

Exhaust Emission Systems

ROVER 2000 T.C. & S.C. ENGINE MODIFICATION

Rover 2000 TC & SC (1968-70)

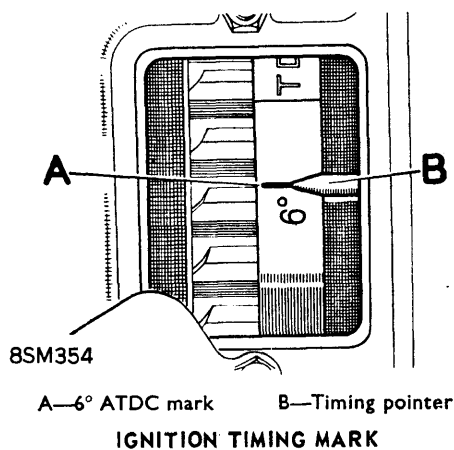
Vehicle Identification — Vehicle commencing numbers are as follows: Automatic transmission SC (single carburetor) 85800001E onwards, TC (twin carburetor) 85900001B onwards. Engine numbers; Automatic Transmission SC — 85800001H onwards, TC — 85900001B onwards.

DESCRIPTION

Exhaust emission control has been achieved by alterations to the carburetion characteristics, and by retarding ignition at lower speeds, allowing engine to run on a much leaner mixture. A special distributor, which has a retarded static setting of 4° ATDC (6° ATDC on early models), is identified by a Lucas part number stamped on body. The distributor permits retarded timing at engine idling speeds and at 900 RPM commences to advance ignition in the normal way to match increased engine RPM.

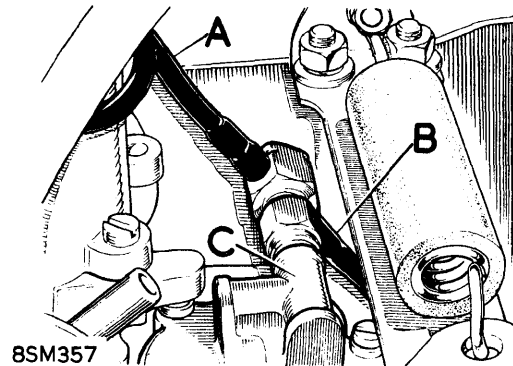
OPERATION

Distributor Ignition Timing — Timing must be set dynamically as follows: Connect timing light to engine. High tension connection must be made on number four cylinder spark plug. Disconnect vacuum advance unit from distributor and plug line. Connect tachometer, set engine idling speed between 700 and 800 RPM. This setting is extremely important and any deviation will cause incorrect timing and subsequent failure to pass emission requirements. Set vernier advance and retard adjustment on distributor to the extreme advance position. This will minimize the possibility of subsequent advancing of ignition point indiscriminately. Slide back timing cover on flywheel bell housing, loosen distributor clamping bolt. Rotate distributor until timing light synchronizes timing pointer and timing mark. Timing should be 4° ATDC (6° ATDC on early models).



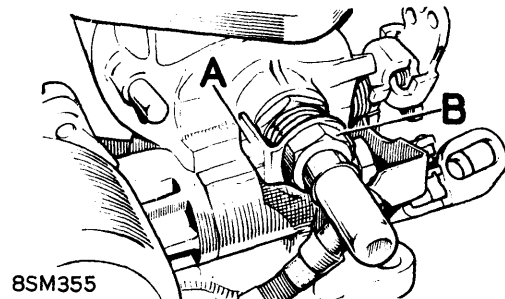
Jet Adjustment Restrictors — Both single and twin carburetor engines have locking devices which restrict adjustment of mixture strength. These locks are factory set, the setting is at a point giving maximum richness, any adjustments may only weaken setting.

Fuel Spill Back System — This system prevents fuel from getting too hot due to it being relatively static while passing through underhood area. Fuel is therefore flowing at a fairly constant rate from fuel tank to fuel pump and back, with carburetors taking fuel as required. This system requires a higher capacity fuel pump, delivering a pressure of 2¼ to 4¼ psi. This pump is identified by a metal filter bowl cover in place of the usual glass cover.



