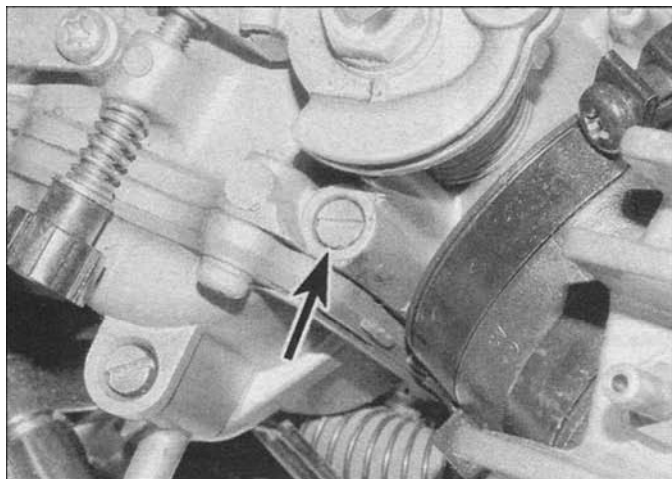
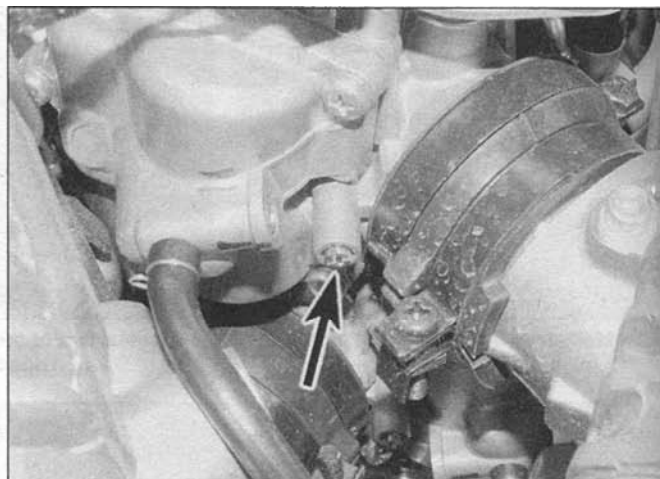


4-8 Fuel and exhaust systems



5.1a Pilot screw (arrowed) -
XL model carburettor



5.1b Pilot screw (arrowed)-
XRV model carburettor

5 Air/fuel mixture adjustment - general information

Adjustment

1 If the engine runs extremely rough at idle or continually stalls, and if a carburettor overhaul does not cure the problem (and it definitely is a carburation problem - see Section 6), the pilot screws may require adjustment. It is worth noting at this point that unless you have the experience to carry this out it is best to entrust the task to a motorcycle dealer, tuner or fuel systems specialist. The front cylinder's pilot screw is accessible from the right-hand side of the carburettor assembly and the rear cylinder's pilot screw is accessible from the left (see illustrations). Make sure the carburettors are synchronised before adjusting the pilot screws (see Chapter 1).

2 Before adjusting the pilot screws, warm the engine up to normal working temperature. Screw in the pilot screw on both carburettors until they seat lightly, then back them out to the number of turns specified (see this Chapter's Specifications). This is the base position for adjustment.

3 Start the engine and reset the idle speed to the correct level (see Chapter 1). Working on one carburettor at a time, turn the pilot screw by a small amount either side of this position to find the point at which the highest consistent idle speed is obtained. When you've reached this position, reset the idle speed to the specified amount (see Chapter 1). Repeat on the other carburettor.

Caution: The catalytic converter fitted in the exhaust system of XL650V models may be damaged if the air/fuel mixture is maladjusted.

Restrictions

4 Due to the increased emphasis on controlling exhaust emissions in certain world markets,

regulations have been formulated which prevent adjustment of the air/fuel mixture. On such models the pilot screw positions are pre-set at the factory and in some cases have a limiter cap fitted to prevent tampering. Where adjustment is possible, it can only be made in conjunction with an exhaust gas analyser to ensure that the machine does not exceed the emissions regulations.

