

# 6

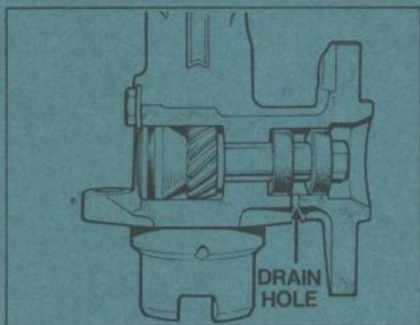
## Have you completed the Primary Card checks?

If not, refer to card No. 1 before attempting further Fault Diagnosis.

### THE PETROL INJECTION METERING UNIT: TIMING AND FITTING PEDESTAL SEALS

#### 1. REPLACING SEALS IN THE METERING UNIT AND DISTRIBUTOR MOUNTING PEDESTAL

Two lip seals are fitted to the metering unit drive shaft in the pedestal housing. The two seals must be fitted with the lips away from each other; this prevents petrol leaking into the crankcase and also prevents oil entering the fuel metering unit in the opposite direction.



**NOTE:** The last seal to be fitted must not be pressed too far into the housing, see illustration, otherwise the drain hole in the pedestal will be blocked.

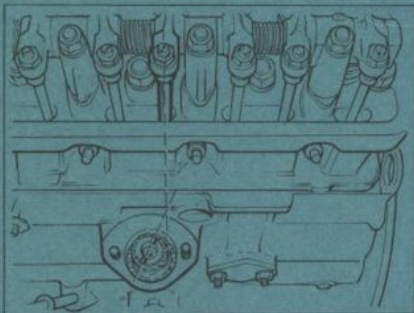
A nylon coupling is fitted between the drive shaft and the rotor of the metering unit. An 'O' ring forms a seal between the pedestal and metering unit body. Fit nylon coupling and 'O' ring, offer up the metering unit to the pedestal and secure with three bolts and washers. When fitted, the two banjo bolts on the metering unit will face the cylinder block.

#### 2. TIMING THE PETROL INJECTION METERING UNIT

Set tappets to 0.010 in (0.25 mm).

Turn the engine so that No. 6 cylinder valves are on the rock and the engine is at T.D.C., No. 1 cylinder firing.

The distributor and metering unit drive gear must be fitted in the block so that the large offset of the distributor drive shaft faces the rear and the slot is pointing towards No. 9 push-rod.



The gear must also mesh with the camshaft gear and the slot on the bottom end of the spindle engage with the oil pump drive.

With the spindle in the correct position the drive gear and cylinder block aperture are nearly level.

If the gear protrudes too far above the block, the spindle has not engaged with the oil pump drive.

Rotate engine two complete turns, keeping slight pressure on top of gear; this will allow the spindle to mesh with the oil pump drive and be in correct alignment with No. 9 push-rod. Replace existing amount of shims between block and pedestal. With the pedestal and metering unit bolted together and all except No. 6 injector pipes connected, offer up the assembly to the distributor drive gear.

Ensure the pedestal is seated correctly in the block.

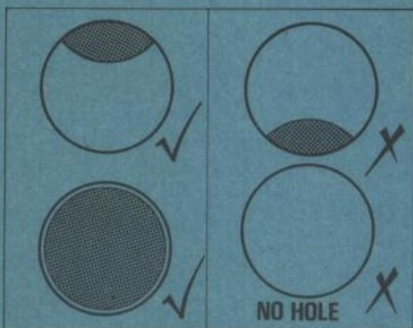
Remove the No. 6 delivery union and look down the hole in

(continued)

the metering unit to check position of the hole in the rotor. The hole should be visible as an eclipse at the top as shown in the illustration.

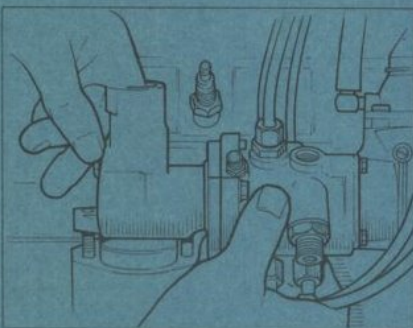
A full hole is acceptable.  
An eclipse showing at the **BOTTOM** is **INCORRECT**.  
No hole visible is **INCORRECT**.

