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screw. This will allow you to adjust the engine speed to the specification located in the "Tune-Up Specifications" chart.

➔ **Make sure that the choke valve on the carburetor is in the full-open position.**

THROTTLE LINKAGE

▶ See Figure 70

The rod length can be determined by measuring the two throttle rods. The lengths should measure as follows:

- Dimension "A" 4.25 in. (108 mm)
- Dimension "B" 1.77 in. (45 mm)

Measure the rods between the connectors.

1. Turn the throttle grip (or remote control lever) to the full open position and turn the shaft lever "C" to the full open position until the stopper "D" contacts the protrusion on the carburetor. The lock the lever in position with the lock screw.

❗ CAUTION

After making the above adjustment, move the throttle grip to check for smooth throttle operation.

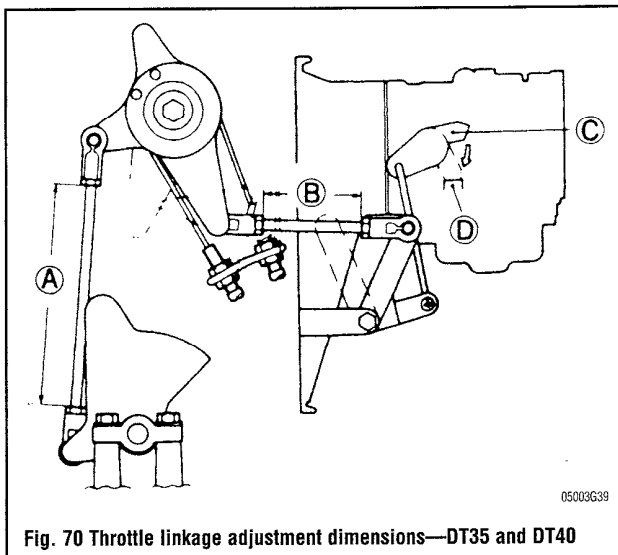


Fig. 70 Throttle linkage adjustment dimensions—DT35 and DT40

DT55 and DT65

IGNITION TIMING

▶ See Figures 71, 72 and 73

The DT55 and DT65 use the Suzuki IC (integrated circuit) ignition system. Ignition timing adjustment is not necessary on models equipped with these ignition systems with the exception of adjusting the throttle valve sensor. They are equipped with the following features:

- Engine Start Advance Mechanism. This feature ensures easy engine starting by automatically advancing the ignition advance to 10° BTDC for about 15 seconds, after which, the IC control circuit changes over to trolling ignition timing "A"
- Trolling Speed Adjusting Mechanism. The trolling ignition timing can be changed at 2° intervals from 0° to 6° ATDC by means of an idle speed adjusting switch. By changing over the trolling ignition timing, the trolling speed can be adjusted.
- All models after 1991 have had the Idle Speed Adjustment Switch removed and instead an ignition timing resistor has been installed. With this

modification, the in gear idle timing with the throttle fully returned is kept at a constant 6° ATDC.

➔ **The engine rpm at trolling speed has been factory set at approximately 700 rpm. The trolling speed varies depending on boat type, weather conditions, propeller types and other variables. Adjust the trolling speed with the idle speed adjusting switch to obtain the desired engine speed.**

- Advance Stop Mechanism. When closing the throttle valve fully, an idle switch "1" is "ON" in conjunction with the carburetor and regardless of the engine rpm, the trolling ignition timing can be obtained. Therefore, by returning the throttle valve to its fully closed position during high speed travel, the boat's speed can be decreased suddenly.
- Acceleration Advance Mechanism. This device is available to increase engine rpm quickly during sudden acceleration. When an acceleration switch "2" is "ON" in cooperation with the carburetor, the ignition timing of the basic advance characteristic "2" is quickened to the ignition timing of the acceleration advance characteristic "C"
- Throttle Valve Switch and Cam. As the throttle valve moves, a cam fitted to the end of the throttle valve shaft moves accordingly to put the roller of the throttle valve switch in motion. By moving the roller, the switch is turned ON and OFF sending a signal to the CDI unit where the ignition timing is changed. When the throttle valve is fully closed, the idle switch "1" is "ON" and the acceleration switch is "OFF". Once the throttle valve is opened, the idle switch "1" is "OFF" and the acceleration switch "2" is "ON"

