWR, DASH12V, PedalPWR1, PedalPWR2
8	Wire		22 AWG Brown	Generic Wire	0 in	W29, W30, W31
9	Wire		22 AWG Yellow	Generic Wire	≥ 2.2 m	BMSOK, BrakeSignal, LatchButtonSignal, MCMaintProgEnable, MotorTempPos, OKHS
10	Wire		16 AWG Violet	Generic Wire	≥ 1.7 m	ChargeEnableSignal, MaintChargeEnable, SHUTDOWN_F, SHUTDOWN_G
11	Ring Terminal		Unspecified gauge Black	Generic Ring Terminal	2	TSMS_IN, TSMS_OUT
12	Ring Terminal		14-12 AWG Black	Generic Ring Terminal	1	ChassisGND
13	Cable		CAN Cable	Cable for CAN Communications and Power	≥ 2.2 m	AccumCAN, CANMaint, MotorController_CAN
14	Ring Terminal		Unspecified gauge Violet	Generic Ring Terminal	1	ChargeEnable
15	Ring Terminal		Unspecified gauge Red	Generic Ring Terminal	12	12VMeasure, 12VMeasureMS,






























<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	

Id	Type	Manufacturer	Part Number	Description	Quantity	Usage
						BRBRight_IN_GLV, BRB_Right_IN_COOLING, CoolingOut, CoolingSupply, Cooling_PostBRB, GLVMS_IN, GLVMS_Out, GLVSupply, GLVSupplySwitched, GLV_Out
16	Resistor		Generic Resistor	Generic Resistor	3	FUSE7A, FUSE10A, FUSE20A
17	Wire		16 AWG Green	Generic Wire	≥ 6.5 m	Fan1GND, Fan2GND, GLVBattery_ChassisGND, GNDMeasure, MainECUGND, PumpGND, SSOKL_GND, SSOKR_GND, TSALGND, W65
18	Wire		22 AWG Black	Generic Wire	≥ 0.2 m	MCMaintGND
19	Ring Terminal		26-22 AWG Black	Generic Ring Terminal	2	GNDMeasureChassis, GNDMeasurePoint
20	Wire		22 AWG Green	Generic Wire	≥ 2.8 m	Accel1GND, Accel2GND, BrakeGND, BrakeLightGNDConnection, LatchGND, W70
21	Wire		16 AWG Black	Generic Wire		MainGNDSpliceToGND
22	Connector		ASMPP30-1X2-RK	Anderson PowerPole 1X2	1	Battery
23	Connector		1327G6-BK	Anderson PowerPole 1	7	BrakeLight, Fan1Neg, Fan1Pos, Fan2Neg, Fan2Pos, PumpNeg, PumpPos
24	Splice		Generic Splice	Generic Splice	5	CANHSplice, CANLSplice, CAN_GND_Splice, MainGNDSplice, PostBRB_CoolingSupply
25	Boot	TE	776463/776464	Ampseal Boot	1	MotorController1
26	Connector		8STA60835SN		1	MotorResolver
27	Connector		8STA60235SN		1	MotorTemp
28	Connector		8 Cavity	Generic Connector	1	MotorController2
29	Connector		12 Cavity	Generic Connector	1	MotorController1










































