

IGNITION SYSTEM

| | Page |
|--------------------------------------|-------|
| IGNITION SYSTEM CIRCUIT | 10-2 |
| DISTRIBUTOR (18R) | |
| DISASSEMBLY | 10-3 |
| INSPECTION & REPAIR..... | 10-5 |
| ASSEMBLY | 10-9 |
| ADJUSTMENT | 10-11 |
| INSTALLATION | 10-13 |
| DISTRIBUTOR (18R-G) | |
| DISASSEMBLY | 10-15 |
| INSPECTION & REPAIR..... | 10-17 |
| ASSEMBLY | 10-20 |
| ADJUSTMENT | 10-22 |
| INSTALLATION | 10-23 |
| IGNITION COIL | 10-25 |
| HIGH TENSION CORD | 10-26 |
| SPARK PLUG | 10-27 |

IGNITION SYSTEM CIRCUIT

Fig. 10-1

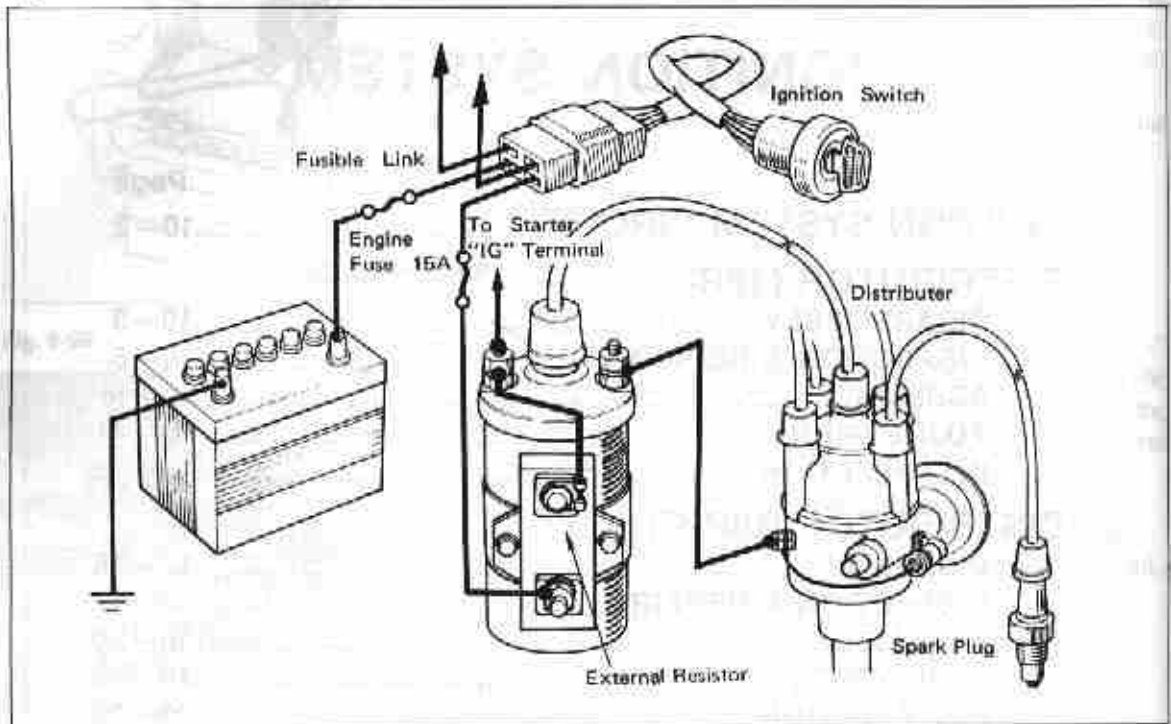
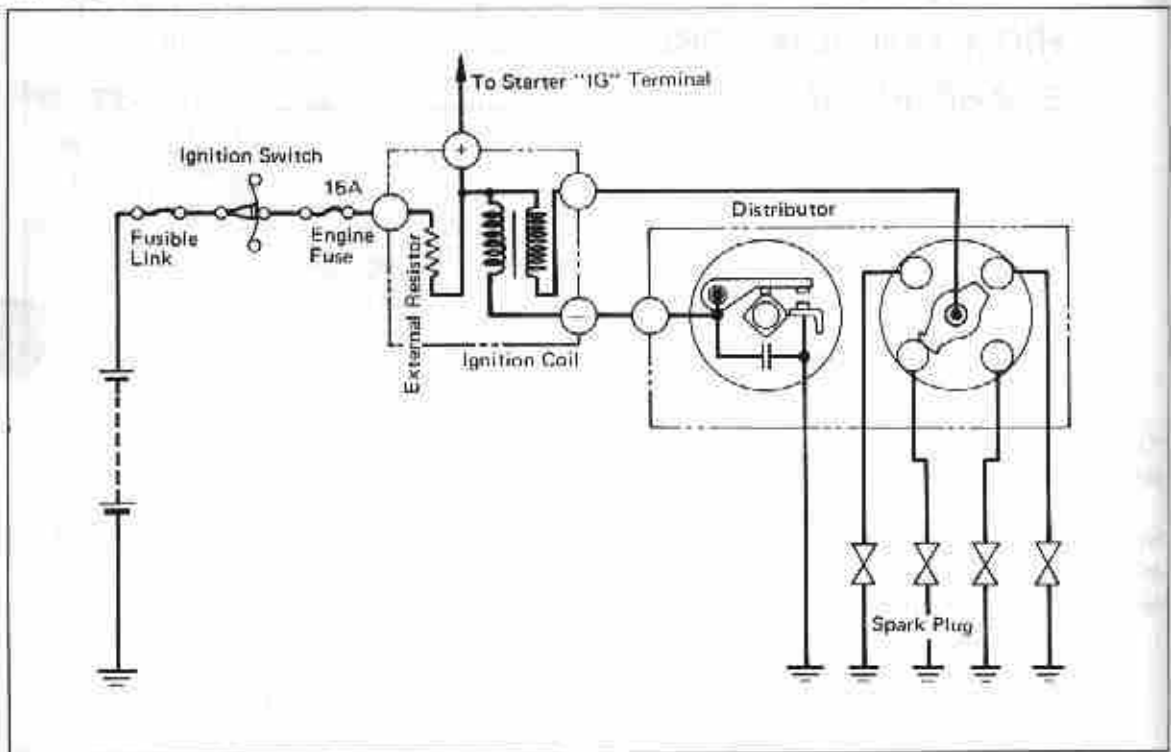


Fig. 10-2



DISTRIBUTOR (18R)**DISASSEMBLY**

Disassemble in numerical order.

