Revisions

Rev.	Date	Author	Description
00-A	28/05/2024	Hagay S	INITIAL RELEASE
00-B	29/05/2024	Hagay S	CHANGED D-SUB 37POS FROM FEMALE TO MALE PLUG
00-C	30/05/2024	Hagay S	SWAPPED UUT KL15 (C2.1) FROM PIN C1.21 TO PIN C1.50 (DIG_9)
00-D	03/06/2024	Hagay S	UPDATED BOM TO IRP INTERNAL PART NUMBERS
00-E	11/06/2024	AMIR F.	D-SUB REPLACED WITH 35PINS CONNECTOR

Coverings

Id	Assembly
[23]	
[24]	

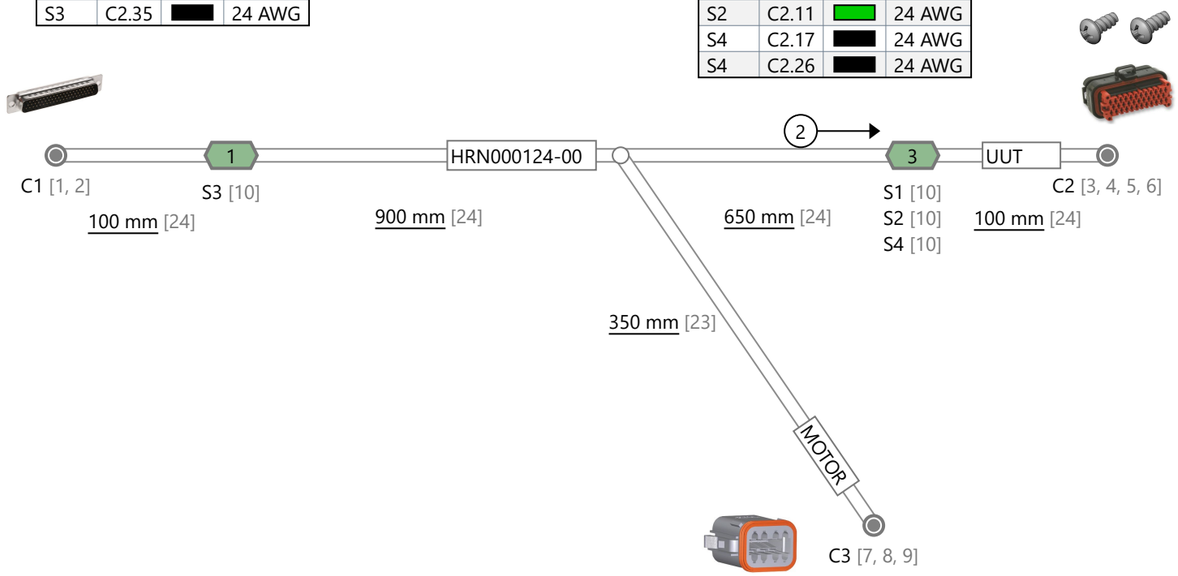
Notes

1. Manufacture and test the cable according to IPC-A-620
   Test the cable for connectivity, disconnection, mis-wires and resistance
2. S4 : JUMPER LINE C2.17 TO C2.26
3. LABEL AS SHOWN

From	To	Color	Gauge	Notes
C1.1	S1		24 AWG	CAN_1_H
C1.2	C2.4		24 AWG	CAN_2_H
C1.6	C2.22		24 AWG	D_IN1
C1.7	C2.2		24 AWG	D_IN2
C1.8	C2.34		24 AWG	D_IN3
C1.9	C2.5		24 AWG	D_OUT1
C1.11	C2.24		24 AWG	HVIL1
C1.12	C2.6		24 AWG	GND
C1.13	C2.8		24 AWG	A_IN1
C1.17	C2.20		24 AWG	GND
C1.18	C2.7		24 AWG	5VDC_CAN
C1.20	C2.27		24 AWG	5VDC_Supply
C1.22	S2		24 AWG	CAN_1_L
C1.23	C2.3		24 AWG	CAN_2_L
C1.28	C2.14		24 AWG	D_IN4 (Brake)
C1.30	C2.15		24 AWG	D_OUT2
C1.32	C2.25		24 AWG	HVIL2
C1.34	C2.9		24 AWG	A_IN2
C1.41	C2.28		24 AWG	5VDC_Supply
C1.42	C2.23		24 AWG	KL30 (VSW)
C1.43	S3		24 AWG	CAN_1_GND
C1.44	S3		24 AWG	CAN_2_GND
C1.50	C2.1		24 AWG	KL15 (DIG_9)
C1.51	C2.16		24 AWG	D_OUT3
C1.53	C3.7		22 AWG	M_Temp
C1.54	C3.8		22 AWG	M_TEMP_RTN
C1.55	C2.19		24 AWG	A_IN3 (Motor Temp sim)

