

***** 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.

- 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

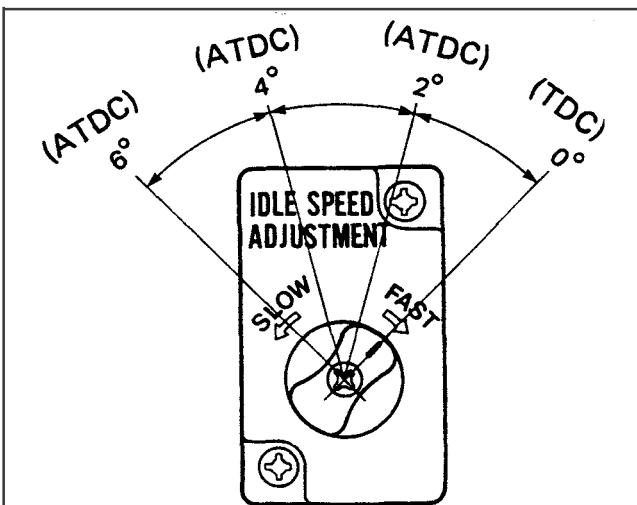


Fig. 76 Idle speed adjusting switch

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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.

- Remove the throttle lever rod (1) from the throttle control lever.
- Ensure that the throttle stop screw (on the #3 carburetor) is fully backed out.
- Loosen the screws (4) of the adjustable levers on the #1 and #3 carburetors. The return springs will close the throttle valves fully.
- 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.
- Tighten the lever screws (4) on the #1 and #3 carburetors and apply thread lock compound.
- 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.

- 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.
- 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.

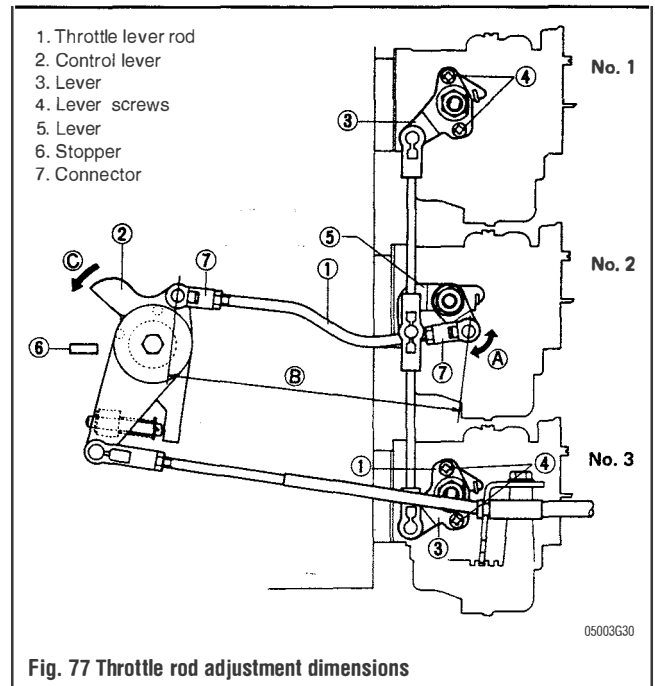


Fig. 77 Throttle rod adjustment dimensions

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IDLE SPEED

♦ See Figure 78

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

- Warm up the engine for approximately 5 minutes

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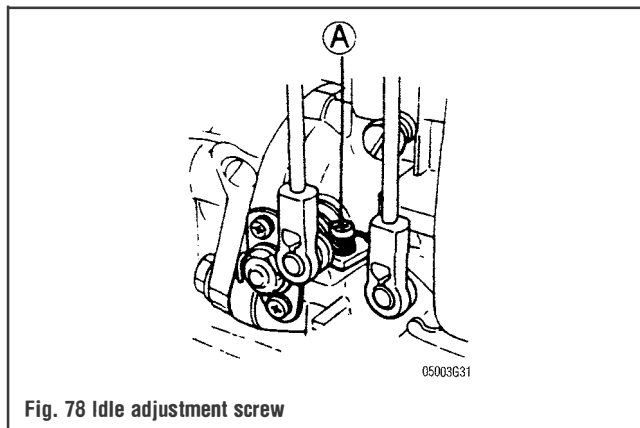


Fig. 78 Idle adjustment screw

2. Turn the pilot air screws in fully (clockwise) until lightly seated, then back them out (counterclockwise) the number of turns specified in the "Idle Air Screw Specifications" chart.

