

## 1•18 Every 8000 miles (12,000 km)



**15.3 Throttle cable freeplay is measured in terms of twistgrip rotation**

Release the filter from its holder and remove it along with the hoses, then disconnect the hoses, noting which fits where, and discard the filter.

**9** Fit the hoses to the unions on the new filter and secure them with the clamps (the hose from the fuel tap goes on the plain end, and the hose to the pump goes on the lipped end). Install the new filter so that its arrow points in the direction of fuel flow (i.e. towards the pump). Fit the hose to the inlet union on the pump and secure it with the clamp. Fit the hose to the fuel tap and secure it with the clamp, then lower the tank (see Chapter 4).

**10** Start the engine and check that there are no leaks.

### 15 Throttle and choke cables – check and adjustment



#### Throttle cables

**1** Make sure the throttle grip rotates smoothly and freely 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.

**2** If the throttle sticks, this is probably due to a



**15.4a Pull back the rubber boot to access the adjuster**

cable fault. Remove the cables (see Chapter 4) and lubricate them (see Section 12). Check that the inner cables slide freely and easily in the outer cables. If not, replace the cables with new ones. With the cables removed, make sure the throttle twistgrip rotates freely on the handlebar. Install the cables, making sure they are correctly routed. If this fails to improve the operation of the throttle, the cables must be replaced with new ones. Note that in very rare cases the fault could lie in the carburettors rather than the cables, necessitating their removal and inspection (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 as follows.

**4** Freeplay adjustments can be made using the adjuster in the accelerator cable where it leaves the throttle/switch housing on the handlebar. Pull the cable boot away from the housing (see illustration). Loosen the locknut and turn the adjuster in or out as required until the specified amount of freeplay is obtained (see this Chapter's Specifications), then retighten the locknut (see illustration).

**5** If the adjuster has reached its limit of adjustment, reset it by turning it fully in so that the freeplay is at a maximum, then tighten the locknut and refit the boot. The cable must now be adjusted at the carburettor end. On XL600V models, remove the left-hand fairing side panel (see Chapter 8). On XL650V and XRV750 models, remove the fuel tank (see Chapter 4). The adjuster is on the lower cable in the bracket. Slacken the adjuster locknut, then screw the adjuster in or out as required, making sure the rear nut remains captive in the bracket, thereby threading itself along the adjuster as you turn it, until the specified amount of freeplay is obtained, then tighten the locknut (see illustration). Subsequent adjustments can now be made at the throttle end. If the cable cannot be adjusted as specified, replace it with a new one (see Chapter 4).



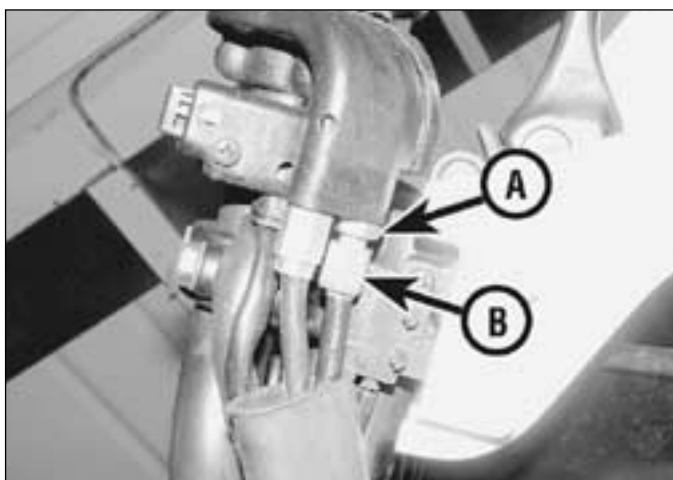
**Warning: Turn the handlebars all the way through their travel with the engine idling. Idle speed should not change. If it does, the cables may be routed incorrectly. Correct this condition before riding the bike.**

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

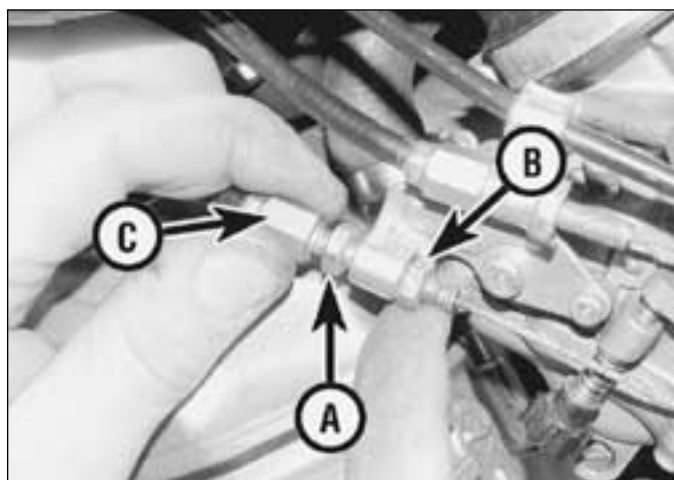
#### Choke cable

**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 12). Check that the inner cable slides freely and easily in the outer cable. If not, replace the cable with a new one. With the cable removed, make sure the choke lever is able to move freely. Install the cable, making sure it is correctly routed.

