

B-10 Mobile LED



Installation & maintenance manual

R9855510

R5976956/03
19/06/2007

BARCO

Visibly yours

Barco nv Events

Noordlaan 5, B-8520 Kurne

Phone: +32 56.36.89.70

Fax: +32 56.36.88.24

E-mail: sales.events@barco.com

Visit us at the web: www.barco.com

Printed in Belgium

Changes

Barco provides this manual 'as is' without warranty of any kind, either expressed or implied, including but not limited to the implied warranties or merchantability and fitness for a particular purpose. Barco may make improvements and/or changes to the product(s) and/or the program(s) described in this publication at any time without notice.

This publication could contain technical inaccuracies or typographical errors. Changes are periodically made to the information in this publication; these changes are incorporated in new editions of this publication.

Copyright ©

All rights reserved. No part of this document may be copied, reproduced or translated. It shall not otherwise be recorded, transmitted or stored in a retrieval system without the prior written consent of Barco.

Guarantee and Compensation

Barco provides a guarantee relating to perfect manufacturing as part of the legally stipulated terms of guarantee. On receipt, the purchaser must immediately inspect all delivered goods for damage incurred during transport, as well as for material and manufacturing faults Barco must be informed immediately in writing of any complaints.

The period of guarantee begins on the date of transfer of risks, in the case of special systems and software on the date of commissioning, at latest 30 days after the transfer of risks. In the event of justified notice of complaint, Barco can repair the fault or provide a replacement at its own discretion within an appropriate period. If this measure proves to be impossible or unsuccessful, the purchaser can demand a reduction in the purchase price or cancellation of the contract. All other claims, in particular those relating to compensation for direct or indirect damage, and also damage attributed to the operation of software as well as to other services provided by Barco, being a component of the system or independent service, will be deemed invalid provided the damage is not proven to be attributed to the absence of properties guaranteed in writing or due to the intent or gross negligence or part of Barco.

If the purchaser or a third party carries out modifications or repairs on goods delivered by Barco, or if the goods are handled incorrectly, in particular if the systems are commissioned operated incorrectly or if, after the transfer of risks, the goods are subject to influences not agreed upon in the contract, all guarantee claims of the purchaser will be rendered invalid. Not included in the guarantee coverage are system failures which are attributed to programs or special electronic circuitry provided by the purchaser, e.g. interfaces. Normal wear as well as normal maintenance are not subject to the guarantee provided by Barco either.

The environmental conditions as well as the servicing and maintenance regulations specified in the this manual must be complied with by the customer.

Trademarks

Brand and product names mentioned in this manual may be trademarks, registered trademarks or copyrights of their respective holders. All brand and product names mentioned in this manual serve as comments or examples and are not to be understood as advertising for the products or their manufactures.

TABLE OF CONTENTS

1. Safety instructions	3
1.1 General instructions	3
1.2 Important Safety instructions	4
1.3 Safety instructions for LED screen setup	4
1.4 Safety instruction when driving the trailer	4
1.5 Important Warnings	5
1.6 Specific warnings for diesel-fueled generator	5
1.7 Specific warning for the jockey wheel	5
2. System Overview	9
2.1 Introduction	9
2.2 B-10 Mobile LED tiles	9
2.2.1 Functionality	9
2.2.2 SLite 10 XP specifications	10
2.2.3 Dimensions SLite XP tile	11
2.2.4 SLite tile input/output ports	11
2.3 LED Pro	12
2.3.1 Functionality	12
2.3.2 LED-PRo features	13
2.4 B-10 Mobile LED trailer	13
2.4.1 Functionality	13
2.4.2 Dimensions	14
2.5 B-10 Mobile LED generator	14
2.5.1 Introduction	14
2.5.2 Components	15
2.5.3 Control panel	16
2.5.4 Starting and using the generator	17
2.5.5 Stopping the generator	18
2.5.6 About cooling the generator	18
2.5.7 Protections	18
2.5.8 Maintenance	19
2.5.9 Safety for the user	19
2.5.10 Spare parts generator	19
3. Setup of the B-10 Mobile LED	21
3.1 Installation of the B-10 Mobile LED	21
3.2 Powering the B-10 Mobile LED	21
3.3 Extending the LED display	22
3.4 Rotating the LED display	24
3.5 Move down the LED Display	24
3.6 Preparing for departure	25
4. Maintenance, Service	27
4.1 Service and maintenance table	27
4.2 Service and Maintenance of the Generator	29
A. Drawings B10 trailer	37
A.1 Electrical drawings	37

1. SAFETY INSTRUCTIONS

Overview

- General instructions
- Important Safety instructions
- Safety instructions for LED screen setup
- Safety instruction when driving the trailer
- Important Warnings
- Specific warnings for diesel-fueled generator
- Specific warning for the jockey wheel

1.1 General instructions

Caution

Setup of the B-10 Mobile LED should be performed only after you are thoroughly familiar with all of the proper safety checks and setup instructions. To do otherwise increases the risk of hazards and injury to the user.

Do not modify and/or replicate any component. Barco uses specific materials and manufacturing processes in order to achieve mechanical strength of the trailer and hydraulic mast. Consult Barco for assistance with custom applications.

Always follow Barco setup instructions. Contact Barco if you should have any question regarding the safety of an application.

The manufacturer assumes no liability for incorrect, inadequate, irresponsible or unsafe use of systems.

Product care

Barco products must be used in a manner consistent with their design and inspected on a routine basis for security, wear, deformation, corrosion and any other circumstances that may affect the proper working of the B-10 Mobile LED.

Barco recommends inspections at regular intervals for the B-10 Mobile LED. If a part of the B-10 Mobile LED is found to have damage, it must be removed for service or replaced immediately.

Under no circumstances are Barco parts repairable by anyone other than Barco.

Owner's record

The part number and serial number are printed on a labels which are stuck on the respective parts. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Barco custom service engineer regarding this product.

Name	Part number	Serial number	Supplier

1.2 Important Safety instructions

Instructions:

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- IMPORTANT, plug holder clamps must be locked firmly on all controller units and power boxes to prevent the possible ingress of fluids or solid particles. Replace damaged clamps immediately.
- Clean only with materials or chemicals that are inert, nonabrasive, noncorrosive and non-marking. Consult the manufacturer for further advice should any doubts exist regarding any cleaning procedure.
- Do not block ventilation openings. Install in accordance with the manufacturers instructions.
- Do not defeat the safety purpose of the polarized or grounding type plugs/sockets. If the provided sockets / plugs are damaged then replacement of the defective parts must be undertaken immediately.
- Protect the power/data cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Replace damaged power/data cords immediately.
- Only use attachments/accessories specified by the manufacturer.
- Disconnect the power to this apparatus during lightning storms or provide suitable additional lightning protection. Unplug this apparatus when unused for long period of time.
- Refer all servicing to qualified service technicians/personnel. Servicing is required when the B-10 Mobile LED has been damaged in any way, such as hydraulic mast or generator is damaged, the B-10 Mobile LED does not operate normally.
- Use only with systems or peripherals specified by the manufacturer, or sold with the apparatus. Use caution during transporting to avoid damage by possible tipping.
- Do not make use of the B-10 Mobile LED to climb on the display.
- Do not place a ladder against the display to access the tiles or for other purposes.
- Do not move the trailer when the B-10 Mobile LED display is in the air.
- Do not walk on the roof of the trailer as it has not been designed and reinforced for this purpose.

1.3 Safety instructions for LED screen setup

Overview

- Only trained people are allowed to set up the LED screen
- No people are allowed around or in the trailer during the setup process of the LED Screen.
- Always put the trailer legs out before lifting the screen.
- Always lock the turntable.
- Always use mechanical locks to lock the turntable.
- Maximum wind force = 8 Beaufort. When the wind force is higher than the maximum allowed wind force, bring the screen down
- Always place the safety pins in the mast.

1.4 Safety instruction when driving the trailer

Overview

- Always stick to the local traffic rules.
- Always respect the local motor vehicle inspection for trailer and car.
- Set draw-bar till trailer level.
- Tires pressure: 3,75 bar
- Max weight under coupling: 150 kg
- Maximum driving speed is 90 km/h. Slow down in the bends.

1.5 Important Warnings

Important warnings

- **High leakage current:**
The combination of multiple tiles in an installation results in increased levels of leakage current. In order to avoid risk of electric shock due to high leakage current, proper grounding of the installation is required.
- **Flammable materials:**
Keep flammable materials away from the B-10 Mobile LED generator. A lot of energy is transferred into heat. The installation should be such that the amount of air flow required for safe operation of the equipment is not compromised. Proper ventilation must be provided.
- **Mains cords:**
The power cords delivered with this system have special properties for safety. They are not user serviceable. If the power cords are damaged, replace only with new ones. Never try to repair a power cord.

1.6 Specific warnings for diesel-fueled generator

Check before operating the engine

- If the engine is malfunctioning DO NOT operate until repairs are made.
- Be sure all guards and shields are in place before operating the engine. Replace any that are damaged or missing.
- DO NOT start the engine by shorting across starter terminals.

Handling of fuel and lubricants

- Always stop the engine before refueling or lubricating.
- DO NOT smoke or allow flames or sparks in your working area. Fuel is extremely flammable and explosive.
- Never store flammable liquids in the engine compartment.
- Refuel at a well-ventilated and open place. If fuel or lubricants spill, clean up immediately and properly dispose of.
- DO NOT mix gasoline or alcohol with diesel fuel. The mixture can cause a fire.

Fire prevention

- To avoid a fire, be alert for leaks of flammables from hoses and lines. Be sure to check for leaks from hoses and pipes, such as fuel and hydraulic by following the maintenance check list.
- To avoid a fire, do not short across power cables and wires. Check to see that all power cables and wires are in good condition. Keep all power connections clean. Bare wire or frayed insulation can cause a dangerous electrical shock and personal injury.

