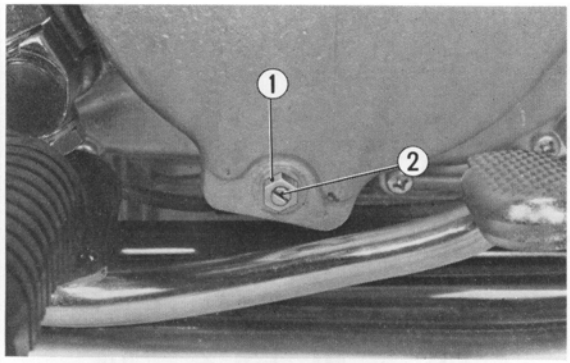

Fig. 320 ① Clutch adjuster lock nut
② Clutch adjuster

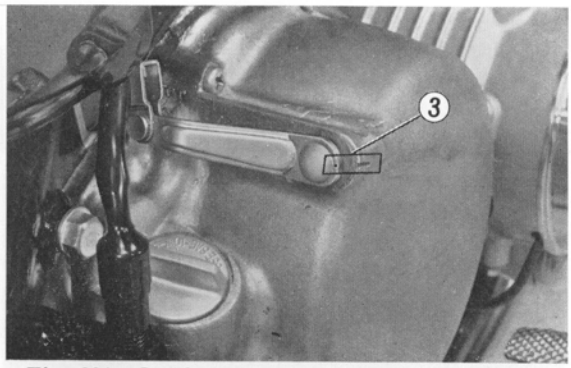

Fig. 321 ③ Alignment marks

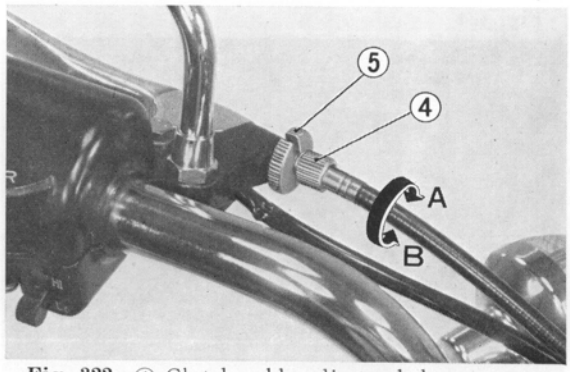

Fig. 322 ④ Clutch cable adjuster bolt
⑤ Lock nut

1. Clutch

The clutch must be adjusted so that the engine can be completely disconnected from the transmission when the clutch lever is squeezed, but not to the point where the clutch will slip when the motorcycle is accelerating.

The clutch cable should be adjusted to provide **10~20 mm (0.4~0.8 in.)** free play as measured at the tip of the clutch lever.

To adjust, proceed as follows:

1. Loosen the clutch adjuster lock nut ① and turn the adjuster ② to align the marks ③ on the actuating arm and engine side cover.
2. Clutch cable adjustment can be made by means of the adjusters at the upper and lower ends of the clutch cable. Loosen the lock nut ⑤ (⑥ at the lower end) at the clutch lever and turn the cable adjuster bolt ④ (nut ⑦ at the lower end) in either direction. Turning the cable adjuster bolt or nut at the lower end in the direction Ⓐ will increase the free play and turning it in the direction Ⓑ will decrease the free play. Tighten the lock nut.
3. After adjusting, check to see if the clutch is not slipping or if the clutch is properly disengaging.

Start the engine and shift into gear. There should be no excessive grinding from the transmission, and the motorcycle should not begin to creep forward while the clutch lever is squeezed. Drive the motorcycle to check for clutch slippage.

