

TO: ALL TRIUMPH DEALERS - WESTERN ZONE

DEPT: SERVICE DEPARTMENT

BULLETIN T-65-15

SUBJECT: NEGATIVE GROUND VEHICLE SYSTEM  
TR-4A NEGATIVE GROUND

DATE: APRIL 15, 1965

### General

Current practice on vehicles of British design is to ground the positive terminal of the battery, while other countries have retained, or reverted to, the use of negative polarity for the ground circuit.

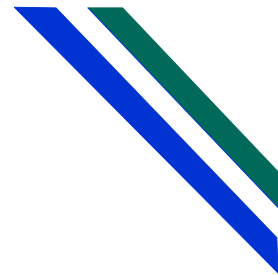
With the increasing use of polarity sensitive devices, such as silicon diodes, transistors, and electronic components in vehicle electrical equipment, there are advantages to be gained from the early adoption of a standardized vehicle grounding system, particularly in the service field.

The reasons which originally prompted the adoption of positive ground on British vehicles, although still being valid, are now of less practical importance owing to improvements in electrical design. In the interest of standardization most vehicles manufactured in England will in the future change over to a negative ground system.

Two manufacturers have already introduced production models with negative ground equipment. These are the David Brown 3 cylinder, 880 implematic tractor, with conventional D.C. equipment and the Jaguar 4.2 litre Mk. X and E-types with A.C. equipment. This trend will undoubtedly continue until eventually all British vehicles have negative ground electrics.

### The Effect on Service Procedure

it is essential for all concerned to be particularly careful when fitting replacement units and determine first of all the vehicle's ground polarity so that the correct components are used. Please insure that all service personnel appreciate the additional care necessary.



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### Service Information

#### 1. Generators

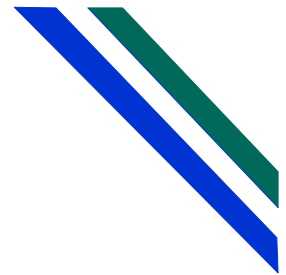
Replacement D.C. generators are all polarized for use on positive grounded systems and a boxing note is included with each machine giving details on how to repolarize.

If the negative terminal of the battery is grounded on the vehicle for which the replacement generator is intended, it will be necessary to repolarize the generator before fitting.

To do this, fit the generator to the vehicle but do not at this stage connect the cables to the "D" and "F" terminals. Temporarily connect a length of wire to the battery positive terminal and flick the other end of this wire several times against the terminal "F". This serves to repolarize the generator. The temporary connection can now be removed and the original cables connected to terminals "D" and "F".

#### 2. Control Boxes

Compensated voltage control and current voltage control units, such as the RB106/2 and RB310, or RB340, which do not incorporate field surge diodes, are polarized for use with positive ground systems. However, if connected into a system of the opposite polarity, that is, one in which both the generator and the battery are of the required polarity, they will automatically repolarize themselves without any loss in efficiency. The circuit connections do not have to be altered in any way.



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### 3. Ignition Coil

These units do not create any problems because the present day design insures that they are more than capable of working efficiently, even when reversing the "SW" and "CB" leads to retain correct sparking plug polarity, when connected into a circuit having a different ground polarity. Therefore, it is only necessary to reverse the "SW" and the "CB" cables.

Latest H.T. coils are marked "+ve" and "-ve" and should be connected accordingly.

### 4. Ammeters

It is only necessary to reverse the cable connections.

### 5. Permanent Magnet Motors

Automatic screen jets come under this heading and it is only necessary to reverse the cable connections, such as the ground cable and feed cable, to retain the same direction of rotation.

### 6. Battery

The important point is to insure that the correct polarity terminal is connected to ground.

### 7. Car Radios

Before fitting or connecting a radio it is essential to ascertain from the manufacturers that it is suitable for the respective polarity.