<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	

From	To	Conductor	Conductor PN	Twisted With	Gauge	Length	From Contact PN	Notes
12VMeasure	12VMeasureMS	 12VMeasureCable.Red	16 AWG Red		16 AWG			
13PinFirewall.1	MainGNDSplice					≥ 0.25 m		ShieldGND
13PinFirewall.5	CANLSplice							CANL fromFirewall
13PinFirewall.6	CANHSplice							CANH from Firewall
13PinFirewall.8	CAN_GND_Splice							
Accumulator.2	ChargeEnable	 ChargeEnableSignal.Violet	16 AWG Violet		16 AWG	≥ 0.5 m		ChargeEnable Signal
Accumulator.4	13PinFirewall.9	 BMSOK.Yellow	22 AWG Yellow		22 AWG	≥ 0.6 m		BMS_OK
Accumulator.5	13PinFirewall.10	 OKHS.Yellow	22 AWG Yellow		22 AWG	≥ 0.6 m		OKHS
Accumulator.7	13PinFirewall.4	 AccumCAN.Red-PWR	CAN Cable		22 AWG	≥ 0.6 m		12V for Accumulator
Accumulator.8	CAN_GND_Splice	 AccumCAN.Black-GND	CAN Cable		22 AWG	≥ 0.6 m		GND for Accumulator
Accumulator.9	CANLSplice	 AccumCAN.White-CANL	CAN Cable		22 AWG	≥ 0.6 m		CANL For Accumulator
Accumulator.10	CANHSplice	 AccumCAN.Green-CANH	CAN Cable		22 AWG	≥ 0.6 m		Accumulator CANH
BRBRight_IN_GLV	FUSE7A.NEG	 LVFused_toRightBRB.Red	16 AWG Red		16 AWG			
BRB_Right_IN_COOLING	FUSE10A.NEG	 Cooling_toRightBRB.Red	16 AWG Red		16 AWG			
Battery.2	4PinFirewall.4	 MainECUGND.Green	16 AWG Green		16 AWG	≥ 0.25 m		MainGND
BrakeLight.1	13PinFirewall.3	 BrakeLightPWR.Red	22 AWG Red		22 AWG	≥ 1.6 m		Brake Light PWR
ChassisGND	Battery.2	 GLVBattery_ChassisGND.Green	16 AWG Green		16 AWG			
CoolingOut	CoolingSupply	 Cooling_RightBRB_toLeftBRB.Red	16 AWG Red		16 AWG	≥ 0.6 m		Cooling Supply before second
Cooling_PostBRB	PostBRB_CoolingSupply	 CoolingPWR.Red	16 AWG Red		16 AWG			
FUSE20A.NEG	GLVMS_IN	 BatteryFuse_toGLVMS.Red	16 AWG Red		16 AWG	≥ 0.95 m		Battery+ Fused
FUSE20A.POS	Battery.1	 12VBattery_toFuse.Red	16 AWG Red		16 AWG			Battery+ Unfused
Fan1Neg.1	13PinFirewall.7	 Fan1GND.Green	16 AWG Green		16 AWG	≥ 0.6 m		Fan1-
Fan1Neg.1	D2.NEG							
Fan1Pos.1	D2.POS							
Fan1Pos.1	PostBRB_CoolingSupply	 Fan1PWR.Red	16 AWG Red		16 AWG	≥ 1.1 m		Power for Fan1
Fan2Neg.1	4PinFirewall.3	 Fan2GND.Green	16 AWG Green		16 AWG	≥ 0.9 m		Fan2-
Fan2Neg.1	D3.NEG							
Fan2Pos.1	D3.POS							
Fan2Pos.1	PostBRB_CoolingSupply	 Fan2PWR.Red	16 AWG Red		16 AWG	≥ 0.4 m		Power for Fan2
GLVMS_Out	FUSE7A.POS	 GLV_ToECUFuse.Red	16 AWG Red		16 AWG			
GLVMS_Out	FUSE10A.POS	 GLV_ToCoolingFuse.Red	16 AWG Red		16 AWG			
GLVSupplySwitched	4PinFirewall.1	 12V_IntoMainECU.Red	16 AWG Red		16 AWG	≥ 1.3 m		Power for GLV System
GLV_Out	GLVSupply	 GLV_RightBRB_toLeftBRB.Red	16 AWG Red		16 AWG	≥ 0.6 m		
GNDMeasureChassis	GNDMeasurePoint	 GNDMeasure.Green	16 AWG Green		16 AWG			
LatchButton	13PinFirewall.11	 LatchButtonSignal.Yellow	22 AWG Yellow		22 AWG	≥ 0.7 m		
LatchButtonGND	MainGNDSplice	 LatchGND.Green	22 AWG Green		22 AWG	≥ 0.95 m		
MainGNDSplice	BrakeLight.NegLead	 BrakeLightGNDConnection.Green	22 AWG Green		22 AWG	≥ 1.85 m		
MainGNDSplice	ChassisGND	 MainGNDSpliceToGND.Black	16 AWG Black		16 AWG			GND
MainGNDSplice	SSOK_LEFT_GND	 SSOKL_GND.Green	16 AWG Green		16 AWG	≥ 1.55 m		
MainGNDSplice	SSOK_RIGHT_GND	 SSOKR_GND.Green	16 AWG Green		16 AWG	≥ 0.95 m		
MainGNDSplice	TSAL_GND	 TSALGND.Green	16 AWG Green		16 AWG	≥ 0.95 m		