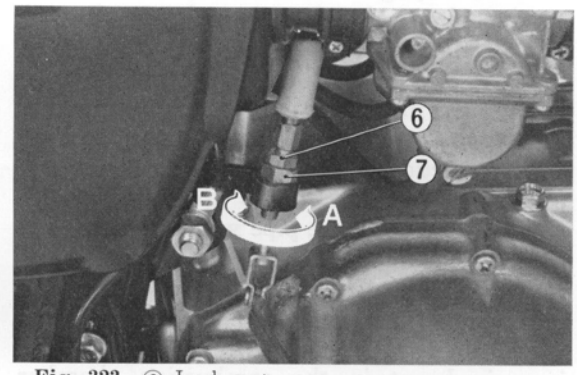

Fig. 323 ⑥ Lock nut
⑦ Clutch cable adjuster nut

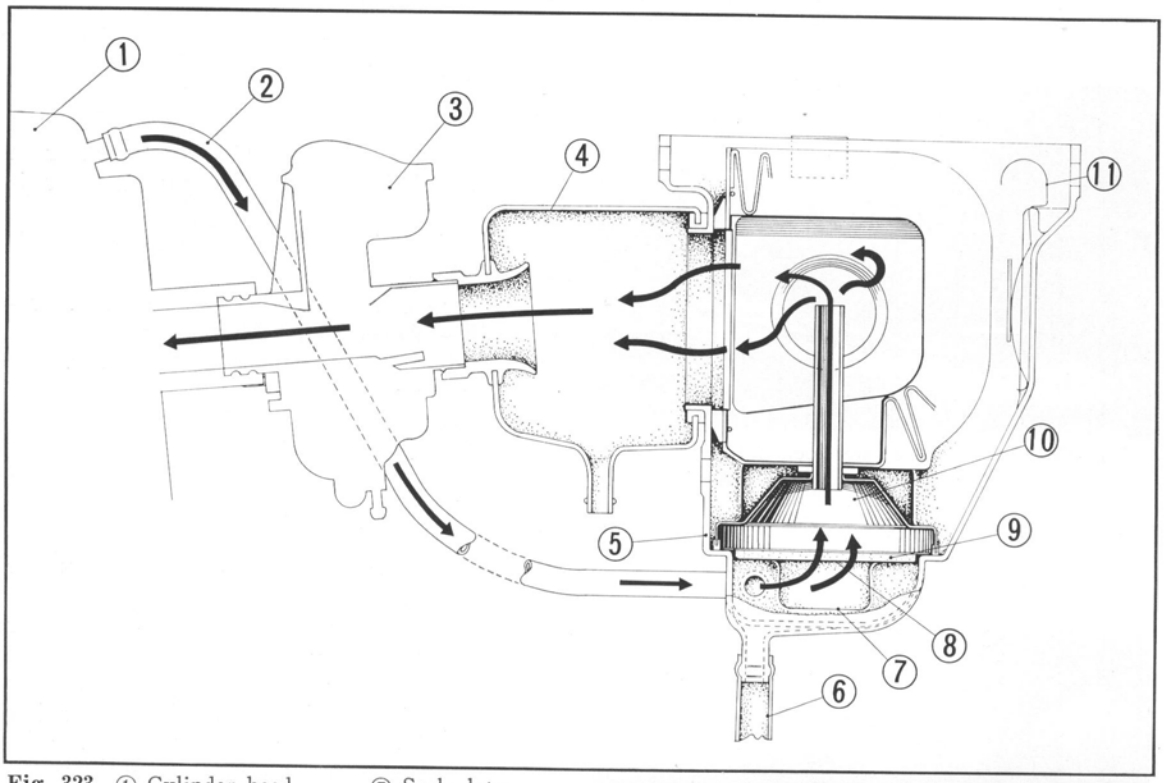

Fig. 323 ① Cylinder head ② Breather tube ③ Carburetor ④ Air cleaner chamber ⑤ Element seal case ⑥ Drain tube ⑦ Seal plate ⑧ Punching metal ⑨ Element B ⑩ Element cover ⑪ Air cleaner element spring

1. BLOW-BY GAS SCAVENGING DEVICE

The blow-by gas scavenging device was newly employed for contributing to minimize pollution. The description is given here, referring to Fig. 5 above.

The blow-by gas within the cylinder head is conducted into the element seal case through the breather tube. The gas is then conducted into the element B through the openings on both sides in the seal plate and punching metal, where oil is separated from the gas at each section. Further the gas enters the air cleaner element on the upper part of the seal case through the pipe within the element cover and is filtered again. The gas so filtered is drawn into the carburetor chamber and returns to the combustion chamber for burning through the carburetor. Now the gas is again burnt in the combustion chamber to minimize pollution by the exhaust gases.

