

7 Carburettor adjustment and exhaust emissions - general note

In some countries legal provision is made for describing and controlling the types and levels of toxic emissions from motor vehicles.

In the USA exhaust emission legislation is administered by the Environmental Protection Agency (EPA) which has introduced stringent regulations relating to motor vehicles. The Federal law entitled The Clean Air Act, specifically prohibits the removal (other than temporarily) or modification of any component incorporated by the vehicle manufacturer to comply with the requirements of the law. The law extends the prohibition to any tampering which includes the addition of components use of unsuitable replacement parts or maladjustment of components which allows the exhaust emissions to exceed the prescribed levels. Violations of the provisions of this law may result in penalties of up to \$10 000 for each violation. It is strongly recommended that appropriate requirements are determined and understood prior to making any change to or adjustments of components in the fuel, ignition, crankcase breather or exhaust systems.

To help ensure compliance with the emission standards some manufacturers have fitted to the relevant systems fixed or pre-set adjustment screws as anti-tamper devices. In most cases this is restricted to plastic or metal limiter caps fitted to the carburettor pilot adjustment screws, which allow normal adjustment only within narrow limits. Occasionally the pilot screw may be recessed and sealed behind a small metal blanking plug, or locked in position with a thread-locking compound, which prevents normal adjustment.

It should be understood that none of the various methods of discouraging tampering actually prevents adjustment, nor, in itself, is re-adjustment an infringement of the current regulations. Maladjustment, however, which results in the emission levels exceeding those laid down, is a violation. It follows that no adjustments should be made unless the owner feels confident that he can make those adjustments in such a way that the resulting emissions comply with the limits. For all practical purposes a gas analyser will be required to monitor the exhaust gases during adjustment, together with EPA data of the permissible Hydrocarbon and CO levels. Obviously, the home mechanic is unlikely to have access to this type of equipment or the expertise required for its use, and therefore, it will be necessary to place the machine in the hands of a competent motorcycle dealer who has the equipment and skill to check the exhaust gas content.

For those owners who feel competent to carry out correctly the various adjustments, specific information relating to the anti-tamper components fitted to the machines covered in this manual is given in the relevant Sections of this Chapter.

8 Carburettors - removal and refitting

1 Before attempting removal of the carburettors, it is first necessary to gain full access by detaching both side panels and then removing the petrol tank. Remember to take the necessary fire precautions when disturbing the fuel system.

Amal Mk II

2 With this type of carburettor, continue removal by detaching both of the air filter housing covers. Completely remove the left-hand securing bolt of the cross member and then withdraw each choke plunger assembly from its carburettor housing.

3 Move to the left-hand carburettor and disconnect the fuel feed pipe from the carburettor body. Where applicable, withdraw the retaining clip from the right-hand choke linkage before disconnecting the linkage. Loosen the two jubilee clips which retain each flexible mounting hose to the cylinder head and carburettor.

4 Grasping the right-hand carburettor, ease it clear of its location then unscrew the cap from the top of the mixing chamber. Withdraw the throttle slide and place the carburettor on a clean area of work surface. Repeat this operation to remove the left-hand carburettor.

Bing CV

5 With this type of carburettor, continue removal by disconnecting the end nipples of the choke and throttle cables from their respective attachment points on each carburettor. Pull the cables clear of each carburettor and then detach the fuel feed and balance pipes from one carburettor. Free each carburettor from its flexible mounting hose by loosening the attachment clip and then ease each carburettor clear of the machine.

Both carburettor types

6 Before refitting each carburettor, closely examine its mounting hose for signs of splitting or perishing and renew it if thought necessary. Each hose must be properly clamped in position so that no air is allowed to find its way past the joints. Refitting each carburettor is a straightforward reversal of the removal procedure, whilst noting the following points.

7 Before starting the engine, check that all disturbed throttle and choke controls function smoothly over their full operating range. Check all disturbed fuel feed connections for leaks. On no account should fuel be allowed to come into contact with hot engine castings as fire may result causing personal injury. With the engine running at full operating temperature, pay attention as to whether both carburettors are correctly synchronised.

9 Amal Mk II carburettors - adjustment settings

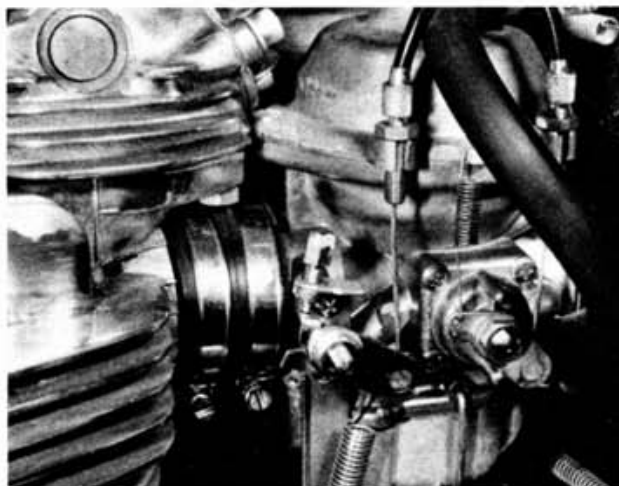
1 Refer to the Specifications at the beginning of this Chapter for the carburettor settings.

