

SPECIFICATION NO. EDTS 252, REV-J

SPECIFICATION FOR 'HARNESS OF UNDER FRAME AND ROOF ARRANGEMENT' FOR LHB AC EOG 2-TIER COACHES.

- 1.0** This specification covers manufacturing, assembly and supply of ready made 'CABLE HARNESSES' for UNDERFRAME AND ROOF ARRANGEMENT' FOR LHB AC EOG 2-TIER COACHES. These harnesses shall comprise of thin walled flexible elastomeric cables with copper conductors duly cut to specified lengths and ferruled for cable identification. The free ends of the cables shall be stripped & taped with FRLT cotton insulation tapes of approved makes.
- 1.1** The harness manufacturer shall quote separately for supply & commissioning of the harness as under :
- a). Budgetary quote of the harness without commissioning.
 - b). Budgetary quote of the harness with commissioning in the coach at RCF.
- 1.2** The firm shall maintain date wise in-house quality control system and in-house quality control records etc. for in-stage process inspection & testing at harness manufacturer premises and the same shall be made available to the inspecting official during type testing.

2.0 Scope of supply:

TYPE	Description
TYPE-1	HARNESS OF UNDERFRAME ARRANGEMENT' FOR LHB AC/EOG 2-TIER COACHES
TYPE-2	HARNESS OF ROOF ARRANGEMENT' FOR LHB AC/EOG AC 2-TIER COACHES

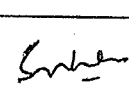
- (i) Procurement of the items specified in the BOM of the specification shall be from RDSO/RCF/ICF approved vendors mentioned in latest version of the vendor directory issued by RCF/ICF/RDSO respectively.
- (ii) Items should be procured from RCF/ICF/RDSO approved sources.

2.1 TYPE-1: HARNESS OF UNDERFRAME ARRANGEMENT' FOR LHB AC/EOG 2-TIER COACHES

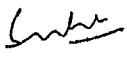
2.1 (a) : BILL OF MATERIAL

Bill of material for Under Frame shall be as per following details:

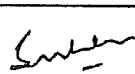
A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-

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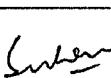
S.NO.	DESCRIPTION	CABLE SIZE mm ²	DETAIL DRG/SPEC	OPC/ COACH	REMARKS/ LOCATION
1.	Thin walled flexible elastomeric cables with copper conductors color 'Red' above 750 V to 1.8/3.0 KV.	150	ELRS/SPEC/ELC/0019 Rev.3.	49 Mt	Feeder cables
2.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' above 750 V to 1.8/3.0 KV.	150	ELRS/SPEC/ELC/0019 Rev.3.	49 Mt	Feeder cables
3.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' above 750 V to 1.8/3.0 KV.	150	ELRS/SPEC/ELC/0019 Rev.3.	49 Mt	Feeder cables
4.	Thin walled flexible elastomeric cables with copper conductors color 'Black' above 750 V to 1.8/3.0 KV.	95	ELRS/SPEC/ELC/0019 Rev.3.	49 Mt	Feeder cables
5.	Thin walled flexible elastomeric cables with copper conductors color 'GNYE' upto 750 V	70	ELRS/SPEC/ELC/0019 Rev.3.	7.1 Mt.	For feeder earthing
6.	Thin walled flexible elastomeric cables with copper conductors color 'Red' above 750 V to 1.8/3.0 KV.	50	ELRS/SPEC/ELC/0019 Rev.3.	13 Mt.	Feeder junction boxes to SBC
7.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' above 750 V to 1.8/3.0 KV.	50	ELRS/SPEC/ELC/0019 Rev.3.	13 Mt.	Feeder junction boxes to SBC

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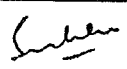
8.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' above 750 V to 1.8/3.0 KV.	50	ELRS/SPEC/ELC/0019 Rev.3.	13 Mt.	Feeder junction boxes to SBC
9.	Thin walled flexible elastomeric cables with copper conductors color 'Black' above 750 V to 1.8/3.0 KV.	50	ELRS/SPEC/ELC/0019 Rev.3.	13 Mt.	Feeder junction boxes to SBC
10.	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	50	ELRS/SPEC/ELC/0019 Rev.3.	15 Mt.	60 KVA TXR output
11.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V.	50	ELRS/SPEC/ELC/0019 Rev.3.	15 Mt.	60 KVA TXR output
12.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V.	50	ELRS/SPEC/ELC/0019 Rev.3.	15 Mt.	60 KVA TXR output
13.	Thin walled flexible elastomeric cables with copper conductors color 'Black' upto 750 V.	50	ELRS/SPEC/ELC/0019 Rev.3.	15 Mt.	60 KVA TXR output
14.	Thin walled flexible elastomeric cables with copper conductors color 'White' upto 750 V	50	ELRS/SPEC/ELC/0019 Rev.3.	2.5 mt.	-Ve fuse box
15.	Thin walled flexible elastomeric cables with copper conductors color 'Chocolate' upto 750 V	50	ELRS/SPEC/ELC/0019 Rev.3.	2.5 mt.	+Ve fuse box

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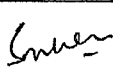
16.	Thin walled flexible elastomeric cables with conductors color 'GNYE' upto 750 V	50	ELRS/SPEC/ELC/0019 Rev.3.	0.5 mt.	Earthing
17.	Thin walled flexible elastomeric cables with conductors color 'Red' above 750 V to 1.8/3.0 KV.	25	ELRS/SPEC/ELC/0019 Rev.3.	13.5 Mt.	60 KVA TXR input
18.	Thin walled flexible elastomeric cables with conductors color 'Yellow' above 750 V to 1.8/3.0 KV.	25	ELRS/SPEC/ELC/0019 Rev.3.	13.5 Mt.	60 KVA TXR input
19.	Thin walled flexible elastomeric cables with conductors color 'Blue' above 750 V to 1.8/3.0 KV.	25	ELRS/SPEC/ELC/0019 Rev.3.	13.5 Mt.	60 KVA TXR input
20.	Thin walled flexible elastomeric cables with conductors color 'Black' above 750 V to 1.8/3.0 KV.	25	ELRS/SPEC/ELC/0019 Rev.3.	13.5 Mt.	60 KVA TXR input
21.	Thin walled flexible elastomeric cables with conductors color 'Red' upto 750 V	25	ELRS/SPEC/ELC/0019 Rev.3.	34 Mt.	Pre-cooling cable
22.	Thin walled flexible elastomeric cables with conductors color 'Yellow' upto 750 V	25	ELRS/SPEC/ELC/0019 Rev.3.	34 Mt.	Pre-cooling cable
23.	Thin walled flexible elastomeric cables with conductors color 'Blue' upto 750 V	25	ELRS/SPEC/ELC/0019 Rev.3.	34 Mt.	Pre-cooling cables

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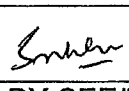
24.	Thin walled flexible elastomeric cables with copper conductors color 'Black' upto 750 V	25	ELRS/SPEC/ELC/0019 Rev.3.	34 Mt.	Pre-cooling cables
25.	Thin walled flexible elastomeric cables with copper conductors color 'White' upto 750 V	25	ELRS/SPEC/ELC/0019 Rev.3.	45 mt.	Under slung RBC
26.	Thin walled flexible elastomeric cables with copper conductors color 'Chocolate' upto 750 V	25	ELRS/SPEC/ELC/0019 Rev.3.	27 mt.	Under slung RBC
27.	Thin walled flexible elastomeric cables with copper conductors color 'GNYE' upto 750 V	16	ELRS/SPEC/ELC/0019 Rev.3.	3.5 mt.	Earthing
28.	Thin walled flexible elastomeric cables with copper conductors color 'White' upto 750 V	10	ELRS/SPEC/ELC/0019 Rev.3.	15 mt.	-ve fuse box
29.	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	6	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	Under slung RBC
30.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V	6	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	Under slung RBC
31.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V	6	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	Under slung RBC

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32.	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	4	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva o/p
33.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V	4	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva o/p
34.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V	4	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva o/p
35.	Thin walled flexible elastomeric cables with copper conductors color 'Black' upto 750 V	4	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva o/p
36.	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	2.5	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva i/p
37.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V	2.5	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva i/p
38.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V	2.5	ELRS/SPEC/ELC/0019 Rev.3.	15 mt	5kva i/p
39.	Thin walled flexible elastomeric cables with copper conductors color 'Chocolate' upto 750 V	2.5	ELRS/SPEC/ELC/0019 Rev.3.	102 mt	Feeder control cables
40.	Thin walled flexible elastomeric cables with copper conductors color 'GNYE' upto 750 V	2.5	ELRS/SPEC/ELC/0019 Rev.3.	2.0 mt	Earthing

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41.	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	1.5	ELRS/SPEC/ELC/0019 Rev.3.	132 mt	CP
42.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V	1.5	ELRS/SPEC/ELC/0019 Rev.3.	132 mt	CP
43.	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V	1.5	ELRS/SPEC/ELC/0019 Rev.3.	132 mt	CP
44.	Thin walled flexible elastomeric cables with copper conductors color 'White' upto 750 V	1.5	ELRS/SPEC/ELC/0019 Rev.3.	47 mt	fuse box -ve
45.	Thin walled flexible elastomeric cables with copper conductors color 'Chocolate' upto 750 V	1.5	ELRS/SPEC/ELC/0019 Rev.3.	63 mt.	Fuse box +ve
46.	4x1.5 sqmm multicore cable E-beam cable 600/1000 V colour Wh,Br,Blk,GNYE	4x1.5	EDTS 132, Rev-' C ' AM-4 (DS-4)	39 mt.	Pump cables
47.	2x1.0 sqmm multicore cables 600/1000 V colour Br,Wh	2x1.0	EDTS 132, Rev-' C ' AM-4 (DS-4)	39 mt.	Pump control cables
48.	Cable marking system i.e Heat shrinkable sleeves.	M/S TYCO /Phoenix/Panduit/ MV make	EDML-60 (Latest revision)	1no.	Col-VI
49.	Copper crimping socket for 70 sq.mm cable.	-	EDTS200 ✓ (Latest revision)	20no.	ITEM-7 ✓
50.	Copper crimping socket for 50 sq.mm cable.	-	EDTS200 (Latest revision)	7no ✓	ITEM-10 ✓

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51.	Copper crimping socket for 50 sq.mm cable.	-	EDTS200 (Latest revision)	5no.	ITEM-I1 ✓
52.	Copper crimping socket for 25 sq.mm cable.	-	EDTS200 (Latest revision)	8 no.	ITEM-I3 ✓
53.	Copper crimping socket for 25 sq.mm cable.	-	EDTS200 (Latest revision)	4 no.	ITEM-I4 ✓
54.	Copper crimping socket for 16 sq.mm cable.	-	EDTS200 (Latest revision)	27 no.	ITEM-I5 ✓
55.	Copper crimping socket for 16 sq.mm cable.	-	EDTS200 (Latest revision)	1 no.	ITEM-I6 ✓
56.	Copper crimping socket for 16 sq.mm cable.	-	EDTS200 (Latest revision)	2no.	ITEM-I7 ✓
57.	Copper crimping socket for 10 sq.mm cable.	-	EDTS201 (Latest revision)	08no.	ITEM-2 ✓
58.	Copper crimping socket for 6 sq.mm cable.	-	EDTS201 (Latest revision)	8no.	ITEM-6 ✓
59.	Copper crimping socket for 6 sq.mm cable.	-	EDTS201 (Latest revision)	10no.	ITEM-5 ✓
60.	Copper crimping socket for 2.5 sq.mm cable.	-	EDTS201 (Latest revision)	8no.	ITEM-10 ✓

B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES (UNDER FRAME)

Firms supplying these items shall get these tested as per RDSO specification no.

RDSO/PE/SPEC/AC/0138-2009,Rev-1.

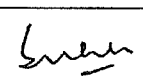
S.NO.	DESCRIPTION	SPEC NO.	TABLE	S.No.	QPC
61.	Polyamide flexible corrugated conduit, NW-12	RDSO/PE/SPEC/AC/0138-2009, Rev.1 (Annexure-A)	A-1	2	5mt ✓
62.	Polyamide flexible corrugated conduit, NW-17		A-1	3	155 mt. ✓
63.	Polyamide flexible corrugated conduit, NW-23		A-1	4	85mt. ✓
64.	Polyamide flexible corrugated conduit, NW-29		A-1	5	57mt. ✓

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65.	Polyamide flexible corrugated conduit, NW-36		A-1	6	40mt.	✓
66.	Polyamide flexible corrugated conduit, NW-48		A-1	7	10mt.	✓
67.	Straight PG metal thread end fitting PG-11	RDSO/PE/SPEC/AC/0138-2009, Rev.1 (Annexure-A)	A-2	2	4 nos.	✓
68.	Straight PG metal thread end fitting PG-16		A-2	3	26no.	✓
69.	Straight PG metal thread end fitting PG-21		A-2	5	20 no.	✓
70.	Straight PG metal thread end fitting PG-29		A-2	6	4 no.	✓
71.	Straight PG metal thread end fitting PG-36		A-2	7	6no.	✓
72.	Straight PG metal thread end fitting PG-48		A-2	8	2no.	✓
73.	Hex. lock nut with PG thread brass PG-11	RDSO/PE/SPEC/AC/0138-2009, Rev.1 (Annexure-A)	A-10	2	4no.	✓
74.	Hex. lock nut with PG thread brass PG-16		A-10	4	26no.	✓
75.	Hex. lock nut with PG thread brass PG-21		A-10	5	20no.	✓
76.	Hex. lock nut with PG thread brass PG-29		A-10	6	4 no.	✓
77.	Hex. lock nut with PG thread brass PG-36		A-10	7	6no.	✓
78.	Hex. lock nut with PG thread brass PG-48		A-10	8	2no.	✓
79.	Tube clamp NW-12	RDSO/PE/SPEC/AC/0138-2009, Rev.1 (Annexure-A)	A-8	2	8 no.	✓
80.	Tube clamp NW-17		A-8	3	48 no.	✓
81.	Tube clamp NW-23		A-8	4	26 no.	✓
82.	Tube clamp NW-29		A-8	6	12 no.	✓
83.	Tube clamp NW-36		A-8	7	19 no.	✓
84.	Tube clamp NW-48		A-8	8	10 no.	✓

2.1(b). Preparation/Bunching of harness:

The preparation / bunching of harness shall be done as per under given details for Under Frame wiring.

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I): FEEDER CABLES**Ia) Feeder -1**

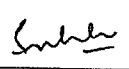
H. No.	Nos. & size of cable	Color code	Length in mm	Ferrules marking	Route	Remarks
1 ✓	3x150mm ² above 750 V to 1.8/3.0 KV.	R,Y,B	24500	12 01 01.02, 12 01 04.02, 12 01 07.02.	10	Feeder-1 From A17X1 to A18X1
	1x95 mm ² above 750 V to 1.8/3.0 KV.	Blk	24500	12 01 10.02	10	XX
1A ✓	2x2.5mm ² upto 750 V	Ch	25500	46 01.01, 46 01.02	14	Control cables (NW-17=24M)

Ib) Feeder -2

H. No.	Nos. & size of cable	Color code	Length in mm	Ferrules marking	Route	Remarks
1B ✓	3x150 mm ² above 750 V to 1.8/3.0 KV.	R,Y,B	24500	12 01 15.02, 12 01 18.02, 12 01 21.02	21	Feeder-2 From A16X1 to A19X1
	1x95 mm ² above 750 V to 1.8/3.0 KV.	Blk	24500	12 01 24.02	21	XX
1C ✓	2x2.5mm ² upto 750 V	Ch	25500	46 01.03, 46 01. 04	25	Control cables (NW-17=24M)

II): FEEDER LOOP CABLES

H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	
2 ✓	4x50 mm ² above 750 V to 1.8/3.0 KV.	R,Y,B, Blk	7000	12 01 01.01, ✓ 12 01 04.01, 12 01 07.01, ✓ 12 01 10.01	13	Loop from Feeder to SBC (NW-48=5.5M)
2A ✓	4x50 mm ² above 750 V to 1.8/3.0 KV.	R,Y,B, Blk	6000	12 01 15.01, ✓ 12 01 18.01, ✓ 12 01 21.01, ✓ 12 01 24.01	23	Loop from Feeders to SBC (NW-48=4M)

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III): PRE-COOLING CABLES

H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	Remarks
3	4x25 mm ² upto 750 V	R,Y,B, Blk	10000	33 01 01.01, ✓ 33 01 02.01, 33 01 03.01, 33 01 04.01 ✓	46	Pre-cooling socket to SBC (NW-36=6M)
3A	4x25 mm ² upto 750 V	R,Y,B, Blk	24000	33 01 06.01, 33 01 07.01, ✓ 33 01 08.01, ✓ 33 01 04.02	45	Pre-cooling socket to SBC (NW-36=21.5M)

IV): 60 KVA TRANSFORMER CABLES

H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	Remarks
4	4x25 mm ² above 750 V to 1.8/3.0 KV.	R,Y,B, Blk	13500	12 01 12.02, ✓ 12 01 13.02, 12 01 14.02, ✓ 12 01 11.02	30	Input cables S1 to S7 (NW-29=10.5M)
4A	4x50 mm ² upto 750 V	R,Y,B, Blk	15000	12 02 06.01, ✓ 12 02 07.01, 12 02 08.01, 12 02 09.01 ✓	31	Out put cables S7 to S1 (NW-36=12M)

V) PUMP CABLES

H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	Remarks
5	4x1.5 mm ² multi-core (DS-4)	W,Br, Blk, GNYE	19500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.02	50	Pump cables/ controller cables (NW-29=15.5M)
	4x1.5 mm ² multi-core (DS-4)	W,Br, Blk, GNYE	19500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.02		
	2x1.0 mm ² multi-core (DS-4)	Br,W	19500	33 08 10.01, 33 08 11.01		
	2x1.0 mm ² multi-core (DS-4)	Br,W	19500	33 08 10.01, 33 08 11.01		

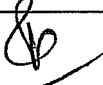
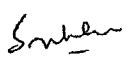
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VI) DC CIRCUIT CABLES

H. No.	Nos. & size of cable	Color code	Length in mm	Ferrules marking	Route	Remarks
6	2x1.5mm² upto 750 V	Ch	2500	32-02-04-02, 32-01-05-02	35	Bat. fuse box +ve to Bat. Box (NW-17=1M)
6A ✓	1x25 mm² upto 750 V	Ch	12000	32 01 10.01	36	Bat. Charger to Bat. fuse box +ve (NW-23=9M)
6B ✓	1x50 mm² upto 750 V	Ch	2500	32 01 09 ✓	38	Bat. fuse box +ve to Bat. Box (NW-23=1M)
6C ✓	4x1.5mm² upto 750 V	Ch	12000	32 02 01.01, 32 02 03.01, 32 01 04.01, 32 01 05.01	37	Bat. fuse box +ve to SBC (NW-23=9M)
6D ✓	1x25 mm² upto 750 V	W	15000	32 01 11.01	40	Bat. Charger to Bat. fuse box -ve
	1x10 mm² upto 750 V	W	15000	32 02 06		Bat. Fuse box -ve to SBC (NW-23=13M)
6E ✓	1x50 mm² upto 750 V	W	2500	32 01 08	39	Bat. fuse box -ve to Bat. Box (NW-29=1M)
6F ✓	2x1.5 mm² upto 750 V	W	16000	32 02 02.01, 32 02 04.01	42	Bat. fuse box -ve to SBC (NW-17=13M)

VII) SPEED SENSOR CABLES (For reference only & not to be supplied by harness manufacturer).

H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	Remarks
7	3x1.0 mm²+Shield multi-core (DS-4)	W,Br, Blk	5000	23 03 10.02, 23 03 11.02, 23 03 12.02	81	SBC to connection box VK4 (NW-17=4M)
7A	3x1.0 mm²+Shield multi-core (DS-4)	W,Br, Blk	9000	23 03 07.02, 23 03 08.02, 23 03 09.02	82	SBC to connection box VK3 (NW-17=6M)
7B	3x1.0 mm²+Shield multi-core (DS-4)	W,Br, Blk	25000	23 03 01.02, 23 03 02.02, 23 03 03.02	76	SBC to connection box VK1
7C	3x1.0 mm²+Shield multi-core (DS-4)	W,Br, Blk	23000	23 03 04.02, 23 03 05.02, 23 03 06.02	75	SBC to connection box VK2 (NW-23=15.5M) Loose supply (NW-17=5.5M) (NW-17=2.5M)

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VIII) DISC BRAKE CABLES (For reference only & not to be supplied by harness manufacturer).

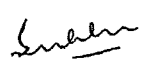
H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	Remarks
8	3x1.0 mm ² +Shield multi-core (DS-4)	W,Br, Blk	20000	23 02 06.01, 23 02 07.01, 23 02 05.06	86	SBC to through box VK5(EVS2/ EVR2). (NW-29=15M) Loose supply (NW-17=2M)
8A	3x1.0 mm ² +Shield multi-core (DS-4)	W,Br, Blk	20000	23 02 01.01, 23 02 02.01, 23 02 05.04		SBC to through box VK5(EVS1/ EVR1).
8B	3x1.0 mm ² +Shield multi-core (DS-4)	W,Br, Blk	10000	23 02 14.01, 23 02 15.01, 23 02 05.10		SBC to through box VK7(EVS4/ EVR4). (NW-23=5M) Loose supply (NW-17=2M)
8C	3x1.0 mm ² +Shield multi-core (DS-4)	W,Br, Blk	10000	23 02 10.01, 23 02 11.01, 23 02 05.08	87	SBC to through box VK7(EVS3/ EVR3).