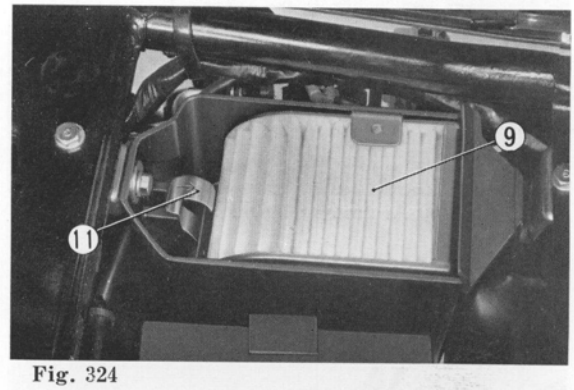

Fig. 324

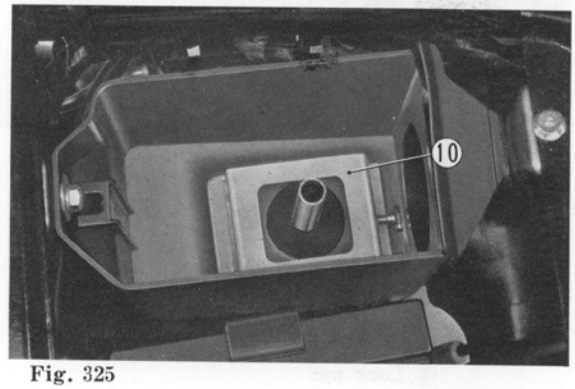

Fig. 325

• Blow-by gas

The exhaust gases from automobiles contain carbon monoxide, hydrocarbon, hydrogen sulfide, nitrogen dioxide, selenium oxide, etc. which are poisonous ingredients contributing to pollution.

The exhaust gases consist of not only the remainder of burned mixture and combustion products but also a leakage of compression past the cylinder wall or from the crankcase. The latter is known as "blow-by gas", and accounts for 20 to 40% of the total amount of hydrocarbon to be emitted in the air. Since blow-by gases have not been completely burned and, therefore, must be burned again by means of the blow-by gas scavenging device to minimize the amount of the gas to be emitted into the air.

2. STARTING MOTOR SAFETY UNIT

• Description

The starting motor safety unit operates in the way that the starting motor functions only when the transmition is in neutral or while the clutch lever is being squeezed in any gear position, assuring rider safety and preventing damage of the motor and transmission gears.

• Circuits and operations

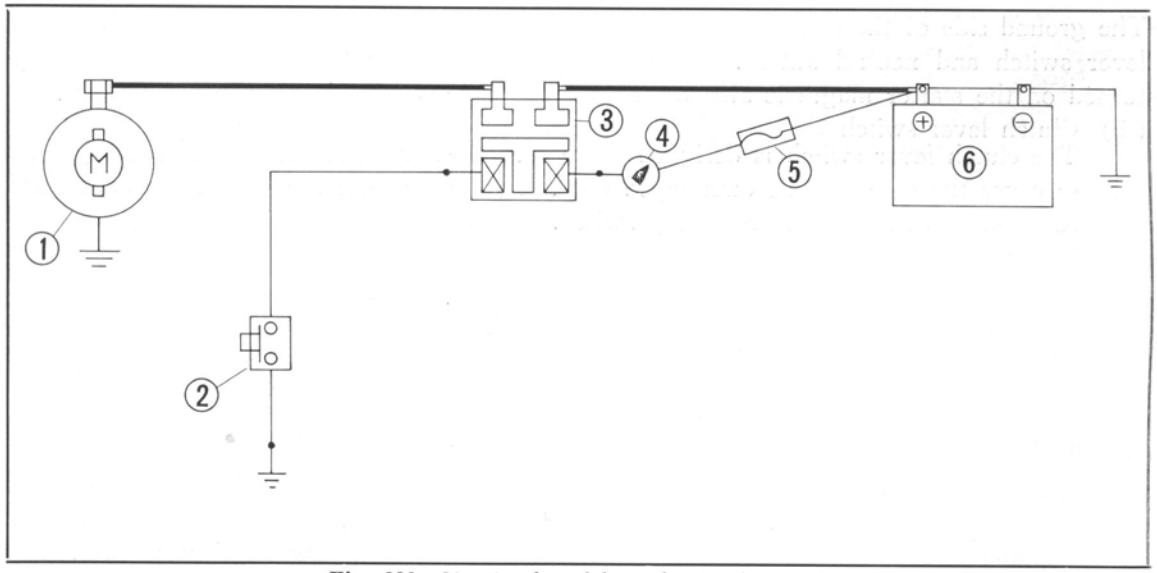

Fig. 326 Circuit of models without safety unit

① Starting motor
② Starter button switch
③ Starter magnetic switch
④ Main switch
⑤ Fuse
⑥ Battery

When the engine switch is turned on, some amount of electricity is usually applied to the starter magnetic switch coil. If the starter button switch is then turned on, the starter magnetic switch will operate to cause the starting motor to turn. In other words, the motorcycle begines to move when the main switch and starter button switch are turned on with the transmission in gear.

