

11.3 Check the friction material on the brake shoes (A). Note the brake cam (B)

check the extent of brake wear, have an assistant apply the brake firmly; if the indicator aligns with the index mark, the brake shoes are worn to their limit and must be replaced with new ones (see Chapter 7).

3 If there is no wear indicator, follow the procedure in Chapter 7 to remove the wheel to check the amount of friction material remaining on the brake shoes (see illustration).

4 Brake shoe friction material wear limit is typically 1.5 mm. Check the amount of wear at the thinnest point (at the shoe leading edge). If worn below this figure, renew the brake shoes.

5 If the brake shoes have worn unevenly, inspect the brake cam for wear (see Section 12).

12 Drum brake cam



1 Remove the wheel; on a front drum brake the brake shoes and brake cam are fitted to

the backplate, on a rear drum brake the shoes and cam are fitted to the back of the gearbox casing (see illustration 11.3).

2 Follow the procedure in Chapter 7 to remove the brake shoes, then remove the brake arm clamp bolt and pull the brake cam out of the backplate or casing (see illustration).

3 Clean the shaft and cam and inspect the bearing surfaces for wear; replace the cam with a new one if necessary.

4 Clean the inside of the brake drum and the casing and inspect the surface of the drum for score marks and other damage. If the drum is badly grooved it must be machined or renewed (see Chapter 7).

5 In the case of the rear drum brake, signs of oil inside the casing indicates that the transmission output shaft seal has failed which must be rectified (see Chapter 5).

6 Apply a smear of copper grease to the bearing surfaces of the cam and the shaft, and to the brake shoe pivot pin, before reassembly (see illustration).

Caution: Do not apply too much grease

otherwise there is a risk of it contaminating the brake drum and shoe friction material.

13 Throttle cable

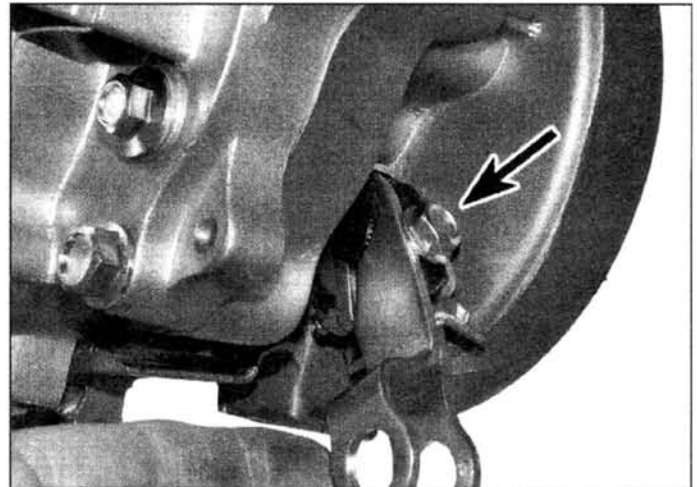


Note: All four-stroke engines are fitted with a one-piece throttle cable. Two-stroke engines (with cable-controlled oil pumps) are fitted with three-piece cables.

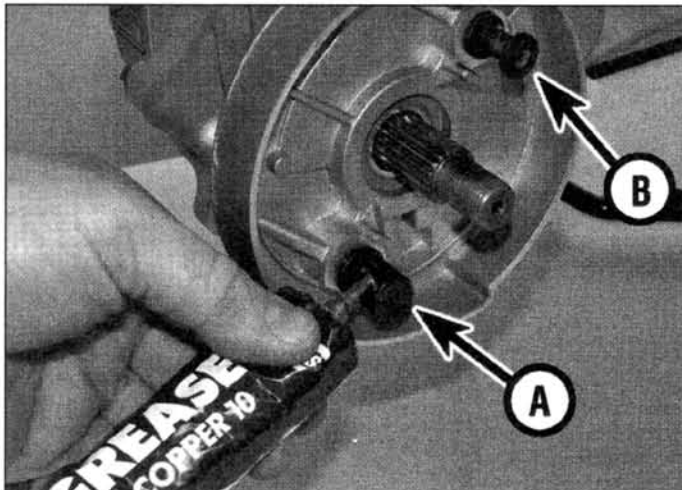
1 Ensure the throttle twistgrip rotates easily from fully closed to fully open with the handlebars turned at various angles. The twistgrip should return automatically from fully open to fully closed when released.