<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	


































From	To	Conductor	Conductor PN	Twisted With	Gauge	Length	From Contact PN	Notes
Maintenance.3	MotorController1.7	 MCMaintGND.Black	22 AWG Black		22 AWG	≥ 0.2 m		
Maintenance.4	MotorController1.8	 MCMaintProgEnable.Yellow	22 AWG Yellow		22 AWG	≥ 0.2 m		
Maintenance.5	MotorController1.9	 MCMaintXDCR_PWR.White	22 AWG White		22 AWG	≥ 0.2 m		
Maintenance.6	MotorController1.10	 MCMaintFaultIndication.White	22 AWG White		22 AWG	≥ 0.2 m		
Maintenance.8	13PinFirewall.8	 CANMaint.Black-GND	CAN Cable		22 AWG	≥ 0.7 m		
Maintenance.9	CANLSplice	 CANMaint.White-CANL	CAN Cable		22 AWG	≥ 0.7 m		
Maintenance.10	CANLSplice	 CANMaint.Green-CANH	CAN Cable		22 AWG	≥ 0.7 m		
Maintenance.11	ChargeEnable	 MaintChargeEnable.Violet	16 AWG Violet		16 AWG			
MotorController1.1	13PinFirewall.2	 MotorController_CAN.Red-PWR	CAN Cable		22 AWG	≥ 0.9 m		Motor Controller PWR
MotorController1.2	CAN_GND_Splice	 MotorController_CAN.Black-GND	CAN Cable		22 AWG	≥ 0.9 m		Motor Controller GND
MotorController1.3	CANHSplice	 MotorController_CAN.Green-CANH	CAN Cable		22 AWG	≥ 0.9 m		Motor Controller CANH
MotorController1.4	CANLSplice	 MotorController_CAN.White-CANL	CAN Cable		22 AWG	≥ 0.9 m		Motor Controller CANL
MotorController1.5	Maintenance.1	 MCMaintTX.White	22 AWG White		22 AWG	≥ 0.2 m		
MotorController1.6	Maintenance.2	 MCMaintRX.White	22 AWG White		22 AWG	≥ 0.2 m		
MotorController2.2	MotorResolver.1	 MotorExcPos.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorController2.3	MotorResolver.2	 MotorExcNeg.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorController2.4	MotorResolver.3	 MotorSinPos.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorController2.5	MotorResolver.4	 MotorSinNeg.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorController2.6	MotorResolver.5	 MotorCosPos.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorController2.7	MotorResolver.6	 MotorCosNeg.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorController2.8	MotorTemp.2	 MotorTempNeg.White	22 AWG White		22 AWG	≥ 0.1 m		
MotorTemp.1	MotorController2.1	 MotorTempPos.Yellow	22 AWG Yellow		22 AWG	≥ 0.1 m		
PumpNeg.1	4PinFirewall.2	 PumpGND.Green	16 AWG Green		16 AWG	≥ 1.3 m		Pump1-
PumpNeg.1	D1.NEG							
PumpPos.1	D1.POS							
PumpPos.1	PostBRB_CoolingSupply	 PumpPWR.Red	16 AWG Red		16 AWG	≥ 1.2 m		Power for Pump
SSOK_LEFT	13PinFirewall.13	 SSOKL.Red	16 AWG Red		16 AWG	≥ 1.3 m		SSOK+Left Panel
SSOK_RIGHT	13PinFirewall.13	 SSOKR.Red	16 AWG Red		16 AWG	≥ 0.7 m		SSOK Supply
TSAL	Accumulator.1	 TSALPWR.Red	16 AWG Red		16 AWG	≥ 0.5 m		TSAL
TSMS_IN	13PinFirewall.12	 SHUTDOWN_F.Violet	16 AWG Violet		16 AWG	≥ 0.7 m		SHUTDOWN
TSMS_OUT	Accumulator.6	 SHUTDOWN_G.Violet	16 AWG Violet		16 AWG	≥ 0.5 m		SHUTDOWN6

