

## Oxygen Sensor Installation Instructions by – PerformanceChipTuning.com

Before installation please confirm that stock O2 sensor is working correctly because result might be diminished if stock oxygen sensor does not work with proper signals: if your sensor is old or worn.

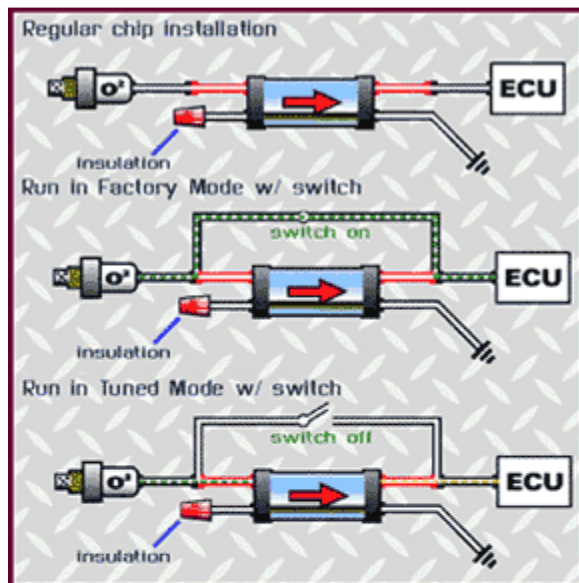
### FACTORY RECOMMENDATION FOR MAINTENANCE OF O2 SENSOR(S)

1. SHOULD BE CHECKED BY EACH 20.000 MILES (32.000 km).
2. MUST BE REPLACED BY EACH 50.000 MILES (80.000 Km).

Please follow these steps below for installation:

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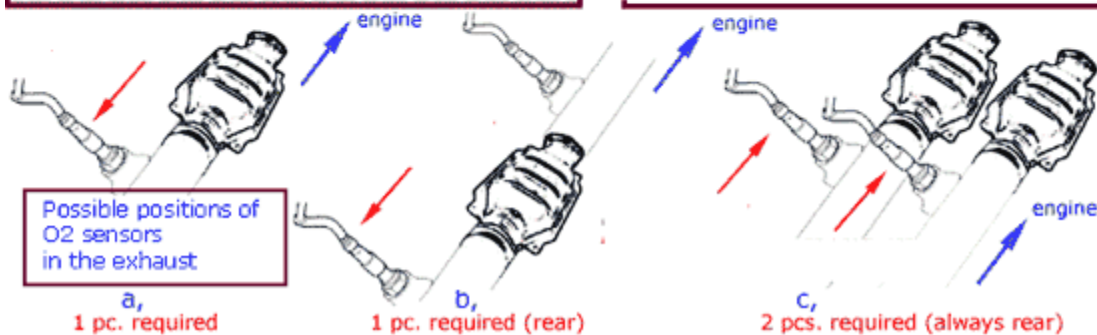
1. Cut the original harness between the factory plug and the oxygen sensor.
2. See colors & operations of each wire in car wiring diagram or search for your combination in table below.
3. Connect the suitable wires with terminals or solder them in place.
4. Seal the contacts with the provided heat shrink tubing or electrical tape.



Installs on your O2 sensor



2 O2 Power Chips required if you have 2 Catalytic Converters



Please make sure the red arrow on the oxygen chip points toward the engine.

**COLOR MATCHING for 1,2,3,4 wire O2 sensors:**

| WIRES of O2 SENSOR | STOCK | CHIP WIRE | STOCK | CHIP WIRE | STOCK  | CHIP WIRE | STOCK | CHIP WIRE |
|--------------------|-------|-----------|-------|-----------|--------|-----------|-------|-----------|
| signal             | blue  | red       | white | red       | green  | red       | black | red       |
| ground             | white | black     | green | black     | yellow | black     | gray  | black     |
| heater             | black | -----     | black | -----     | black  | -----     | white | -----     |
| heater             | black | -----     | black | -----     | black  | -----     | white | -----     |

**COLOR MATCHING for rare 5 wire sensors**

| WIRES of O2 SENSOR | STOCK  | CHIP WIRE | STOCK  | CHIP  |
|--------------------|--------|-----------|--------|-------|
| signal in1         | red    | -----     | blue   | ----- |
| signal out         | black  | red       | black  | red   |
| sign in2           | yellow | -----     | white  | ----- |
| heater-            | white  | black     | grey   | black |
| heater+            | grey   | -----     | yellow | ----- |

Please watch out the sign on the chip, arrow must face the ECU.

Incidental mismatching of wires by installation does not result any damage.