2 If the throttle sticks, this is probably due to a cable fault. Remove the cable (see Chapter 3) and lubricate it following the procedure in Section 7.

3 It's important that there's a small amount of freeplay in the throttle cable. This is either measured as twistgrip rotation (typically between 2 to 6 mm) (see illustration), or as



12.2 Location of the brake arm clamp bolt (arrowed)



12.6 Lubricate the cam (A) and pivot pin (B) with a smear of grease



13.3 Throttle cable freeplay is measured in terms of twistgrip rotation

the amount of freeplay present at the in-line cable adjuster (see illustration 13.7).

4 If there is insufficient or excessive freeplay, cable adjustment is required – follow the appropriate procedure according to the type of engine being worked on.

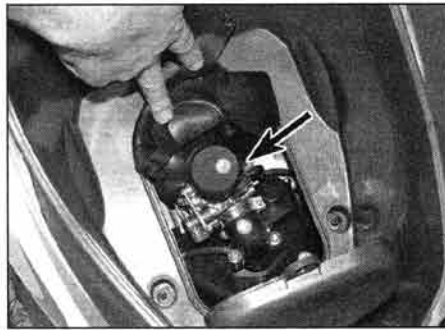
Four-stroke engines

5 Locate the adjuster at the carburettor end of the cable. The carburettor is accessible either through an inspection panel in the bottom of the luggage compartment (see illustration), or by removing the luggage compartment itself (see Chapter 8).

6 Loosen the locknut on the adjuster, turn the adjuster until the right amount of freeplay is evident, then retighten the locknut (see illustration).

7 Where an adjuster is fitted at the twistgrip end of the cable (see illustration) this can be used for making further adjustments. Ensure that the locknut is tightened after adjustment.

8 If cable adjustment has reached its limit, a new cable will have to be fitted (see Chapter 3).



13.5 Remove the inspection panel to access the carburettor (arrowed)

9 Once adjustment is complete, start the engine and check the idle speed. If the idle speed is too high, this could be due to incorrect adjustment of the cable. Loosen the locknut and turn the cable adjuster in – if the idle speed falls as you do, there is insufficient freeplay in the cable. Reset the adjuster. **Note:** The idle speed should not change as the

handlebars are turned. If it does, the throttle cable is routed incorrectly. Rectify the problem before riding the scooter (see Chapter 3).

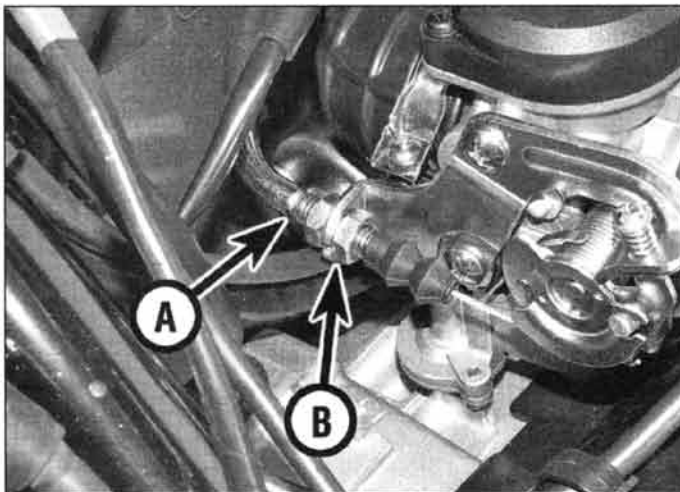
Two-stroke engines fitted with a cable controlled oil pump

10 On these machines a three-cable system is used to actuate both the carburettor and the oil pump at the same time (see illustration).