3. Engage forward gear

4. Set the pilot air screws as specified, then maintain a stable idle by turning the idle adjustment screw (A) clockwise to increase idle speed or counterclockwise to decrease idle speed. Idle speed specifications are located in the "Tune-Up Specifications" chart.

➔ **If in-gear idle speed is not in the specified range, or if the engine will not maintain idle rpm, it is possible that there is an abnormality in either the fuel or ignition systems. If the fuel and ignition systems are working correctly, it is possible that the throttle valve sensor may need adjustment. For this adjustment refer to the applicable section in "Electrical and Ignition".**

DT90 and DT100

IGNITION TIMING

The DT90 and DT100 are all equipped with the Micro Link Ignition system. This system uses a microcomputer to maximize combustion control and thus improve engine performance. The system uses various sensors and switches to monitor engine rpm, throttle valve opening, shift lever position and operator selected idle speed. The computer constantly evaluates this information and provides the optimal ignition spark timing for the current engine running condition.

No adjustment is necessary on these models. If there is a problem with ignition timing, it is most likely caused by a faulty CDI module. Refer to the appropriate section in "Electrical and Ignition" for CDI troubleshooting.

CARBURETOR LINKAGE ADJUSTMENT

➔ See Figure 79

1. Check the length of the throttle linkage rod (1) to the carburetors.
2. Loosen the throttle lever adjusting screws (2) on the top carburetor
3. Lightly push the throttle lever (3) clockwise until the throttle valves are completely closed. Then tighten the adjusting screws (2)
4. Actuate the throttle linkage and check if both throttle valves are synchronized in the completely closed position. If the throttle valves are not synchronized, perform the adjustment again

IDLE SPEED

1. Warm up the engine for approximately five minutes.
2. On the carburetor, turn the pilot 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.

➔ **Do not overtighten the pilot screw or you may damage the screw. Just lightly seat it and then turn it out.**

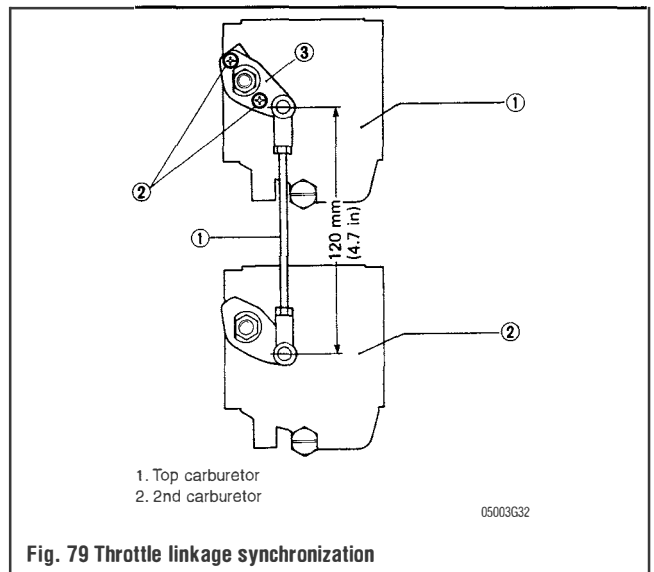


Fig. 79 Throttle linkage synchronization

3. Place the remote control lever into forward gear, first notch.

4. Turn the idle speed adjusting switch to position 5 (slow). This adjusts the engine speed to a range of 600–650 rpm. The engine must maintain this speed for 3 minutes.

5. If the engine speed is less than 600 rpm or it will not maintain trolling speed for three minutes:

- Adjust the top carburetor throttle stop screw to maintain the idle speed specified in the "Tune-Up Specifications" chart.
- Recheck the throttle valve sensor resistance value and readjust if necessary. See "Electrical and Ignition"

DT115 and DT140

IGNITION TIMING

The DT115 and DT140 models are equipped with the Suzuki digital IC ignition system. This system eliminates a direct mechanical linkage between the engine end 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.

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 7°BTDC for about 15 seconds, after which, the time the ignition timing will return to the idle speed circuit and whatever position the "Idle Speed Adjustment Switch" is set at.

➔ **Due to the higher rpm created by the automatic starting device, do not shift gears until the engine speed has returned to normal idle speed.**

- 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.

Within idle speed range, the timing is not affected by any change in engine speed, up to 900 rpm. To further assure exact ignition timing, a gear counter coil electrically measures the flywheel position and sends this information to the CDI module.

➔ **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 6°ATDC and the in-gear idle speed is now adjusted by the throttle stop screw on the #4 carburetor.**