

1•14 Routine maintenance and servicing

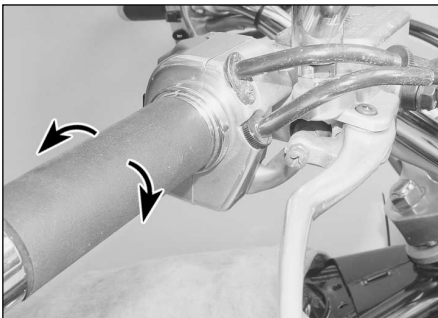


6.4a Lubricating a cable with a pressure adapter. Ensure the tool seals around the inner cable

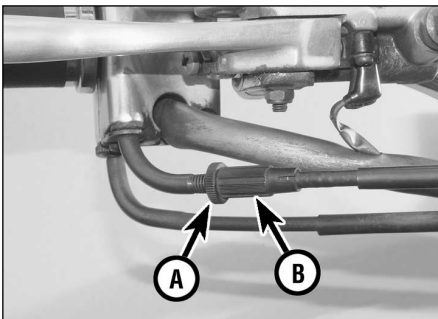
3 In order for the lubricant to be applied where it will do the most good, the component should be disassembled. However, if chain or cable lubricant is being used, it can be applied to the pivot joint gaps and will usually work its way into the areas where friction occurs. If engine oil or light grease is being used, apply it sparingly as it may attract dirt (which could cause the controls to bind or wear at an accelerated rate). **Note:** One of the best lubricants for the control lever pivots is a dry-film lubricant.

Cables

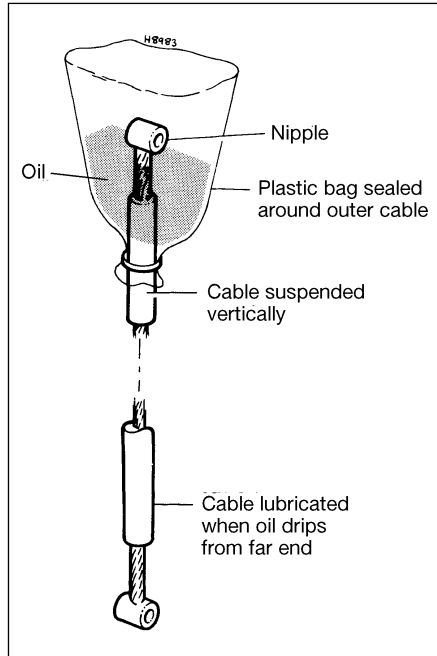
4 To lubricate the throttle and choke cables, disconnect the cable(s) at the lower end (see Chapter 3). To lubricate the clutch cable, first disconnect it from the handlebar lever (see Chapter 5). Lubricate the cable with a pressure lube adapter (see illustration). If you



8.2 Throttle cable freeplay is measure in terms of twistgrip rotation



8.3 Accelerator cable adjuster lockwheel (A) and adjuster (B) – 650 model shown



6.4b Lubricating a cable with a home-made funnel and engine oil

don't have one, disconnect both ends of the cable and remove it from the machine and use a funnel and engine oil (see illustration).

7 Sidestand switch check

Inspect the sidestand switch for security, and check for correct operation (Chapter 8).

8 Throttle cable freeplay check

Check

1 Make sure the throttle twistgrip 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. If the twistgrip sticks, check the throttle cables for kinks or cracks in the outer covers. Also, make sure the inner cables are clean and well-lubricated (see Section 6).

2 Check for a small amount of freeplay at the twistgrip before the carburettor throttle pulley is activated and compare the freeplay to the value listed in this Chapter's Specifications (see illustration). If required, adjust the accelerator cable as follows.

Adjustment

3 Loosen the accelerator cable adjuster lockwheel at the handlebar end of the cable, then turn the adjuster in or out until the specified amount of freeplay is obtained at the twistgrip (see illustration). Tighten the lockwheel.

4 If this adjuster has reached its limit of adjustment, reset it so that the freeplay is at a maximum, then adjust the cable at the carburettor end.

