

Guidance

G3185

Battery Schoma conversion manual

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Contents

1	Purpose	3
1.1	Exclusions	3
1.2	Compliance	3
2	Scope	3
3	New Component Locations	4
4	Controls	8
4.1	Control Desk	8
4.2	New Controls	10
5	Additional Controls	11
6	Display Screens	13
6.1	Screen 1	13
6.2	Driver Information Screen	14
7	Battery	14
7.1	Battery Discharge Indicator	15
7.2	Battery Chargers	16
7.3	Hydrogen Gas Monitor	16
7.4	Regenerative Braking	16
8	Pneumatics	17
9	Air Conditioning	18
10	Driving the Locomotive	20
11	Towing the Locomotive	21
12	Specifications	21
13	Background	23
14	Safety considerations	24

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Page 1 of 26

14.1 Environmental considerations..... 24

15 Person accountable for the document 25

16 Abbreviations 25

17 Document history 26

18 References 26

1 Purpose

The purpose of this Guidance is to familiarise staff with the recently converted Schoma locomotives.

1.1 Exclusions

All systems and items of equipment previously installed in the diesel locomotive and retained for use in the converted locomotive are excluded from the maintenance detailed within this manual. Similarly those items of equipment which are in current use elsewhere within the London Underground network and already have proscribed servicing periods and procedures are omitted.

The following items of equipment are not covered by this manual. Details of the relevant servicing periods and methods can be found within the existing Schoma Diesel Locomotive manual or other current London Underground documentation.

- Shoe Gear
- Sleet Brushes
- Sleet Brush and Shoe Gear Retraction
- Shore Supply
- Control Battery
- Earth Bonding
- Air Conditioning
- Gearboxes
- Wheels
- Axles, bearings & speed sensors
- KrausMaffei Control System
- Train Based Transmission System (TBTC) System
- Lighting Systems
- Audible Warning System
- Existing pneumatic circuits
- Buffer couplings

1.2 Compliance

All replacement systems, assemblies and units are manufactured, installed onto the locomotive frame and operate in accordance with the relevant standards applicable to London Underground equipment in force at the time of assembly.

