

AUTOMOTIVE PRESSURE DIAGNOSTIC KIT

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Ditex diagnostic pressure kit

This diagnostic pressure kit gives you the opportunity to monitor the engine's dynamic pressure and vacuum and thus access its performance. It's designed for all auto repair shops and diagnostic specialists who would like to observe the engine absolute pressure diagram in real time. With the diagnostic pressure kit, you can find serious mechanical defects in the tested cylinder or in the whole engine, find whether an extra air is entering the cylinder. The pressure diagnostic kit allows you to detect clogging of the exhaust ports, reduced exhaust valve lift, or restricted exhaust.

Specifications:

Pressure type	Absolute
Pressure range	0 ÷ 250 PSI (0 ÷ 17.24 bar)
Output	0.5 ÷ 4.5V DC (analog, ratiometric)
Supply voltage	8 ÷ 16V DC (from car battery)
Accuracy	±0.25% FSS
Compensated temperature range	-40 to +125 °C
Response time	<2mS (10 to 90% step change in pressure)
Electrical connection (pressure sensor)	3 pin male Delphi Metri-Pack 150 series
Electrical connection (oscilloscope)	BNC connector
Electrical connection (power supply)	Two "crocodile" type clips
Pressure connection	1/8-27 NPT
Ingress protection IP	IP67
Cable length (to transducer and battery)	1 meter
Cable length (to oscilloscope)	0.75 meters
Weight (kit)	1 kg

In the set:

- 250 psi (17 bar) pressure transducer with 1/8"-27 NPT Male
- Multifunctional cable to the pressure transducer, the car battery and the oscilloscope
- 12 x 1.25mm spark plug 190 mm extension adapter to the pressure sensor with 1/8-27 NPT
- 14 x 1.25mm spark plug 190 mm extension adapter to the pressure sensor with 1/8-27 NPT
- 1/8"-28 G Male to 1/8"-27 NPT Female Brass Adapter
- 1/4"-19 G Male to 1/8"-27 NPT Female Brass Adapter
- 1/4"-18 NPT Male to 1/8"-27 NPT Female Brass Adapter
- User manual

Application:

It can be used practically with all pressure kits that are available on the market due to its universal output fitting. This versatility extends the application of the kit allowing you to check engine exhaust gases, exhaust system check, measure the turbo boost pressure, fuel and air pressures and compression tests to access the overall engine condition by observing the waveform at one cylinder when the engine is cranking. Cylinder pressure waveform also allows you to collect the following important pieces of data:

- Accurate indication of the spark event timing in relation to TDC than is possible using the scan tool data stream;
- The mechanical condition of the engine by skillfully observing scope pattern of the pressure difference before and after the compression stroke.
- Position of the exhaust camshaft by observing the timing of the exhaust valve opening.
- The correct position of the intake camshaft by observing the intake/exhaust valve overlap position and the opening of the intake valve.
- The condition of the exhaust valve guide in the cylinder tested by waveform analysis.
- A clogged exhaust by unusually high pressure during the exhaust stroke, which occurs between 180° and 360° after the TDC compression wave;
- Intake vacuum using the cylinder pressure waveform;
- Timing belt issues by comparing valve action from frame to frame.