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## SERVICE INFORMATION

### GENERAL INSTRUCTIONS

A TRANSISTORIZED IGNITION SYSTEM is used and no adjustments are to be made unless the pulser generator screws are loosened. If these screws are loosened, ignition timing for either the No. 1 or No. 4 cylinder must be adjusted. For spark plug information, see page 3-3.

### SPECIFICATIONS

		For cold climate (below 5°C, 41°F)	Standard	For extended high speed riding
Spark plug USA model	ND	X22ES-U	X24ES-U	X27ES-U
	NGK	D7EA	D8EA	D9EA
Spark plug (Canada model)		ND X24ESR-U, NGK DR8ES-L		
Ignition timing	At idle speed	10° (BTDC)		
	Full advance	28°30' BTDC/2,725 rpm		
Ignition coil	3-point spark test	6 mm (1/4 in) minimum		

## TROUBLESHOOTING

### NOTE

The ignition system has two sub-systems; one for the No. 1 and No. 4 cylinders and one for No. 2 and No. 3 cylinders. Determine which sub-system is faulty, then proceed to the detailed tests below.

#### Engine cranks but will not start

- Engine stop switch OFF.
- No spark at plugs
- Faulty transistorized spark unit
- Faulty pulser generator

#### No spark at plug

- Engine stop switch OFF
- Poorly connected, broken or shorted wires
  - Between ignition switch and engine stop switch
  - Between spark unit and engine stop switch
  - Between spark unit and ignition coil
  - Between ignition coil and plug
  - Between spark unit and pulser generator

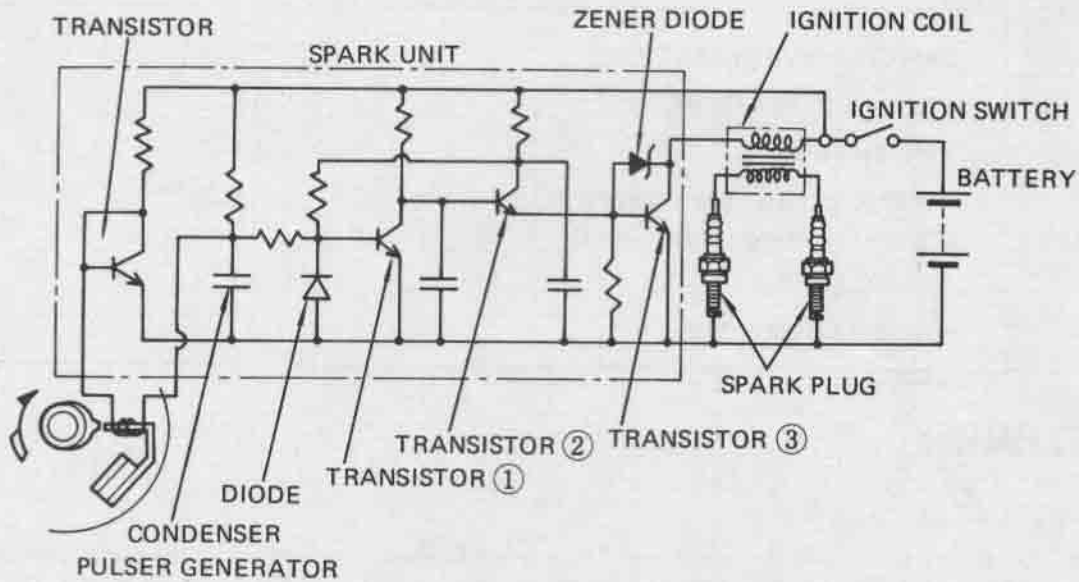
- Faulty ignition coil
- Faulty ignition switch
- Faulty spark unit
- Faulty pulser generator

#### Engine starts but runs poorly

- Ignition primary circuit
  - Faulty ignition coil
  - Loose or bare wire
  - Intermittent short circuit
- Secondary circuit
  - Faulty plug
  - Faulty high tension cord