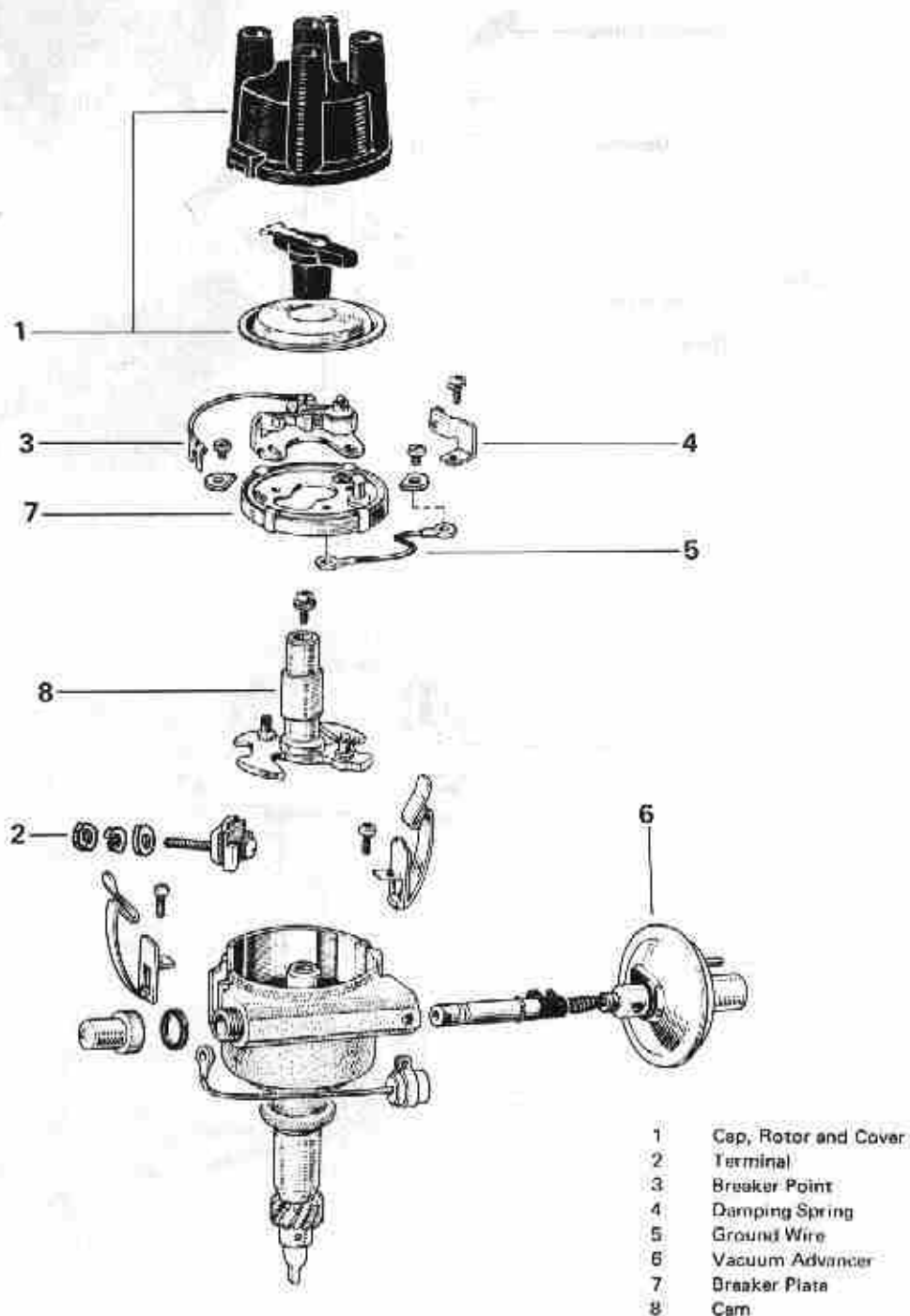
Fig. 10-3

Fig. 10-4

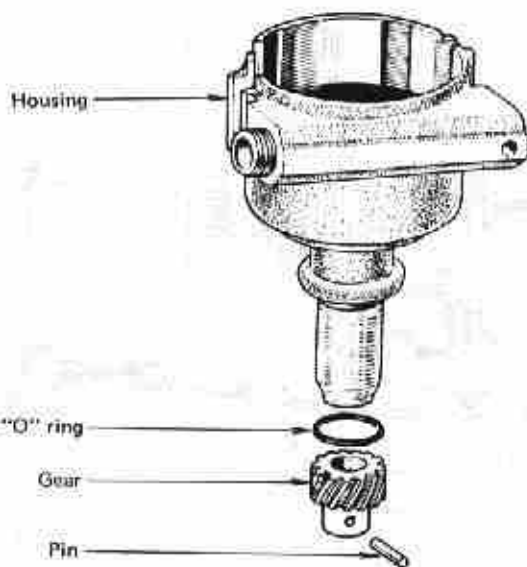
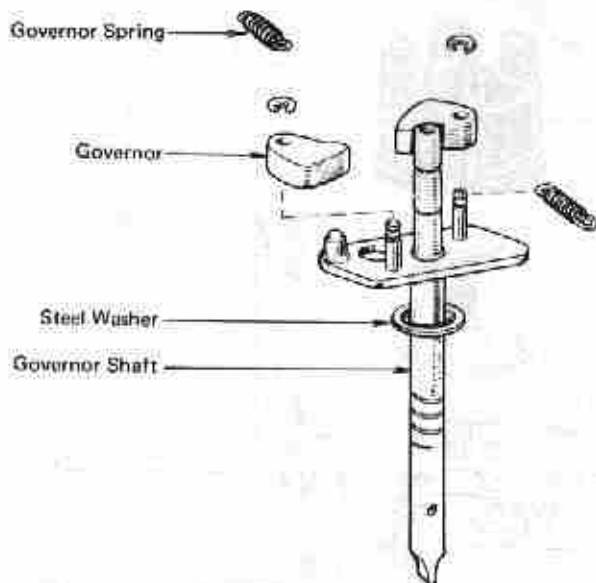


Fig. 10-5

**INSPECTION & REPAIR****Cap**

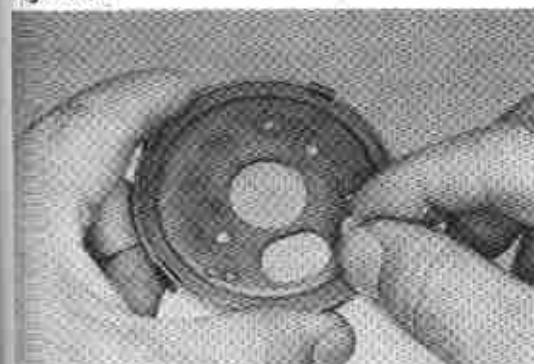
Inspect for cracks, carbon tracks, burnt or corroded terminals, and check center contact for wear.

Fig. 10-6

**Rotor**

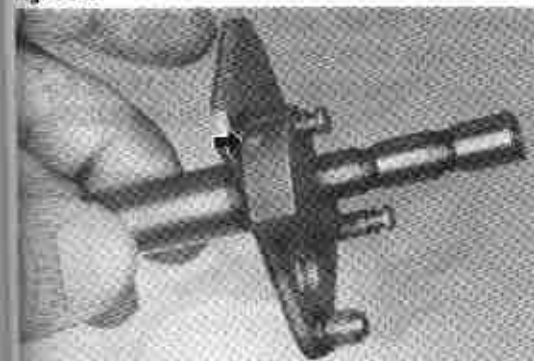
Inspect for cracks, carbon tracks, burnt or corroded terminals.

Fig. 10-7

**Breaker Plate**

Check breaker plate for smooth rotation.

Fig. 10-8

**Governor Weights**

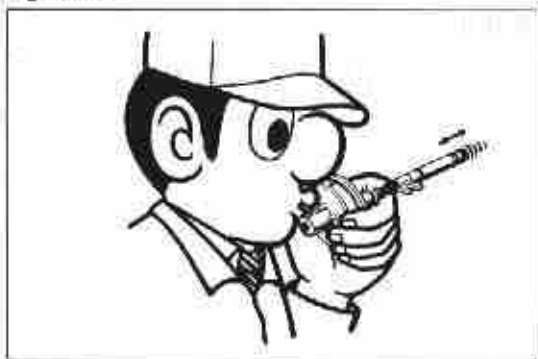
Inspect governor weights for damage.

Fig. 10-9

**Governor Weights and Pin**

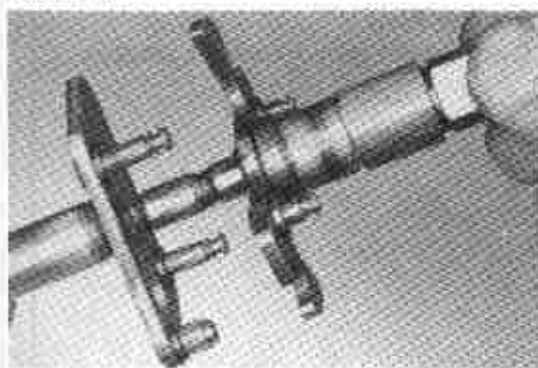
Check the fitting portions of governor weights with support pins for binding.

Fig. 10-10

**Vacuum Advancer Diaphragm**

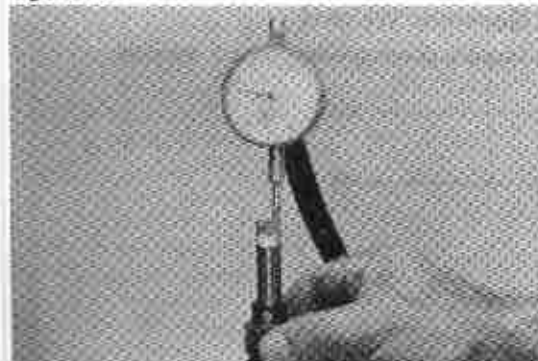
Suck the tube with mouth. The diaphragm should move.

Fig. 10-11

**Cam and Shaft**

Inspect cam for wear, damage, and fit between cam and shaft.

