17 IGNITION SYSTEM

HONDA CB X

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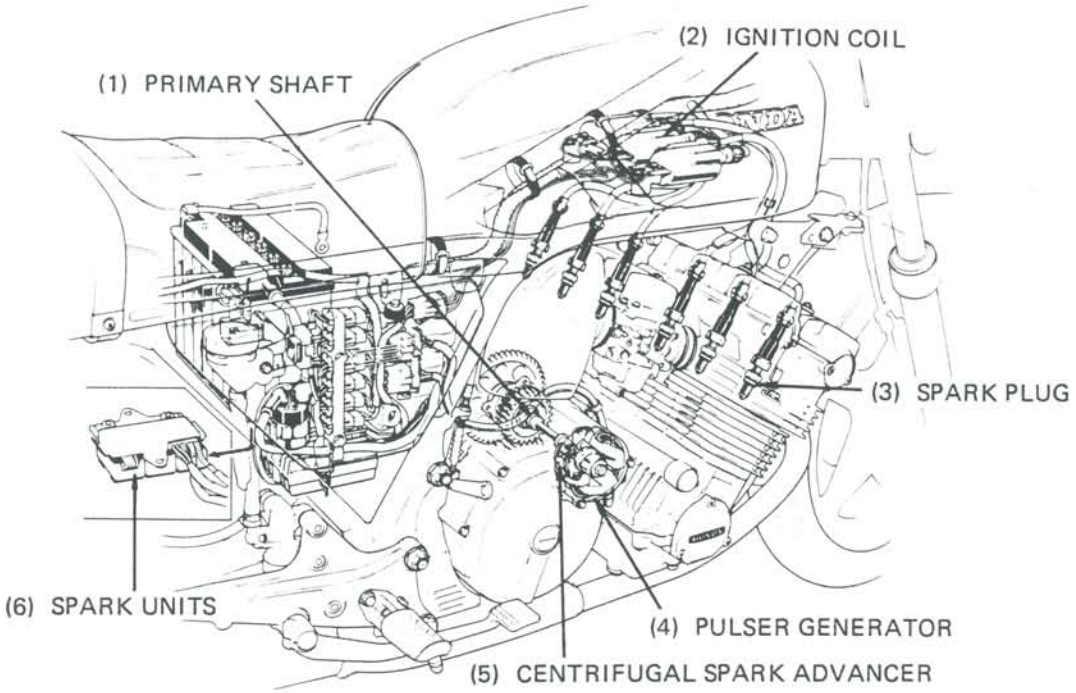
SERVICE INFORMATION

WORKING PRACTICE

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. 6 cylinder must be adjusted. For spark plug information, see page 3-4.

SPECIFICATIONS

Type		CM, E, G, F, ED	DK, DM, U, SA
Spark plug	ND	X24ESR-U	X24ES-U
	NGK	DR8ES-L	D8EA
Spark plug gap		0.6–0.7 mm (0.024–0.028 in)	
Ignition timing		At idle min^{-1} (rpm)	10° (BTDC)
		Partial advance/min^{-1} (rpm)	23.5°/2500
		Full advance/min^{-1} (rpm)	31°/8000
Ignition coil		3-point spark test	6 mm (0.24 in) minimum