#### Timing advance incorrect

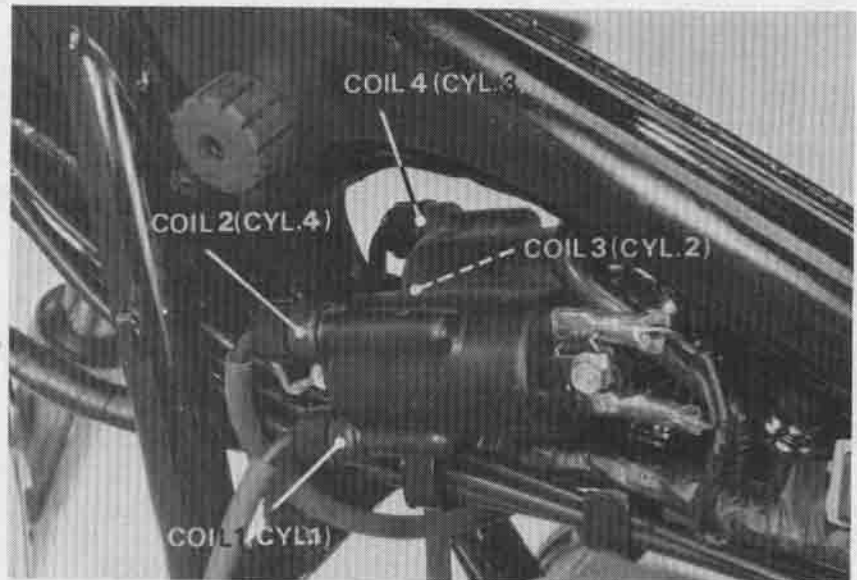
- Centrifugal advancer faulty



## IGNITION COIL

### REMOVAL

Remove the fuel tank.  
 Disconnect the wire leads.  
 Remove the coils by removing the attaching bolts.



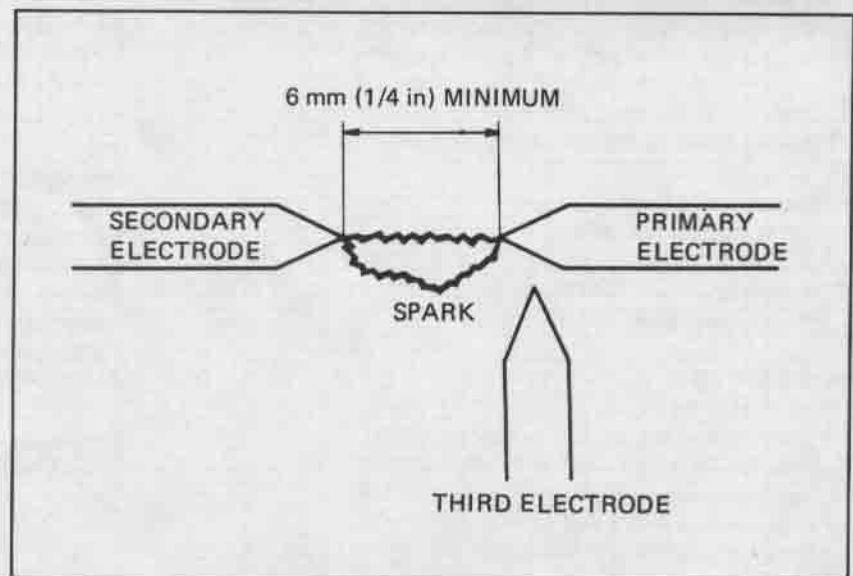
### PERFORMANCE TEST

Perform the 3-point spark test with a coil tester.

**SERVICE LIMIT: 6 mm (1/4 in) min**

#### NOTE

Follow the coil tester manufacturers instructions.





### TRANSISTORIZED IGNITION SYSTEM

#### INSPECTION

##### System

Disconnect the 1 and 2 plugs.  
Hold each plug against any convenient engine ground.