Fig. 10-12

**Governor Shaft and Housing**

1. Check shaft thrust clearance.

Thrust clearance 0.15-0.5 mm
(0.006-0.020 in)

Fig. 10-13



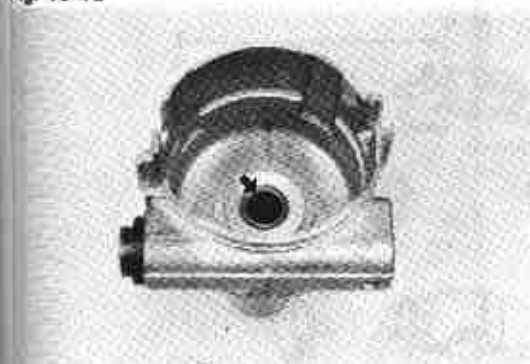
2. Remove gear and pin.
Grind off the pin end, then remove the pin and gear.

Fig. 10-14



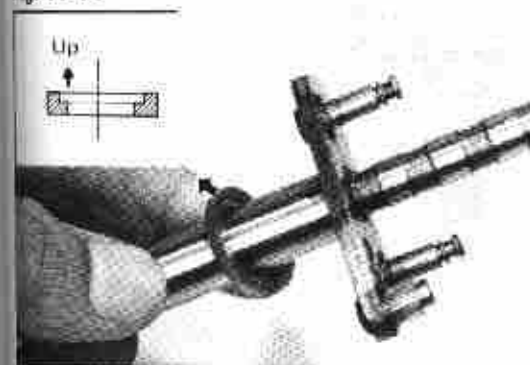
3. Inspect governor shaft for wear and damage.

Fig. 10-15



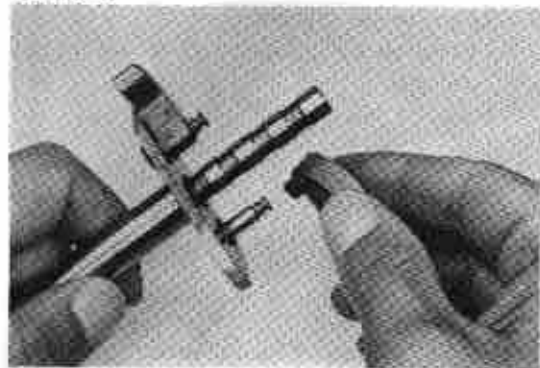
4. Inspect housing bushings, and O ring for wear, deformation, and damage.

Fig. 10-16



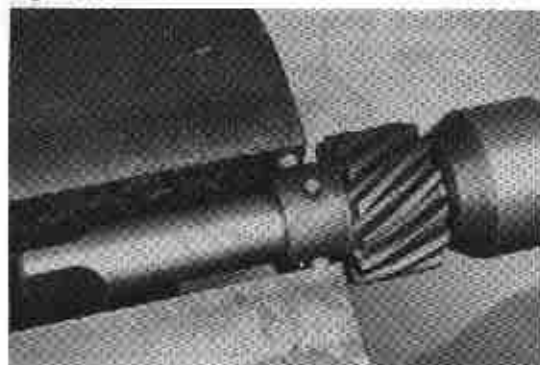
- b. Assemble washer as shown.

Fig. 10-17



6. Assemble bearing between pin and weight.

Fig. 10-18

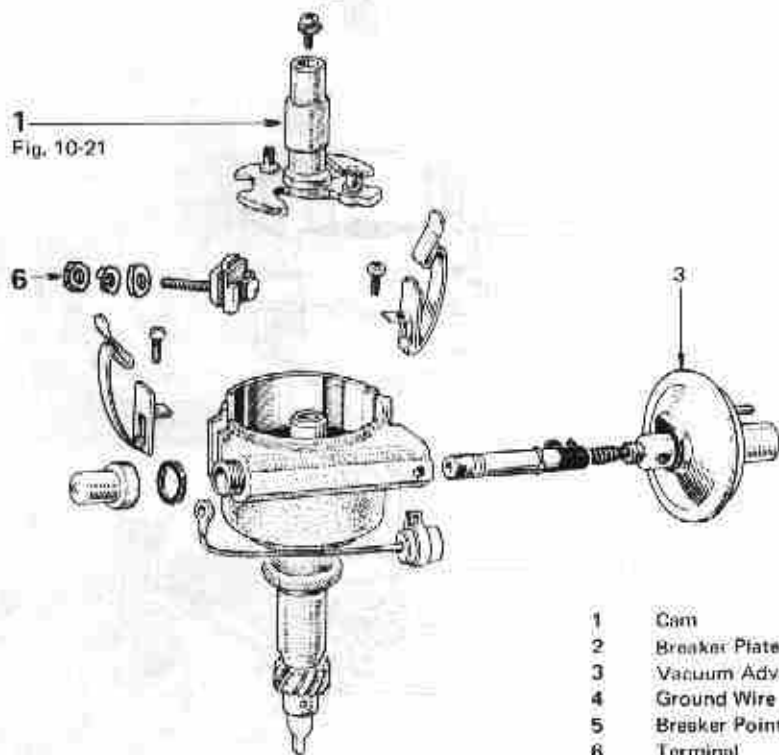
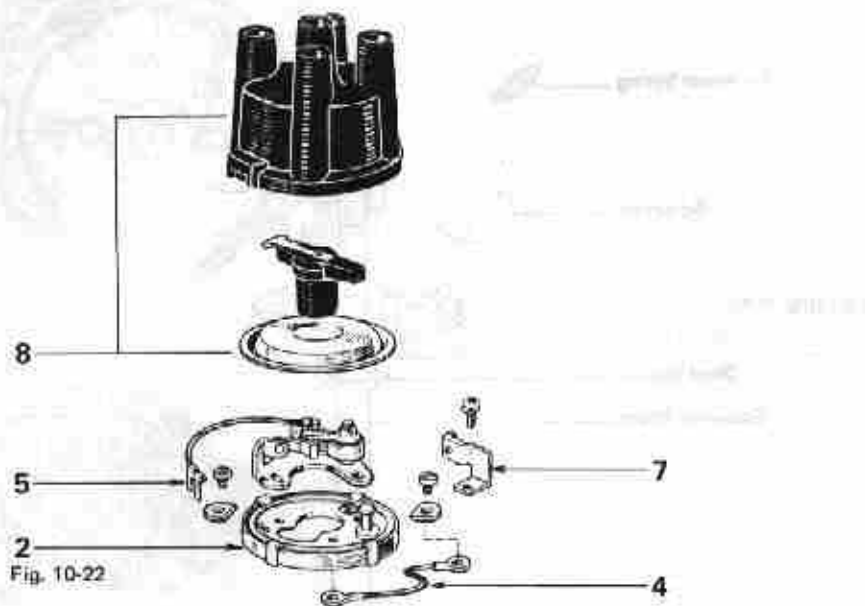


7. Peen both pin ends with a vise.

ASSEMBLY

Assemble in numerical order.

Fig. 10-19



- 1 Cam
- 2 Breaker Plate
- 3 Vacuum Advancer
- 4 Ground Wire
- 5 Breaker Point
- 6 Terminal
- 7 Damping Spring
- 8 Cover, Rotor and Cap

Fig. 10-20

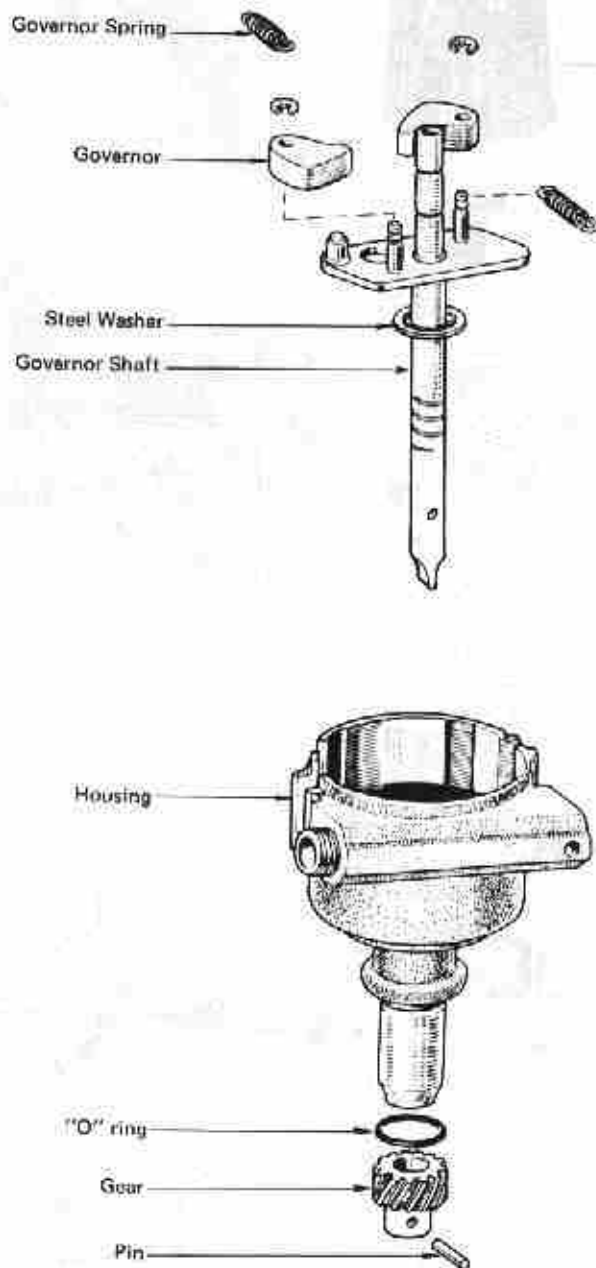
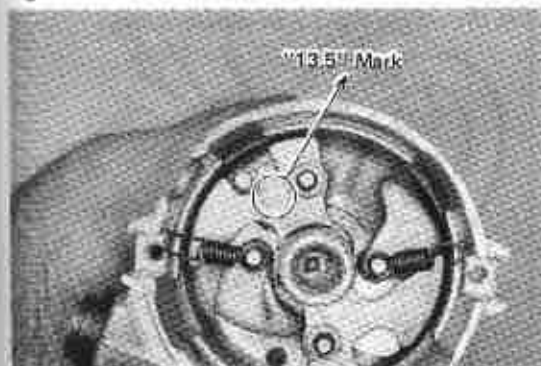


