SECTION I-2
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EQUIPMENT

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WORKSHOP INSTRUCTIONS

TRAFFICATORS

MODELS SF34 and SF40

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TRAFFICATORS

MODELS SF34 and SF40

1. GENERAL

These direction indicators are of the illuminated semaphore type now fitted as standard equipment to most British cars. They are flush-fitting, the movement and the lowered arm being sunk into the door pillar.

When the control switch is operated, a solenoid in the movement raises the arm, which is at the same time illuminated by a bulb inside the translucent moulding. When the current is switched off, the arm falls under its own weight. A spring locking catch holds the arm in the lowered position until the solenoid is energised.

Models SF34 and SF40 are very similar in design, the difference between them being that model SF40 has a shallower movement and can thus be more easily fitted into pillars of restricted depth.

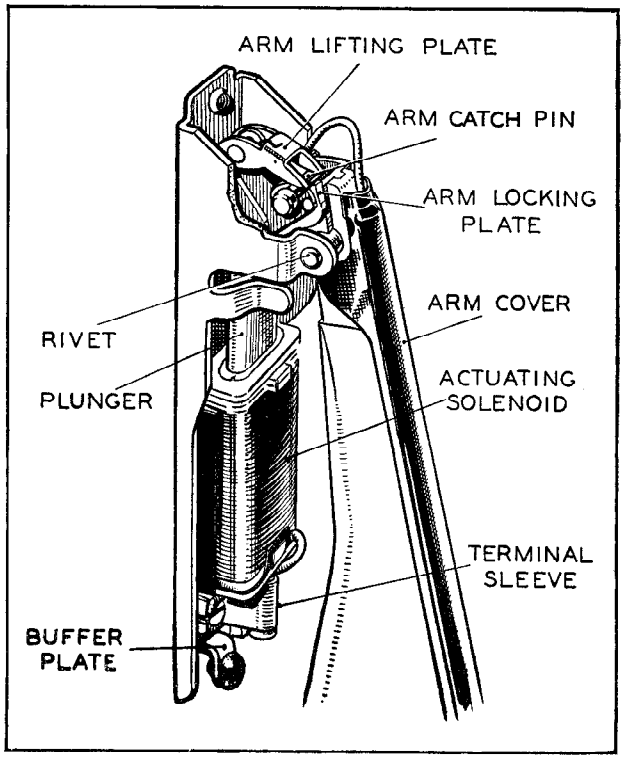

Fig. 1.
Trafficator, model SF40

2. ROUTINE MAINTENANCE

In normal service the Trafficators need very little maintenance. Bulb replacements are dealt with in paragraph 3.

LUBRICATION—EVERY 6,000 MILES.

Lift the Trafficator arm and apply **one drop** of thin machine oil to the catch pin between the arm and the operating mechanism.

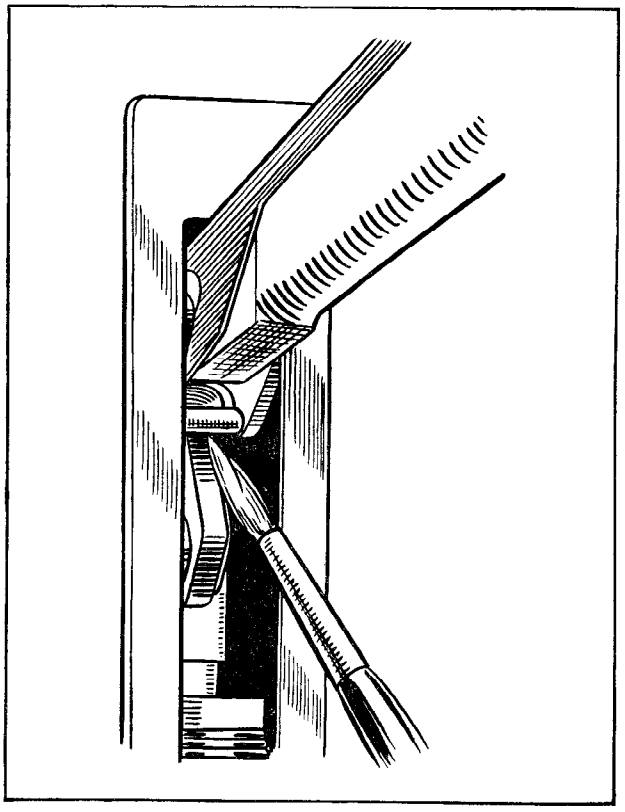

Fig. 2.
Lubricating the catch pin

Withdraw the screw at the end of the arm and slide off the arm cover. Move to one side the connecting wire to the bulb and apply a drop of thin oil to the felt lubricating pad at the top of the arm. When replacing the arm cover, slide it along the arm until the side plates engage with the slots below the pivot bearing. Replace the cover securing screw.

