

CLARKE®

Start·N·charge



HEAVY DUTY BATTERY STARTERS/CHARGERS

MODEL NO: IBC260N & BC335

PART NO: 6225053 & 6235055

**OPERATION & MAINTENANCE
INSTRUCTIONS**



ORIGINAL INSTRUCTIONS

GC1018 - ISS 4

INTRODUCTION

Thank you for purchasing this CLARKE Battery Charger.

Please read this manual thoroughly, before attempting to operate this product, and carefully follow all instructions given.

It is vitally important that ALL precautions are taken, as specified, which will not only provide protection for yourself and that of others around you, but will also ensure that the Battery Charger will give you long and satisfactory service.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

ENVIRONMENTAL RECYCLING POLICY



Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

SAFETY PRECAUTIONS



WARNING: ALWAYS SWITCH OFF THE CHARGER WHEN CONNECTING OR DISCONNECTING LEADS TO AVOID SPARKING AS HIGHLY INFLAMMABLE HYDROGEN GAS IS RELEASED IN THE PROCESS OF BATTERY CHARGING

PLEASE READ BEFORE USING THIS UNIT

1. Battery acid is highly corrosive. If spillage occurs, wipe off immediately and wash copiously with water. Particularly avoid contact with the eyes, but if this occurs, you must seek medical advice.
 2. Before charging ensure the battery terminals are clean and that the cells are filled with electrolyte to the correct level by adding distilled water where necessary.
 3. This product is not intended for use by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.
 4. Children must not play with the charger.
 5. Do not expose this charger to rain.
 6. Never touch the negative and positive leads together.
 7. Never attempt any repairs yourself. If you have a problem with your charger contact your local Clarke dealer or contact Service@Clarkeinternational.com
 8. When charging is completed, ensure that the vehicle battery leads are secured to the proper terminals which should be clean, and lightly smeared with petroleum jelly to prevent corrosion. Finally, re-check the electrolyte level.
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WARNING: CERTAIN TYPES OF SEALED OR MAINTENANCE-FREE BATTERIES NEED EXTRA CARE WHEN CHARGING. PLEASE CONSULT THE BATTERY MANUFACTURERS INSTRUCTIONS BEFORE USING THIS UNIT.



WARNING: SINCE TOXIC FUMES MAY BE RELEASED DURING BATTERY CHARGING, ONLY USE THIS UNIT IN A WELL VENTILATED AREA.

ELECTRICAL CONNECTIONS



WARNING! READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.

Connect the three core mains lead to a suitable industrial supply isolator, or heavy duty plug. These chargers must be connected to a supply having a rated capacity of greater than 13 Amps.

WARNING: A 13 Amp (BS1363) plug is not suitable.

The maximum input amperages for these units are:

BC260N - 40amps, BC335 - 36amps

WARNING: THIS APPLIANCE MUST BE EARTHED



**WARNING! THE WIRES IN THE POWER CABLE OF THIS PRODUCT ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:
Blue = Neutral Brown = Live**

If the colours of the wires in the power cable of this product do not correspond with the markings on the terminals of your plug, proceed as follows.

- The wire which is coloured **Blue** must be connected to the terminal which is marked **N** or coloured **Black**.
- The wire which is coloured **Brown** must be connected to the terminal which is marked **L** or coloured **Red**.

If in any doubt, consult a qualified electrician. DO NOT attempt any repairs yourself.

OVERVIEW



Fig 1

A	Timer Control Knob	E	Mains Indicator Lamp
B	Current Control Knob	F	Thermal Overload Indicator
C	12V Positive Terminal	G	Ammeter
D	24V Positive Terminal	H	Fuse

PROCEDURE FOR NORMAL CHARGING

NOTE: *All references in brackets refer to Fig. 1*

1. Before charging or boosting, ensure that the cells are filled with electrolyte to the correct level by adding distilled water where necessary.
2. Where appropriate we recommend that the non-earthed lead on the battery is disconnected prior to charging. It is possible that damage may occur to any electronically controlled system fitted to the vehicle such as engine management, anti-theft alarm, alternator etc.
3. Check that the mains supply is OFF and the Current Control Knob (B) is in the 'O' OFF position.
4. Connect the appropriate lead to the unearthed battery terminal (on most modern cars this is positive (+ve) terminal), then connect the other lead to the chassis (or a suitable engine bolt) away from the battery and fuel line.

NOTE: *Ensure the RED (+ve) lead is plugged into the 12V or 24V receptacle, depending upon the voltage of the battery to be charged.*

5. Remove the battery filler caps, where appropriate, during charging in order to prevent the build up of dangerous gases within the battery.
6. Switch ON the mains supply.
7. Turn the Current Control Knob (B) to the position necessary to obtain the required charge rate, as indicated on the ammeter - 3 charging rates are provided.