Cautions against burns and battery explosion

- To avoid burns, be alert for hot components during operation and just after the engine has been shut off. Such as the muffler, muffler cover, radiator, piping, engine body, coolants, engine oil, etc.

Conducting safety checks and maintenance

- Maintenance of the generator is only to be performed by a specialized service technician.
- When performing safety checks or engine service, be sure the engine is level and well supported. Use approved stands designed for this type of service.
- Check or conduct maintenance after the engine, radiator, muffler, or muffler cover has cooled off completely.
- When service is performed with two or more people present, take care to perform all work safely. Be aware of their location especially when starting the engine.

1.7 Specific warning for the jockey wheel

About the load

A jockey wheel has a maximum allowed load of 250 Kg. When the load is exceeded, the jockey wheel and the folding system get damaged.

1. Safety instructions

What is a faulty operation

- Levelling the trailer by first placing the rear stabilizers. This way almost the half of the weight of the total trailer (1800 Kg) rests on the jockey wheel.



Image 1-1
Wrong way to level trailer

- Unhitching the trailer by first retracting the front stabilizers.

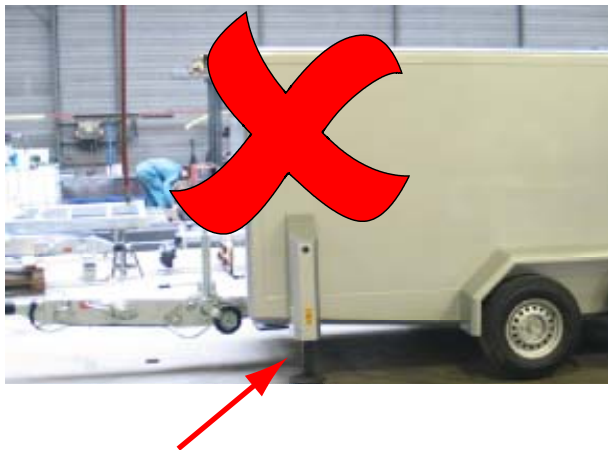


Image 1-2
Wrong way to level trailer

The good way of working, setting up the vehicle

- Unhitch the vehicle from the puller vehicle.
- Extend the front stabilizers first.
- Retract the jockey wheel completely.
- Extend the rear stabilizers and level the vehicle.



Image 1-3
Correct way to setup

The good way of working, building off the vehicle

- Retract the rear stabilizers first and then the front stabilizers till none of them touch the ground.
- Turn the jockey wheel downwards till the wheel touches the ground. Do not lift the trailer at the front side !
- Bring the draw bar to the height of the ball coupling in such a way that the trailer has exactly the same height at the front and at the rear.
- Lift the draw bar a little with the jockey wheel and couple to the trailer.

2. SYSTEM OVERVIEW

Overview

- Introduction
- B-10 Mobile LED tiles
- LED Pro
- B-10 Mobile LED trailer
- B-10 Mobile LED generator

2.1 Introduction

Overview

The B-10 Mobile LED is a mobile outdoor LED display solution. The LED-wall comes in a trailer that can be pulled by a vehicle with a 3500 kg towing capacity. All electronics are stored properly and compact when traveling.



Image 2-1
Trailer side view

LED tiles used in the B-10 Mobile LED are SLite10 XP tiles with pixel pitch of 10mm, in a 4x4 configuration (9.6m² - 103.3ft²) and typically designed for outdoor use.

When arriving on the event location, the B-10 Mobile LED can easily be set up. The wall itself slides out of the trailer by means of a hydraulic system. There is no need for trusses and structures to be set up. The screen can be turned around 360 degrees, allowing you to adjust the display to face the audience.

The B-10 Mobile LED contains a diesel-fueled generator. No external power supply is required, and it comes with a Barco LED-PRO or D320 Digitizer for high quality image processing.



The following topic enumerates all different components of a B-10 Mobile LED solution and describe their functionality in the system. FOR MORE DETAILED INFORMATION ON THESE COMPONENTS PLEASE REFER TO THEIR RESPECTIVE MANUAL.

2.2 B-10 Mobile LED tiles

2.2.1 Functionality

Overview

The B-10 Mobile LED is with outdoor SLite 10 XP tiles. The SLite XP can overlay video and data sources in their native quality. A unique video processing feature enables the creation of a visual resolution quasi double the physical resolution defined by the cluster of LED's spread on the surface of the display. The SLite XP is an IP65 rating rugged module.

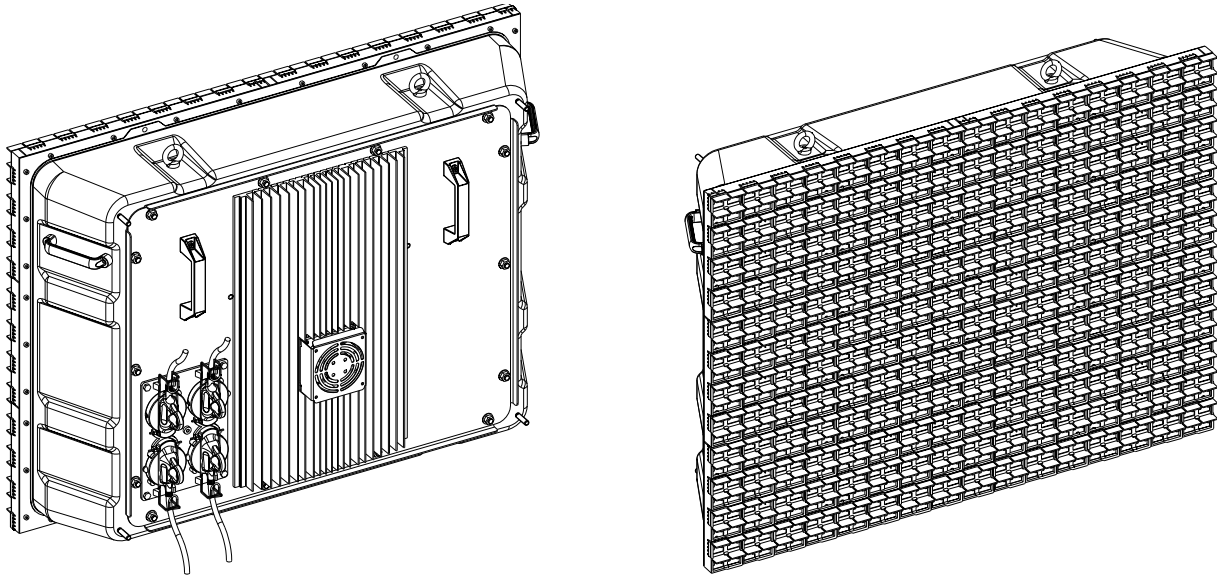


Image 2-2

All tiles are connected in series via a data path. Each tile picks out a part of the video information of the data stream on the data path and processes this information for displaying on its LED's.

2.2.2 SLite 10 XP specifications

Specifications

Visual Resolution	10.18 mm
Physical Resolution	20.36 mm
Brightness	6500 NIT
Calibrated Brightness	5500 NIT (calibrated at 6500°K)
LED configuration	2R, 1G, 1B
LED density	9646/m ² (896/ft ²) 5808/panel (88 x 66)
Hor. viewing angle	120°
Vert. viewing angle	60°
Contrast ratio	2000:1 at 200 lux
Lifetime	50 000 h (full white - half brightness) 100 000 h (typical use)
Power consumption	maximum: 680 W / Tile average: 170 W / Tile
Weight / Tile	40 kg (88.2 lbs) excluding structure
Processing	14 bit
Colors	4.4 trillion
Refresh rate	> 2000 Hz (PAL / NTSC)
Ruggedness	IP 65
Temperature range	operating: -20 - 40°C (-4 - 104°F) storage: -20 - 60°C (-4 - 140°F)
Humidity	operating: 10 - 99% storage: 10 - 99%

D320 input compatibility	S-Video, Composite, YUV, RGB, SDI, HDSI, Data DVI up to UXGA
Certifications	ETL, CE, CEBEC, TUV, FCC class A
Tile dimensions	width: 896mm (35.3") height: 672mm (26.5") depth: 248mm (9.8")
Order Information	R9004170

2.2.3 Dimensions SLite XP tile

SLite XP tile dimensions

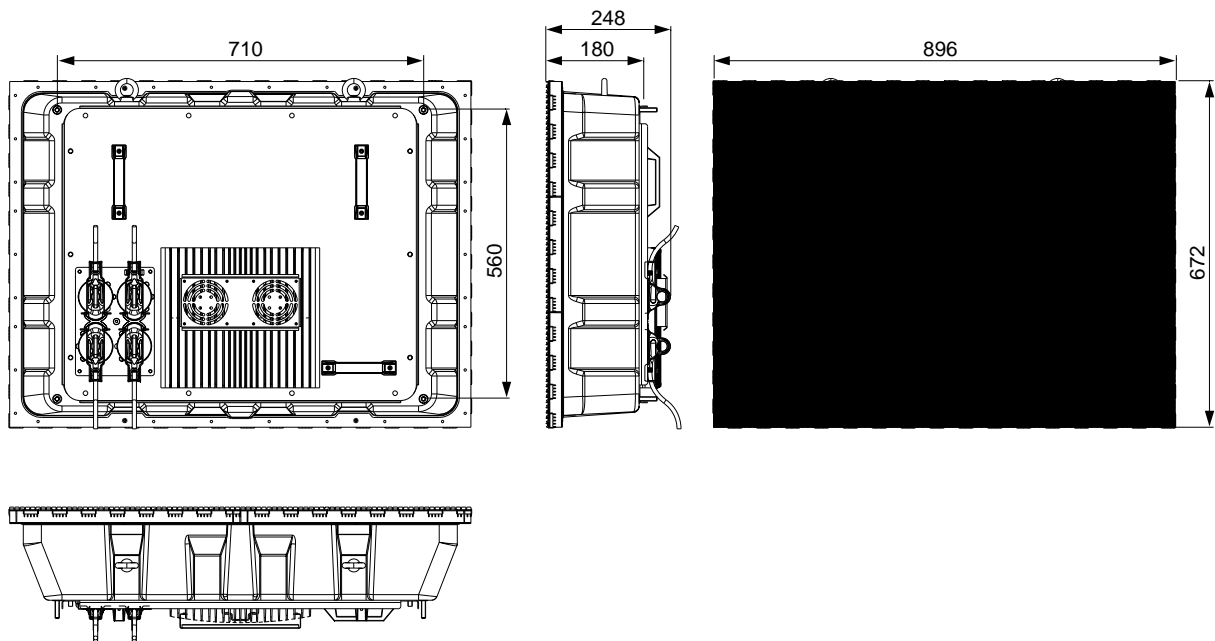


Image 2-3
Dimensions given in millimeters.