Fig. 10-21



Match 13.5 mark with stopper, fit on the cam and tighten with screw.

Fig. 10-22



Assemble governor weights and lock with E ring. Install governor springs.

Fig. 10-23

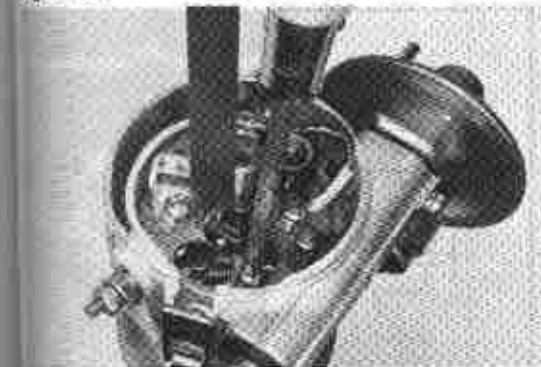


ADJUSTMENT

Install breaker points and adjust the gap.

Heel gap **0.45 mm (0.018 in)**

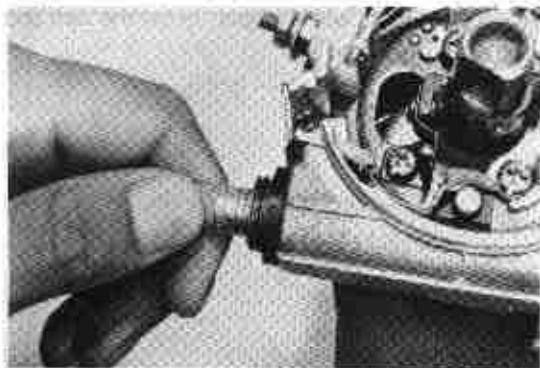
Fig. 10-24



Install damping spring and adjust it.

Damping spring gap **0.1 – 0.4 mm**
(0.004 – 0.016 in)

Fig. 10-25



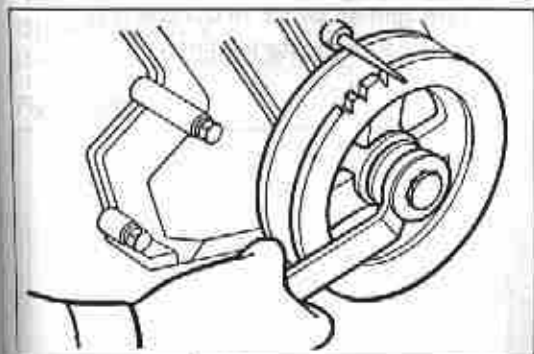
Set the octane selector at standard line.

Fig. 10-26



Check breaker plate for smooth rotation.

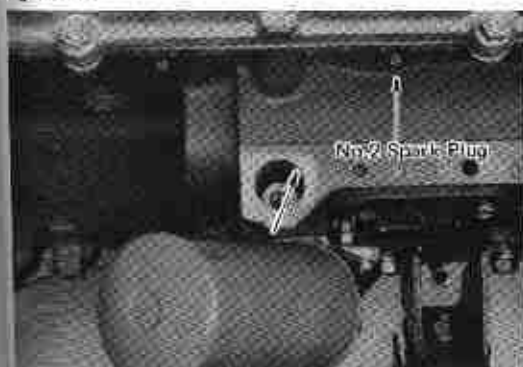
Fig. 10-27



INSTALLATION

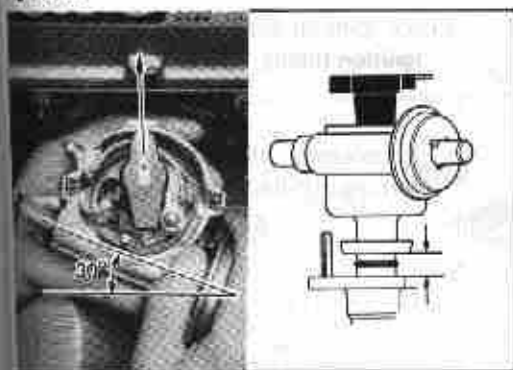
1. Set No. 1 cylinder to 7° BTDC/compression. Align the timing mark with pointer. At this time, rocker arms on No.1 cylinder should be loose and rockers on No.4 should be tight.

Fig. 10-28



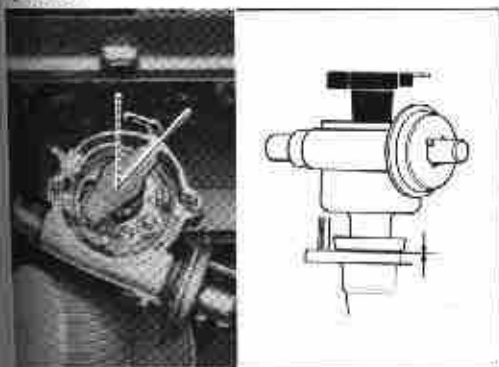
2. Set the oil pump shaft slot in direction as shown.

Fig. 10-29



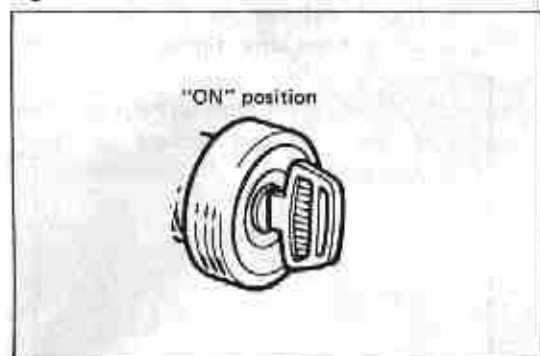
3. Before inserting the distributor, position the rotor and diaphragm as shown.

Fig. 10-30



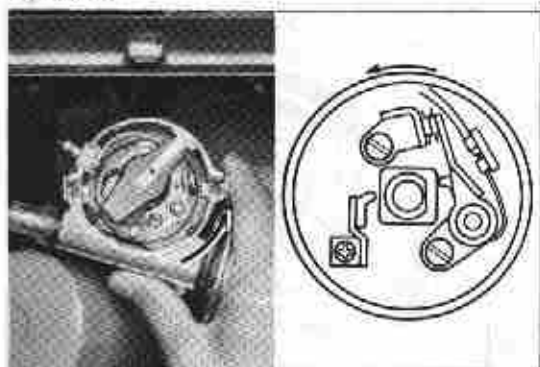
4. When fully installed, rotor should point toward as shown.

Fig. 10-31



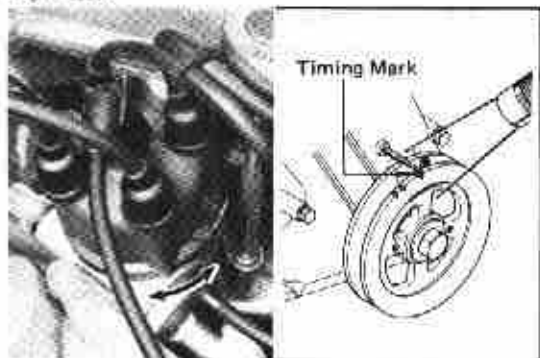
5. Turn ignition switch to ON position. Do not turn the starter motor.

