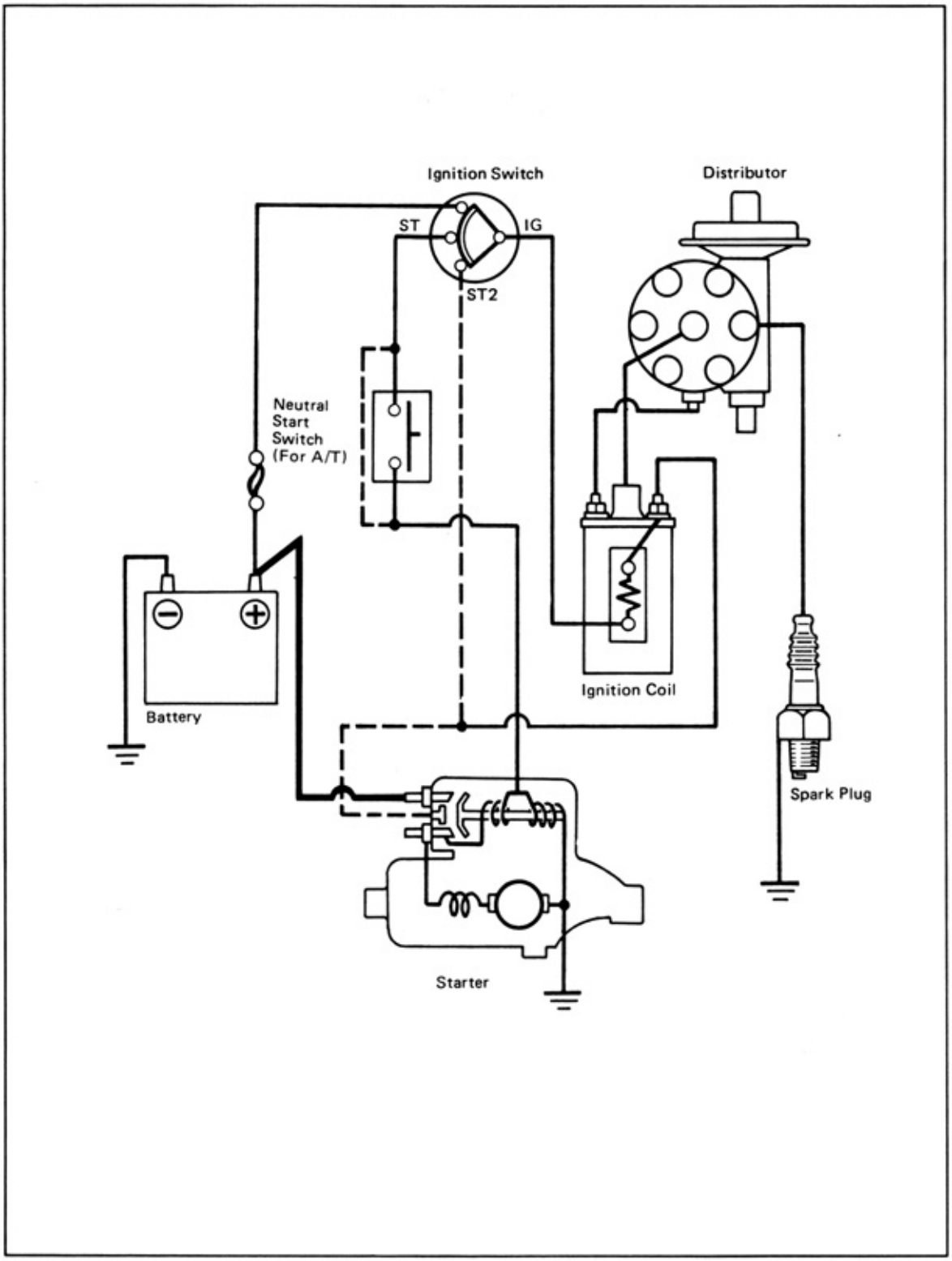
IGNITION SYSTEM

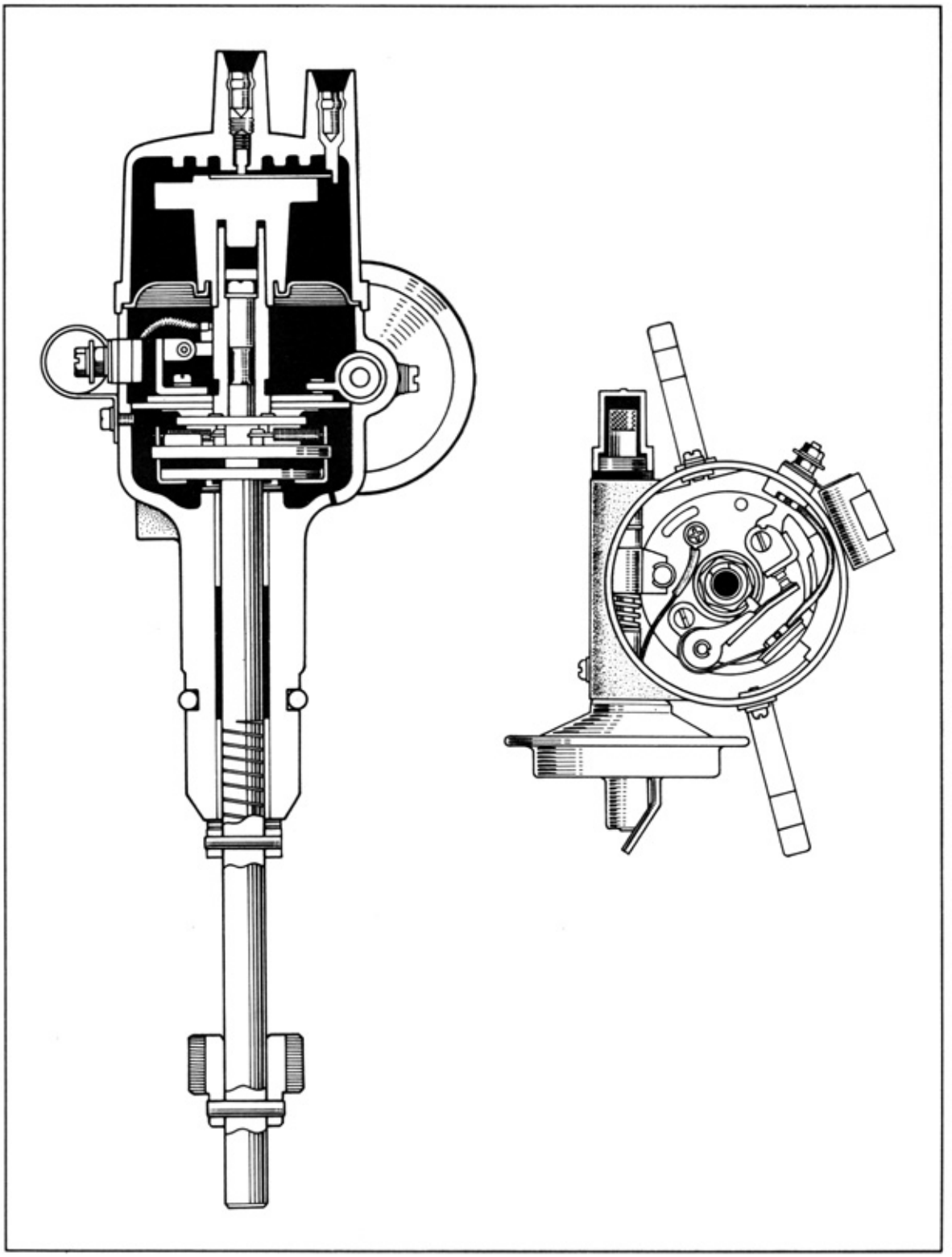
IGNITION SYSTEM CIRCUIT

Fig. 8-1



DISTRIBUTOR

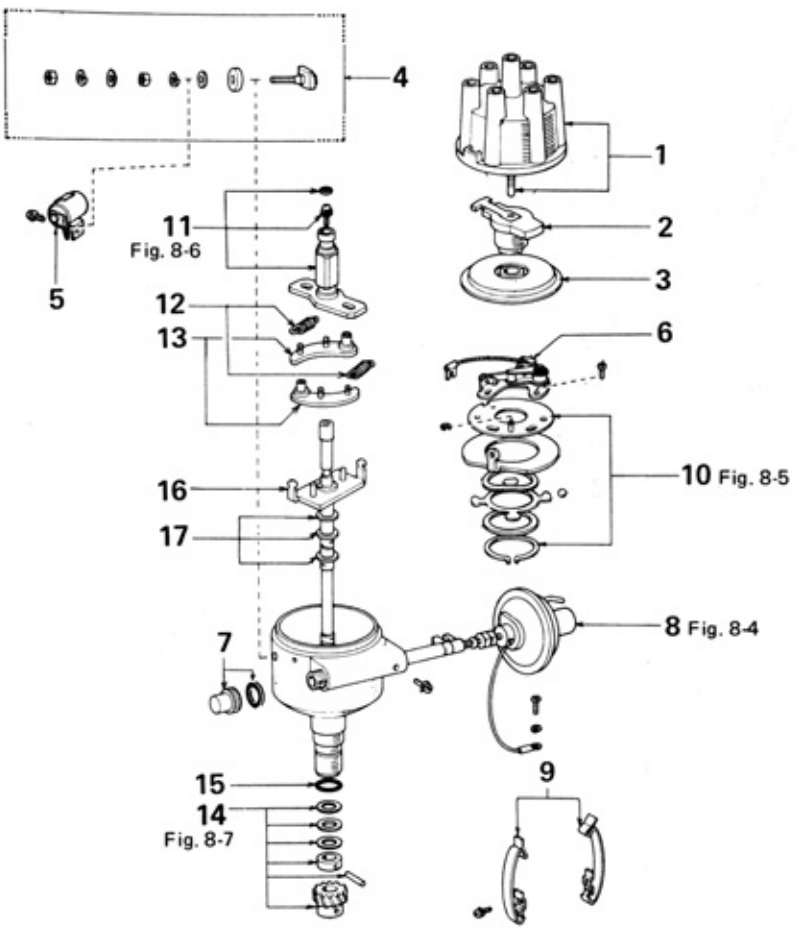
Fig. 8-2



DISASSEMBLY

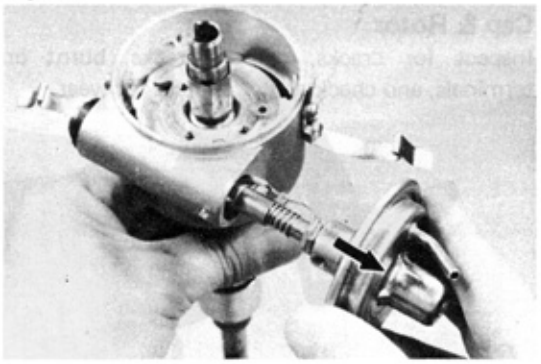
Disassemble in numerical order.

Fig. 8-3



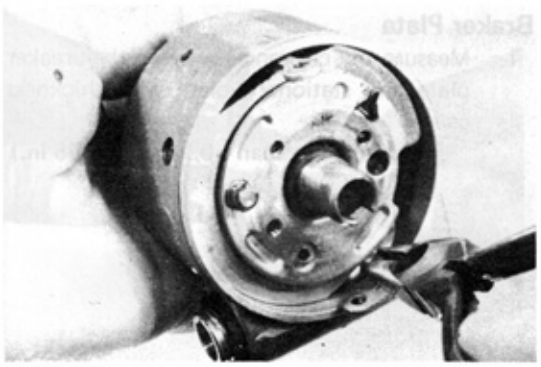
1	Distributor Cap	10	Breaker Plate Assembly
2	Rotor	11	Cam & Grease Stopper
3	Dustproof Cover	12	Governor Spring
4	Terminal	13	Governor Weight
5	Condenser	14	Gear & Collar
6	Breaker Points	15	O Ring
7	Cap	16	Governor Shaft
8	Vacuum Advancer	17	Washer
9	Housing Cap Spring		

Fig. 8-4



Disconnect the ground wire and set screw, and then take out the vacuum advancer.