TROUBLESHOOTING

NOTE

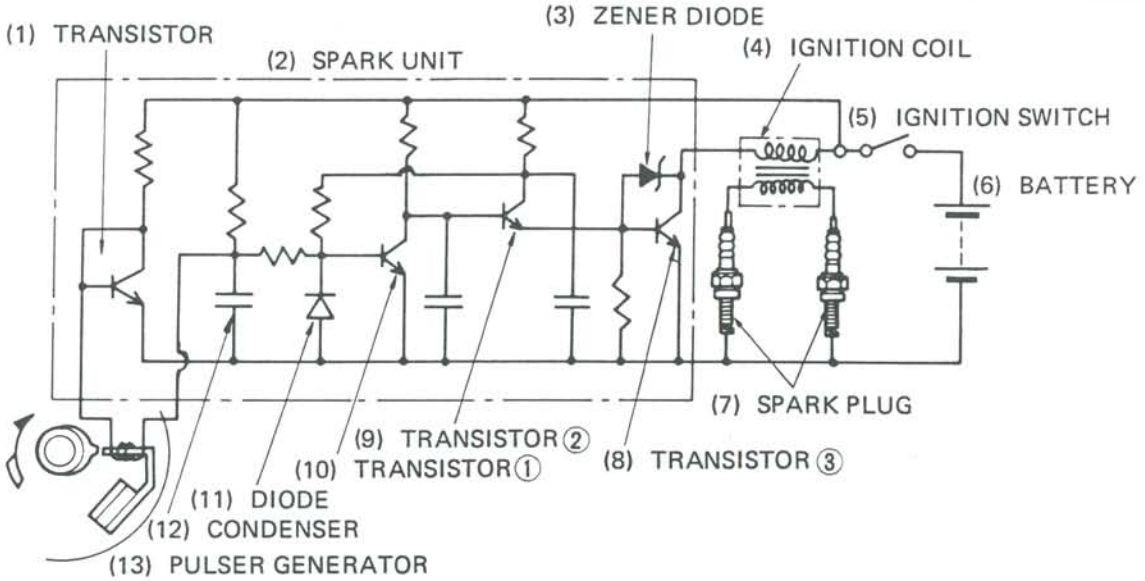
The ignition system is broken down into three sub-systems; one for No. 1 and No. 6 cylinders, one for No. 2 and No. 5 cylinders and one for No. 3 and No. 4 cylinders. First localize the trouble to one of these sub-systems, then proceed to the more detailed tests as described below.

Engine cranks but will not start
- Engine stop switch OFF.
- No spark at plugs
- Faulty transistorized spark unit
- Faulty 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
- Fauly 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

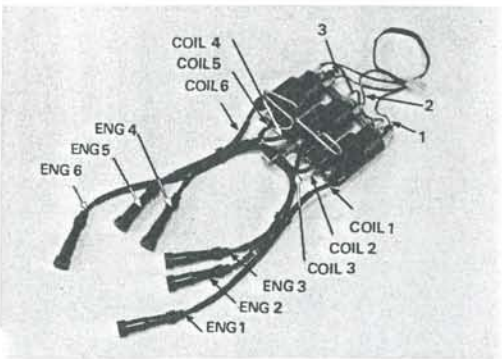
Timing advance incorrect
- Centrifugal advancer faulty