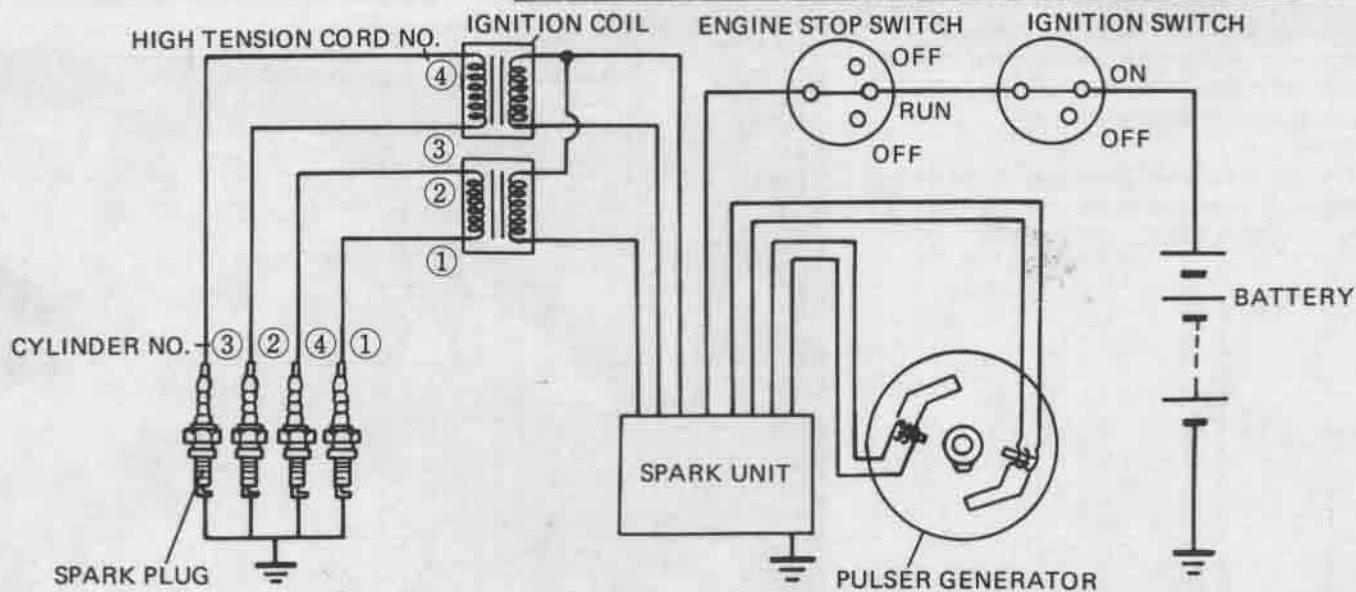
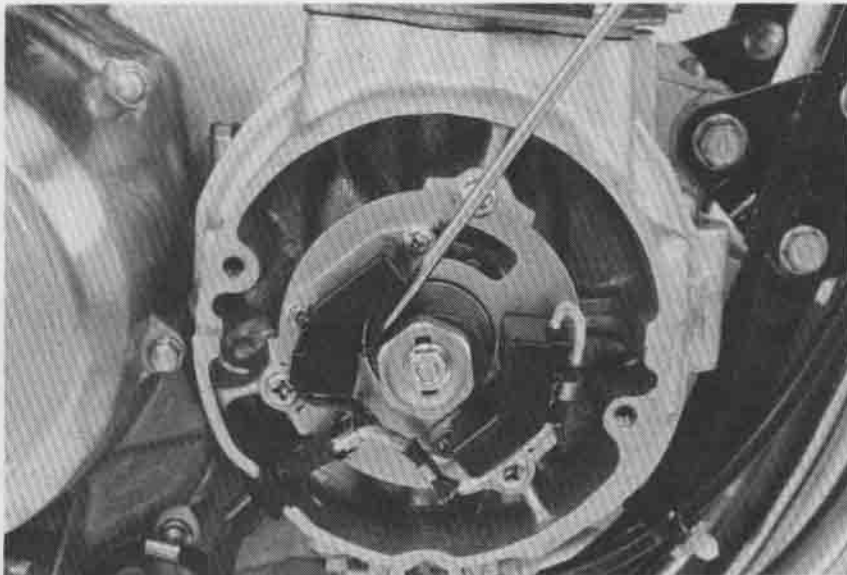
Turn the ignition switch on.