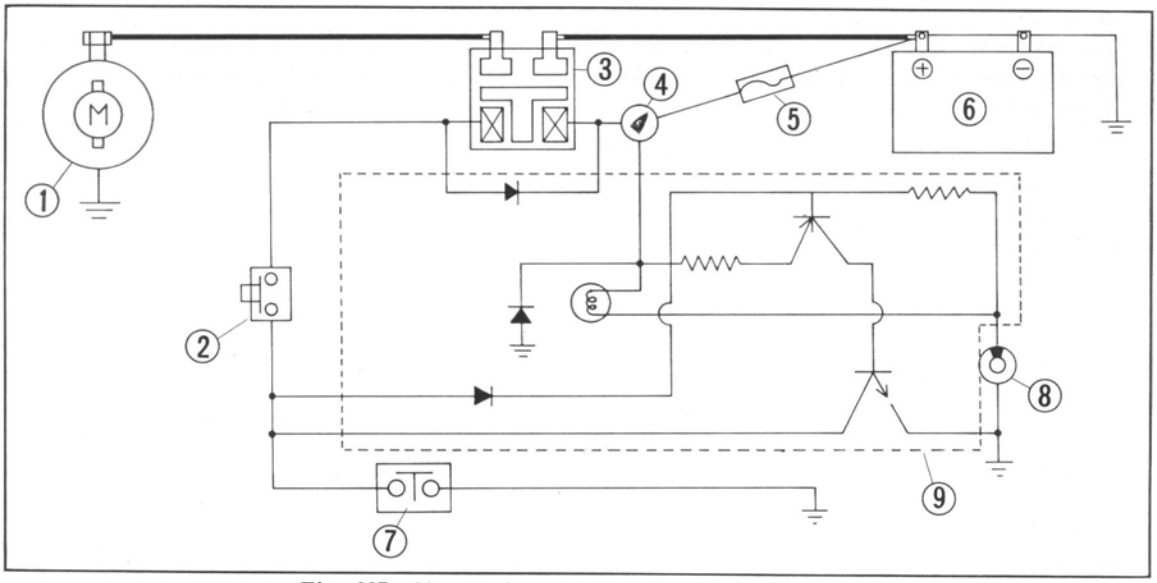

Fig. 327 Circuit of model (CB 550) with safety unit

① Starting motor
② Starter button Switch
③ Starter magnetic switch
④ Main switch
⑤ Fuse
⑥ Battery
⑦ Clutch lever switch
⑧ Neutral switch
⑨ Safety unit

The ground side of the starter button switch is connected to the body through the clutch lever switch and neutral switch. When the clutch lever switch or the neutral switch is turned on the starter magnetic switch will operate to cause the starting motor to turn.

(1) Clutch lever switch
The clutch lever switch is designed to be turned on when the clutch lever is squeezed to cause the clutch to be disengaged only. (This switch has the same construction and function as those of the front stop switch.)

3. FRONT SUSPENSION

The front fork used on CB 550 is of a free valve type which is widely employed in a telescopic type shock absorber.

As its damping force can be adjusted by changing its stroke to meet a driver's preference or conditions of a road or surfaces, it always provides a comfortable ride even under severe driving conditions. On the other hand, CB 500 is incorporated with a rod type shock absorber which is also used in a Telescopic type.

Operation

- When the wheel meets holes or bumps in the road, it moves up and down. This up-and-down movement of the wheel is transmitted to the bottom leg.

  Since the bottom leg is integrated with a pipe, the pipe also moves up and down. With either action, two springs on the pipe flux and rebound, absorbing the road shocks to the motorcycle.

  In this case, oil in the chamber Ⓑ pushes up the free valve and flows into the space Ⓐ freely.

  At the same time, oil in the chamber Ⓑ also flows through orifices in the lower end of the spring under seat into the space Ⓒ by the amount by which the pipe is moved up

- Extension

  As the wheel has passed the bump or hole, it moves down. To eliminate excessive up-and-down motion of the spring and wheel, there will be a restraint on the spring and wheel action.

  In operation, as the wheel moves down, the free valve is closed, introducing high pressure in the space Ⓐ. This high pressure then forces the oil out and into the space Ⓒ through the orifices in the spring under seat.

  Since the oil encounters a restraint as it passes through the orifices, excessive wheel and spring movement as well as spring oscillation are prevented.