Fig. 10-32



6. Rotate the distributor body counterclockwise until a spark jumps between the points, and tighten the clamp bolt in that position.

Fig. 10-33



7. Check ignition timing in idling condition.
Ignition timing 7° BTDC

If necessary, align the timing marks by turning distributor body.

DISTRIBUTOR (18R-G)**DISASSEMBLY**

Disassemble in numerical order.

Fig. 10-34

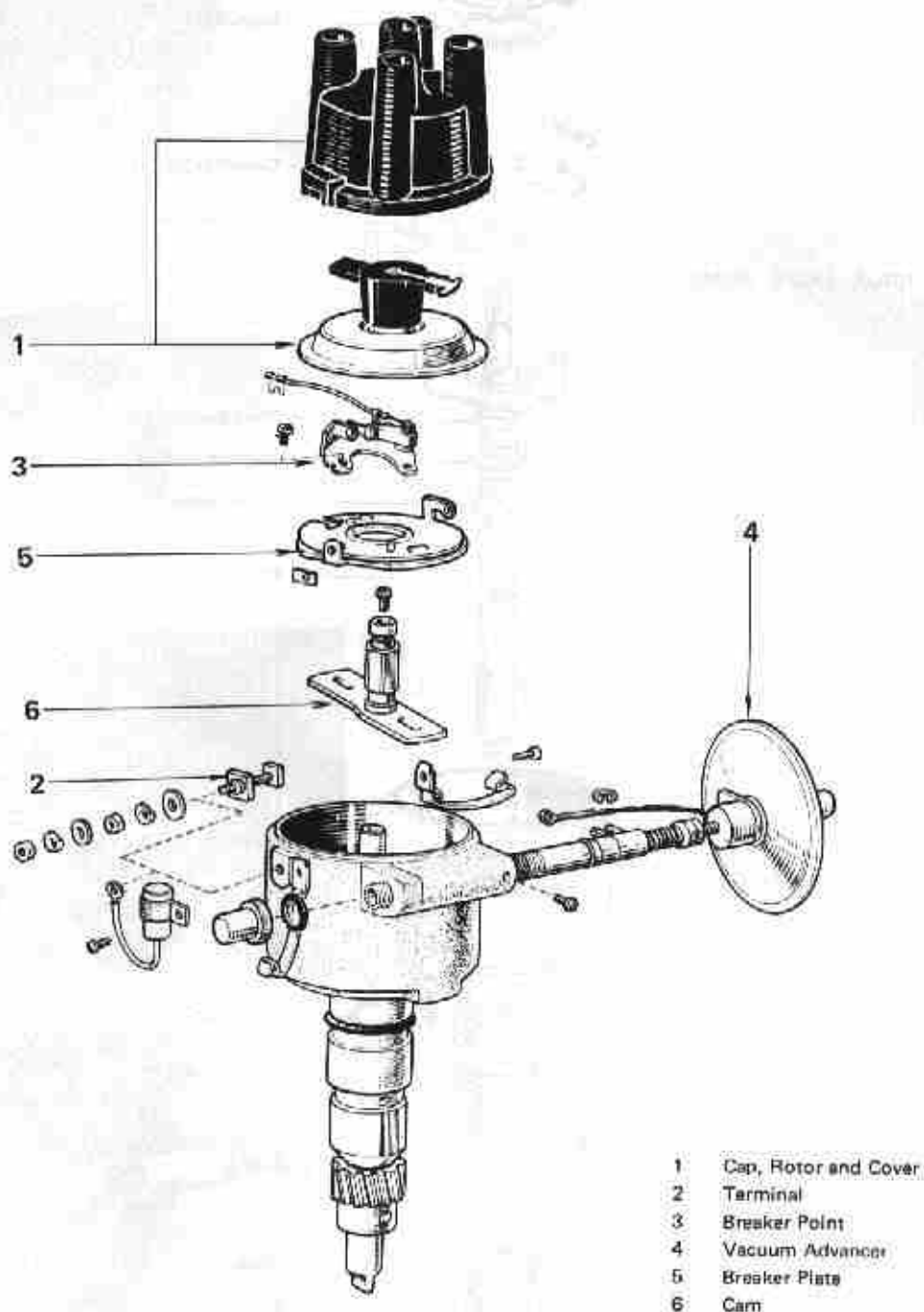


Fig. 10-35

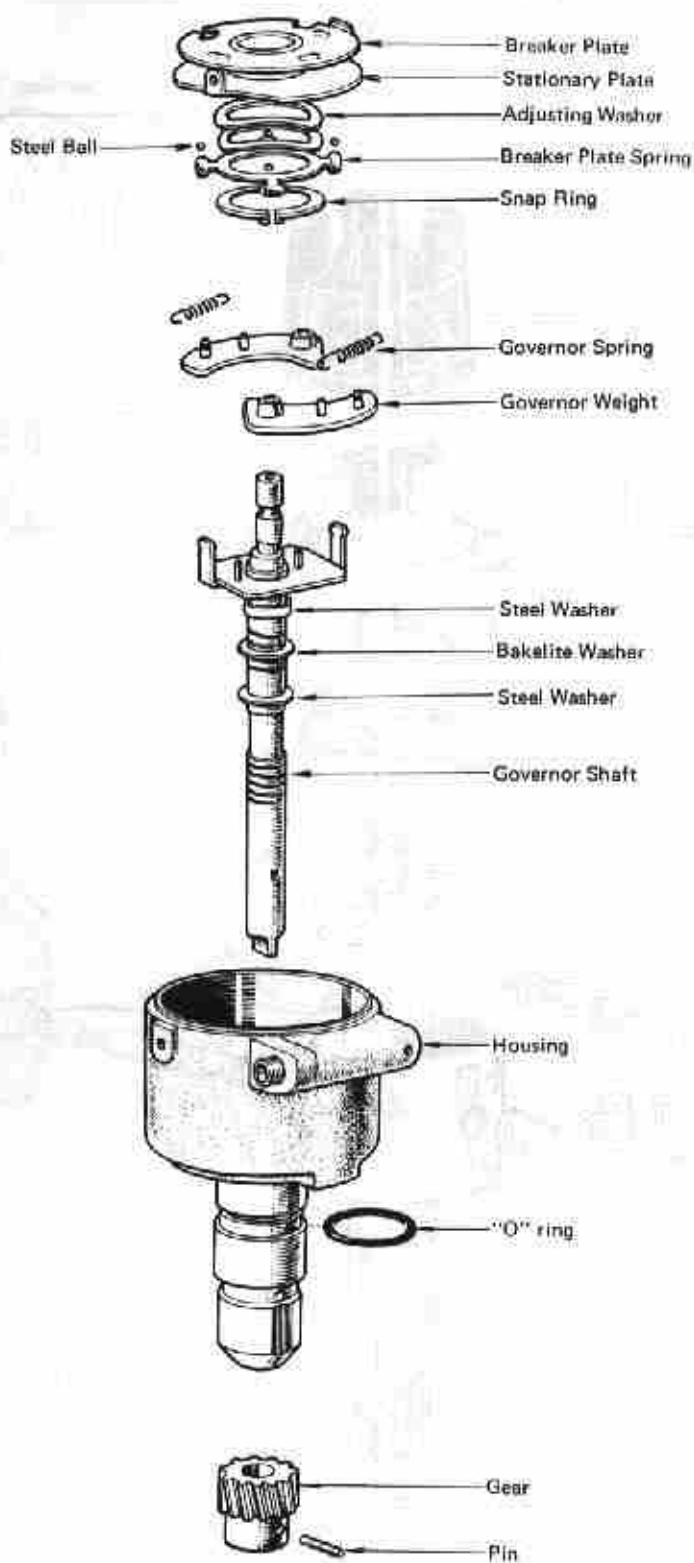


Fig. 10-36



Fig. 10-37

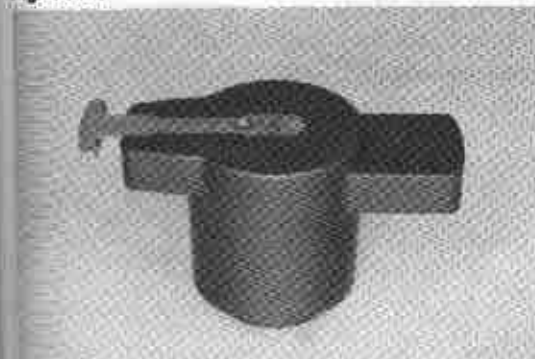


Fig. 10-38



Fig. 10-39

**INSPECTION & REPAIR****Cap**

Inspect for cracks, carbon tracks, burnt or corroded terminals, and check center contact for wear.