From	To	Color	Gauge
S3	C1.43		24 AWG
S3	C1.44		24 AWG
S3	C2.35		24 AWG

From	To	Color	Gauge
S1	C1.1		24 AWG
S1	C2.12		24 AWG
S1	C2.13		24 AWG
S2	C1.22		24 AWG
S2	C2.10		24 AWG
S2	C2.11		24 AWG
S4	C2.17		24 AWG
S4	C2.26		24 AWG



From	To	Color	Gauge	From Contact PN	Notes
C3.1	C2.18		22 AWG	CON000357	EXC_P
C3.2	C2.21		22 AWG	CON000357	EXC_N
C3.3	C2.29		22 AWG	CON000357	SIN_P
C3.4	C2.30		22 AWG	CON000357	SIN_N
C3.5	C2.32		22 AWG	CON000357	COS_P
C3.6	C2.33		22 AWG	CON000357	COS_N
C3.7	C1.53		22 AWG	CON000357	M_Temp
C3.8	C1.54		22 AWG	CON000357	M_TEMP_RTN

From	To	Color	Gauge	Notes
C2.1	C1.50		24 AWG	KL15 (DIG_9)
C2.2	C1.7		24 AWG	D_IN2
C2.3	C1.23		24 AWG	CAN_2_L
C2.4	C1.2		24 AWG	CAN_2_H
C2.5	C1.9		24 AWG	D_OUT1
C2.6	C1.12		24 AWG	GND
C2.7	C1.18		24 AWG	5VDC_CAN
C2.8	C1.13		24 AWG	A_IN1
C2.9	C1.34		24 AWG	A_IN2
C2.10	S2		24 AWG	CAN_1_T2
C2.11	S2		24 AWG	CAN_1_L
C2.12	S1		24 AWG	CAN_1_H
C2.13	S1		24 AWG	CAN_1_T1
C2.14	C1.28		24 AWG	D_IN4 (Brake)
C2.15	C1.30		24 AWG	D_OUT2
C2.16	C1.51		24 AWG	D_OUT3
C2.17	S4		24 AWG	DIG_REF
C2.18	C3.1		22 AWG	EXC_P
C2.19	C1.55		24 AWG	A_IN3 (Motor Temp sim)
C2.20	C1.17		24 AWG	GND
C2.21	C3.2		22 AWG	EXC_N
C2.22	C1.6		24 AWG	D_IN1
C2.23	C1.42		24 AWG	KL30 (VSW)
C2.24	C1.11		24 AWG	HVIL1
C2.25	C1.32		24 AWG	HVIL2
C2.26	S4		24 AWG	DIG_REF
C2.27	C1.20		24 AWG	5VDC_Supply
C2.28	C1.41		24 AWG	5VDC_Supply
C2.29	C3.3		22 AWG	SIN_P
C2.30	C3.4		22 AWG	SIN_N
C2.32	C3.5		22 AWG	COS_P
C2.33	C3.6		22 AWG	COS_N
C2.34	C1.8		24 AWG	D_IN3
C2.35	S3		24 AWG	CAN_GND

Bill of Materials

Id	Type	Manufacturer	Part Number	Quantity
1	Connector	Amphenol	L717HDC62P	1
2	Backshell	MH Connectors	CON000358	1
3	Connector	TE Connectivity	776164-1	1
4	Contact	TE Connectivity / AMP	770520-5	35
5	Backshell	TE Connectivity	7764631	2
6	THRD FORMING SCREW	GNRL.	WN1412	2
7	Connector	Amphenol Sine Systems	CON000355	1
8	Lock	Amphenol Sine Systems	AW8S	1
9	Contact	Amphenol Sine Systems	CON000357	8
10	Splice			4
11	Wire	GNRL.	MAT000011	3600 mm
12	Wire	GNRL.	MAT000010	3600 mm
13	Wire	GNRL.	UL 1569 24 AWG BLACK	5550 mm
14	Wire	GNRL.	MAT000007	8750 mm
15	Wire		24AWG	21000 mm
16	Wire	Generic	UL 1569 22 AWG GRAY	2450 mm
17	Wire		UL 1569 22 AWG BROWN	1100 mm
18	Wire		UL 1569 22 AWG Blue	1100 mm
19	Wire		UL 1569 22 AWG ORANGE	1100 mm
20	Wire		UL 1569 22 AWG White	1100 mm
21	Wire		UL 1569 22 AWG Green	1100 mm
22	Wire		UL 1569 22 AWG Black	1350 mm
23	Sleeving	TE Connectivity / Raychem	DR-25-3/8-0-MS-SP	350 mm
24	Sleeving	Panduit	SE50P-DR0	1750 mm

