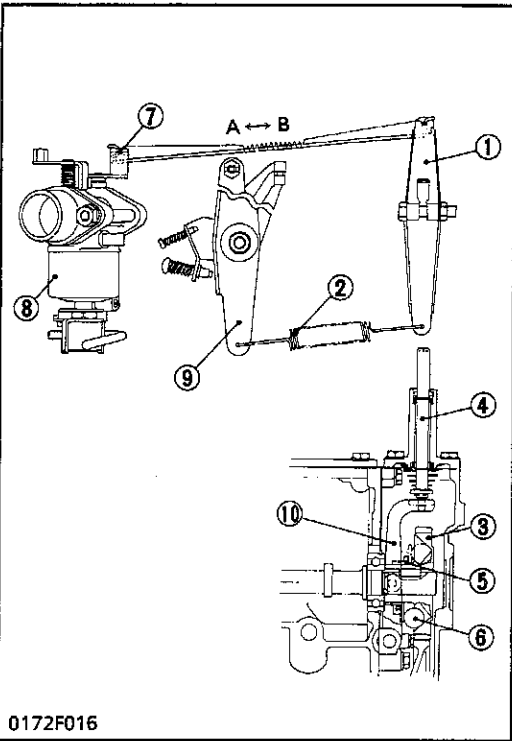


**[5] GOVERNOR**



- |                          |  |
|--------------------------|--|
| (1) Governor Lever       | (6) Ball                               |
| (2) Governor Spring      | (7) Throttle Lever                     |
| (3) Governor Gear        | (8) Carburetor / Mixer / DF Carburetor |
| (4) Governor Lever Shaft | (9) Speed Control Lever                |
| (5) Governor Sleeve      | (10) Fork Lever                        |

The engine is equipped with a centrifugal ball mechanical governor which activates the throttle in response to engine speed.

When the engine is carrying a load and running at rated speed, the speed will drop if the load is increased even slightly. In this case, the governor automatically opens the throttle valve of the carburetor to maintain the original speed.

Dumping the load suddenly will cause a rapid increase in speed. In this case, the governor automatically moves the throttle valve in closing direction to prevent the engine from increasing its speed.

**1) When engine is carrying a load and running at rated speed**

When there is no change in load, the centrifugal force of the ball (6) which is attached to the governor gear (3) balances with the tensile force of the governor spring (2) via governor sleeve (5), fork lever (10), governor lever shaft (4) and governor lever (1). The engine speed and output are thus kept constant.

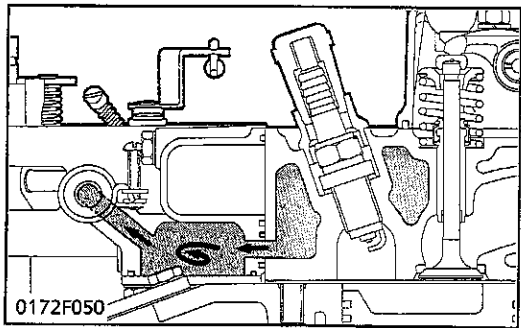
**2) When load is applied to engine**

When the load is applied to the engine running at rated speed, the speed of the governor gear (3) which is connected to the idle gear decreases. As a result, the centrifugal force of the ball (6) becomes smaller. The tensile force of the spring (2) overcomes the centrifugal force, and the governor lever (1) causes the throttle lever (7) to move in the open direction [B]. The original engine speed is thus maintained.

**3) When load is dumped**

When the load is dumped suddenly, the centrifugal force of the ball (6) overcomes the tensile force of the spring (2). As a result, the governor lever (1) causes the throttle lever (7) to move in the shut direction [A] and prevents the engine from increasing its speed.

**[6] INLET MANIFOLD**



Part of water heated in the water jacket is channeled to the inlet manifold, where the hot water heats the fuel-air mixture for better carburetion. Heating effect is particularly good when the engine is running at low speeds and with light load in cold weather, thus improving fuel economy and acceleration.

- (1) Intake Manifold