B. Inspection

1. Check the front suspension spring.
2. Check the fork pipe and bottom case for damage or looseness.
3. Check the oil seal for scratches and damage.
4. Check for excessive clearance between the shock absorber piston and the cylinder.

C. Reassembly

1. Reassemble in the reverse order of disassembly.
2. Assemble the damper unit and cushion spring with the lock nut, and install the unit into the bottom case.
3. Install the front fork pipe.
4. Install the snap ring.
5. Apply thread lock cement around the thread of the piston rod, and tighten the lock nut. Next, tighten the fork bolt on the piston rod and screw the fork bolt into the fork pipe.
6. Install the front fork unit through the steering stem and mount it with the 8 mm and 10 mm bolt.

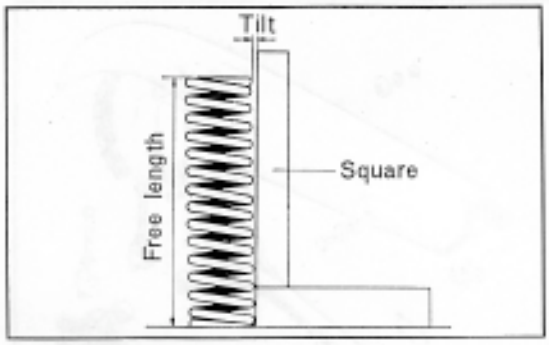

Fig. 251 Measuring the free length

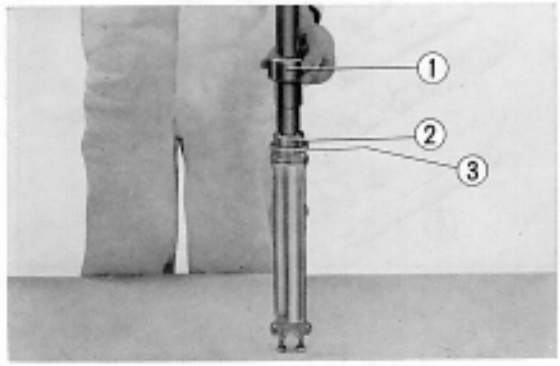

Fig. 252 ① Oil seal drive weight ③ Oil seal
② Oil seal drive guide

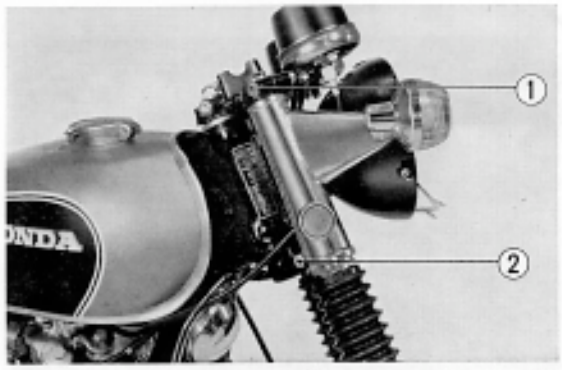

Fig. 253 ① 8 mm setting bolt
② 10 mm setting bolt

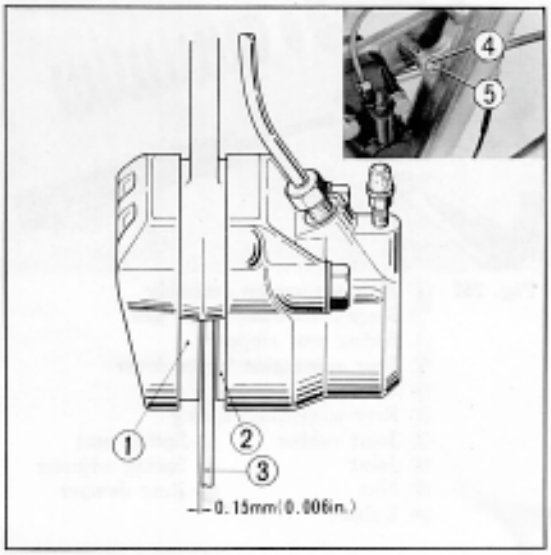

Fig. 254 ① Pad B
② Pad A
③ Brake disc
④ Nut
⑤ Caliper adjusting screw

7. Fill the fork bottom case with 160 cc (5.4 ozs) SAE 10 W-30 grade oil through the fork top bolt hole.
8. Adjust the front brake caliper.
   Adjust the clearance between brake disc and pad B to **0.15 mm (0.006 in.)** with the caliper adjusting screw.

