

(Version October 2021)



The Ignition system itself consists of the ignition coil or coils, high tension cables, spark plugs, distributor or Ignition control module and other components (ECU) that are complement to each other in order to work. Amongst the components mentioned, diagnosing the conditions of the Ignition Coil whether it is in good working order during troubleshooting can be a difficult task.

Now with the combination of this tester for **Spark Plug and Ignition Coil**, car technicians are able to troubleshoot ignition problems much easier and faster. The Tester comes with a range of connection cables with terminals to suit majority of 2-wires, 3-wires or 4-wires Ignition Coil of various car makes.

It allows direct connections to the Ignition coil by providing the necessary grounds (-), triggers (signal) and power (+) inputs with its array of connection cables to perform the test outside the engine.

The Ignition Coil Test is designed to detect the faults in the ignition system whether there is any occurrence of misfire in a sluggish engine. Besides, any High Voltage leakage (caused by cracked coil housing) could be easily detected with its Spark Leak test probe.

Its Spark Plug Test provides sparks (arcs) comparisons after the used spark plug had been serviced and cleaned when compared with the new one. This will allow us to notice the differences and if there are then it has a reason to be replaced.

In addition, it can be utilised to test Fuel Injectors to measure its injection volume or for cleaning it. Besides that, it can simulate sensors signals as long as its signal is in **Square Wave** frequency.

Examples: 1) ABS sensor. 2) Vehicle Speed sensors. 3) TDC sensors. 4) Crankshaft sensor.
5) Camshaft sensor. 6) Gearbox input shaft sensor. 7) Mitsubishi Air Flow sensor.

SAFETY INSTRUCTIONS

While working on electronic ignition systems, contact with live components can result in potentially fatal injuries. This applies not only for the High-Voltage live secondary circuit, but also for the primary circuit. For this reason, testing and repair work should be carried out carefully with paying full attention on the job.

Please strictly observe the following safety measures:

- Do not touch or remove ignition cables, the distributor cap, or the spark plug connectors while the engine is still running.
- Only connect or disconnect electronic control units, plug connections, and connection cables when the ignition is switched OFF.
- During all tests on the ignition system that require the engine to turn over at starter speed, the voltage supply to the injection valves should be disconnected in order to protect the catalytic converter.
- Make sure the input power supply to the Tester is DC12V which securely gripped to avoid weak sparks.
- Keep away from oily, wet and damp areas while testing to prevent any spillage into the tester.
- Conduct Spark Plug or Ignition Coil Testing in a well-ventilated area and keep away from inflammable (LPG, Petrol, etc.) vapors areas to avoid any fire accidents.
- While testing, please do not getting in touch with the ignition coil to avoid any electrical shocks. To test for spark leaks, use the Spark Leak test probe provided.

IGNITION COIL TEST:

This test mode is able to test all ECU control, electronic control or conventional distributor type ignition coils. The normal sparks generated during testing is a straight-line bluish-purple arc with a recommended adjustable distance of **15 mm to 20 mm** gap. If the arc colour is red or in a curved manner, it indicates that the coil is weak.

If there is no spark and sounds are heard, then it is highly suspected that the ignition coil is leaking, then use the Spark Leak test probe provided to check for sparks around the coil for sparks.

Operations:

1. To dismantle the ignition coil from the car, first turn the ignition key to OFF position, unplug and then remove it from the engine.
2. Depending on the car make, select the appropriate connection cable (see examples Fig. 1 below) provided in the test kit to fit the ignition coil under test.

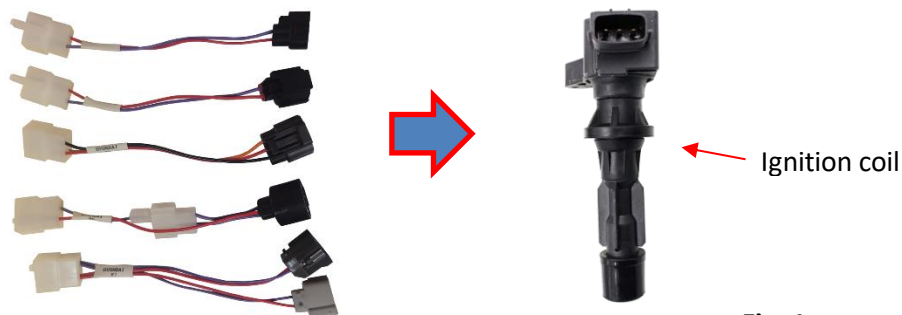


Fig. 1

Find the readily available connection terminal cables

3. After the suitable connecting terminal cable have been connected to the ignition coil, plug in the Ignition Spark Tester (Fig.2 below) into the ignition coil and ground it the auxiliary ground on tester negative (-) terminal and set the gap of the test plug to be at position 2 (about 10 mm gap distance).

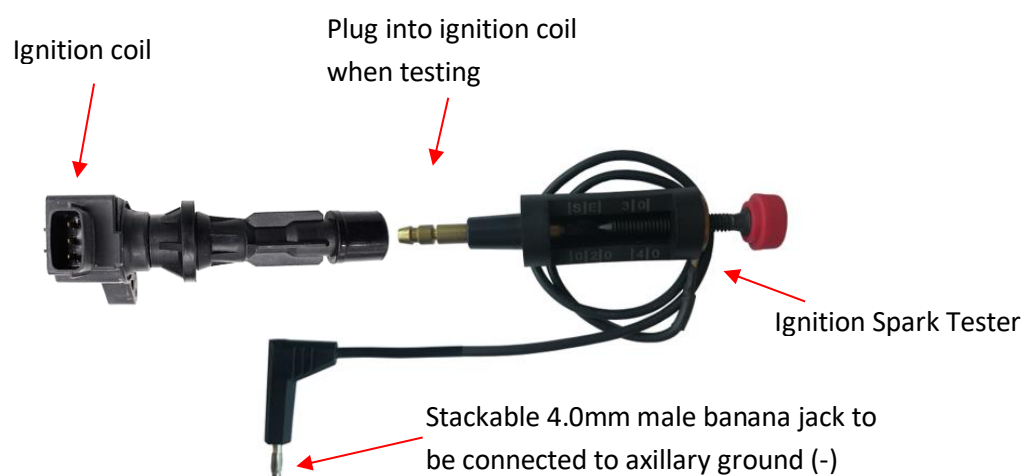


Fig. 2

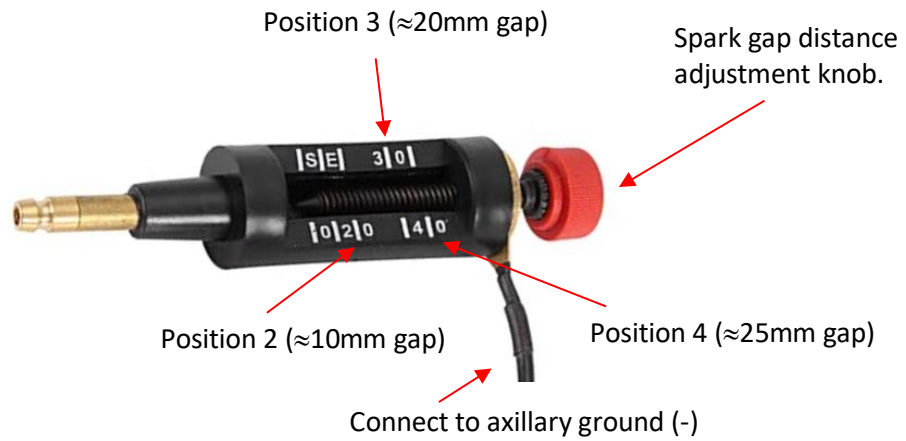


Fig. 3

4. Connect power to the Tester by clamping it on to a 12-volt car battery. **Red** clamp to battery positive (+) terminal and **Black** clamp to negative (-) terminal. See connection diagram Fig 4. Below:

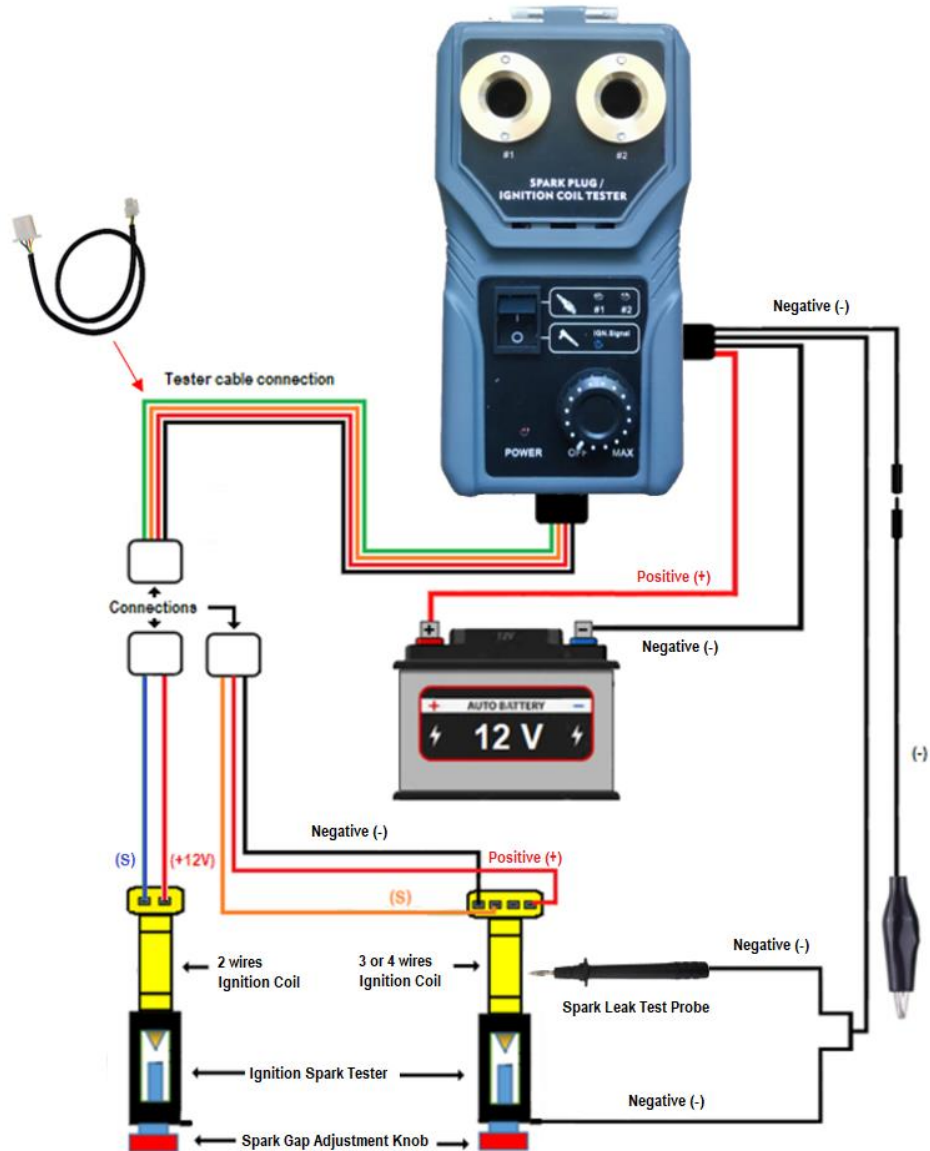


Fig.4

Press the **Select** button switch to [IGNITION COIL TEST] as shown in Fig. 5 below:

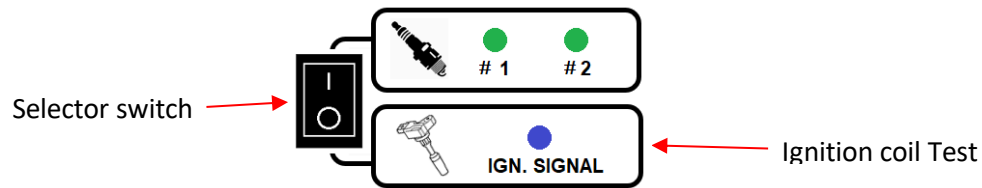


Fig.5

Momentarily switch **ON** Power button (Fig. 6 below) by turning the RPM knob to check whether it's Power (Red) LED is lighted up. In event that the connection is reversed, the tester will not power up and the LEDs will not light up.

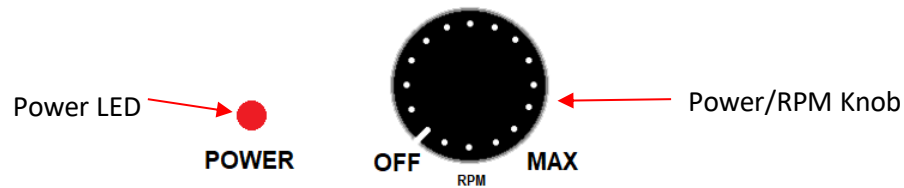


Fig.6

After confirmed that it has power, then switch the **POWER** button to **OFF** again and proceed to the next step.

Starting Ignition Simulation Test:

1. Make sure the arcing gap at the Ignition Spark Tester is adjusted to approximately 10mm to 20mm.
2. Then switch ON the power by turning the RPM knob (Fig. 6 above) clockwise and slowly increase the RPM speed and observe that the color of the sparks which should be purplish-blue and in a straight line (see Fig.7 below) if it is normal state.



Normal Spark

Fig.7

3. Increase the RPM speed gradually and continue until the coil heats up slightly (according to the situation).
4. Adjust the speed to the maximum again and observe whether the spark will break or spread out.

5. If sparks are in a curve manner (see Fig. 8 below) or in red colour, then it may indicate internal current leakage or the coil is aging.



Abnormal Spark

Fig.8

6. If there is a sound of arcing and no sparks, it means that the coil has internal leakage.

Note:

- 1. The simulated speed adjustment can be adjusted from 180 rpm to 10,000 rpm maximum with the Power/RPM knob (Fig.6).*
- 2. The spark distance in open air is much larger than the spark plug gap in the engine cylinder which is under compression with the rich mixture in the combustion chamber. The higher the pressure, the greater the spark resistance will be. Therefore, the spark gap on the Ignition Spark Tester should be adjusted according to the engine with different compression ratios to simulate the conditions as closely as possible and that is the reason why the need to adjust the gap from 10mm to 25mm.*

To test for coil leaks, connect the Spark Leak test probe (as Fig.9 shown below) to the axillary ground connection (see Fig.4 above). Place the probe near the coil and move around the outer casing to observe for any leaking sparks (see Fig.10 & 11 below). If there is then the coil is bad.



Spark Leak Test Probe

Fig.9

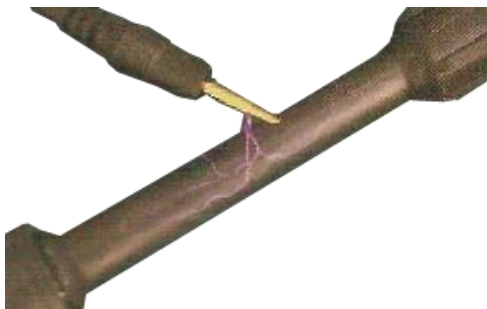


Fig.10

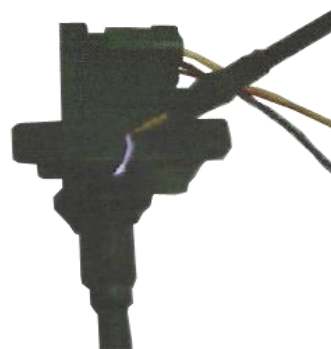


Fig.11

CAUTIONS:

1. *Do not perform any connection to its circuits while the tester is power ON to avoid any electrical shocks. Turn the Power / RPM knob to OFF position before attempting to make any connections.*
 2. *Do not operate the [Speed RPM] at maximum speed (10,000 rpm) for more than 5 minutes because it will overheat the ignition coil which may cause damage to it.*
5. To stop the operation just turn the Power/RPM knob to the left all the way down until it stops and the power LED switched OFF.