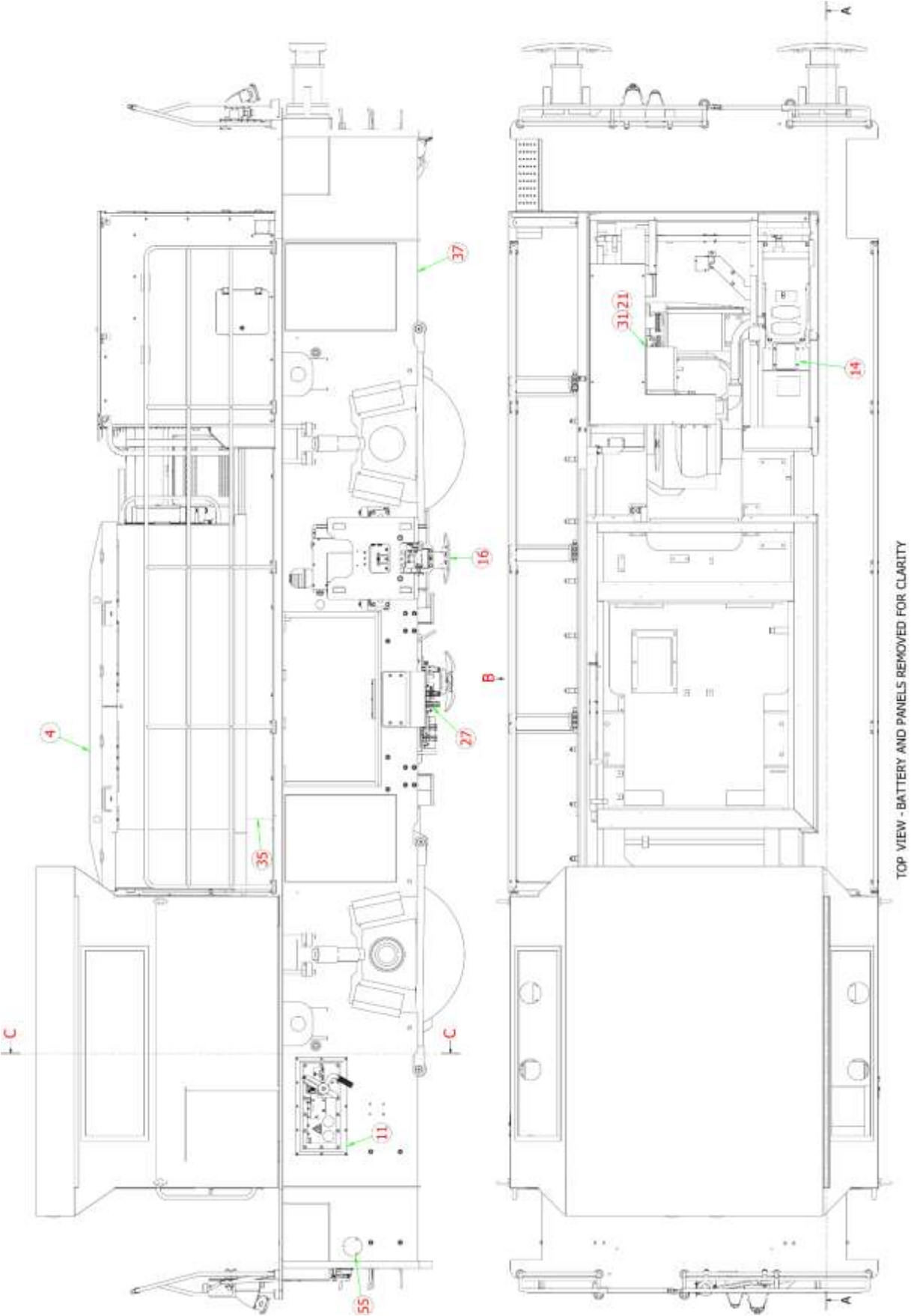
2 Scope

This document is applicable to the Schoma locomotives that are maintained by TransPlant.