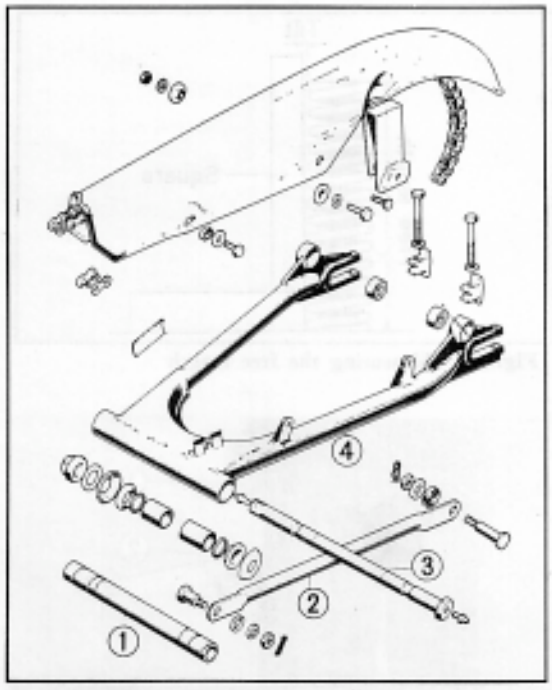

Fig. 255 ① Rear fork pivot collar
② Torque link arm
③ Rear fork pivot shaft
④ Rear fork

5. REAR SUSPENSION

The rear suspension is equipped with dual action telescoping shock absorbers.
Rear fork is a swing arm type of tubular construction which provides greater rigidity.

A. Disassembly

1. Remove the mufflers.
2. Remove the rear wheel.
3. Remove the rear suspension mounting nut and bolt, and then remove the suspension from the frame and rear fork.
4. Compress the rear suspension spring using a special suspension compressor tool, and disassemble.

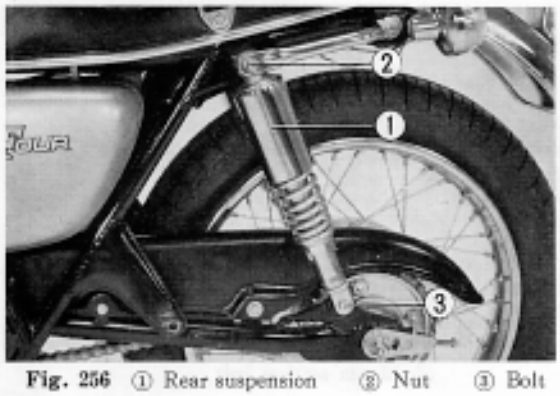

Fig. 256 ① Rear suspension ② Nut ③ Bolt

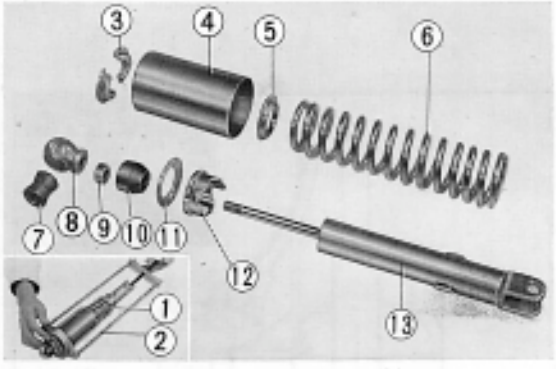

Fig. 257 ① Rear suspension assembly
② Suspension compressor tool
③ Spring seat stopper
④ Rear suspension upper cover
⑤ Spring seat
⑥ Rear suspension spring
⑦ Joint rubber
⑧ Joint
⑨ Nut
⑩ Rubber
⑪ Spring seat
⑫ Spring adjuster
⑬ Rear damper