IX) AIR BRAKE CABLES (Mech)

H. No.	Nos. & size of cable	Color code	Length in mm	Ferrules marking	Route	Remarks
9	2x1.5 mm ² upto 750 V	W,Ch	15000	-	41	Air Brake mech. Unit (NW-17=11M)

X) EARTHING CABLES

H. No.	Nos. & size of cable	Color code	Length in mm	Ferrules marking	Route	Remarks
10	6x70 mm ² upto 750 V	GNYE	500	PE	-	Earthing
	2x70 mm ² upto 750 V	GNYE	1250	PE	-	Earthing
	2x70 mm ² upto 750 V	GNYE	800	PE	-	Earthing
	1x50 mm ² upto 750 V	GNYE	450	PE	-	Earthing
	5x16 mm ² upto 750 V	GNYE	500	PE	-	Earthing

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✓	2x16 mm ² upto 750 V	GNYE	300	PE	-	Earthing
✓	2x16 mm ² upto 750 V	GNYE	200	PE	-	Earthing
✓	4x2.5 mm ² upto 750 V	GNYE	450	PE	-	Earthing

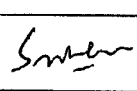
XI): 5 KVA TRANSFORMER CABLES

H. No.	Nos. & size of cable	Colour code	Length in mm	Ferrules marking	Route	Remarks
✓ 11	3x2.5 mm ² upto 750 V	R,Y,B	15000	12 01 12.04, ✓ 12 01 13.04, ✓ 12 01 14.04, ✓	30B	Input cables (NW-17=13M)
✓ 11A	4x4 mm ² upto 750 V	R,Y,B, Blk	15000	12 02 06.03, 12 02 07.03, 12 02 08.03, 12 02 09.03	31B	Output cables (NW-17=13M)

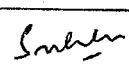
XII): CAPACITOR BANK CABLES

FOR RMPU-1							
H.No.	Cable Size	Color	Ferrule no.	Length	From	To	Remarks
✓ 12	1.5 mm ² upto 750V	R	33 03 01.01	11000	MCB 2.5A, Ter.-2	1 KVAR CP-1	Cond-1.1
	1.5 mm ² upto 750V	Y	33 03 01.02	11000	MCB 2.5A, Ter.-4		
	1.5 mm ² upto 750V	B	33 03 01.03	11000	MCB 2.5A, Ter.-6		
✓ 12A	1.5 mm ² upto 750V	R	33 03 01.04	11000	MCB 2.5A, Ter.-2	1 KVAR CP-2	Cond-1.2
	1.5 mm ² upto 750V	Y	33 03 01.05	11000	MCB 2.5A, Ter.-4		
	1.5 mm ² upto 750V	B	33 03 01.06	11000	MCB 2.5A, Ter.-6		
✓ 12 B	1.5 mm ² upto 750V	R	33 03 01.07	11000	MCB 2.5A, Ter.-2	1 KVAR CP-3	Vent-1.1
	1.5 mm ² upto 750V	Y	33 03 01.08	11000	MCB 2.5A, Ter.-4		
	1.5 mm ² upto 750V	B	33 03 01.09	11000	MCB 2.5A, Ter.-6		
✓ 12 C	1.5 mm ² upto 750V	R	33 03 01.10	11000	MCB 6A, Ter.-2	3KVAR CP-4	Comp-1.1
	1.5 mm ² upto 750V	Y	33 03 01.11	11000	MCB 6A, Ter.-4		
	1.5 mm ² upto 750V	B	33 03 01.12	11000	MCB 6A, Ter.-6		
✓ 12 D	1.5 mm ² upto 750V	R	33 03 01.13	11000	MCB 6A, Ter.-2	3 KVAR CP-5	Comp-1.2
	1.5 mm ² upto 750V	Y	33 03 01.14	11000	MCB 6A, Ter.-4		

(NW-23, L=8M)

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	1.5 mm ² upto 750V	B	33 03 01.15	11000	MCB 6A, Ter.-6			
12 E	1.5 mm ² upto 750V	R	SPARE	11000	MCB 6A, Ter.-2	-	SPARE	
	1.5 mm ² upto 750V	Y	SPARE	11000	MCB 6A, Ter.-4			
	1.5 mm ² upto 750V	B	SPARE	11000	MCB 6A, Ter.-6			
FOR RMPU-2								
H.No.	Cable Size	Color	Ferrule no.	Length	From	To	Remarks	
13	1.5 mm ² upto 750V	R	33 04 02.01	11000	MCB 2.5A, Ter.-2	1 KVAR CP-6	Cond-2.1	(NW-23, L=8M)
	1.5 mm ² upto 750V	Y	33 04 02.02	11000	MCB 2.5A, Ter.-4			
	1.5 mm ² upto 750V	B	33 04 02.03	11000	MCB 2.5A, Ter.-6			
13 A	1.5 mm ² upto 750V	R	33 04 02.04	11000	MCB 2.5A, Ter.-2	1 KVAR CP-7	Cond-2.1	
	1.5 mm ² upto 750V	Y	33 04 02.05	11000	MCB 2.5A, Ter.-4			
	1.5 mm ² upto 750V	B	33 04 02.06	11000	MCB 2.5A, Ter.-6			
13 B	1.5 mm ² upto 750V	R	33 04 02.07	11000	MCB 2.5A, Ter.-2	1 KVAR CP-8	Cond-2.1	
	1.5 mm ² upto 750V	Y	33 04 02.08	11000	MCB 2.5A, Ter.-4			
	1.5 mm ² upto 750V	B	33 04 02.09	11000	MCB 2.5A, Ter.-6			
13 C	1.5 mm ² upto 750V	R	33 04 02.10	11000	MCB 6A, Ter.-2	3 KVAR CP-9	Comp-2.1	
	1.5 mm ² upto 750V	Y	33 04 02.11	11000	MCB 6A, Ter.-4			
	1.5 mm ² upto 750V	B	33 04 02.12	11000	MCB 6A, Ter.-6			
13 D	1.5 mm ² upto 750V	R	33 04 02.13	11000	MCB 6A, Ter.-2	3 KVAR CP-10	Comp-2.2	
	1.5 mm ² upto 750V	Y	33 04 02.14	11000	MCB 6A, Ter.-4			
	1.5 mm ² upto 750V	B	33 04 02.15	11000	MCB 6A, Ter.-6			
13 E	1.5 mm ² upto 750V	R	SPARE	11000	MCB 6A, Ter.-2	-	SPARE	
	1.5 mm ² upto 750V	Y	SPARE	11000	MCB 6A, Ter.-4			
	1.5 mm ² upto 750V	B	SPARE	11000	MCB 6A, Ter.-6			

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XIII): UNDER SLUNG REGULATED BATTERY CHARGER CABLES

H.No.	Cable Size	Color	Ferrule no.	Length	From	To	Remarks
14	25 mm ² upto 750V	W	33 01 12.01	15000	RBC	SBC	RBC TO SBC
	25 mm ² upto 750V	W	33 01 13.01	15000	RBC	SBC	
14A	25 mm ² upto 750V	CH	33 01 14.01	15000	RBC	SBC	RBC TO SBC
14B	6 mm ² upto 750V	R	33 09 01.01	15000	SBC	RBC	SBC TO RBC
	6 mm ² upto 750V	Y	33 10 01.01	15000	SBC	RBC	
	6 mm ² upto 750V	B	33 11 01.01	15000	SBC	RBC	

Notes:

- Harnesses shall be prepared from multi-color cables only as specified for under frame and Roof wiring. Zero halogen, fire retardant heat shrinkable sleeves of M/S Tyco/Phoenix/Panduit make of appropriate color to be used. The standard length of ferrules should only be used.
- Multi-core cables shall be as per specification no. EDTS-132, Rev 'C', AM-4 to respective data sheets.
- The marking ferrules for feeder cables shall not be heat shrunk at the time of supply by the harness manufacturer, however to be suitably provided at 750 mm from both ends of the cables such that these ferrules shall not disengage from the cables during laying in the feeder pipes.. After laying of the harness in the coach these ferrules shall be heat shrunk in place according to shop requirements.

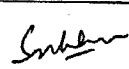
2.2. TYPE-2: BILL OF MATERIAL LHB AC EOG 2-TIER ROOF WIRING:

A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-

S.NO.	DESCRIPTION	CABLE SIZE	DETAIL DRG/SPEC	OPC/ COACH	REMARKS LOCATION
1.	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	638 mt	Inside coach
2.	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	172 mt	Inside coach

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3	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	156 mt	Inside coach
4	Thin walled flexible elastomeric cables with copper conductors color 'Black' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	832 mt	Inside coach
5	Thin walled flexible elastomeric cables with copper conductors color 'GNYE' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	760 mt	Inside coach
6	Thin walled flexible elastomeric cables with copper conductors color 'White' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	500 mt	Inside coach
7	Thin walled flexible elastomeric cables with copper conductors color 'Chocolate' upto 750 V	1.5mm ²	ELRS/SPEC/ELC/0019 Rev.3.	747 mt	Inside coach
9	Thin walled flexible elastomeric cables with copper conductors color 'Red' upto 750 V	4 mm ²	ELRS/SPEC/ELC/0019 Rev.3.	105 mt	Inside coach
10	Thin walled flexible elastomeric cables with copper conductors color 'Yellow' upto 750 V	4 mm ²	ELRS/SPEC/ELC/0019 Rev.3.	105 mt	Inside coach
11	Thin walled flexible elastomeric cables with copper conductors color 'Blue' upto 750 V	4 mm ²	ELRS/SPEC/ELC/0019 Rev.3.	105 mt	Inside coach
12	Thin walled flexible elastomeric cables with copper conductors color 'GNYE' upto 750 V	4 mm ²	ELRS/SPEC/ELC/0019 Rev.3.	35 mt	Inside coach
13	(4x4x1) c+2x0.75(18 cores) multi-core cable 600/1000 V	(4x4x1) c+2x0.75	EDTS 132, Rev-' C ' AM-4 (DS-5)	36 mt	Inside coach

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14	25X1.5 sq.mm multi-core cable 600/1000 V	25x1.5 mm ²	EDTS 132, Rev-' C ' AM-4 (DS-7)	37 mt	Inside coach
15	18X1.5 sq.mm multi-core cable 600/1000 V	18x1.5 mm ²	EDTS 132, Rev-' C ' AM-4 (DS-7)	35 mt	Inside coach
16	2X1.5 sq.mm multi-core cable 600/1000 V	2x1.5 mm ²	EDTS 132, Rev-' C ' AM-4 (DS-4)	250 mt	Inside coach
17	PVC RIGID Conduit Dia 40mm	-	IS:9537-83,P3,CL 5.1	160 Mt	Inside coach ✓
18	PVC RIGID Conduit Dia 20mm	-	IS:9537-83,P3,CL 5.1	62Mt	Inside coach ✓
19	Cable jacket system	-	EDTS138 Corr.1	50 mt	Item-8 ✓
20	Cable jacket system	-	EDTS138 Corr.1	20 mt	Item-11 ✓
21	Cable jacket system	-	EDTS138 Corr.1	75 mt	Item-5 ✓
22	FRLT Cotton insulation tape,Red	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
23	FRLT Cotton insulation tape, Yellow	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
24	FRLT Cotton insulation tape, Blue	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
25	FRLT Cotton insulation tape, black	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
26	FRLT Cotton insulation tape, green	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
27	FRLT Cotton insulation tape, White	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
28	FRLT Cotton insulation chocolate	-	ICF/ELEC/921/ REV-'0'	3 Roll	- ✓
29	Cable Binder 3.6x200	-	CC76129 Itme-2	300 no. ✓	M/S EVEREST,NOVAFLEX, Panduit & M V Electro-systems ✓
30	Cable Binder 4.6x368	-	CC76129 Itme-4	300 no. ✓	M/S EVEREST,NOVAFLEX, Panduit & M V Electro-systems ✓

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31	Cable duct A25(H)X25(W) 1M,STANARD SLOT GREY	-	-	02 meters	M/S L&T/ Phoenix/ Panduit make
32	Cable duct cover A25,STANARD SLOT GREY	-	-	02 meters	M/S L&T/ Phoenix/ Panduit make

B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES (ROOF WIRING)

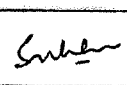
Firms supplying these items shall get these tested as per RDSO specification no.

RDSO/PE/SPEC/AC/0138-2009 ,Rev-1.

S.NO.	DESCRIPTION	SPEC NO.	TABLE	S.No.	QPC
33.	Polyamide flexible corrugated conduit, NW-12	RDSO/PE/SPEC/AC/ 0138-2009, Rev.1 (Annexure-A)	A-1	2	80 mt ✓
34.	Polyamide flexible corrugated conduit, NW-17		A-1	3	110 mt. ✓
35.	Polyamide flexible corrugated conduit, NW-23		A-1	4	40 mt. ✓
36.	Polyamide flexible corrugated conduit, NW-29		A-1	5	20 mt. ✓
37.	Tube clamp NW-12		A-8	2	9 no. ✓
38.	Tube clamp NW-17		A-8	3	22 no. ✓
39.	Tube clamp NW-36		A-8	7	6 no. ✓

Note: i).

- Reference for Wiring on under frame & Roof shall be taken as per clause no. 9.0 & 9.1 respectively.
- Bunching for under frame shall be done as per clause 2.1(b) duly ferruled, legibly marked and laid in polyamide flexible conduits as per requirements in the coaches at shop floor.
- Bunching for Roof shall be done as per annexure-B, duly ferruled, legibly marked and laid in polyamide flexible conduits as per wiring requirements in the coaches at shop floor. Cable protection system shall be supplied as per BOM of clause 2.2.
- Wiring for Roof and under frame shall be done with multi-color scheme only.
- In case of non availability of any specific color cable, grey color cable may be used after having prior approval from office of The CEE/RCF and identification shall be made with colored, zero halogen fire retardant heat shrinkable sleeves of **M/S TYCO/Phoenix/Panduit /MV make.**

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3. i). Packing per coach set shall be done as per packing conditions specified at clause 8.0 of the specification. The packing shall be legibly marked for the type of coach applicable for.
- ii) Jumper harnesses for Roof wiring to be duly laid in PVC conduits and Branch wiring for lighting & BRL to be laid in polyamide flexible conduits as per wiring requirement in the coaches. Under frame wiring shall be laid in flexible conduits, the details of laying the wiring in PVC/Flexible conduits may be collected from office of The CEE/RCF.

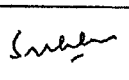
4.0 TECHNICAL REQUIREMENTS:

While manufacturing of cable harnesses essential safety requirements for voltage grade segregation, crimping etc shall be strictly followed as per instructions laid down in under given documents:

- a). General requirements shall be as per RDSO Spec. no. EL/TL/56-92 (Code of practice for Train Lighting maintenance on Prevention of Fires on 110V DC).
 - b). Instructions laid down in Code of practice for wiring End On_ Generation Train Lighting system working at 750VAC, ELPS/ SPEC/EOG-01(MARCH-94) shall be followed.
 - c). Work instructions for preparation of Harness to RCF document no. EDW0003 Ver.-02 or Latest version.
 - d). Work instructions for crimping of cable ends and cable terminations to RCF document no. EDW0006 Ver.-01 or Latest version.
 - e) Schedule of Technical Requirements (**STR) no. RCF/EL/0015-2011 (Rev. 'B')** shall be strictly followed for preparation of ready made harness.
- 4.1 Stripping of the cables at the ends shall be done where crimping sockets are not provided for ease of wiring.
- 4.2 The complete Roof wiring harness shall be made according to the Annexure 'B'

4.3 Technical Staff :

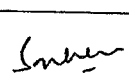
- a). The staff with minimum qualification 'ITI' with **02** years experience or minimum **05** to **06** years experience for non ITI's in manufacturing harness of power-wiring/ control wiring in panels or other similar works having intricate design.
- b). The Supervisor staff for the skilled worker should be minimum graduate in electrical with 02 years experience in the same field or should be diploma holder in electrical discipline with at least five years experience in manufacturing of harness of power wiring control wiring in panels or other similar works. The firm shall deploy supervisors/staff in adequate nos. so as to match the delivery schedules as accepted by them against the contract".

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- c). Firm shall ensure that **technical staff** as stipulated above shall be available in actual working conditions at shop floor. Representative of RCF may check any time the availability of these staff with qualifications. In case of non-compliance, Railway shall be free to **terminate the contract** in case of violation.
- 4.4 Proper cutting / crimping tools for various sizes of cables shall be provided to the staff for ease of crimping & cutting of cables **(to be provided by the contractor)**.
- 4.5 Marking ferrules shall be of computer generated type for easy identification of the cables with the help of shrinking sleeves (self extinguishing) of suitable size horizontally printed cable markers of Tyco/Phoenix/Panduit make only.
- 4.6 Test for thin walled flexible elastomeric cables with copper conductors for its basic properties may be conducted on any sample picked up from the supply. The cost for the testing will be born by the firm. The specific tests to be done are covered in clause 5.10.
- 4.7 The harness manufacturer shall quote separately for commissioning of the harness as under :
- Budgetary quote of the harness without commissioning.
 - Budgetary quote of the harness with commissioning in the coach at RCF.
- 4.8 The firm shall take prompt action or act promptly with in a reasonable time upon a short notice to rectify the defects/deficiency/deficiency noticed/ reported by RCF in the cable harness supplied by the firm. Failure to do the needful up to the satisfaction of the RCF, Firm's contract may be rescinded immediately or terminated without any further notice or may be levied penalty corresponding to the delay caused in the coach turn out for which the decision of the nominated '**Competent Authority**' shall be **Final and Binding on the firm**".
- 4.9 The firm's premises may be inspected by representative of CEE/RCF on any day on a short notice to ensure compliance to the various stipulations of the specifications, laid down standards including work instructions for the cable harness manufacturing practices. If any thing is not laid or specified therein this specification, the work shall be completed as per the best-established Engineering Practices/Procedures being followed in the Industry. "The firm shall extend all the necessary help to allow to visit all the infrastructure facilities, M&P, Tools, Testing facilities, examination of related quality records/documents etc. during his visit"
- 4.10 In case of commissioning work by supplier, firm shall be fully responsible for complete coach wiring & connections i.e. laying of cables in conduits, crimping at equipments, clamping of flexible conduits on roof area & Lavatory area , end wall & side walls etc. and others miscellaneous work (i.e. of Stage-III) to improve the coach wiring quality . Firm shall hand over the coach after testing as per clause 5.10(b) of the specification and complete in all respect.
- 4.11 All the rigid conduits, Flexible Conduits, end fittings shall be in firm scope of supply. However clamps & its hardware's etc. will be in RCF scope of supply, cables, Cable Protection System, crimping sockets, insulation tapes etc. should be purchased from the

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- approved sources of RCF/ICF/RDSO and documentary proof to this effect should be submitted by the firm.
- 4.12 Only those firms shall be considered which have adequate infrastructure to make similar nature wiring/ harness at its manufacturing unit and conforming to STR.
- 4.13 Firm shall fill-up proforma for guaranteed performance as per **Annexure-`A`** and furnish details along with tender. It is perquisite without which offer shall be considered technically disqualified.
- 4.14 The firm will furnish the credentials in their support for having completed similar or identical works of its working in any Central/State government or Central/State Govt. under taking, reputed/established private organization such, as Railways, Defense, L&T, Siemens, etc. The firm to submit requisite proofs like completion certificates, contract details including contract value, Latest Income Tax clearance certificate, balance sheet duly vetted by the CA for the last three years, registration with the government organization, copies of permission from regulatory authorities like environmental & pollution control boards etc. " The firm should have completed successfully at least a similar cable harness work of one third or more value of the tendered cost value against an earlier contract."
- 4.15 The cable & conduit manufacturer shall submit a certificate along with each lot of supply that the same raw material has been used in manufacturing of the present supply as was used on which the type tests were conducted.
- 4.16 Every letter from the firm shall have name and designation of the official signing the letter with the signature.
- 5.0 TESTS:**
- 5.1 Deleted.
- 5.2 Inspecting agency /RITES shall carry out the tests in harness manufacturer's premises as per acceptance and routine tests specified in the tender specification. Check list Proforma consisting of testing details, observations/measurements and acceptability of the measurements should be prepared and testing to be done as per Proforma jointly with the firm's engineer .This should be submitted along with the inspection certificate to RCF.
- 5.3 Cables prescribed in RDSO/RCF specification of cables received by the harness manufacturer shall be inspected by RITES for acceptance and routine tests at cable manufacturer premises and certificate to this effect should be submitted by cable harness manufacturer to RCF.
- 5.4 Cable management system prescribed in RDSO specification RDSO/PE/SPEC/AC/0138-2009 ,Rev-1 shall be inspected by RITES (RA Berlin- in case of imported manufacturer) for acceptance and routine tests and certificate to this effect should be submitted by cable harness manufacturer to RCF.

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5.5 The format for inspection based upon the tests stipulated in specification shall be as per clause no.5.10.

5.6 Firm's internal testing to be done by qualified person as per para 4.3 of this specification and submitted to RCF.

5.7 TYPE TEST:

All the type tests mentioned in Clause 5.10 shall be carried out on a prototype unit. The firm manufacturing for the first time shall get the prototype approved from CEE/RCF.

5.8 ROUTINE TEST:

Routine tests mentioned in clause 5.10(a) shall be carried out on each unit by the manufacturer at his works to ensure compliance with the specification and the drawings.

5.9 ACCEPTANCE TEST:

a) Acceptance tests for cables will be done at cable manufacturer's premises as per RDSO specification no. ELRS/SPEC/ELC/0019 Rev.2.

b) Acceptance tests for conduits etc. for cable management system will be done as per RDSO specification no. RDSO/PE/SPEC/AC/ 0138-2009 ,Rev-1 For supply for Non-RDSO approved sources but RCF approved sources, clause 7.0 is to be followed.

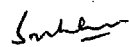
c) Acceptance test mentioned in clause 5.10(a) cable harness manufacturer to be witnessed by inspecting agency nominated by the purchaser at the works of the cable harness manufacturer, on the samples picked up by the inspecting authority. All the acceptance tests shall be carried out at firm's premises at the manufacturer's cost. Inspecting officer will witness the tests.

A copy of the internal tests conducted by the firm shall be supplied to inspecting/purchasing authority. Inspecting agency shall maintain record of all the tests conducted for future reference and will check the authenticity and the originality of the bill of material for each item by seeing the invoices invariably to avoid spurious material being safety involved.