Fig. 8-5



Pull out the stationary plate with long-nose plier.

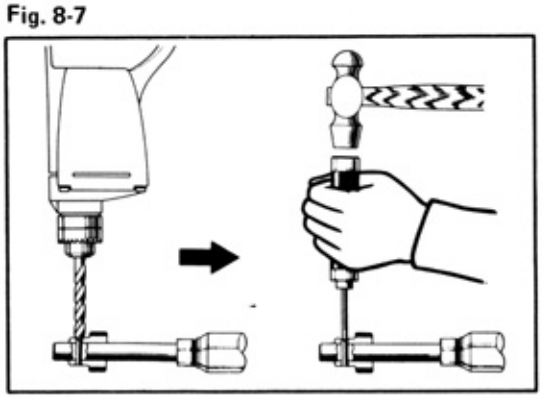
Fig. 8-6

Remove the grease stopper, remove the cam retaining screw and take off the cam.

– Note –

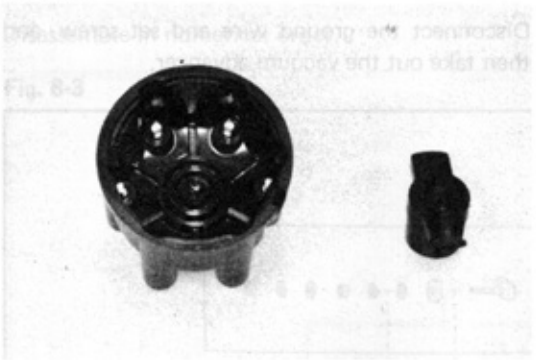
The cam retaining screw cannot be seen as it is normally covered by the grease inside the cam.

Fig. 8-7



Drill out the peened end of hte pin and drive out the pin.

Fig. 8-8

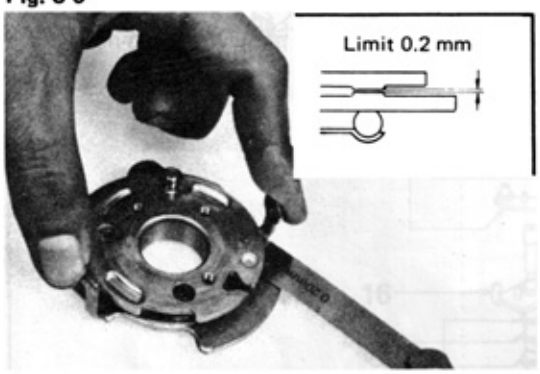


INSPECTION

Cap & Rotor

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

Fig. 8-9

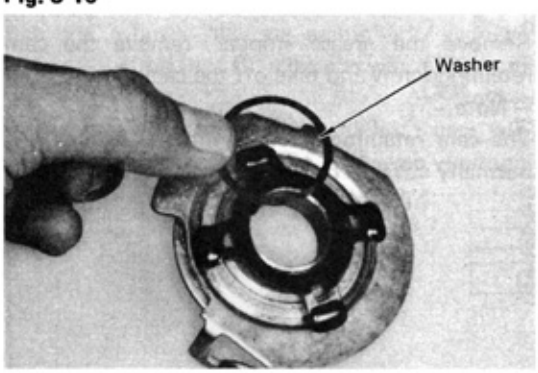


Braker Plate

1. Measure the clearance between the breaker plate and stationary plate with thickness gauge.

   Clearance less than 0.2 mm (0.008 in.)

Fig. 8-10

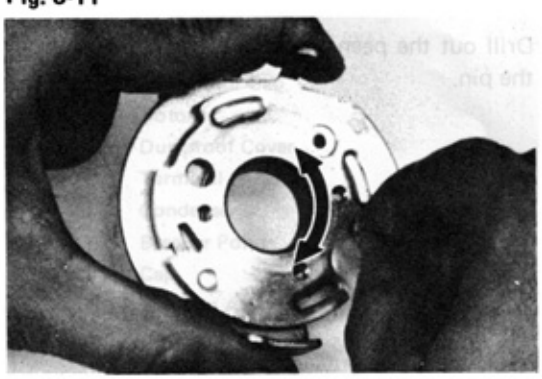


2. If over the limit, replace or adjust by varying the number of washers.

– Note –

Before assembling, coat distributor grease on the sliding surfaces.

Fig. 8-11



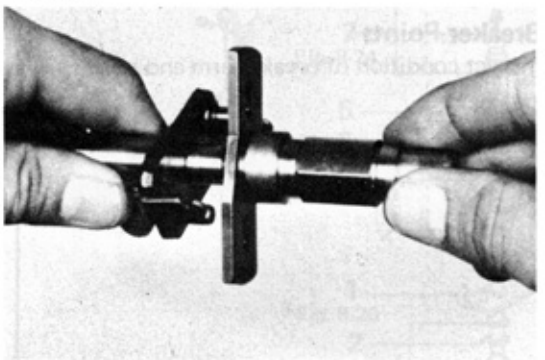
3. Check breaker plate for smooth rotation.

Fig. 8-12

Governor Weight

Check the fitting portions of governor weights with support pins.