5. Remove the rear fork pivot nut and shaft, and separate the fork from the frame.

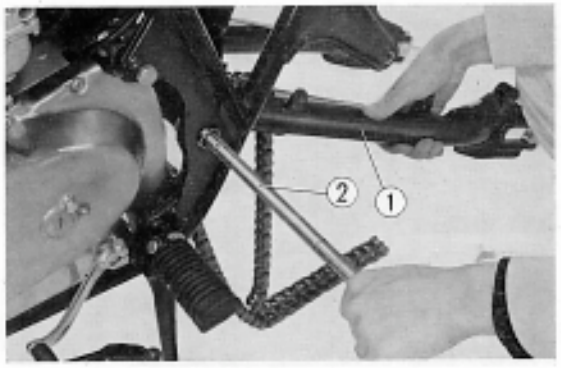

Fig. 258 ① Rear fork ② Rear fork pivot shaft

B. Inspection

1. Check the rear suspension spring.
2. Check damper for oil leaks.
3. Inspect the damper upper case and rod for dent and bend. Make sure the oil damper operates smoothly in both directions.
4. Inspect the damper case and stopper for damage and dent.
5. Check the clearance between the rear fork pivot bushing and shaft.
6. Check the pivot shaft for bending.
7. Check the rear fork swing arm for bend -ing, twisting, and cracks.

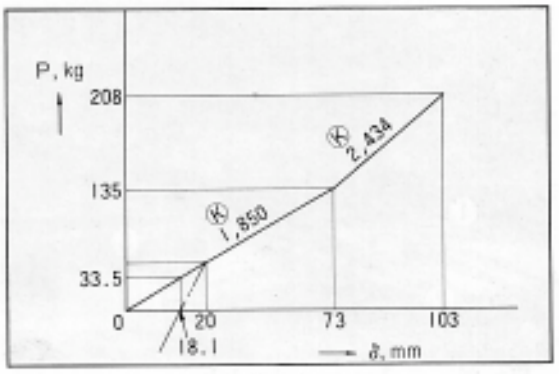

Fig. 259 Rear shock absorber spring characteristic

C. Reassembly

1. Mount the rear brake arm stopper to the rear fork.
2. Apply grease on the fork pivot bushing and install the rear fork on the frame with the pivot shaft.
3. Mount the rear suspension between the frame and fork on both sides and tighten the cap nuts and bolts.
4. Mount the rear wheel.

Note:
When the reassembly is completed, adjust the rear brake and the drive chain tension.