5.10 TABLE FOR TESTS:-

Tests for harnesses at firm's premises:

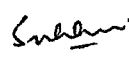
S.No	Tests	Type Test	Routine Test	Acceptance Test
1	Visual inspection, including inspection of wiring and electrical operational test. (Visual inspection for proper assembly, compatibility of sub-components & wiring etc.)	YES	YES	YES
2	Checking of electrical continuity	YES	YES	YES
3	Checking of cable routing & alignment as per requirements	YES	YES	YES
4	Test for verification of dielectric properties. (shall withstand (2.0 KV for 1 minute)	YES	YES	-

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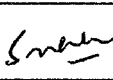
5	Test for verification of insulation resistance. (>100 MΩ with 500 V Megger).	YES	YES	-
6	Compliance to safety related codes of practice as per para 4.0 of this specification.	YES	YES	YES
7	Originality of the bill of the material with proof of the invoices	YES	YES	YES
8	Check of crimping joints a) mV drop Test. b) Pull out Test.	YES	YES	-
9.	Test for thin walled flexible elastomeric cables with copper conductors	YES	YES	YES
10.	Test for rigid PVC conduits to IS:9537 (Part-3)	YES	YES	YES
11.	Test for cable protection system	YES	YES	YES
12.	Test for marking ferrules	YES	YES	YES
13.	Test for copper crimping sockets	YES	YES	YES
14.	Test for FRLT tape	YES	YES	YES
15.	Test for cable alley/ duct	YES	YES	YES

5.10 a): Details of testing:

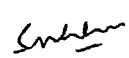
Sr. No.	Details of testing	Remarks of Rites Inspecting official
1	Tests for thin walled flexible elastomeric cables with copper conductors	
	Testing for basic properties of cable picked up from supply (clause 4.8). Minimum one sample shall be tested for each 50 sets (at the manufacturer's cost) to RDSO specification no ELRS/SPEC/ELC/0019 (REV-2).	
a	Test for thickness of insulation and sheath as per clause 7.4.1(b) of RDSO spec (5% of each cable size to be checked.)	
b	High voltage test (water immersion test) as per clause 7.4.1(c) of RDSO spec. (on two cable size of cable used)	

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c	Insulation resistance test as per clause 7.4.1(d) of RDSO spec. (on one cable size different from HV test)	
d	Tracking resistance as per clause 7.4.1(f) of RDSO spec.(on two size not covered in HV test & IR test)	
e	Strippability as per clause 7.4.2 of RDSO spec. (10 samples in prototype testing and five samples in acceptance/routine test of different size 1mm to 6mm)	
f	Wind ability of the finished cable as per clause 7.4.3 of RDSO spec. (One sample 1-6 sq. mm & one sample more than 6 sq. mm)	
g	Slippage test as per clause 7.4.5 of the RDSO spec. (two samples for size less than 25mm dia and two samples for dia more than 25mm)	
2	Acceptance Test for PVC conduit to IS:9537	
a	Checking of dimensions as clause 7 of IS	
b	Bending test (at room temperature) as per clause 9.2 of IS spec	
c	Compression test as per cl. 9.3 of IS spec (5 samples in prototype and 2 samples in acceptance/routine)	
d	Collapse test as per cl. 9.5 of IS spec (one sample)	
e	Resistance to burning as per cl. 11 of IS spec. (2 samples)	
f	Electrical Characteristics as per cl 12 of IS spec	
3	Cable Protection System- Testing as per RDSO Spec. No. RDSO/PE/SPEC/AC/0138	
a	Make	
b	Type / Series used for	
i	Conduit	

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	Checking of dimensions	
	Compression test (two sample of each size)	
	Impact test (one sample of each sizes)	
	Flexing test (2 samples of each type of fitting.)	
	di-electric strength (one sample of each size)	
ii	End fitting – Tensile test (of different five sizes)	
iii	Tube clamps – Dimensional check as per – two sample of each size	
iv	Lock nuts – Dimensional check as per – two sample of each size.	
4	Marking ferrules	
	Computer generated (verification of make/brand)	Tyco / Phoenix / Panduit /MV/____
5	Copper crimping sockets	
	Visual inspection and checking of dimensions as per cl 5.6 of EDTS200 (five sample of each)	
	Crimping test as per cl 5.7 of EDTS200 (Two sample of size less than 6mm ² and two sample of 6mm ²)	
	Flattening test as per cl 5.8 of EDTS200	
6	FRLT tape	
	ISI marked Resistance to flame propagation as per clause 6.0 of IS:7809 for 2 samples	
	Electrical strength as per clause 7.1 of IS:7809 for 5 samples IR value	
7	Cable alley / duct	
	Make/catalogue number used verify make of _____ test certificates.	

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5.10 (b) : Tests after commissioning of the coach at RCF:

S.No	Tests	Type Test	Routine Test	Acceptance Test	Clause of IS:8623(P-I)-93
1	Verification of insulation resistance	YES	YES	YES	8.3.4
2	Checking of electrical continuity of all the circuits.	YES	YES	YES	8.3.3
3.	Verification of die electric properties	YES	YES	YES	8.2.2

The accuracy of measuring instruments used for both type and routine tests shall be of class 1.5.

6 APPROVALS:

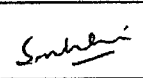
6.1 Before making regular supplies, firm shall take prior clearance from DYCEE/P regarding minor changes in size of cut length of wire under same, overall bill of material. If the minor changes in the length of cables, as advised by DY.CEE/P/RCF result in variation in the overall quantity of bill of material for particular type of coaches then the excess quantity should be supplied separately by the supplier and if quantity falls short then the same shall be supplied by RCF at RCF as per direction of DY.CEE/P. It is essential in order to ensure proper usage of cable harness in other coaches with minor modifications to avoid hold of coaches and to avoid the cable harness being surplus for a particular type of coach.

6.2 Firms manufacturing for the first time, Prototype Inspection shall be done by office of the CEE / RCF.

6.3 Firm shall be fully responsible for commissioning of harness system in prototype coach at RCF to avoid any teething troubles or modification required if any, before commencement of bulk supply and commissioning at RCF. Firm shall supply one coach harness set only for validation on coach and after its trial conducted/ prototype approval, the bulk supply shall be dispatched and commissioned on the coaches at RCF.

7.0 SPECIAL CONDITIONS FOR RCF SPECIFICATION:

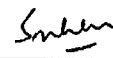
7.1 These conditions shall apply to the conduit system for cable management items like Polyamide conduits and End fittings etc. These conditions would apply to the material which would be supplied from a Non RDSO approved but RCF approved source of conduit management items like polyamide conduits , end fittings etc. The firm will clearly mention the make of conduit system like conduits, end fittings etc. to be supplied.

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- 7.2 The complete data sheet of product number/catalogue number/part number etc. of the approved company make shall be submitted along with the offer which should be confirming to the technical requirements of RDSO specification. The product data sheet not meeting with all the stipulated requirements of the specifications would not be considered acceptable and the complete offer of the tenderer shall be considered unsuitable. Acceptance tests shall be carried as per para 5.9.
- 7.3 The order shall be placed on the firm supplying conduit system for cable management system by cable harness manufacturers specifying specification, product/part/catalogue number etc. as approved in 7.2 above.
- 7.4 The documentation shall be submitted regarding supply/ receipt of material after import mentioning the product number/part number/catalogue number etc. on the bill/purchase invoices/purchase voucher etc.

8.0 PACKING AND TRACEABILITY:

- i). Packing of harnesses shall be done as per Packing Instructions PI005 to RCF document no. PLM0010E version-8.0. Harnesses shall be bunched together and shall be supplied as single unit per coach. Each harness shall be duly bunched individually and legibly marked as per details specified in the specification on it for under frame and Roof arrangement.
- ii). Packing per coach set shall be done as per packing conditions. However either card board packing in single unit or plastic containers (returnable basis) shall be used for supplying the material. The packing shall be legibly marked for the type of coach applicable for.
- iii). All the loose wiring for lavatory area & other locations shall be segregated and bunched separately before packing.
- iv). Performa invoice of all the major items like cable, crimping sockets etc. shall be supplied along with each supply of material.
- v). Every unit of supply item shall be numbered / marked for identification, traceability and analysis. The following details shall be imprinted on the number plate of each unit
- Serial Number
 - Year and month of manufacture
 - Name of the item

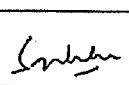
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9.0 ENCLOSURES:

S.No	Drawing/Spec. no.	Description
1	RDSO Spec. no. EL/TL/56-92	Code of practice for Train Lighting maintenance on Prevention of Fires on 110V D.C
2	RDSO Spec. no. EL/TL/001	Code of practice for End On Generation for Train Lighting system working at 750VAC
3	RCF/EL/0015-2011 (Rev. 'A')	Schedule of technical requirements (STR) for ready made harness.
4	EDW0003 Ver. – 02.	Work instructions for preparation of Harness
5	EDW0006 Ver. – 01	Work instructions for crimping of cable ends and cable terminations
6	Annexure-A	Performa for Performance Guaranty
7	Annexure-B	Harness details for Roof Wiring. (TYPE-II)
8	Annexure-C	Break up of end fittings for reference at shop floor

9.1. ENCLOSURES for TYPE-1 (For Underframe arrangement)

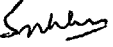
Sno.	Drawing no.	Description
1.	1.10113.026.000.002	Devices on Underframe
2	1.10113.076.110.001	Cable pipe laying mounting (NPPE)
3	1.10113.076.110.002	Cable pipe laying mounting (NPPE-Middle)
4	1.10113.076.110.003	Cable pipe laying mounting (WE2-Middle)
6	LW70211	Block diagram & Harness chart for under frame (for LHB AC EOG 2-Tier type coach)

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ANNEXURE 'A' TO SPEC. NO. EDTS 252, REV-J

PERFORMA FOR PERFORMANCE GURANTEE

S.NO.	ITEMS DESCRIPTION	COMPLIANCE (YES/NO)
1.	Compliance of STR (if Yes, enclose clause by clause comments)	
2.	Compliance of qualified technical staff (if Yes, enclose the details)	
3.	Compliance of adequate space and condition for manufacturing, assembly (if yes, enclose the details)	
4.	Compliance of in-house testing facilities (if Yes, enclose the details)	
5.	Compliance of other details to improve the quality (if Yes, enclose the details)	

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Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
JUMPER WIRING FOR LIGHTING/ALARM PULL(SBC TO CABIN-1)									
1	1.5 SQ.MM	R	FLD 52 01 01	6000	+S1X1	112	B1X1	1	FLD-1
	1.5 SQ.MM	BLK	FLD 52 01 02	6000	+S1X1	113	B1X1	2	
	1.5 SQ.MM	CH	AL 32 04 05	6000	+S1X1	95	B1X1	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	6000	+S1X1	99	B1X1	4	
	1.5 SQ.MM	B	FLE 52 01 04	6000	+S1X1	114	B1X1	5	FLE-1
	1.5 SQ.MM	BLK	FLE 52 01 05	6000	+S1X1	115	B1X1	6	
	1.5 SQ.MM	CH	NL 52 03 03	6000	+S1X1	116	B6X1	7	NL-1
	1.5 SQ.MM	W	NL 52 03 04	6000	+S1X1	117	B1X1	8	
	1.5 SQ.MM	GNYE	52 01 03	6000	+S1X1	110	B1X1	9,10	LIGHTING EARTH
1.5 SQ.MM	BLK	43 01 03	6000	+S1X1	PE	B1X1	11	ALARM EARTH	
TO 5TH CABIN									
1A	1.5 SQ.MM	R	52 01 06	14000	+S1X1	112	B1X6	1	TO 5TH CABIN
	1.5 SQ.MM	BLK	52 01 07	14000	+S1X1	113	B1X6	2	
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-1 TO CABIN-2)									
2	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X1	112	B1X2	1	FLD-2
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X1	113	B1X2	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X1	95	B1X2	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X1	99	B1X2	4	
	1.5 SQ.MM	B	FLS 52 01 04	2300	B1X1	114	B1X2	5	FLS-1
	1.5 SQ.MM	BLK	FLS 52 01 05	2300	B1X1	115	B1X2	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B6X1	116	B1X2	7	NL-2
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X1	117	B1X2	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X1	110	B1X2	9,10	LIGHTING EARTH
1.5 SQ.MM	BLK	43 01 03	2300	B1X1	PE	B1X2	11	ALARM EARTH	
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-2 TO CABIN-3)									
3	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X2	112	B1X3	1	FLD-3
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X2	113	B1X3	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X2	95	B1X3	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X2	99	B1X3	4	
	1.5 SQ.MM	B	FLE 52 01 04	2300	B1X2	114	B1X3	5	FLE-2
	1.5 SQ.MM	BLK	FLE 52 01 05	2300	B1X2	115	B1X3	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X2	116	B1X3	7	NL-3
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X2	117	B1X3	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X2	110	B1X3	9,10	LIGHTING EARTH
1.5 SQ.MM	BLK	43 01 03	2300	B1X2	PE	B1X3	11	ALARM EARTH	
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-3 TO CABIN-4)									
4	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X3	112	B1X4	1	FLD-4
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X3	113	B1X4	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X3	95	B1X4	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X3	99	B1X4	4	
	1.5 SQ.MM	B	FLS 52 01 04	2300	B1X3	114	B1X4	5	FLS-2
	1.5 SQ.MM	BLK	FLS 52 01 05	2300	B1X3	115	B1X4	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X3	116	B1X4	7	NL-4
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X3	117	B1X4	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X3	110	B1X4	9,10	LIGHTING EARTH
1.5 SQ.MM	BLK	43 01 03	2300	B1X3	PE	B1X4	11	ALARM EARTH	
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-4 TO CABIN-5)									
	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X4	112	B1X5	1	FLD-5
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X4	113	B1X5	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X4	95	B1X5	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X4	99	B1X5	4	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
5	1.5 SQ.MM	B	FLE 52 01 04	2300	B1X4	114	B1X5	5	FLE-3
	1.5 SQ.MM	BLK	FLE 52 01 05	2300	B1X4	115	B1X5	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X4	116	B1X5	7	NL-5
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X4	117	B1X5	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X4	110	B1X5	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2300	B1X4	PE	B1X5	11	ALARM EARTH
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-5 TO CABIN-6)									
6	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X5	112	B1X6	1	FLD-6
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X5	113	B1X6	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X5	95	B1X6	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X5	99	B1X6	4	
	1.5 SQ.MM	B	FLS 52 01 04	2300	B1X5	114	B1X6	5	FLS-3
	1.5 SQ.MM	BLK	FLS 52 01 05	2300	B1X5	115	B1X6	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X5	116	B1X6	7	NL-6
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X5	117	B1X6	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X5	110	B1X6	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2300	B1X5	PE	B1X6	11	ALARM EARTH
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-6 TO CABIN-7)									
7	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X6	112	B1X7	1	FLD-7
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X6	113	B1X7	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X6	95	B1X7	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X6	99	B1X7	4	
	1.5 SQ.MM	B	FLE 52 01 04	2300	B1X6	114	B1X7	5	FLE-4
	1.5 SQ.MM	BLK	FLE 52 01 05	2300	B1X6	115	B1X7	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X6	116	B1X7	7	NL-7
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X6	117	B1X7	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X6	110	B1X7	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2300	B1X6	PE	B1X7	11	ALARM EARTH
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-7 TO CABIN-8)									
8	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X7	112	B1X8	1	FLD-8
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X7	113	B1X8	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X7	95	B1X8	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X7	99	B1X8	4	
	1.5 SQ.MM	B	FLS 52 01 04	2300	B1X7	114	B1X8	5	FLS-4
	1.5 SQ.MM	BLK	FLS 52 01 05	2300	B1X7	115	B1X8	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X7	116	B1X8	7	NL-8
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X7	117	B1X8	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X7	110	B1X8	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2300	B1X7	PE	B1X8	11	ALARM EARTH
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-8 TO CABIN-9)									
9	1.5 SQ.MM	R	FLD 52 01 01	2300	B1X8	112	B1X9	1	FLD-9
	1.5 SQ.MM	BLK	FLD 52 01 02	2300	B1X8	113	B1X9	2	
	1.5 SQ.MM	CH	AL 32 04 05	2300	B1X8	95	B1X9	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2300	B1X8	99	B1X9	4	
	1.5 SQ.MM	B	FLE 52 01 04	2300	B1X8	114	B1X9	5	FLE-5
	1.5 SQ.MM	BLK	FLE 52 01 05	2300	B1X8	115	B1X9	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	B1X8	116	B1X9	7	NL-9
	1.5 SQ.MM	W	NL 52 03 04	2300	B1X8	117	B1X9	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	B1X8	110	B1X9	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2300	B1X8	PE	B1X9	11	ALARM EARTH

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
9A	1.5 SQ.MM	B	FLE 52 01 04	2300	+S1X1	114	B1X1	5	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	2300	+S1X1	115	B1X1	6	
	1.5 SQ.MM	CH	NL 52 03 03	2300	+S1X1	116	B6X1	7	NL
	1.5 SQ.MM	W	NL 52 03 04	2300	+S1X1	117	B1X1	8	
	1.5 SQ.MM	GNYE	52 01 03	2300	+S1X1	110	B1X1	9,10	LIGHTING EARTH
WAGO TERMINALS TO SWITCH POINTS(CABIN-1)									
10	1.5 SQ.MM	R	SW 52 01 01	1000	B1X1	1	52S1	1	FLD-1
	1.5 SQ.MM	B	SW 52 01 04	1000	B1X1	3	52S2	1	FLE-1
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X1	5	72A1	1	NL-1
WAGO TERMINALS TO SWITCH POINTS(CABIN-2)									
11	1.5 SQ.MM	R	SW 52 01 01	1000	B1X2	1	52S1	1	FLD-2
	1.5 SQ.MM	R	SW 52 01 01	1000	B1X2	3	52S2	1	FLS-1
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X2	5	72A1	1	NL-2
WAGO TERMINALS TO SWITCH POINTS(CABIN-3)									
12	1.5 SQ.MM	R	SW 52 01 01	1000	B1X3	1	52S1	1	FLD-3
	1.5 SQ.MM	B	SW 52 01 04	1000	B1X3	3	52S2	1	FLE-2
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X3	5	72A1	1	NL-3
WAGO TERMINALS TO SWITCH POINTS(CABIN-4)									
13	1.5 SQ.MM	R	SW 52 01 01	1000	B1X4	1	52S1	1	FLD-4
	1.5 SQ.MM	R	SW 52 01 01	1000	B1X4	3	52S2	1	FLS-2
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X4	5	72A1	1	NL-4
WAGO TERMINALS TO SWITCH POINTS(CABIN-5)									
14	1.5 SQ.MM	R	SW 52 01 01	1000	B1X5	1	52S1	1	FLD-5
	1.5 SQ.MM	B	SW 52 01 04	1000	B1X5	3	52S2	1	FLE-3
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X5	5	72A1	1	NL-5
WAGO TERMINALS TO SWITCH POINTS(CABIN-6)									
15	1.5 SQ.MM	R	SW 52 01 01	1000	B1X6	1	52S1	1	FLD-6
	1.5 SQ.MM	R	SW 52 01 01	1000	B1X6	3	52S2	1	FLS-3
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X6	5	72A1	1	NL-6
WAGO TERMINALS TO SWITCH POINTS(CABIN-7)									
16	1.5 SQ.MM	R	SW 52 01 01	1000	B1X7	1	52S1	1	FLD-7
	1.5 SQ.MM	B	SW 52 01 04	1000	B1X7	3	52S2	1	FLE-4
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X7	5	72A1	1	NL-7
WAGO TERMINALS TO SWITCH POINTS(CABIN-8)									
17	1.5 SQ.MM	R	SW 52 01 01	1000	B1X8	1	52S1	1	FLD-8
	1.5 SQ.MM	R	SW 52 01 01	1000	B1X8	3	52S2	1	FLS-4
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X8	5	72A1	1	NL-8
WAGO TERMINALS TO SWITCH POINTS(CABIN-9)									
18	1.5 SQ.MM	R	SW 52 01 01	1000	B1X9	1	52S1	1	FLD-9
	1.5 SQ.MM	B	SW 52 01 04	1000	B1X9	3	52S2	1	FLE-5
	1.5 SQ.MM	CH	SW 52 03 03	1000	B1X9	5	72A1	1	NL-9
BRANCH WIRING									
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-1)									
19	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
19A	1.5 SQ.MM	B	FLE 52 01 04	5500	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
19B	1.5 SQ.MM	CH	AL32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-2)									
20	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
20A	1.5 SQ.MM	R	FLS 52 01 01	5500	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
20B	1.5 SQ.MM	CH	AL32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-3)									
21	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
21A	1.5 SQ.MM	B	FLE 52 01 04	5500	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
21B	1.5 SQ.MM	CH	AL32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-4)									
22	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
22A	1.5 SQ.MM	R	FLS 52 01 01	5500	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
22B	1.5 SQ.MM	CH	AL32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-5)									
23	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
23A	1.5 SQ.MM	B	FLE 52 01 04	5500	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
23B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-6)									
24	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
24A	1.5 SQ.MM	R	FLS 52 01 01	5500	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
24B	1.5 SQ.MM	CH	AL32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-7)									
25	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
25A	1.5 SQ.MM	B	FLE 52 01 04	5500	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
25B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-8)									
26	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
26A	1.5 SQ.MM	R	FLS 52 01 01	5500	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
26B	1.5 SQ.MM	CH	AL32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES(CABIN-9)									
27	1.5 SQ.MM	R	FLD 52 01 01	3500	52S1	2	B7E1	1	FLD
	1.5 SQ.MM	BLK	FLD 52 01 02	3000	B1X1	2	B7E1	2	
	1.5 SQ.MM	GNYE	FLD 52 01 03	3000	B1X1	11	B7E1	PE	
27A	1.5 SQ.MM	B	FLE 52 01 04	5500	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	5000	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	5000	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5500	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	5000	B1X1	6	B9E1	2	
27B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X1	7	43S3	1	LS
	1.5 SQ.MM	W	AL43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL43 01 03	1000	B1X1	13	43S3	PE	
JUMPER WIRING FOR MOBILE /LAP TOP CHARGING SOCKET (SBC TO CABIN-1)									
28	1.5 SQ.MM	B	CS 52 01 01	6000	+S1X1	555	B1X1	12	CS-1 (P)
	1.5 SQ.MM	Y	CS 52 01 02	6000	+S1X1	555	B1X1	13	CS-2 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	6000	+S1X1	555	B1X1	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	6000	+S1X1	111	B1X1	15	E
JUMPER (CABIN-1 TO CABIN-2)									
28A	1.5 SQ.MM	B	CS 52 01 01	2300	B1X1	12	B1X2	12	CS-3 &4 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X1	13	B1X2	13	CS-5&6 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X1	14	B1X2	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X1	15	B1X2	15	E
JUMPER (CABIN-2 TO CABIN-3)									
28B	1.5 SQ.MM	B	CS 52 01 01	2300	B1X2	12	B1X3	12	CS-7&8 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X2	13	B1X3	13	CS-9&10 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X2	14	B1X3	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X2	15	B1X3	15	E
JUMPER (CABIN-3 TO CABIN-4)									
28C	1.5 SQ.MM	B	CS 52 01 01	2300	B1X3	12	B1X4	12	CS-11&12 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X3	13	B1X4	13	CS-13&14 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X3	14	B1X4	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X3	15	B1X4	15	E
JUMPER (CABIN-4 TO CABIN-5)									
28D	1.5 SQ.MM	B	CS 52 01 01	2300	B1X4	12	B1X5	12	CS-15&16 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X4	13	B1X5	13	CS-17&18 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X4	14	B1X5	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X4	15	B1X5	15	E
JUMPER (CABIN-5 TO CABIN-6)									
28E	1.5 SQ.MM	B	CS 52 01 01	2300	B1X5	12	B1X6	12	CS-19&20 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X5	13	B1X6	13	CS-21&22 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X5	14	B1X6	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X5	15	B1X6	15	E