5 Remove the fuel tank; on 650 models remove the air filter housing and on 1100 models remove the cover on the left-hand side of the carburettor assembly (see Chapter 3).

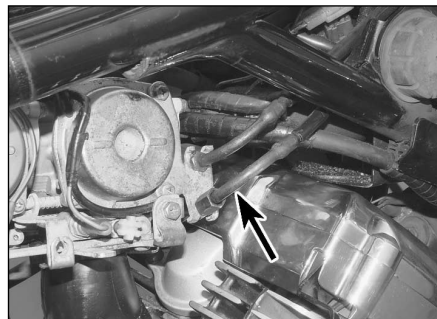
6 Identify the accelerator (opening) cable (see illustrations). Slacken the upper adjuster locknut, then, holding the lower locknut against the bracket, turn the adjuster out, making sure the lower nut remains on the adjuster threads. Turn the adjuster until the specified amount of freeplay is obtained, then tighten the upper locknut. Further adjustments can now be made at the twistgrip end. If the cable cannot be adjusted as specified, install a new one (see Chapter 3).

7 Make sure the throttle pulley on the carburettor contacts the idle adjusting screw when the twistgrip is in the closed position (see Chapter 3).

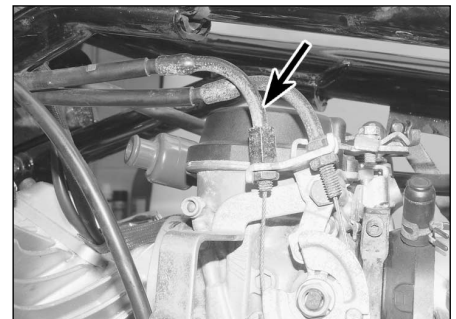
8 Install the components as applicable in the reverse order of removal.



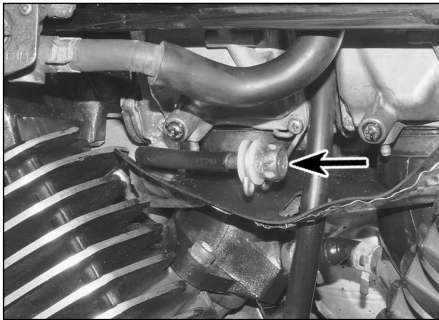
Warning: Turn the handlebars all the way through their travel with the engine idling. Idle speed should not change. If it does, the cables may be routed incorrectly. Correct this condition before riding the bike.



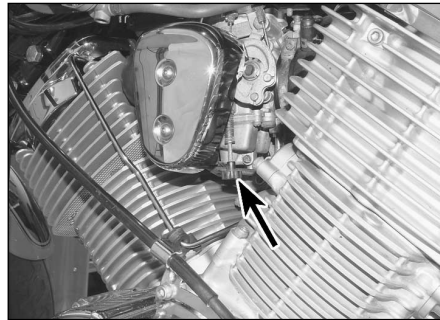
8.6a Accelerator cable – 650 models



8.6b Accelerator cable – 1100 models



9.3a Location of the idle speed adjuster – 650 models



9.3b Location of the idle speed adjuster – 1100 models

9 Idle speed check



1 The idle speed should be checked and adjusted before and after the carburettors are synchronized and when it is obviously too high or too low. Before adjusting the idle speed, make sure the valve clearances and spark plug gaps are correct. Also, turn the handlebars back-and-forth and see if the idle speed changes as this is done. If it does, the accelerator cable may not be adjusted correctly, or it may be trapped (see Section 8). This is a dangerous condition that can cause loss of control of the bike. Be sure to correct this problem before proceeding.

2 The engine should be at normal operating temperature, which is usually reached after 10 to 15 minutes of stop and go riding. Support the motorcycle securely in an upright position.

