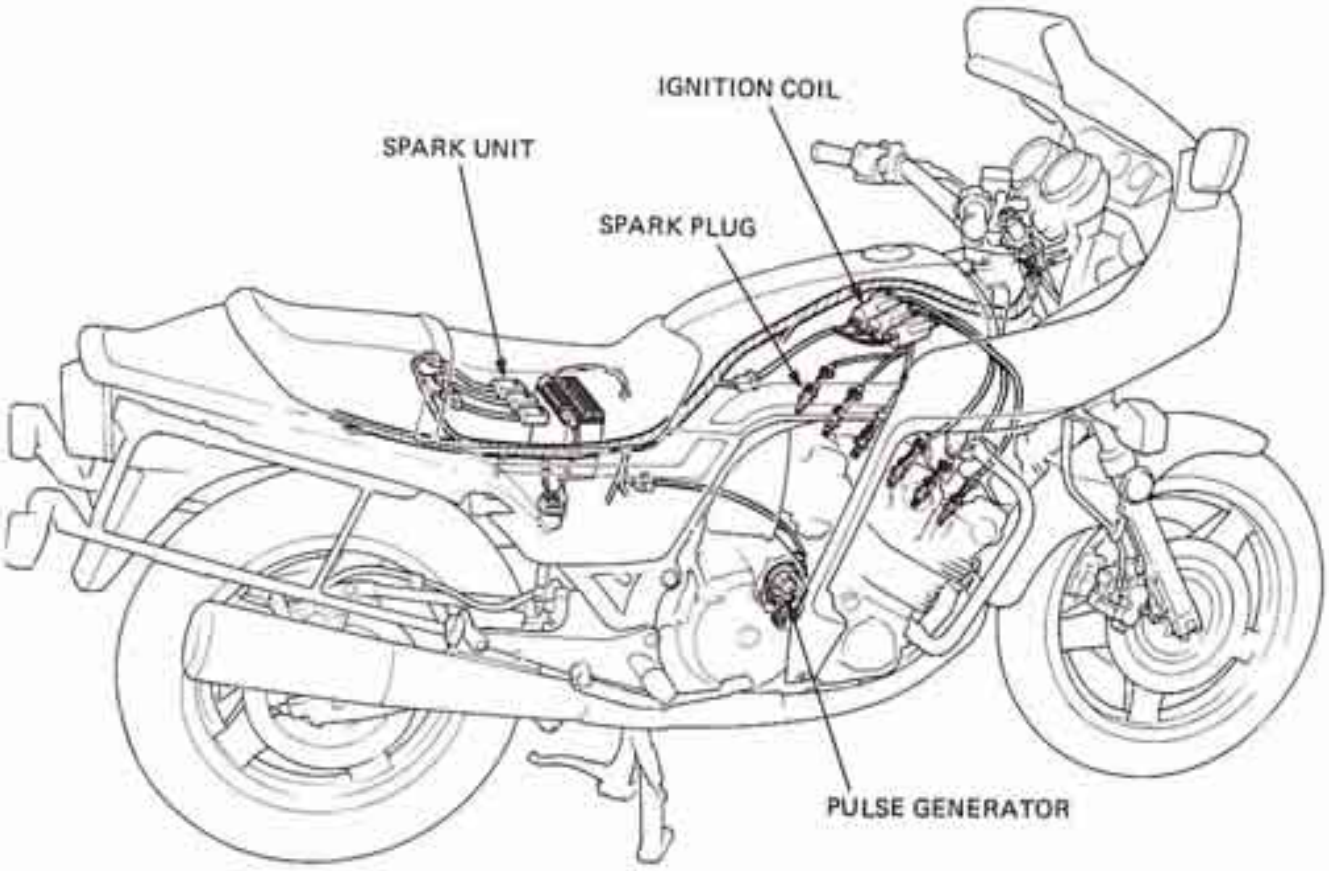
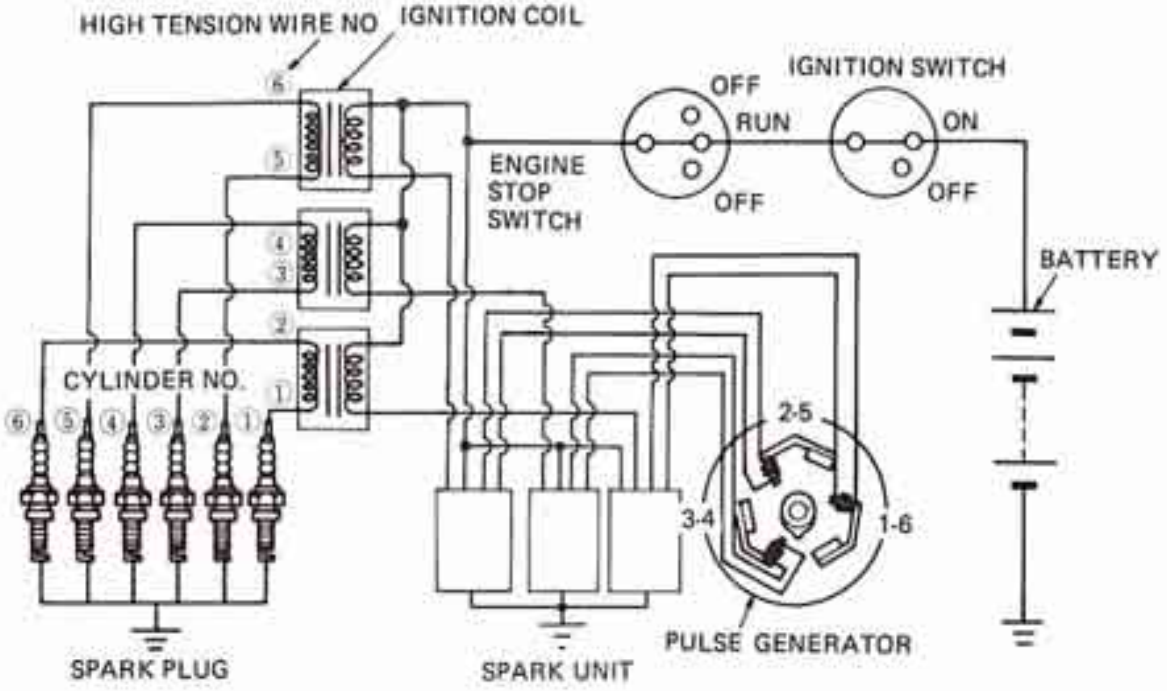