6 Carburettor overhaul - general information

1 Poor engine performance, hesitation, hard starting, stalling, flooding and backfiring are all signs that major carburettor maintenance may be required.

2 Keep in mind that many so-called carburettor problems are really not carburettor problems at all, but mechanical problems within the engine or ignition system or other electrical malfunctions. Try to establish for certain that the carburettors are in need of maintenance before beginning a major overhaul.

3 Check the fuel tap and strainer, the fuel and vacuum hoses, the intake manifold joint clamps, the air filter, the ignition system, the spark plugs, valve clearance and carburettor synchronisation before assuming that a carburettor overhaul is required.

4 Most carburettor problems are caused by dirt particles, varnish and other deposits which build up in and block the fuel and air passages. Also, in time, gaskets and O-rings shrink or deteriorate and cause fuel and air leaks which lead to poor performance.

5 When overhauling the carburettors, disassemble them completely and clean the parts thoroughly with a carburettor cleaning solvent and dry them with filtered, unlubricated compressed air. Blow through the fuel and air passages with compressed air to force out any dirt that may have been loosened but not removed by the solvent.

Once the cleaning process is complete, reassemble the carburettor using new gaskets and O-rings.

6 Before disassembling the carburettors, make sure you have all necessary O-rings and other parts, some carburettor cleaner, a supply of clean rags, some means of blowing out the carburettor passages and a clean place to work. It is recommended that only one carburettor be overhauled at a time to avoid mixing up parts.

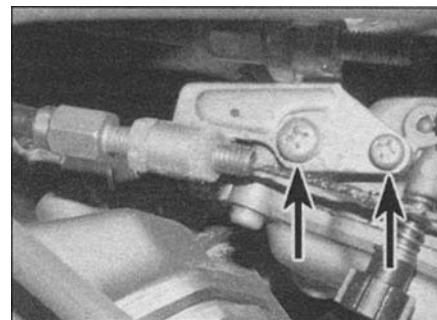
7 Carburettors - removal and installation



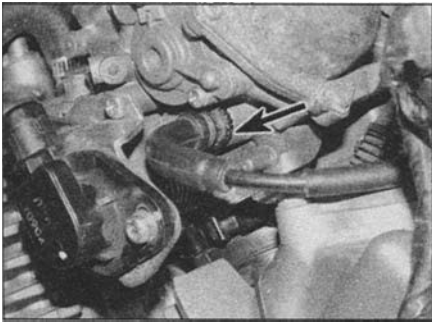
Warning: Refer to the precautions given in Section 1 before starting work.

Removal

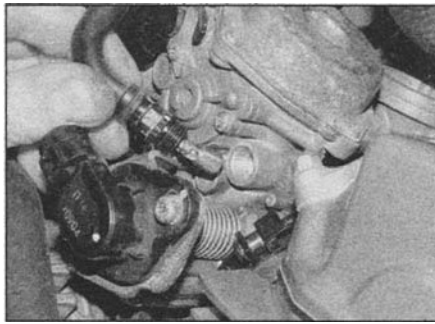
- 1 Remove the fuel tank (see Section 2).
- 2 Remove the air filter/duct housing, according to model (see Section 4). On XL models, also remove the rear cylinder ignition HT coil (see Chapter 5).
- 3 Undo the two screws securing the throttle cable holder to the carburettors and detach the cable ends from the carburettors, noting which fits where (see illustration).



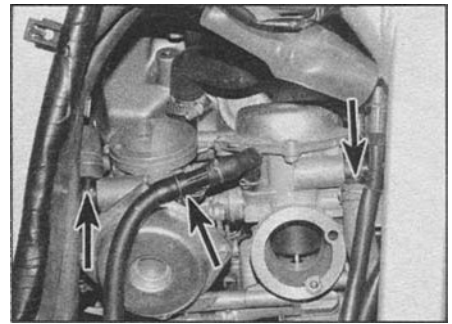
7.3 Undo the screws (arrowed) and detach the bracket from the carburettors



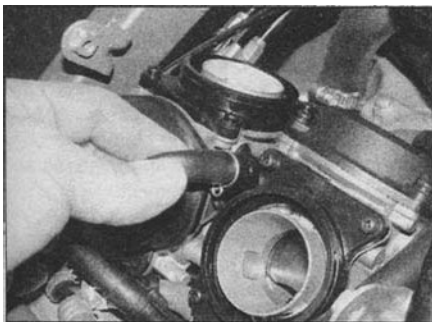
7.4a Unscrew the nut (arrowed)...