### 1 wire version

1. Cut the one wire of O2 sensor.
2. Contact here in series the red of performance chip.
3. Ground one side of performance chip's black wire to the chassis or the exhaust pipe.
4. Seal the other end of chip's black wire.

### 2 wire version

1. Cut the signal wire of O2 sensor (see table below).
2. Contact here in series the red of performance chip.
3. Ground the black of performance chip to the ground wire of the sensor.
4. Seal the other end of chip's black wire.



|            |        |        |       |       |        |       |          |
|------------|--------|--------|-------|-------|--------|-------|----------|
| TOYOTA     | DENSO  | BLACK  | BLUE  | BLACK | BLUE   | BLUE  | SIGNAL + |
|            |        |        | WHITE | WHITE | BLACK  | WHITE |          |
|            |        |        |       |       | BLACK  | BLACK | HEATER   |
|            |        |        |       |       | BLACK  | BLACK | HEATER   |
| HONDA      | DENSO  | BLACK  |       |       |        | BLUE  | SIGNAL + |
|            |        |        |       |       |        | WHITE | SIGNAL - |
|            |        |        |       |       |        | BLACK | HEATER   |
|            |        |        |       |       |        | BLACK | HEATER   |
|            | NGK    | BLACK  |       |       |        | WHITE | SIGNAL + |
|            |        |        |       |       |        | GREEN | SIGNAL - |
|            |        |        |       |       |        | BLACK | HEATER   |
|            |        |        |       |       |        | BLACK | HEATER   |
|            | DELPHI | VIOLET |       |       |        |       | SIGNAL + |
| NISSAN     | U-JECS | GREEN  |       |       | BLACK  | BLACK | SIGNAL + |
|            |        |        |       |       | WHITE  | RED   | SIGNAL - |
|            |        |        |       | WHITE | WHITE  |       | HEATER   |
|            |        | BOSCH  | BLACK |       |        | BLACK |          |
|            |        |        |       |       |        | WHITE | SIGNAL - |
|            |        |        |       |       | WHITE  |       | HEATER   |
| MAZDA      | DENSO  | BLACK  |       |       | BLUE   | BLUE  | SIGNAL + |
|            |        |        |       |       | BLACK  | WHITE | SIGNAL - |
|            |        |        |       |       | BLACK  | BLACK | HEATER   |
|            |        |        |       |       | BLACK  | BLACK | HEATER   |
|            | BOSCH  |        |       |       |        | BLACK | SIGNAL + |
|            |        |        |       |       |        | GRAY  | SIGNAL - |
|            |        |        |       |       |        | WHITE | HEATER   |
|            |        |        |       |       |        | WHITE | HEATER   |
| MITSUBISHI | DENSO  | BLACK  |       |       | BLUE   | BLUE  | SIGNAL + |
|            |        |        |       |       | BLACK  | WHITE | SIGNAL - |
|            |        |        |       |       | BLACK  | BLACK | HEATER   |
|            |        |        |       |       | BLACK  | BLACK | HEATER   |
|            | BOSCH  |        |       |       |        | BLACK | SIGNAL + |
|            |        |        |       |       |        | GRAY  | SIGNAL - |
|            |        |        |       |       |        | WHITE | HEATER   |
|            |        |        |       |       |        | WHITE | HEATER   |
| SUZUKI     | DENSO  | BLACK  |       |       |        | BLUE  | SIGNAL + |
|            |        |        |       |       |        | WHITE | SIGNAL - |
|            |        |        |       |       |        | BLACK | HEATER   |
|            |        |        |       |       |        | BLACK | HEATER   |
|            | DELPHI | VIOLET |       |       | VIOLET |       | SIGNAL + |
|            |        |        |       |       |        | BROWN | SIGNAL - |
|            |        |        |       |       | BROWN  |       | HEATER   |
|            |        |        |       |       |        | BROWN | HEATER   |