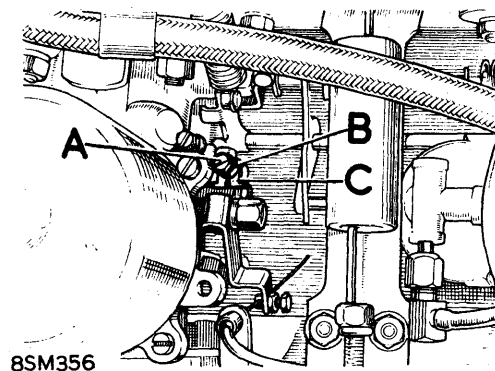
- A—Fuel spill-back pipe
- B—Fuel feed pipe
- C—Float chamber top, rear carburetor

FUEL SPILL-BACK CONNECTION



- A—Restrictor device
- B—Jet adjusting nut

JET RESTRICTOR SC

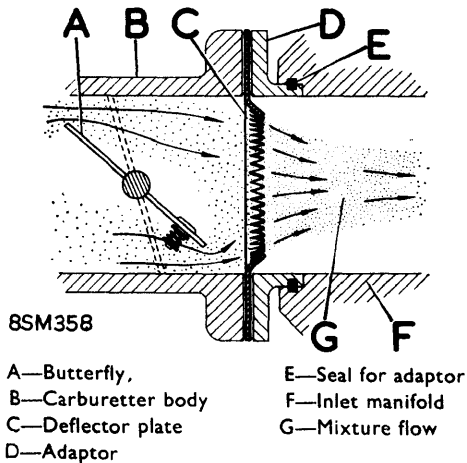


- A—Jet adjusting screw
- B—Locknut
- C—Restrictor device

JET RESTRICTOR TC

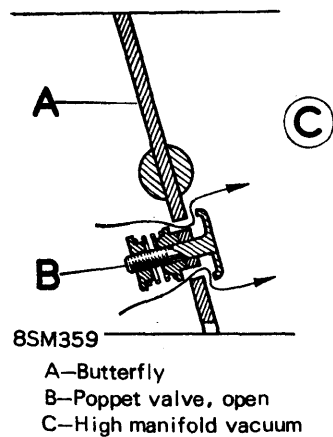
ROVER 2000 T.C. & S.C. ENGINE MODIFICATION (Cont.)

Fuel Deflector – Installed between carburetor and intake manifold on single carburetor engines, between carburetors and carburetor adaptors on twin carburetors engines. Its purpose is to prevent wet fuel accumulation on manifold walls, allowing engine to function satisfactorily on leaner mixtures.



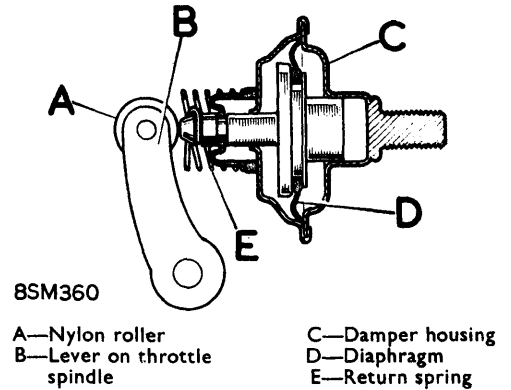
FUEL DEFLECTOR

Throttle Butterfly Poppet Valve – This small spring loaded poppet valve set in carburetor throttle butterfly prevents incomplete combustion of fuel during high manifold vacuum conditions, by supplementing volume of air/fuel mixture. This with a retarded ignition setting maintains correct combustion.



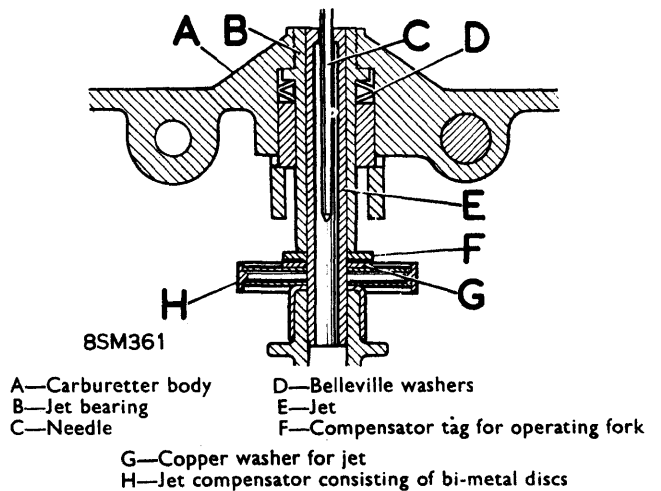
BUTTERFLY POPPET VALVE

Throttle Damper (Twin Carburetors Only) – This is a small pneumatic damper acting on throttle spindle. It prevents throttle butterflies snapping shut on rapid release of throttle pedal. This device is unnecessary on automatic transmission models because the high emissions at gear change do not occur.



THROTTLE DAMPER TC ONLY

Jet Compensators (Twin Carburetors Only) – Small bi-metal discs installed between each jet assembly and carburetor body. These discs, acting against the jets, compensate for temperature fluctuations by adjusting mixture strength to suit prevailing conditions.



JET COMPENSATOR

Carburetors – For further information see *S.U. Carburetors in CARBURETION Section.*