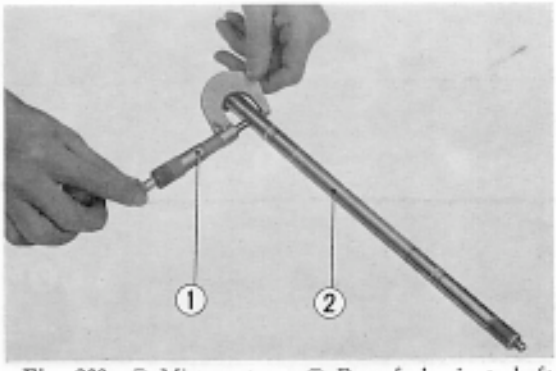

Fig. 260 ① Micrometer ② Rear fork pivot shaft

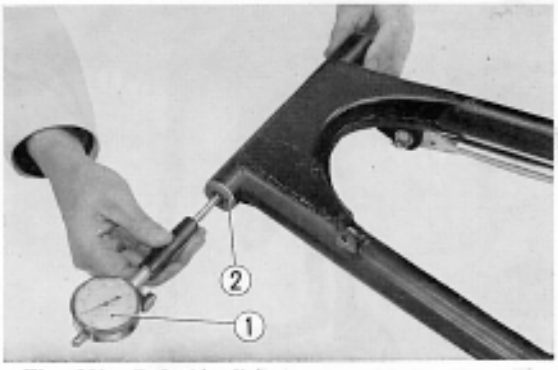

Fig. 261 ① Inside dial gauge
② Rear fork bushing

Fig. 262 ① Fuel tank

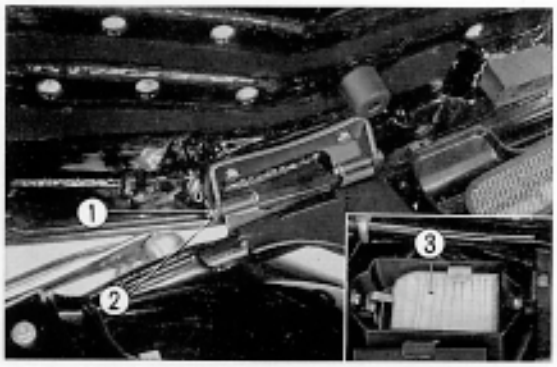

Fig. 263 ① Seat mounting bolt
② Cotter pin
③ Air cleaner

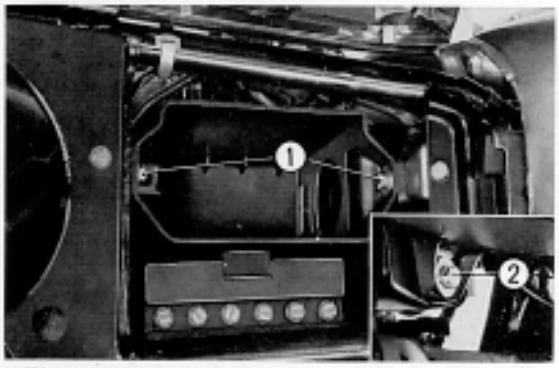

Fig. 264 ① 6 mm bolt ② 6 mm bolt

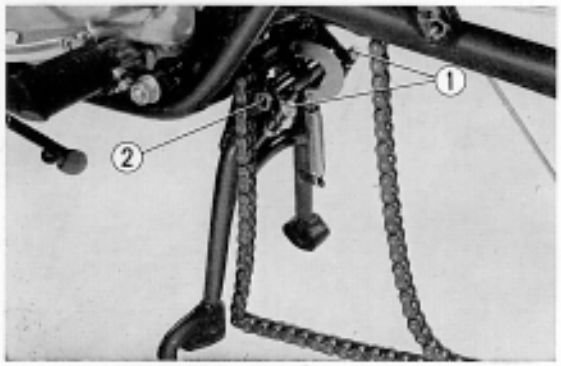

Fig. 265 ① Mounting bolt
② Cotter pin

6. FRAME BODY

A. Construction

The double cradle frame is constructed of steel tubes and plates. The head pipe section is of drawn tubing construction which provides high rigidity and strength for good handling at high riding speed.

B. Disassembly

1. Position the fuel cock lever to 'STOP', disconnect the fuel tube from the fuel cock, and dismount the fuel tank from the frame.
2. Remove the mufflers, and dismount the engine.
3. Remove the front wheel, and the front fork.
4. Remove the handle bar and the steering stem from the frame.
5. Remove the rear wheel, rear fork, and rear fender.
6. Remove the seat, the tool tray, and the air cleaner element.
7. Detach the electrical equipment.
8. To remove the main stand, unscrew the two mounting bolts, remove the cotter pin, and extract the main stand pivot pipe.

9. Remove the top and bottom ball races from the steering head pipe.

Note:
Use a wooden drift to prevent damage when driving out the ball races.