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
JUMPER (CABIN-6 TO CABIN-7)									
28F	1.5 SQ.MM	B	CS 52 01 01	2300	B1X6	12	B1X7	12	CS-23&24 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X6	13	B1X7	13	CS-25&26 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X6	14	B1X7	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X6	15	B1X7	15	E
JUMPER (CABIN-7 TO CABIN-8)									
28G	1.5 SQ.MM	B	CS 52 01 01	2300	B1X7	12	B1X8	12	CS-27&28 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X7	13	B1X8	13	CS-29&30 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X7	14	B1X8	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X7	15	B1X8	15	E
JUMPER (CABIN-8 TO CABIN-9)									
28H	1.5 SQ.MM	B	CS 52 01 01	2300	B1X8	12	B1X9	12	CS-31&32 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2300	B1X8	13	B1X9	13	CS-33&34 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X8	14	B1X9	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X8	15	B1X9	15	E
JUMPER WIRING FOR MOBILE /LAP TOP CHARGING SOCKET (SBC TO CABIN-1) Longitudinal									
Berths (CORRIDOR-SIDE)									
29	1.5 SQ.MM	R	CS 52 01 03	9000	+S1X1	555	B1X10	1	CS-35&36 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	9000	+S1X1	555	B1X10	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	9000	+S1X1	111	B1X10	3	E
JUMPER (CABIN-1 TO CABIN-2)									
29A	1.5 SQ.MM	R	CS 52 01 03	2300	B1X10	1	B1X11	1	CS-37&38 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X10	2	B1X11	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X10	3	B1X11	3	E
JUMPER (CABIN-2 TO CABIN-3)									
29B	1.5 SQ.MM	R	CS 52 01 03	2300	B1X11	1	B1X12	1	CS-39&40 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X11	2	B1X12	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X11	3	B1X12	3	E
JUMPER (CABIN-3 TO CABIN-4)									
29C	1.5 SQ.MM	R	CS 52 01 03	2300	B1X12	1	B1X13	1	CS-41&42 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X12	2	B1X13	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X12	3	B1X13	3	E
JUMPER (CABIN-4 TO CABIN-5)									
29D	1.5 SQ.MM	R	CS 52 01 03	2300	B1X13	1	B1X14	1	CS-43&44 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X13	2	B1X14	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X13	3	B1X14	3	E
JUMPER (CABIN-5 TO CABIN-6)									
29E	1.5 SQ.MM	R	CS 52 01 03	2300	B1X14	1	B1X15	1	CS-45&46 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X14	2	B1X15	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X14	3	B1X15	3	E
JUMPER (CABIN-6 TO CABIN-7)									
29F	1.5 SQ.MM	R	CS 52 01 03	2300	B1X15	1	B1X16	1	CS-47&48 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X15	2	B1X16	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X15	3	B1X16	3	E
JUMPER (CABIN-7 TO CABIN-8)									
29G	1.5 SQ.MM	R	CS 52 01 03	2300	B1X16	1	B1X17	1	CS-49&50 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X16	2	B1X17	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X16	3	B1X17	3	E

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
JUMPER (CABIN-8 TO CABIN-9)									
29H	1.5 SQ.MM	R	CS 52 01 03	2300	B1X17	1	B1X18	1	CS-51&52 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2300	B1X17	2	B1X18	2	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2300	B1X17	3	B1X18	3	E
BRANCH WIRING (WAGO TERMINAL TO CHARGING SOCKETS) CABIN SIDE									
30	1.5 SQ.MM	B	CS 52 01 01	1000	B1X1	12	CS-1	P	CS-1
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X1	14	CS-1	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X1	15	CS-1	E	E
30 A	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X1	13	CS-2	P	CS-2
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X1	14	CS-2	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X1	15	CS-2	E	E
30 B	1.5 SQ.MM	B	CS 52 01 01	1000	B1X2	12	CS-3	P	CS-3
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X2	14	CS-3	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X2	15	CS-3	E	E
To be cut & looped at CS-4									
30 C	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X2	13	CS-4	P	CS-5
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X2	14	CS-4	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X2	15	CS-4	E	E
To be cut & looped at CS-6									
30 D	1.5 SQ.MM	B	CS 52 01 01	1000	B1X3	12	CS-5	P	CS-7
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X3	14	CS-5	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X3	15	CS-5	E	E
To be cut & looped at CS-8									
30 E	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X3	13	CS-6	P	CS-9
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X3	14	CS-6	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X3	15	CS-6	E	E
To be cut & looped at CS-10									
30 F	1.5 SQ.MM	B	CS 52 01 01	1000	B1X4	12	CS-7	P	CS-11
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X4	14	CS-7	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X4	15	CS-7	E	E
To be cut & looped at CS-12									
30 G	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X4	13	CS-8	P	CS-13
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X4	14	CS-8	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X4	15	CS-8	E	E
To be cut & looped at CS-14									
30 H	1.5 SQ.MM	B	CS 52 01 01	1000	B1X5	12	CS-9	P	CS-15
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X5	14	CS-9	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X5	15	CS-9	E	E
To be cut & looped at CS-16									
30 I	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X5	13	CS-10	P	CS-17
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X5	14	CS-10	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X5	15	CS-10	E	E
To be cut & looped at CS-18									
30 J	1.5 SQ.MM	B	CS 52 01 01	1000	B1X6	12	CS-11	P	CS-19
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X6	14	CS-11	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X6	15	CS-11	E	E
To be cut & looped at CS-20									
30 K	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X6	13	CS-12	P	CS-21
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X6	14	CS-12	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X6	15	CS-12	E	E
To be cut & looped at CS-22									

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
30 L	1.5 SQ.MM	B	CS 52 01 01	1000	B1X7	12	CS-13	P	CS-23
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X7	14	CS-13	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X7	15	CS-13	E	E
	To be cut & looped at CS-24								
30 M	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X7	13	CS-14	P	CS-25
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X7	14	CS-14	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X7	15	CS-14	E	E
	To be cut & looped at CS-26								
30 N	1.5 SQ.MM	B	CS 52 01 01	1000	B1X8	12	CS-15	P	CS-27
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X8	14	CS-15	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X8	15	CS-15	E	E
	To be cut & looped at CS-28								
30 O	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X8	13	CS-16	P	CS-29
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X8	14	CS-16	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X8	15	CS-16	E	E
	To be cut & looped at CS-30								
30 P	1.5 SQ.MM	B	CS 52 01 01	1000	B1X9	12	CS-17	P	CS-31
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X9	14	CS-17	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X9	15	CS-17	E	E
	To be cut & looped at CS-32								
30 Q	1.5 SQ.MM	Y	CS 52 01 02	1000	B1X9	13	CS-18	P	CS-33
	1.5 SQ.MM	BLK	CS 52 01 04	1000	B1X9	14	CS-18	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	1000	B1X9	15	CS-18	E	E
	To be cut & looped at CS-34								
BRANCH WIRING (WAGO TERMINAL TRAY TO CHARGING SOCKETS) Corridor SIDE									
30 R	1.5 SQ.MM	R	CS 52 01 03	3600	B1X10	1	CS-19	P	CS-35
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X10	2	CS-19	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X10	3	CS-19	E	E
	To be cut & looped at CS-36								
30 S	1.5 SQ.MM	R	CS 52 01 03	3600	B1X11	1	CS-20	P	CS-37
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X11	2	CS-20	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X11	3	CS-20	E	E
	To be cut & looped at CS-38								
30 T	1.5 SQ.MM	R	CS 52 01 03	3600	B1X12	1	CS-21	P	CS-39
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X12	2	CS-21	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X12	3	CS-21	E	E
	To be cut & looped at CS-40								
30 U	1.5 SQ.MM	R	CS 52 01 03	3600	B1X13	1	CS-22	P	CS-41
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X13	2	CS-22	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X13	3	CS-22	E	E
	To be cut & looped at CS-42								
30 V	1.5 SQ.MM	R	CS 52 01 03	3600	B1X14	1	CS-23	P	CS-43
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X14	2	CS-23	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X14	3	CS-23	E	E
	To be cut & looped at CS-44								

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
30 W	1.5 SQ.MM	R	CS 52 01 03	3600	B1X15	1	CS-24	P	CS-45
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X15	2	CS-24	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X15	3	CS-24	E	E
To be cut & looped at CS-46									
30 X	1.5 SQ.MM	R	CS 52 01 03	3600	B1X16	1	CS-25	P	CS-47
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X16	2	CS-25	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X16	3	CS-25	E	E
To be cut & looped at CS-48									
30 Y	1.5 SQ.MM	R	CS 52 01 03	3600	B1X17	1	CS-26	P	CS-49
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X17	2	CS-26	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X17	3	CS-26	E	E
To be cut & looped at CS-50									
30 Z	1.5 SQ.MM	R	CS 52 01 03	3600	B1X18	1	CS-27	P	CS-51
	1.5 SQ.MM	BLK	CS 52 01 04	3600	B1X18	2	CS-27	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	3600	B1X18	3	CS-27	E	E
To be cut & looped at CS-52									
AC PACKAGE UNIT-1									
31 2105-E	6(2X1.5) SQ.MM DS-4	Br	61 01 12.01	25500-	+S1X1	132	+U1X4	1	FRESH AIR TEMP.SENSOR-1
		W	61 01 13.01		+S1X1	133	+U1X4	2	
		Br	61 01 14.01		+S1X1	134	+U1X4	3	FRESH AIR TEMP.SENSOR-1
		W	61 01 17.01		+S1X1	135	+U1X4	4	
		Br	61 03 01.01		+S1X1	213	+U1X4	5	LP INDICATION
		W	61 03 02.01		+S1X1	214	+U1X4	7	
		Br	61 03 05.01		+S1X1	217	+U1X4	9	HP INDICATION
		W	61 03 06.01		+S1X1	218	+U1X4	11	
Ferrules to be provided by harness manufacturer									
31A 2110-D	25X1.5 SQ.MM	Black outer sheath white numbered cores	61 02 01.05	25500	+S1X1	212	+U1X3	1	+24 V FOR HP/LP SENSOR
			61 06 03.02		+S1X1	178	+U1X3	17	LP MEASUREMENT
			61 01 02.19		+S1X1	179	+U1X3	6	
			61 02 02.02		+S1X1	150	+U1X3	4	FLAPPER MOTOR
			61 02 03.01		+S1X1	151	+U1X3	3	
			61 02 04.02		+S1X1	152	+U1X3	2	-VE 24V
			61 04 03.03		+S1X1	163	+U1X3	15	EVAPORATOR MOTOR THERMAL SWITCH
			61 04 04.01		+S1X1	164	+U1X3	16	
			61 04 07.01		+S1X1	156	+U1X3	7	TEMP. & PR. SWITCH
			61 04 09.01		+S1X1	157	+U1X3	8	
			61 04 10.01		+S1X1	158	+U1X3	9	
			61 04 12.01		+S1X1	159	+U1X3	10	
			61 04 14.01		+S1X1	160	+U1X3	11	
			61 04 15.01		+S1X1	161	+U1X3	14	
			61 01 01.12		+S1X1	162	+U1X3	5	+VE24 V FOR THERMAL SW
			61 06 04.01		+S1X1	181	+U1X3	18	HP CUT OUT
			61 06 05.02		+S1X1	180	+U1X3	20	
			61 06 06.02		+S1X1	182	+U1X3	12	LP CUT OUT
			61 06 07.01		+S1X1	184	+U1X3	19	
			61 06 08.02		+S1X1	183	+U1X3	21	
			61 06 09.02		+S1X1	185	+U1X3	13	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS			
					LOCATION	TER. NO.	LOCATION	TER.NO.				
31B ✓	18X1.5 SQ.MM	Black outer sheath white numbered cores	33 03 02.02	27000	+S1X1	231	+U1X1	1	EVAPORATOR MOTOR			
			33 03 04.02		+S1X1	232	+U1X1	2				
			33 03 06.02		+S1X1	233	+U1X1	3				
			33 03 07		+S1X1	234	+U1X1	PE				
			33 04 08.02		+S1X1	250	+U1X1	10	CRANK CASE HEATER			
			33 04 16.02		+S1X1	252	+U1X1	11				
			33 04 09.01		+S1X1	251	+U1X1	12				
			33 04 18.02		+S1X1	253	+U1X1	4	COND FAN MOTOR-1			
			33 04 20.02		+S1X1	254	+U1X1	5				
			33 04 22.02		+S1X1	255	+U1X1	6				
			33 04 24.02		+S1X1	256	+U1X1	7	COND FAN MOTOR-2			
			33 04 26.02		+S1X1	257	+U1X1	8				
			33 04 28.02		+S1X1	258	+U1X1	9				
			RES-1		+S1X1		+U1X1		SPARE			
			RES-2		+S1X1		+U1X1					
			RES-3		+S1X1		+U1X1					
			RES-4		+S1X1		+U1X1					
2150-H												
31C ✓	4 SQ.MM	R	33 04 02.02	27000	+S1X1	239	+U1X2	14	COMP. MOTOR-1			
		Y	33 04 04.02	27000	+S1X1	240	+U1X2	13				
		B	33 04 06.02	27000	+S1X1	241	+U1X2	16				
		GNYE	33 04 07	27000	+S1X1	242	+U1X2	PE				
		R	33 04 11.02	27000	+S1X1	243	+U1X2	5	COMP. MOTOR-2			
		Y	33 04 13.02	27000	+S1X1	244	+U1X2	18				
		B	33 04 15.02	27000	+S1X1	245	+U1X2	7				
		R	33 04 29.02	27000	+S1X1	247	+U1X2	20	HEATER BANK			
		Y	33 04 32.02	27000	+S1X1	248	+U1X2	9				
		B	33 04 34.02	27000	+S1X1	249	+U1X2	22				
3425-G												
31D ✓	1.5 SQ.MM	CH	61 01 03.02 ✓	11500	+S1X1	141	S12S1	13	HYGROSTAT			
2050-K	1.5 SQ.MM	W	61 01 04.01 ✓	11500	+S1X1	142	S12S1	14				
31E ✓	(2X1.5) SQ.MM (DS-4)	Br	61 01 05.01	26000	+S1X1	128	S12B1	1	TEMP.SENSOR INSIDE COMPT.			
3380-I	W	61 01 06.01	+S1X1		129	S12B1	2					
AC PACKAGE UNIT-2												
32 ✓	6(2X1.5) SQ.MM DS-4	Br	61 01 18.01	11000	+S1X1	136	+U2X4	1	FRESH AIR TEMP.SENSOR-1			
		W	61 01 19.01		+S1X1	137	+U2X4	2				
		Br	61 01 21.01		+S1X1	138	+U2X4	3	FRESH AIR TEMP.SENSOR-2			
		W	61 01 23.01		+S1X1	139	+U2X4	4				
		Br	61 03 03.01		+S1X1	215	+U2X4	5	LP INDICATION			
		W	61 03 04.01		+S1X1	216	+U2X4	7				
		Br	61 03 07.01		+S1X1	219	+U2X4	9	HP INDICATION			
		W	61 03 08.01		+S1X1	220	+U2X4	11				
		2065-K										
		Ferrules to be provided by harness manufacturer										
			61 05 01.01		+S1X1	170	+U2X3	7	+24V FOR THERMAL SW.			
			61 01 02.28		+S1X1	190	+U2X3	6	TEMP. & PR. SWITCH			
			62 02 01.04		+S1X1	212	+U2X3	1	+24 V FOR HP/LP SENSOR			
			61 02 02.03		+S1X1	150	+U2X3	4	FLAPPER MOTOR			
			61 02 03.03		+S1X1	151	+U2X3	3				
			61 02 04.03		+S1X1	152	+U2X3	2	-VE 24V			
			61 04 11.03		+S1X1	166	+U2X3	15	EVAPORATOR MOTOR THERMAL SWITCH			
			61 04 13.03		+S1X1	167	+U2X3	16				

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
32A <									

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
33	1.5 SQ.MM	W	32 05 08.04	7000	+S1X1	26	+S19X1	7	DOOR SWITCH
								8	
								9	
								10	
								11	FLUSHING PUSH
	1.5 SQ.MM	R	72 01 04.01	7000	+S1X1	210	+S19X1	12	
	1.5 SQ.MM	BLK	72 01 05.01	7000	+S1X1	211	+S19X1	13	
	1.5 SQ.MM	CH	72 01 06.03	7000	+S1X1	207	+S19X1	14	WSP
	1.5 SQ.MM	W	72 01 07.03	7000	+S1X1	208	+S19X1	15	
	1.5 SQ.MM	R	33 06 07.02	7000	+S1X1	227	+S19X1	16	
	1.5 SQ.MM	BLK	33 06 08.02	7000	+S1X1	228	+S19X1	17	RAZOR SOCKET
	1.5 SQ.MM	CH	52 01 01.03	7000	+S1X1	106	+S19X1	18	
								19	
	1.5 SQ.MM	W	52 01 03.03	7000	+S1X1	103	+S19X1	20	LL-1
								21	
	1.5 SQ.MM	R	52 04 01.03	7000	+S1X1	109	+S19X1	22	
								23	
	1.5 SQ.MM	BLK	52 04 02.23	7000	+S1X1	108	+S19X1	24	110 V AC (FLE-1)
								25	
	1.5 SQ.MM	CH	32 03 01.20	7000	+S1X1		+S19X1	26	
	1.5 SQ.MM	W	32 03 02.20	7000	+S1X1		+S19X1	27	110V DC MOTOR
								28	
	1.5 SQ.MM	CH	Res-1	7000	+S1X1		+S19X1	29	EMPTY
2020-L	1.5 SQ.MM	CH	Res-2	7000	+S1X1		+S19X1	30	
2080-L	1.5 SQ.MM	GNYE	52 01 06.01	7000	+S1X1		+S19X1	31	
2130-L	1.5 SQ.MM	GNYE	43 01 PE.03	7000	+S1X1		+S19X1	32	PE EARTHING
+S19X1 TO WC-1,FLE-1 & FLE-2									
34D	1.5 SQ.MM	CH	32 05 08.31	8500	+S19X1	8	S16H1	1	WC LIGHT-1
2320A-L	1.5 SQ.MM	W	72 05 01.03	8500	+S19X1	9		2	
34F	1.5 SQ.MM	R	52 01 01.13	4000	+S19X1	22	B3E1	1	FLE-1
	1.5 SQ.MM	BLK	52 01 03.12	4000	+S19X1	24		2	
2030	1.5 SQ.MM	GNYE	52 01 06.21	4000	+S19X1	32		PE	
34G	1.5 SQ.MM	CH	52 04 01.09	4000	+S19X1	19	B4E1	1	FLE-2
	1.5 SQ.MM	W	52 04 02.08	4000	+S19X1	21		2	
2100	1.5 SQ.MM	GNYE	52 04 03.09	4000	+S19X1	32		PE	
+S19X1 TO +S16X1									
36	1.5 SQ.MM	CH	32 04 05.27	10000	+S19X1	1	+S16X1	1	ALARM PULL(LS-1)
						2		2	
	1.5 SQ.MM	W	43 01 02.10	10000	+S19X1	3	+S16X1	3	
						4		4	
	1.5 SQ.MM	CH	32 05 07.21	10000	+S19X1	5	+S16X1	5	DOOR SWITCH
						6		6	
	1.5 SQ.MM	W	32 05 08.33	10000	+S19X1	7	+S16X1	7	
						8		8	
						9		9	
						10		10	
						11		11	FLUSHING PUSH
	1.5 SQ.MM	R	72 01 04.03	10000	+S19X1	12	+S16X1	12	
	1.5 SQ.MM	BLK	72 01 05.03	10000	+S19X1	13	+S16X1	13	
	1.5 SQ.MM	CH	72 01 06.05	10000	+S19X1	14	+S16X1	14	WSP
	1.5 SQ.MM	W	72 01 07.05	10000	+S19X1	15	+S16X1	15	
	1.5 SQ.MM	R	33 06 07.05	10000	+S19X1	16	+S16X1	16	
	1.5 SQ.MM	BLK	33 06 08.07	10000	+S19X1	17	+S16X1	17	RAZOR SOCKET