Remove the pulser generator cover.

Touch the end of a screwdriver to one pulser generator steel core.

A good spark to the plug means that the ignition system for that cylinder is in good shape.

Repeat the above for the other pulser.



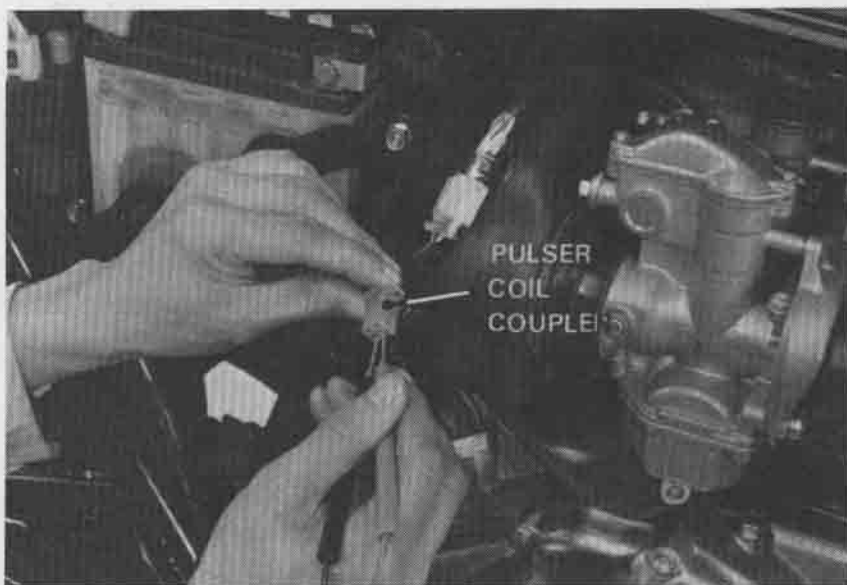
##### Pulser generator

Measure the coil resistance.

**COIL RESISTANCE:  $530 \pm 50 \Omega$  ( $20^\circ\text{C}$ ,  $68^\circ\text{F}$ )**

Between yellow with white tube and yellow leads (2.3 cylinders)

Between blue with white tube and blue leads (1.4 cylinders)



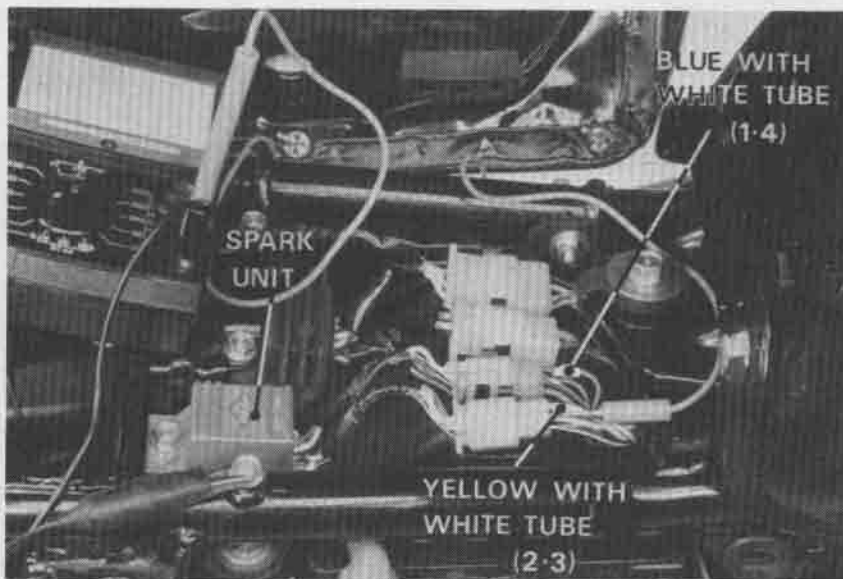
PULSER COIL COUPLETS



## SPARK UNIT

Disconnect the wirings at the pulser generator coupler.