On the DT55 and DT65, the working angles at which the idle switch and acceleration switch turn "On" and "OFF" differ from each other. Therefore, two different cams have been developed, one being for the DT55 and the other for the DT65. They can be told apart by the different markings on them. The numerals on the cams denote the angle until the switch is "OFF" "C" from the vertical line "A" and an angle until the acceleration switch is "ON" "D" from the vertical line "A"

IDLE SPEED

1. On the carburetor, turn the pilot air screw all the way in until it lightly seats and then back it out the number of turns specified in the "Idle Air Screw Specifications" chart.
2. Place the remote control lever forward gear (idle).
3. Turn the idle speed adjusting switch, and adjust the idle speed to the specification listed in the "Tune-Up Specifications" chart.

➔ **Make sure the choke valve is in the fully open position.**

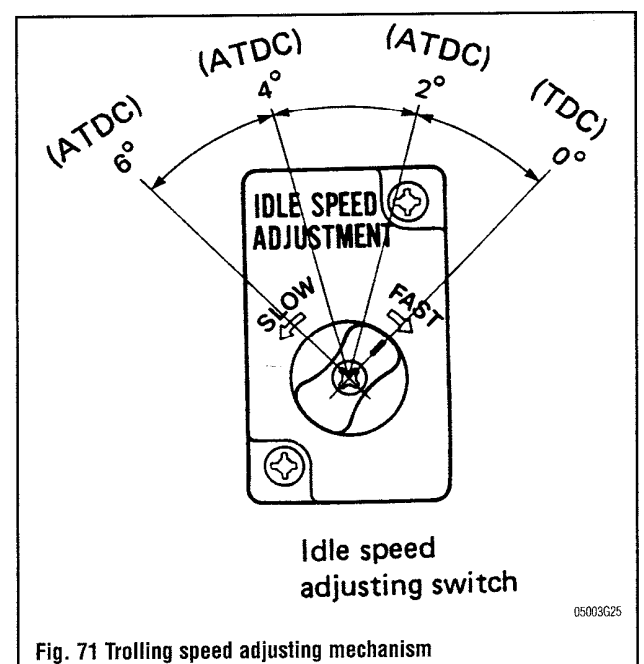


Fig. 71 Trolling speed adjusting mechanism

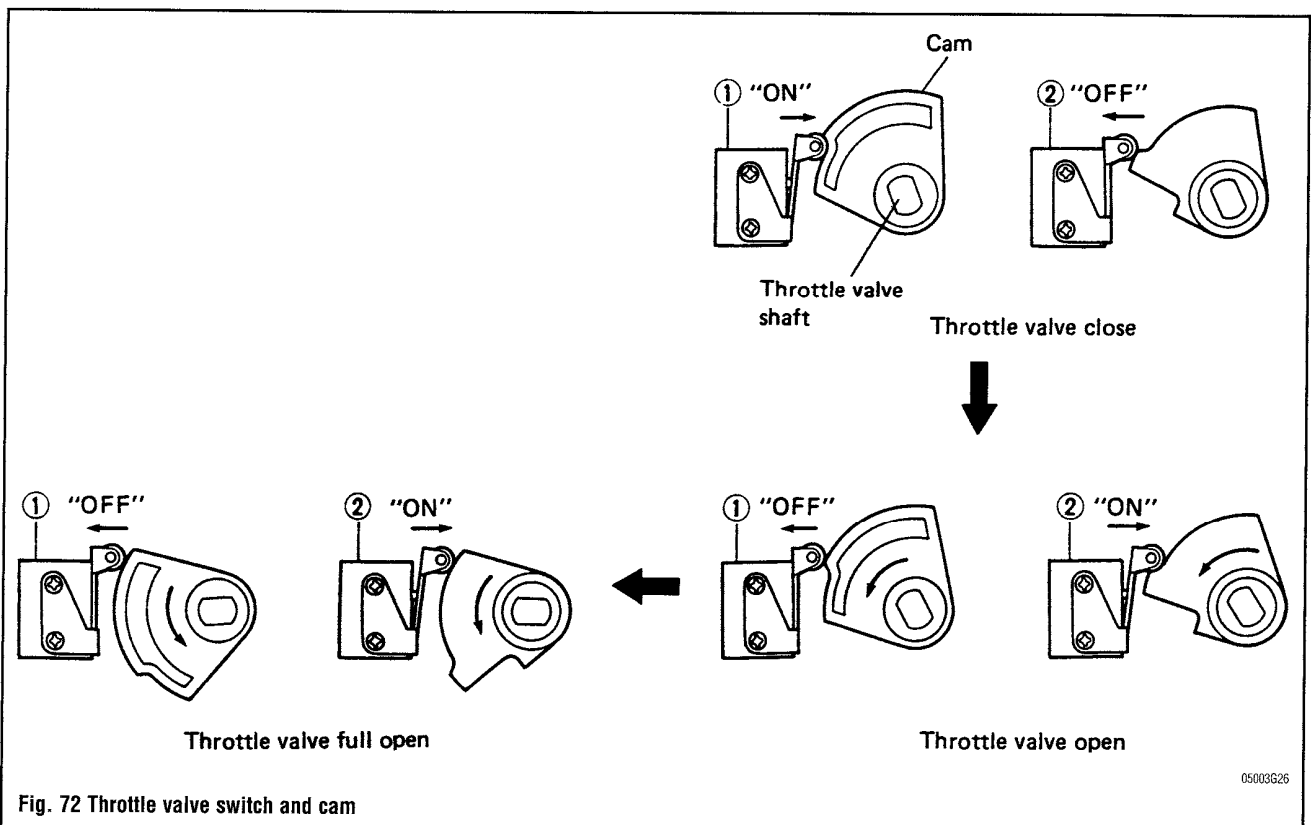


Fig. 72 Throttle valve switch and cam

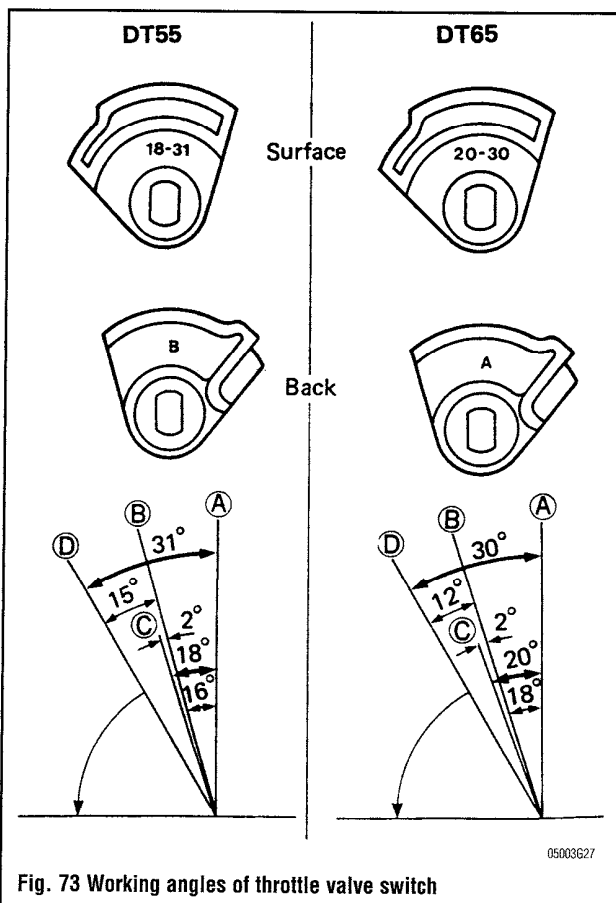


Fig. 73 Working angles of throttle valve switch

THROTTLE LINKAGE

See Figures 74 and 75

Full-close adjustment of the throttle valve. DT55 (serial number 501001-502859) and DT65 (serial number 501001-502959)