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
2170A 3430A EXTRA-J	1.5 SQ.MM	CH	52 01 01.07	10000	+S19X1	18	+S16X1	18	LL-2
						19		19	
	1.5 SQ.MM	W	52 01 03.07	10000	+S19X1	20	+S16X1	20	
						21		21	
	1.5 SQ.MM	R	52 04 01	10000	+S19X1	22	+S16X1	22	110 V AC (FLE-1)
						23		23	
	1.5 SQ.MM	BLK	52 04 02	10000	+S19X1	24	+S16X1	24	
						25		25	
	1.5 SQ.MM	CH	32 03 01.22	10000	+S19X1	26	+S16X1	26	110V DC MOTOR
	1.5 SQ.MM	W	32 03 02.22	10000	+S19X1	27	+S16X1	27	
1.5 SQ.MM	CH	Res-3	10000	+S19X1	28	+S16X1	28	EMPTY	
1.5 SQ.MM	CH	Res-4	10000	+S19X1	29	+S16X1	29		
					30		30	PE EARTHING	
1.5 SQ.MM	GNYE	52 01 06.07	10000	+S19X1	31	+S16X1	31		
1.5 SQ.MM	GNYE	53 01 06.27	10000	+S19X1	32	+S16X1	32		
+S16X1 TO WC-2, LL-2,FLE-3 & FLE-4									
37D 2220-K	1.5 SQ.MM	CH	32 05 08.02	8500	+S16X1	8	S17H1	1	WC LIGHT-2
	1.5 SQ.MM	W	72 01 01.03	8500	+S16X1	9		2	
37F 2075	1.5 SQ.MM	R	52 01 01.15	3000	+S16X1	19	B5E1	1	FLE-3
	1.5 SQ.MM	BLK	52 01 03.14	3000	+S16X1	21		2	
	1.5 SQ.MM	GNYE	52 01 06.24	3000	+S16X1	32		PE	
37G 3901	1.5 SQ.MM	CH	52 01 04.07	6000	+S16X1	21	B6E1	1	FLE-4
	1.5 SQ.MM	W	52 04 02.07	6000	+S16X1	23		2	
	1.5 SQ.MM	GNYE	52 04 03.07	6000	+S16X1	32		PE	
+S16X1 TO +S17X1									
39	1.5 SQ.MM	CH	32 04 05.29	28000	+S16X1	1	+S17X1	1	ALARM PULL(LS-12)
						2		2	
	1.5 SQ.MM	W	43 01 02.02	28000	+S16X1	3	+S17X1	3	
						4		4	
	1.5 SQ.MM	CH	32 05 07.17	28000	+S16X1	5	+S17X1	5	
						6		6	
	1.5 SQ.MM	W	32 05 08.29	28000	+S16X1	7	+S17X1	7	FLUSHING PUSH
						8		8	
						9		9	
						10		10	WSP
						11		11	
	1.5 SQ.MM	R	72 01 04.02	28000	+S16X1	12	+S17X1	12	RAZOR SOCKET
	1.5 SQ.MM	BLK	72 01 05.02	28000	+S16X1	13	+S17X1	13	
	1.5 SQ.MM	CH	72 01 06.04	28000	+S16X1	14	+S17X1	14	
	1.5 SQ.MM	W	72 01 07.04	28000	+S16X1	15	+S17X1	15	LL-3
	1.5 SQ.MM	R	33 06 07.02	28000	+S16X1	16	+S17X1	16	
	1.5 SQ.MM	BLK	33 06 08.06	28000	+S16X1	17	+S17X1	17	110 V AC (FLE-1)
	1.5 SQ.MM	CH	52 01 01.05	28000	+S16X1	18	+S17X1	18	
						19		19	
	1.5 SQ.MM	W	52 01 03.05	28000	+S16X1	20	+S17X1	20	
						21		21	110 V AC (FLE-1)
	1.5 SQ.MM	R	52 04 01	28000	+S16X1	22	+S17X1	22	
						23		23	
	1.5 SQ.MM	BLK	52 04 02	28000	+S16X1	24	+S17X1	24	
						25		25	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
2225-A	1.5 SQ.MM	CH	32 03 01.21	28000	+S16X1	26	+S17X1	26	110V DC MOTOR
	1.5 SQ.MM	W	32 03 02.21	28000	+S16X1	27	+S17X1	27	
						28		28	EMPTY
	1.5 SQ.MM	CH	Res-3	28000	+S16X1	29	+S17X1	29	
	1.5 SQ.MM	CH	Res-4	28000	+S16X1	30	+S17X1	30	
2115-A	1.5 SQ.MM	GNYE	52 01 06.04	28000	+S16X1	31	+S17X1	31	PE EARTHING
2215-A	1.5 SQ.MM	GNYE	43 01 PE.02	28000	+S16X1	32	+S17X1	32	
+S17X1 TO WC-3,FLE-10 ,FLE-12									
40D	1.5 SQ.MM	CH	32 05 08.36	8500	+S17X1	8	S18H1	1	WC LIGHT-3
2320-J	1.5 SQ.MM	W	72 03 01.03	8500	+S17X1	9		2	
40F	1.5 SQ.MM	R	52 04 01.05	3000	+S17X1	22	B34E1	1	FLE-10
	1.5 SQ.MM	BLK	52 04 02.04	3000	+S17X1	24		2	
	2125	1.5 SQ.MM	GNYE	52 04 03.03	3000	+S17X1		32	
40G	1.5 SQ.MM	CH	52 01 01.11	4000	+S17X1	19	B36E1	1	FLE-12
	1.5 SQ.MM	W	52 01 03.10	4000	+S17X1	21		2	
	2235	1.5 SQ.MM	GNYE	52 01 06.18	4000	+S17X1		32	
+S17X1 TO +S18X1									
42	1.5 SQ.MM	CH	32 04 05.27	10000	+S17X1	1	+S18X1	1	ALARM PULL(LS-13)
						2		2	
	1.5 SQ.MM	W	43 01 02.10	10000	+S17X1	3	+S18X1	3	
						4		4	DOOR SWITCH
	1.5 SQ.MM	CH	32 05 07.21	10000	+S17X1	5	+S18X1	5	
						6		6	
	1.5 SQ.MM	W	32 05 08.33	10000	+S17X1	7	+S18X1	7	FLUSHING PUSH
						8		8	
						9		9	
						10		10	WSP
						11		11	
	1.5 SQ.MM	R	72 01 04.03	10000	+S17X1	12	+S18X1	12	
	1.5 SQ.MM	BLK	72 01 05.03	10000	+S17X1	13	+S18X1	13	RAZOR SOCKET
	1.5 SQ.MM	CH	72 01 06.05	10000	+S17X1	14	+S18X1	14	
	1.5 SQ.MM	W	72 01 07.05	10000	+S17X1	15	+S18X1	15	
	1.5 SQ.MM	R	33 06 07.05	10000	+S17X1	16	+S18X1	16	LL-4
	1.5 SQ.MM	BLK	33 06 08.07	10000	+S17X1	17	+S18X1	17	
	1.5 SQ.MM	CH	52 01 01.07	10000	+S17X1	18	+S18X1	18	
						19		19	110 V AC (FLE-11)
	1.5 SQ.MM	W	52 01 03.07	10000	+S17X1	20	+S18X1	20	
						21		21	
	1.5 SQ.MM	R	52 04 01	10000	+S17X1	22	+S18X1	22	110V DC MOTOR
						23		23	
	1.5 SQ.MM	BLK	52 04 02	10000	+S17X1	24	+S18X1	24	
						25		25	EMPTY
	1.5 SQ.MM	CH	32 03 01.22	10000	+S17X1	26	+S18X1	26	
	1.5 SQ.MM	W	32 03 02.22	10000	+S17X1	27	+S18X1	27	
						28		28	PE EARTHING
	1.5 SQ.MM	CH	Res-7	10000	+S17X1	29	+S18X1	29	
	1.5 SQ.MM	CH	Res-8	10000	+S17X1	30	+S18X1	30	
2170-J	1.5 SQ.MM	GNYE	52 01 06.01	10000	+S17X1	31	+S18X1	31	PE EARTHING
3430-J	1.5 SQ.MM	GNYE	43 01 PE.01	10000	+S17X1	32	+S18X1	32	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
+S18X1 TO WC-4,FLE-11									
43D	1.5 SQ.MM	CH	32 05 08.31	8500	+S18X1	8	S18H1	1	WC LIGHT-4
216D	1.5 SQ.MM	W	72 05 01.03	8500	+S18X1	9		2	
43F	1.5 SQ.MM	R	52 04 01.07	3000	+S18X1	22	B35E1	1	FLE-11
2045	1.5 SQ.MM	BLK	52 04 02.06	3000	+S18X1	24		2	
	1.5 SQ.MM	GNYE	52 04 03.06	3000	+S18X1	32		PE	
NOTE: The harnesses for the following shall be bunched as follows:									
1. PP DRESSING: 31D,32,32D,33,37D,43D									
2.NPP DRESSING: 34D & 40D									
3. DOORWAY & GANGWAY: 34F,34G,37F,37G,40F,40G,43F									
PANTRY EQUIPMENT CIRCUIT WIRING									
45 3390A 3391A 3392A GROUP-B	1.5 SQ.MM	R	33 02 07.02	25500	+S1X1	289	+A10X1	1	HOT CASE
	1.5 SQ.MM	BLK	33 02 08.02	25500	+S1X1	290	+A10X1	2	
	1.5 SQ.MM	GNYE	33 02 09.01	25500	+S1X1	291	+A10X1	3	
	1.5 SQ.MM	Y	33 02 10.02	25500	+S1X1	292	+A10X1	4	BOTTLE-COOLER
	1.5 SQ.MM	BLK	33 02 11.02	25500	+S1X1	293	+A10X1	5	
	1.5 SQ.MM	GNYE	33 02 12.01	25500	+S1X1	294	+A10X1	6	
	1.5 SQ.MM	B	33 02 13.02	25500	+S1X1	295	+A10X1	7	DEEP-FREEZER
	1.5 SQ.MM	BLK	33 02 14.02	25500	+S1X1	296	+A10X1	8	
	1.5 SQ.MM	GNYE	33 02 15.01	25500	+S1X1	297	+A10X1	9	
ACCIDENT EMERGENCY LIGHTING CIRCUIT WIRING									
46 0000 GROUP-L	1.5 SQ.MM	Y	33 07 16.01	8000	+S1X1	283	+B41E1	1	AEL-1
	1.5 SQ.MM	BLK	33 07 17.01	8000	+S1X1	284	+B41E1	2	
	1.5 SQ.MM	GNYE	33 07 18.01	8000	+S1X1	285	+B41E1	3	
	1.5 SQ.MM	CH	32 06 11.01	8000	+S1K1	2	+B41E1	4	
	1.5 SQ.MM	CH	32 06 11.02	8000	+S1K1	1	+B41E1	5	
46A	1.5 SQ.MM	Y	33 07 16.02	11000	+B41E1	1	+B42E1	1	AEL-2, L=50M
	1.5 SQ.MM	BLK	33 07 17.02	11000	+B41E1	2	+B42E1	2	
	1.5 SQ.MM	GNYE	33 07 18.02	11000	+B41E1	3	+B42E1	3	
	1.5 SQ.MM	CH	32 06 12.01	11000	+B41E1	4	+B42E1	4	
	1.5 SQ.MM	CH	32 06 12.02	11000	+B41E1	3	+B42E1	5	
46B	1.5 SQ.MM	Y	33 07 16.03	17000	+B42E1	1	+B43E1	1	AEL-3, L=85M
	1.5 SQ.MM	BLK	33 07 17.03	17000	+B42E1	2	+B43E1	2	
	1.5 SQ.MM	GNYE	33 07 18.03	17000	+B42E1	3	+B43E1	3	
	1.5 SQ.MM	CH	32 06 13.01	17000	+B42E1	4	+B43E1	4	
	1.5 SQ.MM	CH	32 06 13.02	17000	+B42E1	3	+B43E1	5	
46C	1.5 SQ.MM	Y	33 07 16.04	26000	+B43E1	1	+B44E1	1	AEL-4, L=130M
	1.5 SQ.MM	BLK	33 07 17.04	26000	+B43E1	2	+B44E1	2	
	1.5 SQ.MM	GNYE	33 07 18.04	26000	+B43E1	3	+B44E1	3	
	1.5 SQ.MM	CH	32 06 14.01	26000	+B43E1	4	+B44E1	4	
	1.5 SQ.MM	CH	32 06 12.02	26000	+B43E1	3	+B44E1	5	
PARCIL LIGHTING CIRCUIT									
47 2310-L	1.5 SQ.MM	Y	52 02 07.01	5000	+S1X1	112	+B39E1	1	PARCIL-1
	1.5 SQ.MM	BLK	52 02 08.01	5000	+S1X1	113	+B39E1	2	
	1.5 SQ.MM	GNYE	43 02 PE.27	5000	+S1X1	PE	+S26H1	PE	
	1.5 SQ.MM	CH	32 02 01.27	5000	+S1K1	101	+S26H1	2	
	1.5 SQ.MM	W	43 02 01.27	5000	+S1K1	99	+S26H1	1	
47A 2315-K	1.5 SQ.MM	Y	52 02 07.02	8000	+S1X1	112	+B40E1	1	PARCIL-2
	1.5 SQ.MM	BLK	52 02 08.02	8000	+S1X1	113	+B40E1	2	
	1.5 SQ.MM	GNYE	43 02 PE.28	8000	+S1X1	PE	+S27H1	PE	
	1.5 SQ.MM	CH	32 02 01.28	8000	+S1K1	101	+S27H1	2	
	1.5 SQ.MM	W	43 02 01.28	8000	+S1K1	99	+S27H1	1	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
EXHAUST FAN CIRCUIT									
48 2230-L	1.5 SQ.MM	R	33 06 09.05	9000	+S1X1	279	+S11M1	5	EF-1
	1.5 SQ.MM	Y	33 06 10.05	9000	+S1X1	280	+S11M1	7	
	1.5 SQ.MM	B	33 06 11.05	9000	+S1X1	281	+S11M1	9	
	1.5 SQ.MM	GNYE	33 06 12.04	9000	+S1K1	282	+S11M1	PE	
48A 2155-G	1.5 SQ.MM	R	33 06 09.04	28000	+S1X1	279	+S15M1	3	EF-2
	1.5 SQ.MM	Y	33 06 10.04	28000	+S1X1	280	+S15M1	7	
	1.5 SQ.MM	B	33 06 11.04	28000	+S1X1	281	+S15M1	9	
	1.5 SQ.MM	GNYE	33 06 12.03	28000	+S1K1	282	+S15M1	PE	
P.A. SYSTEM WIRING									
49 3440-F	4-SQ.MM	BLK	23-04-07-12	28000	+L30X1	19	+L31X1	19	
			23-04-08-12	28000	+L30X1	20	+L31X1	20	
			23-04-09-12	28000	+L30X1	21	+L31X1	21	
			23-04-10-12	28000	+L30X1	22	+L31X1	22	
49A 3440-F	(4x4x1)C+2 X.75(MULTI-CORE)	Black outer sheath white numbered cores	32 07 01.12	28000	+L30X1	10	+L31X1	10	CORRIDOR WAGO TO CORRIDOR WAGO WIRING
			32 07 02.12		+L30X1	12	+L31X1	12	
			32 07 03.12		+L30X1	11	+L31X1	11	
			45 01 01.12		+L30X1	SHIELD	+L31X1	13	
			45 01 02.12		+L30X1	8	+L31X1	8	
			45 01 03.12		+L30X1	7	+L31X1	7	
			45 01 04.12		+L30X1	6	+L31X1	6	
			45 01 05.12		+L30X1	5	+L31X1	5	
			45 01 06.12		+L30X1	4	+L31X1	4	
			45 01 07.12		+L30X1	3	+L31X1	3	
			45 01 08.12		+L30X1	2	+L31X1	2	
			45 01 09.12		+L30X1	1	+L31X1	1	
			45 01 13.12		+L30X1	9	+L31X1	9	
			45 01 14.12		+L30X1	13	+L31X1	14	
			45 01 15.12		+L30X1	14	+L31X1	15	
			45 01 16.12		+L30X1	15	+L31X1	16	
			45 01 17.12		+L30X1	BLK	+L31X1	17	
			45 01 18.12		+L30X1	W	+L31X1	18	
50 2305-L	4-SQ.MM	BLK	23-04-07-02	8000	+S1X1	19	+L30X1	19	
			23-04-08-02	8000	+S1X1	21	+L30X1	21	
			23-04-09-02	8000	+S1X1	20	+L30X1	20	
			23-04-10-02	8000	+S1X1	22	+L30X1	22	
50A 2305-L	(4x4x1)C+2 X.75(MULTI-CORE)	Black outer sheath white numbered cores	32 07 01.04	8000	+S1X1	10	+L30X1	10	SBC TO CORRIDOR WAGO
			32 07 02.06		+S1X1	12	+L30X1	12	
			32 07 03.04		+S1X1	11	+L30X1	11	
			45 01 01.01		+S1X1	13	+L30X1	13	
			45 01 02.01		+S1X1	8	+L30X1	8	
			45 01 03.01		+S1X1	7	+L30X1	7	
			45 01 04.01		+S1X1	6	+L30X1	6	
			45 01 05.01		+S1X1	5	+L30X1	5	
			45 01 06.01		+S1X1	4	+L30X1	4	
			45 01 07.01		+S1X1	3	+L30X1	3	
			45 01 08.01		+S1X1	2	+L30X1	2	
			45 01 09.01		+S1X1	1	+L30X1	1	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
51	1.5 SQ.MM	W	45 01 12.03	8000	+S1X1	36	+L40X1	1	SBC TO SPK-1
2240-L	1.5 SQ.MM	CH	45 02 02.19	8000	+S1X1	39	+L40X1	2	
51A	1.5 SQ.MM	W	45 01 12.04	8000	+S1X1	36	+L41X1	1	SBC TO SPK-2
	1.5 SQ.MM	CH	45 02 02.20	8000	+S1X1	39	+L41X1	2	
51B	1.5 SQ.MM	W	45 01 12.06	3000	+L41X1	1	+L42X1	1	SPK-2 TO SPK-3
	1.5 SQ.MM	CH	45 02 02.02	3000	+L41X1	2	+L42X1	2	
51C	1.5 SQ.MM	W	45 01 12.10	3000	+L42X1	1	+L43X1	1	SPK-3 TO SPK-4
	1.5 SQ.MM	CH	45 02 02.04	3000	+L42X1	2	+L43X1	2	
51D	1.5 SQ.MM	W	45 01 12.12	3000	+L43X1	1	+L44X1	1	SPK-4 TO SPK-5
	1.5 SQ.MM	CH	45 02 02.06	3000	+L43X1	2	+L44X1	2	
51E	1.5 SQ.MM	W	45 01 12.15	3000	+L44X1	1	+L45X1	1	SPK-5 TO SPK-6
	1.5 SQ.MM	CH	45 02 02.09	3000	+L44X1	2	+L45X1	2	
51F	1.5 SQ.MM	W	45 01 12.16	3000	+L45X1	1	+L46X1	1	SPK-6 TO SPK-7
	1.5 SQ.MM	CH	45 02 02.10	3000	+L45X1	2	+L46X1	2	
51G	1.5 SQ.MM	W	45 01 12.18	3000	+L46X1	1	+L47X1	1	SPK-7 TO SPK-8
	1.5 SQ.MM	CH	45 02 02.12	3000	+L46X1	2	+L47X1	2	
51H	1.5 SQ.MM	W	45 01 12.20	3000	+L47X1	1	+L48X1	1	SPK-8 TO SPK-9
	1.5 SQ.MM	CH	45 02 02.14	3000	+L47X1	2	+L48X1	2	
51I	1.5 SQ.MM	W	45 01 12.22	3000	+L48X1	1	+L49X1	1	SPK-9 TO SPK-10
	1.5 SQ.MM	CH	45 02 02.16	3000	+L48X1	2	+L49X1	2	
51J	1.5 SQ.MM	W	45 01 12.24	6000	+L49X1	1	+L50X1	1	SPK-10 TO SPK-11
	1.5 SQ.MM	CH	45 02 02.18	6000	+L49X1	2	+L50X1	2	
JUMPER WIRING FOR BRL									
52	1.5 SQ.MM.	R	52 05 01.01	8000	+S28U1	1	B19X1	1	SBC TO CABIN-1
	1.5 SQ.MM.	BLK	52 05 02.01	8000	+S28U1	2	B19X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.01	8000	+S1X1	288	B19X1	9	
52A	1.5 SQ.MM.	R	52 05 01.02	2600	+B19X1	4	+B20X1	1	CABIN-1 TO CABIN-2
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B19X1	8	+B20X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B19X1	11	+B20X1	9	
52B	1.5 SQ.MM.	R	52 05 01.02	2600	+B20X1	4	+B21X1	1	CABIN-2 TO CABIN-3
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B20X1	8	+B21X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B20X1	11	+B21X1	9	
52C	1.5 SQ.MM.	R	52 05 01.02	2600	+B21X1	4	+B22X1	1	CABIN-3 TO CABIN-4
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B21X1	8	+B22X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B21X1	11	+B22X1	9	
52D	1.5 SQ.MM.	R	52 05 01.02	2600	+B22X1	4	+B23X1	1	CABIN-4 TO CABIN-5
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B22X1	8	+B23X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B22X1	11	+B23X1	9	
52E	1.5 SQ.MM.	R	52 05 01.03	16000	+S28U1	1	+B24X1	1	SBC TO CABIN-6
	1.5 SQ.MM.	BLK	52 05 02.03	16000	+S28U1	2	+B24X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.03	16000	+B23X1	11	+B24X1	9	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
52F	1.5 SQ.MM.	R	52 05 01.02	2600	+B24X1	4	+B25X1	1	CABIN-6 TO CABIN-7
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B24X1	8	+B25X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B24X1	11	+B25X1	9	
52G	1.5 SQ.MM.	R	52 05 01.02	2600	+B25X1	4	+B26X1	1	CABIN-7 TO CABIN-8
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B25X1	8	+B26X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B25X1	11	+B26X1	9	
52H	1.5 SQ.MM.	R	52 05 01.02	2600	+B26X1	4	+B27X1	1	CABIN-8 TO CABIN-9
	1.5 SQ.MM.	BLK	52 05 02.02	2600	+B26X1	8	+B27X1	5	
	1.5 SQ.MM.	GNYE	52 05 52.02	2600	+B26X1	11	+B27X1	9	
BRANCH WIRING FROM BRL-1 TO BRL-52									
53	1.5 SQ.MM.	R	52 05 01.06	4500	+B19X1	1	+B45E1	1	BRL-1
	1.5 SQ.MM.	BLK	53 05 01.06	4500	+B19X1	5	+B45E1	2	
	1.5 SQ.MM.	GNYE	54 05 01.06	4500	+B19X1	10	+B45E1	PE	
53A	1.5 SQ.MM.	R	52 05 01.07	3600	+B19X1	2	+B46E1	1	BRL-2
	1.5 SQ.MM.	BLK	53 05 01.07	3600	+B19X1	6	+B46E2	2	
	1.5 SQ.MM.	GNYE	54 05 01.07	3600	+B19X1	10	+B46E3	PE	
53B	1.5 SQ.MM.	R	52 05 01.08	2700	+B19X1	1	+B47E1	1	BRL-3
	1.5 SQ.MM.	BLK	52 05 02.08	2700	+B19X1	5	+B47E1	2	
	1.5 SQ.MM.	GNYE	52 05 52.08	2700	+B19X1	11	+B47E1	PE	
53C	1.5 SQ.MM.	R	52 05 01.09	1300	+B19X1	2	+B48E1	1	BRL-4
	1.5 SQ.MM.	BLK	52 05 02.09	1300	+B19X1	6	+B48E1	2	
	1.5 SQ.MM.	GNYE	52 05 52.09	1300	+B19X1	11	+B48E1	PE	
CABIN-1 (BRL-1 TO 4)									
54	1.5 SQ.MM.	R	52 05 01.04	5700	+B20X1	1	+B49E1	1	BRL-5
	1.5 SQ.MM.	BLK	52 05 02.04	5700	+B20X1	5	+B49E1	2	
	1.5 SQ.MM.	GNYE	52 05 52.04	5700	+B20X1	9	+B49E1	PE	
54A	1.5 SQ.MM.	R	52 05 01.05	4200	+B20X1	2	+B50E1	1	BRL-6
	1.5 SQ.MM.	BLK	53 05 01.05	4200	+B20X1	6	+B50E1	2	
	1.5 SQ.MM.	GNYE	54 05 01.05	4200	+B20X1	9	+B50E1	PE	
54B	1.5 SQ.MM.	R	52 05 01.06	4500	+B20X1	3	+B51E1	1	BRL-7
	1.5 SQ.MM.	BLK	53 05 01.06	4500	+B20X1	7	+B51E1	2	
	1.5 SQ.MM.	GNYE	54 05 01.06	4500	+B20X1	10	+B51E1	PE	
54C	1.5 SQ.MM.	R	52 05 01.07	3600	+B20X1	4	+B52E1	1	BRL-8
	1.5 SQ.MM.	BLK	53 05 01.07	3600	+B20X1	8	+B52E1	2	
	1.5 SQ.MM.	GNYE	54 05 01.07	3600	+B20X1	10	+B52E1	PE	
54D	1.5 SQ.MM.	R	52 05 01.08	2700	+B20X1	1	+B53E1	1	BRL-9
	1.5 SQ.MM.	BLK	52 05 02.08	2700	+B20X1	5	+B53E1	2	
	1.5 SQ.MM.	GNYE	52 05 52.08	2700	+B20X1	11	+B53E1	PE	
54E	1.5 SQ.MM.	R	52 05 01.09	1300	+B20X1	2	+B54E1	1	BRL-10
	1.5 SQ.MM.	BLK	52 05 02.09	1300	+B20X1	6	+B54E1	2	
	1.5 SQ.MM.	GNYE	52 05 52.09	1300	+B20X1	11	+B54E1	PE	
CABIN-2 (BRL-5 TO 10)									
55	1.5 SQ.MM.	R	52 05 01.04	5700	+B21X1	1	+B55E1	1	BRL-11
	1.5 SQ.MM.	BLK	52 05 02.04	5700	+B21X1	5	+B55E1	2	
	1.5 SQ.MM.	GNYE	52 05 52.04	5700	+B21X1	9	+B55E1	PE	
55A	1.5 SQ.MM.	R	52 05 01.05	4200	+B21X1	2	+B56E1	1	BRL-12
	1.5 SQ.MM.	BLK	53 05 01.05	4200	+B21X1	6	+B56E1	2	
	1.5 SQ.MM.	GNYE	54 05 01.05	4200	+B21X1	9	+B56E1	PE	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
55B	1.5 SQ.MM	R	52 05 01.08	4500	+B21X1	3	+B57E1	1	BRL-13
	1.5 SQ.MM	BLK	53 05 01.06	4500	+B21X1	7	+B57E1	2	
	1.5 SQ.MM	GNYE	54 05 01.06	4500	+B21X1	10	+B57E1	PE	
55C	1.5 SQ.MM	R	52 05 01.07	3600	+B21X1	4	+B58E1	1	BRL-14
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B21X1	8	+B58E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B21X1	10	+B58E1	PE	
55D	1.5 SQ.MM	R	52 05 01.08	2700	+B21X1	1	+B59E1	1	BRL-15
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B21X1	5	+B59E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B21X1	11	+B59E1	PE	
55E	1.5 SQ.MM	R	52 05 01.09	1300	+B21X1	2	+B60E1	1	BRL-16
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B21X1	6	+B60E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B21X1	11	+B60E1	PE	
CABIN-3 (BRL-11 TO 16)									
56	1.5 SQ.MM	R	52 05 01.04	5700	+B22X1	1	+B61E1	1	BRL-17
	1.5 SQ.MM	BLK	52 05 02.04	5700	+B22X1	5	+B61E1	2	
	1.5 SQ.MM	GNYE	52 05 52.04	5700	+B22X1	9	+B61E1	PE	
56A	1.5 SQ.MM	R	52 05 01.05	4200	+B22X1	2	+B62E1	1	BRL-18
	1.5 SQ.MM	BLK	53 05 01.05	4200	+B22X1	6	+B62E1	2	
	1.5 SQ.MM	GNYE	54 05 01.05	4200	+B22X1	9	+B62E1	PE	
56B	1.5 SQ.MM	R	52 05 01.08	4500	+B22X1	3	+B63E1	1	BRL-19
	1.5 SQ.MM	BLK	53 05 01.06	4500	+B22X1	7	+B63E1	2	
	1.5 SQ.MM	GNYE	54 05 01.06	4500	+B22X1	10	+B63E1	PE	
56C	1.5 SQ.MM	R	52 05 01.07	3600	+B22X1	4	+B64E1	1	BRL-20
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B22X1	8	+B64E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B22X1	10	+B64E1	PE	
56D	1.5 SQ.MM	R	52 05 01.08	2700	+B22X1	1	+B65E1	1	BRL-21
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B22X1	5	+B65E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B22X1	11	+B65E1	PE	
56E	1.5 SQ.MM	R	52 05 01.09	1300	+B22X1	2	+B66E1	1	BRL-22
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B22X1	6	+B66E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B22X1	11	+B66E1	PE	
CABIN-4 (BRL-17 TO 22)									
57	1.5 SQ.MM	R	52 05 01.04	5700	+B23X1	1	+B67E1	1	BRL-23
	1.5 SQ.MM	BLK	52 05 02.04	5700	+B23X1	5	+B67E1	2	
	1.5 SQ.MM	GNYE	52 05 52.04	5700	+B23X1	9	+B67E1	PE	
57A	1.5 SQ.MM	R	52 05 01.05	4200	+B23X1	2	+B68E1	1	BRL-24
	1.5 SQ.MM	BLK	53 05 01.05	4200	+B23X1	6	+B68E1	2	
	1.5 SQ.MM	GNYE	54 05 01.05	4200	+B23X1	9	+B68E1	PE	
57B	1.5 SQ.MM	R	52 05 01.06	4500	+B23X1	3	+B69E1	1	BRL-25
	1.5 SQ.MM	BLK	53 05 01.06	4500	+B23X1	7	+B69E1	2	
	1.5 SQ.MM	GNYE	54 05 01.06	4500	+B23X1	10	+B69E1	PE	
57C	1.5 SQ.MM	R	52 05 01.07	3600	+B23X1	4	+B70E1	1	BRL-26
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B23X1	8	+B70E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B23X1	10	+B70E1	PE	