CAUTION: *Avoid high charge rates with sealed batteries*

8. Keep the battery on charge until the Ammeter (G) reads zero (or 0-2 amps) or has stopped moving down, then turn the Current Control Knob (B) to the OFF position.
9. When disconnecting the charger, disconnect 1. supply, 2. chassis conductor and 3. battery conductor, **in that order.**

IMPORTANT: *If the fixed positive lead and the fixed negative lead are connected to the wrong terminals, then a flash will occur when the 2nd Clamp is attached. Damage to the charging unit and the battery will be avoided as your START'N CHARGE is fitted with a polarity protection feature. It will however be necessary to replace the internal fuse. Remove the black plastic cover on the front panel (marked 'fuse') and replace the burnt fuse with an exact replacement. See 'Specifications' for replacement fuses.*

CHARGING WITH TIMER

1. Follow the same instructions as for Normal Charging up to and including para. 6.
2. Turn the timer control knob (A) clockwise to the desired charging time setting.
3. Switch ON the mains supply.
4. Turn the Current Control Knob (B) clockwise to position 5 or 6, to obtain the desired charging rate as indicated on the ammeter.

NOTES ON CHARGING PROCEDURE

** A complete charge is best done slowly in order to protect your battery We recommend the charging rate be no more than 10% of the battery capacity rating AH). eg. a typical battery has a rating of 40 Ampere Hours, therefore the charging rate should be 4 amps, and a complete charge will take 10 hours.*

*** If a low current reading (2 amps or less) is seen on the gauge, this may indicate that the battery is either (a) already fully charged or (b) at the end of its useful life and in need of replacement. Do not charge the battery for longer than is necessary. Check the SG of the battery with a hydrometer.*

PROCEDURE FOR ENGINE STARTING

Note: We recommend that before attempting to boost start you charge the battery for 10-15 minutes. This will improve the chance of a first time start, particularly with big engines. When the battery is completely flat, you must charge the battery for 10-15 minutes before attempting to start, otherwise you may cause damage to the vehicle electronic systems.

1. Check that mains supply switch is OFF and the Current Control Switch is in the OFF position.
2. Connect the cables as for normal charging.
3. Switch ON the mains supply.
4. Turn the Current Control Knob (B) in the BOOST START position.
5. Turn the vehicle's ignition switch to 'start', then press the button on the Remote Control to provide a boost.

IMPORTANT: If the engine fails to start after a MAXIMUM of 10 seconds, release the button on the remote control and the ignition switch. You must

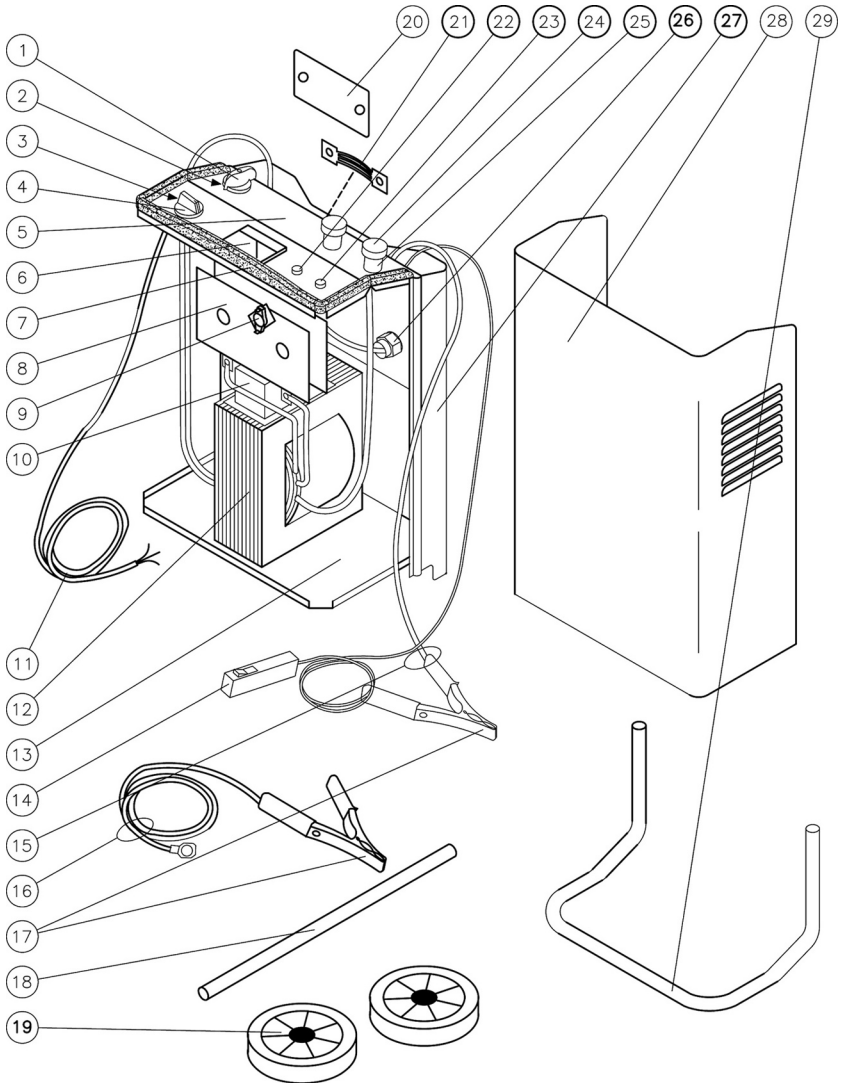
then wait for at least 30 seconds before retrying. Failure to follow this procedure may cause damage to some electronic equipment on the vehicle and may also damage the battery and the Start 'N' Charge unit, which could invalidate your guarantee.