2.2.4 SLite tile input/output ports

Location input/output ports

There are four connection ports on the back of each SLite tile. Two power ports and two data ports. All ports are waterproof and located on the 'Connection module'.

The data ports consist of two waterproof MDR connectors at the right side of the connection module. The data is coming in on the lower right MDR connector of the connection module. The upper right MDR connector is used to loop the data through.

The power ports consist in one waterproof C19 connector in the lower left corner and one waterproof C20 connector in the upper left corner of the connection module, respectively used for power input and power output.

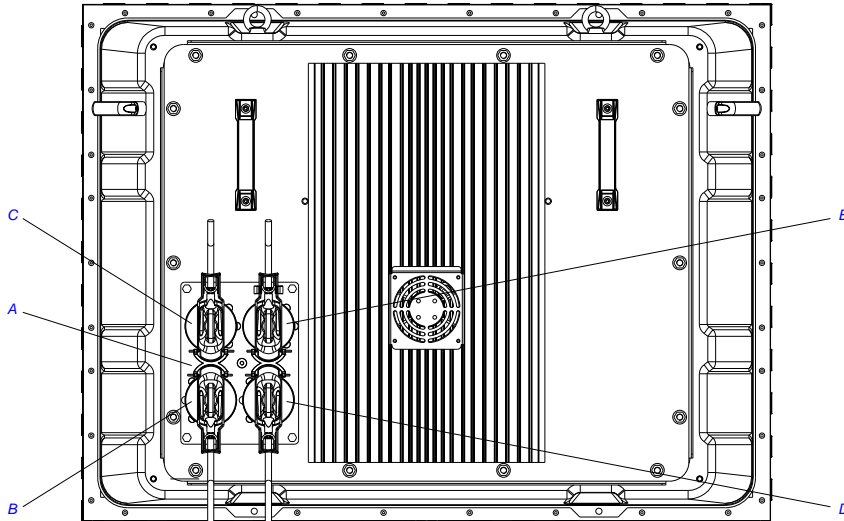


Image 2-4
SLite input/output ports.

- A Connection module.
- B Power input port.
- C Power output port.
- D Data input port.
- E Data output port.

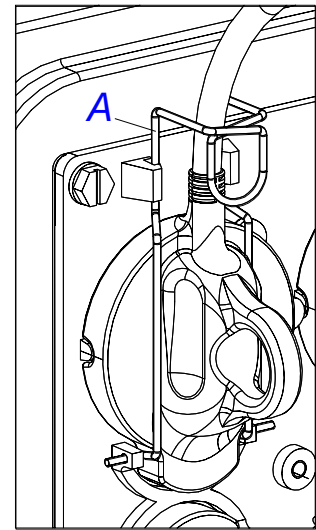


Image 2-5
A Plug holder clamp.



CAUTION: The SLite input/output ports can only be used in conjunction with Barco's outdoor cables for LED-walls. Do not use any other cables than those specified.



CAUTION: Dummy plugs must be placed on unused connection ports of the connection module and all plug holder clamps must be locked firmly.

2.3 LED Pro

2.3.1 Functionality

Overview

The Barco LED-PRO™ is a powerful all-in-one signal processor that accepts a wide range of video input signals and processes them to drive Barco LED Displays. The LED-PRO™ allows you to scale visual sources, mix and match them in any way while still maintaining a high quality picture. The unit is a high performance digital video scaler, scan converter, standards converter, switcher and transcoder in one. The LED-PRO™ is the ideal solution for converting RGB, HDTV, component, S-Video, composite (NTSC, PAL and SECAM), SDI, DVI, and HD-SDI for use with the B-10 Mobile LED.

The LED-PRO™ has an advanced feature set that includes:

- universal inputs
- aspect ratio conversion
- memory presets
- test patterns
- Lock to Source
- picture adjustments
- motion adaptive de-interlacing
- 3:2 and 2:2 pull down detection



Image 2-6
LEDPRO

2.3.2 LED-PRO features

Overview

- Three universal inputs accept RGBHV/RGBCs/RGsB computer video, component video (STD or HDTV), SVideo, or composite video with loop-through
- SD SDI/HD-SDI input.
- DVI-I connectors support both universal analog and DVI input with loop-through.
- DVI output connector for Barco LED Display interface.
- Input Video detection and Auto-acquisition. LED-PRO™ will auto detect and match input video to stored formats or user configurations.
- Aspect ratio conversion and adjustments
- Pan and zoom
- Freeze
- 10-Bit processing
- De-interlacing modes: Motion Adaptive and Field to Frame
- 3:2 pulldown detection for NTSC and 2:2 film detection for PAL video sources
- Decodes NTSC, PAL, and SECAM
- Ethernet connector for real-time control
- Vertical lock (Lock to Source) eliminates image tears and other artifacts in scaled motion video by eliminating frame rate conversion
- 64 independent input configuration memory presets
- Motion adaptive de-interlacing for HDTV inputs
- Low Video Delay

2.4 B-10 Mobile LED trailer

2.4.1 Functionality

Overview

The B-10 Mobile LED is a mobile outdoor LED display solution. The LED-wall comes in a trailer that can be pulled by a vehicle with a 3500 kg towing capacity. All electronics are stored properly and compact when traveling. When arriving to the event location The LED-wall can easily be put out of the trailer by means of a hydraulic mast and simple lever-control. There is no need for trusses and structures to be set up. The screen can then be turned around 360 degrees, allowing you to adjust the display to face the audience.

2.4.2 Dimensions

Overview

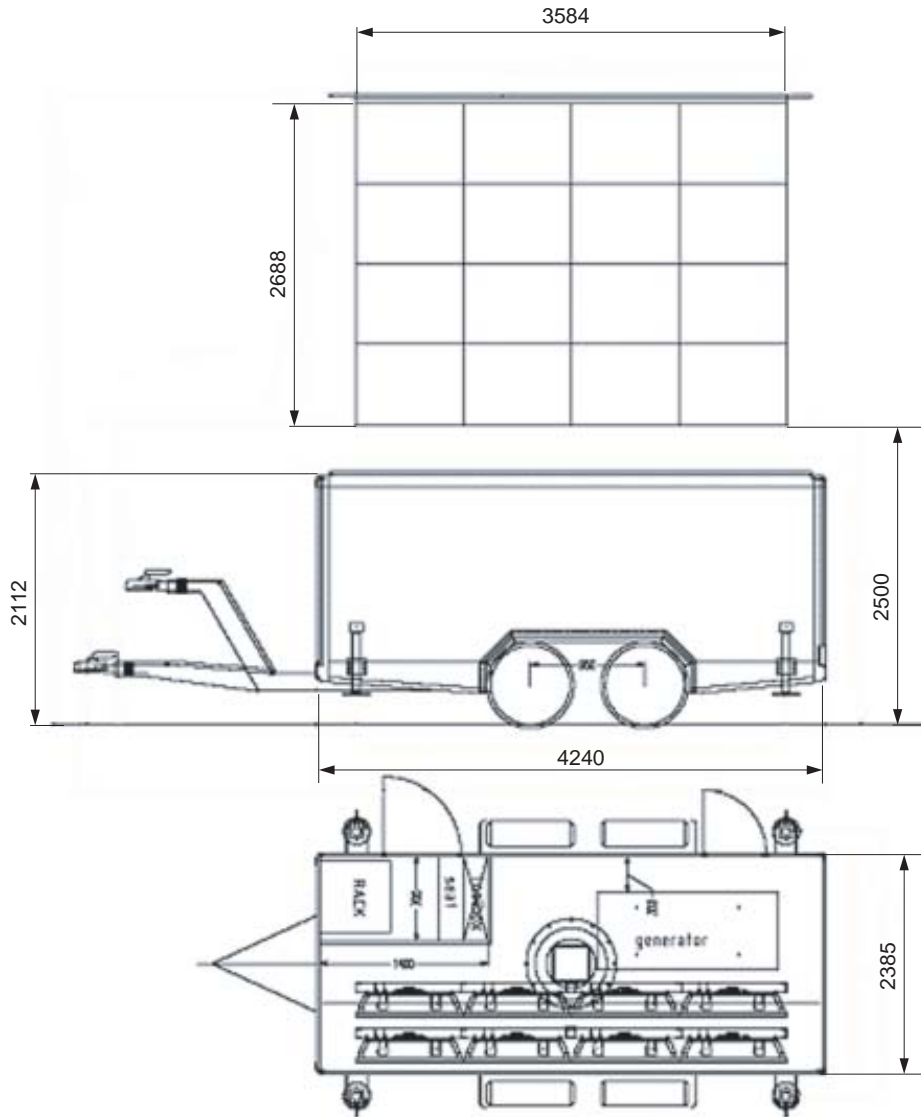


Image 2-7
Dimensions

2.5 B-10 Mobile LED generator

2.5.1 Introduction

Overview

Please read this section carefully before using the generator. If you act as stated in this section, your generating set will guarantee you a smooth functioning time after time.