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER.NO.	
57D	1.5 SQ.MM	R	52 05 01.08	2700	+B23X1	1	+B71E1	1	BRL-27
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B23X1	5	+B71E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B23X1	11	+B71E1	PE	
57E	1.5 SQ.MM	R	52 05 01.09	1300	+B23X1	2	+B72E1	1	BRL-28
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B23X1	6	+B72E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B23X1	11	+B72E1	PE	
CABIN-5 (BRL-23 TO 28)									
58	1.5 SQ.MM	R	52 05 01.04	5700	+B24X1	1	+B73E1	1	BRL-29
	1.5 SQ.MM	BLK	52 05 02.04	5700	+B24X1	5	+B73E1	2	
	1.5 SQ.MM	GNYE	52 05 52.04	5700	+B24X1	9	+B73E1	PE	
58A	1.5 SQ.MM	R	52 05 01.05	4200	+B24X1	2	+B74E1	1	BRL-30
	1.5 SQ.MM	BLK	53 05 01.05	4200	+B24X1	6	+B74E1	2	
	1.5 SQ.MM	GNYE	54 05 01.05	4200	+B24X1	9	+B74E1	PE	
58B	1.5 SQ.MM	R	52 05 01.08	4500	+B24X1	3	+B75E1	1	BRL-31
	1.5 SQ.MM	BLK	53 05 01.08	4500	+B24X1	7	+B75E1	2	
	1.5 SQ.MM	GNYE	54 05 01.08	4500	+B24X1	10	+B75E1	PE	
58C	1.5 SQ.MM	R	52 05 01.07	3600	+B24X1	4	+B76E1	1	BRL-32
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B24X1	8	+B76E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B24X1	10	+B76E1	PE	
58D	1.5 SQ.MM	R	52 05 01.08	2700	+B24X1	1	+B77E1	1	BRL-33
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B24X1	5	+B77E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B24X1	11	+B77E1	PE	
58E	1.5 SQ.MM	R	52 05 01.09	1300	+B24X1	2	+B78E1	1	BRL-34
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B24X1	6	+B78E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B24X1	11	+B78E1	PE	
CABIN-6 (BRL-29 TO 34)									
59	1.5 SQ.MM	R	52 05 01.04	5700	+B25X1	1	+B79E1	1	BRL-35
	1.5 SQ.MM	BLK	52 05 02.04	5700	+B25X1	5	+B79E1	2	
	1.5 SQ.MM	GNYE	52 05 52.04	5700	+B25X1	9	+B79E1	PE	
59A	1.5 SQ.MM	R	52 05 01.05	4200	+B25X1	2	+B80E1	1	BRL-36
	1.5 SQ.MM	BLK	53 05 01.05	4200	+B25X1	8	+B80E1	2	
	1.5 SQ.MM	GNYE	54 05 01.05	4200	+B25X1	9	+B80E1	PE	
59B	1.5 SQ.MM	R	52 05 01.06	4500	+B25X1	3	+B81E1	1	BRL-37
	1.5 SQ.MM	BLK	53 05 01.06	4500	+B25X1	7	+B81E1	2	
	1.5 SQ.MM	GNYE	54 05 01.06	4500	+B25X1	10	+B81E1	PE	
59C	1.5 SQ.MM	R	52 05 01.07	3600	+B25X1	4	+B82E1	1	BRL-38
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B25X1	8	+B82E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B25X1	10	+B82E1	PE	
59D	1.5 SQ.MM	R	52 05 01.08	2700	+B25X1	1	+B83E1	1	BRL-39
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B25X1	5	+B83E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B25X1	11	+B83E1	PE	
59E	1.5 SQ.MM	R	52 05 01.09	1300	+B25X1	2	+B84E1	1	BRL-40
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B25X1	6	+B84E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B25X1	11	+B84E1	PE	
CABIN-7 (BRL-35 TO 40)									

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOCATION	TER. NO.	LOCATION	TER. NO.	
60	1.5 SQ.MM	R	52 05 01.04	5700	+B26X1	1	+B85E1	1	BRL-41
	1.5 SQ.MM	BLK	52 05 02.04	5700	+B26X1	5	+B85E1	2	
	1.5 SQ.MM	GNYE	52 05 52.04	5700	+B26X1	9	+B85E1	PE	
60A	1.5 SQ.MM	R	52 05 01.05	4200	+B26X1	2	+B86E1	1	BRL-42
	1.5 SQ.MM	BLK	53 05 01.05	4200	+B26X1	6	+B86E1	2	
	1.5 SQ.MM	GNYE	54 05 01.05	4200	+B26X1	9	+B86E1	PE	
60B	1.5 SQ.MM	R	52 05 01.06	4500	+B26X1	3	+B87E1	1	BRL-43
	1.5 SQ.MM	BLK	53 05 01.06	4500	+B26X1	7	+B87E1	2	
	1.5 SQ.MM	GNYE	54 05 01.06	4500	+B26X1	10	+B87E1	PE	
60C	1.5 SQ.MM	R	52 05 01.07	3600	+B26X1	4	+B88E1	1	BRL-44
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B26X1	8	+B88E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B26X1	10	+B88E1	PE	
60D	1.5 SQ.MM	R	52 05 01.08	2700	+B26X1	1	+B89E1	1	BRL-45
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B26X1	5	+B89E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B26X1	11	+B89E1	PE	
60E	1.5 SQ.MM	R	52 05 01.09	1300	+B26X1	2	+B90E1	1	BRL-46
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B26X1	6	+B90E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B26X1	11	+B90E1	PE	
CABIN-8 (BRL-41 TO 46)									
61	1.5 SQ.MM	R	52 05 01.04	5700	+B27X1	1	+B91E1	1	BRL-47
	1.5 SQ.MM	BLK	52 05 02.04	5700	+B27X1	5	+B91E1	2	
	1.5 SQ.MM	GNYE	52 05 52.04	5700	+B27X1	9	+B91E1	PE	
61A	1.5 SQ.MM	R	52 05 01.05	4200	+B27X1	2	+B92E1	1	BRL-48
	1.5 SQ.MM	BLK	53 05 01.05	4200	+B27X1	6	+B92E1	2	
	1.5 SQ.MM	GNYE	54 05 01.05	4200	+B27X1	9	+B92E1	PE	
61B	1.5 SQ.MM	R	52 05 01.06	4500	+B27X1	3	+B93E1	1	BRL-49
	1.5 SQ.MM	BLK	53 05 01.06	4500	+B27X1	7	+B93E1	2	
	1.5 SQ.MM	GNYE	54 05 01.06	4500	+B27X1	10	+B93E1	PE	
61C	1.5 SQ.MM	R	52 05 01.07	3600	+B27X1	4	+B94E1	1	BRL-50
	1.5 SQ.MM	BLK	53 05 01.07	3600	+B27X1	8	+B94E1	2	
	1.5 SQ.MM	GNYE	54 05 01.07	3600	+B27X1	10	+B94E1	PE	
61D	1.5 SQ.MM	R	52 05 01.08	2700	+B27X1	1	+B95E1	1	BRL-51
	1.5 SQ.MM	BLK	52 05 02.08	2700	+B27X1	5	+B95E1	2	
	1.5 SQ.MM	GNYE	52 05 52.08	2700	+B27X1	11	+B95E1	PE	
61E	1.5 SQ.MM	R	52 05 01.09	1300	+B27X1	2	+B96E1	1	BRL-52
	1.5 SQ.MM	BLK	52 05 02.09	1300	+B27X1	6	+B96E1	2	
	1.5 SQ.MM	GNYE	52 05 52.09	1300	+B27X1	11	+B96E1	PE	
CABIN-9 (BRL-47 TO 52)									

PUMP					
Size	Location on Item	Qty	Termination at other location	Qty	Overall QPC
PG-11	Pump-	2	Connection box	2	4
PG-21	Connection Box for Pump	1	Through Box	1	2
60 KVA TRANSFORMER					
PG-29	Input Side	1	Through Box	1	2
PG-36	Output Side	1	Through Box	1	2
PRE-COOLING SOCKET					
PG-36	End wall	2	Through Box	2	4
5 KVA TRANSFORMER					
PG-16	Input & Output Side	0	Through Box	2	4
Capacitor Bank					
PG-21	Input & Output Side	0	Through Box	2	4
AIR BRAKE MODULE					
PG-16	Pressure Switch	1	Through Box	1	2
WSP ITEMS					
PG-16	VK-1	1	VK-6	1	2
PG-16	VK-2	1	VK-6	1	2
PG-21	SBC to VK-6	1	VK-6	1	2
PG-16	VK-3	1	Through Box	1	2
PG-16	VK-4	1		1	2
PG-21	SBC to VK-7	1	Through Box	1	2
PG-16	VK-7 to EVR-1	1	-	0	1
PG-16	VK-7 to EVR-2	1	-	0	1
PG-16	VK-7 to EVR-3	1	-	0	1
PG-16	VK-7 to EVR-4	1	-	0	1
PG-16	SBC to VK-5	1	VK-5	1	2
PG-16	VK-5 to EVR-1	1	-	-	1
PG-16	VK-5 to EVR-2	1	-	-	1
PG-16	VK-5 to EVR-3	1	-	-	1
PG-16	VK-5 to EVR-4	1	-	-	1
FEEDER LOOP					
PG-48	FJB-1 to SBC	0	Through Box	1	1
PG-48	FJB-2 to SBC	0	Through Box	1	1
BATTERY AND FUSE BOXES					
PG-21	Battery Box	1	+ve Fuse Box	1	2
PG-21	Battery Box	1	-ve Fuse Box	1	2
PG-21	+ve Fuse Box to SBC	1	Through Box	1	2
PG-21	+ve Fuse Box to SBC	1	Through Box	1	2
PG-21	-ve Fuse Box to SBC	1	Through Box	1	2
PG-16	-ve Fuse Box to SBC	1	Through Box	1	2
PG-16	+ve Fuse Box	1	Battery Box	1	2
UNDER SLUNG RBC					
PG-16	RBC	1	Through Box	1	2
PG-21	RBC	1	Through Box	1	2
PG-29	RBC	1	Through Box	1	2

Total End fittings:

S.no.	Item	QPC as per drawing
1.	End fitting PG-11, straight	4
2.	End fitting PG-16, straight	26
3	End fitting PG-21, straight	20
4	End fitting PG-29, straight	4
5	End fitting PG-36, straight	6
6	End fitting PG-48, straight	2


SSE/CAD


SEE/D


DY.CEE/D & D

Corrigendum - 1

Corrigendum -1 to specification no EDTS 252 Rev J

This corrigendum is issued to specification no EDTS 252 Rev. 'J' for ' Harness of Under frame and Roof arrangement for LHB EOG AC-2 tier coaches' to change the scope of supply as follows:

Clause 2.0 (i) shall be read as:

2.0 Scope of supply:

- (i) Procurement of the item specified in BOM of the specification shall be from RDSO/RCF/ICF approved vendors mentioned in the latest version of the vendor directory issued by RCF/ICF/RDSO respectively, however The procurement of cables shall be done from RDSO 'approved vendors' for minimum 80% quantity of NPQ and balance 20% quantity from 'developmental vendors' as mentioned in latest version of the vendor directory issued by RDSO.

Based on the procurement of various sizes of cables from either approved or developmental sources, the cable harness shall be categorized as under:

- Category-A Cable Harness with approved sources of cables (80% min.)
- Category-B Cable Harness with developmental sources of cables (up to 20%)

Category-B type of cable harnesses may be supplied with cables procured from developmental sources however in no case category-A type shall be supplied with cables procured from developmental sources.

Firm shall maintain a record according to the above classification and offer to RITES/inspecting official for inspection in format EDF 0001 annexed with the specification.

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Corrigendum - 2

Corrigendum -2 to specification no EDTS 252 Rev J, Corr.1

This corrigendum is issued to specification no EDTS 252 Rev. 'J'Corr.1 for ' Harness of Under frame and Roof arrangement for LHB EOG AC-2 tier coaches' and the details are as follows:

The specification no. EDTS 132 Rev C, AM-4 may be read as EDTS 132 Rev C, AM-3, Corr.1.

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Corrigendum -3 to specification no EDTS 252 Rev J, Corr.2

This corrigendum is issued to specification no EDTS 252 Rev. 'J' Corr.2 for 'Harness of Under frame and Roof arrangement for LHB EOG AC-2 Tier coaches' and the details are as follows:

1. Clause 2.1 (a) : BILL OF MATERIAL

S.no. 85 in the clause no. 2.1 (a) A in the BOM added to include the QPC of 122 meters for 3x1.0 mm² (DS-4) multi-core cables 600/1000V colour wh,Br,Blk as follows:

S.NO.	DESCRIPTION	CABLE SIZE mm ²	DETAIL DRG./SPEC	QPC/ COACH	REMARKS/LOCATION
85	3X1.0 mm ² multi-core screened cables 600/1000V grade, color W,Br,Blk	3X1.0	EDTS 132 Rev 'C', AM-3,Corr.1 or latest Version	122 Mt.	Speed Sensor/Disc Brake cables

2. Clause 2.1 (b) VII & VIII :

Harness at 2.1(b) VII) & VIII) to be supplied as indicated against Speed Sensor/Disc Brake cables.

3. Clause 5.10 (a): S.no.6:

ISI marked indicated in the clause no. 5.10(a) at S.no.6 stands deleted and FRLT tapes shall be procured as per specification no. ICF/ELEC/921 Rev.0 or Latest Version from approved sources mentioned in the vendor directory issued by ICF.