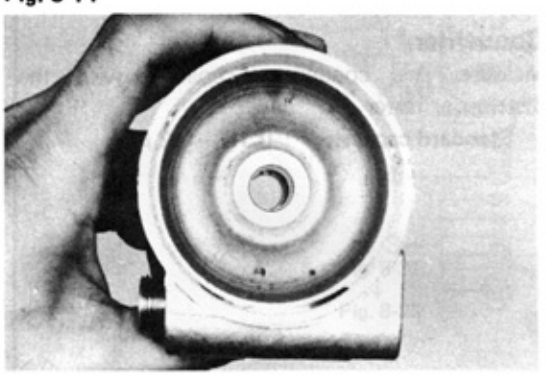
Fig. 8-13



Cam & Shaft

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

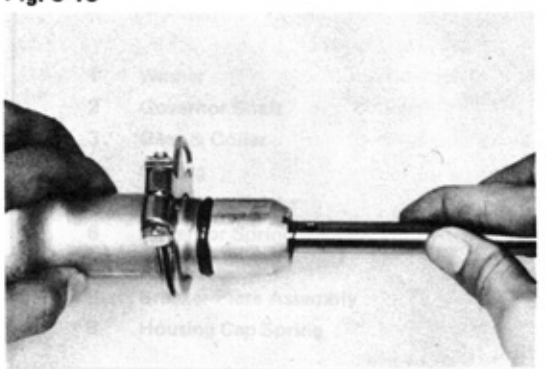
Fig. 8-14



Housing

1. Inspect housing and O ring for cracks, deformation, and damage.

Fig. 8-15



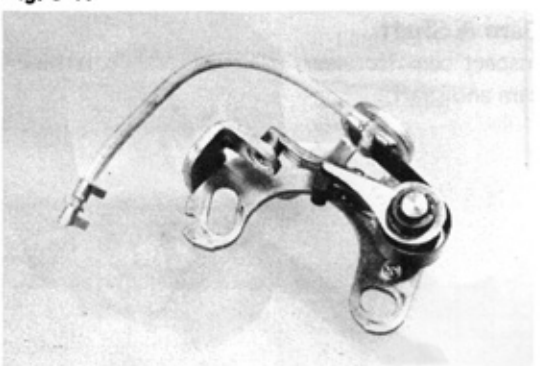
2. Check fit between shaft and housing.

Fig. 8-16

Vacuum Advancer Diaphragm

Suck the tube with mouth, the diaphragm should move.

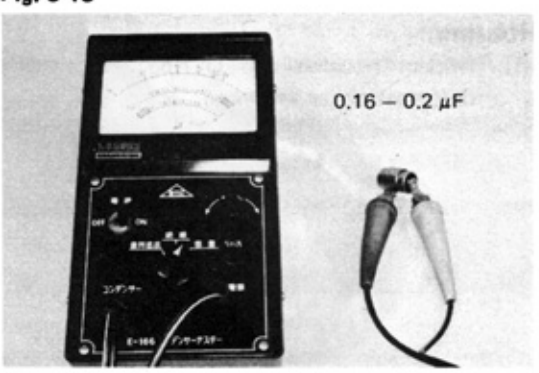
Fig. 8-17



Breaker Points

Inspect condition of breaker arm and points.

Fig. 8-18



Condenser

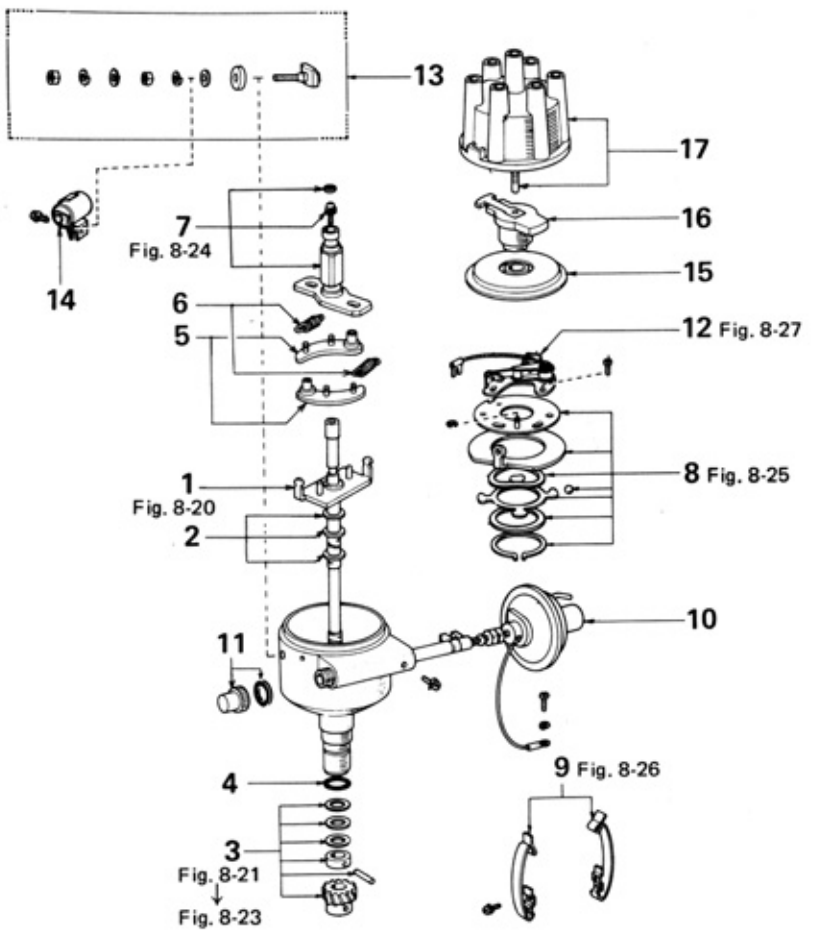
Measure the condenser capacity with the distributor tester.

Standard capacity **0.16 – 0.2 μF**

ASSEMBLY

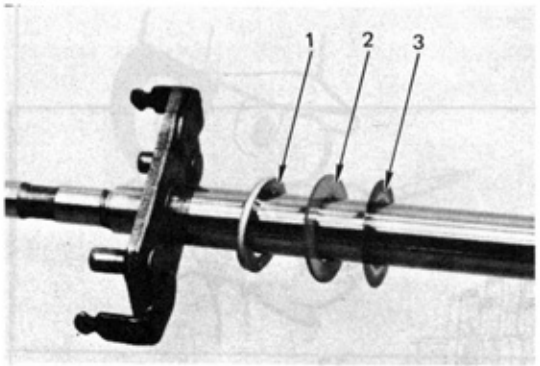
Assemble in numerical order.

