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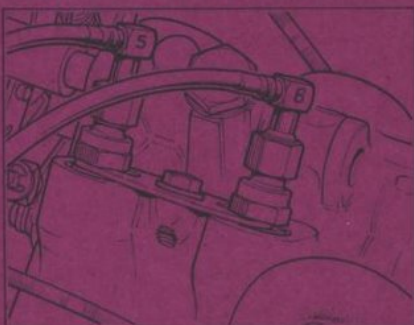
Have you completed the Primary Card checks?

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

ERRATIC IDLING OR LACK OF RESPONSE

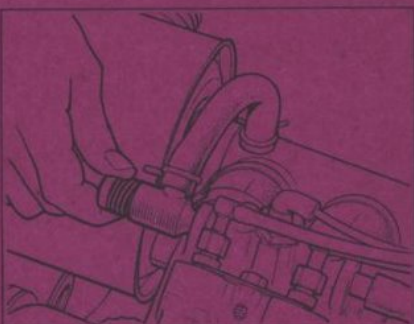
1. Check injector pipes are fitted to correct inlet manifold positions.

NOTE: Engine firing order 1, 5, 3, 6, 2, 4.



2. Check engine idling speed which should be 750 to 800 r.p.m.

If necessary, adjust the idling speed by means of the air valve at the front of the inlet manifold.



3. Check excess fuel lever clearance between lever adjusting screw (fully returned) 0.004 to 0.008 in (0.1 to 0.2 mm).

Check for excess Bowden cable fouling on bulkhead—cut off as necessary.



4. Check line pressure as follows:

Fit pressure test adaptor (Churchill Part No. S 351) between petrol feed pipe and metering unit as shown. Using pressure gauge 0 to 120 lbf/in² (0 to 8.4 kgf/cm²) (Churchill Part No. CBW 1B), Check line pressure which should read 100 to 110 lbf/in² (7.07 to 7.7 kgf/cm²).

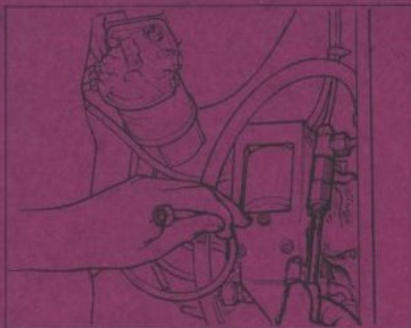


If necessary, adjust the pressure relief valve as follows:
Switch off ignition.

CAUTION: Before disconnecting any fuel pipes or connections the immediate area of the connections should be covered with cotton waste to prevent petrol contaminating the interior of the boot. If this is not done complaints may be received of petrol fumes in the passenger compartment of the car.

Do not try to clamp nitrile spill-back pipe otherwise damage will occur. Pipe should be plugged.

Disconnect spill-back pipe at valve end and using a Pozidriv type of screwdriver turn the nylon screw **ANTI-CLOCKWISE** to **DECREASE** or **CLOCKWISE** to **INCREASE** the pressure.



NOTE: It is most important that the nylon adjusting screw is not turned more than **ONE** complete turn in either direction. If the line pressure does not react when the nylon screw has been adjusted to the maximum, the relief valve is faulty and should be changed.

All new relief valves are factory-set to the correct pressure; do not disturb adjustment screw.

5. Check the petrol injection metering unit timing as follows:

Turn off ignition.

Turn engine to T.D.C., firing No. 1 cylinder.

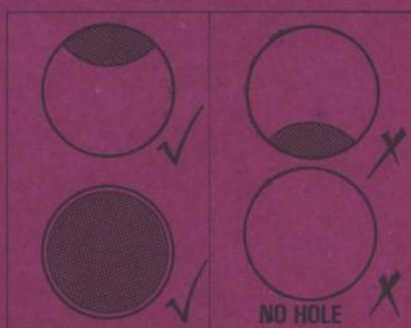
Remove No. 6 injector pipe from metering unit.

