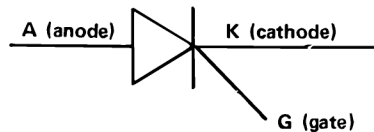


#### (4) Thyristor

The thyristor is made of four pieces of semiconductor material (see page 102 for an explanation of semiconductors). Current will flow from the cathode to anode but will not flow in the reverse direction. The thyristor differs from a diode in two respects: (a) even though a voltage of the correct polarity – negative to cathode – may be applied, the thyristor will not conduct until a signal is received at the gate input lead; (b) once started, it will not stop conducting (even if the gate lead signal voltage stops) until the anode to cathode voltage is removed or reversed.

In the HI CDI capacitor discharge circuit not only does the capacitor discharge to zero, but self-induction in the coil primary (roughly equivalent to inertia of the moving current) causes current to continue flowing until the capacitor charges to more than 400 volts in the opposite direction. When the reverse charge reaches its peak and stops, the charge puts a reverse voltage on the thyristor and stops it from conducting, and the normal charge cycle begins again.

#### Thyristor

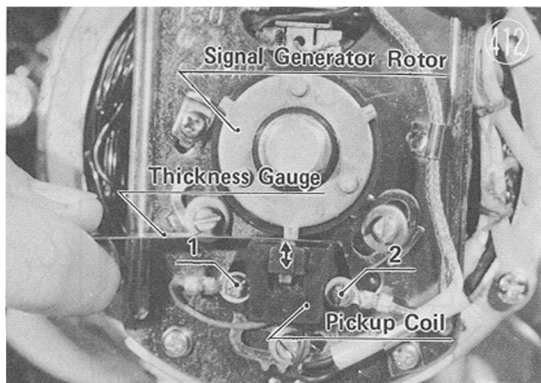


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#### c. Adjustment

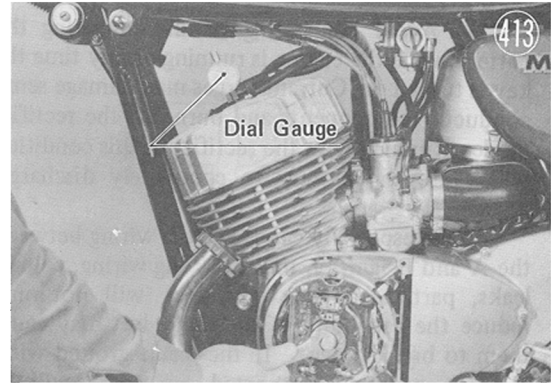
##### (1) Gap adjustment

Loosen the two pickup coil mounting screws ① and ②. Move the coil so that all three of the magnet projections from the signal generator rotor are between .016" and .024" (0.4–0.6 mm) from the coil.

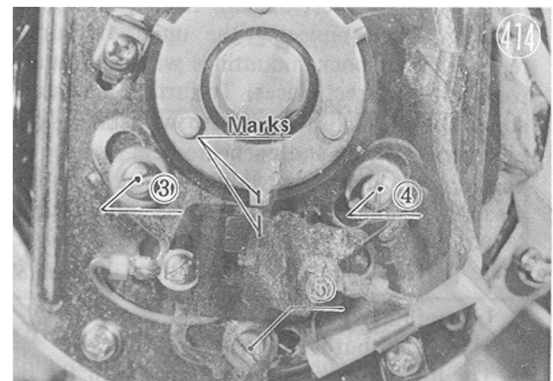


##### (2) Timing adjustment

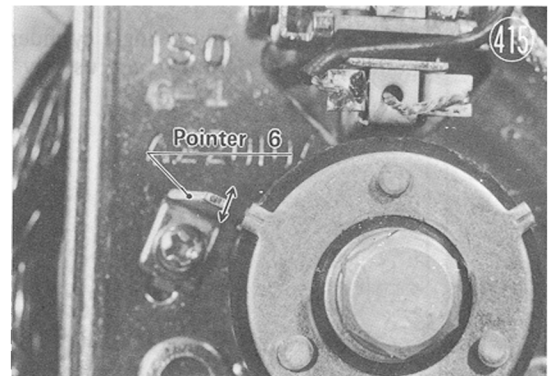
(i) Using an adapter (special tool) to mount a dial gauge in the spark plug hole, set the piston at .1358" (3.45mm, or 25° BTDC).



(ii) In this position, loosen the three pickup coil base plate mounting screws ③ ④ ⑤. Align the mark on the SG magnet projection with the mark on top of the pickup coil housing, and tighten the screws back down.



(iii) Align pointer ⑥ with the next mark on the rotor, and turn the rotor to check that any two points will coincide with the pickup mark and the pointer, respectively. Once the pointer is set correctly, it can be used as a reference mark to restore timing any time the pickup coil is removed or the gap adjusted.



(iv) Last, ascertain that the pickup coil/magnet gap has not changed.

#### d. Handling Care

(1) Before connecting the battery leads, be certain the polarity is correct. If the battery is installed backwards, the moment the key is turned on, the CDI and the rectifiers will suffer damage, and general wiring damage may also result.