First read the engine and alternator manual supplied with each generating set. Here you will find more information about the use, the maintenance and the dangers in case of improper use.

All data in this manual are based on the standard version type EPS183TDE. Generating sets with options can have slightly different data. Contact your dealer for more info about this.

2.5.2 Components

Overview

- Type: EPS183TDE
- Power: 3 x 400V : 18kVA, 1 x 230V : 6kVA
- Alternator: Leroy Somer LSA37M8 with AVR (brush less)
- Engine: KUBOTA D1105, 3-cylinder, 1123cm³, 3000 rpm, water-cooled
- Content of fuel tank: 63 liters
- Fuel type: diesel
- Dimensions: 150 x 64 x 90 cm
- Weight: 425 kg
- Noise level: LwA 93



Image 2-8
Control panel generator

Please refer to the Diesel Motor and Alternator manual for more detail on these components.

The main components of the generating set are: the water-cooled KUBOTA diesel engine 3000rpm for EPS183TDE, the alternator, the control panel, the silenced canopy and the chassis.

Engine and alternator specifications can be found in the engine and alternator manual supplied with each generating set.

The chassis of the generator serves as fuel tank and contains the fuel filler cap, the mechanic fuel level meter, the fuel drain cap (for cleaning of fuel tank), 4 fixation holes (for fixed mounting of the genset), the battery support and the fixing support for the (manual) oil drain pump.

The silenced canopy of the generator contains: one central lifting eye, 2 plastic inspection hatches in the top cover for the radiator filler cap and oil filler cap, two doors with lock (for normal maintenance), a control panel, an inspection hatch for the battery, a cold air intake grid, a hot air exhaust grid.

The exhaust goes through the hot air exhaust grid. The whole of this is mounted on 4 anti vibration engine suspensions (Type RAEM 350 A) to prevent vibrations to be transferred to the trailer and permit a more comfortable use of the machinery.

2.5.3 Control panel

Description



Image 2-9
Control panel

The control panel of the EPS8DE consists of:

- Starting key (off / on / glow / start)
- Pilot lamp green (contact on / off), lamp lights up when contact on
- Pilot lamp red (charging current battery), lamp lights up when battery is not being charged
- Hours counter
- 1 fuse (2 A) hours counter
- Measuring unit , 3-fases for voltage, frequency en current
- Voltage presence indicator (3-fases)
- 3 fuses (2 A) for mentioned above
- Main breaker 25A 4p
- Earth leakage protection 40A 4p,300mA, class A
- 1 x breaker 16A 2p/C/10kA (electronics)
- 1 x breaker 16A 2p/C/10kA (hydraulics)
- 1 x breaker 10A 2p/C/10kA (lights)
- 4 x breaker 16A 2p/C/10kA (video screen)
- 1 x socket CE 16 (electronics)
- 1 x socket CE 16 (hydraulics)
- 1 x socket CE 16 (lights)
- 1 x Tour mate multiconnector female chassis (supply video)
- Earth connection point
- Emergency stop
- 32A CEE free socket (power from generator set)
- 32A CEE plug panel mount (supply to power distribution box) possibility to provide power from auxiliary device (grid)

On the inside of the control panel there can be found:

- 2 x relay 12V/30A for guarding oil pressure and temperature of cooling liquid with aid of a stopping coil (Engine shuts off when the oil pressure is low or the temperature of the cooling liquid is too high).
- 1 x relay 12V/30A by-pass guards (oil pressure) when starting engine.

2.5.4 Starting and using the generator



CAUTION: The generator 183TDE is equipped with a 12V electric fuel pump. This pump may not “run dry”. If the engine stops because it is out of fuel, turn the contact key to position “OFF” as fast as possible.

Starting the engine

1. Check the oil level. Oil dipstick can be reached through the plastic cover on top of the generating set



Image 2-10
Oil level check

2. Check the fuel level, add if necessary .



Image 2-11
Fuel check

Caution: Adding fuel with engine stopped and in a sufficiently ventilated room, respecting the necessary personal safety precautions.

3. Preheat the engine for approximately 10 sec.
4. Start the engine with the starting key.



Image 2-12

5. Let the engine run for a few minutes before charging.

Charging the generator

1. On the type indication plate of the generator you can find more information about the power/maximum admissible charging current of the generator.

2. System Overview



Image 2-13
Identification

2. In case of overload, the thermal-magnetic protection in the control panel shall be switched off after a short period of time. Check the load, reduce it if necessary and switch on the thermal-magnetic protection again.
3. In case of short-circuit, the thermal-magnetic protection will switch off immediately! Check what caused the short-circuit and switch on the protection again afterwards.



Image 2-14
Main breaker



CAUTION: Never let the diesel engine run for longer periods (> 30 min) without charge or small loads (< 15%). This could result in severe damage to the diesel engine.

2.5.5 Stopping the generator

How to stop

1. Let the generator run at no load for a few more minutes before stopping it. In this way the generator can "cool down".
2. Stop the generator with the starting key.

2.5.6 About cooling the generator

Attention points

- Make sure there are no obstructions at the fresh air intake grid where the cooling air for engine and alternator comes in.
- Make sure the hot air that comes from cooling the engine and alternator can leave easily through the grid, as well as the exhaust gases.
- Never let the generator run in an inappropriately ventilated room!

2.5.7 Protections

Engine

Low oil pressure protection and high cooling water temperature protection.



Image 2-15

Alternator

Thermal-magnetic protection and earth leakage protection (with earth pin).

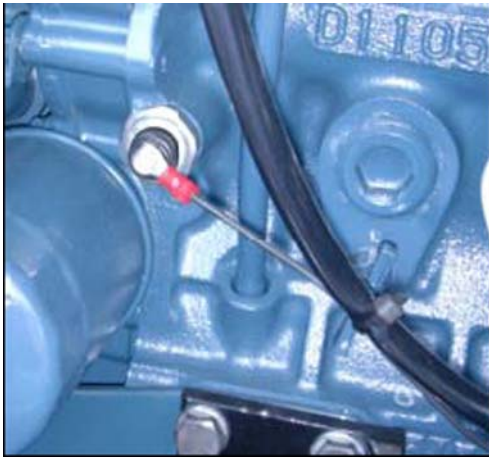


Image 2-16

2.5.8 Maintenance

Overview

All maintenance points (air filter, oil drain pump, oil filler cap, oil filter, fuel filters, radiator filler cap) are easily accessible. For normal maintenance activities, check the engine manual.

For engine or alternator failure, consult a local dealer. For a list of service center, see "Service and Maintenance of the Generator", page 29.

2.5.9 Safety for the user

Overview

The standard versions of these generators are equipped with an earth leakage protection and a thermal-magnetic protection, following the IN-S electrical scheme. For connection of charges of class 1 (charges with earth) and charges of class 2 (charges with double insulation, to be recognized by the "double square" pictograph on the appliance) there are no restrictions concerning the number of charges connected at the same time. Respect the minimum square (mm²) and maximum length of the extension cables (to assure the correct switching off of the thermal-magnetic protection in case of short-circuit).

2.5.10 Spare parts generator

Overview

Nr	Description	Ordering reference Euro power	Ordering reference Fleedguard	Ordering reference Kubota
1	Oil filter D1105/V1505	398211105	LF 3776	1627132092

2. System Overview

2	Fuel filter D1105/V1505	398111105	FF 5226	1522143080
3	In line filter D1105/V1505	130000016	FF 149	128143012
4	Air filter cartridge 1105/V1505	398011105	AF 4939	1574111083
5	V – belt D1105/V1505	A130		
6	Gasket valve cover D1105 BG2/EBB	A11105001		
7	Battery 45Ah 12 V (DIN 54577)	170000003		
8	Injectors	16032-5300-0		
9	Radiator assembly			
10	Charging generator			
11	AVR (electronic)	200990099		
12	Anti vibration support (A puffer motor) 60/60	120000060		
13	Anti vibration support (A puffer motor) 75/55	12000075		
14	Anti vibration support RAEM350	RA350EM		

3. SETUP OF THE B-10 MOBILE LED

Overview

- Installation of the B-10 Mobile LED
- Powering the B-10 Mobile LED
- Extending the LED display
- Rotating the LED display
- Move down the LED Display
- Preparing for departure

3.1 Installation of the B-10 Mobile LED

Useful tools

In order to set up the B-10 Mobile LED more easily the following tools may be useful to purchase:

- A level to verify the flat position of the trailer
- A drill to position the 4 outriggers and fasten the 2 halves LED display parts together (4 bolts)

How to install?

1. Place the trailer on a flat and hard ground.
2. Unhitch the trailer from the ball hitch. For this purpose, you may need to use the jockey wheel. After using the jockey wheel wind it fully up to its initial (up) position.

Note: After using the jockey wheel wind it fully up to its initial (up) position.

Caution: Only use the jockey wheel to engage and disengage the trailer on & from the towing hook. After usage, always wind the jockey wheel fully up to avoid damages on the jockey wheel.



Image 3-1

3. Trigger the brake system of the B-10 Mobile LED (back position)
4. Take the wooden plate (in the B-10 Mobile LED left at door entrance) and position them below the outriggers.
5. Start by extending the front stabilizer.
Tip: If the stabilizers cannot reach the wooden plates, put additional wooden plates under the outriggers.
6. Retract the jockey wheel completely.
Caution: After using the jockey wheel wind it fully up to its initial (up) position. Only use the jockey wheel to engage and disengage the trailer on or from the towing hook.
Caution: A jockey wheel may have a maximum allowed load of 250 kg. Do not use the jockey wheel faulty as it can damage the wheel and the folding system.
7. Extend the rear stabilizers.
8. Level the B-10 Mobile LED vehicle and try to position it as "flat" as possible in the length and the width. Use therefore a level and adjust the stabilizers accordingly.