Typical Ignition Coil Test hook up configurations:

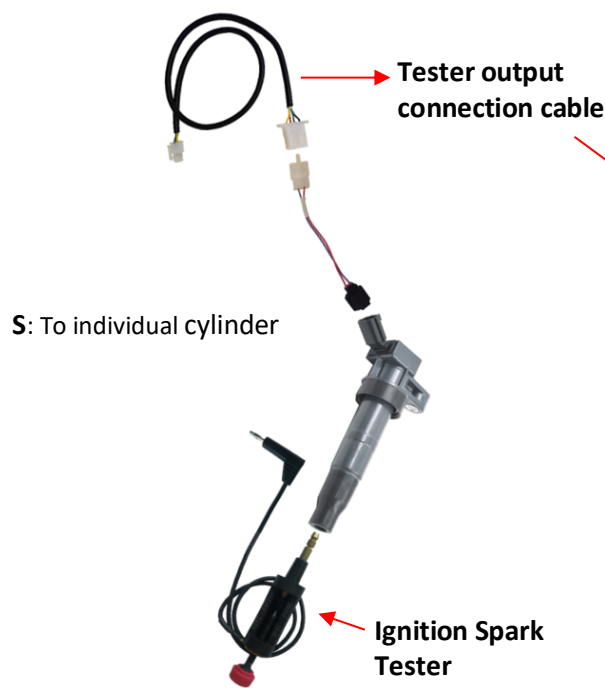


Fig.12

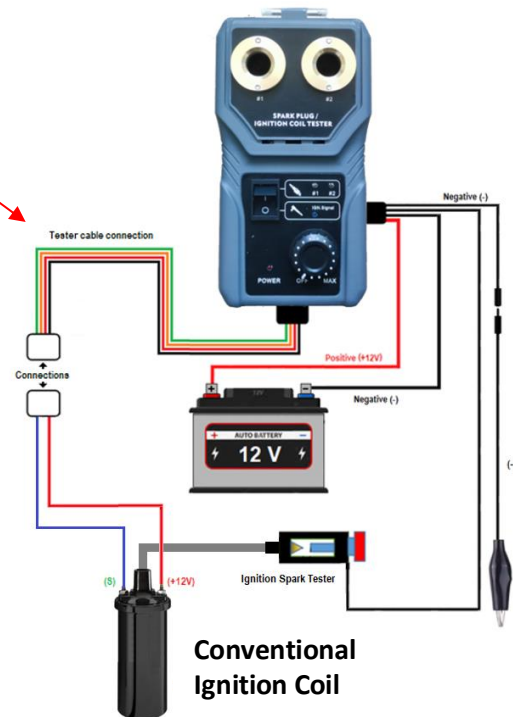


Fig.13

S: To both cylinders

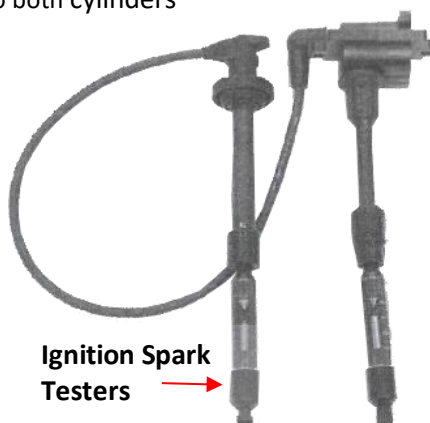


Fig.14

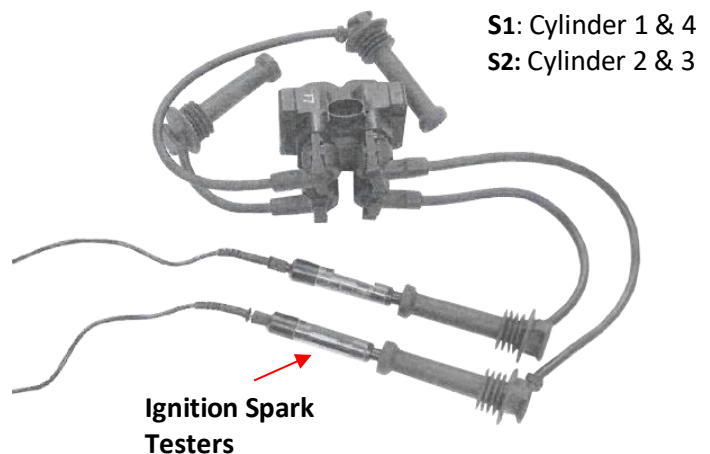


Fig.15

List of Ignition coils wire connections:

1. AUDI / SEAT / SKODA / VOLKSWAGEN



Connector

AUDI

06B 905 115R
06B 905 115M
06B 905 115J
06B 905 115P

SEAT

06B 905 115R
06B 905 115G

SKODA

06B 905 115R
06B 905 115D
06B 905 115Q
06B 905 115L

VOLKSWAGEN

06B 905 115R
06B 905 115J
06B 905 115G
06B 905 115N

Remarks:

Use connection cable marked: **VW/AUDI #1**
Negative (-), Signal (S), Positive (+),



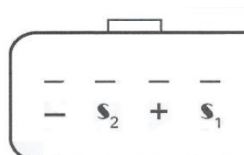
Connector

AUDI / SKODA / VOLKSWAGEN

036 905 100A
036 905 100D
036 905 715
036 905 715A
036 905 715C
036 905 715E

Remarks:

Use connection cable marked: **VW/AUDI #3**
Negative (-), Positive (+), Signal (S)



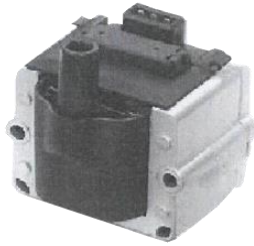
Connector

Remarks:

032 905 106 series

Use connection cable marked: **VW/AUDI #2**

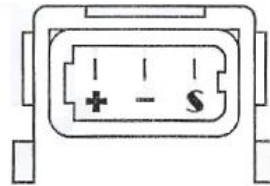
Negative (-), Signal (S2), Positive (+), Signal (S1)



Connector

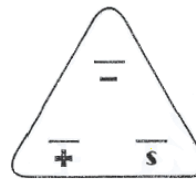
Remarks:
AUDI / VW
Positive (+), Negative (-), Signal (S)

2. BMW



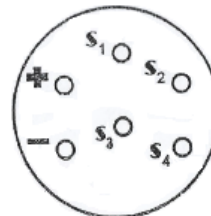
Connector

Remarks:
BMW - Before Year 2002 Models
Use connection cable marked: **BMW #1**
Positive (+), Negative (-), Signal (S)



Connector

Remarks:
BMW - After Year 2002 Models
Use connection cable marked: **BMW #2**
Negative (-), Positive (+), Signal (S)



Connector

Remarks:
E36 Series: 318, 318Ti, M42, M44
Negative (-), Positive (+), Signals (S1, S2, S3, S4)

S1: Cylinder 1
S2: Cylinder 2
S3: Cylinder 3
S4: Cylinder 4

3. CITROEN / FIAT / NISSAN / OPEL / PEUGEOT / RENAULT



Connector

Remarks:

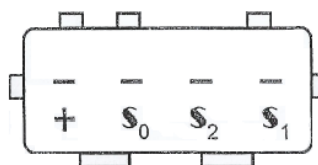
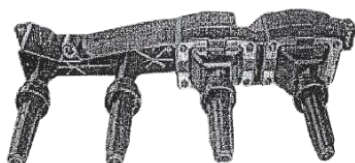
CITREON C5 / C6 / C8