Fig. 8-19



1	Washer	10	Vacuum Advancer
2	Governor Shaft	11	Cap
3	Gear & Collar	12	Breaker Points
4	O Ring	13	Terminal
5	Governor Weight	14	Condenser
6	Governor Spring	15	Dustproof Cover
7	Cam	16	Rotor
8	Breaker Plate Assembly	17	Distributor Cap
9	Housing Cap Spring		

Fig. 8-20



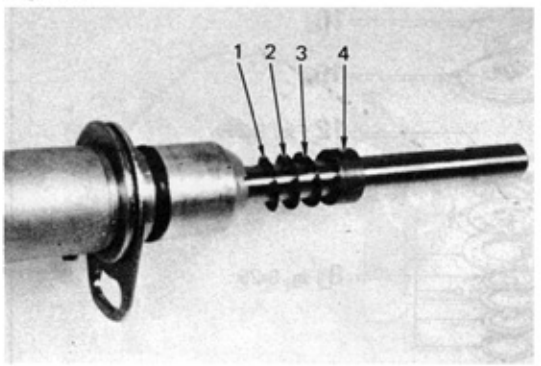
Assemble following parts on shaft in numerical order.

1. Steel washer
2. Bakelite washer
3. Steel washer

– Note –

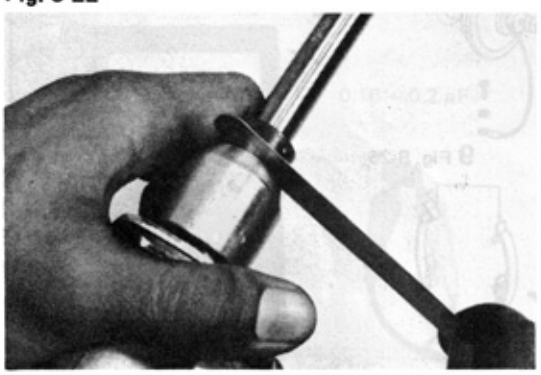
Coat the shaft with oil before installing.

Fig. 8-21



1. Assemble following parts in shaft in numerical order.
   (1) Steel washer
   (2) Bakelite washer
   (3) Steel washer
   (4) Collar

Fig. 8-22



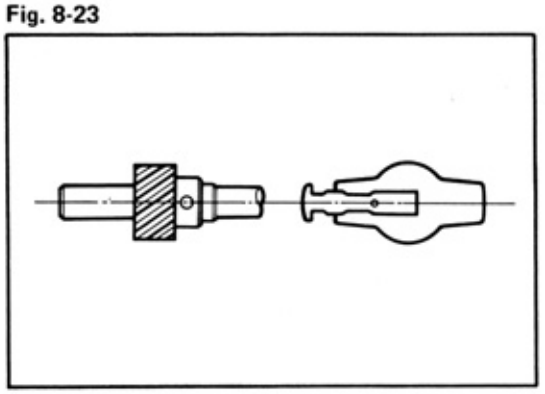
2. Check the thrust clearance.
   Standard **0.15 – 0.50 mm (0.0059 – 0.0197 in.)**

– Note –

Adjust the clearance by varing the number of washers (1) or (3) in fig. 8-21.

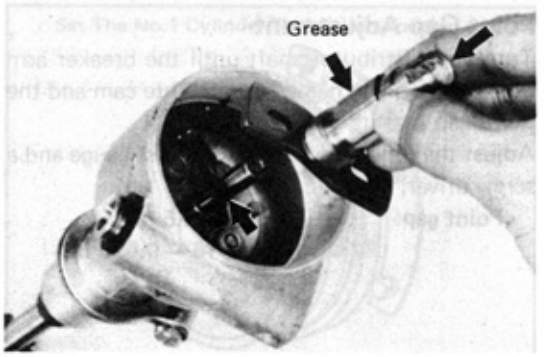
3. Peen the ends of pin.

Fig. 8-23



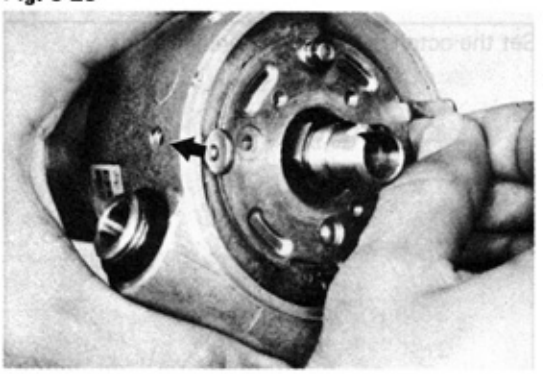
1. Position the gear drill mark in the same direction as that of the rotor, and insert the gear over the shaft.
2. Peen both ends of the pin.

Fig. 8-24



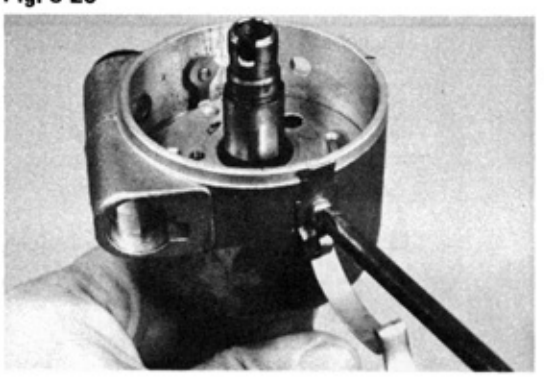
Apply distributor grease on cam surface fitting with shaft and in the cam end.