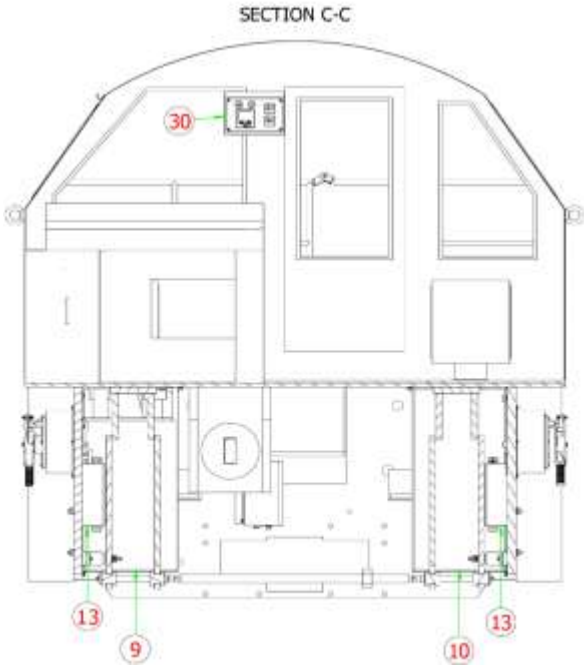
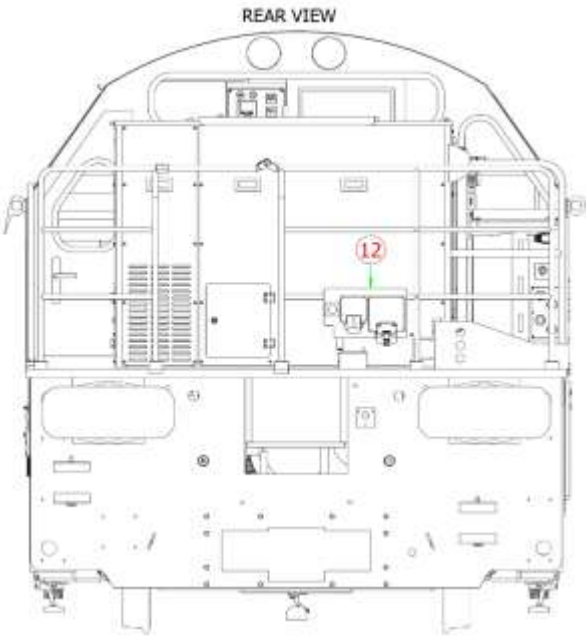
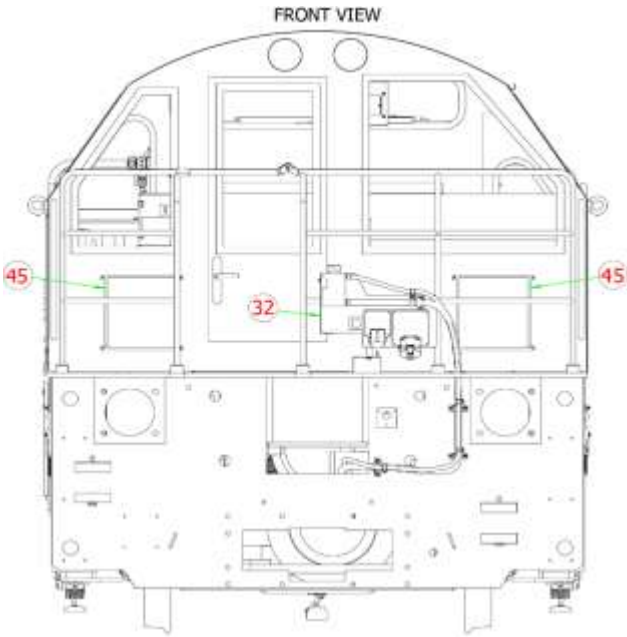
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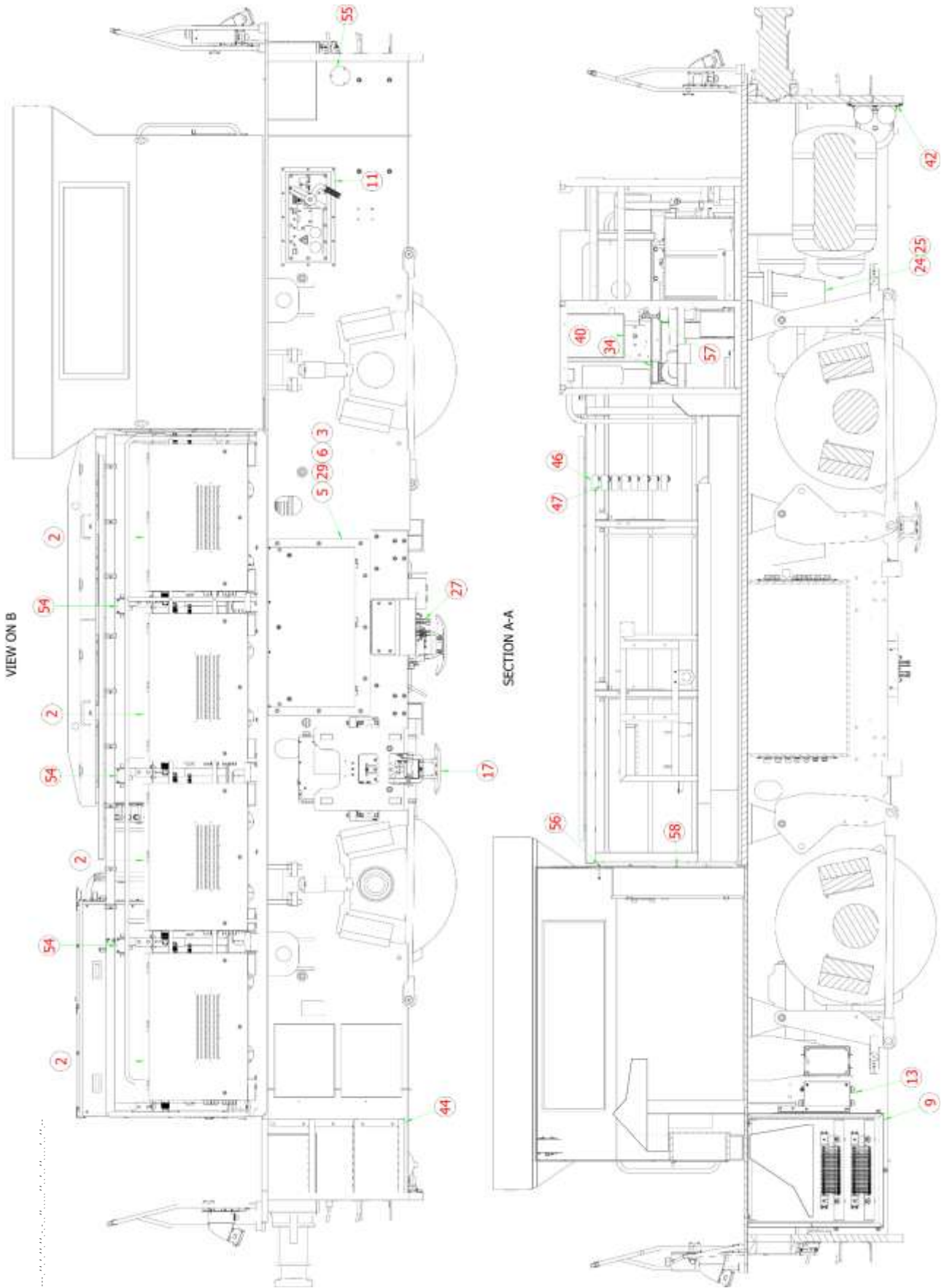
Page 3 of 26