FIAT / RENAULT 9633001580

PEUGEOT 406 / 407 / 607 / 807

Use connection cable marked: **PEUGEOT #1**

Signal (S), Positive (+)



S1: Cylinder 1 & 4

S2: Cylinder 2 & 3

S0: IGF

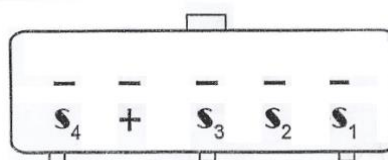
Connector

Remarks:

CITREON C3

PEUGEOT 106 / 206 / 307

Positive (+), Signal (S2, S1)



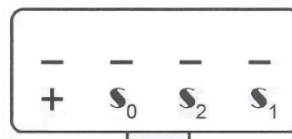
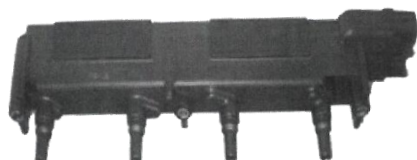
Connector

Remarks:

CITREON C8

PEUGEOT 406 / 407

Signal (S4), Positive (+), Signals (S3, S2, S1)



Connector

S1: Cylinder 1 & 4

S2: Cylinder 2 & 3

S0: IGF

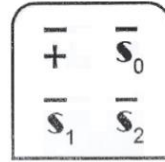
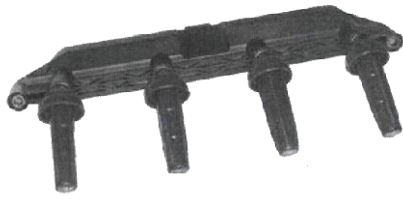
Remarks:

CITREON XSARA PICASSO 1.8/2.0 / C8 / JUMPY 2.0L

FIAT SCUDO ULYSSE 2.0L

PEUGEOT 307 / 407 / 807 / EXPERT 2.0L

Positive (+), Signal (S1, S2)



S1: Cylinder 1 & 4
S2: Cylinder 2 & 3
S0: IGF

Connector

Remarks:

CITREON BERLINGO / SAXO / XSARA / XSARA PICASSO

PEUGEOT 106 / 206 / 306

Positive (+), Signal (S1, S2)



Connector

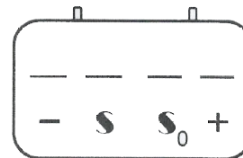
Remarks:

NISSAN / OPEL / RENAULT

Use connection cable marked: **RENAULT #1**

Positive (+), Signal (S)

4. DAIHATSU



S0: IGF

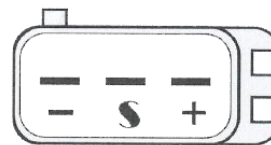
Connector

Remarks:

DAIHATSU K3-VE / 3SZ-VE

Use connection cable marked: **TOYOTA #1**

Negative (-), Signal (S), Positive (+)



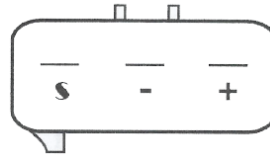
Connector

Remarks:

DAIHATSU CUORE / SIRION / 1K3-FE / K3-VE

Use connection cable marked: **DAIHATSU #1**

Negative (-), Signal (S), Positive (+)



Connector

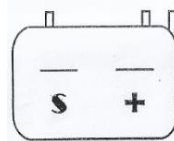
Remarks:

DAIHATSU TERIOS

Use connection cable marked: **SUZUKI #2**

Signal (S), Negative (-), Positive (+)

5. FORD



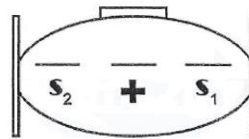
Connector

Remarks:

FORD ESCAPE

Use connection cable marked: **FORD #1**

Signal (S), Positive (+)



Connector

Remarks:

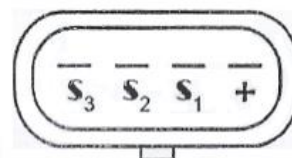
FORD ESCAPE / FOCUS / MONDEO

Use connection cable marked: **FORD #4**

Signal (S2), Positive (+), Signal (S1)

S1: Cylinder 1 & 4 Signal

S2: Cylinder 2 & 3 Signal



Connector

Remarks:

FORD

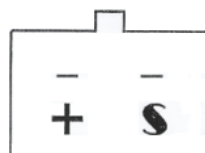
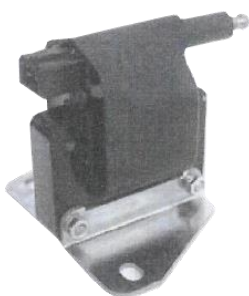
Use connection cable marked: **FORD #5**

Signal (S1, S2, S3), Positive (+)

S1: Cylinder 1 & 5 Signal

S2: Cylinder 2 & 6 Signal

S3: Cylinder 3 & 4 Signal



Connector

Remarks:

FORD

Use connection cable marked: **FORD #3**

Positive (+), Signal (S)



Connector

Remarks:

FORD TIERRA / MAV

Use connection cable marked: **MAZDA #2**

Signal (S), Negative (-), Positive (+)



Connector

Remarks:

FORD ESCAPE / I-MAX / MONDEO

Use connection cable marked: **NISSAN**

Signal (S), Negative (-), Positive (+)



Connector

Remarks:

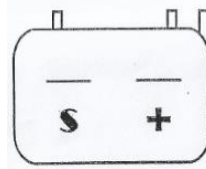
33400-65G00 / 33400-65G01

33400-65G02 / 33410-77E01 / CW-724632

Use connection cable marked: **MITSUBISHI #2**

Signal (S), Negative (-), Positive (+)

6. GENERAL MOTORS (GM)



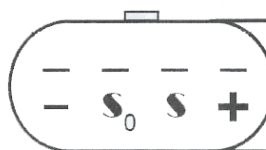
Connector

Remarks:

GENERAL MOTORS (GM)

Use connection cable marked: **FORD #1**

Signal (S), Positive (+)



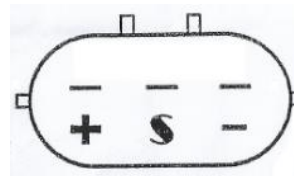
S0: IGF

Connector

Remarks:

GENERAL MOTORS (GM)

Negative (-), Signal (S), Positive (+)

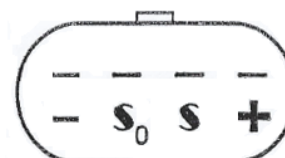


Connector

Remarks:

GENERAL MOTORS (GM)

Positive (+), Signal (S), Negative (-)



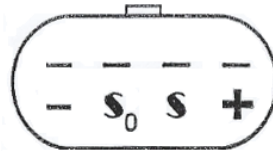
S0: IGF

Connector

Remarks:

CADILLAC / CHEVROLET / GM / HAMMER

Negative (-), Signal (S), Positive (+)



S0: IGF

Connector

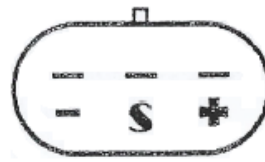
Remarks:

BUICK / CHEVROLET / GM / PONTIAC / SATURN

Negative (-), Signal (S), Positive (+)



Connect to Negative (-) Ground
when conducting test.