**Rotor**

Inspect for cracks, carbon tracks, burnt or corroded terminals.

**Breaker Plate**

Check breaker plate for smooth rotation.

**Governor Weights and Pin**

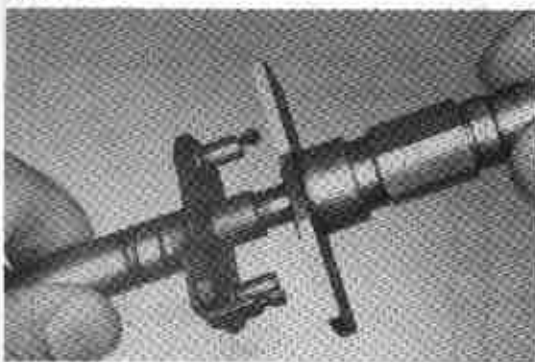
Check the fitting portions of governor weights with support pins for binding.

Fig. 10-40

**Vacuum Advancer Diaphragm**

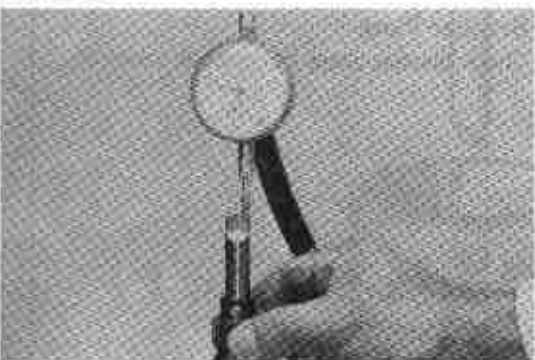
Suck the tube with mouth. The diaphragm should move.

Fig. 10-41

**Cam and Shaft**

Inspect cam for wear, damage, and fit between cam and shaft.

Fig. 10-42

**Governor Shaft and Housing**

1. Check shaft thrust clearance.

Thrust clearance 0.15-0.5 mm
(0.006-0.020 in)

Fig. 10-43



2. Remove gear and pin. Grind off the pin end, then remove the pin and gear.

Fig. 10-44



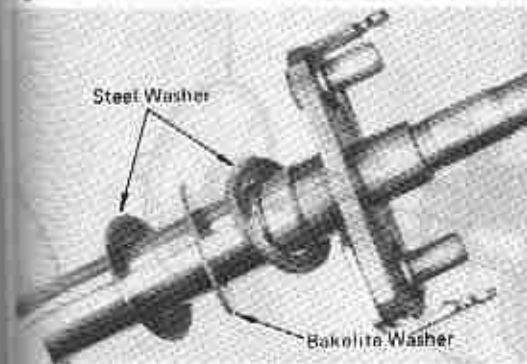
3. Inspect governor shaft for wear and damage.

Fig. 10-45



4. Inspect housing bushings, and O ring for wear, deformation, and damage.

Fig. 10-46



5. Assemble washers as shown.

Fig. 10-47



6. Peen both pin ends with a vise.

ASSEMBLY

Assemble in numerical order.