2 To adjust the throttle stop screw, set it so that the throttle slide is opened just enough to keep the engine running at a slow tick-over with the throttle twistgrip closed.

3 The pilot air screw controls the suction on the pilot jet. It achieves this by metering the volume of air to be mixed with petrol. The idling mixture is set by turning the screw in to enrich the mixture or out to weaken it. Set the screw 2½ turns out from the fully-in position to achieve a basic setting.

4 Do not attempt to adjust the needle and needle jet setting without first obtaining advice from a Triumph specialist. These settings are made before the machine leaves the factory.

5 The amount of throttle slide cut-away is indicated by a number on the base of the throttle slide, eg, 2928. The 2½ refers to the amount of cut-away. A smaller cut-away (eg, 2) gives a richer mixture whereas a larger cut-away (eg, 4) gives a weaker mixture. The 2928 refers to the throttle type.



8.6 Check that each carburettor is properly refitted (Bing CV)

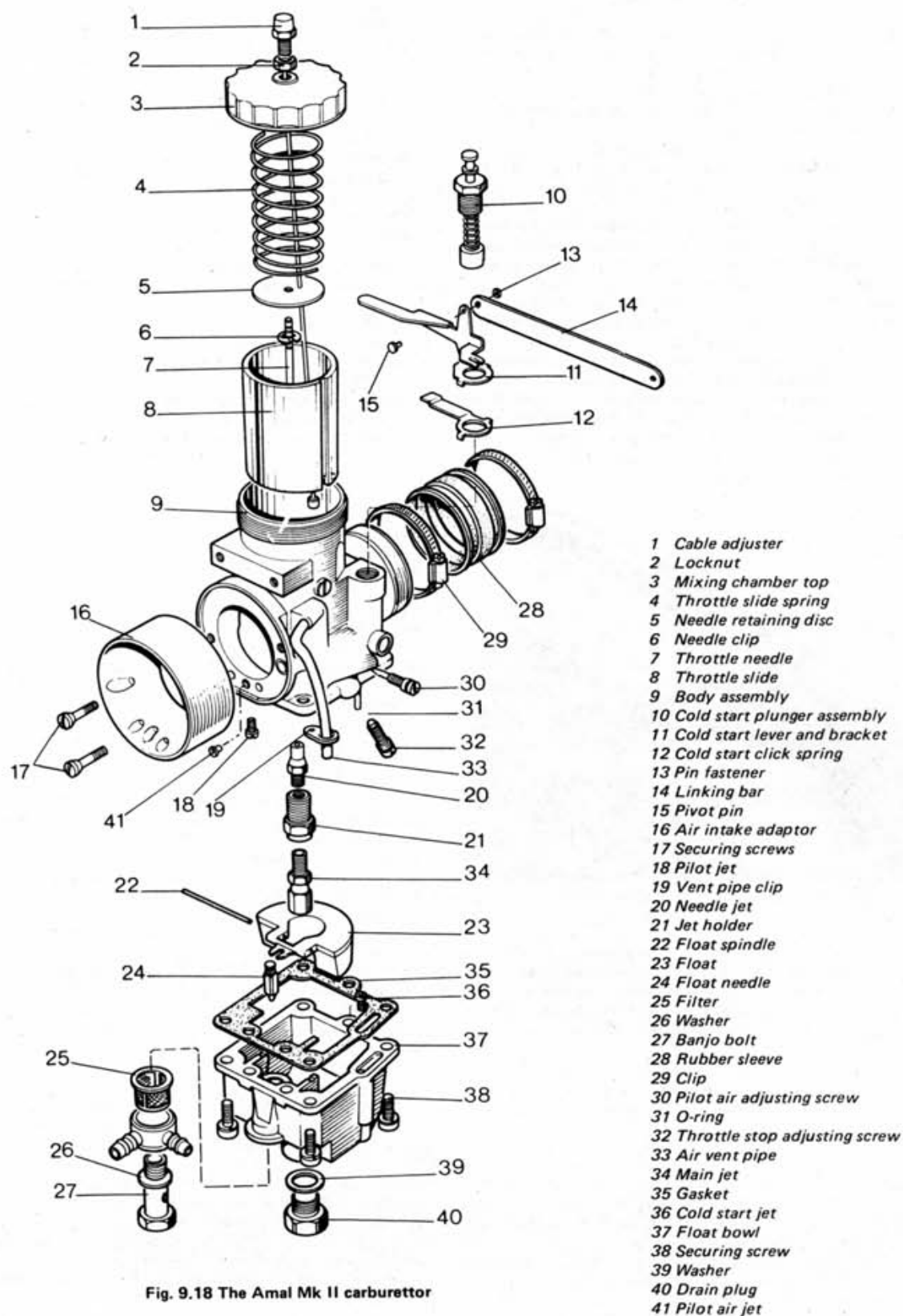


Fig. 9.18 The Amal Mk II carburettor