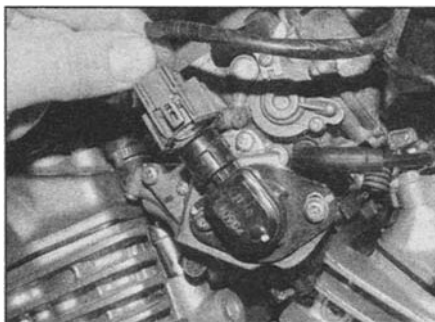
7.4b ... and withdraw the choke plunger



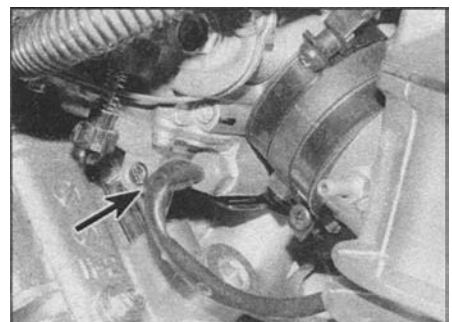
7.5a Detach the vent hoses (arrowed) - XL models



7.5b Detach the air vent hose - XRV models



7.6a Disconnect the throttle position sensor wiring connector



7.6b Trace the wiring from the heater (arrow) and disconnect it at the connector

4 Undo the nut securing the choke plunger in each carburettor and draw the plungers out (see illustrations).

5 Detach the air vent hoses from their unions,

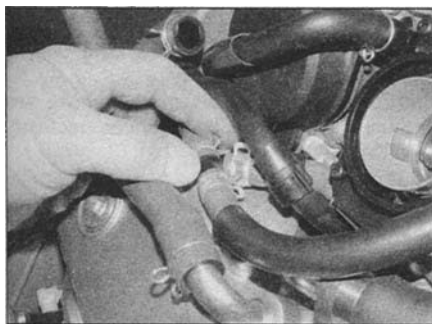
noting what fits where (see illustrations).

6 On XL600V-T to X (1997 to 1999) models, XL650V models, and XRV750-T models onwards (1996-on), disconnect the throttle

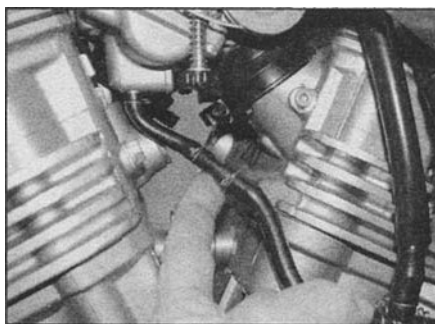
position sensor wiring connector (see illustration). On UK XL650V models, disconnect each carburettor heater wiring connector (see illustration).

7 On XRV750-L to N (1990 to 1992) models, release the idle speed adjuster from its holder. On all XRV750 models, release the clamp and detach the fuel supply hose from its union (see illustration). Also detach the overflow/drain hoses (see illustration).

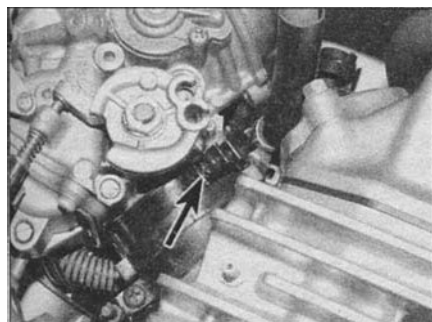
8 Slacken the clamps securing the carburettors to the cylinder head inlet rubbers, then ease the carburettors off, noting how they fit, and manoeuvre them out of the frame as shown (see illustrations). **Note:** Keep the carburettors as upright as possible to prevent fuel spillage from the float chambers and the possibility of the piston diaphragms being damaged.



