



Rental Set Battery Charger

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Set Mounted

FOREWORD

The purpose of this manual is to provide the user with sound general information for operating the battery charger. It is for guidance and assistance with recommendations for correct and safe procedure. Cummins Power Generation Limited cannot accept any liability whatsoever for problems arising as a result of following recommendations in this manual.

The information contained within the manual is based on information available at the time of going to print. In line with the Cummins Power Generation Limited policy of continuous development and improvement, information may change at any time without notice. The user should therefore ensure that, before commencing any work, he has the latest information available.

Users are respectfully advised that it is their responsibility to employ competent persons to carry out any installation work in the interests of good practice and safety. It is essential that the utmost care is taken with the application, installation and operation of any equipment. Careful reference should also be made to other Cummins Power Generation Limited literature, in particular the Health and Safety Manual (0908-0110-00), the Controller Operation and Maintenance, and Engine Manuals.

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SECTION 1 – SAFETY

1 Safety

1.1 Warning, Caution and Note Styles Used In This Manual

The following safety styles found throughout this manual indicate potentially hazardous conditions to the operator, service personnel or the equipment.

WARNING: WARNS OF A HAZARD THAT MAY RESULT IN SEVERE PERSONAL INJURY OR DEATH.

Caution: Warns of a hazard or an unsafe practice that can result in product or property damage.

Note: A short piece of text giving information that augments the current text.

1.2 Warnings

WARNING: IT IS IMPORTANT TO READ AND UNDERSTAND ALL SAFETY NOTICES PROVIDED IN THIS MANUAL. IMPROPER OPERATION OR MAINTENANCE COULD RESULT IN A SERIOUS ACCIDENT OR DAMAGE TO THE EQUIPMENT, CAUSING INJURY OR DEATH.

1.3 General Information

This manual should form part of the documentation package supplied by Cummins Power Generation Limited with specific generator sets. In the event that this manual has been supplied in isolation please refer to the other Cummins Power Generation Limited literature, in particular the Health and Safety Manual (0908-0110-00), the Controller manual, and the Engine Manual.

Note: *It is in the user's interest to read and understand all Health and Safety information together with all Warnings and Cautions contained within the documentation relevant to the generator set and its operation and maintenance.*

1.4 Generator Plant Safety Code

Before operating the generator set, read the Controller Manual and the Engine Manual and become familiar with them and the equipment. Safe and efficient operation can be achieved only if the equipment is properly operated and maintained. Many accidents are caused by failure to follow fundamental rules and precautions.

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SECTION 2 - BATTERY CHARGER – 4 AMP

2 Battery Charger – 4 Amp

The generator set control housing provides for the mounting of the battery charger and the Customer's single phase AC connections for the battery charger.



WARNING: All installation and electrical connections must be made by trained experienced engineers and wired in accordance with applicable and relevant codes of practise.

