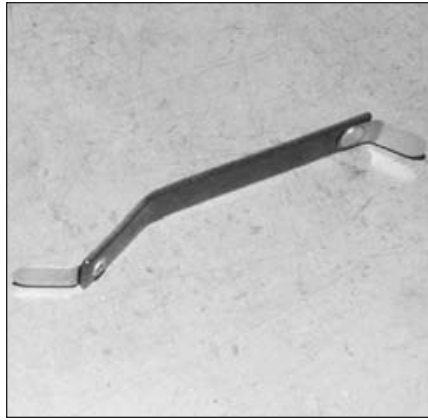




**14.12a** These offset feeler gauges will make measuring valve clearance much easier . . .



**14.12b** . . . especially if you bend the gauge slightly as shown (arrow)



**14.13a** Slip the feeler gauge between the rocker arm and valve stem . . .

gauge handle slightly with pliers (**see illustration**).

13 Insert the feeler gauge between each rocker arm and valve adjusting screw (**see illustrations**). Pull the feeler gauge out slowly - you should feel a slight drag. If there's no drag, the clearance is too loose. If there's a heavy drag, the clearance is too tight.

14 If the clearance is incorrect, write it down.

15 Repeat the clearance measurement for the other valves on the front cylinder, writing the measurements down.



**Suzuki makes a special tool for valve adjustment, but you can use a box wrench and pliers instead.**

16 Loosen the locknut on any valves that need to be adjusted. Hold the locknut with a wrench and turn the adjusting screw with pliers (**see illustration**).

17 Once the clearance is set correctly, hold the adjusting screw so it won't turn and tighten the locknut securely.

18 Adjust the remaining valve on that side of the cylinder. Get the setting as close as possible to the valve you just adjusted.

19 Adjust the remaining two valve for the cylinder. Again, get the settings for the pair of valves as close as possible to each other.

20 Turn the crankshaft to place the front cylinder at TDC compression. When this occurs, the F/T mark inside the timing hole will be centered in the hole and it will be possible to wiggle the rocker arms with fingers.

21 Repeat Steps 13 through 19 to adjust any other valves that need it.

22 Once all of the valves are correctly adjusted, install the valve adjusting hole covers and all of the components that had to be removed for access. Install the covers over the crankshaft rotation bolt and timing window.

### 15 Throttle and choke operation/grip freeplay - check and adjustment



#### Throttle check

1 With the engine stopped, make sure the throttle grip rotates easily from fully closed to fully open with the front wheel turned at various angles. The grip should return auto-

matically from fully open to fully closed when released. If the throttle sticks, check the throttle cables for cracks or kinks in the housings. Also, make sure the inner cables are clean and well-lubricated.

2 Check for a small amount of freeplay at the grip and compare the freeplay to the value listed in this Chapter's Specifications.



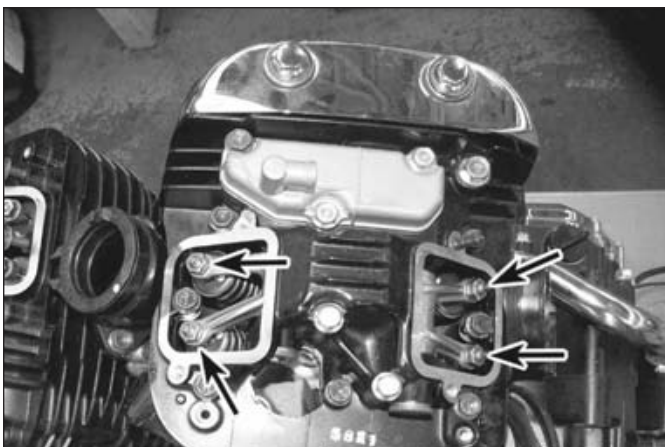
**Warning: With the engine idling, idle speed should not change as the handlebars are moved through their travel. If idle speed does change, find and fix the problem before riding the bike.**

#### Throttle adjustment

**Note:** Some models use two throttle cables - a pull cable and a return cable.

#### Single cable

3 Freeplay adjustments are made at the handlebar end of the cable. Loosen the locknut on the cable where it leaves the handlebar (**see illustration**). Turn the adjuster until the desired freeplay is obtained, then retighten the locknut.



**14.13b** . . . there are two intake valve adjusters and two exhaust valve adjusters per cylinder (arrows)



**14.16** Hold the lock-nut and turn the adjusting screw

**Dual cables, dual carburetors**

4 Loosen the return cable locknut (see illustrations). Turn the adjuster to obtain the return cable freeplay listed in this Chapter's Specifications. Hold the adjuster so it won't turn and tighten the locknut.

5 Adjust the pull cable in the same manner as the return cable.

**Dual cables, single carburetor or fuel injection**

6 Minor adjustments are made at the handlebar end of the cable. Major adjustments are made at the carburetor or throttle body.

**Minor adjustment**

7 Loosen the return cable locknut and thread the adjuster all the way in (see illustration 15.4a or 15.4b). Leave the locknut loose for now.

8 Loosen the pull cable locknut. Turn the adjuster to achieve the amount of throttle freeplay listed in this Chapter's Specifications. Hold the adjuster so it won't turn and tighten the locknut.

9 Hold the throttle grip in the closed position and turn the return cable adjuster just until you feel resistance. Hold the adjuster at this point and tighten the locknut.