<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	

#	Type	Reference Designator	Manufacturer	Part Number	Color	Gauge	Length	Twisted With
1	Cable	AccumCAN		CAN Cable	 Gray		≥ 0.6 m	
2	Cable	CANMaint		CAN Cable	 Gray		≥ 0.7 m	
3	Cable	MotorController_CAN		CAN Cable	 Gray		≥ 0.9 m	
4	Wire	12VBattery_toFuse		16 AWG Red	 Red	16 AWG		
5	Wire	12VMeasureCable		16 AWG Red	 Red	16 AWG		
6	Wire	12V_IntoMainECU		16 AWG Red	 Red	16 AWG	≥ 1.3 m	
7	Wire	Accel1GND		22 AWG Green	 Green	22 AWG	0 in	
8	Wire	Accel2GND		22 AWG Green	 Green	22 AWG	0 in	
9	Wire	BMSOK		22 AWG Yellow	 Yellow	22 AWG	≥ 0.6 m	
10	Wire	BatteryFuse_toGLVMS		16 AWG Red	 Red	16 AWG	≥ 0.95 m	
11	Wire	BrakeGND		22 AWG Green	 Green	22 AWG	0 in	
12	Wire	BrakeLightGNDConnection		22 AWG Green	 Green	22 AWG	≥ 1.85 m	
13	Wire	BrakeLightPWR		22 AWG Red	 Red	22 AWG	≥ 1.6 m	
14	Wire	BrakePWR		22 AWG Red	 Red	22 AWG	0 in	
15	Wire	BrakeSignal		22 AWG Yellow	 Yellow	22 AWG	0 in	
16	Wire	ChargeEnableSignal		16 AWG Violet	 Violet	16 AWG	≥ 0.5 m	
17	Wire	CoolingPWR		16 AWG Red	 Red	16 AWG		
18	Wire	Cooling_RightBRB_toLeftBRB		16 AWG Red	 Red	16 AWG	≥ 0.6 m	
19	Wire	Cooling_toRightBRB		16 AWG Red	 Red	16 AWG		
20	Wire	DASH12		22 AWG White	 White	22 AWG	0 in	
21	Wire	DASH12V		22 AWG Red	 Red	22 AWG	0 in	
22	Wire	Fan1GND		16 AWG Green	 Green	16 AWG	≥ 0.6 m	
23	Wire	Fan1PWR		16 AWG Red	 Red	16 AWG	≥ 1.1 m	
24	Wire	Fan2GND		16 AWG Green	 Green	16 AWG	≥ 0.9 m	
25	Wire	Fan2PWR		16 AWG Red	 Red	16 AWG	≥ 0.4 m	
26	Wire	GLVBattery_ChassisGND		16 AWG Green	 Green	16 AWG		
27	Wire	GLV_RightBRB_toLeftBRB		16 AWG Red	 Red	16 AWG	≥ 0.6 m	
28	Wire	GLV_ToCoolingFuse		16 AWG Red	 Red	16 AWG		
29	Wire	GLV_ToECUFuse		16 AWG Red	 Red	16 AWG		
30	Wire	GNDMeasure		16 AWG Green	 Green	16 AWG		
31	Wire	LVFused_toRightBRB		16 AWG Red	 Red	16 AWG		
32	Wire	LatchButtonSignal		22 AWG Yellow	 Yellow	22 AWG	≥ 0.7 m	
33	Wire	LatchGND		22 AWG Green	 Green	22 AWG	≥ 0.95 m	
34	Wire	MCMaintFaultIndication		22 AWG White	 White	22 AWG	≥ 0.2 m	
35	Wire	MCMaintGND		22 AWG Black	 Black	22 AWG	≥ 0.2 m	
36	Wire	MCMaintProgEnable		22 AWG Yellow	 Yellow	22 AWG	≥ 0.2 m	
37	Wire	MCMaintRX		22 AWG White	 White	22 AWG	≥ 0.2 m	
38	Wire	MCMaintTX		22 AWG White	 White	22 AWG	≥ 0.2 m	
39	Wire	MCMaintXDCR_PWR		22 AWG White	 White	22 AWG	≥ 0.2 m	
40	Wire	MainECUGND		16 AWG Green	 Green	16 AWG	≥ 0.25 m	
41	Wire	MainGNDSpliceToGND		16 AWG Black	 Black	16 AWG		