Fig. 8-25



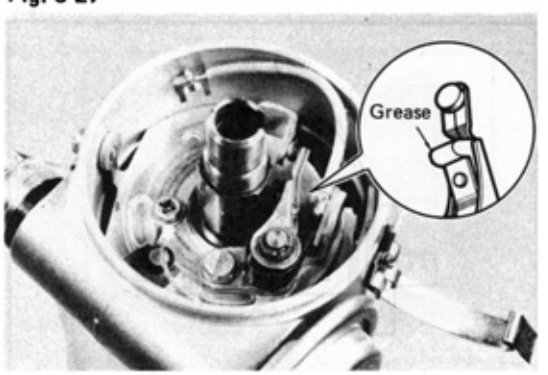
Position the smaller slotted part toward the terminal.

Fig. 8-26



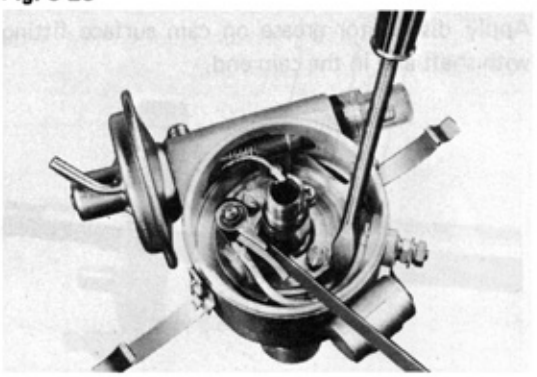
The housing cap spring with cap positioner must must be installed at vacuum advancer side.

Fig. 8-27



Apply a light coat of distributor grease on the breaker arm heel.

Fig. 8-28



ADJUSTMENT

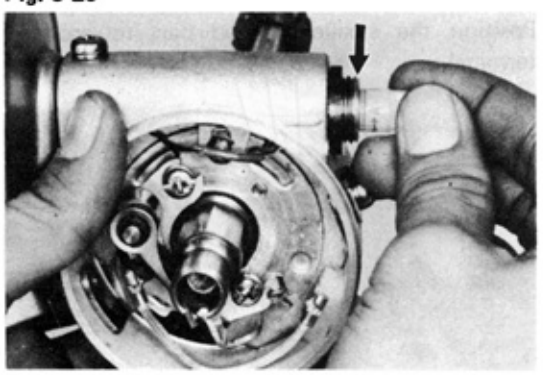
Point Gap Adjustment

Turn the distributor shaft until the breaker arm heel rides on the highest part of hte cam and the point gap is at its widest opening.

Adjust the point gap with a thickness gauge and a screw driver.

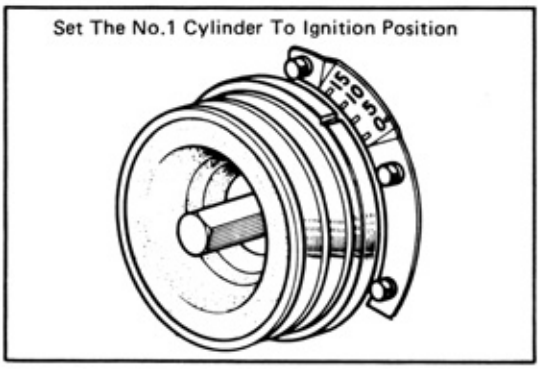
Point gap	**0.4 – 0.5 mm (0.016 – 0.020 in.)**

Fig. 8-29



Set the octane selector at standard line.

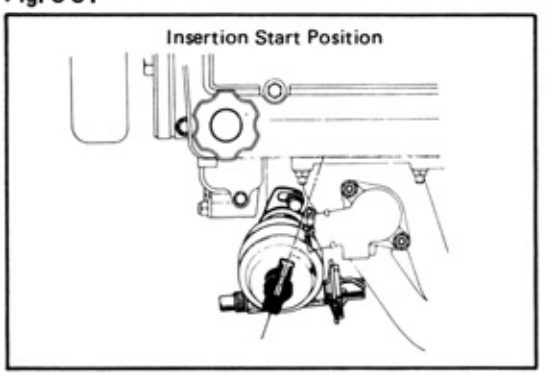
Fig. 8-30



INSTALLATION

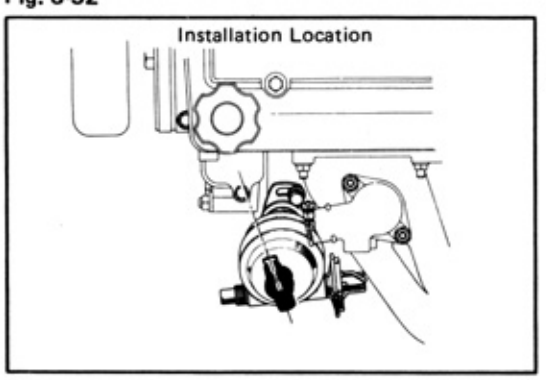
1. Set No.1 cylinder to ignition timing.
   Ignition timing **8° BTDC (Exc. ECE)**
   12° BTDC (For ECE)

Fig. 8-31



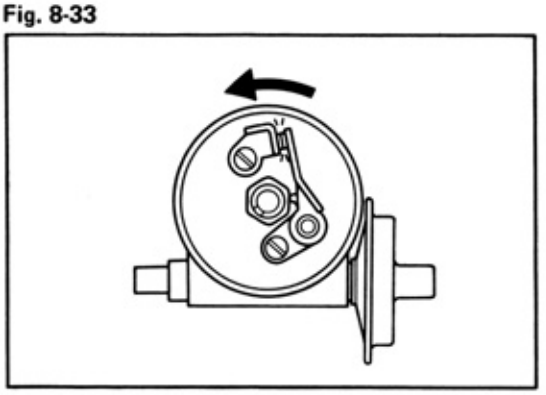
2. Before inserting the distributor, position the rotor and diaphragm as shown.