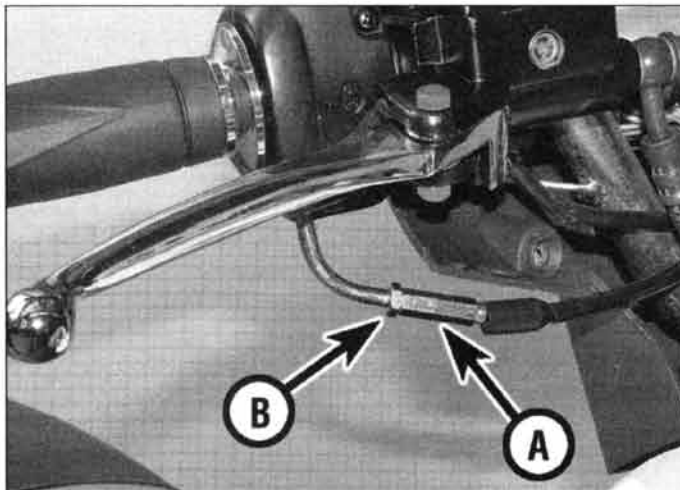
11 First ensure that there is no freeplay in the cable from the splitter to the carburettor. Remove the air filter housing (see Chapter 3) and pull back the boot on the cable adjuster on the top of the carburettor. Loosen the locknut on the adjuster, turn the adjuster to create a small amount of freeplay in the cable, then screw the adjuster out until the carburettor slide just begins to lift (see illustration). Now turn the adjuster in a quarter turn. Tighten the locknut, then refit the boot and the filter housing.

12 Check the adjustment of the oil pump cable (see Section 19).

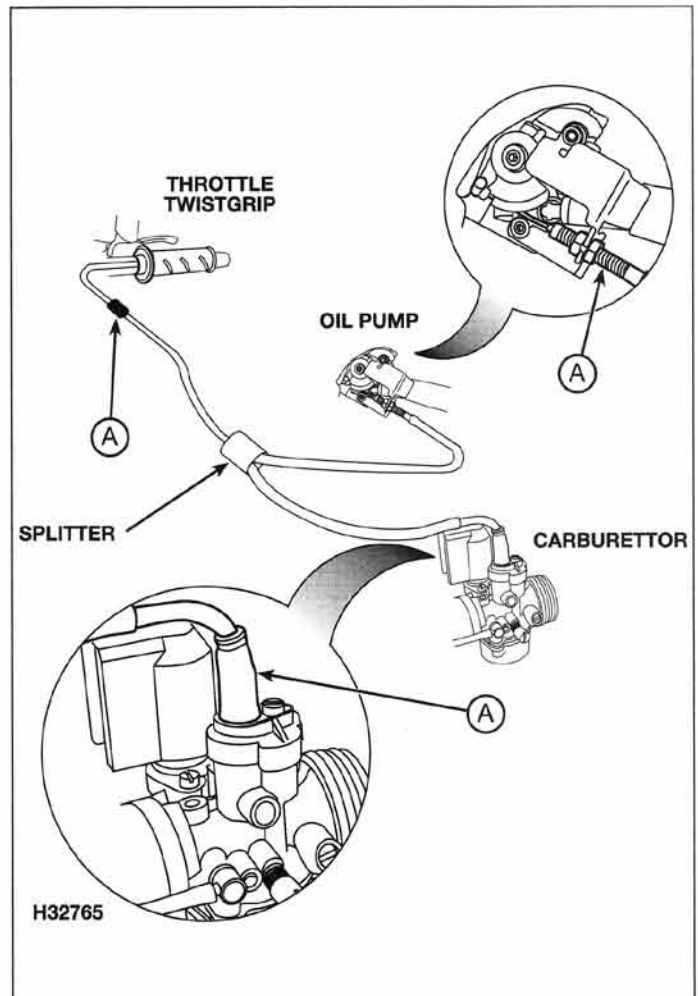
13 Now adjust the freeplay in the throttle



13.6 Throttle cable adjuster (A) and locknut (B), carburettor end



13.7 Throttle cable adjuster (A) and locknut (B), twistgrip end



13.10 Cable arrangement for models fitted with a cable operated oil pump

Location of cable adjusters (A)