3 New Component Locations



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Page 4 of 26





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Page 6 of 26

Item	Description	Item	Description
1	Motor Frame Assembly	2	Battery Charger/Power Supply Unit 30 kW
3	Contactor Cubicle Assembly	4	Battery Box Arrangement
5	Contactor Box Lid Assembly	6	Inverter Backplate Assembly
7	Supply Contactor Cubicle Assembly	8	Air Conditioning Motor Sub-Assembly
9	Nearside Resistor Sub-Assembly	10	Offside Resistor Sub-Assembly
11	Shore Supply Assembly	12	Connector Plate Assembly
13	Supply Fuse Box Assembly	14	Compressor Assembly
15	Air Conditioning Pulley Guard	16	Positive Shoe Beam Assembly – Near Side
17	Positive Shoe Beam Assembly – Off Side	18	Negative Shoe Beam Assembly
19	Charger Fusebox Assembly	20	Supply Filter Cubicle Assembly
21	Auxiliary Fusebox Assembly	22	Positive Fusebox Assembly
23	Negative Fusebox Assembly	24	Torque Arm Bracket
25	Torque Reaction Arm	26	Negative Shoe Splash Guard
27	Sleet Brush Arrangement	28	PLC Cubicle Assembly
29	DCDC Backplate Assembly	30	Driver Display Assembly
31	Mounting Plate	32	Heater Installation
33	Earth Leakage Cubicle Assembly	34	Air Filter Bracket
35	Locomotive Deck Frame Arrangement	36	Cab Cubicle Assembly
37	Frame Modifications	38	Driver's Console Assembly
39	Air Arrangement	40	Isolation Switch Assembly
41	Resistor Assembly	42	Air Tank Plate Assembly
43	Deck Tray Assembly	44	Side Step Assembly
45	Mesh Cover Assembly	46	Plug Red - 500A with 90° Backshell
47	Plug Black - 500A with 90° Backshell	48	Circuit Breaker – 900V DC 1000A
49	Inductor Cubicle Assembly	50	Gland Plate Assembly
51	Gland Plate Assembly	52	Gland Plate Assembly
53	Wiring Assembly	54	Terminal Junction Box Assembly
55	Cover Assembly	56	Cover Plate Assembly
57	Belt Tensioner Assembly	58	Seal Assembly

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Page 7 of 26

4 Controls

This locomotive uses two Programmable Logic Controller (PLC) Controllers. The first controller is the original PLC fitted during initial manufacture. The second consists of qty 5 Mobile Vehicle PLC units which are linked together and interfaced with the original PLC. These PLCs are the interface between the Control Panel and the locomotive.

4.1 Control Desk

The following table lists the indicators and controls which have been changed on the driver's control desk.

No	Previous	New	New Function
1	Alternator Fault Light	Battery Charge Fault	Four battery chargers supply the power necessary to each charge 25% of the cells within the battery. The battery charge fault indicator will illuminate if the PLC fails to receive a charging signal from all of the battery charger circuits. Will flash when Battery Charge switch is set the Charge to show battery is undergoing an equalisation charge.
2	Fire/Circuit Test Light	Earth Leakage	Illuminates when the master loco earth leakage is triggered
3	Remote Fire Light	Remote Earth Leakage	Illuminates when the slave loco earth leakage is triggered
4	Engine Fault Light	Traction Power	(Now blue) Illuminates to show that external power (3rd/4th Rail or Shore Supply) is present on the locomotive and the Traction Mode switch is set to TRACTION
5	Engine Start	Traction Motor Enable	Enables the traction motor drive
6	Engine Stop All Locos	Traction Motor Disable	Disables the traction motor drive in both



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Page 8 of 26