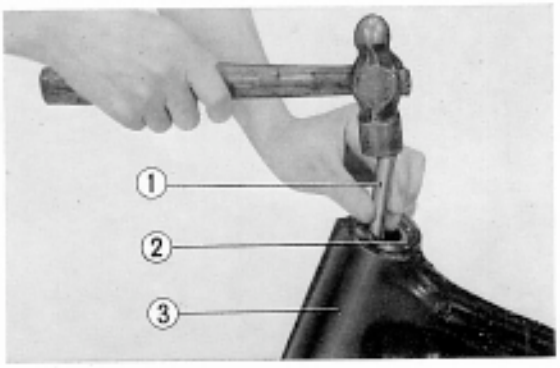

Fig. 265 ① Wooden drift
② Ball race
③ Head pipe

C. Inspection

1. Check the frame main unit for twisting, deformation, and cracks around the welded areas, and the pipes for bending and cracks.
2. Inspect the top and bottom races for scoring and wear.
3. Check the head pipe for misalignment.
4. Check seat cover for tears.
5. Check fuel tank for leaks, fuel tubes for aging or damage, and fuel cock gasket and strainer cup O-ring for damage. Flush the tank interior with clean gosoline.
6. Remove dust from the air cleaner element by blowing compressed air from the inside. Check element for damage.
7. Replace exhaust pipe gasket if damaged.

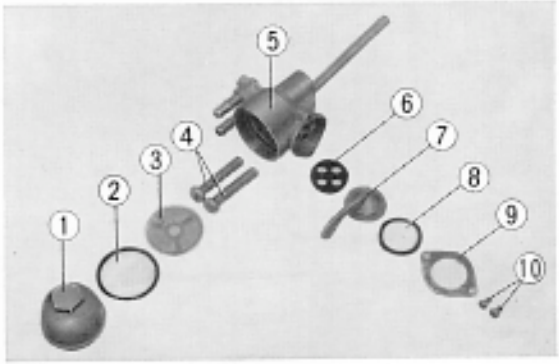

Fig. 267 ① Fuel strainer cup
② O-ring
③ Fuel strainer screen
④ 6 mm cross screws
⑤ Fuel cock body
⑥ Fuel cock gasket
⑦ Fuel cock lever
⑧ Cock lever spring
⑨ Setting plate
⑩ 6 mm screw

D. Reassembly

1. Install the main stand on the frame.
2. Install the rear fender and the electrical equipments on the frame.
3. Install the rear fork, rear cushion and rear wheel.
4. Install the steering stem, front fork and front wheel.
5. Mount the air cleaner case, the battery, the seat, and the fuel tank.