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SERVICE INFORMATION

GENERAL INSTRUCTIONS

A transistorized ignition system is used and no adjustments are to be made unless the pulse generator screws are loosened. If these screws are loosened, ignition timing for either the No. 1 or No. 6 cylinder must be adjusted. For spark plug information, see page 3-4.

SPECIFICATION

Spark plug		For cold climate (below 5°C)	Standard	For extended high speed riding
U.S.A. model (optional)	ND NGK	X22ES-U (X22ESR-U) D7EA (DR7ES)	X24ES-U (X24ESR-U) D8EA (DR8ES-L)	X27ES-U (X27ESR-U) D9EA (DR8ES)
Canada model	ND NGK	X22ESR-U DR7ES	X24ESR-U DR8ES-L	X27ESR-U DR8ES
Spark plug gap	0.6 – 0.7 mm (0.024 – 0.028 in)			
Ignition timing	At idle Partial advance/rpm Full advance/rpm		10° (BTDC) 23.5° (BTDC)/2500 rpm 31° (BTDC)/8000 rpm	
Ignition coil	3-point gap		6 mm (0.24 in) min.	
Firing order	1–5–3–6–2–4			

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TROUBLESHOOTING

NOTE

The ignition system is broken down into three sub-systems; one for No. 1 and No. 6 cylinders, one for No. 2 and No. 5 cylinders and one for No. 3 and No. 4 cylinders. First localize the trouble to one of these sub-systems, then proceed to the more detailed tests as described below.

