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NOVEMBER, 1965

TO: ALL ROOTES DEALERS  
MODEL: ALL MODELS  
SUBJECT: NEGATIVE EARTH ELECTRICAL SYSTEMS

By the end of 1965 all vehicles of our manufacture will incorporate an electrical system with Negative Earth. Introduction points on individual models will be circulated at the time of the changeover in the normal way, and this Bulletin is intended as advance information for general guidance.

The primary reason for the changeover - which is understood to be common to other major British manufacturers - is to standardise our practices with those of other countries, and thereby reduce servicing problems which can arise overseas. With the introduction of more advanced electronic and transistorised components into vehicle electrical systems, the complication and cost of test equipment would be markedly increased if it had to cater for both polarities.

Service personnel who have been accustomed to dealing solely with existing positive earth systems will need to take care to differentiate between the two polarities. Vehicles of our manufacture will have a plate located on the bonnet locking platform stating the vehicle's earth polarity, with the exception of the Tiger, which has been negative earth from first production.

Certain electrical units are interchangeable, for use with either polarity, providing they are wired up correctly; others are suitable only for vehicles of the correct polarity - in particular those fitted with transistors or other semiconductors, which are irreparably damaged if wrongly connected. The principal points are summarised below:-

#### Batteries

Batteries are interchangeable provided that the vehicle cable terminals are of the correct size for their respective battery posts, so as to provide the correct polarity when connected.

#### Ignition Coils

Ignition Coils are interchangeable. The wiring for current types, with

L.T. Terminals marked "+" and "-" is self explanatory, when it is borne in mind that the contact-breaker is on the earth side of the coil. Earlier types, marked "SW" and "CB" must have the connections reversed for a negative earth system.

#### Generators (D.C.)

Replacement generators will continue to be supplied polarised for positive earth. They may be re-polarised for negative earth, by a simple operation, if required, and full instructions will be supplied in the carton with each unit.

#### Alternators

Alternators are NOT interchangeable. They are polarity conscious to suit one system only, and on no account must any attempt be made to re-polarise. Irreparable damage would result. Different types will be supplied to suit positive and negative earth, under different part numbers. Alternators with the main output terminal marked "-ve" are for positive earth systems, those marked "+ve" for negative earth. Circuit connections differ for the two types, and the greatest care must be exercised when connecting up.

#### Regulators/Control Boxes

Replacement units for D.C. Generators will be polarised for positive earth, as at present. However, if connected into a negative earth system they will automatically repolarise themselves without any loss of efficiency. The circuit connections do not require altering.

In the case of Alternators using the standard 4. TR control box, it will be necessary to ensure circuit connections are used to suit the polarity of the system.

#### Ammeters

Ammeters may be used with either positive or negative earth; if the dial readings are reversed, the leads to the instrument should be changed over.

#### Battery Charger

The "built-in" Rootes Special Accessory Battery Charger can be used on vehicles with either polarity, provided that the cables from the socket to the fuse unit are connected to correspond with the vehicle's earth polarity.

#### Electric Clocks & Tachometers

Electric Clocks and Tachometers are NOT interchangeable, and cannot



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be adapted to the opposite polarity. They are marked to show which system they are intended for and this must be checked before installation, as incorrect connection will render the instrument useless.

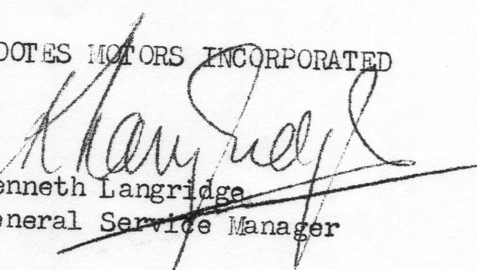
Radios

Radios are usually designed for one or other polarity and reversed connections will immediately destroy the transistors. It is possible to make internal reconnections to suit the opposite polarity, but this must be entrusted to an appointed radio dealer.

NOTE

Sales staff should be notified of these problems which may occur when transferring owner's electrical equipment from one car to another.

ROOTES MOTORS INCORPORATED

  
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KL/jd