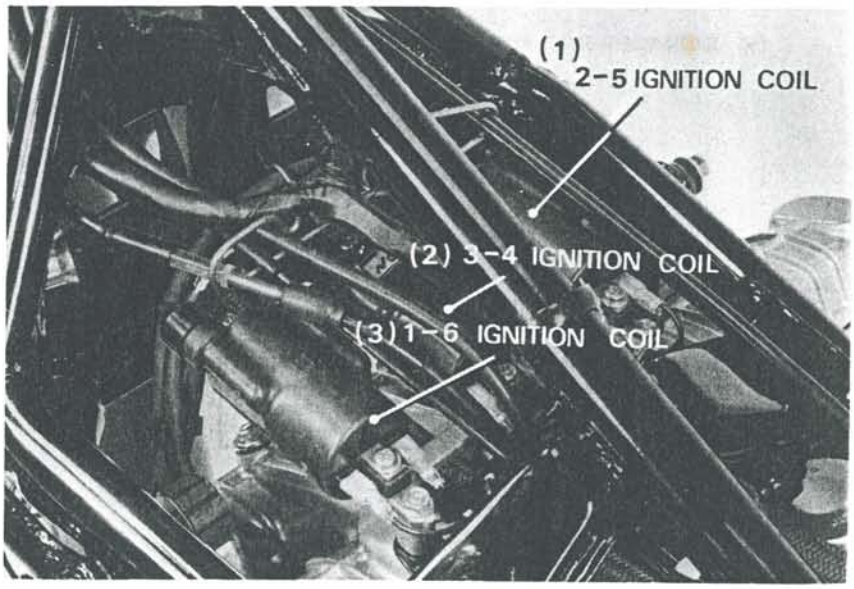


IGNITION COIL

REMOVAL

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





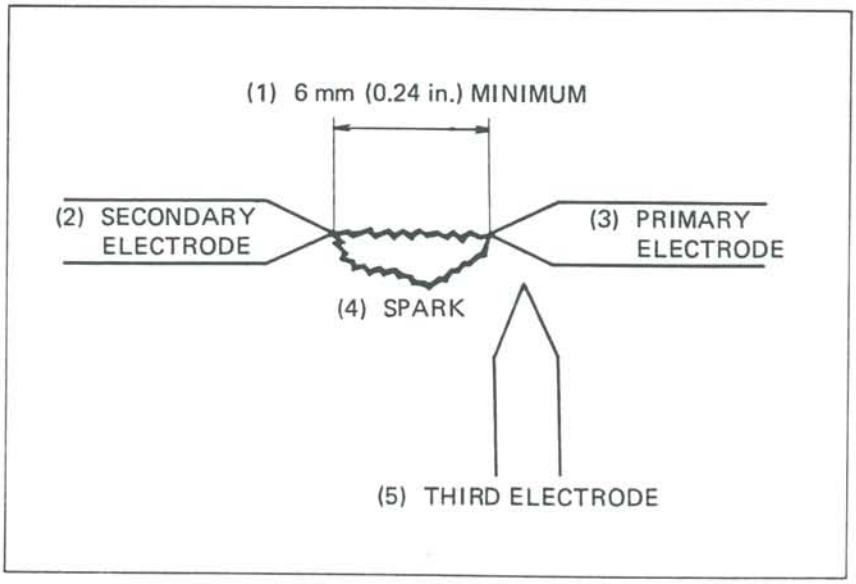
PERFORMANCE TEST

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

SERVICE LIMIT: 6 mm (0.24 in) min

NOTE

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

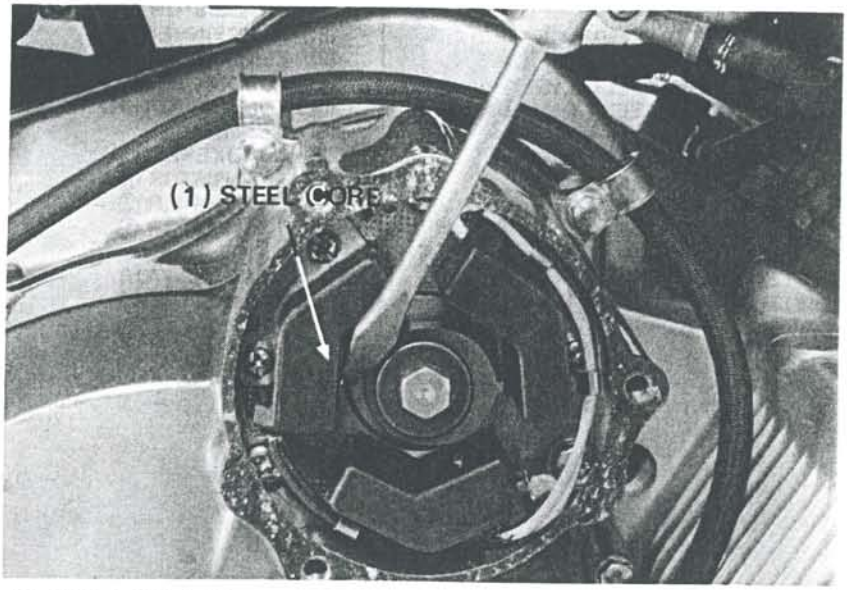