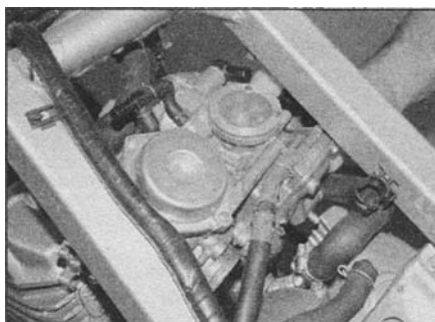
7.7a Disconnect the fuel hose ...



7.7b ... and the overflow/drain hoses



7.8a Slacken the clamp screw (arrowed) on each side ...

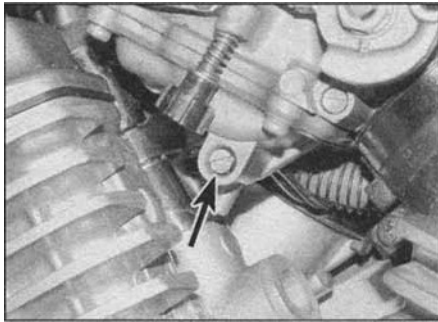


7.8b ... then lift the carburettors out of the intakes ...

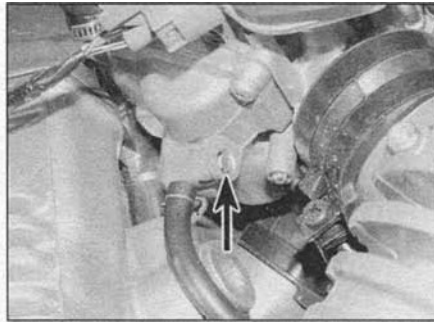


7.8c ... and remove them as shown

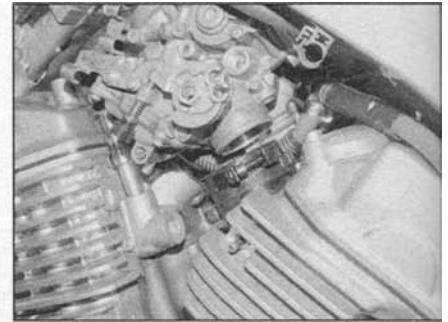
4-10 Fuel and exhaust systems



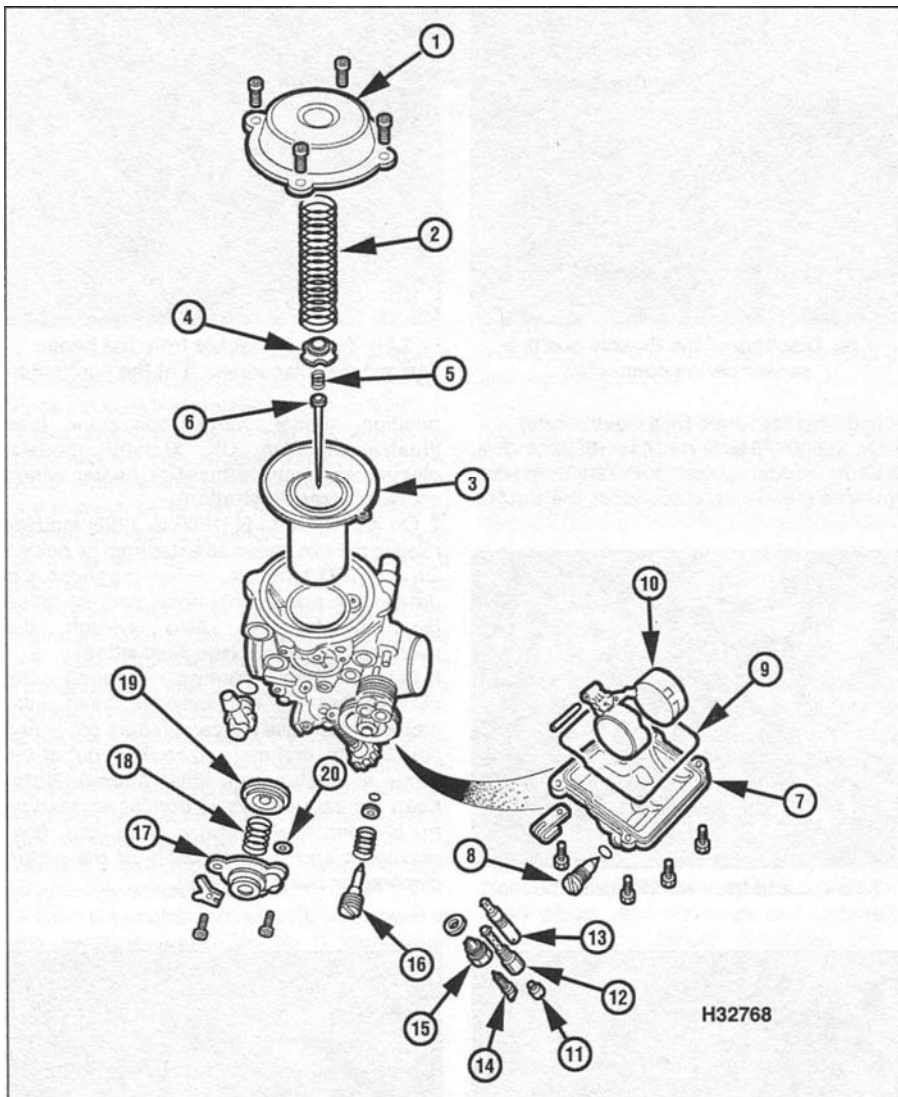
7.9a Carburettor drain screw (arrowed) - XL models



7.9b Carburettor drain screw (arrowed) - XR/V models



7.11 Make sure the carburettors engage fully in the ducts



8.1a Carburettor components - XL models and XR/V750-L to N (1990 to 1992) models

- | | | |
|--------------------|------------------------|----------------------------|
| 1 Top cover | 8 Drain screw | 15 Float needle valve seat |
| 2 Spring | 9 Rubber seal | 16 Pilot screw |
| 3 Piston/diaphragm | 10 Float and float pin | 17 Air cut-off valve cover |
| 4 Needle holder | 11 Main jet | 18 Spring |
| 5 Spring | 12 Needle jet | 19 Diaphragm |
| 6 Jet needle | 13 Pilot jet | 20 O-ring |
| 7 Float chamber | 14 Float needle valve | |

9 Place a suitable container below the float chambers, then slacken the drain screws and drain all the fuel from the carburettors (see illustrations). Once all the fuel has been drained, tighten the drain screws securely.