2.1 C13 to C50 Installation

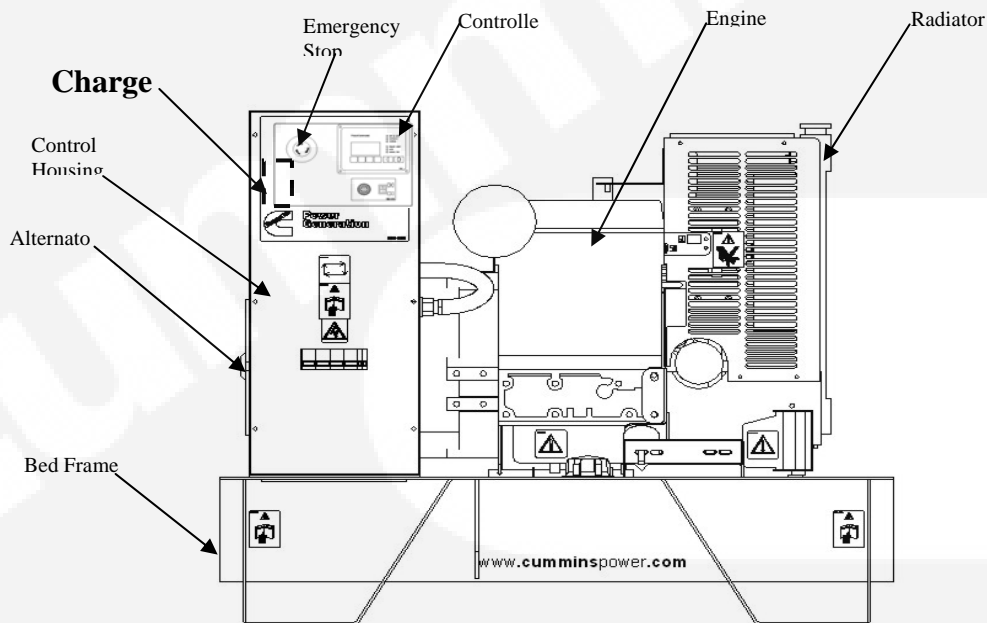


Figure 2-1 Position of Charger Installation for C13 to C50 Sets

2.2 C70 to C200 Installation

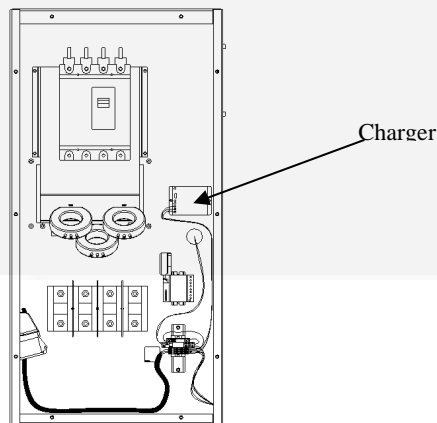


Figure 2-2 View of control housing with front panel removed (C70 to C200 sets)

2.3 Description

Utilising the latest, high efficiency switch mode technology, the charger is suitable for continuous float charging of sealed or vented batteries. e.g. sealed lead acid VRLA/AGM. Gel, flooded lead acid, NiCad etc.

The two stage constant current – constant voltage characteristic ensures accurate and efficient battery charging, and is designed for permanent connection to the batteries maintaining them in a fully charged condition without overcharging.

The charger is fully protected against overload, reverse battery connection, over voltage, and over temperature as standard.

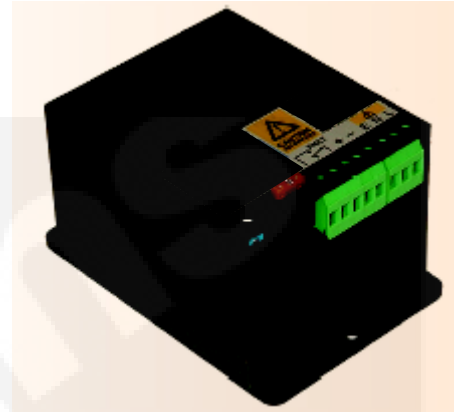


Figure 2-3 Battery Charger

2.4 Specification

Power Supply		
Nominal operating voltages	85-264VAC	
Operating frequency	47-63Hz	
Input Current	1.5A@115V	0.75A@230V
DC Charge Output		
Output current A	4	2.5
Nominal voltage V	12	24
General		
Operating temperature	-10 to +50°C	
Operating Humidity	20% to 90% RH	



SECTION 4 – OPERATION

3 Operation

As the charge cycle commences, current is limited to the maximum allowable by the electronic control circuitry. As the battery becomes increasingly charged, the current demanded by the battery reduces proportionally, until the battery terminal float voltage equals the reference voltage of the charger at which point the charger maintains a trickle charge only, which is insufficient to either overcharge the battery or cause “gassing” effects.

3.1 Circuits

For generator set specific Information refer to the drawings and circuits provided with your generator set.

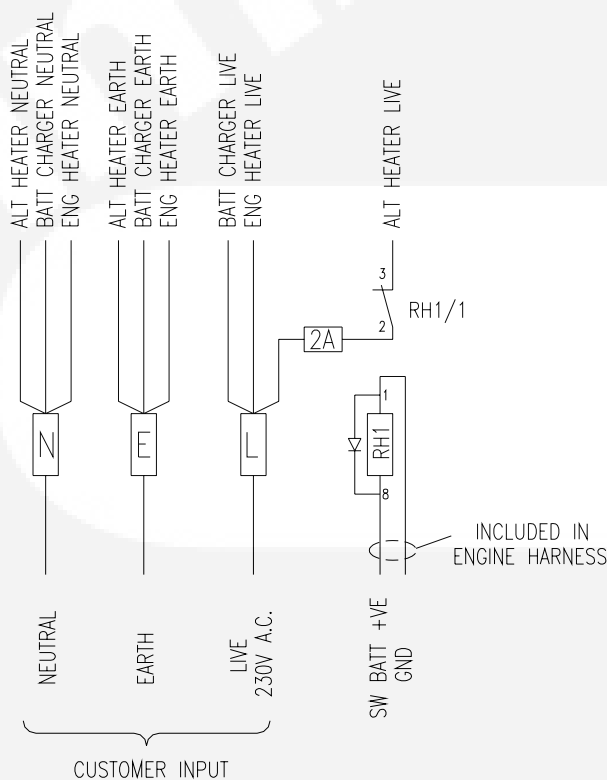


Figure 3-1

C13 to C200 WD Schematic

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