Remove No. 6 delivery union from metering unit and look down the hole to observe the position of the hole in the rotor.

The hole in the rotor 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 showing is **INCORRECT**.



If the hole is not showing in the correct position, remove the distributor and two nuts and washers securing the pedestal and metering unit to the cylinder block. Disconnect the petrol feed and the spill-back pipe to the metering unit.

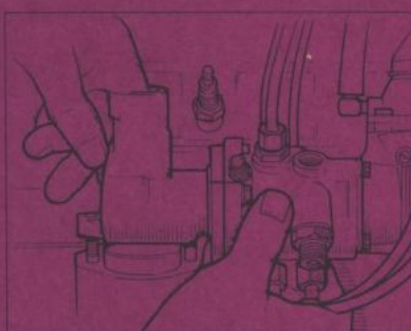
CAUTION: Ensure the distributor gear spindle does not lift with the pedestal, otherwise difficulty may be experienced engaging spindle with oil pump drive.

Raise the pedestal and metering unit sufficiently to allow the drive gear to clear the camshaft gear.

Place finger in distributor hole of pedestal and turn gear anti-clockwise (towards engine) until a full hole is visible.

Continue to turn gear anti-clockwise until hole just disappears from view, and then rotate gear one *extra* tooth.

Lower pedestal and metering unit into position.

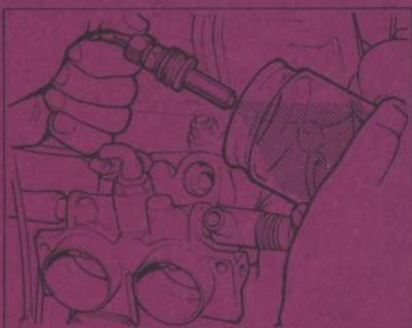


Re-check position of hole in rotor.

If position of hole is still not correct, the gear may not have been turned sufficiently—repeat operation.

When the metering unit timing is correct, secure the pedestal to the block, replace the distributor, plug leads, and No. 6 delivery union and injection pipe to metering unit. Refit the petrol feed and spill-back pipes.

6. Check for continuous injection on one or more cylinder by removing each injector in turn and observing spray pattern.



NOTE: Ensure other injectors are secured. Place end of injector in glass jar to prevent atomized fuel being sprayed over the engine.

Renew the outlet union internal seal in the affected line as follows:

NOTE: Details of the special tools required to complete the following operation are described on the PRIMARY CARD list of special equipment.

It will be found easier to change certain seals if the metering unit and pedestal are removed from the engine as described in CHECK 5 of this card.

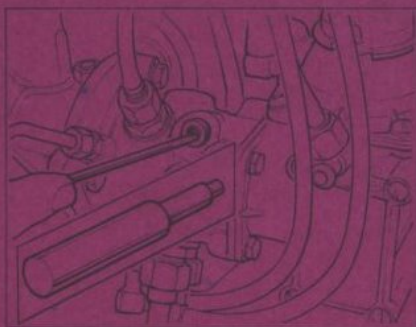


Unscrew the appropriate injector pipe from the metering unit.

Unscrew the outlet union from the metering unit and collect the seal.

Using a wire hook, withdraw the inner seal which has been leaking.

Fit a new inner seal to the special tool and press the tool and seal into position in the metering unit. Withdraw the special tool.



CAUTION: The inner seal must not be fitted to the delivery union, as it will expand and be prevented from locating correctly in the sleeve.

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.



Refit the delivery union and seal.

Refit injector pipe to delivery union.

Refit metering unit and pedestal, time metering unit as described in check 5 of this sheet, and then refit distributor.

NOTE: If any of the supply pipes are removed from the metering unit or the injectors disconnected for any

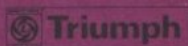
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reason the engine will misfire on the appropriate injector until the system has bled itself. This operation may take two or three minutes before the engine is running normally.



Check for petrol leaks on metering unit.

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