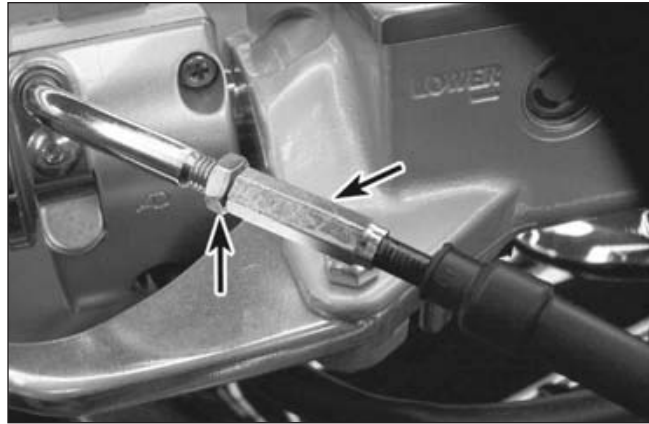
10 If the throttle cable can't be adjusted at the throttle grip, make major adjustments as described below.

**Major adjustment**

11 Remove the seat and fuel tank. See Chapters 8 and 4.

12 Loosen the return cable locknut. On carbureted models, it's the cable toward the right side of the motorcycle. On fuel injected models, it's the lower cable at the throttle body pulley (see illustration). Turn the adjuster to create slack in the cable.

13 Loosen the pull cable locknut. Turn the adjuster to set freeplay at the throttle grip to the value listed in this Chapter's Specifi-



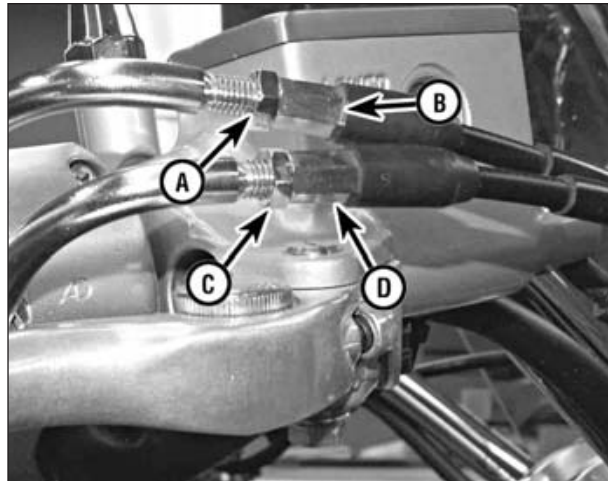
**15.3** Here is the locknut (left arrow) and adjuster (right arrow) on a single throttle cable

cations. Hold the adjuster at this point and tighten the locknut.

14 Hold the throttle grip in the closed position and turn the return cable adjuster to produce side-to-side slack of 1 mm (0.04 inch). Hold the adjuster in this position and tighten the locknut.

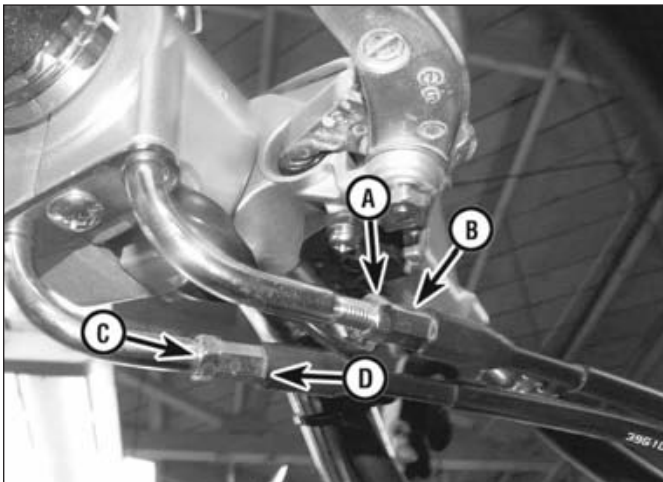
**Choke check (carbureted models)**

15 Inspect the choke knob and cable. The choke should pull out easily and stay out by itself. If it doesn't, adjust the knob's tension with the plastic nut behind the knob. If this



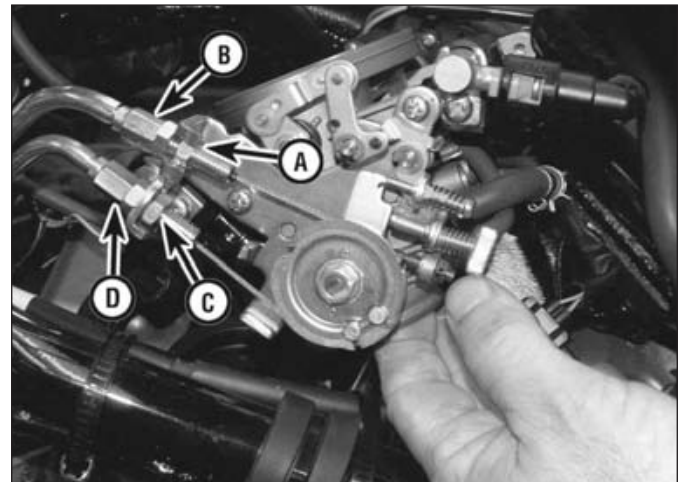
**15.4a** Throttle cable adjuster details (Volusia and C50)

- A Pull cable locknut
- B Pull cable adjusting nut
- C Return cable locknut
- D Return cable adjusting nut



**15.4b** Throttle cable adjuster details (M50)

- A Pull cable locknut
- B Pull cable adjusting nut
- C Return cable locknut
- D Return cable adjusting nut



**15.12** Throttle cable pulley details (fuel injected models)

- A Pull cable locknut
- B Pull cable adjusting nut
- C Return cable locknut
- D Return cable adjusting nut