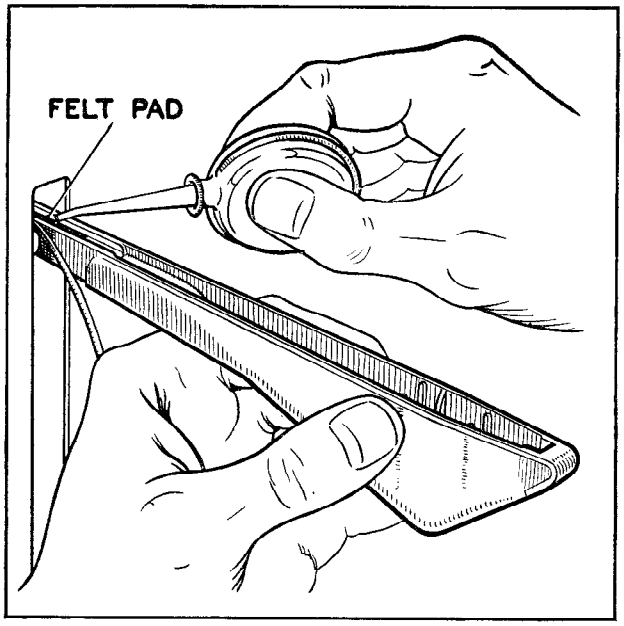

Fig. 3.
Lubricating the pivot bearing

It is important to use only the slightest trace of oil, as any excess may affect the operating mechanism.

3. SERVICING

(a) REPLACEMENTS

In the event of Trafficator failure through an internal fault, it is generally better to replace the complete movement rather than to attempt a repair. Replacement arms are, however, supplied, and the procedure for fitting them is given in paragraph (e), page 3.

The bracket of the Trafficator movement is secured by a single screw to a fixing plate, shaped to suit the individual car and itself secured to the pillar or body member by two screws. This fixing plate is **not** supplied with a replacement Trafficator movement.

When removing a Trafficator from the car, note the terminal arrangement : some Trafficators have two terminal sleeves, the upper being the "live" and the lower the "earth" connection. The cables are colour-coded to ensure correct connection, and if necessary reference should be made to the wiring diagram.

(b) TRAFFICATORS DO NOT OPERATE.

If both Trafficators are out of action, examine the fuse protecting the Trafficator circuit, which may have blown. Examine the wiring from the supply point to the switch, from the switch to the Trafficators, and from the Trafficators to the earthing point. (Most Trafficators are earthed to the chassis through their brackets, but a second terminal is provided on some units so that a separate earth connection can be used if necessary). Remember that a blown fuse may be caused by a short circuit in any of the other circuits protected by the fuse. Replace any defective cables and fit protective sleeving at points where chafing has occurred.

If the fuse still blows, remove the escutcheon plates or pillar facings to expose each Trafficator movement.

Examine the internal connections, and especially the flexible cable to the bulb in the arm, for chafed insulation and other signs of a short circuit.

Failure of one Trafficator only may be caused by the moving arm fouling the bodywork. Loosen the two screws securing the Trafficator fixing plate and move it until the arm can operate freely.

Lift the Trafficator arm by hand, and work it up and down. If it does not move freely, lubricate as described in paragraph 2, and in addition apply a **slight trace** of high melting point grease to the inside of the bracket where the operating plunger bears on it. Do not use ordinary grease, which, when warm, might run down into the solenoid and cause the plunger to stick.

If excessive lubrication has caused clogging of the movement, clean the moving parts with petrol.

Examine the internal connections of the Trafficator for worn leads or a broken wire at a soldered joint.