3.2 Powering the B-10 Mobile LED

How to power up?

1. Put the contact in the warm up position. After several seconds turn-on the generator with the contact key.

3. Setup of the B-10 Mobile LED



Image 3-2
Contact key and power cable of pump

2. After several seconds turn-on the generator with this contact key.
Caution: *The generator of the B-10 Mobile LED needs to be well-ventilated. Therefore, the generator of the B-10 Mobile LED is not indented to run for a long period of time with the roof closed. Once the generator is running, the screen needs to be lifted immediately.*
3. Insert the power cable of the hydraulic pump in the generator (Red-plug)
4. Connect the grounding conductor to a grounding rod or other acceptable earth grounding method.

3.3 Extending the LED display

Extending process

1. Open the air arrival to start the pump.



Image 3-3
Pump system

2. Push on the black button.
3. Lift the first half of the LED-wall by using the lever
Lift this part of the display up till its 10 cm above the deck of the B-10 Mobile LED.

Fastening both display halves together

1. Release the 4 fasteners of the bottom display and pull it below the top display.



Image 3-4

2. Bring down the upper display and position the bolts in the holes.
Note: Do not bring down the display much than needed!
3. Fasten the 2 half displays together by fastening the bolts.
4. Plug in the 4 power cables and data cable.

Extending the full display

1. Extend the display to its top position.
2. Place the safety pieces in the mast.

3. Setup of the B-10 Mobile LED



Image 3-5
Safety pieces

Caution: Make sure the safety pins are placed in the mast. This is mandatory for security reason and to avoid that the mast comes slightly down after closing the pump system.

3. Stop the pump system by closing the air arrival and switching off the pump.
4. Press the red button.

3.4 Rotating the LED display

How to rotate?

1. Rotate the display to the desired position.
2. Lock this position.



Image 3-6
Mechanical lock

3.5 Move down the LED Display



CAUTION: Do not use the pump to bring down the display.



When bringing down the display too fast, oil can spill out of the hydraulic system. This is not a leak !

How to move down?

1. Lift down the display till it's on the bottom.
Note: Do not forget to take away the safety pieces from the mast.
Caution: Watch out that cables are not under the display.
2. Open the pump system and lift up the display a little.
3. Close the pump.
4. De-fasten the 2 half display and unplug the power and data cables.
5. Push back the bottom half display and fasten it with the 4 fasteners.
6. Lift down the top half display till it is on the bottom.

3.6 Preparing for departure

Steps to be taken

1. Retract the rear stabilizers.
2. Retract the front stabilizers.
3. Turn the jockey wheel downwards till the wheel touches the ground.
Note: Do not lift the trailer at the front side.
4. Bring the tong of the trailer to the height of the ball hitch so that the trailer has exactly the same height at the front and at the rear.
5. Release the brake system of the B-10 Mobile LED trailer.
6. Lift up the tong of the trailer a little with the jockey wheel and hitch it to the ball hitch.
7. Place the wooden plate in the B-10 Mobile LED trailer.
8. Retract the jockey wheel completely.
Caution: Only use the jockey wheel to hitch and unhitch the trailer on & from the ball hitch. After usage, always wind the jockey wheel fully up to avoid damages on the jockey wheel.

4. MAINTENANCE, SERVICE

Overview

For maintenance, service and repair on the B-10 Mobile LED please consult qualified service technicians/personnel.

Servicing is required when the B-10 Mobile LED has been damaged in any way, such as hydraulic mast or generator is damaged, the B-10 Mobile LED does not operate normally.

4.1 Service and maintenance table

Overview

Below a service and maintenance overview table. For more information on the different parts, consult the respective manuals.

		Daily				500 km				Quarterly				Yearly				
		C	L	T	CI	C	L	T	CI	C	L	T	CI	C	L	T	CI	
Trailer																		
Towbar	Attachment to front transverse																	
	Attachment to 1st axle																	
	Height adjustable bracket system																	
	Umbilical cord																	
	Jockey wheel																	
	hitch coupling																	
inertial brake system	Course when braking (barking action)																	
	Grease nipple																	
	Braking distance																	
	Brake grips																	
	Hand brake																	
Axles	Wheel bolts																	
	Bearing clearance																	
	Control cable																	
	Brake linings																	
	Brakes																	
Tires	Pressure																	
	Bearing surface																	
	Pressure of replacement tire																	
	Wheel wrench available																	
Lights	back-, front-lights																	
	plug																	
	Light cable																	

4. Maintenance, Service

		Daily				500 km				Quarterly				Yearly				
		C	L	T	CI	C	L	T	CI	C	L	T	CI	C	L	T	CI	
	Light cover																	
Outriggers	Functioning																	
	Attachment																	
Frame	Transverse at side section																	
	support for girders																	
	girders of mast																	
	Transverse at compressor																	
	Splashguards																	
Trailor enclosure																		
Doors	Lock system (inside)																	
	Functioning doors																	
	Door frame																	
	Functioning lock																	
	Rubber of door frame																	
	Door stops																	
	Door hinges																	
	Nails																	
Walls	surrounding frames																	
	nails																	
	attachment to main frame																	
	inside wall paneling																	
	wall control room																	
Roof	attachment to side frames																	
	attachment to display grid																	
Floor	attachment																	
	holes for water evacuation																	
Display system																		
Pump	leaks																	
	oil level																	
	lever																	
	attachment to frame																	
Rotation system	lubricate																	
	attachment bolts 2x																	
Mast	functioning																	
	oil losses of main cylinder																	

		Daily				500 km				Quarterly				Yearly				
		C	L	T	CI	C	L	T	CI	C	L	T	CI	C	L	T	CI	
	cylinder flexible																	
	attachment to grid																	
Generator																		
general	motor																	
	alternator																	
	oil																	
	gas - diesel																	
exhausts	fixing																	
	state																	

C = Control

L = Lubricate

T = Tighten

CI = Clean



After 50h00 the diesel generator needs to get its first maintenance. Please refer to the Kubota and Leroy Somer manuals as well as section 4.2 for more information on maintenance of the generator.



Used oil in the B-10 Mobile LED

Oil used in the generator is 10 W 40 for ambient temperature up to -20°C.

Hydraulic oil is SAE 35

4.2 Service and Maintenance of the Generator

Parts

The B-10 Mobile LED is equipped with a diesel-fueled generator. The generator is composed of a diesel motor from Kubota (KUB-OTA D1105) and an alternator from Leroy Somer (LSA 37M8).

Alternator

The alternators are maintenance-free. A periodic check of the alternator is not necessary. A regular visual control of the different alternator parts – and especially of the rotor bearing – at every engine maintenance is enough.

Engine

Check engine manual for maintenance intervals.

Below you will find a list of official service centres for the Kubota and Leroy Somer components. Please refer to their respective manual for more detail on these components and their maintenance.



CAUTION: The diesel generator needs after 50h00 its first maintenance run.

Remarks

In the factory, the radiator has been filled with coolant for use up to -15°C.

The engine has been filled in the factory with 10W40 oil (up to -20°C). If a lower temperature is needed, fill with 5W40 oil (up to -30°C).

Service intervals

For a detailed explanation of the service intervals, consult the service and maintenance manual of the generator.

Interval	Items	
Every 50 hours	<ul style="list-style-type: none"> Check of fuel pipes and clamp bands 	
After first 50 hours	Change of engine oil	A
Every 100 hours	Cleaning of air cleaner element	1
	Cleaning of fuel filter	
	Check of battery electrolyte level	
	Check of fan belt tightness	
Every 200 hours	Check of radiator hoses and clamp bands	
	Replacement of oil filter cartridge	A
Every 400 hours	Replacement of fuel filter cartridge	
Every 500 hours	Removal of sediment in fuel tank	
	Cleaning of water jacket (radiator interior)	
	Replacement of fan belt	
Every one or two months	Recharging of battery	
Every year	Replacement of air cleaner elements	2
	Check of damage in electric wiring and loose connections	
Every 800 hours	Check of valve clearance	
Every 1500 hours	Check of fuel injection nozzle injection pressure	3
Every 3000 hours	Check of turbo charger	3
	Check of injection pump	3
	Check of fuel injection timer	3
Every two years	Change of radiator coolant (L.L.C.)	
	Replacement of battery	
	Replacement of radiator hoses and clamp bands	
	Replacement of fuel pipes and clamp bands	3
	Replacement of intake air line	4

Legend

A : Must be done after the first 50 hours of operation.

1 : Air cleaner should be cleaned more often in dusty conditions than in normal conditions.

2 : After 6 times of cleaning.

3 : Consult your local Kubota dealer for this service.

4 : Replace only if necessary.

When the battery is used for less than 100 hours in a year, check its electrolyte yearly (only for refillable batteries).

