

4

Have you completed the Primary Card checks?

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

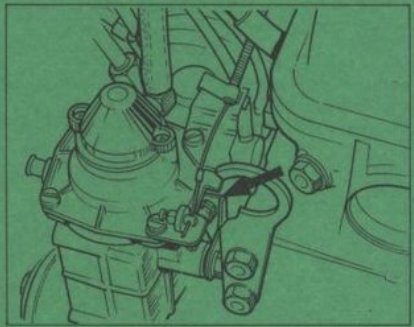
ENGINE MISFIRING OR CUTTING OUT

ENGINE MISFIRING

1. Check for low fuel condition.
2. Check excess fuel lever is returning to the OFF position.

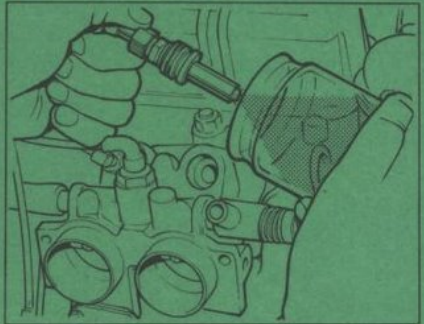


Check excess fuel lever clearance between lever adjusting screw. (Fully returned) 0.004 to 0.008 in (0.1 to 0.2 mm).



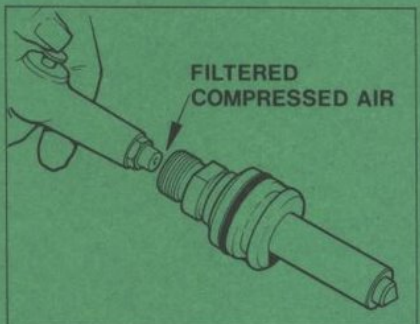
3. Remove each injector in turn and check for correct spray pattern.

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



If injector dribbles, remove injector from pipe and blow out with compressed air.

CAUTION: The filtered compressed air pressure **MUST NOT** exceed 80 lbf/in² (5.6 kgf/cm²) and should only be used for short periods, otherwise the injector may be damaged.



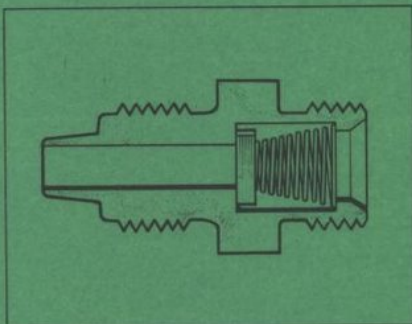
Refit injector to pipe, start engine and re-check spray pattern. If injector still dribbles, change the injector.

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

If the new injector persists in dribbling check adaptor seal in metering unit. (Seal may be changed using appropriate special tools.)

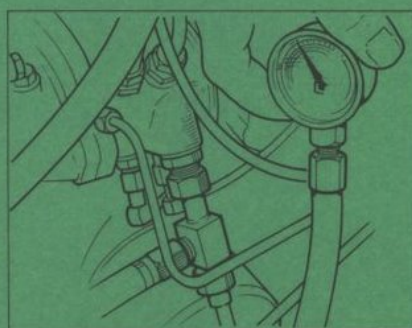
IMPORTANT: A dribbling injector will cause a misfire on ONE cylinder only. A blocked injector will cause misfiring on TWO cylinders, i.e. cylinders will misfire in engine firing order. If No. 1 cylinder misfires, so will No. 5 Engine firing order 1, 5, 3, 6, 2, 4.

4. Metering unit delivery union non-return valve faulty on relevant cylinder.



5. Fit pressure test adaptor (Churchill 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 No. CBW 1B), check line pressure which should read 100 to 110 lbf/in² (7.05 to 7.7 kgf/cm²) with the car static. Check the line pressure readings during road test. The pressure in the petrol injection system should remain constant under any normal conditions.

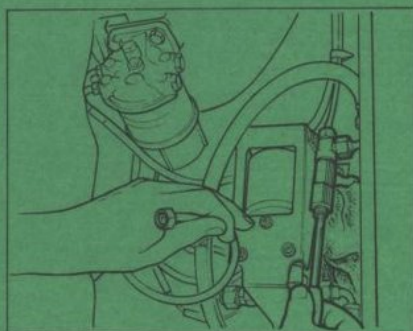


If necessary, adjust the relief valve as follows:

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.

Switch off ignition.

DO NOT try to clamp nitrile spill-back pipe, otherwise damage will occur to the pipe. The pipe should be plugged. Disconnect spill-back pipe at valve end. Using a Pozidriv type of screwdriver, turn the nylon screw **CLOCKWISE** to **INCREASE** or **ANTI-CLOCKWISE** to **DECREASE** 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 the adjustment screw.

Low pressure on road test but normal pressure in the static position indicates fuel starvation.

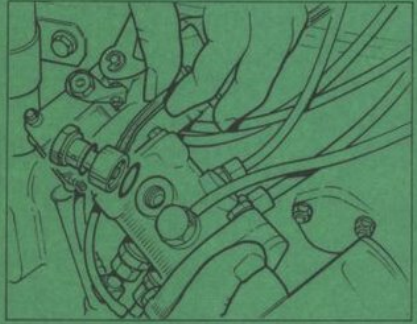


Check fuel tank for blockage.



Check pressure relief valve for correct operation—by means of substitution.

6. If the sparking plugs on Nos. 2 and 5 cylinders are constantly fouled check banjo seals on Nos. 2 and 5 injector pipes on metering unit.



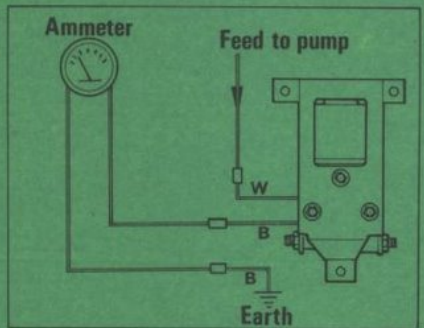
ENGINE CUTTING OUT

1. Check alternator belt tension.



Belt slipping and with all electrics in use there is insufficient current available to provide normal line pressure.

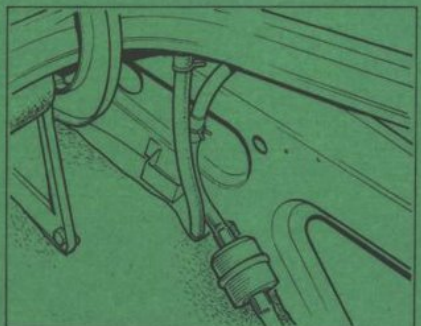
2. Road test car with line pressure gauge and ammeter fitted as follows:
Connect ammeter to fuel pump as shown in illustrations.



Check the line pressure as described for ENGINE MISFIRING (check No. 5 on this card).
Low pressure on road test but normal pressure in the static position indicates fuel starvation.



Check petrol tank breather pipe and filter for blockage.



(continued)



Check fuel filter—if dirty, change.

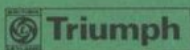
3. The petrol injection fuel pump current consumption is normally 3.5 to 5 amps.

If excessive amperage consumption was noted during the road test, check the pump armature end-float.



Check pump motor brushes.

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