Engine cranks but will not start
- Engine stop switch OFF.
- No spark at plugs
- Faulty transistorized spark unit
- Faulty pulse 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 pulse generator
- Faulty ignition coil
- Faulty ignition switch
- Faulty spark unit
- Faulty pulse 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

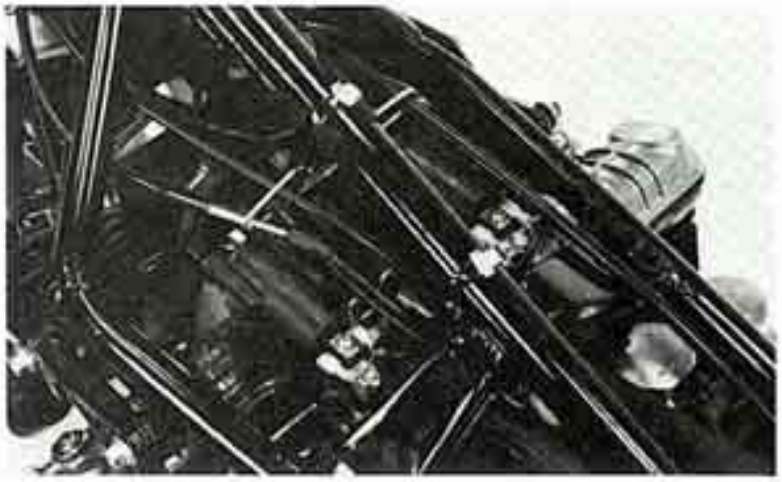
Timing advance incorrect
- Centrifugal advancer faulty

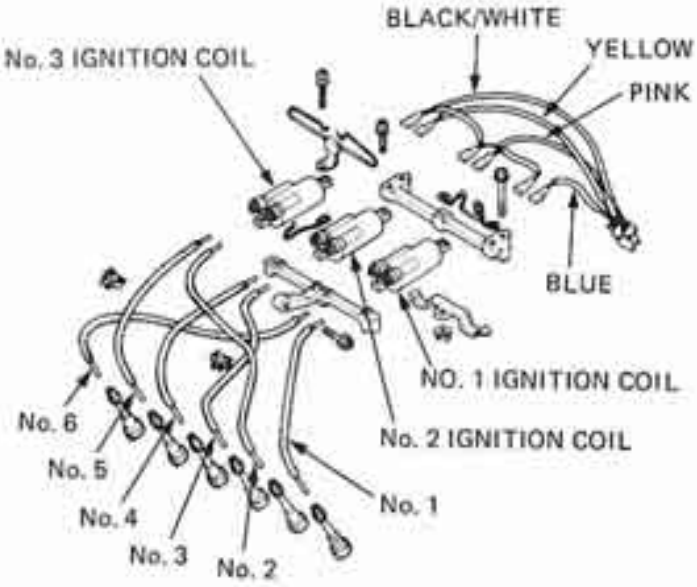
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IGNITION COIL

REMOVAL

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





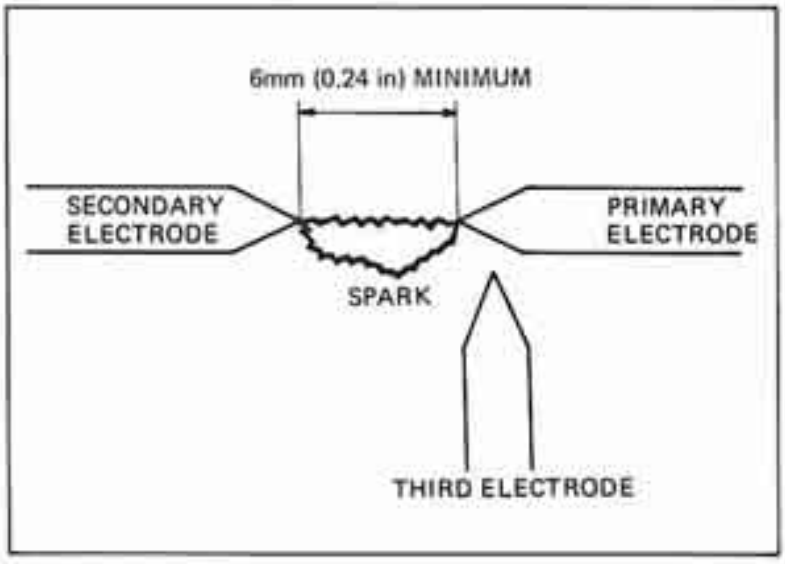
PERFORMANCE TEST

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

SERVICE LIMIT: 6 mm (0.24 in) min

NOTE

For wire connection, follow the instructions supplied with the coil tester.



