

## Dynamo Regulator (V-Reg-2c) Adjustable

This is a solid state encapsulated regulator for low power automotive applications (pre war cars) using the Lucas E3 type dynamo. The dynamo regulator (manufactured by teb-tec) is designed to replace the mechanical regulator with modern reliable semiconductors, and can handle up to 150W\* at 6V and even more for the 12V version, provided the dynamo is capable of delivering this power. The V-Reg-2c incorporates internal thermal protection, which in turn helps to protect the dynamo. The regulator must be used with a known good automotive battery (minimum 9 Amp-hours or more) and it is strongly recommended that a fuse is fitted in the battery line (25A nominal). This regulator does not include output current limiting and is therefore suitable for replacing '2 bobbin' mechanical regulators only. It should NOT be used to replace the '3 bobbin' types unless there is careful evaluation of the electrical load.

### VOLTAGE AND POLARITY

As manufactured all regulators are adjusted to charge a 12V battery. The regulated voltage can be adjusted via the small brass adjustment screw (20 turns) over the approximate range of 6 to 15V making it suitable for both 6V and 12V application, however it is recommended that this adjustment is carried out with a reliable meter in circuit. If there is any doubt please consult with A O Services.

### FITTING

To maintain original appearances this unit may be fitted inside the original control box by first removing all of the contents (solenoids, points and resistors) or it may be mounted in any convenient corner, maybe in the top of a tool box, such that it has some protection from injury and weather.

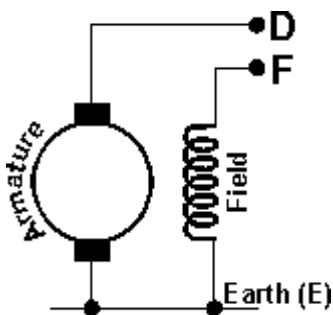
There are multiple fixing options: A pair of tee-slots (M4 stainless hex bolts and lock-nuts are supplied) allow mounting along one edge, alternatively use two or more of the through holes with the longer screws. Note, when using stainless steel fasteners it is good practice to lubricate the threads before fitting. If the unit is fitted within the original regulator box the dynamo power handling is limited to less than the regulator's maximum due to the restricted movement of cooling air, however it will comfortably handle the E3L dynamo.

### POLARISING

To ensure the correct polarity of your dynamo for your vehicle and the correct function of the regulator, it is advisable to polarise or 'splash' the dynamo. To do this disconnect the field (F) connection from the dynamo; take a wire from the live terminal of the battery and briefly touch the F terminal of the dynamo ensuring the battery is earthed (as per intended use). This establishes the field's remnant magnetism, which is required for correct dynamo start-up.

### TESTING DYNAMO

If required (dynamo unknown or suspect) check internal wiring is as in the diagram. Remove normal D & F connections and link D and F together, connect a 12V headlamp bulb from the linked point to earth. Run engine at fast idle, lamp should be bright. Confirm the polarity with a voltmeter.



### CONNECTIONS

Disconnect the battery before starting work. Ensure the dynamo internal connections are as shown. The four wires can be soldered to the original four terminals inside the control box if used in accordance with the adjacent wiring table. Alternatively any suitable crimp connectors can be used to connect to the vehicle's wiring, taking into account proper practices to produce clean firm connections.

### Warning

Ensure you fit a regulator of correct polarity

+ (positive) earth have a **RED earth wire.**

— (negative) earth have a **BLACK earth wire.**

F (Field).....GREEN

A (Ammeter)..BROWN

D (Dynamo)....YELLOW

E ( + Earth)...RED

E ( - Earth)....BLACK

### TESTING (REGULATOR FUNCTION)

Measure the voltage across the battery, around 6V or 12V at rest. Rising to around 7.2V or 14.4V once the dynamo is operating (2500 engine revs, headlight OFF). When manufactured the V-Reg-2c is set for 12V charging.

### GUARANTEE

This unit is guaranteed provided it is fitted and used as intended. Bad connections can cause damage.

\* There should be free circulation of cool air around the regulator if its maximum output is required. 071A – December 2017/Nov 2021