<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	

#	Type	Reference Designator	Manufacturer	Part Number	Color	Gauge	Length	Twisted With
42	Wire	MaintChargeEnable		16 AWG Violet	 Violet	16 AWG		
43	Wire	MotorCosNeg		22 AWG White	 White	22 AWG	≥ 0.1 m	
44	Wire	MotorCosPos		22 AWG White	 White	22 AWG	≥ 0.1 m	
45	Wire	MotorExcNeg		22 AWG White	 White	22 AWG	≥ 0.1 m	
46	Wire	MotorExcPos		22 AWG White	 White	22 AWG	≥ 0.1 m	
47	Wire	MotorSinNeg		22 AWG White	 White	22 AWG	≥ 0.1 m	
48	Wire	MotorSinPos		22 AWG White	 White	22 AWG	≥ 0.1 m	
49	Wire	MotorTempNeg		22 AWG White	 White	22 AWG	≥ 0.1 m	
50	Wire	MotorTempPos		22 AWG Yellow	 Yellow	22 AWG	≥ 0.1 m	
51	Wire	OKHS		22 AWG Yellow	 Yellow	22 AWG	≥ 0.6 m	
52	Wire	PedalPWR1		22 AWG Red	 Red	22 AWG	0 in	
53	Wire	PedalPWR2		22 AWG Red	 Red	22 AWG	0 in	
54	Wire	PumpGND		16 AWG Green	 Green	16 AWG	≥ 1.3 m	
55	Wire	PumpPWR		16 AWG Red	 Red	16 AWG	≥ 1.2 m	
56	Wire	SHUTDOWN_F		16 AWG Violet	 Violet	16 AWG	≥ 0.7 m	
57	Wire	SHUTDOWN_G		16 AWG Violet	 Violet	16 AWG	≥ 0.5 m	
58	Wire	SSOKL		16 AWG Red	 Red	16 AWG	≥ 1.3 m	
59	Wire	SSOKL_GND		16 AWG Green	 Green	16 AWG	≥ 1.55 m	
60	Wire	SSOKR		16 AWG Red	 Red	16 AWG	≥ 0.7 m	
61	Wire	SSOKR_GND		16 AWG Green	 Green	16 AWG	≥ 0.95 m	
62	Wire	TSALGND		16 AWG Green	 Green	16 AWG	≥ 0.95 m	
63	Wire	TSALPWR		16 AWG Red	 Red	16 AWG	≥ 0.5 m	
64	Wire	W10		16 AWG Brown	 Brown	16 AWG	0 in	
65	Wire	W11		16 AWG Brown	 Brown	16 AWG	0 in	
66	Wire	W12		16 AWG Brown	 Brown	16 AWG	0 in	
67	Wire	W13		16 AWG Brown	 Brown	16 AWG	0 in	
68	Wire	W14		16 AWG Brown	 Brown	16 AWG	0 in	
69	Wire	W15		16 AWG Brown	 Brown	16 AWG	0 in	
70	Wire	W29		22 AWG Brown	 Brown	22 AWG	0 in	
71	Wire	W30		22 AWG Brown	 Brown	22 AWG	0 in	
72	Wire	W31		22 AWG Brown	 Brown	22 AWG	0 in	
73	Wire	W65		16 AWG Green	 Green	16 AWG	0 in	
74	Wire	W70		22 AWG Green	 Green	22 AWG	0 in	
75		13PinFirewall.1 - MainGNDSplice					≥ 0.25 m	
76		13PinFirewall.5 - CANLSplice						
77		13PinFirewall.6 - CANHSplice						
78		13PinFirewall.8 - CAN_GND_Splice						
79		Fan1Neg.1 - D2.NEG						
80		Fan1Pos.1 - D2.POS						
81		Fan2Neg.1 - D3.NEG						
82		Fan2Pos.1 - D3.POS						

<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	



#	Type	Reference Designator	Manufacturer	Part Number	Color	Gauge	Length	Twisted With
83		PumpNeg.1 - D1.NEG						
84		PumpPos.1 - D1.POS						



<b>Title:</b>	----
<b>Part Number:</b>	HT04 Main Harness
<b>Description:</b>	



#	Manufacturer	Part Number	Description	Label Text