Fig. 8-32



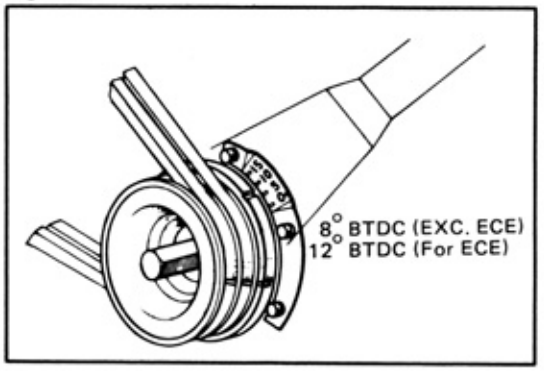
3. When fully installed, rotor should point toward as shown.

Fig. 8-33



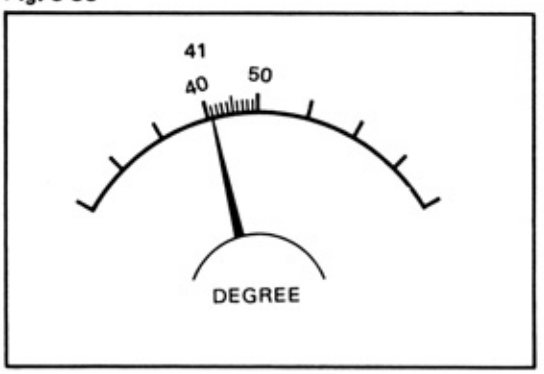
4. Rotate the distributor housing and set it at the place where the point just begin to open.

Fig. 8-34



5. Check ignition timing in idling condition.
   Ignition timing **8° BTDC (Exc. ECE)**
   12° BTDC (For ECE)

Fig. 8-35



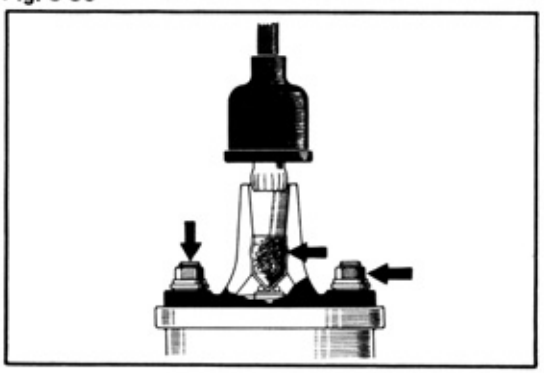
6. Check dwell angle with a distributor tester.
   Dwell angle **38° – 44°**

7. Check governor and vacuum advance angles.

Advance characteristics

	19100 – 41120 (Exc. ECE)		19100 – 45130 (For ECE)	
	Vacuum mmHg (in.Hg)	Dis. advance angle Degree	Vacuum mmHg (in.Hg)	Dis. advance angle Degree
Vacuum advance	110 (4.33) 160 (6.30) 200 (7.87) 240 (9.45)	Advance begins 2 – 4.6 4.3 – 6.9 6.5 – 8.5	100 (3.94) 180 (7.09) 280 (11.02)	Advance begins 1.2 – 3.4 3.5 – 5.5
	Distributor rpm	Dis. advance angle Degree	Distributor rpm	Dis. advance angle Degree
Governor advance	460 – 640 1150 3000	Advance begins 5.5 – 7.5 9.5 – 11.5	410 – 590 900 2100 3000	Advance begins 5.1 – 6.9 8.0 – 10.0 7.7 – 9.7

Fig. 8-36

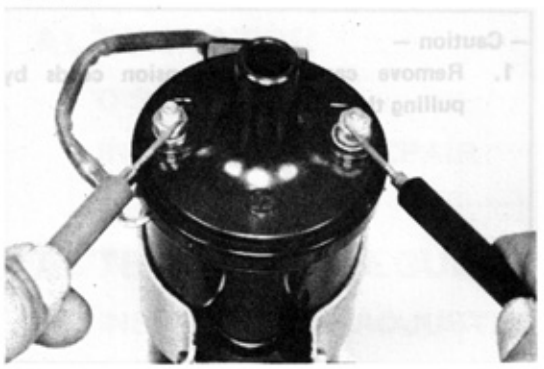


IGNITION COIL

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.

Fig. 8-37



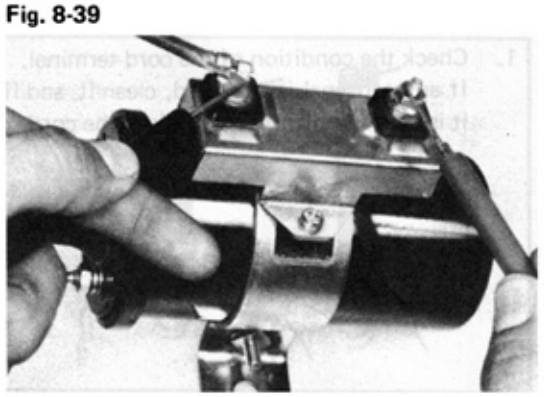
3. Measure the following resistances.
   If the reading is not within the specified resistance, replace coil.