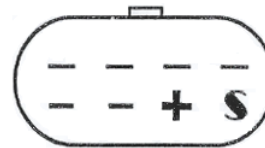
Connector

Remarks:

BUICK / CHEVROLET / GM / GMC / HAMMER /

ISUZU / OLDSMOBILE

Negative (-), Signal (S), Positive (+)



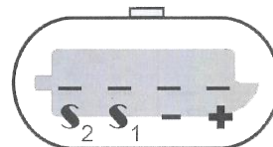
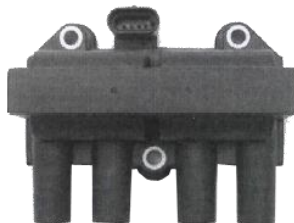
Connector

Remarks:

GM / SAAB

Use connection cable marked: **GM #1**

Negative (-), Positive (+), Signal (S)



S1: Cylinder 1 & 4 Signal

S2: Cylinder 2 & 3 Signal

Connector

Remarks:

BUICK / DAEWOO / GM / ISUZU / OPEL

Use connection cable marked: **GM #2**

Signals (S1, S2), Negative (-), Positive (+)

7. HONDA



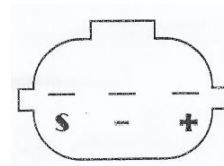
Connector

Remarks:

HONDA – Before Year 2007 Models

Use connection cable marked: **HONDA #1**

Signal (S), Negative (-), Positive (+)



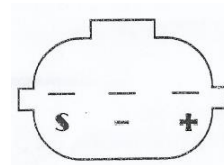
Connector

Remarks:

HONDA FIT

Use connection cable marked: **HONDA #2**

Signal (S), Negative (-), Positive (+)



Connector

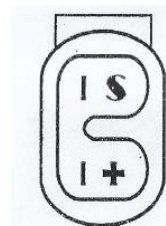
Remarks:

HONDA CR-V

Use connection cable marked: **HONDA #3**

Signal (S), Negative (-), Positive (+)

8. HYUNDAI / KIA



Connector

Remarks:

HYUNDAI SONATA

Use connection cable marked: **HYUNDAI #1**

Positive (+), Signal (S)



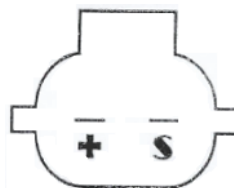
Connector

Remarks:

HYUNDAI SONATA / SANTAFE / TRAJET / XG350

Use connection cable marked: **HYUNDAI #2**

Positive (+), Signal (S), Negative (-)



Connector

Remarks:

HYUNDAI iX35

Use connection cable marked: **HYUNDAI #3**

Positive (+), Signal (S)

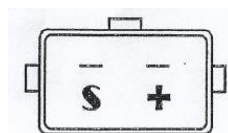


Connector

Remarks:

HYUNDAI SANTAFE / ACCENT / i30 / i35

Positive (+), Signal (S)

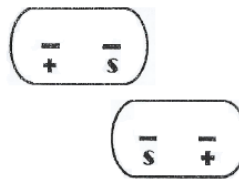
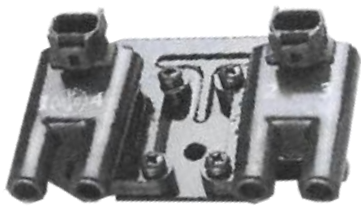


Connector

Remarks:

HYUNDAI SONATA

Signal (S), Positive (+)



Connector

Remarks:

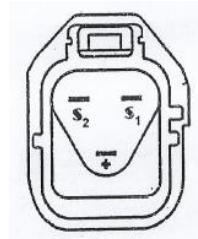
HYUNDAI MATRIX / ELANTRA / COUPE / KIA
Positive (+), Signal (S), Signal (S), Positive (+)



Connector

Remarks:

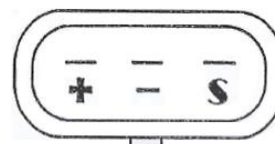
HYUNDAI ACCENT / TUCSON / KIA RIO
Use connection cable marked: **HYUNDAI #6**
Positive (+), Signals (S1, S2)



Connector

Remarks:

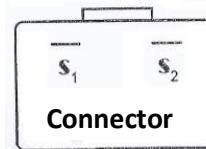
HYUNDAI ACCENT / TUCSON / KIA RIO
Use connection cable marked: **HYUNDAI #1**
Positive (+), Signals (S1, S2)



Connector

Remarks:

HYUNDAI ELANTRA / SANTAFE / SONATA
Positive (+), Negative (-), Signal (S)



S1: Cylinder 1 & 4 Signal
S2: Cylinder 2 & 5 Signal
S3: Cylinder 3 & 6 Signal

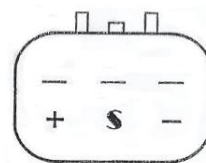
Remarks:

HYUNDAI SANTAFE / SONATA / TUCSON

Use connection cable marked: **HYUNDAI #1**

Positive (+), Signals (S1, S2, S3)

9. ISUZU



Connector

Remarks:

ISUZU

Positive (+), Signal (S), Negative (-)



Connect to Negative (-) Ground
when conducting test.



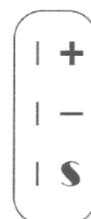
Connector

Remarks:

ISUZU ASCENDER / PICKUP

Positive (+), Signal (S), Negative (-)

10. LUXGEN



Connector

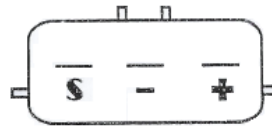
Remarks:

LUXGEN 7 (2.2L) / LUXGEN SUV (2.2L)

Use connection cable marked: **LUXGEN #1**

Positive (+), Negative (-), Signal (S)

11. MAZDA



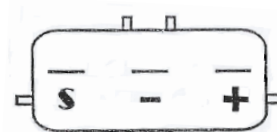
Connector

Remarks:

MAZDA 2 / 3 / 6 / TRIBUTE / MX5 / CX-7

Use connection cable marked: **NISSAN**

Signal (S), Negative (-), Positive (+)



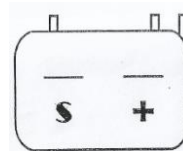
Connector

Remarks:

MAZDA 323 / PREMACY

Use connection cable marked: **MAZDA #2**

Signal (S), Negative (-), Positive (+)



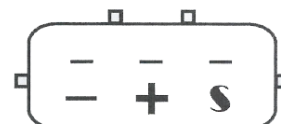
Connector

Remarks:

MAZDA / 3 / TRIBUTE

Use connection cable marked: **FORD #1**

Signal (S), Positive (+)



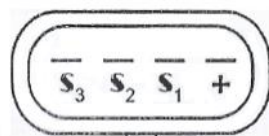
Connector

Remarks:

MAZDA 323 / TRIBUTE / MX5

Use connection cable marked: **MAZDA #4**

Negative (-), Positive (+), Signal (S)



Connector

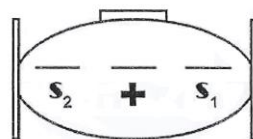
S1: Cylinder 1 & 5 Signal
S2: Cylinder 2 & 6 Signal
S3: Cylinder 3 & 4 Signal

Remarks:

MAZDA MPV

Use connection cable marked: **FORD #5**

Signals (S1, S2, S3), Positive (+)



Connector

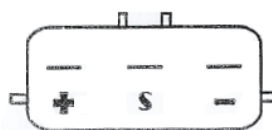
S1: Cylinder 1 & 4 Signal
S2: Cylinder 2 & 3 Signal

Remarks:

MAZDA 6

Use connection cable marked: **FORD #4**

Signal (S2), Positive (+), Signal (S1)

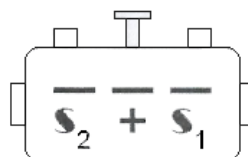


Connector

Remarks:

MAZDA RX-8

Positive (+), Signal (S), Negative (-)



Connector

S1: Cylinder 1 & 4 Signal
S2: Cylinder 2 & 3 Signal

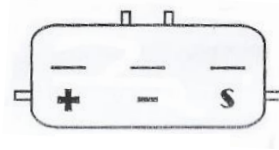
Remarks:

MAZDA 6

Use connection cable marked: **MAZDA #5**

Signal (S2), Positive (+), Signal (S1)

12. MERCEDES-BENZ



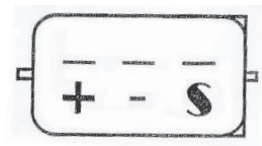
Connector

Remarks:

MERCEDES-BENZ M120

Use connection cable marked: **BENZ #1**

Positive (+), Negative (-), Signal (S)