4. Thin walled flexible elastomeric cables with copper conductors to be procured as per latest applicable Version of specification no. ELRS/SPEC/ELC/0019 against which the sources are approved by RDSO.
5. Conduit system for cable management to be procured as per latest applicable Version of the specification no. RDSO/PE/SPEC/AC/0138 against which sources are approved by RDSO.
6. Cable marking system, Cable Jacket system & Cable binders shall be procured as per Latest applicable specification/drawing and from approved sources in the vendor directory issued by RCF.

7. Clause no. 5.10(a) Details of Testing:

S.no. (1)g may be read as : Slippage test as per clause 7.4.6 of the RDSO spec. (two samples for size less than 25mm dia and two samples for dia more than 25mm).

8. Annexure-B:

- i) The length of harness against harness no. 46B shall be read as 19000 mm instead of 17000 mm.
- ii) The length of harness against harness for BRL i.e harness no. 54,55,56,57,58,59,60,61 shall be read as 5900 mm instead of 5700 mm.
- iii) The length of harness against harness for BRL i.e harness no. 53,54B,55B,56B,57B,58B,59B,60B,61B shall be read as 4700 mm instead of 4500 mm.
- iv) Harness no.9A deleted.

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Corrigendum -4 to specification no EDTS 252 Rev J, Corr.3

This corrigendum is issued to specification no EDTS 252 Rev. 'J'Corr.3 for ' Harness of Under frame and Roof arrangement for LHB EOG AC-2 Tier coaches' and the details are as follows:

1. Point no.1 & 2 mentioned in the corrigendum no. 3 deleted.

QPC of 122 meter 3x1.0 mm² (DS-4) multi-core cables 600/1000V colour wh,Br,Blk for speed sensor/disc brake cables deleted as these are being supplied by the disc brake suppliers.

2. Clause no. 4.0 c) is reproduced as under :

Work instructions for preparation of harness to RCF document no. EDW0003 with latest version to be followed.

3. Clause no. 4.3 a, b & c i.e. Technical staff :

Deleted, as this part has already been mentioned in the STR for manufacture of cable harness.

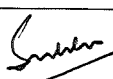
4. Clause no. 4.14: Deleted.

5. Clause no. 5.4 is reproduced as under:

Cable Management system prescribed in RDSO specification RDSO/PE/SPEC/AC/0138-2009(Latest revision) shall be inspected by M/s RITES for acceptance & routine tests at the premises of OEM (i.e. cable management system manufacturer).

6. Clause no. 5.10 a) S.no.5:

The testing parameters for copper crimping sockets i.e. crimping test and flattening tests shall stand deleted as crimping sockets shall be procured as per latest applicable specification/drawing and crimping is to be carried out after laying harness in the coach from approved sources specified in the vendor directory issued by RCF.

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Corrigendum-5 to Specification No. EDTS-252, Rev-J, Corr-1, 2, 3, 4

This corrigendum is issued to specification no. EDTS-252, Rev-J, Corr-1, 2, 3, 4 i.e. 'Ready-made Harness of Roof and Under-frame arrangement for LHB EOG AC 2 Tier Coaches' in-order to incorporate the following changes:-

2.1 (a). Bill of Material

S. N.	Description	Cable Size (in mm ²)	Detailed Drg./Spec.		Length	Remarks
			Existing	Revised		
46	4x1.5 sq.mm multi-core E-Beam Cable 600/1000V colour Wh, Br, Blk, GNYE	4 x 1.5	EDTS-132, Rev-C, Am-3, Corr-1 (DS-4)	EDTS-132, Rev-C, Am-3, Corr-1 (DS-3)	39 mt.	Pump Cables

2.1 b) Preparation/Bunching of harness:

S.No. V: Data sheet for Pump cables of size 4x1.5mm² (except control cables) shall be read as details mentioned in 2.1(a) above.

XIII. Under slung Regulated Battery Charger Cables: (Cable for indication added)

H. No.	Description	Cable Size (in mm ²)	Detailed Drg./Spec	Length (in mm)	From	To	Ferrule No.	Remarks
14C	4x1.5 sq.mm multi-core E-Beam Cable 600/1000V colour Wh, Br, Blk, GNYE	4 x 1.5	EDTS-132, Rev-C, Am-3, Corr-1 (DS-3)	15500	RBC	SBC	32 04 05.21	RBC Ok (Wh, Br)
							42 02 04.03	
							32 04 05.22	Battery Not healthy (Blk, GNYE)
							42 02 10.03	

2.2 A) Thin Walled Flexible Elastomeric Cables with Copper Conductors & Accessories:-

Item added:

S. N.	Description	Cable Size	Detail Drg./Spec.	QPC	Remarks
32A	Flexible Flame-retardant high performance polyolefin heat shrinkable tubing	-	EDML-176, Rev-0	1	Loose Supply

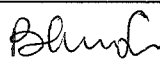
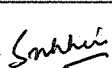
2.2 B) Note:-

Clause No. (v) shall be read as:-

In case of non availability of any specific color cable, Grey/Black color cable may be used after having prior approval from office of the PCEE/RCF and identification shall be made with colored, zero halogen fire retardant heat shrinkable sleeves of M/s **TYCO/Phoenix/Panduit/MV** or any other approved make up-to **100 mm** length.

4.0 Technical Requirements:

- e) STR No. for Preparation of Ready-made Harness shall be read as **RCF/EL/0015-2020, Rev-C.**
- f) General Requirements shall be as per **RDSO Spec. No. - RDSO/PE/O/0008-2005, Rev-0 (Code of Practice for Prevention of Fire in AC Coaches)** and fire retardant sleeve shall be provided (as per clause no. 5.4 of the specification) at the termination point of the cable.

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5.10 Table for Tests:-

Test for Harnesses at firm's premises.

S. No.	Tests	Remarks
10	Test for Rigid PVC Conduits to IS:9537 (Part-3)	Stands Deleted for Type, Routine & Acceptance test.

5.10 a) Details of Testing:-

S. No.-2 i.e. Acceptance Test for PVC Conduit to IS:9537 **Stands Deleted**.

6.0 Approvals:-

6.1 Deleted.

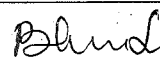
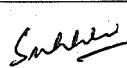
6.3 Revised as under:

"Firm supplying the Coach Harness for first time shall supply one set of coach harness for validation on coach before bulk supply".

8.0 Packing and Traceability:-

Clause No. (i) shall be read as:-

Packing of Harnesses shall be done as per Packing Instructions mentioned in the relevant PO's placed on the firm. Harnesses shall be bunched together and shall be supplied as single unit per Coach. Each harness shall be duly bunched individually and legibly marked as per details specified in the specification on it for Under-frame and Roof Arrangement.

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Corrigendum – 6 to Specification no. - EDTS 252, Rev-J, Corr-1,2,3,4,5

This corrigendum is issued to Specification no. EDTS 252, Rev. 'J', Corr-1,2,3,4,5 for 'Harness of Under frame and Roof arrangement for LHB EOG AC-2 Tier Coaches' to change the Scope of Supply as follows:

Clause 2.0 (i) shall be read as:

2.0 Scope of supply:

- (i) Procurement of the item specified in BOM of the specification shall be from RDSO/RCF/ICF approved vendors mentioned in the latest version of the vendor directory issued by RCF/ICF/RDSO respectively, however the procurement of **e-beam Cables & Cable Management System** shall be done from RDSO 'Approved Vendors' for minimum **80%** quantity of total quantity and balance quantity up-to **20%** from 'Developmental Vendors' as mentioned in latest version of the vendor directory issued by RDSO.

Based on the procurement of various sizes of **e-beam Cables & Cable Management System** from either Approved or Developmental Sources, the cable harness shall be categorized as under:

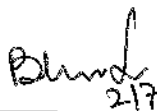
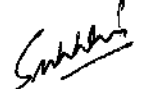
- **Category-A:** Cable Harness with Approved Source of e-beam Cables & Cable Management System (80% min.)
- **Category-B:** Cables Harness with Developmental source of e-beam Cables & Cable Management System (20% min.)

Category-B type of cable harness may be supplied with e-beam cables & cable management system procured from Developmental Sources, however in no case Category-A type shall be supplied with e-beam cables & cable management system procured from Developmental Sources.

Firm shall maintain a record according to the above classification and offer to RITES/Inspecting Official for inspection in format **EDF 0001, Ver. 2.0 (or Latest)** annexed with the specification.

Note:-

The above mentioned criteria is not applicable to Cable Management System of size NW10 & NW70 as the Approved Sources are less than three or only Developmental Sources are there. Therefore, the procurement of size NW10 & NW70 (if applicable) may be done for such sources subject to past performance, capacity, delivery requirements, quality under procurement, nature of item, outstanding order etc. to be treated as Bulk Orders.

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To be maintained by the cables harness manufacturer at his premises and to be signed by
the Inspecting official during inspection against each Purchase Order

Name of Firm :

P.O. No. :

Description :

Specification :

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Corr-7 to Specification No. EDTS-252,Rev-j,Corr-1,2,3,4,5,6

This Corrigendum is issued to specification no.EDTS-252,Rev-j,Corr-6 for "Ready-made Harness of Roof and Under-frame arrangement for LHB EOG AC 2-TIER Coaches" in order to incorporate following changes:-

Claus 2.1(a): Bill of material**A) THIN WALLED FELEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES**

Details of Item at S.No. 5,25,26,29,30,31,45 and 46 modified and 31A,31B added.

S.NO.	DESCRIPTION	CABLE SIZE mm ²	DETAIL DRG./SPEC.	QPC/COACH Previous	QPC/COACH Revised	REMARKS/L OCATION
5.	Thin walled flexible elastomeric cable with copper conductors colour "GNYE" upto 750 V.	70	ELRS/SPEC/ ELC/0019 REV.4.	7.1mt	9.6 mt	For feeder earthing
25.	Thin walled flexible elastomeric cable with copper conductors colour "WHITE" upto 750 V.	25	ELRS/SPEC/ ELC/0019 REV.4.	45mt	25 mt	Under slung RBC
26.	Thin walled flexible elastomeric cable with copper conductors colour "CHOCOLATE" upto 750 V.	25	ELRS/SPEC/ ELC/0019 REV.4.	27mt	20mt	Under slung RBC
29.	Thin walled flexible elastomeric cable with copper conductors colour "RED" upto 750 V.	6	ELRS/SPEC/ ELC/0019 REV.4.	15mt	12mt	Under slung RBC
30.	Thin walled flexible elastomeric cable with copper conductors colour "YELLOW" upto 750 V.	6	ELRS/SPEC/ ELC/0019 REV.4.	15mt	12mt	Under slung RBC
31.	Thin walled flexible elastomeric cable with copper conductors colour "BLUE" upto 750 V.	6	ELRS/SPEC/ ELC/0019 REV.4.	15mt	12mt	Under slung RBC
31A.	Thin walled flexible elastomeric cable with copper conductors colour "BLACK" upto 750 V.	6	ELRS/SPEC/ ELC/0019 REV.4.	-	12mt	Under slung RBC
31B.	Thin walled flexible elastomeric cable with copper conductors colour "GNYE" upto 750 V.	6	ELRS/SPEC/ ELC/0019 REV.4.	-	12mt	Under slung RBC

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45.	Thin walled flexible elastomeric cable with copper conductors colour "CHOCOLATE" upto 750 V.	1.5	ELRS/SPEC/ELC/0019 REV.4.	63mt	39mt	Fuse box +ve
46	4x1.5 sq.mm multi-core E-Beam Cable 600/1000V colour Wh,Br,Blk,GNYE	4x1.5	EDTS-132,Rev-C,AM-3,Corr-1 (DS-3)	54.5 mt	51 mt	Pump cables & RBC

2.1 (b). Preparation/Bunching of harness:

The preparation/bunching shall be done as per under given detail for Under Frame wiring.

III): PRE-COOLING CABLES

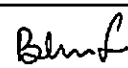
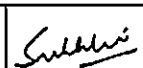
Details of Item at S.No. 3 and 3A modified.

H.No.	No. & size of cable	Colour code	Previous length(in mm)	Revised length(in mm)	Ferrules marking	Route	Remarks
3	4x25 mm ² upto 750 V	R,Y,B,Blk	10000	9000	33 01 01.01 33 01 02.01 33 01 03.01 33 01 04.01	46	Pre-cooling socket to SBC (NW-36=6M)
3A	4x25 mm ² upto 750 V	R,Y,B,Blk	24000	25000	33 01 06.01 33 01 07.01 33 01 08.01 33 01 04.02	45	Pre-cooling socket to SBC (NW36=21.5M)

VI) DC CIRCUIT CABLES

Details of Item at S.No. 6C,6D and 6F modified.

H.No.	No. & size of cable	Colour code	Previous length (in mm)	Revised length (in mm)	Ferrules marking	Route	Remarks
6C	2x1.5 mm ² upto 750 V	Ch	12000	12000	32 02 01.01 32 02 03.01	37	Bat. Fuse box +ve to SBC (NW-23=9M)
6D	1x25 mm ² upto 750 V	W	15000	10000	32 01 11.01	40	Bat.Charger to Bat. Fuse box -ve (NW-23=9M)
6F	1x10 mm ² upto 750 V	W	15000	15000	32 02 06	42	Bat. Fuse box -ve to SBC (NW-17=13M)
	2x1.5 mm ² upto 750 V	W	16000	16000	32 02 02.01 32 02 04.01	42	

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X)EARTHING CABLES

Quantity of Earthing cable to size 70 mm² upto 750 V with colour GNYE and length 1250 mm has been changed from 2 nos. to 4 nos.

XIII): UNDER SLUNG REGULATED BATTERY CHARGER CABLES

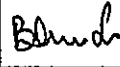
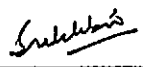
14C merged to 14B and details of Item at S.No. 14,14A and 14B has been modified

H.No.	Cable size	Colour	Ferrule No.	Length Previous (in mm)	Length Revised (in mm)	From	To	Remarks
14	25 mm ² upto 750 V	W	33 01 12.01	15000	15000	RBC	SBC	RBC TO SBC (NW-17=12M)
14A	25 mm ² upto 750 V	CH	33 01 14.01	15000	7500	RBC	SBC	RBC TO SBC (NW-17=8M)
14B	6 mm ² upto 750 V	R	33 09 01.01	15000	12000	SBC	RBC	SBC TO RBC (NW-23=10M)
	6 mm ² upto 750 V	Y	33 10 01.01	15000	12000	SBC	RBC	
	6 mm ² upto 750 V	B	33 11 01.01	15000	12000	SBC	RBC	
	6 mm ² upto 750 V	BLACK	33 12 01.01	-	12000	SBC	RBC	
	6 mm ² upto 750 V	GNYE	33 13 01.01	-	12000	SBC	RBC	
	4x1.5 sq.mm multi-core E-Beam Cable 600/1000V EDTS-132,Rev-C,AM-3,Corr-1(DS-3)	Wh Br	32 04 05.21 42 02 04.03	15500	12000	RBC	SBC	
		Blk GNYE	32 04 05.22 42 02 10.03					

Annexure-B

- Harness No. 46, 46A, 46B and 46C have been modified.

H.No.	Cable size	Colour	Ferrule no.	Existing length	Revised length
46	1.5 mm ²	Y	33 07 16 01	8000 mm	8000 mm
	1.5 mm ²	BLK	33 07 17 01	8000 mm	8000 mm
	1.5 mm ²	GNYE	33 07 18 01	8000 mm	8000 mm
46A	1.5 mm ²	Y	33 07 16 02	11000 mm	11000 mm
	1.5 mm ²	BLK	33 07 17 02	11000 mm	11000 mm
	1.5 mm ²	GNYE	33 07 18 02	11000 mm	11000 mm
46B	1.5 mm ²	Y	33 07 16 03	17000 mm	17000 mm
	1.5 mm ²	BLK	33 07 17 03	17000 mm	17000 mm
	1.5 mm ²	GNYE	33 07 18 03	17000 mm	17000 mm
46C	1.5 mm ²	Y	33 07 16 04	26000 mm	26000 mm
	1.5 mm ²	BLK	33 07 17 04	26000 mm	26000 mm
	1.5 mm ²	GNYE	33 07 18 04	26000 mm	26000 mm

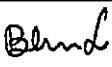
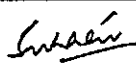
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2.2. TYPE-2: BILL OF MATERIAL LHB AC EOG 2-TIER ROOF WIRING:

A) THIN WALLED FELEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-

Cable length of Item at S.No. 7 & 17 has been modified:

S.No.	DESCRIPTION	CABLE SIZE	DETAIL DRG/SPEC	QPC/COACH PREVIOUS	QPC/COACH REVISED	REMARKS LOCATION
7.	Thin walled flexible elastomeric cable with copper conductors colour "CHOCOLATE" upto 750 V	1.5 mm ²	ELRS/SPEC/ELC/0019 REV.4	747 mt	623 mt	Inside coach
17.	PVC RIGID Conduit Dia 40 mm	-	IS:9537-83, PE,CL 5.1	160 Mt	148 Mt	Inside coach

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Corrigendum-8**Corr-8 to Specification No. EDTS-252,Rev-j,Corr-1,2,3,4,5,6,7**

This Corrigendum is issued to specification no.EDTS-252,Rev-j,Corr-7 for "Ready-made Harness of Roof and Under-frame arrangement for LHB EOG AC 2-TIER Coaches" in order to incorporate following changes:-

Annexure-B

- Harness No. 46B has been modified.

H.No.	Cable size	Colour	Ferrule no.	Existing length	Revised length
46B	1.5 mm ²	Y	33 07 16 03	17000 mm	19000 mm
	1.5 mm ²	BLK	33 07 17 03	17000 mm	19000 mm
	1.5 mm ²	GNYE	33 07 18 03	17000 mm	19000 mm

2.2. TYPE-2: BILL OF MATERIAL LHB AC EOG 2-TIER ROOF WIRING:**A) THIN WALLED FELEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-**

Cable length of Item at S.No. 2, 4 and 5 has been modified:

S.No.	DESCRIPTION	CABLE SIZE	DETAIL DRG/SPEC	QPC/COACH PREVIOUS	QPC/COACH REVISED	REMARKS LOCATION
2.	Thin walled flexible elastomeric cable with copper conductors colour "YELLOW" upto 750 V	1.5 mm ²	ELRS/SPEC/ELC/0019 REV.4	172 mt	174 mt	Inside coach
4.	Thin walled flexible elastomeric cable with copper conductors colour "BLACK" upto 750 V	1.5 mm ²	ELRS/SPEC/ELC/0019 REV.4	832 mt	834 mt	Inside coach
5.	Thin walled flexible elastomeric cable with copper conductors colour "GNYE" upto 750 V	1.5 mm ²	ELRS/SPEC/ELC/0019 REV.4	760 mt	762 mt	Inside coach

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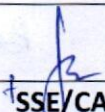
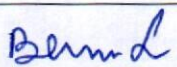
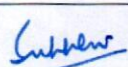
Corrigendum-9 to Specification No. EDTS-252, Rev-J, Corr-1,2,3,4,5,6,7,8

This Corrigendum is issued to Specification No. **EDTS-252, Rev-J, Corr-1 to 8** for "Harness of Under-frame and Roof Arrangement for **LHB AC EOG 2-Tier Coaches**" in order to incorporate the following changes:-

1. **Clause No. 2.1 a) : Bill of Material (for Under-frame) is modified as follows:**

A) **Thin Walled Flexible Elastomeric Cables With Copper Conductors & Accessories:-**

SN	Description	Cable Size (mm ²)	Detail Drg./Spec.	Existing QPC	Revised QPC	Remarks/ Location
41	Thin walled flexible elastomeric cables with copper conductors color 'RED' upto 750V	1.5	ELRS/SPEC/ELC/0019 (Latest)	132 mtr.	171 mtr.	Capacitor Bank (CP) & Pump Cables
42	Thin walled flexible elastomeric cables with copper conductors color 'YELLOW' upto 750V	1.5	ELRS/SPEC/ELC/0019 (Latest)	132 mtr.	171 mtr.	Capacitor Bank (CP) & Pump Cables
43	Thin walled flexible elastomeric cables with copper conductors color 'BLUE' upto 750V	1.5	ELRS/SPEC/ELC/0019 (Latest)	132 mtr.	171 mtr.	Capacitor Bank (CP) & Pump Cables
45A	Thin walled flexible elastomeric cables with copper conductors color 'GNYE' upto 750V	1.5	ELRS/SPEC/ELC/0019 (Latest)	--	39 mtr.	Pump Cables (New)
46	4x1.5mm ² multi-core e-beam cable 600/1000V color Wh,Br,Blk,GNYE	4x1.5 SQ.MM	EDTS-132, Rev-C, Am-3, Corr-1 (DS-3)	51 mtr.	12 mtr.	RBC

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2. Clause No. 2.1 b) : Preparation/Bunching of Harness:

Preparation/bunching shall be done as per under given detail for Under-frame wiring

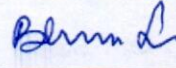
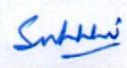
V) Pump Cables : Wiring for Pump circuits shall be revised as under:

H. No.	Nos., size and Color of Cable		Length (in mm)	Ferrule Marking	Route	Remarks
	Existing	Revised				
5	4x1.5 mm ² multicore (DS-3) Color (Wh, Br, Blk, GNYE)	1.5 mm ² , 4 nos. e-beam cable upto 750V Color (R,Y,B,GNYE)	19500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.02	50	Pump Cables/ Controller Cables (NW-29= 15.5 M)
	4x1.5 mm ² multicore (DS-3) Color (Wh, Br, Blk, GNYE)	1.5 mm ² , 4 nos. e-beam cable upto 750V Color (R,Y,B,GNYE)	19500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.02		
	2x1.0 mm ² multicore (DS-4) (Wh, Br)	Same	19500	33 08 10.01, 33 08 11.01		
	2x1.0 mm ² multicore (DS-4) (Wh, Br)	Same	19500	33 08 10.01, 33 08 11.01		No Change

3. Clause No. 2.2 : TYPE-2: Bill of Material (BOM) for LHB AC EOG 2-Tier Roof Wiring

A) Thin Walled Flexible Elastomeric Cables With Copper Conductors & Accessories:-

SN	Description	Cable Size	Detail Drg./Spec.	Existing QPC	Revised QPC	Remarks/ Location
1	Thin walled flexible elast. cable with Copper cond. color "RED" upto 750V.	1.5mm ²	ELRS/SPEC/ELC/ 0019 (Latest)	638 mtr.	635.6 mtr.	Inside coach
2	Thin walled flexible elast. cable with Copper cond. color "YELLOW" upto 750V.	1.5mm ²	ELRS/SPEC/ELC/ 0019 (Latest)	174 mtr.	181.6 mtr.	Inside coach
3	Thin walled flexible elast. cable with Copper cond. color "BLUE" upto 750V.	1.5mm ²	ELRS/SPEC/ELC/ 0019 (Latest)	156 mtr.	160.7 mtr.	Inside coach

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4	Thin walled flexible elast. cable with Cu. Conductors color "BLACK" upto 750V.	1.5mm ²	ELRS/SPEC/ELC/0019 (Latest)	834 mtr.	843.9 mtr.	Inside coach
5	Thin walled flexible elast. cable with Cu. conductors color "GNYE" upto 750V.	1.5mm ²	ELRS/SPEC/ELC/0019 (Latest)	762 mtr.	781.7 mtr.	Inside coach
6	Thin walled flexible elast. cable with Cu. conductors color "WHITE" upto 750V.	1.5mm ²	ELRS/SPEC/ELC/0019 (Latest)	500 mtr.	481.7 mtr.	Inside coach
7	Thin walled flexible elast. cable with Cu. conductors color "CHOC." upto 750 V.	1.5mm ²	ELRS/SPEC/ELC/0019 (Latest)	623 mtr.	604.7 mtr.	Inside coach
21	Cable Jacket System	--	EDTS-138, Corr-1,2	75 mtr.	100 mtr.	Item-5

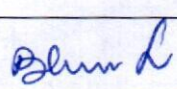
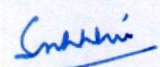
B) Conduit System for Cable Management & Accessories (Roof Wiring) :

QPC of Polyamide conduits and accessories revised due segregation of DC +VE & -VE wiring is as under:

SN	Description	Spec./Drg. No.	Table	S.No.	Existing QPC	Revised QPC
33	Polyamide Flexible Corrugated Conduit, NW-12	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-1	2	80 mtr.	160 mtr.
37	Tube Clamp, NW-12		A-8	2	09 Nos.	18 Nos.
40	4-way socket coupler (T-Joint) for Ø20 mm PVC rigid conduit	SKED-947	-	-	-	36 Nos. (New Added)

Note:-

1. Conduit Arrangement for Jumper & Branch wiring shall be made as per drawing no. **SKED-951**.
2. Wiring for Lavatory, AEL, WC Light, PACIL circuits etc. on the both sides also be properly segregated into 02 nos. different Polyamide flexible conduits and provisioning of Cable Jackets (i.e. 110V DC +VE cables in one conduit and 110V DC -VE/Earth Cables in other).
3. The Jumper wiring for 110V AC Mobile Charging Circuit in Corridor side shall be laid in NW-12 Polyamide Flexible Conduit.