1. Remove the throttle lever rod (1) from the throttle control (2) lever.
2. Loosen the set screw (4) on the lever (3) of the #1 and #3 carburetors.
3. Tighten the set screw (4) with the throttle valves of the #1 and #3 carburetors fully closed.
4. Check operation by moving the lever (5) of the #2 carburetor to make sure the individual throttle valves of each carburetor operate together.

➔ If they do not work together uniformly, make the above adjustments again.

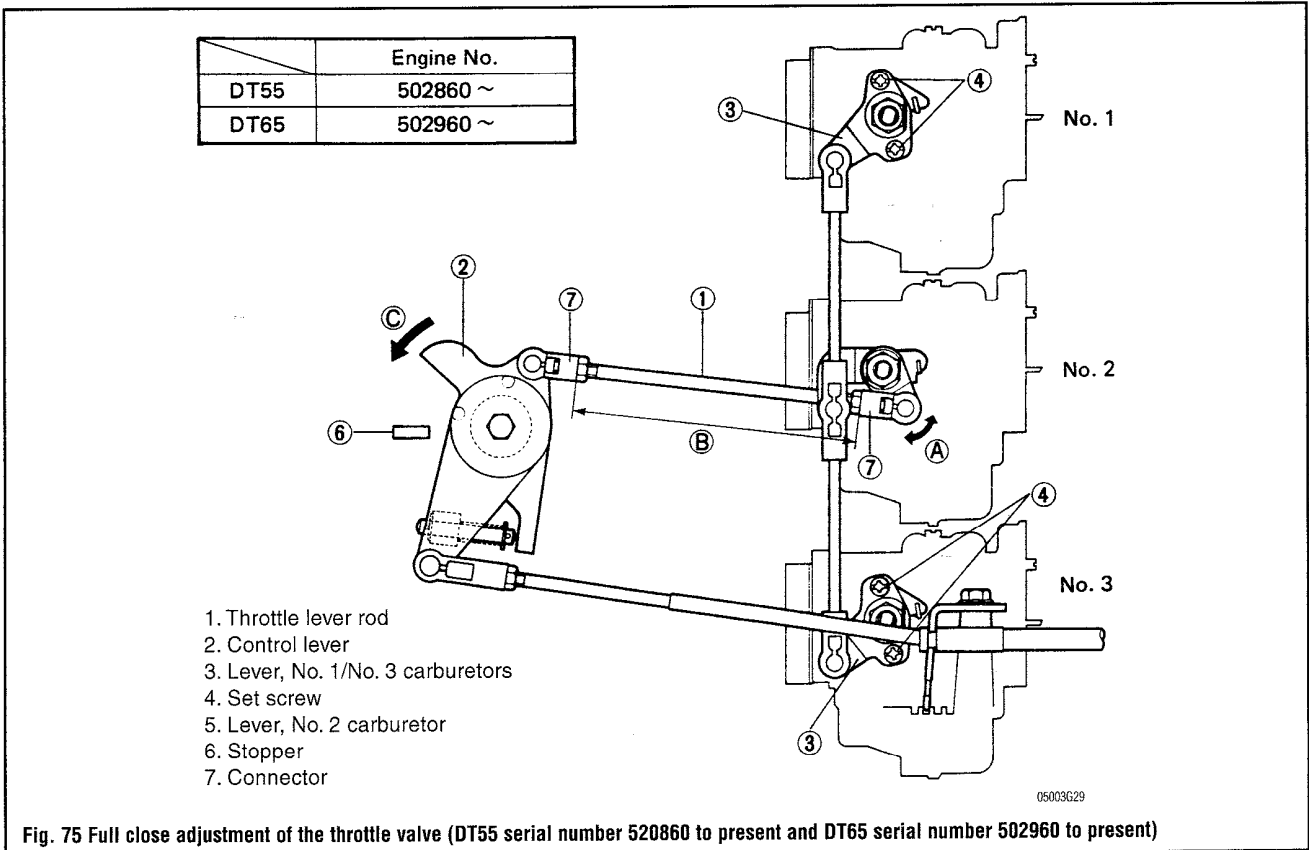
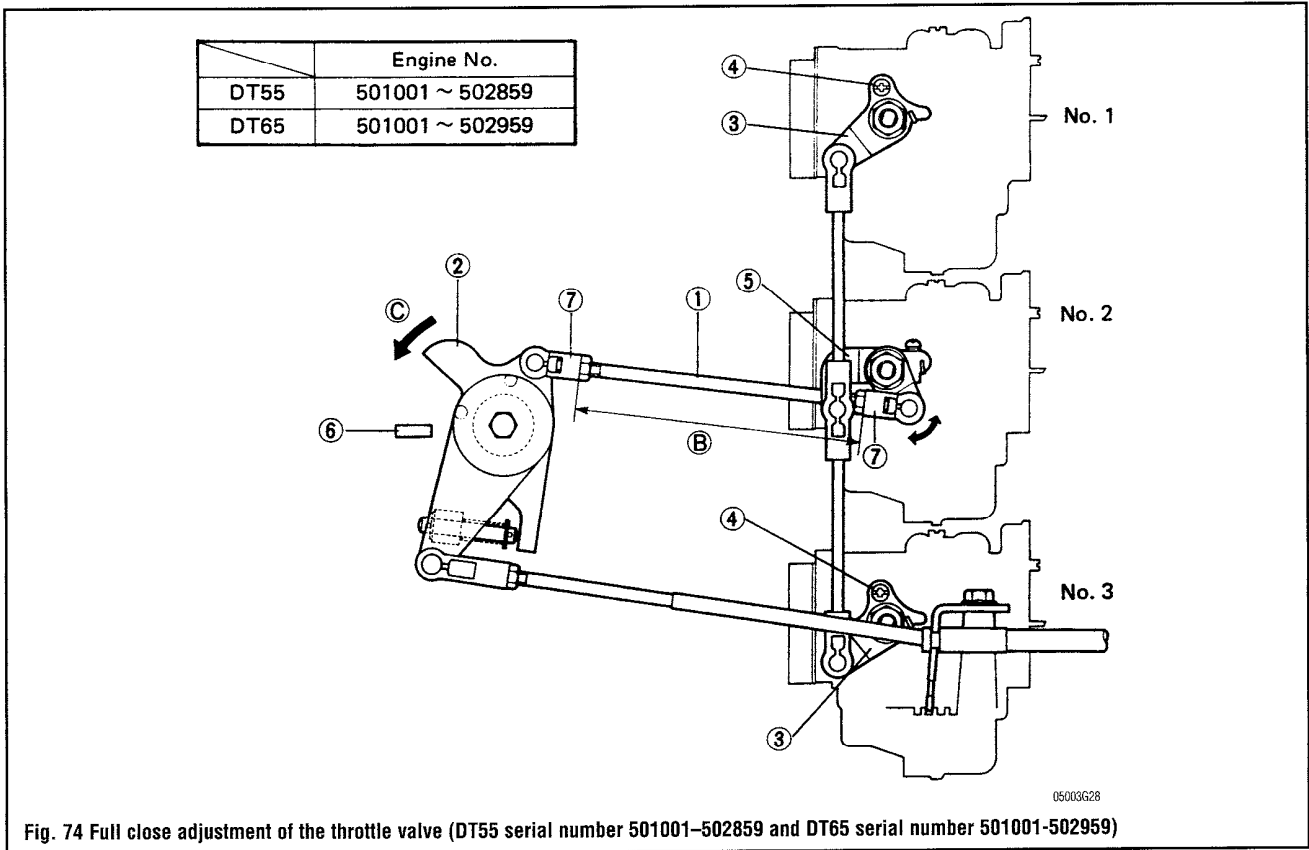
Full close adjustment of the throttle valve. DT55 (serial number 502860 to present) and DT65 502960 to present)