Primary coil resistance
1.3 – 1.6 Ω

Fig. 8-38

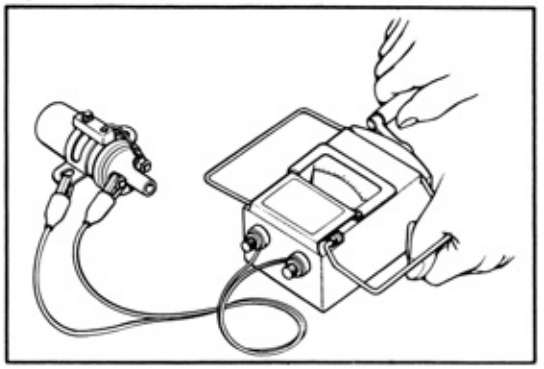
Secondar coil resistance
12600 – 15400 Ω

Fig. 8-39



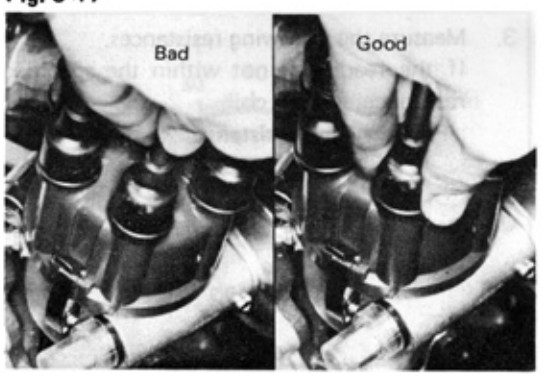
External resistor resistance
1.3 – 1.5 Ω

Fig. 8-40



Insulation resistance at 500V
Over 10 MΩ

Fig. 8-41

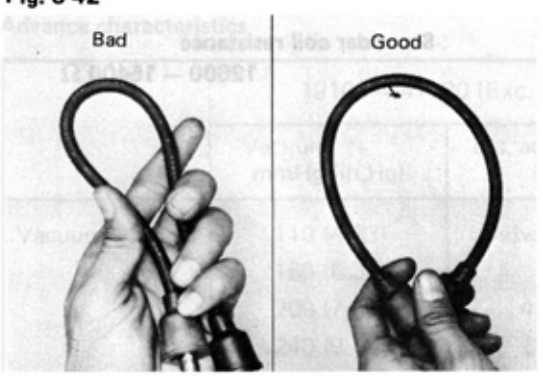


HIGH TENSION CORDS

– Caution –

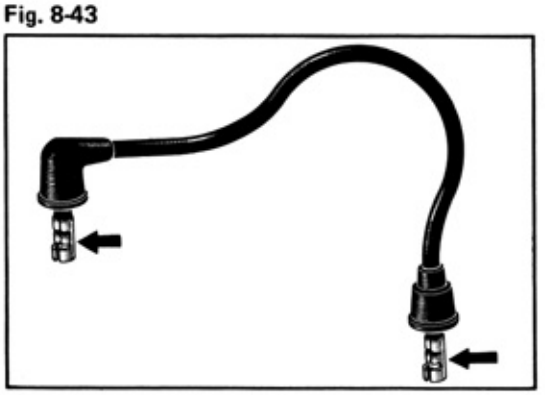
1. **Remove carefully hightension cords by pulling the rubber boot.**

Fig. 8-42



2. **Do not bend cords so as to conductor from broken.**

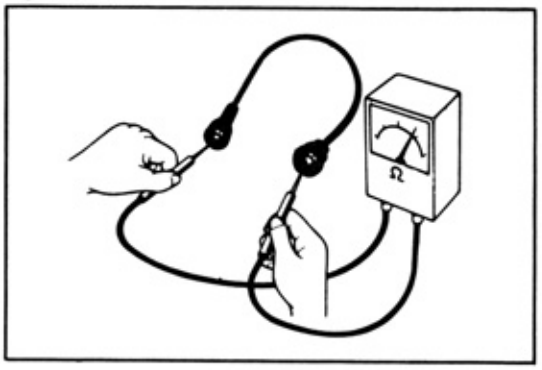
Fig. 8-43



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.

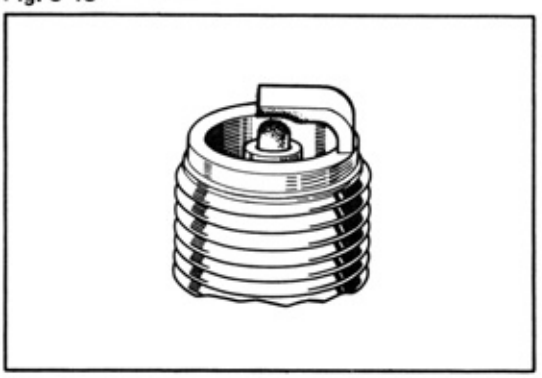
Fig. 8-44



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

Resistance **Less than 25 kΩ**

Fig. 8-45



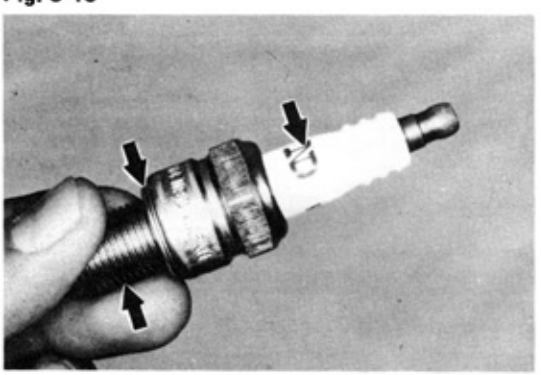
SPARK PLUGS

INSPECTION

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

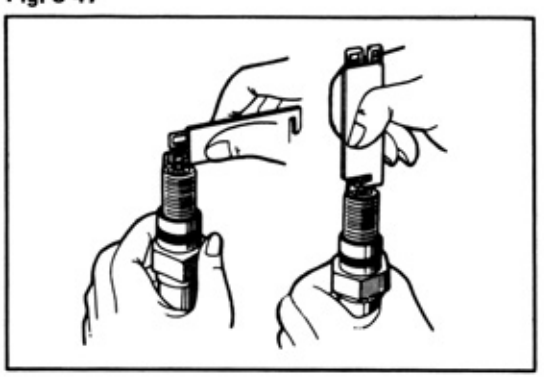
1. Wear in the electrodes.
2. Burnt condition of electrode and amount of carbon deposit.

Fig. 8-46



3. Cracks or damages in the threads or insulator.
4. Damaged or deteriorated gaskets.

Fig. 8-47



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.)**

Recommended spark plug

ND: W16EP (Exc. ECE)
W20EPR (For ECE)
NGK: BP5ES-L (Exc. ECE)
BPR6ES (For ECE)

MEMO