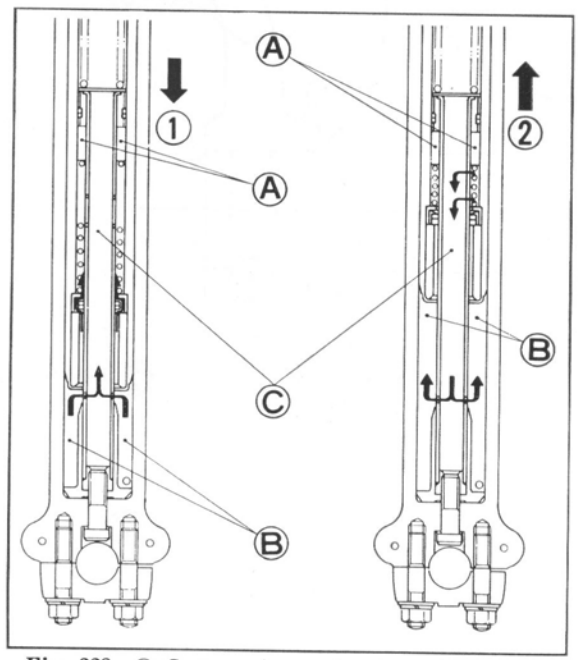

Fig. 328 ① Compression ② Extension

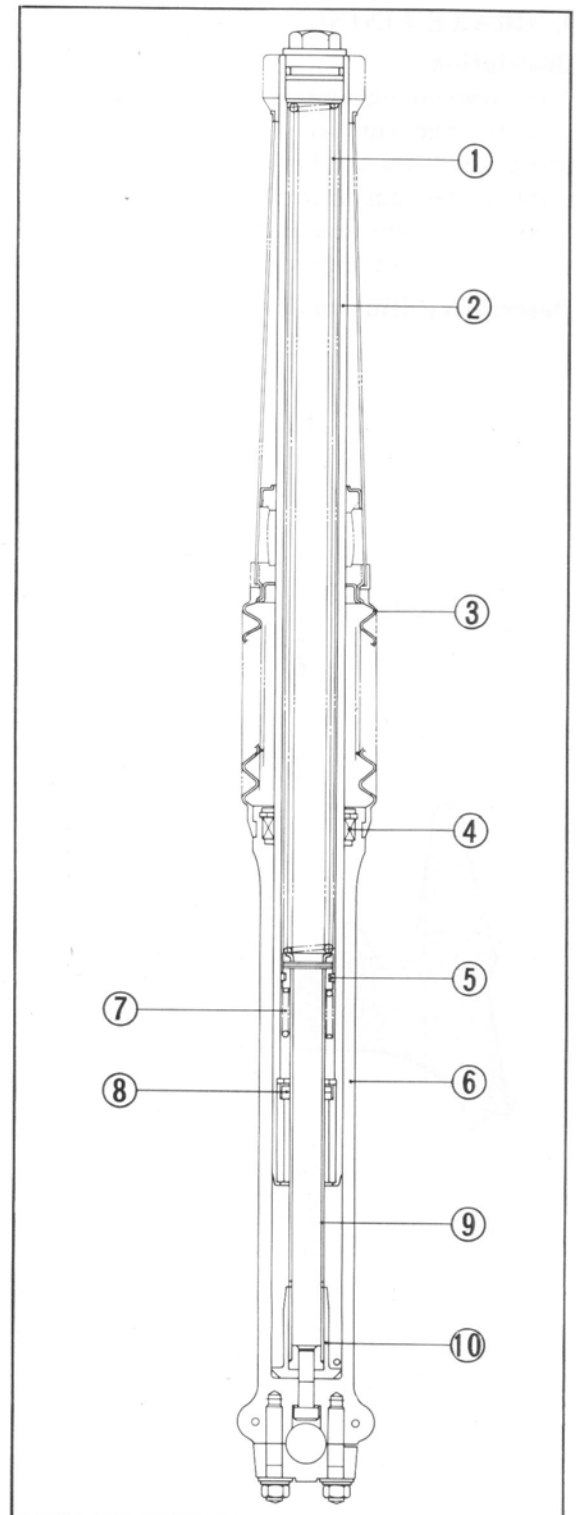

Fig. 329
① Front spring
② Front fork pipe
③ Front fork dust seal
④ Oil seal
⑤ Piston ring
⑥ Front fork bottom leg
⑦ Front rebound spring
⑧ Free valve
⑨ Bottom pipe
⑩ Oil lock piece

4. BRAKE LINING WEAR INDICATOR

Discription

The brake lining wear indicator is provided to check the wear condition of the brake linings visually from outside. As shown in the figure below, the indicator plate is attached to the brake cam. As the brake lining has worn, the brake cam moves excessively. Such a movement of the cam is checked by the arrow on the periphery of the indicator. Further the brake panel cam boss is provided with the "wear limit" mark to make it possible to check the service limit (replacement time) of the lining easily with the brake panel installed.