PART NUMBER: HRN000124-00-E

DESCRIPTION: Hi-Dynamic EOL - ATE to UUT and Motor Cable

	NAME	DATE
DRAWN BY	HAGAY S	11/6/2024
ENG APPROVED	AMIR F.	11/6/2024
MFG APPROVED	----	----
QA	----	----

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IRP systems

Title:	----
Part Number:	HRN000124-00-E
Description:	Hi-Dynamic EOL - ATE to UUT and Motor Cable

IRP systems

Flag	Quantity	Note
1	0	Manufacture and test the cable according to IPC-A-620 Test the cable for connectivity, disconnection, mis-wires and resistance
2	1	S4 : JUMPER LINE C2.17 TO C2.26
3	0	LABEL AS SHOWN

Title:	----
Part Number:	HRN000124-00-E
Description:	Hi-Dynamic EOL - ATE to UUT and Motor Cable

IRP systems

Id	Type	Manufacturer	Part Number	Description	Quantity	IPN
1	Connector	Amphenol	L717HDC62P	Conn High Density D-Sub PIN 62 POS Solder RA Thru-Hole 62 Terminal 1 Port	1	CON000040
2	Backshell	MH Connectors	CON000358	MHDPPK - Slim Design Snap Together Top Entry D-Type Hoods	1	MHDPPK37-K
3	Connector	TE Connectivity	776164-1	Conn Housing PL 35 POS 4mm Crimp ST Cable Mount Automotive Package	1	CON000302
4	Contact	TE Connectivity / AMP	770520-5	Automotive Terminals, Socket, 20-22 AWG Wire Size, Family Seal, AMPSEAL | TE Connectivity 770520-5	35	CON000303
5	Backshell	TE Connectivity	7764631	TE CONNECTIVITY 776463-1 Strain Relief AMPSEAL 35p	2	CON000281
6	THRD FORMING SCREW	GNRL.	WN1412	Thread-Forming Screw for Plastic PH. ST. #4x1/4 (KA30x6)	2	FST000280
7	Connector	Amphenol Sine Systems	CON000355	Connector PLUG 8POS 14-20AWG SIZE 16, AT Series | Amphenol Sine Systems AT06-08SA	1	AT06-08SA
8	Lock	Amphenol Sine Systems	AW8S	Wedgelock Connector Plug, 8 Position, Green, AT Series | Amphenol Sine Systems AW8S	1	
9	Contact	Amphenol Sine Systems	CON000357	This size 16 female machined contact from Amp Sine is nickel plated and operates at 13A.	8	AT62-201-16141
10	Splice				4	
11	Wire	GNRL.	MAT000011	24 AWG WIRE - GREEN	3600 mm	MAT000011
12	Wire	GNRL.	MAT000010	24 AWG WIRE - YELLOW	3600 mm	MAT000010
13	Wire	GNRL.	UL 1569 24 AWG BLACK	24 AWG WIRE - BLACK	5550 mm	MAT000009
14	Wire	GNRL.	MAT000007	24 AWG WIRE - RED	8750 mm	MAT000007
15	Wire		24AWG		21000 mm	
16	Wire	Generic	UL 1569 22 AWG GRAY	Generic Wire	2450 mm	MAT000123
17	Wire		UL 1569 22 AWG BROWN	Generic Wire	1100 mm	MAT000088
18	Wire		UL 1569 22 AWG Blue	Generic Wire	1100 mm	MAT000089
19	Wire		UL 1569 22 AWG ORANGE	Generic Wire	1100 mm	MAT000091
20	Wire		UL 1569 22 AWG White	Generic Wire	1100 mm	MAT000093
21	Wire		UL 1569 22 AWG Green	Generic Wire	1100 mm	MAT000084
22	Wire		UL 1569 22 AWG Black	Generic Wire	1350 mm	MAT000087
23	Sleeving	TE Connectivity / Raychem	DR-25-3/8-0-MS-SP	HEAT SHRINK TUBING DR-25 3/8	350 mm	
24	Sleeving	Panduit	SE50P-DR0	Cable Accessories Braided Expandable Sleeving Polyethylene Terephthalate Black Reel	1750 mm	MAT000108

Title:	----
Part Number:	HRN000124-00-E
Description:	Hi-Dynamic EOL - ATE to UUT and Motor Cable