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TRANSISTORIZED IGNITION SYSTEM

INSPECTION



System

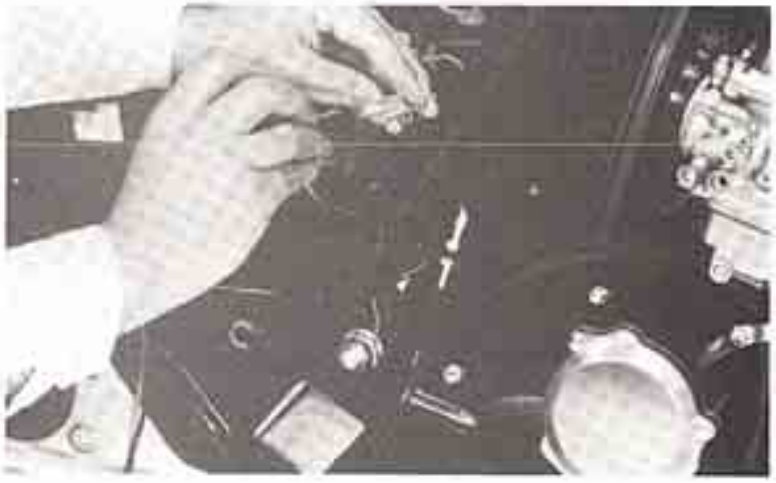
Disconnect the No. 4,5 and 6 spark plugs.
Hold each plug against any convenient engine ground.
Turn the ignition switch on.
Remove the pulse generator cover.
Touch the end of a screwdriver to the rotor and one pulse generator steel core.
Repeat this operation several times.
A good spark to the plug means that the ignition system for that cylinder is in good shape.
Repeat the above for the other two pulse generators.

Pulse generator

Measure the coil resistance.

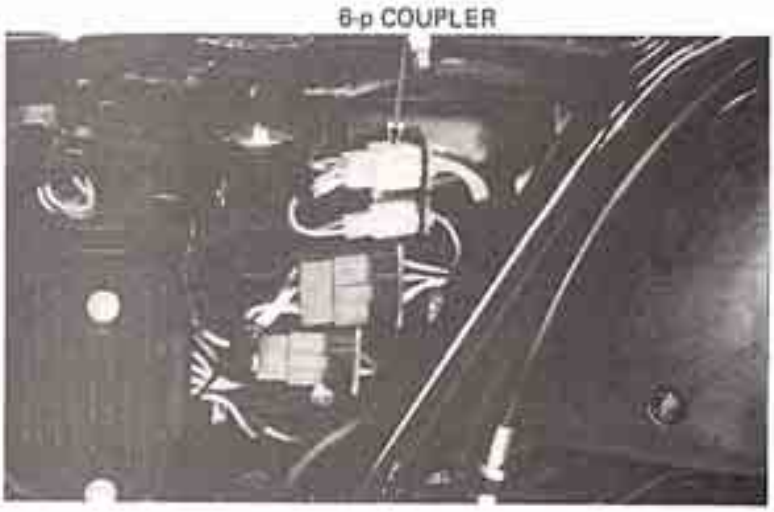
COIL RESISTANCE: 530 ± 50Ω (20°C, 68°F)

Between pink leads (3,4 cylinders)
Between yellow leads (2,5 cylinders)
Between blue leads (1,6 cylinders)



Spark unit

Disconnect the 6-P (red pulse generator) coupler.
Turn the ignition switch ON. Set the voltmeter to the 0-25V DC.



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Touch the positive lead of the voltmeter to the blue/yellow wire of the 1-6 spark unit coupler.
Ground the negative lead. The meter should read 12V (battery voltage).

With the voltmeter leads in place, use a jumper wire to ground the blue wire of the spark unit 6-P coupler. Voltage should drop to 0-2 VDC.

Move the positive voltmeter lead to the pink wire of the 3-4 spark unit coupler. Voltage should be 12V.

Move the jump wire lead from blue wire to pink wire of the 3-4 spark unit coupler. Voltage should drop to 0-2 V DC.

Move the voltmeter lead from the pink wire to the yellow wire of the 2-5 spark unit coupler.
Move the jump wire lead from the pink wire to the yellow/blue wire.
Voltage should change from 12 V to 0–2V.

Replace the spark units if they are faulty.



SPARK UNITS

PULSE GENERATOR REPLACEMENT

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



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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 wear if the advancer fails to return properly.



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