Attach the positive lead of a voltmeter to the blue with yellow tube wire terminal (1.4) or yellow with white tube wire terminal (2.3) of the 6-pole coupler. Attach the negative lead to any convenient ground. Turn the ignition switch on.



Ground each corresponding terminal (1.4: blue with white tube wire terminal, 2.3: yellow with white tube wire terminal) of the 4-pole coupler intermittently.

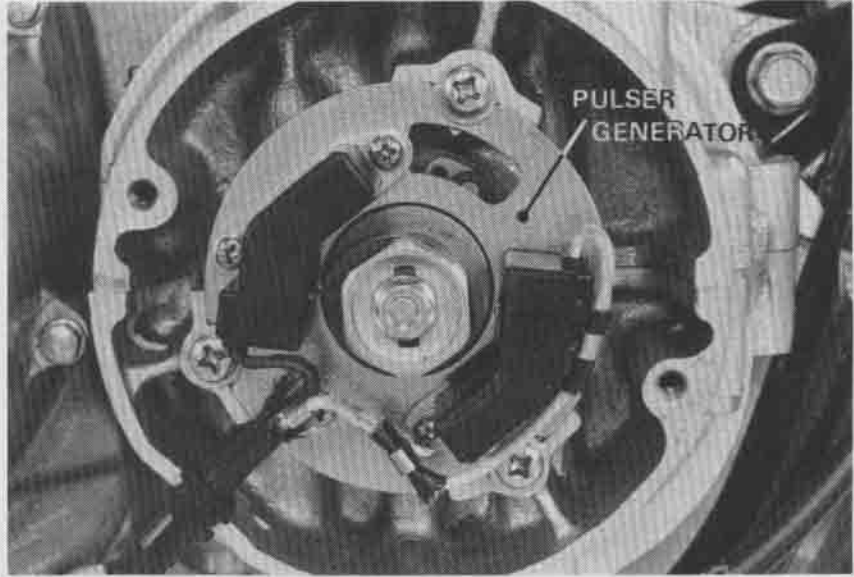
The transistor unit is normal if the voltage indicated by the voltmeter changes from 12V to 0V in each test.





### PULSER REPLACEMENT

If pulser replacement is necessary, loosen the three pulser base plate screws.  
Replace the pulser generator assembly.  
Adjust the ignition timing (Page 3-4).

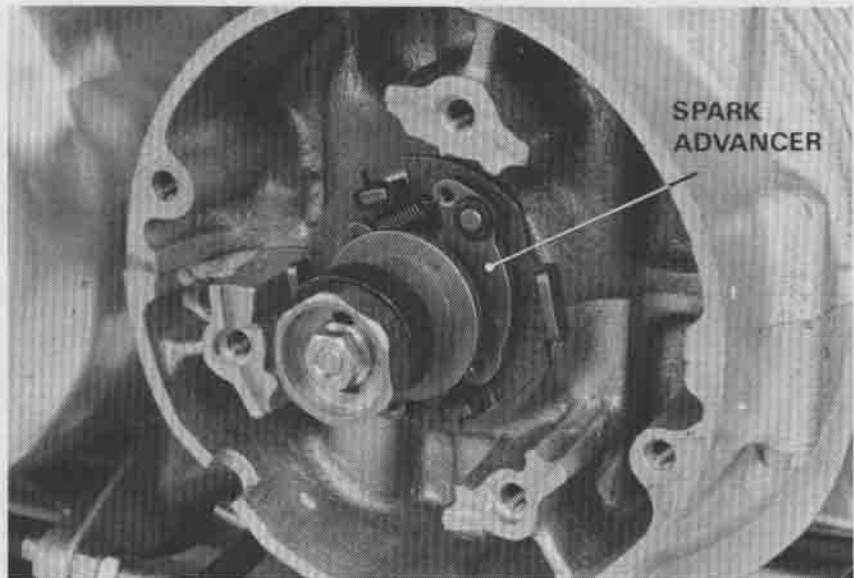


### SPARK ADVANCER

For advancer function test, see Page 3-5.  
Remove the pulser generator cover.  
Remove the pulser generator.