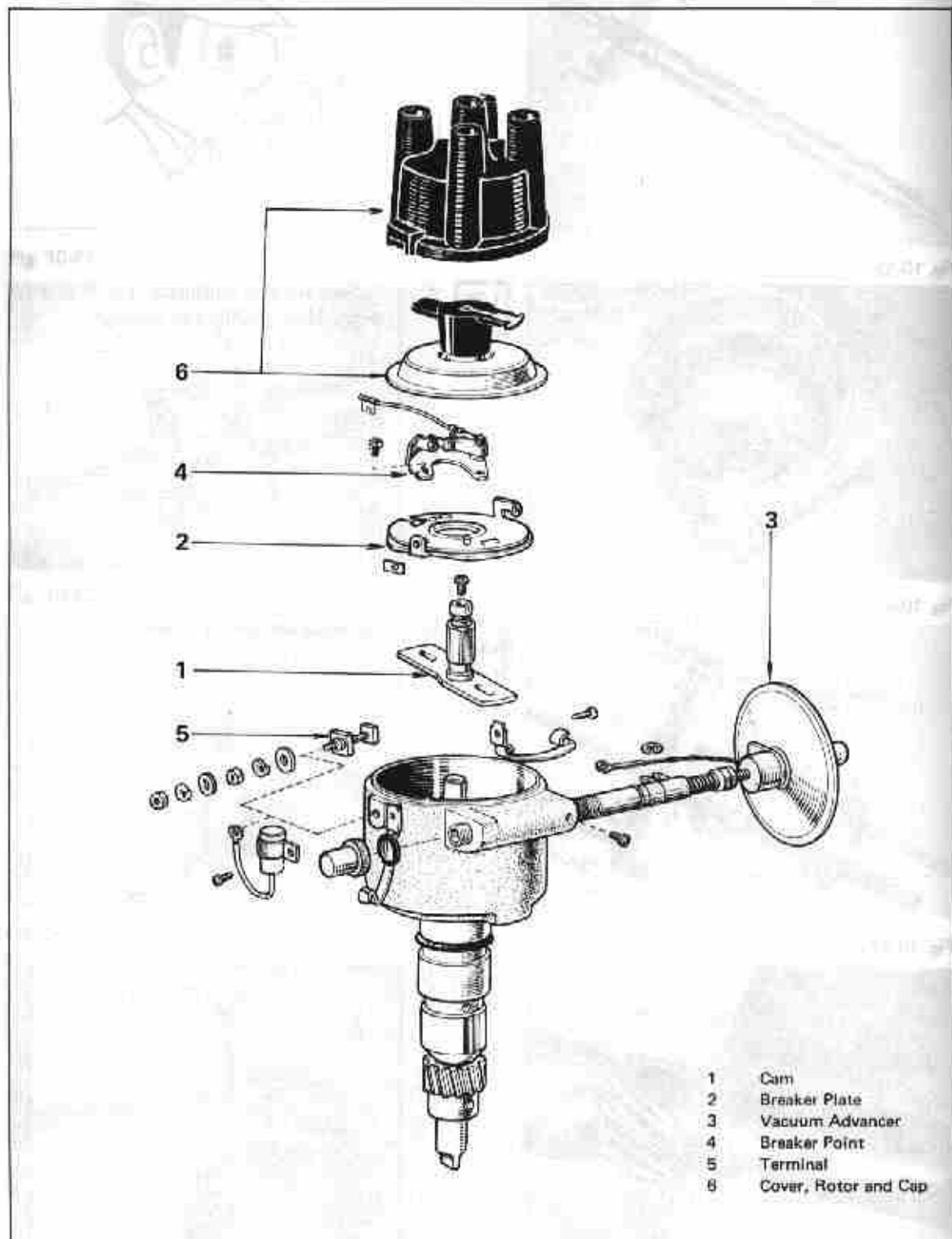
Fig. 10-48

Fig. 10-49

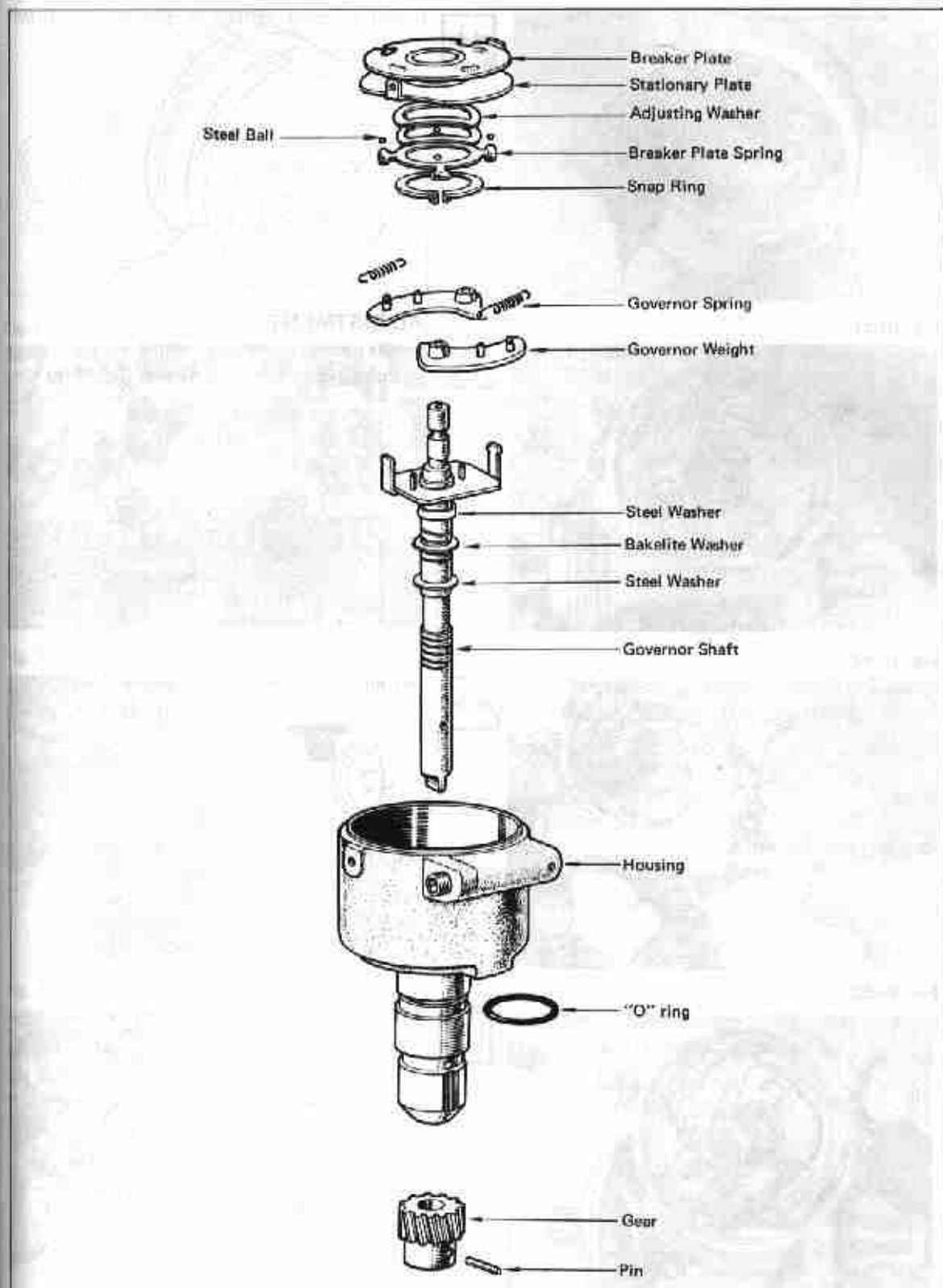
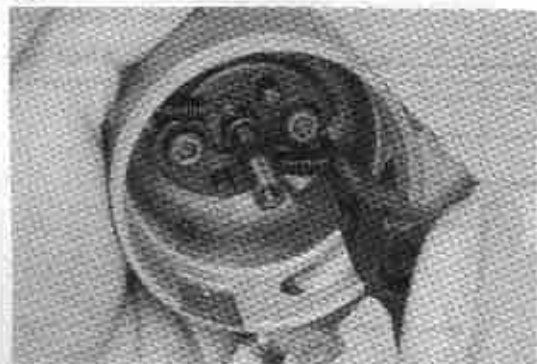
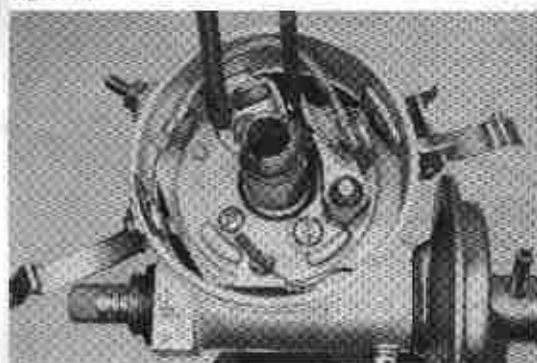


Fig. 10-50



Install governor springs in direction as shown.

Fig. 10-51

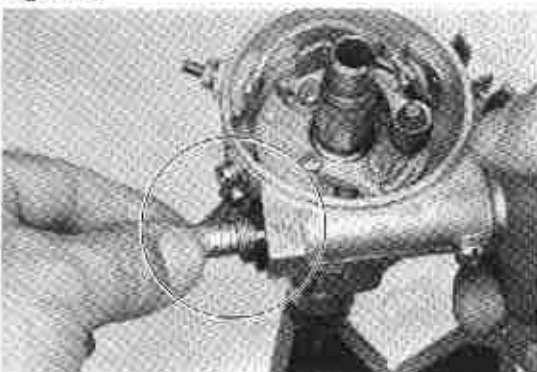


ADJUSTMENT

Install breaker points and adjust the gap.

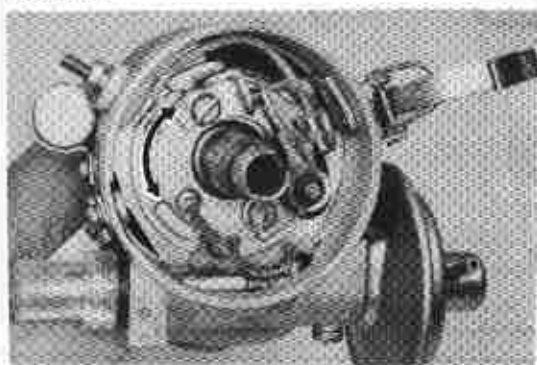
Point gap 0.45 mm (0.018 in)

Fig. 10-52



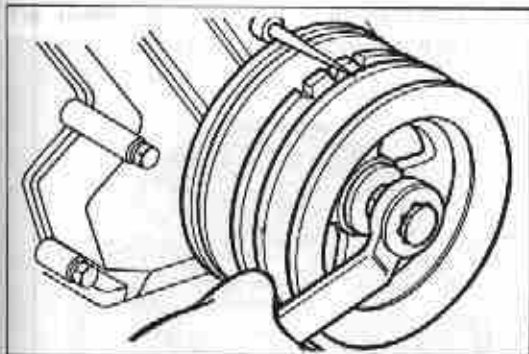
Set the octane selector at standard line.

Fig. 10-53



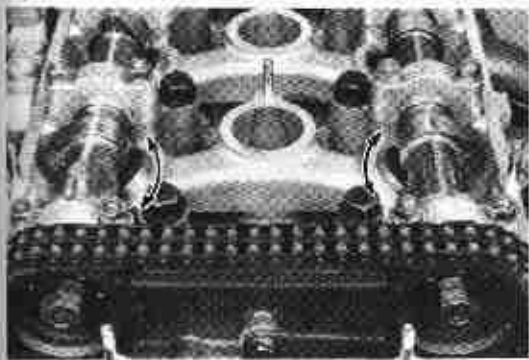
Check breaker plate for smooth rotation.

Fig. 10-54

**INSTALLATION**

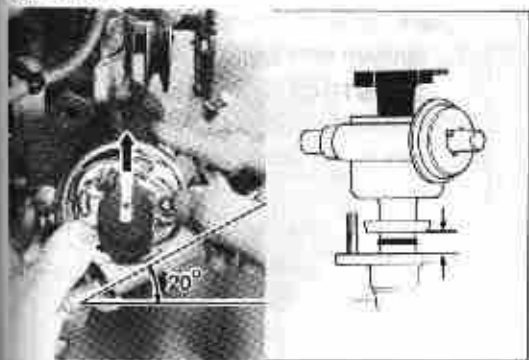
1. Set No.1 cylinder to 12° BTDC/compression. Align the timing mark with pointer.

Fig. 10-55



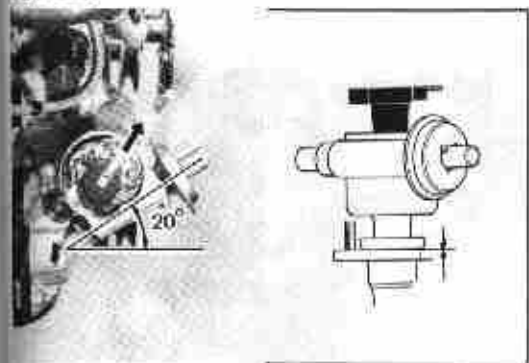
2. At this time, intake and exhaust valve lifter on No.1 cylinder should be rotate and valve lifters on No.4 should be tight.

Fig. 10-56



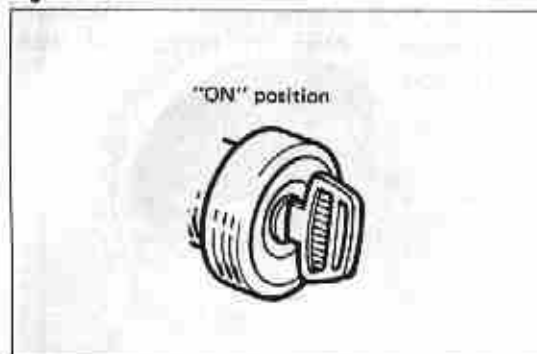
3. Before inserting the distributor, position the rotor and diaphragm as shown.