(c) TRAFFICATORS DO NOT LIFT TO FULL EXTENT OR DO NOT FALL COMPLETELY HOME.

See that the Trafficator arm does not foul the bodywork, and that the movement is correctly lubricated.

Failure of the arm to fall to its correct position may be due to a distorted buffer plate, which should be bent back to its correct shape with a small pair of pliers.

If the arm, although capable of moving freely, does not lift to its full extent, and at the same time the bulb lights with less than its usual brilliance, it is possible that a discharged or faulty battery, or a wiring fault, has reduced the operating voltage at the Trafficator.

(d) TRAFFICATOR ARM LIFTS BUT BULB DOES NOT LIGHT

Remove the screw at the end of the Trafficator arm and slide off the arm cover. The bulb is a tubular festoon type, fitting between two moulded ribs inside the translucent cover. One connection to the bulb is made by a coil spring in the arm, and the other by the plated arm cover. When fitting a new bulb, take care that the connecting spring and bulb make good contact.

Examine the wire from the terminal to the bulb, especially where it is held under the clip on the arm and at the soldered connections. If this wire is damaged, it must **not** be replaced by a length of ordinary cotton-covered wire : the wire used in production is 100/47 SWG copper, with braided cotton covering, and this or similar wire must be used in servicing.

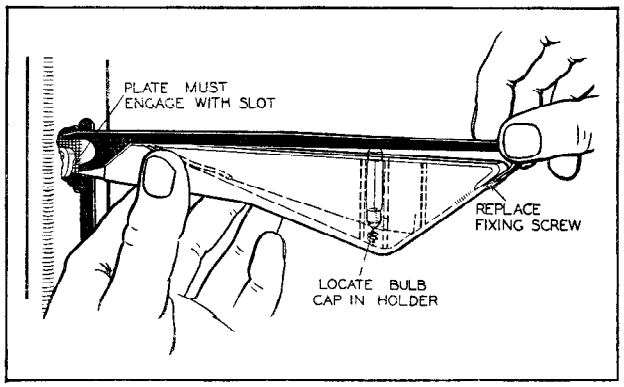

Fig. 4.
Replacing bulb

Replacing the bulb connection

Remove the arm cover and the bulb. Open the clip securing the cable to the arm. Slacken the screw securing the terminal assembly : the complete movement, with the exception of the arm, can be withdrawn from the bracket.

Soften the soldered joints and remove the old length of cable : solder the ends of the new length (9½ in.) to the terminal plate and the bulb contact spring.

Thread the contact spring and the cable between the bracket and the arm, and refit the solenoid and plunger in position, taking care that the catch pin on the arm is correctly located between the lifting plate and the locking plate. Before finally tightening the securing screw, ensure that the various paper and fibre insulating strips are correctly fitted ; the flexible lead to the bulb should be secured between the coil and the insulating strip protecting the latter from the bracket. Secure the wire to the arm by means of the clip, leaving sufficient slack to ensure that the wire is neither taut when the arm is in the lowered position nor bent sharply when the Trafficator is operated. Refit the bulb and replace the arm cover.

(e) REPLACING A DAMAGED ARM

NOTE : A new arm is usually supplied complete with the spring bulb contact and short length of flexible cable, and should be fitted in accordance with the instructions below. If, however, the old contact and cable are in good condition, a somewhat simpler job can be made of the repair by making use of them, it then being unnecessary to disturb the terminal plate or to make any soldered joints.

Remove the Trafficator from the car, take off the arm cover and remove the bulb. If the old cable and contact are to be used, open the clip securing the cable to the arm ; otherwise slacken the screw securing the terminal assembly, remove the terminal plate and unsolder the cable, temporarily replacing the screw to hold the solenoid in position. Drill out the rivet securing the arm.

Place the new arm in position so that the catch pin locates correctly between the lifting plate and the locking plate, and secure by fitting a new rivet. Solder the free end of the braided cable to the tag on the terminal plate, and refit the plate in position. Before finally tightening the securing screw, fit the cable neatly between the coil and the insulating strip, so that, although held firmly, there is no danger of the insulation being damaged by sharp edges. There must be sufficient slack to allow the arm to move freely without either straining the cable or bending it sharply.

Finally fit the bulb into the arm.