5. Remove the throttle lever rod (1) from the throttle control lever (2).
6. Loosen the set screw (4) of the lever (3) of #1 and #3 carburetors. In this case, the throttle valve is set to its full-closed position by the action of a return spring.
7. Move the lever (5) of the second carburetor, a few times (more than 30°) as shown by the arrow (A) to eliminate any play in the throttle rod between the carburetors. All the throttle valves should be closed evenly.
8. Apply a thread locker to the loosened set screw (4) and tighten.
9. Check operation by moving the lever (5). All throttle valve should move at the same time.

Adjustment of the throttle lever rod

10. Adjust the dimension (B) of the throttle lever rod (1) to the following length and attach the control lever:
 - Standard dimension (B): DT55-4.5 in. (114 mm); DT65-4.3 in. (108 mm)
11. Move the control lever in the direction of the arrow (C) and adjust the length of the rod (1) with the connector (7) so that the control lever comes in contact with the stopper (6) at a position where the throttle valve fully opens or a position of 1° to 2° this side from the full-open position.

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**** CAUTION**

If there is a gap between the control lever (2) and the stopper (6) when the throttle valve has opened fully, the throttle rod, throttle valve or carburetor(s) may be damaged and may not operate correctly at full throttle operation.

12. If all adjustments are correct, tighten the throttle rod lock nuts securely.

DT75 and DT85

IGNITION TIMING

See Figure 76

Starting in 1988, the Suzuki digital IC ignition system was adopted. This system eliminates a direct mechanical linkage between the engine and the ignition system. Instead, sensors relay information detailing throttle position sensor, gear counter (engine speed) and engine temperature to the ignition module which processes this information and then determines the optimal ignition timing.

No adjustment is necessary on this system.

The DT75 and DT85 use the Suzuki IC (integrated circuit) ignition system. Ignition timing adjustment is not necessary on models equipped with these ignition systems with the exception of adjusting the throttle valve sensor. They are equipped with the following features:

- Engine Start Advance Mechanism. This feature ensures easy engine starting by automatically advancing the ignition advance to 5°BTDC for about 15 seconds, after which, the IC control circuit changes over to trolling ignition timing "A"
- Trolling Speed Adjusting Mechanism. The trolling ignition timing can be changed from 7°ATDC in the slow position to 1°BTDC by means of an idle speed adjusting switch. Each position on the switch represents approximately 50 rpm change. By changing over the trolling ignition timing, the trolling speed can be adjusted.

All models from 1991 have had the Idle Speed Adjustment Switch removed and instead an ignition timing resistor has been installed. With this modification, the in-gear idle timing with the throttle fully returned is kept at a constant 2°-6°ATDC and the in-gear idle speed is now adjusted by the throttle stop screw on the #3 carburetor.

→ The engine rpm at trolling speed has been factory set at approximately 700 rpm. The trolling speed varies depending on boat type, weather conditions, propeller types and other variables. Adjust the trolling speed with the idle speed adjusting switch to obtain the desired engine speed.