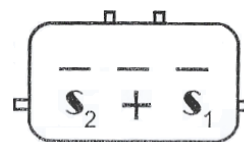
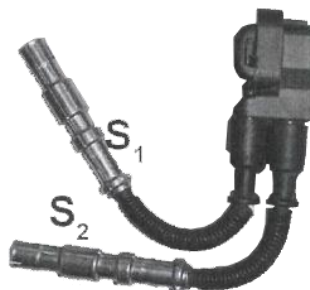
Connector

Remarks:

MERCEDES-BENZ M271

Use connection cable marked: **BENZ #3**

Positive (+), Negative (-), Signal (S)



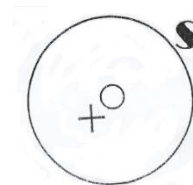
Connector

Remarks:

MERCEDES-BENZ M112 / M113 / M155 / M266

Use connection cable marked: **BENZ #2**

Signal (S2), Positive (+), Signal (S1)



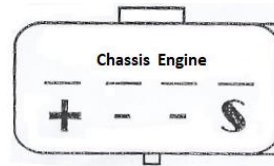
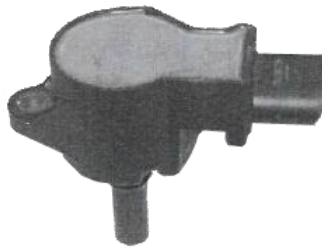
Connector

Remarks:

MERCEDES-BENZ M104 / M111

Use connection cable marked: **BENZ #4**

Positive (+), Signal (S)



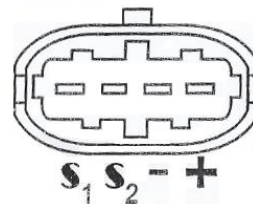
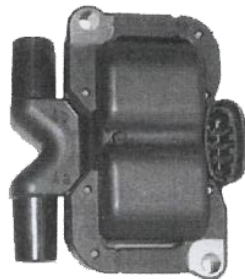
Connector

Remarks:

MERCEDES-BENZ M272 / M273

Use connection cable marked: **BENZ #5**

Positive (+), Chassis (-), Engine (-), Signal (S)

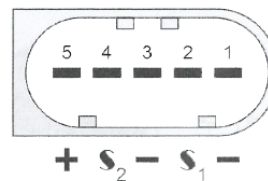


Connector

Remarks:

MERCEDES-BENZ M112 / M113 / SMART

Signals (S1, S2), Negative (-), Positive (+)



Connector

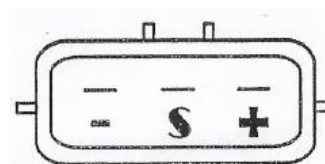
Remarks:

MERCEDES-BENZ C63 / W205

Positive (+), Signal (S2), Neg. (-), Signal (S1), Neg. (-)

Note: Both Negative (-) to be connected

13. MITSUBISHI



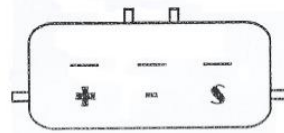
Connector

Remarks:

MITSUBISHI GROUNDER (4G69) / FORTIS (4B10) /
OUTLANDER (4B12) / SAVRIN (4G69)

Use connection cable marked: **MITSUBISHI #1**

Negative (-), Positive (+), Signal (S)

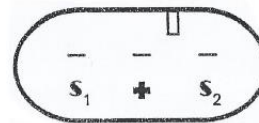
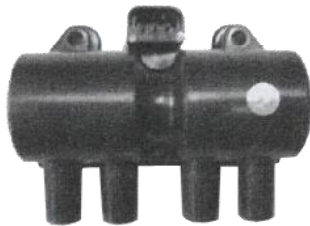


Connector

Remarks:

**MITSUBISHI GLOBER LANCER (4G91) /
LANCER (4G92) / VIRAGE (4G93) / SAVRIN (4G63)**

Use connection cable marked: **MITSUBISHI #2**
Positive (+), Negative (-), Signal (S)

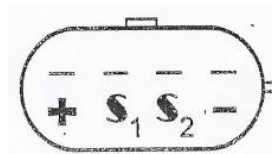
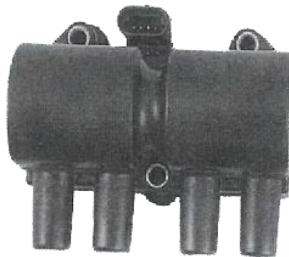


Connector

Remarks:

MITSUBISHI VARICA / CMC VERYCAR

Use connection cable marked: **MITSUBISHI #3**
Signal (S1), Positive (+), Signal (S2)



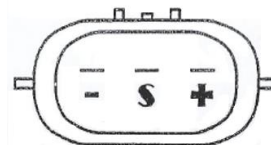
Connector

Remarks:

MITSUBISHI VARICA / CMC VERYCAR

Use connection cable marked: **GM #2**
Positive (+), Signal (S1), Signal (S2), Negative (-)

**S1: Cylinder 1 & 4 Signal
S2: Cylinder 2 & 3 Signal**

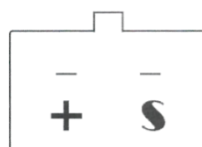


Connector

Remarks:

MITSUBISHI ZINGER (4G69)

Use connection cable marked: **MITSUBISHI #5**
Negative (-), Signal (S), Positive (+)



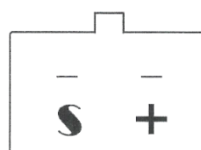
Connector

Remarks:

mitsubishi varica / CMC VERYCAR 1.3L

Use connection cable marked: **FORD #3**

Positive (+), Signal (S)



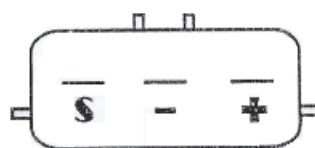
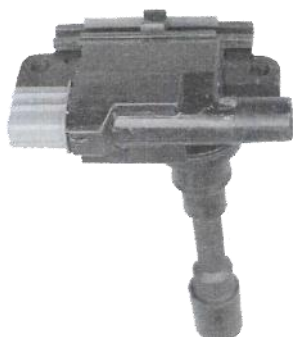
Connector

Remarks:

mitsubishi varica / CMC VERYCAR 1.2L

Use connection cable marked: **mitsubishi #6**

Signal (S), Positive (+)



Connector

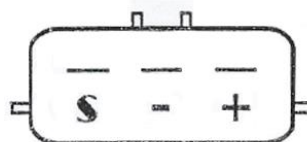
Remarks:

mitsubishi (PART NO. 475-9007)

Use connection cable marked: **mitsubishi #2**

Signal (S), Negative (-), Positive (+)

14. NISSAN



Connector

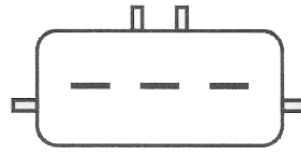
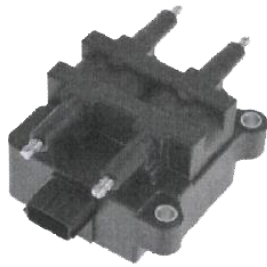
Remarks:

NISSAN – ALL MODELS

Use connection cable marked: **NISSAN**

Signal (S), Negative (-), Positive (+)

15. SUBARU



Connector

Remarks:
SUBARU IMPREZA
Negative (-), Signal (S), Positive (+)



Connector

Remarks:
SUBARU
Use connection cable marked: **FORD #1**
Signal (S), Positive (+)



Connector

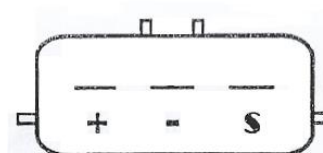
Remarks:
SUBARU FORESTER / LEGACY / STI / WRX
Use connection cable marked: **SUBARU #1**
Positive (+), Negative (-), Signal (S)



Connector

Remarks:
SUBARU IMPREZA / LEGACY / STI / WRX
Positive (+), Negative (-), Signal (S)