6. When the engine has started, switch the Current Control knob (B) to the OFF position, then disconnect the charger. Disconnect (1) supply, (2) chassis conductor and (3) battery conductor, **IN THAT ORDER.**

TROUBLESHOOTING

Problem	Cause	Solution
Battery does not charge	Lack of AC input power.	Make sure that the charger is plugged into AC outlet and the POWER LED is lit.
	Faulty connections to battery terminals.	Unplug the charger and check the battery connection; ensure that there is a good connection at the battery terminal/post and/or vehicle chassis.
	Wrong charge voltage selection.	Check that the correct charge voltage was selected for the battery being charged.
	Battery voltage too low.	Ensure enough charging time was allowed to charge battery.
	Charging a very cold battery.	If the battery being charged is extremely cold, it will not accept a high rate of charge, so the initial charge rate will be slow. The rate of charger will increase as the battery warms up. Never attempt to charge a frozen battery.

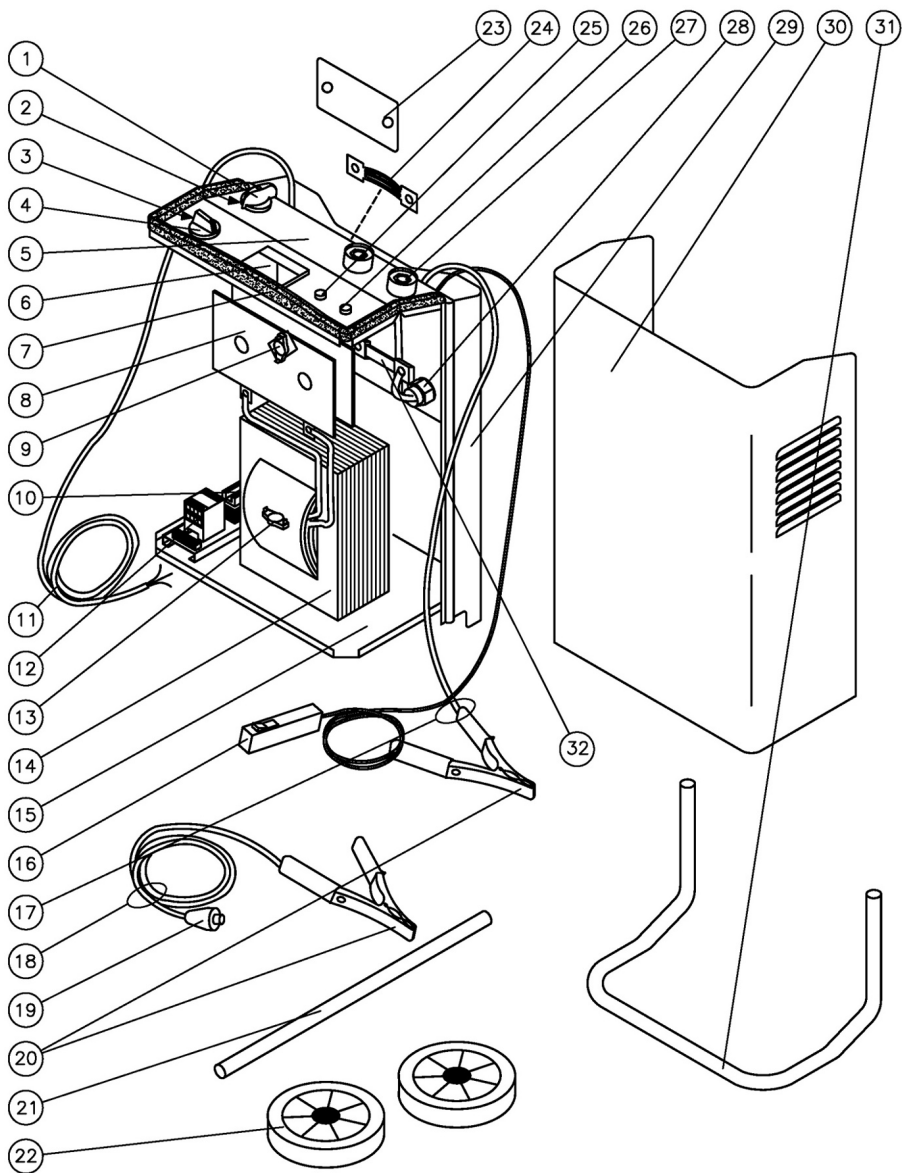
COMPONENT PARTS BC260N



COMPONENT PARTS BC260N

No	DESCRIPTION	PART No
01	Switch Knob	EM21690015
02	Switch 12A	EM22205133
03	Timer 16a 250V	EM22215001
04	Timer knob	EM21690034
05	Upper control panel	EM33710273
06	Ammeter 50A/Start	EM22600027
07	Front frame	EM21690322
08	Rectifier Pms 20/2/2	EM22400045
09	Thermostat 1004 & support	EM04600113
10	PC board for remote control	EM22700001
11	Input cable 3x2.5 M2.5	EM20220020
12	Transformer starter 230V	EM44105046
13	Lower panel	EM33700028
14	Remote control cable without plug	EM40210768
15	Black cable 16 sq/mm	EM43200016
16	Red cable 16 sq/mm	EM04600067
17	Earth clamp (pair) 120A	EM22110005
18	Wheels axle	EM55200001
19	Wheel 0.175 rubber hole D20	EM21625009
20	Fuse box cover	EM21690110
21	Fuse 200A	2EM2220008
22	Orange pilot lamp 220V	EM22610014
23	Green pilot lamp 220V	EM22610008
24	6-lobe handwheel	EM21800042
25	Insulating french washers	EM21615012
26	Cable clamp for hose D10	EM21605034
27	Front panel Aut700	EM33700722
28	Cover panel Aut700	EM33705346