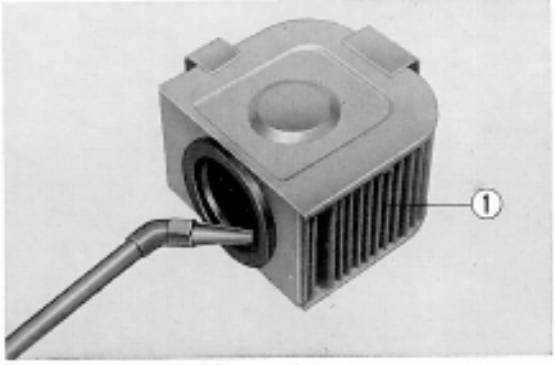

Fig. 268 ① Air cleaner element

6. ELECTRICAL

1. GENERAL DESCRIPTION

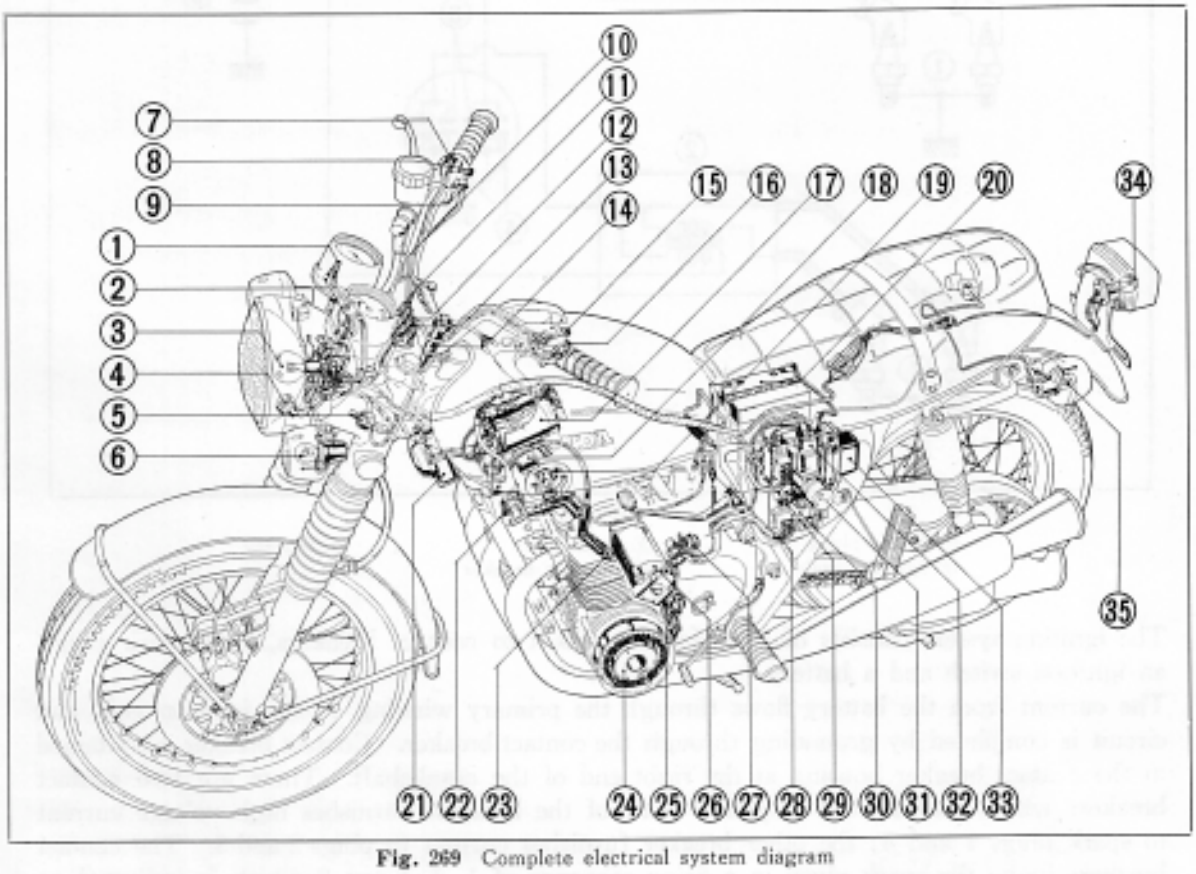

Fig. 269 Complete electrical system diagram

① Tachometer pilot lamp
② Speedometer pilot lamp
③ Head light
④ Position lamp (except USA type)
⑤ Front brake stop switch
⑥ Front winker lamp
⑦ Emergency switch
⑧ Head light switch
⑨ Starter switch
⑩ High beam pilot lamp
⑪ Neutral lamp
⑫ Oil warning lamp
⑬ Winker pilot lamp
⑭ Speed warning lamp (except USA type)
⑮ Winker switch
⑯ Horn button
⑰ Ignition coil
⑱ Speed warning system (except USA type)
⑲ Contact breaker assembly
⑳ Battery
㉑ Horn
㉒ Main switch
㉓ Spark plug
㉔ AC generator
㉕ Oil pressure switch
㉖ Starting motor
㉗ Neutral switch
㉘ Rear brake stop switch
㉙ Fuse holder
㉚ Silicon rectifier
㉛ Winker relay
㉜ Magnetic switch
㉝ Voltage regulator
㉞ Tail/stop lamp
㉟ Rear winker lamp