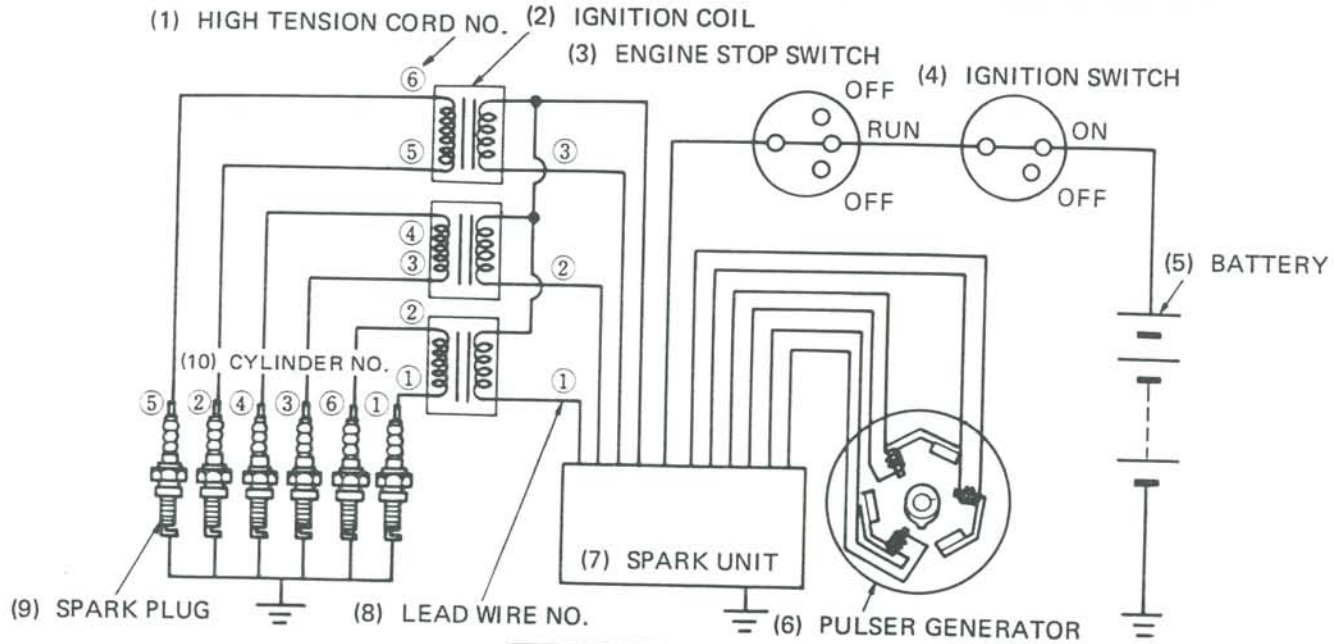
TRANSISTORIZED IGNITION SYSTEM

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 pulser cover.
Touch the end of a screwdriver to the rotor and one pulser 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 pulsers.



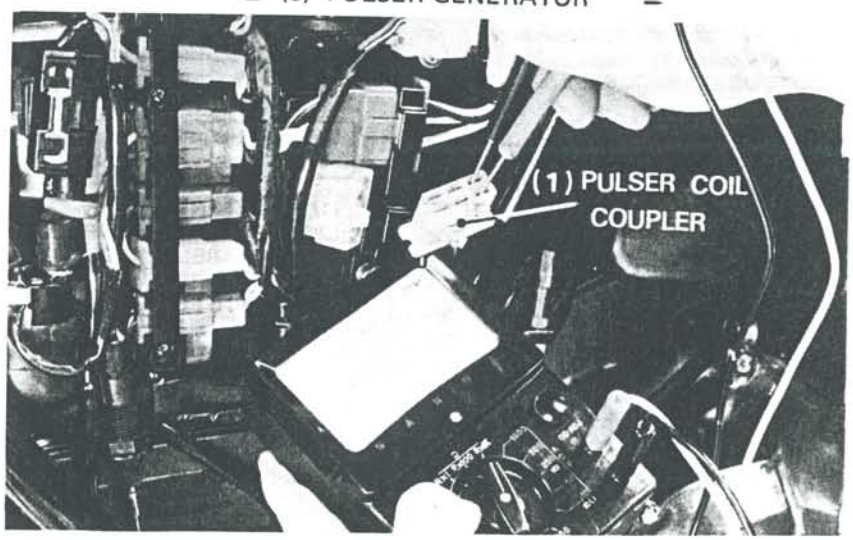


Pulser generator

Measure the coil resistance.