29	Handle Aut700	EM33725080

COMPONENT PARTS BC335



COMPONENT PARTS BC335

No	DESCRIPTION	PART No
01	Switch Knob	EM21690015
02	Switch 12A	EM22205133
03	Timer 16a 250V	EM22215001
04	Timer knob	EM21690034
05	Upper control panel	EM33710285
06	Ammeter 50A	EM22600050
07	Front frame	EM21690322
08	Rectifier Pms 20/2/2	EM22400011
09	Thermostat & support	EM04600113
10	Auxiliary transformer	EM44140049
11	Input cable 3x2.5 M2.5	EM20220020
12	Contactora	EM22225025
13	Thermostat support	EM04600261
14	Transformer	EM44105075
15	Red lower panel	EM33700028
16	Remote control cable	EM40210768
17	Black cable 16 sq/mm	EM43200016
18	Earth cable 16 sq/mm	EM43200015
19	Dinse plug 25sq/mm	EM22100001
20	Clamps 120A	EM04600067
21	Wheels/axle	EM55200001
22	Wheel rubber 175mm	EM21625009
23	Fuse box cover	EM21690110
24	Fuse 300A	EM22220011
25	Orange pilot lamp 220V	EM22610014
26	Green pilot lamp 220V	EM22610008
27	Female dinse plug 25 sq/mm	EM22100002
28	Cable clamp	EM21605009/8
29	Front panel	EM33700722
30	Cover panel	EM33705346
31	Handle	EM33725080
32	Amperarometric Shunt 100A/60MW	EM22600047

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnal Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

2014/30/EU *Electromagnetic Compatibility Directive.*

2104/35/EU *Low Voltage Equipment Directive.*

2011/65/EU *Restriction of Hazardous substances*

The following standards have been applied to the product(s):

EN 60335-2-29:2004+A2:2010, EN 60335-1:2012+A11:2014, EN 55014-1, EN 55014-2,

EN 61000-3-2, EN 61000-3-3.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2013

Product Description: Battery Chargers
Model number(s): BC100C,120C,130C,185N, 210C, 260N, 320C, 335, 520N
Serial / batch Number: n/a
Date of Issue: 07/03/2017

Signed:

J.A. Clarke
Director

SPECIFICATIONS

Model Number	260N	335
Supply voltage	220-240V, 50Hz	220-240V, 50Hz
Battery charging voltages:	12V and 24V	12V and 24V
Max charge (Amps)	40	50
Max boost (Amps)	250	300
Internal fuse rating	200A	300A
Internal fuse part no	EM22220008	EM22220011

NOTES

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