- Advance Stop Mechanism. When closing the throttle valve fully, an idle switch is "ON" in conjunction with the carburetor and regardless of the engine

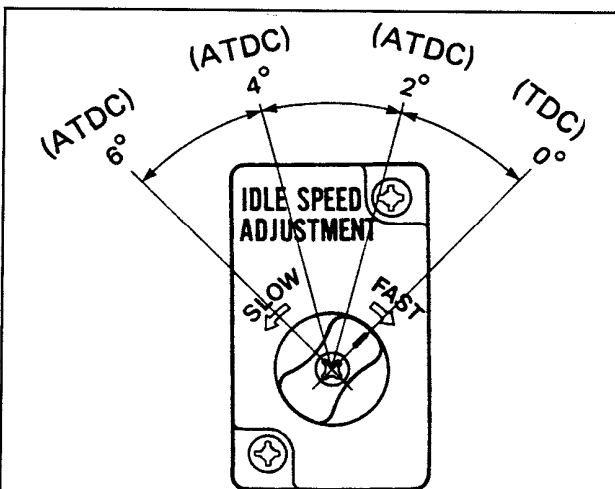


Fig. 76 Idle speed adjusting switch

rpm, the trolling ignition timing can be obtained. Therefore, by returning the throttle valve to its fully closed position during high speed travel, the boat's speed can be decreased suddenly.

CARBURETOR LINKAGE ADJUSTMENT

See Figure 77

Fully closed adjustment of the throttle valve.

1. Remove the throttle lever rod (1) from the throttle control lever.
2. Ensure that the throttle stop screw (on the #3 carburetor) is fully backed out.
3. Loosen the screws (4) of the adjustable levers on the #1 and #3 carburetors. The return springs will close the throttle valves fully.
4. Flick the lever (5) of the #2 carburetor 2 or 3 times, as shown by the arrow (A), which will ensure that all three throttle valves are closed evenly.
5. Tighten the lever screws (4) on the #1 and #3 carburetors and apply thread lock compound.
6. Finally, check the operation by flicking the lever (5), to see if the three carburetor throttle valves are balanced and synchronized with each other.

Adjustment of the throttle lever rod.

1. Adjust the dimension (B) of the throttle lever (1) to the correct length. For the DT75: 6.1 in. (155 mm) and the DT85: 5.7 in. (145 mm). Attach the control lever.
2. Move the control lever (2) in the direction of the arrow (C) and adjust the length of the rod (1) by screwing the connector (7) accordingly. The cam on the control lever should touch the stopper (6) when the throttle valves are fully open, or within 1°-2° of being fully open.

**** CAUTION**

If there is a gap between the control lever (2) and stopper (6) at full throttle, damage may result to the throttle rod, throttle valves and carburetors.

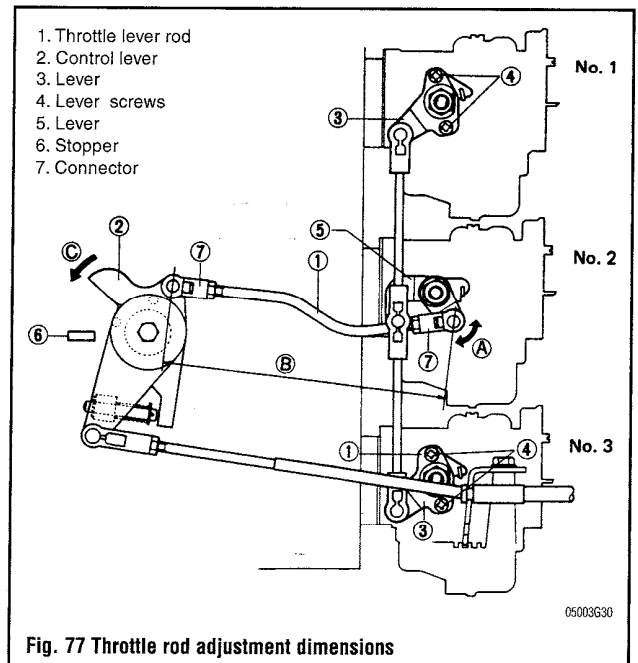


Fig. 77 Throttle rod adjustment dimensions

IDLE SPEED

See Figure 78

Adjust the in-gear idle speed in the following way.

1. Warm up the engine for approximately 5 minutes