IRP systems

From	To	Conductor	Conductor PN	Twisted With	Gauge	Length	From Contact PN	To Contact PN	From Wire Seal PN	To Wire Seal PN	Notes
C1.1	S1	W5.Yellow	MAT000010		24 AWG	1650 mm					CAN_1_H
C1.2	C2.4	W8.Yellow	MAT000010		24 AWG	1750 mm		770520-5			CAN_2_H
C1.6	C2.22	W18.Gray	24AWG		24 AWG	1750 mm		770520-5			D_IN1
C1.7	C2.2	W19.Gray	24AWG		24 AWG	1750 mm		770520-5			D_IN2
C1.8	C2.34	W20.Gray	24AWG		24 AWG	1750 mm		770520-5			D_IN3
C1.9	C2.5	W21.Gray	24AWG		24 AWG	1750 mm		770520-5			D_OUT1
C1.11	C2.24	W22.Gray	24AWG		24 AWG	1750 mm		770520-5			HVIL1
C1.12	C2.6	W15.Black	UL 1569 24 AWG BLACK		24 AWG	1750 mm		770520-5			GND
C1.13	C2.8	W24.Gray	24AWG		24 AWG	1750 mm		770520-5			A_IN1
C1.17	C2.20	W14.Black	UL 1569 24 AWG BLACK		24 AWG	1750 mm		770520-5			GND
C1.18	C2.7	W34.Red	MAT000007		24 AWG	1750 mm		770520-5			5VDC_CAN
C1.20	C2.27	W35.Red	MAT000007		24 AWG	1750 mm		770520-5			5VDC_Supply
C1.22	S2	W1.Green	MAT000011		24 AWG	1650 mm					CAN_1_L
C1.23	C2.3	W4.Green	MAT000011		24 AWG	1750 mm		770520-5			CAN_2_L
C1.28	C2.14	W25.Gray	24AWG		24 AWG	1750 mm		770520-5			D_IN4 (Brake)
C1.30	C2.15	W26.Gray	24AWG		24 AWG	1750 mm		770520-5			D_OUT2
C1.32	C2.25	W23.Gray	24AWG		24 AWG	1750 mm		770520-5			HVIL2
C1.34	C2.9	W27.Gray	24AWG		24 AWG	1750 mm		770520-5			A_IN2
C1.41	C2.28	W36.Red	MAT000007		24 AWG	1750 mm		770520-5			5VDC_Supply
C1.42	C2.23	W17.Red	MAT000007		24 AWG	1750 mm		770520-5			KL30 (VSW)
C1.43	S3	W9.Black	UL 1569 24 AWG BLACK		24 AWG	100 mm					CAN_1_GND
C1.44	S3	W10.Black	UL 1569 24 AWG BLACK		24 AWG	100 mm					CAN_2_GND
C1.50	C2.1	W16.Red	MAT000007		24 AWG	1750 mm		770520-5			KL15 (DIG_9)
C1.51	C2.16	W28.Gray	24AWG		24 AWG	1750 mm		770520-5			D_OUT3
C1.53	C3.7	W39.Gray	UL 1569 22 AWG GRAY	W40	22 AWG	1350 mm		CON000357			M_Temp
C1.54	C3.8	W40.Black	UL 1569 22 AWG Black	W39	22 AWG	1350 mm		CON000357			M_TEMP_RTN
C1.55	C2.19	W29.Gray	24AWG		24 AWG	1750 mm		770520-5			A_IN3 (Motor Temp sim)
C2.17	S4	W12.Black	UL 1569 24 AWG BLACK		24 AWG	100 mm	770520-5				DIG_REF
C2.18	C3.1	W30.Gray	UL 1569 22 AWG GRAY	W31	22 AWG	1100 mm	770520-5	CON000357			EXC_P
C2.21	C3.2	W31.Brown	UL 1569 22 AWG BROWN	W30	22 AWG	1100 mm	770520-5	CON000357			EXC_N
C2.26	S4	W13.Black	UL 1569 24 AWG BLACK		24 AWG	100 mm	770520-5				DIG_REF
C2.29	C3.3	W32.Blue	UL 1569 22 AWG Blue	W33	22 AWG	1100 mm	770520-5	CON000357			SIN_P
C2.30	C3.4	W33.Orange	UL 1569 22 AWG ORANGE	W32	22 AWG	1100 mm	770520-5	CON000357			SIN_N
C2.32	C3.5	W37.White	UL 1569 22 AWG White	W38	22 AWG	1100 mm	770520-5	CON000357			COS_P
C2.33	C3.6	W38.Green	UL 1569 22 AWG Green	W37	22 AWG	1100 mm	770520-5	CON000357			COS_N
S1	C2.12	W6.Yellow	MAT000010		24 AWG	100 mm		770520-5			CAN_1_H
S1	C2.13	W7.Yellow	MAT000010		24 AWG	100 mm		770520-5			CAN_1_T1
S2	C2.10	W3.Green	MAT000011		24 AWG	100 mm		770520-5			CAN_1_T2
S2	C2.11	W2.Green	MAT000011		24 AWG	100 mm		770520-5			CAN_1_L
S3	C2.35	W11.Black	UL 1569 24 AWG BLACK		24 AWG	1650 mm		770520-5			CAN_GND