2. IGNITION SYSTEM

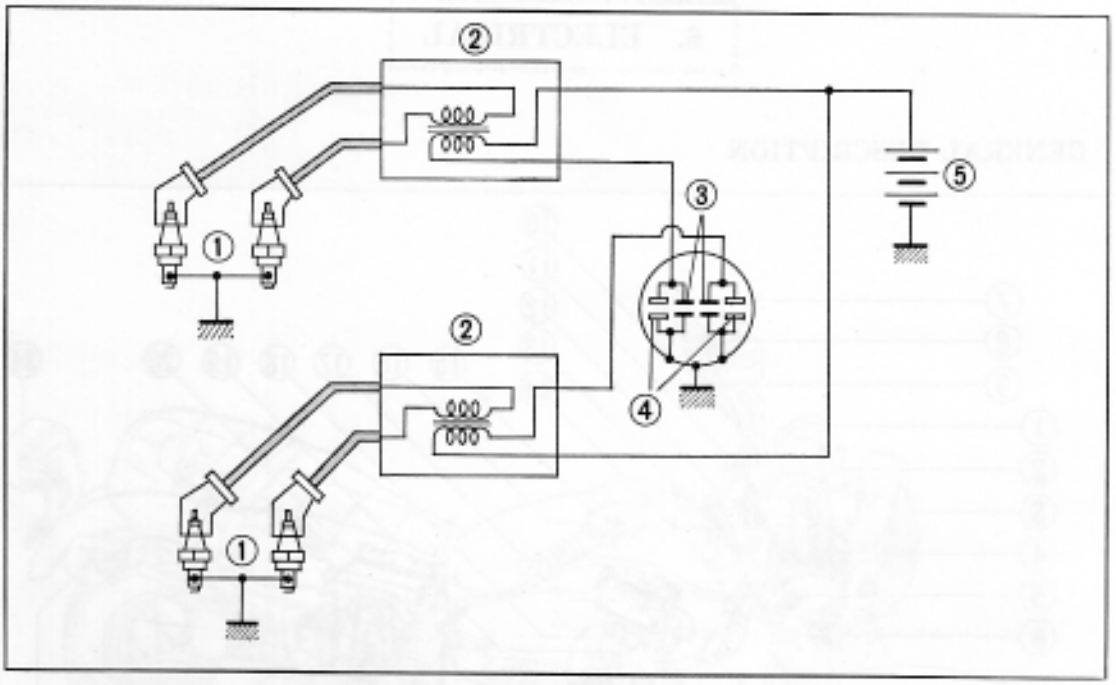

Fig. 270

① Spark plugs
② Ignition coils
③ Condensers
④ Contact breaker
⑤ Battery

The ignition system consists of two ignition coils, two contact breakers, four spark plugs, an ignition switch and a battery.

The current from the battery flows through the primary winding of the ignition coil, and circuit is completed by grounding through the contact breaker. Contact breaker is contained in the contact breaker housing at the right end of the crankshaft. There are two contact breakers which are 180° out of phase. One of the breakers furnishes high voltage current to spark plugs 1 and 4; the other breaker furnishes current to plugs 2 and 3. The contact breakers ignite the spark plugs in a firing sequence of 1, 2, 4 and 3 which is indicated on the high tension plug cords. Since no distributor is used, the construction is simple and the system is easy to service.

SERVICE DATA

Ignition coil 3 point spark gap opening	7 mm min. (0.27 in.)
Spark plug Type (standard) Plug gap	NGK D-7 ES, DENSO X 22 ES 0.6~0.7 mm (0.023~0.027 in.)
Contact breaker Point gap Spring force	0.3~0.4 mm (0.012~0.016 in.) 680~850 g (1.43~1.87 lbs.)
Condenser Capacity Insulation resistance	0.24 μF±10% Over 10 MΩ (1,000 megger)
Spark advancer Start of advance (crankshaft speed) Full advance (crankshaft speed) Advance angle	 1,150 rpm 2,300~2,500 rpm 25°

Ignition Coil

The ignition coil consists of a primary coil with 420 turns of copper wire wound around an iron core of laminated silicon steel sheets. A secondary coil with 13,000 turns of wire is wound on top of the primary coil. Each secondary coil has two high tension cords to two spark plugs.