10 If necessary, release the clamps securing the inlet rubbers to the cylinder heads and remove them, noting how they fit.

Installation

11 Installation is the reverse of removal, noting the following.

- Check for cracks or splits in the cylinder head inlet rubbers. If they have been removed from the cylinder head, make sure they are installed with the slotted tab on the adapter aligning with the raised lip on the underside of the cylinder head stub.
- Make sure the carburettors are fully engaged with the cylinder head inlet rubbers and the clamps are securely tightened (see illustration).
- Make sure all hoses are correctly routed and connected and secured, and are not trapped or kinked.
- Check the operation of the choke and throttle cables and adjust them as necessary (see Chapter 1).
- Check idle speed and carburettor synchronisation; adjust as necessary (see Chapter 1).

8 Carburettors - disassembly, cleaning and inspection



Warning: Refer to the precautions given in Section 1 before starting work.

Disassembly

- 1 Remove the carburettors (see Section 7).
Note: Do not separate the carburettors unless absolutely necessary; each carburettor can be dismantled sufficiently for all normal cleaning and adjustments while in place on the mounting brackets. Dismantle the carburettors separately to avoid interchanging parts (see illustrations).
- 2 Unscrew and remove the top cover retaining screws (see illustration). Lift off the cover and remove the spring from inside the piston.