

5112

LASER®

Diesel Smoke Meter



NEW
PRODUCT



Description

Diesel smoke meter utilises the same technology as used in MOT smoke meters. For the analysis of diesel engine emissions etc.

Packaging

Blow mould case and label

Additional Information

- Simple and easy to use
- Green for pass red for fail
- No batteries fully portable
- 12volt cigar lighter connection

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 **TOOL
CONNECTION**

Distributed by The Tool Connection Ltd.
Kineton Road | Southam | Warwickshire | CV47 0DR
T | +44 (0) 1926 815 000 F | +44 (0) 1926 815 888
E | info@toolconnection.co.uk www.toolconnection.co.uk

LASER®



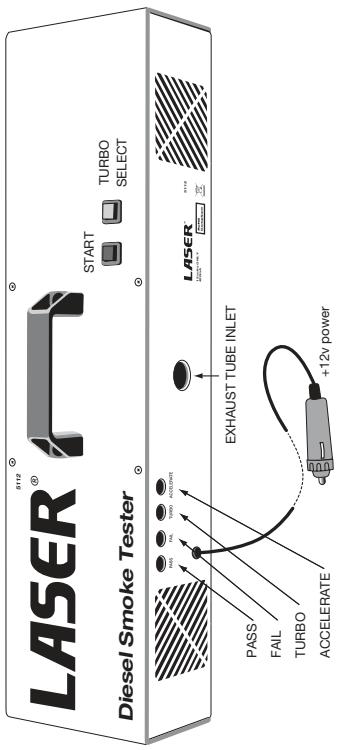
Gunson®

Eldon



Diesel Smoke Meter

Basic Summary of 5112 LED functionality:



SPECIFICATION

Pre-July 1st 2008 Non-Turbocharger

Diesel Opacity:

Lower than 2.5km-1 = **PASS** Light ON
Higher than 2.5km-1 = **FAIL** Light ON

Pre-July 1st 2008 Turbocharged

Diesels Opacity:

Lower than 3Km-1 = **PASS** Light ON
Higher than 3Km-1 = **FAIL** Light ON

From and including July 1st 2008

(All) Diesel Opacity:

Lower than 1.5Km-1 = **PASS** Light ON
Higher than 1.5Km-1 = **FAIL** Light ON

Note: Not for use on spark ignition engines (petrol engines).

Preparation

Important: As for any emissions test, there are certain pre-test conditions that must be observed. Failure to comply with these conditions could cause a false test result or even major engine damage.

Disclaimer:

The diesel emissions test process requires the engine being tested to be run at full throttle with no load. This means the engine will run at maximum revolutions per minute (RPM). For this reason, The Tool Connection Ltd, its representatives and distributors cannot be held responsible for damage caused due to engine failure during testing.

The Laser Diesel Smoke Meter (part no: 5112) has been developed to offer a fast and cost effective solution to checking the emissions from a diesel engine exhaust. The technology used to measure the exhaust emissions is the same as that used in current MOT machines; it measures the smoke level of the exhaust gas in the same way and to the same specifications. It has been developed to allow the professional garage and home mechanic to check the emissions from a diesel engine for service and pre-MOT purposes. The 5112 is not approved for use for the MOT test; it cannot be linked to a PC or the MOT vehicle database. Suitable for all turbo and non-turbo diesel engines.

Pre-Test Checks:

- Mechanical Condition** - as stated above the test requires the engine to be run at full throttle. It is therefore very important that the engine is mechanically sound. Camshaft drive belts are of particular concern, ensure the camshaft drive belt and its idlers are in good serviceable condition. If the belt is due for change it is advised this is done prior to the test.

- Fuel system condition** - check the fuel filters and fuel pipes are in good general condition. For best results ensure the fuel filter is free from air leaks and the presence of water (drain the water separator).
- Air filter and engine breather system**
- always ensure the air filter and oil breather system is clean and operating correctly.

- Oil level** - insufficient oil and excessive oil in the sump can both do significant damage to a diesel engine. Insufficient oil both in quality and quantity can cause premature engine failure. Excessive engine oil quantity can cause oil to enter the combustion chambers of the engine via the engine breather and air filter system. This engine oil will be burnt as fuel and could cause the engine to start running on its own oil allowing it to run at un-governed engine speeds and resulting in major engine damage.
- Pre-2008 Non turbo vehicle** - default (do not press turbo selection button)
• Orange Turbo LED off -
• Orange Turbo LED on -

- Pre-2008 Turbo Vehicle**
- press turbo selection button once
• Orange Turbo LED flashing -
• All Post 2008 vehicles
- press turbo selection button twice
- Important:** As for any emissions test, there are certain pre-test conditions that must be observed. Failure to comply with these conditions could cause a false test result or even major engine damage.
- Disclaimer:**
The diesel emissions test process requires the engine being tested to be run at full throttle with no load. This means the engine will run at maximum revolutions per minute (RPM). For this reason, The Tool Connection Ltd, its representatives and distributors cannot be held responsible for damage caused due to engine failure during testing.

The four LEDs on the 5112 are used to indicate the machine's system status. Each LED is a different colour as shown below:

- | | | |
|-----------------------------------|---|--------|
| 1. PASS | = | GREEN |
| 2. FAIL | = | RED |
| 3. TURBO | = | ORANGE |
| ('K' level selection - see below) | | |
| 4. ACCELERATE | = | BLUE |

System Ready:

After connecting the 5112 to a 12v DC power supply the 5112 is ready to run a test when the green and blue LEDs flash alternately. In this condition the Turbo threshold can be selected. This is done by pressing the **Turbo Select** (RED) button:

- Orange Turbo LED off -
Pre-2008 Non turbo vehicle - default (do not press turbo selection button)
- Orange Turbo LED on -

- Orange Turbo LED flashing -
All Post 2008 vehicles
- press turbo selection button twice
- Pressing the **Start** button (BLACK) will start the smoke test.

Results:

GREEN LED ON = **PASS**
RED LED ON = **FAIL**