If the eclipse is not showing in the correct position, lift the pedestal and metering unit sufficiently to allow the drive gear to clear the camshaft gear.



**NOTE:** Ensure distributor gear spindle does not lift with pedestal, otherwise difficulty may be experienced engaging spindle with oil pump drive.

Place fingers in distributor hole of pedestal and turn gear anti-clockwise (towards engine) one tooth.  
At this point no hole is visible through metering unit hole.  
Rotate gear anti-clockwise one extra tooth and lower pedestal and metering unit into position.

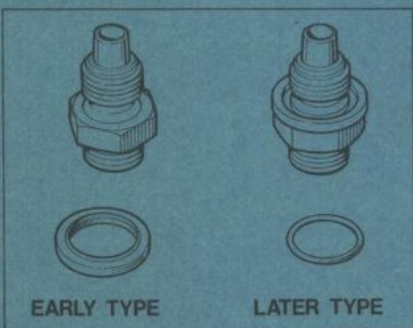


Re-check position of eclipse.

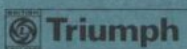
If the hole is still not showing in the correct position, gear may not have been turned sufficiently—repeat operation.  
When the metering unit has been timed correctly, secure the pedestal to the block, replace the distributor plug leads, rocker cover and No. 6 delivery union and injector pipe to metering unit. Refit the petrol feed and spill-back pipes to the metering unit.

**CAUTION:** Smear the end of the delivery union with oil before refitting to the metering unit. This will help to prevent the inner seal being damaged.

**NOTE:** On early cars the delivery unions were sealed by 'Dowty' type seals and whenever the unions are disturbed the seals should be changed. On later cars 'O' rings are used to seal the delivery unions. These may be re-used if they are in good condition.



Issued by:



SALES AND SERVICE TRAINING CENTRE  
COVENTRY ENGLAND

# AMENDMENT TO CHECK CARD No. 6

## ENGINE CHANGES FOR 1973 PETROL INJECTION CARS

The changes listed below have been made so that the 1973 engines meet the European Exhaust Emission Control regulations.

The changes were incorporated from engine numbers:

CR — 1E — TR6  
MG — 75001E — 2.5 P.I.

A common camshaft is now fitted, Part Number 311399.

Camshaft angles: Inlet opens — 18° B.T.D.C.  
Inlet closes — 58° A.B.D.C.  
Exhaust opens — 58° B.B.D.C.  
Exhaust closes — 18° A.T.D.C.

Time the camshaft in accordance with the workshop manual, using an excessive clearance of 0.040 in.

No vacuum advance is fitted to TR6 or 2.5 P.I.

Dwell angle is 32° – 38°.

### Ignition Timing

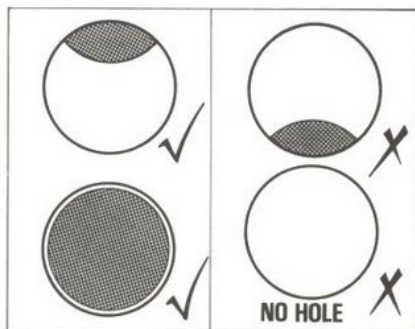
TR6	2.5 P.I.
Static 4° B.T.D.C.	Static T.D.C.
Strobe light 6° B.T.D.C.	Strobe light 2° B.T.D.C.

Injection is now timed for 30° after top dead centre (A.T.D.C.) and can be checked as follows.

1. For reasons of safety, disconnect the battery.
2. Using a  $\frac{7}{8}$  A.F. socket on the alternator pulley nut, turn the engine *clockwise* until No. 1 cylinder is at T.D.C. firing.
3. Mark off from T.D.C. on the crankshaft pulley two marks in an anti-clockwise direction at  $1\frac{1}{8}$  in. and  $2\frac{5}{8}$  in.

(The tolerance for injection timing is 20° A.T.D.C. to 45° A.T.D.C.; the marks correspond to these two angles.)

4. Remove No. 6 injector pipe and adaptor union.
5. Continue to turn the engine in a clockwise direction until a small eclipse is visible in the No. 6 adaptor hole; at this point the crankshaft must be between 20° A.T.D.C. and 45° A.T.D.C.



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**Rover Triumph**

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