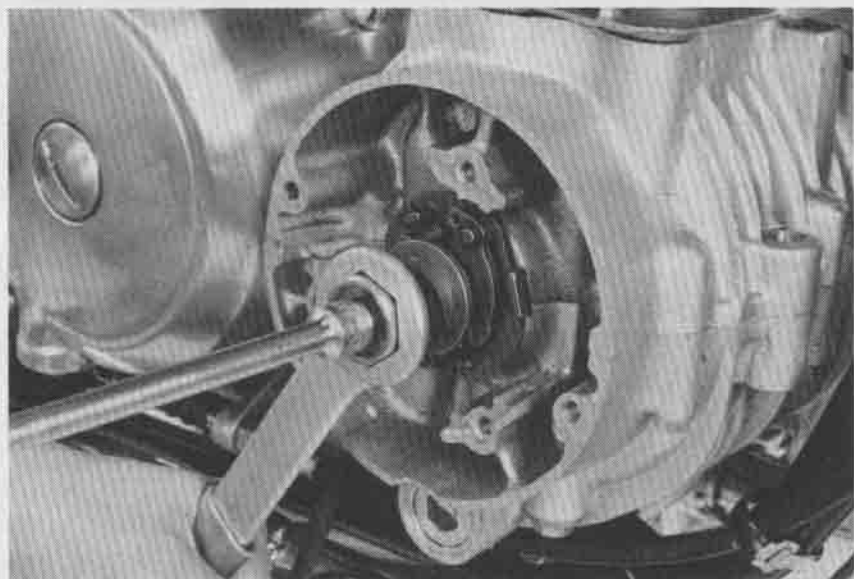
### ADVANCER VISUAL INSPECTION

Check the mechanical advancer cam for sticking.  
Lubricate the sliding surfaces, and check the spring for loss of tension and advancer pin for excessive.



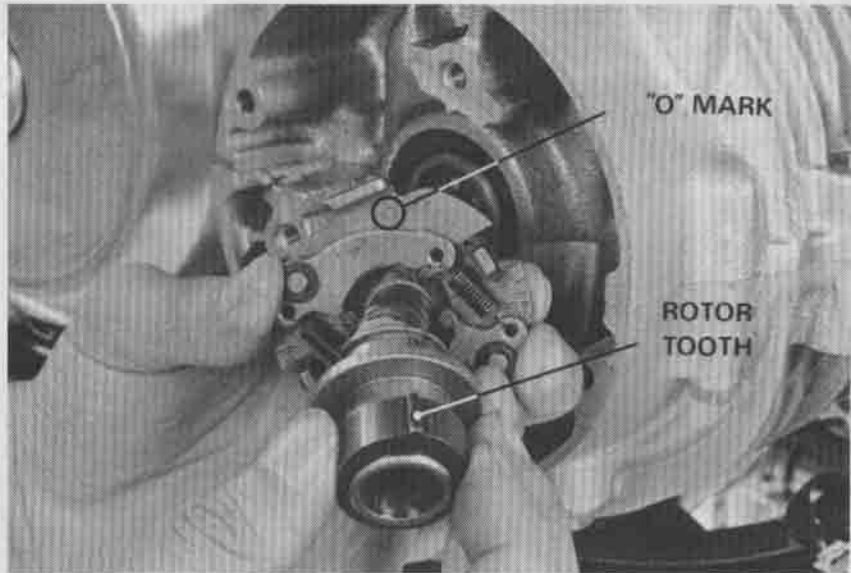
### ADVANCER REPLACEMENT

Remove the advancer nut by holding the spacer.  
Remove the advancer.





Align the rotor tooth with the "O" mark on the advancer.



Install the advancer.  
Align the hole in the advancer with the pin on the crankshaft.  
Tighten the nut.

**TORQUE: 0.8–1.2 kg-m (6–7 ft-lb)**

Install the pulser generator.  
Adjust ignition timing (Page 3–4).