3 With the engine idling, turn the idle speed adjuster until the idle speed listed in this Chapter's Specifications is obtained. **Note:** As the machine is not fitted with a tachometer in the instrument panel the only accurate means of measuring engine speed is using an auxiliary tachometer with an inductive pick-up which clamps around the rear cylinder HT lead. The idle speed adjuster is located on the left-hand side of the carburettor assembly (see illustrations). Turn the adjuster clockwise to increase idle speed and anti-clockwise to decrease it.

4 Snap the throttle open and shut a few times, then recheck the idle speed. If

necessary, repeat the adjustment procedure.

5 If a smooth, steady idle can't be achieved, the fuel/air mixture may be incorrect (see Chapter 3) or the carburettors may need synchronising (see Section 10). Also check the intake manifold rubbers for cracks which will cause an air leak, resulting in a weak mixture. Check the air induction system (see Section 20).

10 Carburettor 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 (such as a water heater or clothes dryer) 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 class B type fire extinguisher on hand.

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.

2 To properly synchronize the carburettors, you will need a vacuum gauge set-up with a gauge for each cylinder, or a mercury manometer, which is a calibrated tube arrangement that utilizes columns of mercury to indicate engine vacuum. **Note:** Because of the nature of the synchronisation procedure and the need for special instruments, most owners leave the task to a Yamaha dealer or a reputable motorcycle repair shop.

3 Temporarily remove the fuel tank (see Chapter 3). Remove the air filter housing and, on 1100 models, remove the intake duct (see Chapter 3).

4 Remove the blanking caps from the intake joint fittings (see illustration). Connect the vacuum gauges or manometer to the fittings.

5 Install the fuel tank and start the engine and let it run until it reaches normal operating temperature. Check the engine idle speed and adjust it if necessary (see Section 9).

6 With the engine idling, the vacuum readings for both cylinders should be the same, or at least within the tolerance listed in this Chapter's Specifications. If the vacuum readings vary, adjust carburettor No. 1 to match No. 2 by turning the synchronising screw (see Chapter 3).

7 After adjustment, snap the throttle open and shut 2 or 3 times, then recheck the vacuum readings and readjust as necessary.

8 When the adjustment is complete, turn the engine OFF. Remove the vacuum gauges or manometer and reinstall the blanking caps. Check the throttle cable freeplay and adjust it if necessary (see Section 8).

9 Install all the parts removed for access.

10 Start the engine and check the idle speed (see Section 9).

11 Brake pads and brake shoes check



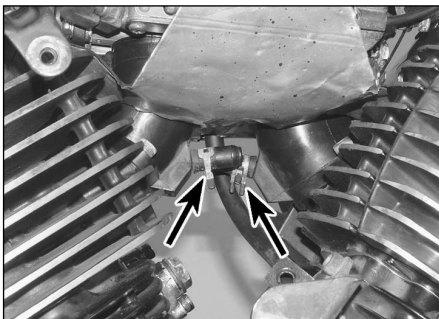
Warning: The dust created by the brake system may contain asbestos, which is harmful to your health. Never blow it out with compressed air and don't inhale any of it. An approved filtering mask should be worn when working on the brakes.

Brake pads

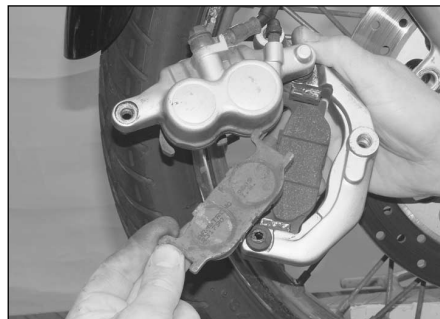
1 Always renew the disc brake pads in complete sets; on 1100 models with two front brake calipers, replace all four pads at the same time.

2 To check the front brake pads on all 650 models, follow the procedure in Chapter 6 and displace the caliper assembly, then remove the pads from the caliper bracket (see illustration).

3 To check the front brake pads on all 1100 models, follow the procedure in Chapter 6 and displace the caliper, then remove the



10.4 Blanking caps on intake joint fittings – 650 model shown



11.2 Remove the pads from the caliper bracket – 650 models