Overview service center

For Europe

Country	Engine (Kubota)	Alternator (Leroy Somer)
Austria	MAG Motoren GmbH A-5023 Salzburg Tel. 43.662640460 Fax. 43.662882340	L-S Elektroantriebe GmbH A-1180 Wien Tel. 43.2224706401 Fax. 43.222479225
Belgium	Maternaco S.A. 1030 Brussel - Bruxelles Tel. 32.2.7356065 Fax. 32.2.7270363	Leroy Somer Belgium 2800 Mechelen Tel. 32.15210640 Fax. 32.15210315
Cyprus		C/O SGA Dorman Limassol Tel. 357.5.325250 Fax. 357.5.358361
Denmark	Stiga Belos AB Denmark 2600 Glostrup Tel. 45.43636090 Fax. 45.43636722	Leroy-Somer Danmark DK-5230 Odense M Tel. 45.65930343 Fax. 45.66156343
Eire	EL-GE Engineering Ltd. Kildare Tel. 353.4576225 Fax. 353.4597476	
Finland	Kesko Machinery Finland SF 01301 Vantaa Tel. 358.105320209 Fax. 358. 8573811	Leroy Somer Finland OY 00140 Helsinki Tel. 358.171877 Fax. 358.171905
France	Kubota Europe SA Argenteuil Cedex Tel. 33.1.34263434 Fax. 33.1.34263499	
Germany	Kubota D. Engine Division 63110 Rodgau Tel. 49.6106873-0 Fax. 49.6106873-199	L-S Elektromotoren GmbH 6000 Frankfurt/ Main Tel. 49.69780056 Fax. 49.697894138
Greece	Agripan S.A. 11855 Athens Tel. 30.1.3472166 Fax. 30.1.3461653	Moteurs Leroy Somer 11527 Athens Tel. 30.1.7783698 Fax. 30.1.7795509
Italy	SAIM S.P.A. 20090 Assago (MI) Tel. 390. 2488531 Fax. 390.245700663	Leroy-Somer SPA 20020 Lainate (Milano) Tel. 390.2935791 Fax. 390.29370836

4. Maintenance, Service

Country	Engine (Kubota)	Alternator (Leroy Somer)
Malta	Gaetano Caruana Limited Zebbug, MALTA G.C. Tel. 356.460881 Fax. 356.465824	
Netherlands	Gebr. Prins B.V. 2676 BD Maasdijk Tel. 31.174516240 Fax. 31.174518142	Leroy Somer Nederland 3769 Bt-Soesterberg Tel. 31.346353244 Fax. 31.346352284
Norway	Univ. Diesel Broddway 1473 Skårer Tel. 47.67.912800 Fax. 47.67912801	Leroy-Somer Norge A/S 1371 Asker Tel. 47.27.84057 Fax. 47.27.80953
Portugal	Fatomipe 3800 Aveiro Tel. 351.941260/18	Leroy-Somer Motores 1400 Lisbonne Tel. 351.1615084 Fax. 351.1615084
Spain	Transdiesel Div. de Casli 28820 Coslada-Madrid Tel. 34.16737012 Fax. 34.16737412	Leroy Somer Iberica Irun (Guipuecoa) Tel. 34.43616293 Fax. 34.43618322
Sweden	Broddway Norden 59623 Skänninge Tel. 46.1.42.41670 Fax. 46.1.42.41350	Gränsbovägen 6 S-151 42 Södertälje Tel. 46.7.5539590 Fax. 46.7.5511278
Switzerland	Hamilton AG Ind. Equipm. CH-8306 Brüttisellen Tel. 41.1.8335070 Fax. 41.1.8335095	Leroy-Somer SA 2557 Studen Biel/ Bienne Tel. 41.32533844 Fax. 41.32535451
UK	Kubota Limited OX9 3UN Oxfordshire Tel. 44.1844214500 Fax. 44.1844216685	Leroy-Somer LTD West Drayton Middlesex Tel. 44.895442678 Fax. 44.895420633

for Latin America:

Country	Engine (Kubota)	Alternator (Leroy Somer)
Argentina	Argentagro S.R.L. Buenos Aires 1068SO Tel. 54.1.3611022 Fax. 54.1.3616242	L-S Burban Argentine San Martin-Buenos Aires Tel. 54.17539853 Fax. 54.17539905
Bahamas	Southeastern Power Prod. FL33069 U.S.A. Tel. 954.9795899 Fax. 954.9794349	

Country	Engine (Kubota)	Alternator (Leroy Somer)
Brazil		Polus Maquina Eletricas Campuci Sao Paulo CEP 01524 Tel. 55.11.9148766
Chili	Clemsa Maipu/Santiago Tel. 56.2.5572970 Fax. 56.2.5571439	Moteurs Leroy Somer Santiago Tel. 56.2.497314 Fax. 56.2.497314
Columbia		Fevacol Bogota Tel. 57.1.2856697 Fax. 57.1.2880932
Ecuador		C/O SDAD AMLAT Quito Tel. 593.24.35638 Fax. 593.24.35671
Guadeloupe		L-S Caraibe Services 97195 Pointe à Pitre Cedex Tel. (590)267456 Fax. (590)266017
Mexico		D.E.I. CP 06170 Mexico Tel. 52.5.2725802 Fax. 52.5.2726102
Venezuela		L-S De Venezuela Barquisimento Tel. 58.51.458673 Fax. 58.51.454435

For Asia:

Country	Engine (Kubota)	Alternator (Leroy Somer)
Hong Kong		L-S Hong Kong Liaison Kowloon Hong Kong Tel. 852.7903393 Fax. 852.3412716
India	Next corporation Mumbai 400023 Tel. 91.	Beghum India Consultants New Delhi 110008 Tel. 91.11.589603
Indonesia	CV. Karya Hidup Sentosa Magelang Yogyakarta Tel. 62.274512095 Fax. 62.274563523	

4. Maintenance, Service

Country	Engine (Kubota)	Alternator (Leroy Somer)
Israel	FK Generators & Equipm. Ind. Z. Holon PB 1729 Tel. 972.3.5570567 Fax. 972.3.5560771	Moteurs Leroy-Somer Tel Aviv 66089 Tel. 972.3.820996 Fax. 972.3.820040
Japan	Kubota Osaka Head Off. Osaka 556-8601 Tel. 81.6.6482055 Fax. 81.6.6483158	Moteurs Leroy-Somer Tokyo 101 Tel. 81.3.2191873 Fax. 81.3.2191874
Korea	Tado Co., LTD. Seoul Tel. 82.2.3387132/33 Fax. 82.2.3387134	Moteurs Leroy Somer Seoul Tel. 82.2.5633871 Fax. 82.2.5633875
Malaysia	Sime Kubota SDN.BHD. 47600 Petaling Jaya Tel. 60.3.7361388 Fax. 60.3.7350435	Kuasa Kita SDN BDH 47301 Petaling Jaya Tel. 60.3.7741775 Fax. 60.3.7746306
Oman	Bahwan Engineering Co. Ruwi Area Code 112 Tel. 968.594702 Fax. 968.561631	
Philippines	K. Agro-industrial Mach. 1103 Quezon City, M.M. Tel. 63.2.9201071 Fax. 63.2.9241848	
Saudi Arabia	National Trading Co. Jeddah 21451 PB 2073 Tel. 966.2.6426257 Fax. 966.2.6440280	Leroy Somer Saudi Arabia Al Khobar 31952 Tel. 966.3.8645719 Fax. 966.3.8953597
Singapore	E & E Equipment PTE. LTD Singapore 0718 Tel. 65.3363661 Fax. 65.3363669	L-S Southeast Asia Singapore 2262 Tel. 65.2661726 Fax. 65.2621953
Taiwan	Amicaux Int. Corp. Taiwan 106 R.O.C. Tel. 886.2.23625235 Fax. 886.2.23632984	
Thailand	The Siam Kubota Ind. Co. Bangkok 10800 Tel. 66.2.5864193 Fax. 66.2.5876468	

Country	Engine (Kubota)	Alternator (Leroy Somer)
Turkey	Altinboga Istanbul Tel. 90.212.5013465 Fax. 90.212.6122381	SASIM Kemeralti 80020 Karaköy-Istanbul Tel. 90.1.1515626 Fax. 90.1.1515524
Un. Arab Emirates	M. Tayyeb Khoory & Sons P.O.Box 4664 Dubai Tel. 971.4.223251 Fax. 971.4.212750	Moteurs Leroy Somer Ab-Dhabi Tel. 971.2.722622 Fax. 971.2.776689

For Australia & Pacific:

Country	Engine (Kubota)	Alternator (Leroy Somer)
Australia	Kubota Tractor Australia Victoria 3043 Tel. 61.3.92792000 Fax. 61.3.92792010	L-S Australasia New South Wales 2099 Tel. 61.2.9717111 Fax. 61.2.9712237
New Guinea	Tutt Bryant Equipment Rocklea QLD 4106 Tel. 61.7.32775422 Fax. 61.7.38751680	
New Zealand	C.B. Norwood Distr. LTD. Palmerston North Tel. 64.9.63564920 Fax. 64.9.63564939	

For Africa:

Country	Engine (Kubota)	Alternator (Leroy Somer)
Algeria		Moteurs Leroy-Somer Birkhadem Alger Tel. 213.2.569758 Fax.213.2.569762
Egypt		Moteurs Leroy-Somer Aguza-Cairo Tel. 20.2.3441982 Fax. 20.2.3440201
Gabon		Fabelec Libreville Tel. 241.700246 Fax. 241.762098

4. Maintenance, Service

Country	Engine (Kubota)	Alternator (Leroy Somer)
Guinea		Les ateliers de Guinee Conakry Tel. 224.464744
Ivory Coast		Sorepel Abidjan 01 Tel. 225.359525 Fax. 225.350414
Morocco	Cogepra 20300 Casablanca Tel. 212.2.307436 Fax. 212.2.302307	L-S Maroc Casablanca Tel. 212.354956 Fax. 212.354956
South Africa	Terraquip Kempton Park 1620 Tel. 27.11.9143648 Fax. 27.11.9143794	
Tunisia		Promotechnic S.A. Z. I. 2013 Ben Arous Tunis Tel. 216.1.383889 Fax. 216.1.383509

