

# 1•14 Every 8000 miles (12,000 km) or 12 months

## 13 Fuel system – check



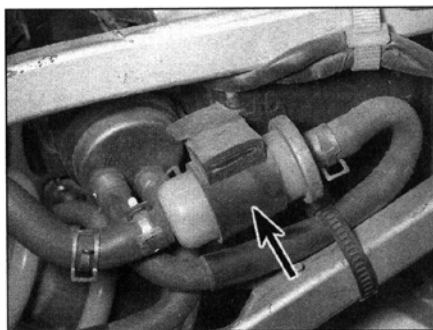
**Warning:** Petrol (gasoline) is extremely flammable, so take extra precautions when you work on any part of the fuel system. Don't smoke or allow open flames or bare light bulbs near the work area, and don't work in a garage where a natural gas-type appliance is present. If you spill any fuel on your skin, rinse it off immediately with soap and water. When you perform any kind of work on the fuel system, wear safety glasses and have a fire extinguisher suitable for a Class B type fire (flammable liquids) on hand.

### Check

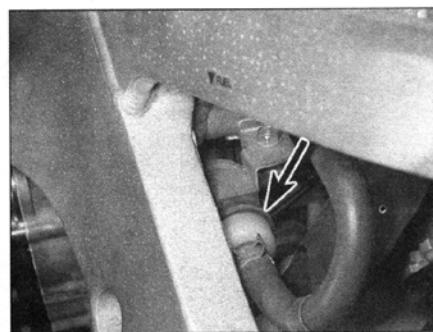
- 1 Remove the fuel tank (see Chapter 4) and check the tank, the fuel tap, the fuel pump, the in-line fuel filter and the fuel hoses for signs of leakage, deterioration or damage; in particular check that there is no leakage from the fuel hoses. Renew any hoses which are cracked or deteriorated.
- 2 If the fuel tap is leaking, tightening the retaining nut and the assembly screws may help (see Chapter 4). If leakage persists, remove the tap and renew the O-ring. If the tap appears blocked, check the filter (see below). If a leakage or blockage cannot be cured, fit a new tap.
- 3 If the carburettor gaskets are leaking, the carburettors should be disassembled and rebuilt using new gaskets and seals (see Chapter 4).

### Filter cleaning

- 4 Cleaning or renewal of the fuel filters is advised after a particularly high mileage has been covered. It is also necessary if fuel starvation is suspected.
- 5 A fuel filter is mounted in the tank and is integral with the fuel tap. Remove the fuel tank and the fuel tap (see Chapter 4). Clean the gauze filter to remove all traces of dirt and fuel sediment. Check the gauze for holes. If any are found, a new filter should be fitted (it is available separately). Check the condition of the O-ring and renew it if it is in any way damaged or deteriorated. It is advisable to renew it as a matter of course.
- 6 An in-line fuel filter is fitted in the hose from the fuel tap to the fuel pump (see illustrations). If the filter is dirty or clogged or otherwise needs renewing, remove the fuel tank (see Chapter 4). Have a rag handy to soak up any residual fuel and disconnect the pipes from the filter. Slip the filter out of its bracket and install the new filter so that its arrow points in the direction of fuel flow (ie towards the pump). Secure the pipes to the filter with the retaining clips. Install the fuel tank (see Chapter 4), turn the tap ON and check that there are no leaks.



13.6a In-line fuel filter (arrowed) – J and K models



13.6b In-line fuel filter (arrowed) – L, N and R models

## 14 Battery – check

- 1 All models covered in this manual are fitted with a sealed maintenance-free battery which requires no maintenance. **Note:** Do not attempt to remove the battery filler caps to check the electrolyte level or battery specific gravity. Removal will damage the caps, resulting in electrolyte leakage and battery damage.
- 2 All that should be done is to check that its terminals are clean and tight and that the casing is not damaged or leaking. See Chapter 9 for further details.
- 3 If the machine is not in regular use, disconnect the battery and give it a refresher charge every month to six weeks, as described in Chapter 9.

## 15 Throttle and choke cables – check

### Throttle cables

- 1 Make sure the throttle grip rotates easily from fully closed to fully open with the front wheel turned at various angles. The grip should return automatically from fully open to fully closed when released.



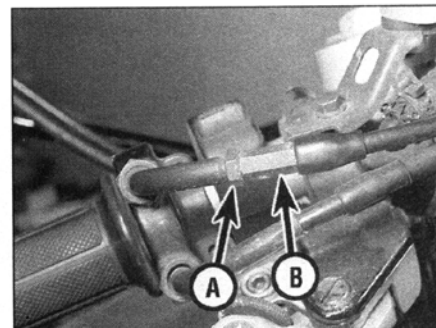
15.3 Throttle cable freeplay is measured in terms of twistgrip rotation

2 If the throttle sticks, this is probably due to a cable fault. Remove the cables (see Chapter 4) and lubricate them (see Section 6). Install the cables, making sure they are correctly routed. If this fails to improve the operation of the throttle, the cables must be renewed. Note that in very rare cases the fault could lie in the carburettors rather than the cables, necessitating the removal of the carburettors and inspection of the throttle linkage (see Chapter 4).

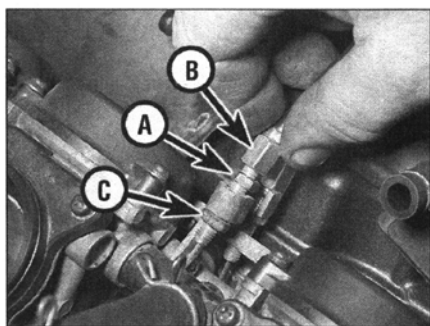
3 With the throttle operating smoothly, check for a small amount of freeplay in the cables, measured in terms of the amount of twistgrip rotation before the throttle opens, and compare the amount to that listed in this Chapter's Specifications (see illustration). If it's incorrect, adjust the cables to correct it.

