

# 1•12 Routine maintenance and servicing

**6** Now place the drain tray below the oil filter on the front of the engine. Unscrew the oil filter using a filter socket (one can be obtained as a kit with the new filter from Honda dealers, or separately under part No. 07HAA-PJ70101, or otherwise there are commercially available equivalents available from good accessory dealers), a filter removing strap or a chain-wrench, and tip any residual oil into the drain tray (**see illustrations**). The filter socket is preferable because it allows a means of tightening the new filter to the correct torque.

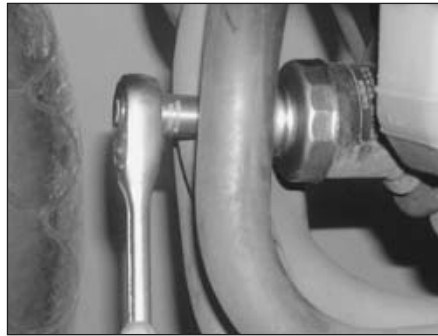
**7** Smear clean engine oil onto the rubber seal on the new filter and thread it onto the engine (**see illustration**). Tighten it to the specified torque setting using the filter socket if available (**see illustration**), or tighten the filter as tight as possible by hand, or by the number of turns specified on the filter itself or its packaging. **Note:** Do not use a strap or chain filter removing tool to tighten the filter as you will damage it.

**8** Refill the engine to the proper level using the recommended type and amount of oil (see *Daily (pre-ride) checks*). With the motorcycle vertical, the oil level should lie between the maximum and minimum level lines on the inspection window (see *Daily (pre-ride) checks*). Install the filler cap (**see illustration 8.3**). Start the engine and let it run for two or three minutes (make sure that the oil pressure light extinguishes after a few seconds). Shut it off, wait a few minutes, then check the oil level. If necessary, add more oil to bring the level close to the maximum line, but do not go above it. Check around the drain plug and the oil filter for leaks. A leak around the drain plug probably means a new washer is needed. A leak around the filter probably means it is not tight enough. Install the lower fairing or fairing side panels as required according to model (see Chapter 8).

**9** The old oil drained from the engine cannot be re-used and should be disposed of properly. Check with your local refuse disposal company, disposal facility or environmental agency to see whether they will accept the used oil for recycling. Don't pour used oil into drains or onto the ground.



**Check the old oil carefully – if it is very metallic coloured, then the engine is experiencing wear from break-in (new engine) or from insufficient lubrication. If there are flakes or chips of metal in the oil, then something is drastically wrong internally and the engine will have to be disassembled for inspection and repair. If there are pieces of fibre-like material in the oil, the clutch is experiencing excessive wear and should be checked.**



**8.6a** Unscrew the filter using a filter removing tool . . .



**8.6b** . . . and allow the oil to drain



**8.7a** Smear clean oil onto the seal . . .



**8.7b** . . . then install the filter and tighten it as described

## 9 Fuel system – check



Every 8000 miles (12,000 km) or 12 months



**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.

**1** Raise the fuel tank (see Chapter 4). Check the tank and the fuel hoses for signs of leakage, deterioration and damage; in particular check that there is no leakage from the fuel hoses. Replace any hoses which are cracked or deteriorated with new ones (see Section 34).

**2** Also check for signs of fuel leakage between the injectors, the fuel rail and the throttle bodies. If there are, remove the injectors and install new O-rings and seals (see Chapter 4).

**3** If there are signs of fuel starvation or the

machine has covered a high mileage, the fuel filters could be in need of cleaning or renewal (see Section 36).

## 10 Battery – check



Every 8000 miles (12,000 km) or 12 months

**1** All models covered in this manual are fitted with a sealed MF (maintenance free) battery. **Note:** Do not attempt to remove the battery caps to check the electrolyte level or battery specific gravity. Removal will damage the caps, resulting in electrolyte leakage and battery damage. All that should be done is to check that the terminals are clean and tight and that the casing is not damaged or leaking. See Chapter 9 for further details.

**2** If the machine is not in regular use, disconnect the battery and give it a refresher charge every month to six weeks (see Chapter 9).

## 11 Throttle cables – check



Every 8000 miles (12,000 km) or 12 months

**1** Make sure the throttle grip rotates smoothly and freely from fully closed to fully open with



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

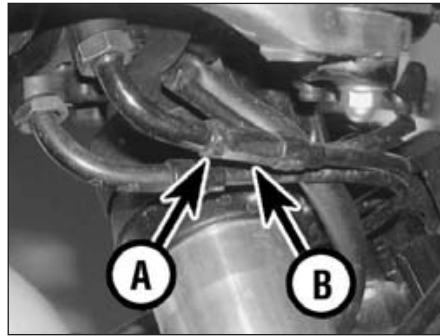
the front wheel turned at various angles. The grip should return automatically from fully open to fully closed when released.