Fig. 10-57



4. When fully installed, rotor should point toward as shown.

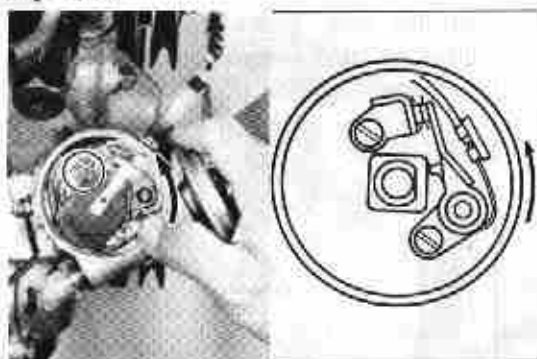
Fig. 10-58



5. Turn ignition switch to ON position. Do not turn the starter motor.



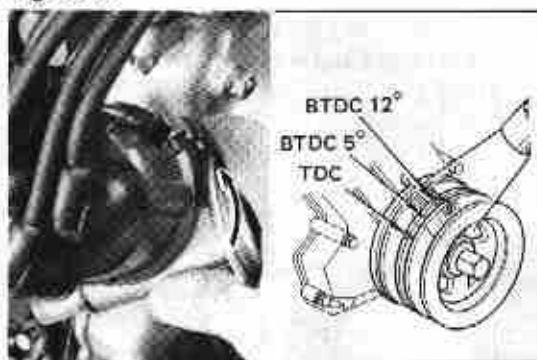
Fig. 10-59



6. Rotate the distributor body counter-clockwise until when just sparking between points, then, tighten the clamp bolt in that position.



Fig. 10-60



7. Check ignition timing in idling condition.
Ignition timing 12° BTDC
20° BTDC at coolant below 60°C
 If necessary, align the timing marks by turning distributor body.



Fig. 10-61



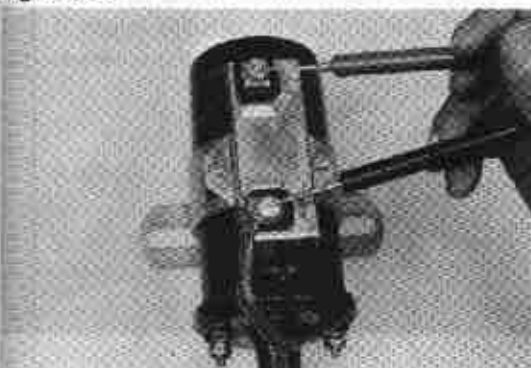
Fig. 10-62



Fig. 10-63



Fig. 10-64



IGNITION COIL INSPECTION



1. Clean the coil and inspect it for carbon paths around the terminals, and check the outside body for cracks.
2. Inspect the high tension cord insertion hole for carbon deposit or corrosion.



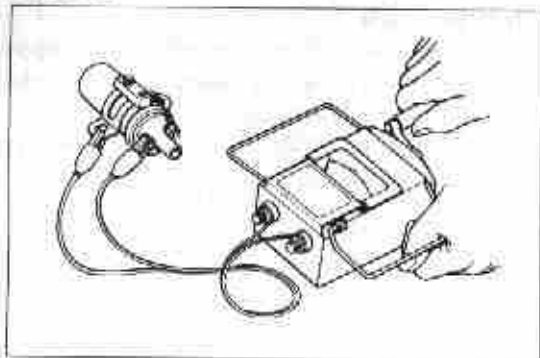
3. Measure the following resistances. If the reading is not within the specified resistance replace coil.

Primary coil resistance (Reference only)
1.3 – 1.6 Ω

Secondary coil resistance (Reference only)
10.2 – 13.8 k Ω

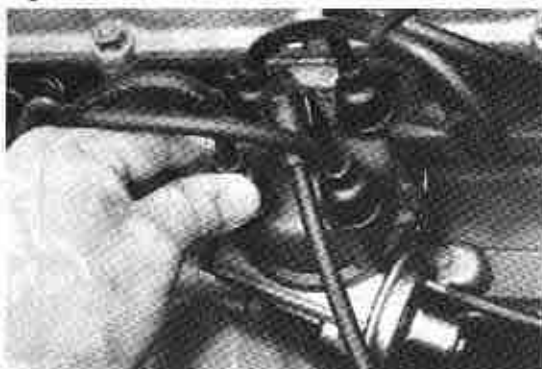
External resistor resistance (Reference only)
1.3 – 1.5 Ω

Fig. 10-65



Insulation resistance Over $10M\Omega$ at 500V

Fig. 10-66

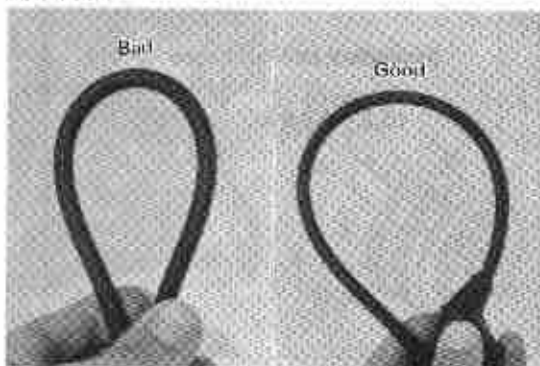


HIGH TENSION CORD

— Caution —

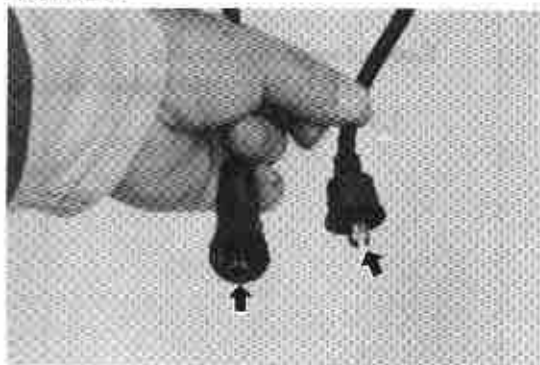
1. Remove carefully high tension cords by pulling the rubber boot.

Fig. 10-67



2. Do not bend the cords as the conductors may break.

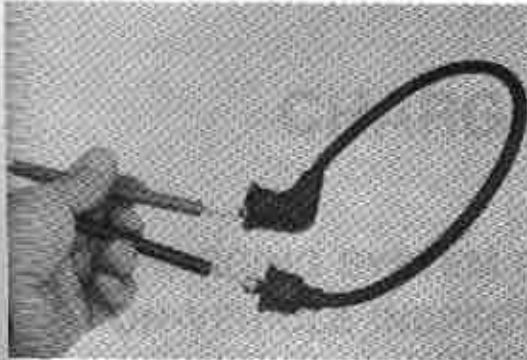
Fig. 10-68



INSPECTION

1. Check the condition of the cord terminal. If any terminal is corroded, clean it, and if it is broken or distorted, replace the cord.

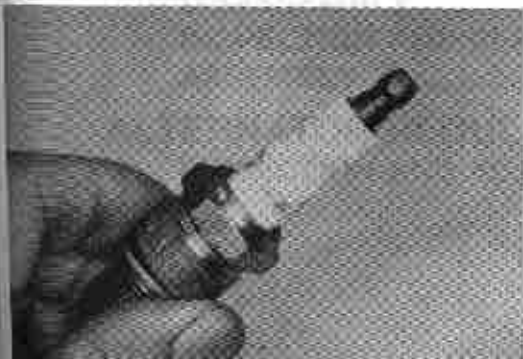
Fig. 10-69



2. Check the resistance of each cord between both ends. If the reading exceeds the limit, replace the cord.

Resistance 10 – 50 k Ω /Meter.

Fig. 10-70



SPARK PLUG INSPECTION

Inspect for the following items. Clean or replace plugs if necessary.

1. Cracks or damages in the threads or insulator.
2. Damaged or deteriorated gaskets.

Fig. 10-71



3. Wear on the electrodes.
4. Burnt condition of electrode and amount of carbon deposit.

Fig. 10-72



GAP ADJUSTMENT

Check the plug gap with plug gap gauge. If not to specified value, adjust by bending the ground (outer) electrode.

Spark plug gap 0.7 – 0.8 mm
(0.028 – 0.031 in)