4 Freeplay adjustments can be made at the throttle end of the cable. Loosen the locknut on the accelerator cable where it leaves the handlebar (see illustration). Turn the adjuster until the specified amount of freeplay is obtained (see this Chapter's Specifications), then retighten the locknut.

5 If the adjuster has reached its limit of adjustment, reset it so that the freeplay is at a maximum, then remove the fuel tank and air filter housing (see Chapter 4) and adjust the cable at the carburettor end. Slacken the adjuster locknut, then turn the adjuster out, making sure the lower nut remains captive in the bracket, thereby threading itself down the



15.4 Throttle cable adjuster locknut (A) and adjuster (B) – throttle end



**15.5 Throttle cable adjuster locknut (A), adjuster (B) and lower nut (C) – carburettor end**

adjuster as you turn it (see illustration). Turn the adjuster until the specified amount of freeplay is obtained, then tighten the locknut. Further adjustments can now be made at the throttle grip end. If the cable cannot be adjusted as specified, renew the cable (see Chapter 4).



**Warning:** Turn the handlebars all the way through their travel with the engine idling. Idle speed should not change. If it does,

the cable may be routed incorrectly. Correct this condition before riding the bike.

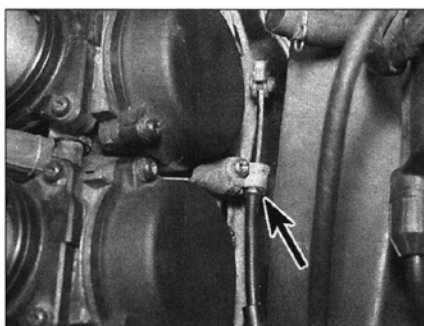
6 Check that the throttle twistgrip operates smoothly and snaps shut quickly when released.

### Choke cable

7 If the choke does not operate smoothly this is probably due to a cable fault. Remove the cable (see Chapter 4) and lubricate it (see Section 6). Install the cable, routing it so it takes the smoothest route possible.

8 If this fails to improve the operation of the choke, the cable must be renewed. Note that in very rare cases the fault could lie in the carburettors rather than the cable, necessitating the removal of the carburettors and inspection of the choke plungers (see Chapter 4).

9 Make sure there is a small amount of freeplay in the cable before the plungers move. If there isn't, check that the cable is



**15.9 Slacken the screw and slide the outer cable end (arrowed) further into the bracket to create some freeplay**

correctly installed at both ends – remove the fuel tank and air filter housing to access the carburettor end of the cable (see Chapter 4). If it is, then slacken the choke outer cable bracket screw on the carburettor and slide the cable further into the bracket, creating some freeplay (see illustration). Otherwise, renew the cable.

## 16 Spark plugs – renewal

1 Remove the old spark plugs as described in Section 5 and install new ones.

## 17 Carburettors – synchronisation



**Warning:** Petrol (gasoline) is extremely flammable, so take extra precautions when you work on any part of the fuel system. Don't smoke or allow open flames or bare light bulbs near the work area, and don't work in a garage where a natural gas-type appliance is present. If you spill any fuel on your skin, rinse it off immediately with soap and water. When you perform any kind of work on the fuel system, wear safety glasses and have a

fire extinguisher suitable for a Class B type fire (flammable liquids) on hand.



**Warning:** Take great care not to burn your hand on the hot engine unit when accessing the gauge take-off points on the inlet manifolds. Do not allow exhaust gases to build up in the work area; either perform the check outside or use an exhaust gas extraction system.

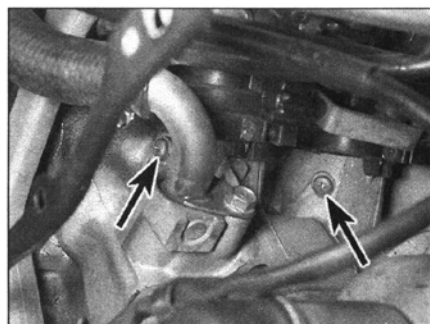
1 Carburettor synchronisation is simply the process of adjusting the carburettors so they pass the same amount of fuel/air mixture to each cylinder. This is done by measuring the vacuum produced in each cylinder. Carburettors that are out of synchronisation will result in decreased fuel mileage, increased engine temperature, less than ideal throttle response and higher vibration levels. Before synchronising the carburettors, make sure the valve clearances are properly set.

2 To properly synchronise the carburettors, you will need a set of vacuum gauges or calibrated tubes (manometer) to indicate engine vacuum. The equipment used should be suitable for a four cylinder engine and come complete with the necessary adapters and hoses to fit the take-off points. **Note:** Because of the nature of the synchronisation procedure and the need for special instruments, most owners leave the task to a dealer.

3 Start the engine and let it run until it reaches normal operating temperature, then shut it off. Remove the fuel tank (see Chapter 4).

4 On J and K models, remove the blanking screws from the vacuum take-off points on the inlet manifolds (see illustration). Install the take-off adapters provided with the vacuum gauges (see illustration). Connect the vacuum gauge hoses to the adapters (see illustration). Make sure they are a good fit because any air leaks will result in false readings.

5 On L, N and R models, remove the air filter housing and displace the carburettors to access the vacuum take-off points (see Chapter 4) – there is no need to disconnect the cables, though it may be necessary to either detach the fuel hose or displace the fuel pump to provide enough slack. Remove the



**17.4a Remove the blanking screws (arrowed) (cylinders 1 and 2 shown) . . .**



**17.4b . . . then fit the adapters . . .**



**17.4c . . . and attach the hoses**