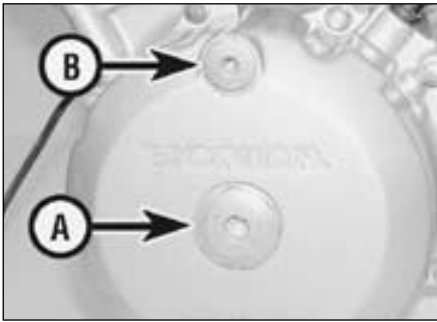
**8** If this fails to improve the operation of the choke, the fault could lie in the choke plungers and their bores in the carburettors rather than the cable (see Chapter 4).



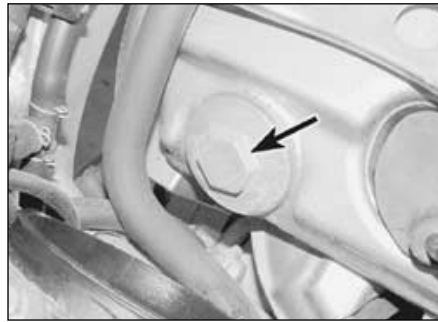
**15.4b Throttle cable adjuster locknut (A) and adjuster (B) – throttle end**



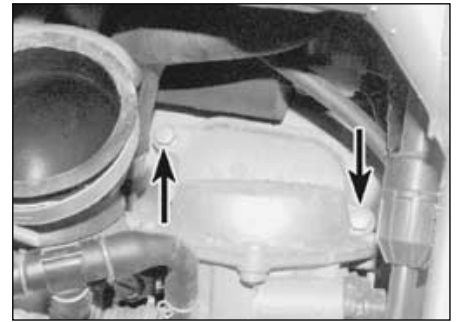
**15.5 Slacken the locknut (A), then turn the adjuster (C) as required, keeping the rear (captive) nut (B) locked**



**16.4 Remove the crankshaft end cap (A) and the timing inspection cap (B)**



**16.5a Unscrew the caps using a spanner on the hex (arrowed)**



**16.5b The covers are secured by two bolts (arrowed)**

## 16 Valve clearances – check and adjustment



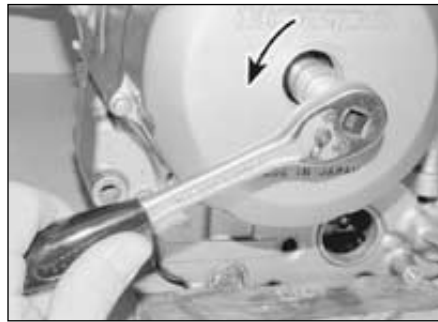
**1** The engine must be completely cool for this maintenance procedure, so let the machine sit overnight before beginning.

**2** Remove the fuel tank and the air duct on XL600V and XRV750-L to N (1990 to 1992) models. Remove the fuel tank and the air filter housing on XL650V and XRV750-P models onward (1993-on). Refer to Chapter 4 for details.

**3** Either displace or remove the right-hand radiator (not necessary if working on rear cylinder only).

**4** If the belly pan on your model obscures the alternator cover, remove it (see Chapter 8). Unscrew the crankshaft end cap and the timing mark inspection cap from the alternator cover (**see illustration**). Check the condition of the cap O-rings and discard them if they are damaged, deformed or deteriorated.

**5** Remove the valve inspection caps/covers from each valve cover – the caps (above the exhaust valves) can be unscrewed using a suitable spanner or socket, while the covers (above the inlet valves) are secured by two bolts (**see illustrations**). Check the condition of the cap and cover O-rings and discard them



**16.6a Turn the engine anti-clockwise using a socket on the timing rotor bolt . . .**

if they are damaged, deformed or deteriorated. Unscrew the spark plugs to allow the engine to be turned over easier (see Section 5).

**6** Starting with the front cylinder, rotate the engine anti-clockwise using a suitable socket on the alternator rotor bolt until the line next to the 'FT' mark on the flywheel aligns with the notch in the timing mark inspection hole (**see illustrations**). At this point make sure that the cylinder is at TDC (top dead centre) on the compression stroke (and not the exhaust stroke) by checking for some free movement between each rocker arm and the valve. There must be freeplay evident in all three rocker arms. If not, turn the engine anti-clockwise



**16.6b . . . until the line next to the FT mark aligns with the notch**

through one full turn (360°) until the 'FT' mark again aligns with the notch. There should now be freeplay in all rocker arms indicating that the engine is correctly positioned.

**7** Insert a feeler gauge of the correct thickness (see Specifications) between each rocker arm adjusting screw and valve and check that it is a firm sliding fit (**see illustration**). If it is either too loose or too tight, slacken the locknut and turn the adjusting screw in or out as required until a firm sliding fit is obtained, then tighten the locknut to the torque setting specified at the beginning of the Chapter, making sure the adjusting screw does not rotate as you do so (**see illustration**). Re-check the clearances,



**16.7a Insert the feeler gauge between the base of the adjusting screw and the top of the valve stem as shown**



**16.7b Slacken the locknut using an offset ring spanner and turn the adjusting screw using pliers**