16. SUZUKI



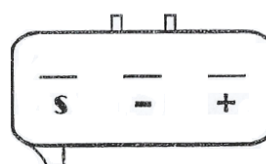
Connector

Remarks:

SUZUKI LIANA 1.5L / SOLIO 1.3L / SWIFT 1.5L

Use connection cable marked: **MITSUBISHI #2**

Signal (S), Negative (-), Positive (+)



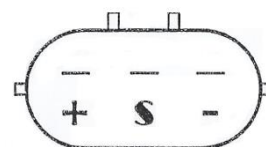
Connector

Remarks:

SUZUKI GRAND VITARA 2.0L / SX-4 1.6L

Use connection cable marked: **SUZUKI #2**

Signal (S), Negative (-), Positive (+)

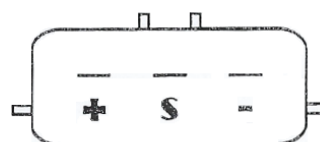


Connector

Remarks:

SUZUKI VERONA 2.5L

Positive (+), Signal (S), Negative (-)



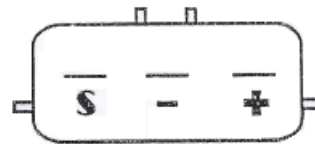
Connector

Remarks:

SUZUKI GRAND VITARA 2.5L

Use connection cable marked: **SUZUKI #3**

Positive (+), Signal (S), Negative (-)



Connector

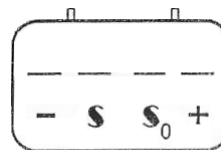
Remarks:

SUZUKI ESTEEM – YEAR 1999 ~ 2000

Use connection cable marked: **MITSUBISHI #2**

Signal (S), Negative (-), Positive (+)

17. TOYOTA



S0: IGF

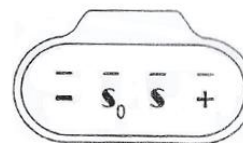
Connector

Remarks:

TOYOTA ALTIS / CAMRY / INNOVA / PREVIA /
RAV4 / VIOS / WISH / YARIS

Use connection cable marked: **TOYOTA #1**

Negative (-), Signal (S), Positive (+)



S0: IGF

Connector

Remarks:

TOYOTA – YEAR 1966 ~ 2002

Use connection cable marked: **TOYOTA #2**

Negative (-), Signal (S), Positive (+)



Connector

Remarks:

TOYOTA AVALON – BEFORE YEAR 1993

Use connection cable marked: **HYUNDAI #1**

Signal (S), Positive (+)



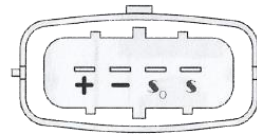
Connector

Remarks:

TOYOTA AVALON – YEAR 1993 ~ 1995

Use connection cable marked: **HYUNDAI #1**
Signal (S), Positive (+)

18. VOLVO



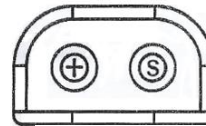
S0: IGF

Connector

Remarks:

VOLVO C70 / S60 / S80 / V70 / XC70 / XC90

Use connection cable marked: **VOLVO #1**
Positive (+), Negative (-), Signal (S)

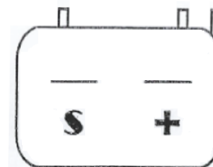


Connector

Remarks:

VOLVO 960 / V40

Use connection cable marked: **VOLVO #2**
Positive (+), Signal (S)



Connector

Remarks:

VOLVO C30 – After Year 2007

VOLVO S40 – 1st Generation (2000 ~ 2004)

2nd Generation (After Year 2004)

VOLVO V50 – After Year 2004

Use connection cable marked: **FORD #1**
Positive (+), Signal (S)

IMPORTANT to note:

1. *The above Ignition coil list is just part of most Manufacturers' models but not all and it is not complete as there maybe recently introduced models in the market and different regions in the world might have its own local models which may not be covered here. In any case, please refer to the relevant Car Service and Repair Manual for those not found in the list to avoid any mistake in the connections to the Ignition coil terminals during hook up for the test.*
2. *If there is no connection cable listed, then make use of the connection cable with Flat terminals (2.5mm, 3.0mm and 5.0mm) provided. Find the appropriate size to fit the Ignition coil terminals connection but first refer to the Repair Manual to confirm the right connection [positive (+), Signal (S), Negative (-)] before hook up to avoid damage to the coil during testing.*

Spark Plug Test mode:

The purpose of this test is to check the conditions of spark plugs after it has been cleaned and its spark gap has been reset. From the sparks generated it can always tell its condition while adjusting [Speed RPM] knob.

1. To begin test, place the spark plugs into the test slot and securely fixed in its position.

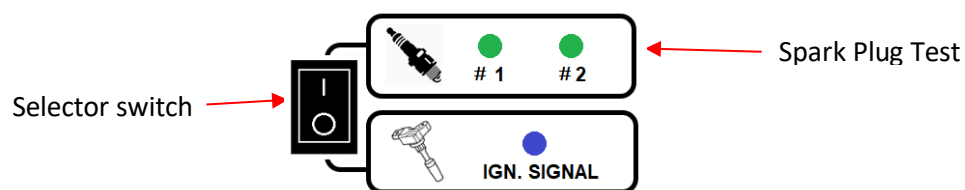


Fig.16

Momentarily switch **ON** Power button (Fig. 17 below) by turning the RPM knob to check whether it's Power (Red) LED is lighted up. In event that the connection is reversed, the tester will not power up and the LEDs will not light up.

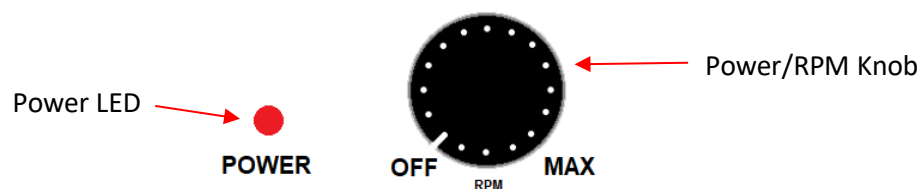


Fig. 17

2. Place the Spark plugs into both or either one of its slots (Fig.18 below), press firmly downwards to ensure that it is securely held in it.



3. Switch **ON** the **POWER** button by turning the [Speed RPM] knob (Fig.17) to the right direction and observe the sparks generated. The intensity of the sparks can be increased or decreased by turning the knob clockwise or counter clockwise.
4. To stop the operation just turn the Power/RPM knob to the left all the way down until it stops and the power LED switched OFF.

Fuel Injector Tester mode:

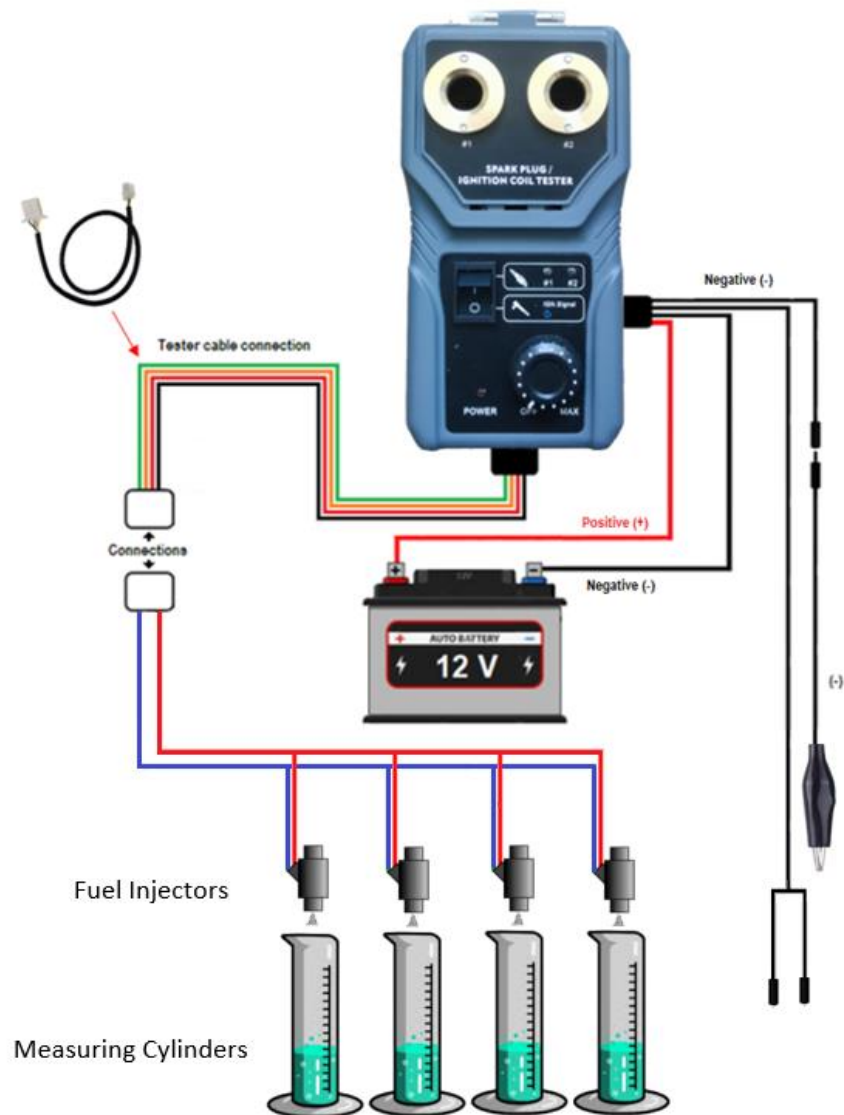


Fig. 18

To enter into Fuel Injector Test or Sensor simulation mode:

1. Press the **Select** button switch to [IGNITION COIL TEST] as shown in Fig. 19 below:

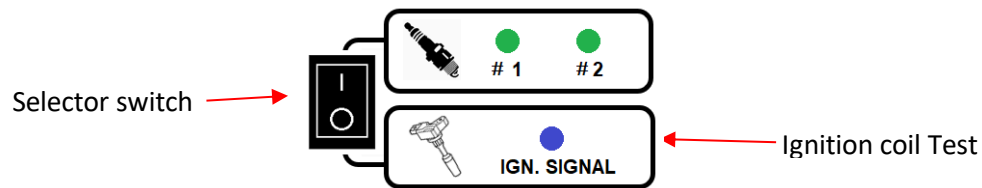


Fig.19

Momentarily switch **ON** Power button (Fig. 20 below) by turning the RPM knob to check whether it's Power (Red) LED is lighted up. In event that the connection is reversed, the tester will not power up and the LEDs will not light up.

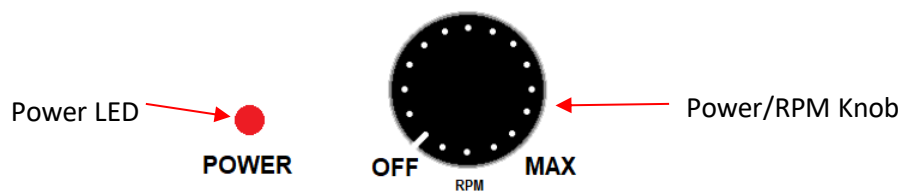


Fig.20

After confirmed that it has power, then switch the **POWER** button to **OFF** again and proceed to the next step.

2. Hook up the Fuel Injectors circuits as according to the above schematic (Fig. 18). To test its spray volume, it has to be connected to a pressurised line.
3. For Sensor simulation test, connect to the [red wire and green wire] cable (Fig. 21 below).

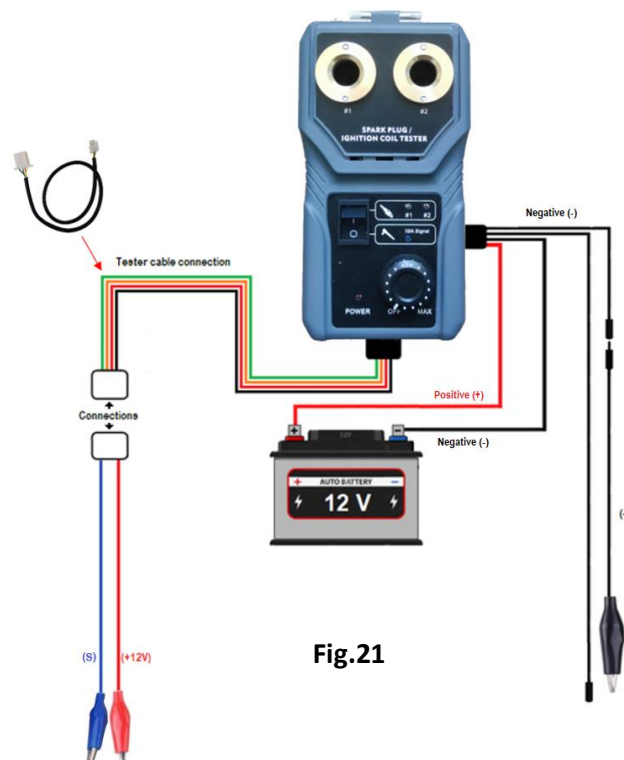


Fig.21

List of Ignition coils connecting cables and Accessories provided:



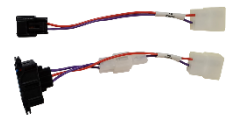
**AUDI / VW /
SEAT / SKODA**



BMW



DAIHATSU



FORD



GM



HONDA



HYUNDAI / KIA



LUXGEN



M. BENZ



MAZDA



MITSUBISHI



NISSAN



SUBARU



SUZUKI



TOYOTA



VOLVO



**SIMULATION OUTPUT
CABLE**



**CONNECTION CABLE
(2.5 MM FLAT TERMINAL)**



**CONNECTION CABLE
(3.0 MM FLAT TERMINAL)**



**CONNECTION CABLE
(5.0 MM FLAT TERMINAL)**



**TESTER OUTPUT
CONNECTION CABLE**



**TESTER POWER INPUT
CONNECTION CABLE**



**SPARK LEAK TEST
PROBE**



**IGNITION SPARK
TESTER**

Technical Specifications:

Power Input.....	12V DC supply
Number of Spark plug Test simultaneously.....	2 nos.
Pulse signal indications.....	Spark Plug test – 2 Green LEDs
Ignition Coil Test.....	2 wires, 3 wires and 4 wires type.
Ignition Pulse signal indications.....	1 Blue LED
Adjustable RPM Range.....	180 RPM to 10,000 RPM max.
Ignition Spark Tester Gap adjustment	0 ~ 25mm Arcing distance.
Simulation Signal Range.....	7Hz to 346Hz max. (Square Wave)
Simulation Voltage.....	12 Volts (Depends on Battery Voltage)
Short circuit Protection.....	Self-Recovery - 2.0 Amps PTC fuse
Inverse Polarity Protection.....	No power on reverse polarity.
Working Temperature.....	0°C (32°F) ~ 50°C (122°F)
Working Humidity.....	10% ~ 80 %
Approvals.....	CE, ROHS

Product Warranty

The Spark Plug and Ignition Coil Tester comes with one-year warranty and undergoes strict quality control for testing workmanship, function and safety before leaving the factory.

From the date of purchase, we will warranty/repair of this Ignition Coil and Spark Plug Tester against defects in parts and workmanship.

All repairs due to misuse or tampering with will incur a charge. All warranty units must be accompanied by a copy of the original sale receipt.

This warranty doesn't apply to products which have been:

1. Altered.
2. Improperly installed, maintained or repaired.
3. Damaged by accident, negligence or misuse.

THIS WARRANTY EXCLUDES ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF MISUSE