Title:	----
Part Number:	HRN000124-00-E
Description:	Hi-Dynamic EOL - ATE to UUT and Motor Cable

IRP systems

#	Type	Reference Designator	Manufacturer	Part Number	Color	Gauge	Length	Twisted With
1	Wire	W1	GNRL.	MAT000011	Green	24 AWG	1650 mm	
2	Wire	W2	GNRL.	MAT000011	Green	24 AWG	100 mm	
3	Wire	W3	GNRL.	MAT000011	Green	24 AWG	100 mm	
4	Wire	W4	GNRL.	MAT000011	Green	24 AWG	1750 mm	
5	Wire	W5	GNRL.	MAT000010	Yellow	24 AWG	1650 mm	
6	Wire	W6	GNRL.	MAT000010	Yellow	24 AWG	100 mm	
7	Wire	W7	GNRL.	MAT000010	Yellow	24 AWG	100 mm	
8	Wire	W8	GNRL.	MAT000010	Yellow	24 AWG	1750 mm	
9	Wire	W9	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	100 mm	
10	Wire	W10	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	100 mm	
11	Wire	W11	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	1650 mm	
12	Wire	W12	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	100 mm	
13	Wire	W13	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	100 mm	
14	Wire	W14	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	1750 mm	
15	Wire	W15	GNRL.	UL 1569 24 AWG BLACK	Black	24 AWG	1750 mm	
16	Wire	W16	GNRL.	MAT000007	Red	24 AWG	1750 mm	
17	Wire	W17	GNRL.	MAT000007	Red	24 AWG	1750 mm	
18	Wire	W18		24AWG	Gray	24 AWG	1750 mm	
19	Wire	W19		24AWG	Gray	24 AWG	1750 mm	
20	Wire	W20		24AWG	Gray	24 AWG	1750 mm	
21	Wire	W21		24AWG	Gray	24 AWG	1750 mm	
22	Wire	W22		24AWG	Gray	24 AWG	1750 mm	
23	Wire	W23		24AWG	Gray	24 AWG	1750 mm	
24	Wire	W24		24AWG	Gray	24 AWG	1750 mm	
25	Wire	W25		24AWG	Gray	24 AWG	1750 mm	
26	Wire	W26		24AWG	Gray	24 AWG	1750 mm	
27	Wire	W27		24AWG	Gray	24 AWG	1750 mm	
28	Wire	W28		24AWG	Gray	24 AWG	1750 mm	
29	Wire	W29		24AWG	Gray	24 AWG	1750 mm	
30	Wire	W30	Generic	UL 1569 22 AWG GRAY	Gray	22 AWG	1100 mm	W31
31	Wire	W31		UL 1569 22 AWG BROWN	Brown	22 AWG	1100 mm	W30
32	Wire	W32		UL 1569 22 AWG Blue	Blue	22 AWG	1100 mm	W33
33	Wire	W33		UL 1569 22 AWG ORANGE	Orange	22 AWG	1100 mm	W32
34	Wire	W34	GNRL.	MAT000007	Red	24 AWG	1750 mm	
35	Wire	W35	GNRL.	MAT000007	Red	24 AWG	1750 mm	
36	Wire	W36	GNRL.	MAT000007	Red	24 AWG	1750 mm	
37	Wire	W37		UL 1569 22 AWG White	White	22 AWG	1100 mm	W38
38	Wire	W38		UL 1569 22 AWG Green	Green	22 AWG	1100 mm	W37
39	Wire	W39	Generic	UL 1569 22 AWG GRAY	Gray	22 AWG	1350 mm	W40
40	Wire	W40		UL 1569 22 AWG Black	Black	22 AWG	1350 mm	W39

Title:	----
Part Number:	HRN000124-00-E
Description:	Hi-Dynamic EOL - ATE to UUT and Motor Cable

IRP systems

#	Manufacturer	Part Number	Description	Label Text
1				HRN000124-00
2				MOTOR
3				UUT