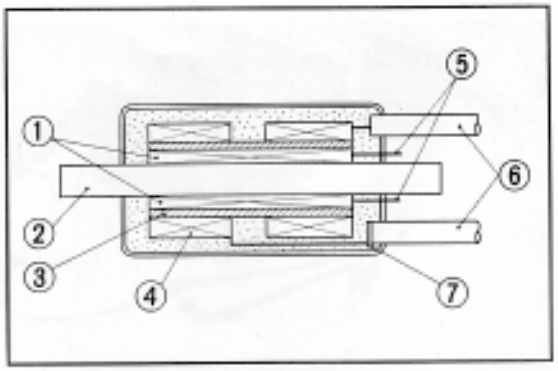

Fig. 271 ① Primary coil
② Iron core
③ Bobbin
④ Secondary coil
⑤ Primary terminal
⑥ High tension cord
⑦ High tension terminal

A. Disassembly

1. Open the seat and remove the fuel tank.
2. Disconnect the ignition coil leads. (yellow, blue and black/white)
3. Unscrew the two ignition coil mounting bolts, and separate the ignition coil from the frame.

Fig. 272 ① Ignition coil ② Bolts

B. Inspection

1. Ignition coil continuity test
   Primary coils:
   Check for continuity between the terminals of the primary coil.
   Right coil: yellow and black/white leads
   Left coil: blue and black/white leads
   Secondary coils
   Check for continuity between the terminals of the high tension cords.
   If there is no continuity, the coil is open and must be replaced.

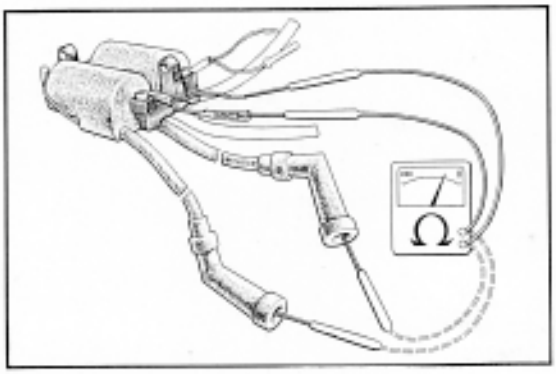

Fig. 273 Ignition coil continuity test

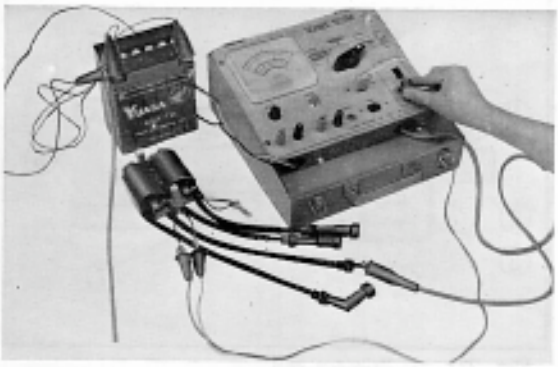

Fig. 274 Ignition coil performance test

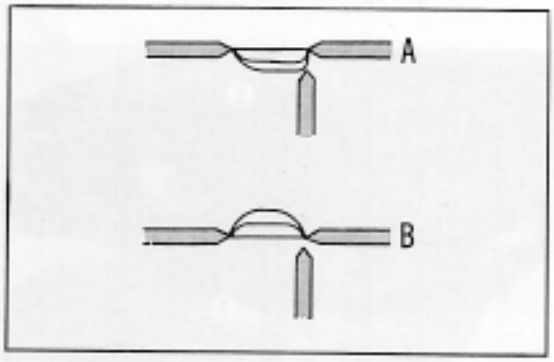

Fig. 275 Spark performance

Ignition coil perfomance test

Coil may test satisfactorily for continuity but it may not perform satisfactorily due to deterioration from long use, therefore, performance should be checked to determine its condition.

Connect the service tester power cord to a 12 V battery and ground the ground cable. Connect the ignition primary test lead to the tester and connect the opposite terminal ends to the primary terminals of the coil. Connect red test lead to the black terminal of the ignition coil and the white test lead to the yellow cord of the left coil (to the blue cord for the right coil).

Position the selector knob to COIL TEST. Adjust the three point spark tester to the maximum distance spark is maintained and then measure this distance. The coil is satisfactory if the distance is greater than **7 mm. (0.27 in.)**

Note:

Since a dual sparking ignition coil is used, note the spark condition. If the spark appears as B in Fig. 274, the connection to the primary coil is reversed.