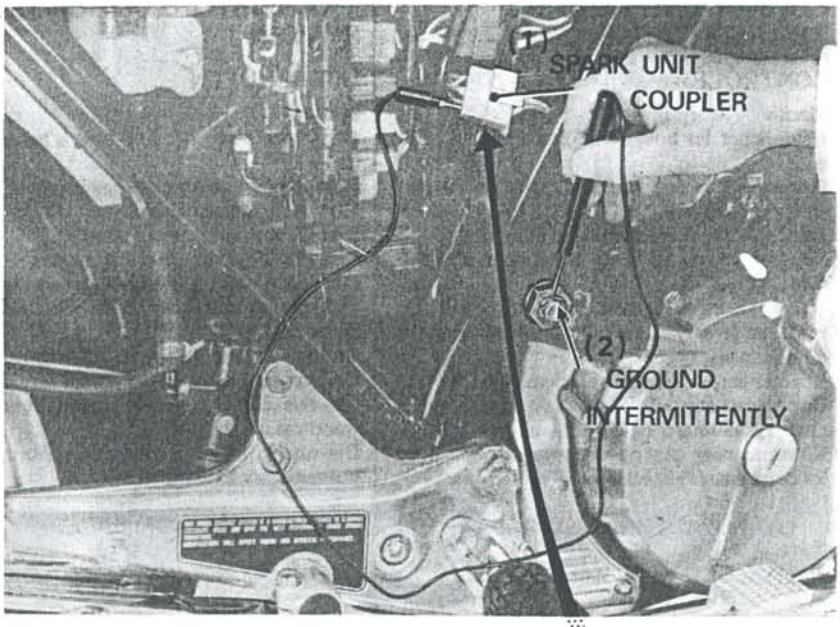
COIL RESISTANCE: 530 ± 50Ω (20°C, 68°F)

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

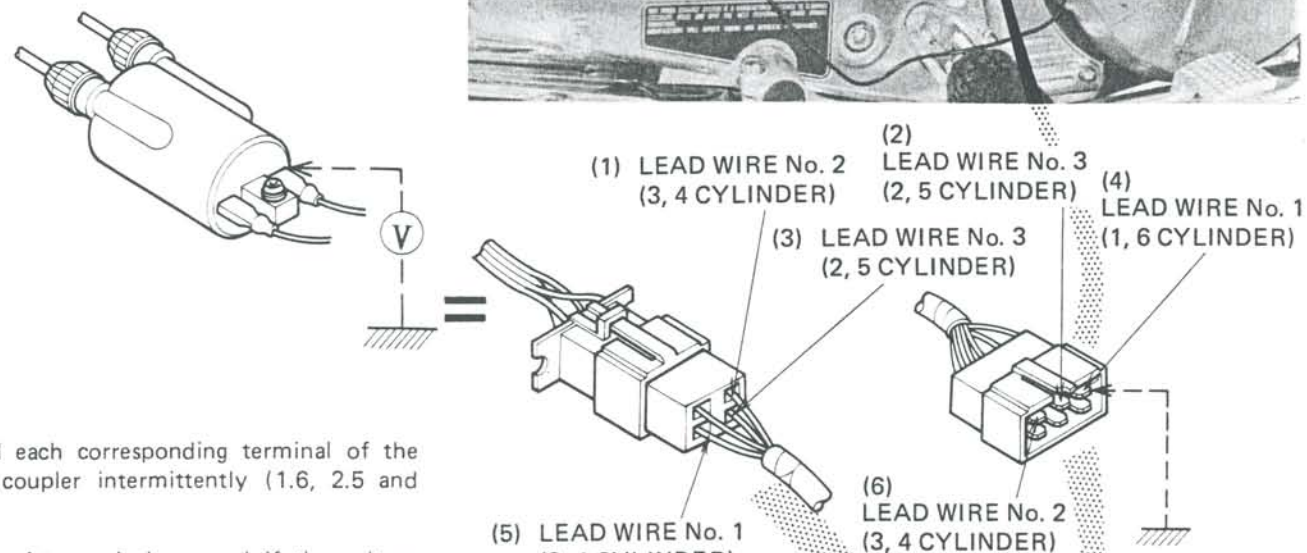


SPARK UNIT

Disconnect the wirings at the 6-pole coupler.



Attach the positive lead of a voltmeter to each of the three 4-pole coupler terminals (1.6, 2.5 and 3.4). Attach the negative lead to any convenient ground. Turn the ignition switch on.



Ground each corresponding terminal of the 6-pole coupler intermittently (1.6, 2.5 and 3.4).

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

SPARK ADVANCER/ PULSER REMOVAL

For advancer/pulser removal, see Page 8-2.
For advancer function test, see Page 3-6.

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.