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4. Coach Alteration Instruction (CAI) Sheet to CAI No. ED/CAI/033, Dated:- 02.04.2024 for "Segregation of 110V DC (+VE) and (-VE) at all levels, and provision of Cage Clamp Terminals with Glass fuses for Enhanced Fire Safety in LHB EOG AC 2T & 3T Coaches" shall be referred.

4. Clause No. 5.10 : Table for Tests:

Test mentioned at SN-10 i.e. Test for Rigid PVC Conduits to IS: 9537 (Part-3) which was deleted earlier in Corr-5 of the specification is hereby included and reproduced as under:

Test for Harnesses at firm's premises:

SN	Tests	Type Test	Routine Test	Acceptance Test
10	Test for Rigid PVC Conduits to IS:9537 (Part-3)	YES	YES	YES

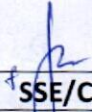
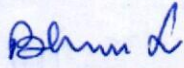
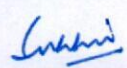
5. Clause No. 5.10 a) Details of Testing

Tests mentioned at SN-2 i.e. Acceptance Tests for PVC Conduit to IS: 9537 which was deleted in Corr-5 of the specification is hereby added and reproduced as follows:

2	Acceptance test for PVC conduit to IS:9537		
SN	Details of Testing	Remarks of Rites Inspecting official	
a	Checking of dimensions as clause 7 of IS.		
b	Bending test (at room temperature) as per clause 9.2 of IS spec.		
c	Compression test as per cl. 9.3 of IS spec (5 sample in prototype and 2 samples in acceptance /routine)		
d	Collapse test as per cl. 9.5 of IS spec (One sample)		
e	Resistance to burning as per cl. 11 of IS spec. (2 samples)		
f	Electrical characteristics as per cl. 12 of IS spec.		

6. Clause No. 8.0: Packing and Traceability

Reference **Clause 8.0(i)** for Packing instructions Stands Deleted.

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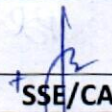
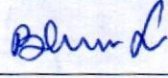
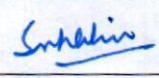
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Corrigendum-9 (शुद्धिपत्र सं-9)

Annexure-B

1. Jumper Wiring shall be modified as under:-

Har No	CABLE SIZE	COLO R	FERRULE NO.	LENGTH (in mm)	FROM		TO		REMARKS
					LOC.	TERM.	LOC.	TERM.	
JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-1 TO CABIN-2)									
2	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X1	112	B1X2	1	FLD-2
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X1	113	B1X2	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X1	95	B1X2	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X1	99	B1X2	4	
	1.5 SQ.MM	B	FLS 52 01 04	2250	B1X1	114	B1X2	5	FLS-1
	1.5 SQ.MM	BLK	FLS 52 01 05	2250	B1X1	115	B1X2	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X1	116	B1X2	7	NL-2
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X1	117	B1X2	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X1	110	B1X2	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X1	PE	B1X2	11	ALARM INDICATION
JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-2 TO CABIN-3)									
3	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X2	112	B1X3	1	FLD-3
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X2	113	B1X3	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X2	95	B1X3	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X2	99	B1X3	4	
	1.5 SQ.MM	B	FLE 52 01 04	2250	B1X2	114	B1X3	5	FLE-2
	1.5 SQ.MM	BLK	FLE 52 01 05	2250	B1X2	115	B1X3	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X2	116	B1X3	7	NL-3
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X2	117	B1X3	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X2	110	B1X3	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X2	PE	B1X3	11	ALARM INDICATION
JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-3 TO CABIN-4)									
4	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X3	112	B1X4	1	FLD-4
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X3	113	B1X4	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X3	95	B1X4	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X3	99	B1X4	4	
	1.5 SQ.MM	B	FLS 52 01 04	2250	B1X3	114	B1X4	5	FLS-2
	1.5 SQ.MM	BLK	FLS 52 01 05	2250	B1X3	115	B1X4	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X3	116	B1X4	7	NL-4
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X3	117	B1X4	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X3	110	B1X4	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X3	PE	B1X4	11	ALARM INDICATION

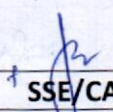
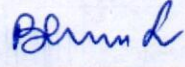
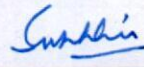
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JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-4 TO CABIN-5)									
5	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X4	112	B1X5	1	FLD-5
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X4	113	B1X5	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X4	95	B1X5	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X4	99	B1X5	4	
	1.5 SQ.MM	B	FLE 52 01 04	2250	B1X4	114	B1X5	5	FLE-3
	1.5 SQ.MM	BLK	FLE 52 01 05	2250	B1X4	115	B1X5	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X4	116	B1X5	7	NL-5
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X4	117	B1X5	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X4	110	B1X5	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X4	PE	B1X5	11	ALARM INDICATION
JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-5 TO CABIN-6)									
6	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X5	112	B1X6	1	FLD-6
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X5	113	B1X6	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X5	95	B1X6	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X5	99	B1X6	4	
	1.5 SQ.MM	B	FLS 52 01 04	2250	B1X5	114	B1X6	5	FLS-3
	1.5 SQ.MM	BLK	FLS 52 01 05	2250	B1X5	115	B1X6	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X5	116	B1X6	7	NL-6
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X5	117	B1X6	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X5	110	B1X6	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X5	PE	B1X6	11	ALARM INDICATION
JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-6 TO CABIN-7)									
7	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X6	112	B1X7	1	FLD-7
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X6	113	B1X7	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X6	95	B1X7	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X6	99	B1X7	4	
	1.5 SQ.MM	B	FLE 52 01 04	2250	B1X6	114	B1X7	5	FLE-4
	1.5 SQ.MM	BLK	FLE 52 01 05	2250	B1X6	115	B1X7	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X6	116	B1X7	7	NL-7
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X6	117	B1X7	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X6	110	B1X7	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X6	PE	B1X7	11	ALARM INDICATION
JUMPER WIRING FOR LIGHTING/ALARM PULL (CABIN-7 TO CABIN-8)									
8	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X7	112	B1X8	1	FLD-8
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X7	113	B1X8	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X7	95	B1X8	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X7	99	B1X8	4	
	1.5 SQ.MM	B	FLS 52 01 04	2250	B1X7	114	B1X8	5	FLS-4
	1.5 SQ.MM	BLK	FLS 52 01 05	2250	B1X7	115	B1X8	6	

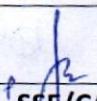
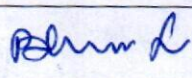
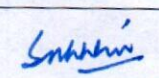
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Corrigendum-9 (शुद्धिपत्र सं.-9)

	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X7	116	B1X8	7	NL-8
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X7	117	B1X8	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X7	110	B1X8	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X7	PE	B1X8	11	ALARM INDICATION
JUMPER WIRING FOR LIGHTING/ALARM PULL(CABIN-8 TO CABIN-9)									
9	1.5 SQ.MM	R	FLD 52 01 01	2250	B1X8	112	B1X9	1	FLD-9
	1.5 SQ.MM	BLK	FLD 52 01 02	2250	B1X8	113	B1X9	2	
	1.5 SQ.MM	CH	AL 32 04 05	2250	B1X8	95	B1X9	3	ALARM
	1.5 SQ.MM	W	AL 43 01 02	2250	B1X8	99	B1X9	4	
	1.5 SQ.MM	B	FLE 52 01 04	2250	B1X8	114	B1X9	5	FLE-5
	1.5 SQ.MM	BLK	FLE 52 01 05	2250	B1X8	115	B1X9	6	
	1.5 SQ.MM	CH	NL 52 03 03	2250	B1X8	116	B1X9	7	NL-9
	1.5 SQ.MM	W	NL 52 03 04	2250	B1X8	117	B1X9	8	
	1.5 SQ.MM	GNYE	52 01 03	2250	B1X8	110	B1X9	9,10	LIGHTING EARTH
	1.5 SQ.MM	BLK	43 01 03	2250	B1X8	PE	B1X9	11	ALARM INDICATION
JUMPER (CABIN-1 TO CABIN-2)									
28A	1.5 SQ.MM	B	CS 52 01 01	2250	B1X1	12	B1X2	12	CS-3&4 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X1	13	B1X2	13	CS-5&6 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X1	14	B1X2	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X1	15	B1X2	15	E
JUMPER (CABIN-2 TO CABIN-3)									
28B	1.5 SQ.MM	B	CS 52 01 01	2250	B1X2	12	B1X3	12	CS-7&8 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X2	13	B1X3	13	CS-9&10 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X2	14	B1X3	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X2	15	B1X3	15	E
JUMPER (CABIN-3 TO CABIN-4)									
28C	1.5 SQ.MM	B	CS 52 01 01	2250	B1X3	12	B1X4	12	CS-11&12 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X3	13	B1X4	13	CS-13&14(P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X3	14	B1X4	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X3	15	B1X4	15	E
JUMPER (CABIN-4 TO CABIN-5)									
28D	1.5 SQ.MM	B	CS 52 01 01	2250	B1X4	12	B1X5	12	CS-15&16 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X4	13	B1X5	13	CS-17&18 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X4	14	B1X5	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X4	15	B1X5	15	E
JUMPER (CABIN-5 TO CABIN-6)									
28E	1.5 SQ.MM	B	CS 52 01 01	2250	B1X5	12	B1X6	12	CS-19&20 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X5	13	B1X6	13	CS-21&22 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X5	14	B1X6	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X5	15	B1X6	15	E
JUMPER (CABIN-6 TO CABIN-7)									
28F	1.5 SQ.MM	B	CS 52 01 01	2250	B1X6	12	B1X7	12	CS-23&24 (P)

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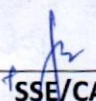
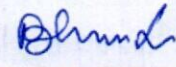
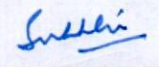
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Corrigendum-9 (शुद्धिपत्र सं.-9)

	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X6	13	B1X7	13	CS-25&26 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X6	14	B1X7	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X6	15	B1X7	15	E
JUMPER (CABIN-7 TO CABIN-8)									
28G	1.5 SQ.MM	B	CS 52 01 01	2250	B1X7	12	B1X8	12	CS-27&28 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X7	13	B1X8	13	CS-29&30 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X7	14	B1X8	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X7	15	B1X8	15	E
JUMPER (CABIN-8 TO CABIN-9)									
28H	1.5 SQ.MM	B	CS 52 01 01	2250	B1X8	12	B1X9	12	CS-31&32 (P)
	1.5 SQ.MM	Y	CS 52 01 02	2250	B1X8	13	B1X9	13	CS-33&34 (P)
	1.5 SQ.MM	BLK	CS 52 01 04	2250	B1X8	14	B1X9	14	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2250	B1X8	15	B1X9	15	E

- 2. Harness No. 19A,19B, 20A,20B,21A,21B, 22A,22B,23A,23B,24A,24B,25A,25B,26A,26B,27A & 27B is modified as follows:-**

Har No	CABLE SIZE	COLOR	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOC.	TERM.	LOC.	TERM.	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-1)									
19A	1.5 SQ.MM	B	FLE 52 01 04	5000	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	4500	B1X1	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	4500	B1X1	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X1	6	B9E1	2	
19B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X1	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X1	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X1	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X1	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-2)									
20A	1.5 SQ.MM	R	FLS 52 01 01	5000	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	4500	B1X2	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	4500	B1X2	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X2	6	B9E1	2	
20B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X2	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X2	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X2	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X2	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-3)									
21A	1.5 SQ.MM	B	FLE 52 01 04	5000	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	4500	B1X3	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	4500	B1X3	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X3	6	B9E1	2	

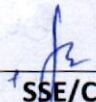
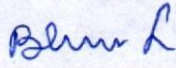
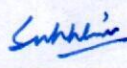
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Corrigendum-9 (शुद्धिपत्र सं.-9)

21B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X3	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X3	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X3	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X3	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-4)									
22A	1.5 SQ.MM	R	FLS 52 01 01	5000	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	4500	B1X4	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	4500	B1X4	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X4	6	B9E1	2	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-5)									
22B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X4	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X4	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X4	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X4	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-6)									
23A	1.5 SQ.MM	B	FLE 52 01 04	5000	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	4500	B1X5	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	4500	B1X5	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X5	6	B9E1	2	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-7)									
23B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X5	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X5	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X5	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X5	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-8)									
24A	1.5 SQ.MM	R	FLS 52 01 01	5000	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	4500	B1X6	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	4500	B1X6	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X6	6	B9E1	2	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-9)									
24B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X6	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X6	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X6	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X6	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-10)									
25A	1.5 SQ.MM	B	FLE 52 01 04	5000	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	4500	B1X7	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	4500	B1X7	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X7	6	B9E1	2	

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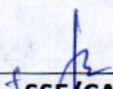
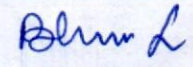
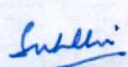
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Corrigendum-9 (शुद्धिपत्र सं.-9)

25B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X7	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X7	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X7	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X7	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-8)									
26A	1.5 SQ.MM	R	FLS 52 01 01	5000	52S2	2	B8E1	1	FLS
	1.5 SQ.MM	BLK	FLS 52 01 02	4500	B1X8	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLS 52 01 03	4500	B1X8	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X8	6	B9E1	2	
26B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X8	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X8	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X8	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X8	9	43S3	PE	
HARNESS UPTO LIGHTS/LIMIT SWITCHES (CABIN-9)									
27A	1.5 SQ.MM	B	FLE 52 01 04	5000	52S2	2	B8E1	1	FLE
	1.5 SQ.MM	BLK	FLE 52 01 05	4500	B1X9	4	B8E1	2	
	1.5 SQ.MM	GNYE	FLE 52 01 03	4500	B1X9	11	B8E1	PE	
	1.5 SQ.MM	CH	NL 52 03 03	5000	52S3	2	B9E1	1	NL
	1.5 SQ.MM	W	NL 52 03 04	4500	B1X9	6	B9E1	2	
27B	1.5 SQ.MM	CH	AL 32 04 05	1000	B1X9	7	43S3	1	LS (PE wire added)
	1.5 SQ.MM	W	AL 43 01 02	1000	B1X9	8	43S3	2	
	1.5 SQ.MM	BLK	AL 43 01 03	1000	B1X9	13	43S3	3	
	1.5 SQ.MM	GNYE	AL 43 01 04	1000	B1X9	9	43S3	PE	

3. Switch Drops for Mobile Charging Sockets (Cabin Side) is modified as follows:-

Har No	CABLE SIZE	COLO R	FERRULE NO.	LENGTH	FROM		TO		REMARKS
					LOC.	TERM.	LOC.	TERM.	
30B	1.5 SQ.MM	B	CS 52 01 01	2000	B1X2	12	CS-3	P	CS-3
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X2	14	CS-3	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X2	15	CS-3	E	E
To be cut & looped at CS-4									
30C	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X2	13	CS-5	P	CS-5
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X2	14	CS-5	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X2	15	CS-5	E	E
To be cut & looped at CS-6									
30D	1.5 SQ.MM	B	CS 52 01 01	2000	B1X3	12	CS-7	P	CS-7
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X3	14	CS-7	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X3	15	CS-7	E	E
To be cut & looped at CS-8									
30E	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X3	13	CS-9	P	CS-9
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X3	14	CS-9	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X3	15	CS-9	E	E

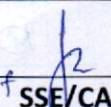
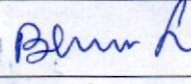
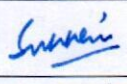
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To be cut & looped at CS-10									
30F	1.5 SQ.MM	B	CS 52 01 01	2000	B1X4	12	CS-11	P	CS-11
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X4	14	CS-11	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X4	15	CS-11	E	E
To be cut & looped at CS-12									
30G	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X4	13	CS-13	P	CS-13
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X4	14	CS-13	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X4	15	CS-13	E	E
To be cut & looped at CS-14									
30H	1.5 SQ.MM	B	CS 52 01 01	2000	B1X5	12	CS-15	P	CS-15
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X5	14	CS-15	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X5	15	CS-15	E	E
To be cut & looped at CS-16									
30I	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X5	13	CS-17	P	CS-17
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X5	14	CS-17	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X5	15	CS-17	E	E
To be cut & looped at CS-18									
30 J	1.5 SQ.MM	B	CS 52 01 01	2000	B1X6	12	CS-19	P	CS-19
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X6	14	CS-19	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X6	15	CS-19	E	E
To be cut & looped at CS-20									
30K	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X6	13	CS-21	P	CS-21
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X6	14	CS-21	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X6	15	CS-21	E	E
To be cut & looped at CS-22									
30L	1.5 SQ.MM	B	CS 52 01 01	2000	B1X7	12	CS-23	P	CS-23
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X7	14	CS-23	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X7	15	CS-23	E	E
To be cut & looped at CS-24									
30M	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X7	13	CS-25	P	CS-25
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X7	14	CS-25	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X7	15	CS-25	E	E
To be cut & looped at CS-26									
30 N	1.5 SQ.MM	B	CS 52 01 01	2000	B1X8	12	CS-27	P	CS-27
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X8	14	CS-27	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X8	15	CS-27	E	E
To be cut & looped at CS-28									
30O	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X8	13	CS-29	P	CS-29
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X8	14	CS-29	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X8	15	CS-29	E	E
To be cut & looped at CS-30									
30P	1.5 SQ.MM	B	CS 52 01 01	2000	B1X9	12	CS-31	P	CS-31
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X9	14	CS-31	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X9	15	CS-31	E	E

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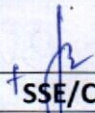
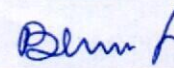
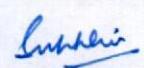
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To be cut & looped at CS-32									
30Q	1.5 SQ.MM	Y	CS 52 01 02	2000	B1X9	13	CS-33	P	CS-33
	1.5 SQ.MM	BLK	CS 52 01 04	2000	B1X9	14	CS-33	N	N
	1.5 SQ.MM	GNYE	CS 52 01 05	2000	B1X9	15	CS-33	E	E
To be cut & looped at CS-34									

4. Harness No. 47 and 47A has been modified as follow:

H. No.	Cable size	Color	Ferrule No.	Length	From		To		Remarks
					Loc.	Term.	Loc.	Term.	
47	1.5 SQ.MM	Y	52 02 07.01	5000	+S1X1	112	+B39E1	1	PACIL-1
	1.5 SQ.MM	BLK	52 02 08.01	5000	+S1X1	113	+B39E1	2	
	1.5 SQ.MM	GNYE	43 02 PE.27	5000	+S1X1	PE	+B39E1	PE	
47A	1.5 SQ.MM	Y	52 02 07.02	8000	+S1X1	112	+B40E1	1	PACIL-2
	1.5 SQ.MM	BLK	52 02 08.02	8000	+S1X1	113	+B40E1	2	
	1.5 SQ.MM	GNYE	43 02 PE.28	8000	+S1X1	PE	+B40E1	PE	

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