**2** If the throttle sticks, this is probably due to a cable fault. Remove the cables (see Chapter 4) and lubricate them (see Section 7). 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. If necessary, unscrew the handlebar end-weight and slide the twistgrip off the handlebar. Clean any old grease from the bar and the inside of the tube. Smear some new grease of the specified type onto the bar, then refit the twistgrip. When fitting the end-weight, align the boss with the cut-out on the inner weight inside the handlebar. Clean the threads of the end-weight retaining screw, then apply a suitable non-permanent thread locking compound and tighten it to the torque setting specified at the beginning of the Chapter. Install the cables, making sure they are correctly routed (see Chapter 4). 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 throttle bodies 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



**12.2** Check all the coolant hoses as described



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

Chapter's Specifications (see illustration). If it's incorrect, adjust the cables to correct it as follows.

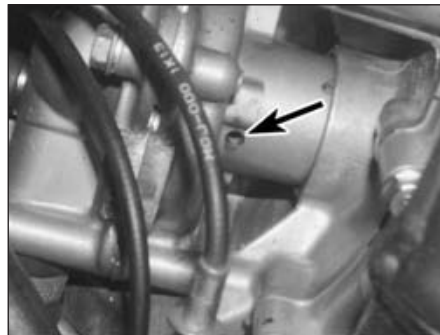
**4** Initially adjust freeplay using the adjuster in the throttle opening cable where it leaves the throttle/switch housing on the handlebar. Loosen the locknut and turn the adjuster in or out as required until the specified amount of freeplay is obtained (see this Chapter's Specifications), then retighten the locknut (see illustration).

**5** If the adjuster has reached its limit of adjustment, reset it to its start point by turning it fully in, so that freeplay is at a maximum, then remove the air filter housing (see Chapter 4), and adjust the cable at the throttle body end.

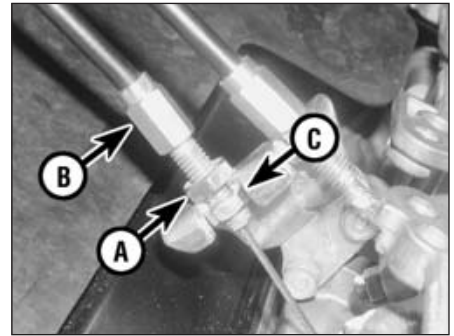
**6** The adjuster is on the lower cable in the bracket. Slacken the adjuster locknut, then screw the adjuster in or out as required, making sure the lower nut remains captive in the bracket, thereby threading itself along the adjuster as you turn it, until the specified amount of freeplay is obtained, then tighten the locknut (see illustration). Subsequent adjustments can be made at the throttle end when required. If the cable cannot be adjusted as specified, replace it with a new one (see Chapter 4). Check that the throttle twistgrip operates smoothly and snaps shut quickly when released.



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



**12.4** Check the pump drain hole (arrowed) for signs of leakage



**11.6** Throttle cable adjuster locknut (A), adjuster (B) and lower nut (C)

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

## 12 Cooling system – check



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



**Warning:** The engine must be cool before beginning this procedure.

**1** Check the coolant level in the reservoir (see Daily (pre-ride) checks).

**2** On RR-Y and RR-1 (2000 and 2001) models, remove the right-hand air duct cover, the lower fairing and the fairing side panels, and the right-hand heat guard (see Chapter 8). On RR-2 and RR-3 (2002 and 2003) models remove the right-hand air duct cover and the fairing side panels (see Chapter 8). Check the entire cooling system for evidence of leakage. Examine each rubber coolant hose along its entire length. Look for cracks, abrasions and other damage. Squeeze each hose at various points to see whether they are dried out or hard (see illustration). They should feel firm, yet pliable, and return to their original shape when released. If necessary, replace them with new ones (see Chapter 3).

**3** Check for evidence of leaks at each cooling system joint and around the pump on the left-hand side of the engine. Tighten the hose clips carefully to prevent future leaks. If the pump is leaking around the cover, check that the bolts are tight. If they are, remove the cover and replace the O-ring with a new one (see Chapter 3). If it is leaking around the crankcase, remove the pump and replace the body O-ring with a new one (see Chapter 3).

**4** To prevent leakage of coolant from the cooling system to the lubrication system and vice versa, two seals are fitted on the pump shaft. On the bottom of the pump housing there is a drain hole (see illustration). If either seal fails, the drain allows the coolant or oil to escape and prevents them mixing. The seal on the water pump side is of the mechanical type which bears on the rear face of the