Descriptive illustration

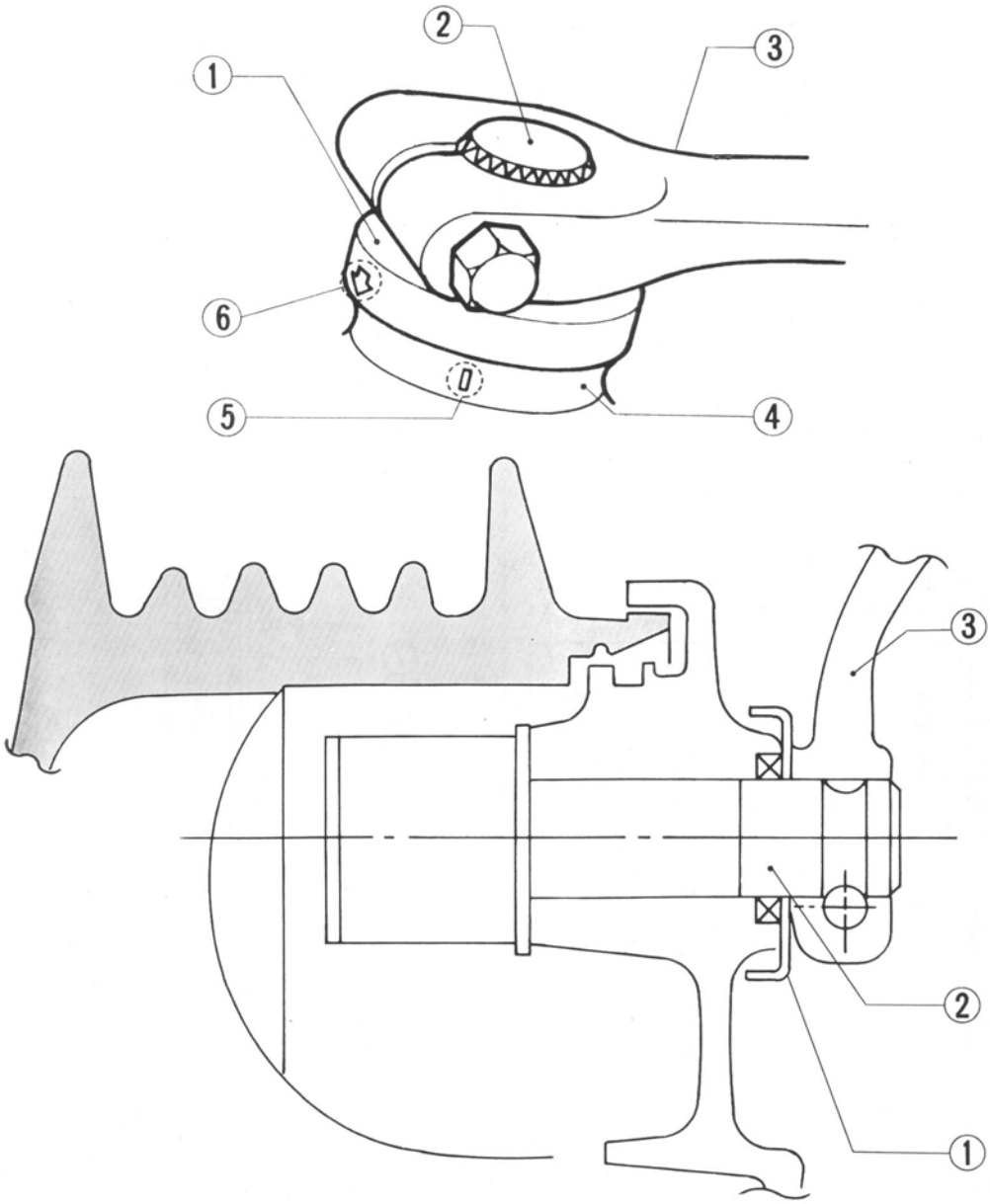

Fig. 330 ① Indicator plate
② Brake cam
③ Brake arm
④ Brake panel cam boss
⑤ "Wear limit" mark
⑥ Arrow