# **Safety Precautions**

To prevent accidents that could possibly result in serious injury and/or damage to the vehicles and/or test equipment, carefully observe all safety rules and test procedures when working on vehicles.

Before working on a vehicle set the brakes and block the wheels. Beware of automatic parking brake releases.

When the engine is running, it produces carbon monoxide, a toxic and poisonous gas. Always operate the vehicle in a well ventilated area. Do not breathe the exhaust gases - they are hazardous and can lead to death.

### Fuel and battery vapours are highly flammable. DO NOT SMOKE NEAR THE VEHICLE DURING TESTING.

When engine is running, many parts (such as pulleys, coolant fan, belts, etc) are turn at high speed. To avoid serious injury, always be alert and keep a safe distance from these parts.

Engine parts become very hot when engine is running. To prevent severe burns, avoid contact with hot engine parts.

# **Limited Warranty**

This limited warranty covers defects in materials and workmanship for a period of twelve (12) months from the date the product is initially purchased, including only those defects that arises as a result of normal use and does not cover those that arises as a result of unauthorized modifications and repair, improper operation (i.e.: over tighten on Piezo Clamp) or misuse, accident or neglect such as dropping the unit onto hard surfaces, contact with water, rain or extreme humidity or extreme heat, Leads that have broken, physical damage to the product surface including scratches, cracks or other externally exposed parts.

# Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: +44 (0) 1926 818186. Normal wear and tear are excluded as are consumable items and abuse.



#### Distributed by The Tool Connection Ltd

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# **GUNSON**<sup>®</sup> DIESEL INJECTOR PULSE PICK UP

# Instructions and Guarantee

This Diesel Adaptor Kit can be used with almost any Petrol Timing Light, Engine Analyzer or Digital Multi-meter which has an inductive pickup to detect the pulses on the fuel pipes of diesel fuel injectors.

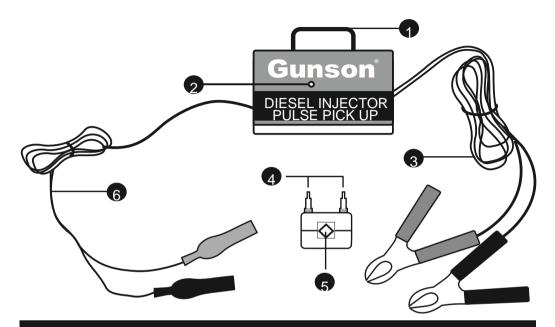
It works on most Diesel engines with 1/4" | 3/8" external fuel pipes.

Note: This product is designed to work with Distributor type high pressure pump systems. It will not work on common rail or PD type systems.

### SPECIFICTIONS

- Input power: 6V-30V DC
- Trigger Point: 15% of the highest pressure in the Injector pipe.
- Size of Piezo Clamp: fits for 6mm | 10mm (1/4" | 3/8") of Injector Pipes.

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Diesel Injector Pulse Pick-up Adaptor Kit

- 1. Pick-up Loop
- 2. Indicator Light
- 3. Power Lead
- 4. Adjustable Nuts
- 5. Piezo Clamp
- 6. Sensor Lead

- 1. With the ignition switched off locate No1 Injector high pressure fuel pipe.
- Clamp the Piezo Clamp (5) on a straight section of Injector fuel pipe as close to the pump as possible (there is less noise on the pump end of the pipe to interfere with the pulse), ensuring the Piezo Clamp (5) and fuel pipe are clean and dry.
- Make sure the fuel pipe is straight and is in contact with the Piezo Clamp (5) but do not over tighten, Over tightening may cause damage on the sensor element.
- 4. Connect the Sensor Lead clips YELLOW (6) to one adjustable nut (4) on the Piezo clamp and the black clip direct to the pipe.
- Warning: Do not allow the black Sensor clip to touch the Glow Plug Plate or wiring; it may cause a short circuit.

Connect the Power Lead clips (3) RED to positive and BLACK to negative of the vehicles battery.

Note: The Timing Light, Engine Analyzer or Digital Multi-meter should be powered with the vehicle battery as well.

- 5. Clamp a timing light inductive pickup on the Pick-up Loop (1) following the arrow marks on the timing light.
- 6. Start the engine and warm up to operating temperature
- Read the results from the timing light. The Indicator light should fl ash constantly.
  If the Indicator Light does not fl ash, check all the connections or relocate the Piezo Clamp to another

### Instructions

### section of the fuel pipe.

Note: Low vehicle battery, defective injector pump, or out of fuel engine may cause the Indicator Light not to fl ash.