module processes throttle position, engine speed and engine temperature to determine the optimum ignition timing for all operating conditions.

The throttle valve sensor is mounted on the side of the bottom carburetor on DT 25, DT 30, DT 115 and DT 140 models and the side of the center carburetor on DT 55, DT 65, DT 75 and DT 85 models. On all models, the sensor is engaged with the carburetor throttle valve shaft to directly register throttle opening.

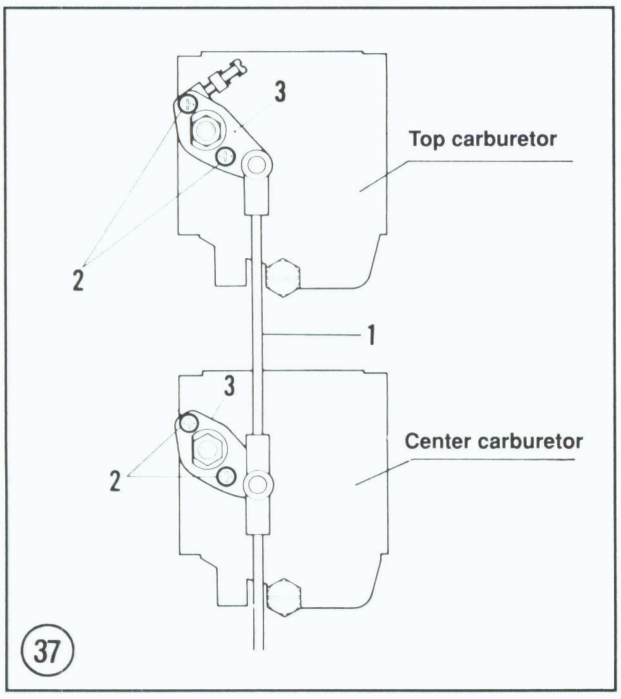
No adjustment is required on early models equipped with a throttle position switch. Refer to Chapter Three for throttle switch and throttle sensor troubleshooting procedures.

The following procedures apply to later models equipped with a throttle valve sensor.

1989-on DT 25, DT 55, DT 65, DT 115, DT 140; 1988-on DT 30, DT 75, DT 85

The following special tools are required for this procedure:

a. Small nonmagnetic screwdriver (insulated electrical type).



b. Digital voltmeter.
c. Battery (9 volt minimum).
d. Throttle valve sensor test lead (part 09930-89530) or suitable jumper leads.

1. On models prior to 1991, turn the idle speed switch to the lowest idle setting. On models after 1990, back out idle speed screw so throttle valves are completely closed.

NOTE
*Throttle valves **must** be fully closed for proper throttle sensor adjustment.*

2. Disconnect the sensor 3-wire connector.
3. Connect sensor test lead (part 09930-89530) to the sensor connector.

NOTE
*If the throttle sensor test lead (part 09930-89530) is not available, connect suitable jumper leads to the sensor connector as shown in **Figure 38**.*

4. Connect test lead black/red wire to the positive battery terminal. See **Figure 38**.
5. Connect test lead black wire to the negative battery terminal. See **Figure 38**.
6. Connect voltmeter positive lead to the light green/red test lead wire and voltmeter negative lead to the negative battery terminal. See **Figure 38**.

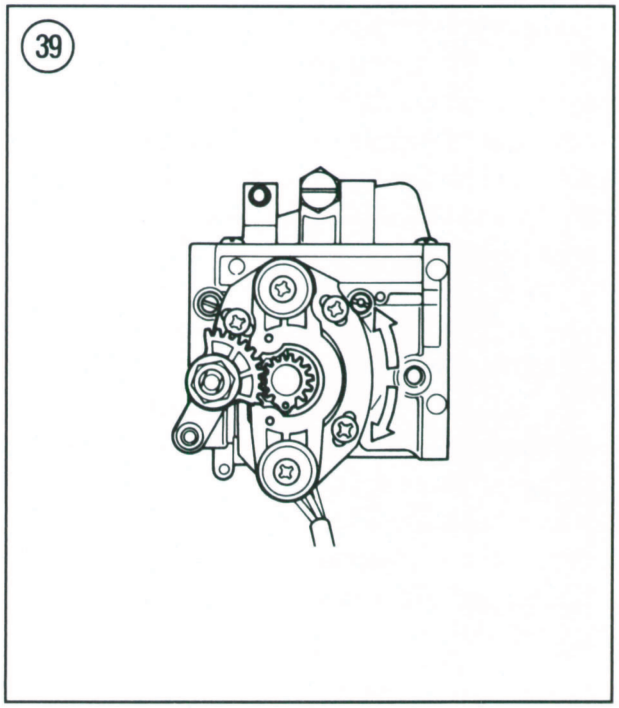
NOTE
Use only a nonmagnetic, insulated screwdriver to adjust sensor in Step 7, or voltage reading will not be valid.

7. Throttle sensor voltage at closed throttle should be 0.45-0.55 volt. If not, remove adjusting screw cover and turn screw (**Figure 38**) clockwise to increase the voltage or counterclockwise to decrease the voltage.
8. Advance the throttle to the wide-open position. Sensor voltage at wide-open throttle should be 2.7 volts or more. Wide-open voltage is not adjustable—if 2.7 volts or more can not be obtained, replace throttle sensor.

NOTE

The correct throttle sensor voltages are essential for proper outboard operation. If the correct closed-throttle voltage can not be obtained by turning the sensor adjusting screw, loosen the sensor mounting screws and shift position of the sensor on the carburetor. If the correct voltage still can not be obtained, replace the sensor.

9. Disconnect the test leads, voltmeter and reconnect the sensor connector to the outboard wiring harness. Reinstall sensor adjusting screw cover.



V4 and 1987-on V6

1. Remove the oil pump control rod from the oil pump lever.