|            |        |        |     |        |        |       |        |          |
|------------|--------|--------|-----|--------|--------|-------|--------|----------|
| SUBARU     | U-JECS | GREEN  | RED | ORANGE | BLACK  | BLACK |        | SIGNAL + |
|            |        |        |     |        | WHITE  | RED   |        | SIGNAL - |
|            |        |        |     |        | WHITE  | WHITE |        | HEATER   |
|            | BOSCH  |        |     |        | BLACK  |       |        | HEATER   |
|            |        |        |     |        | WHITE  |       |        | SIGNAL + |
|            |        |        |     |        | WHITE  |       |        | SIGNAL - |
|            |        |        |     |        |        |       |        | HEATER   |
|            | DENSO  | BLACK  |     |        |        |       |        | HEATER   |
|            |        |        |     |        |        |       |        | SIGNAL + |
| ISUZU      | DENSO  | BLACK  |     |        | BLUE   | WHITE | WHITE  | SIGNAL + |
|            |        |        |     |        |        | BLUE  | GREEN  | SIGNAL - |
|            |        |        |     |        | BLACK  | BLACK | BLACK  | HEATER   |
|            |        |        |     |        | BLACK  | BLACK | BLACK  | HEATER   |
|            | DELPHI | VIOLET |     |        | VIOLET |       |        | SIGNAL + |
|            |        |        |     |        |        | BROWN |        | SIGNAL - |
|            |        |        |     |        | BROWN  |       | HEATER |          |
|            | BOSCH  |        |     |        | BLACK  |       |        | HEATER   |
|            |        |        |     |        |        | WHITE |        | SIGNAL + |
|            |        |        |     |        | WHITE  |       |        | SIGNAL - |
|            |        |        |     |        |        |       |        | HEATER   |
| VW AUDI    | BOSCH  | BLACK  |     |        | BLACK  | BLACK | GRAY   | SIGNAL + |
|            |        |        |     |        |        | GRAY  |        | SIGNAL - |
|            |        |        |     |        | WHITE  | WHITE | WHITE  | HEATER   |
|            |        |        |     |        | WHITE  |       |        | HEATER   |
| BENZ       | BOSCH  | BLACK  |     |        | BLACK  | BLACK | GRAY   | SIGNAL + |
|            |        |        |     |        |        | GRAY  |        | SIGNAL - |
|            |        |        |     |        | WHITE  | WHITE | WHITE  | HEATER   |
|            |        |        |     |        | WHITE  |       |        | HEATER   |
| BMW        | BOSCH  | BLACK  |     |        | BLACK  | BLACK | GRAY   | SIGNAL + |
|            |        |        |     |        |        | GRAY  |        | SIGNAL - |
|            |        |        |     |        | WHITE  | WHITE | WHITE  | HEATER   |
|            |        |        |     |        | WHITE  |       |        | HEATER   |
| PORSCHE    | BOSCH  | BLACK  |     |        | BLACK  | BLACK | GRAY   | SIGNAL + |
|            |        |        |     |        |        | GRAY  |        | SIGNAL - |
|            |        |        |     |        | WHITE  | WHITE | WHITE  | HEATER   |
|            |        |        |     |        | WHITE  |       |        | HEATER   |
| ALFA-ROMEO | BOSCH  | BLACK  |     |        | BLACK  | BLACK | GRAY   | SIGNAL + |
|            |        |        |     |        |        | GRAY  |        | SIGNAL - |
|            |        |        |     |        | WHITE  | WHITE | WHITE  | HEATER   |
|            |        |        |     |        | WHITE  |       |        | HEATER   |

|         |          |       |               |                         |                                 |  |
|---------|----------|-------|---------------|-------------------------|---------------------------------|--|
| VOLVO   | BOSCH    | BLACK |               | BLACK                   | BLACK<br>GRAY<br>WHITE<br>WHITE | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
| SAAB    | BOSCH    |       |               | BLACK<br>WHITE<br>WHITE | BLACK<br>GRAY<br>WHITE<br>WHITE | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
| RENAULT | BOSCH    | BLACK |               | BLACK<br>WHITE<br>WHITE | BLACK<br>GRAY<br>WHITE<br>WHITE | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
|         | AUTOLITE | BLACK |               |                         |                                 | SIGNAL +                                 |
| JAGUAR  | BOSCH    |       |               | BLACK<br>WHITE<br>WHITE |                                 | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
|         | DENSO    |       | BLUE<br>WHITE |                         | BLUE<br>WHITE<br>BLACK<br>BLACK | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
| HYUNDAI | KEFICO   |       | BLACK<br>GRAY | BLACK<br>WHITE<br>WHITE | BLACK<br>GRAY<br>WHITE<br>WHITE | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
|         | DENSO    | BLACK |               |                         |                                 | SIGNAL +                                 |
|         | NGK      |       |               |                         |                                 | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
| KIA     | DENSO    | BLACK |               |                         | BLUE<br>WHITE<br>BLACK<br>BLACK | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
|         | BOSCH    |       |               | BLACK<br>WHITE<br>WHITE | BLACK<br>GRAY<br>WHITE<br>WHITE | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |

IF GENERIC SEE BELOW:

|          |       |  |                         |  |  |
|----------|-------|--|-------------------------|--|--|
| STANDARD | BLACK |  | BLACK<br>WHITE<br>WHITE |  | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |
| ECHLIN   |       |  | BLACK<br>WHITE<br>WHITE |  | SIGNAL +<br>SIGNAL -<br>HEATER<br>HEATER |