A. DRAWINGS B10 TRAILER

A.1 Electrical drawings

Overview

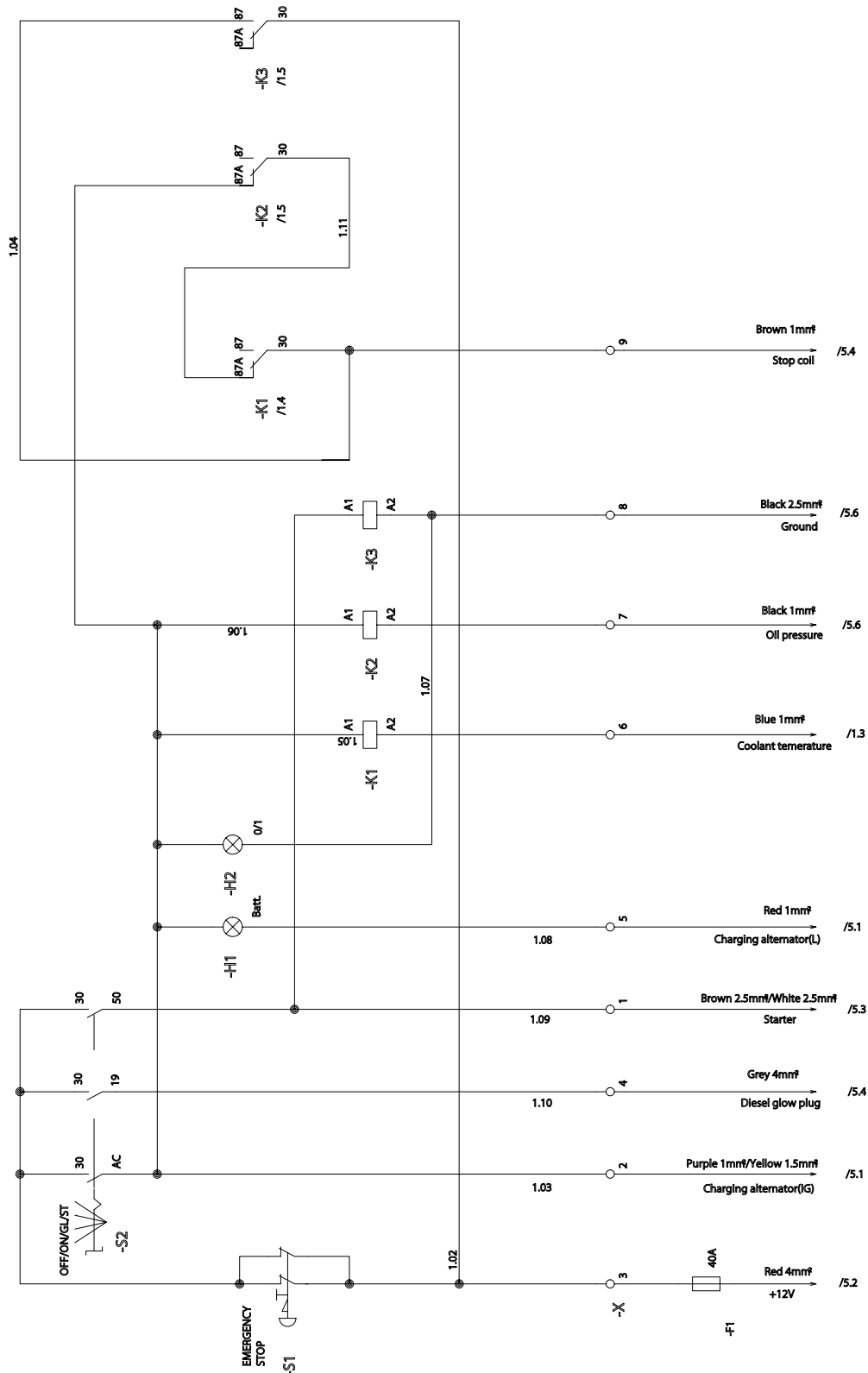


Image A-1

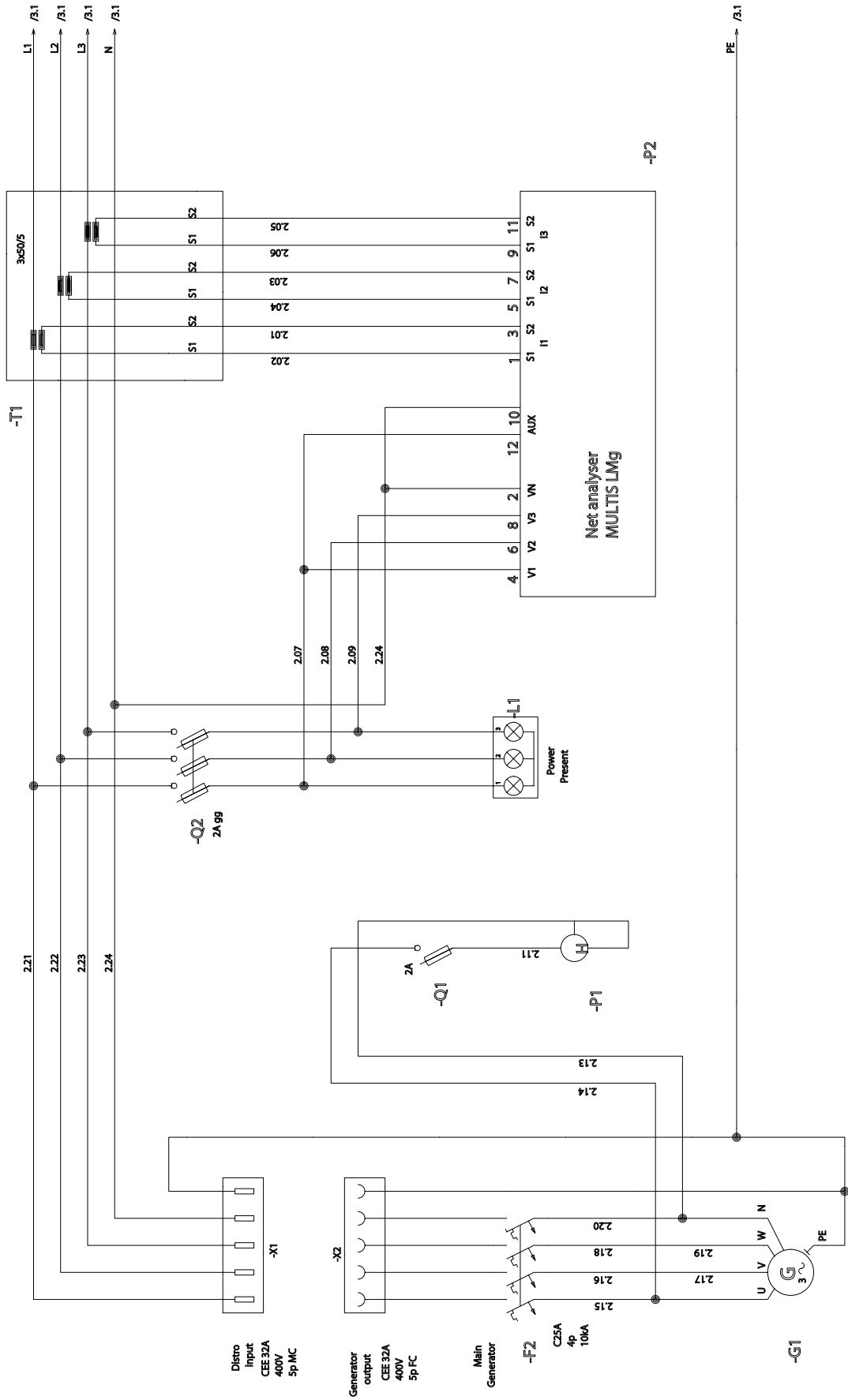


Image A-2

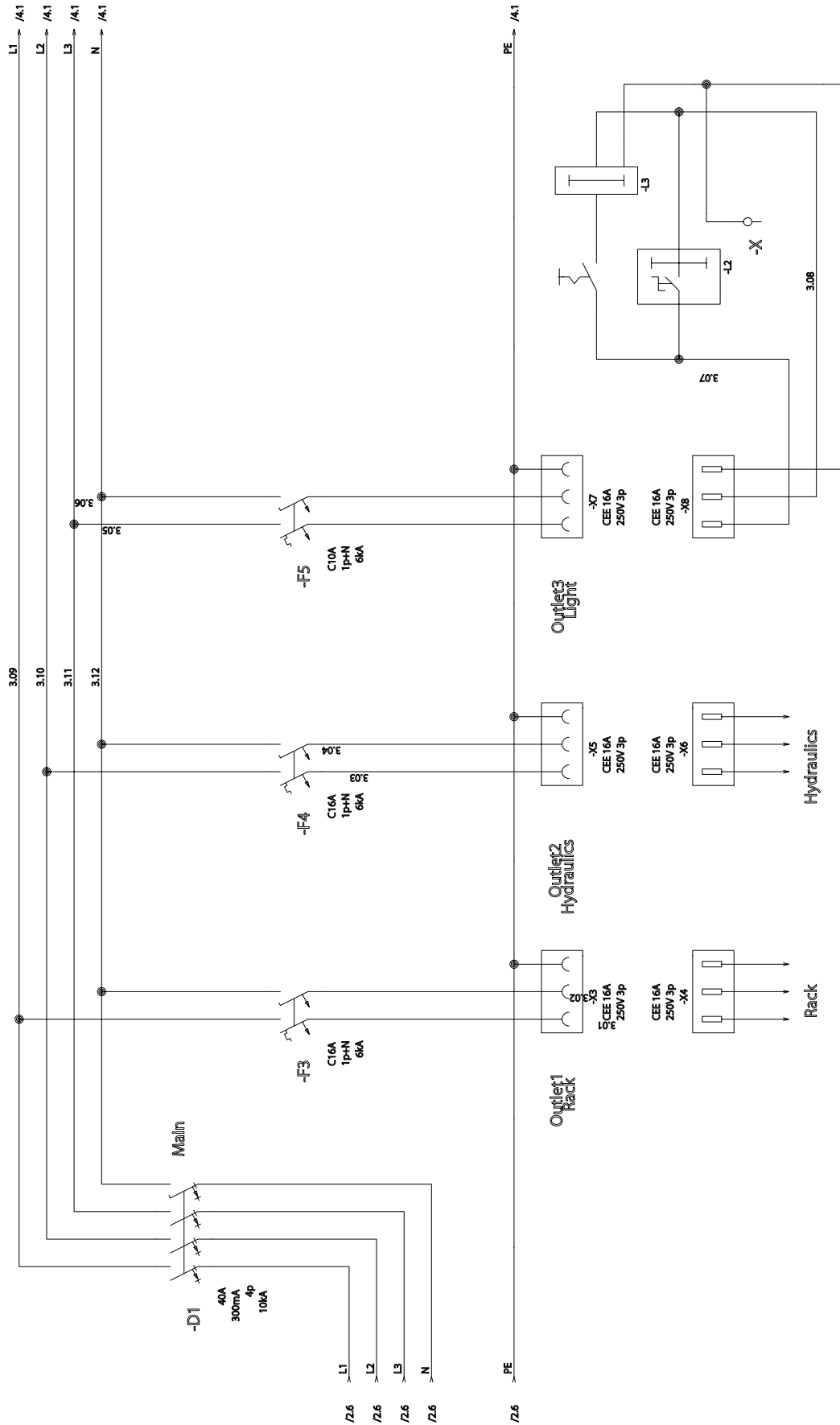
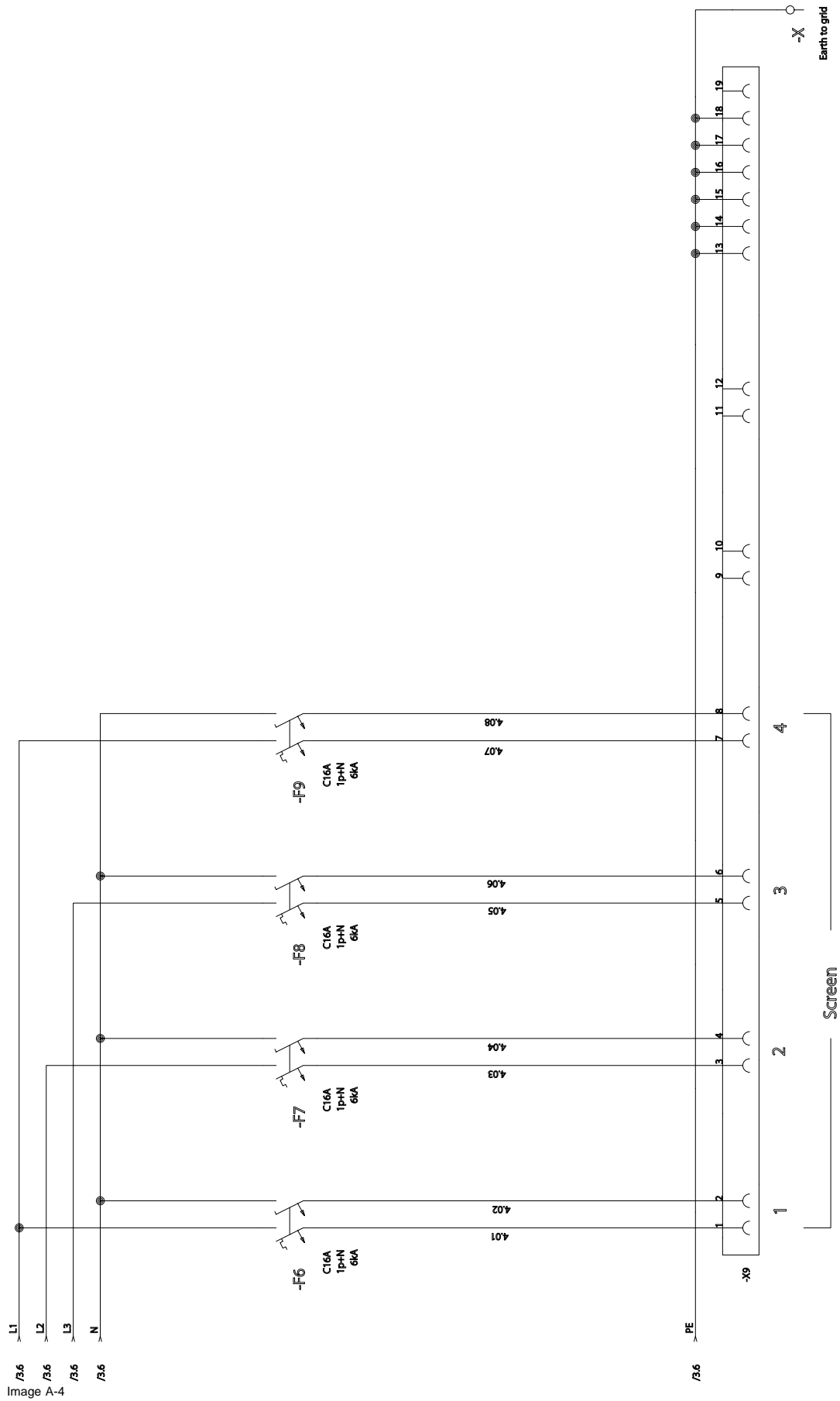


Image A-3



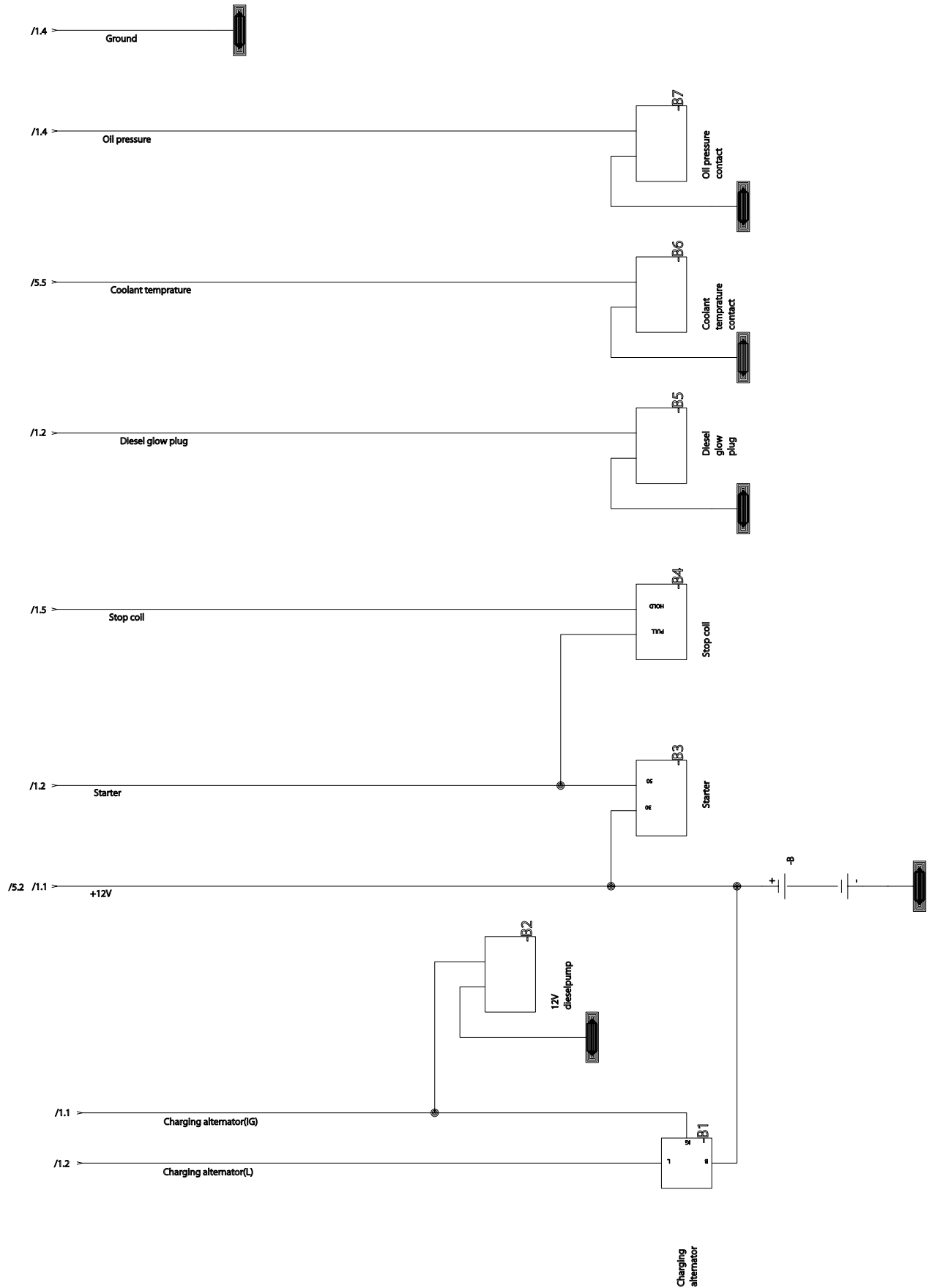


Image A-5

Revision Sheet

To:

► **Barco nv Events/Documentation**
Noordlaan 5, B-8520 Kuurne
Phone: +32 56.36.89.70, Fax: +32 56.36.88.24
E-mail: service.mne@barco.com, Web: www.barco.com

From: _____

Date: _____

Please correct the following points in this documentation (**R5976956/03**):

page

wrong

correct

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>