



## The fifth element

Traditionally the only emissions test you can perform on a diesel vehicle is a smoke test which is of limited diagnostic use. To add to this it has not been possible to perform full gas tests on diesel engines without access to very expensive laboratory type equipment. This is about to change with the launch of the Sykes-Pickavant SP9550 diesel gas analyser. We find out more.

### How does this differ from traditional gas analysers?

A standard MoT gas analyser measures the readings of just 4 gases (CO, CO<sub>2</sub>, HC and O<sub>2</sub>), however this OIML Class 1 5-gas analyser can also measure a fifth gas – NO<sub>x</sub>. The product is suitable for testing on all types of diesel systems (cars, LCV, HGV, PSV etc).

### Why is a NO<sub>x</sub> reading important?

Because of the way a diesel engine works, in comparison to a petrol engine, diesel engines can produce far higher levels of NO<sub>x</sub> and this is a very good indicator of the operating efficiency of the engine. There are many cases where a poor running diesel vehicle will pass the standard MoT smoke test, however a NO<sub>x</sub> reading can tell you a lot about the emission control system on a diesel vehicle and whether it is working correctly.

### Test results

Sykes-Pickavant has invested a considerable amount of time in testing in order to establish benchmark readings for diesel gas testing, both at idle and fast idle, and to establish readings

for many types of common faults found on diesel systems.

The unit is supplied with a built-in technical tips database to guide users and to assist in the diagnostic process and the company also aims to establish an online forum where end-users will be encouraged to share their experiences and results. This can then be used as an alternative method of collating various 'known values' on a range of makes and models over time.

### The secret weapon

The key to 5-gas diesel testing is the diesel gas probe that is attached to the machine. This incorporates patented technology which performs an internal chemical process to remove the smoke particles and thus enables diesel exhaust gases to pass through and be analysed without damaging the analyser.

### Save on costly mistakes

There are still a number of alternative ways that a technician is able to test and find faults on a diesel vehicle, however gas analysis has not been an option before. In simple terms, it is an

aid to the overall diagnostics process as the cost of replacing parts unnecessarily or incorrectly can be hugely expensive to the garage. If you were a doctor getting ready to operate on a patient, you wouldn't take an educated guess as to which part of the body may be functioning incorrectly and would want as much evidence as possible before you undertook that procedure so why should diagnostics be any different?

### Convenience for the user

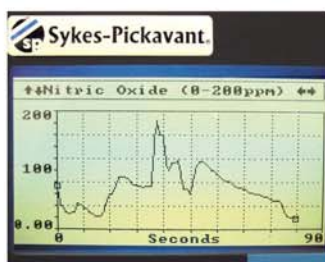
With diesel vehicles you get a different set of figures when the vehicle is under load so the tool is also designed to be as convenient as possible for the user by including an optional adapter that lets you plug the unit into a cigarette lighter.

### MORE INFORMATION

To request a brochure or leaflet offering more product and pricing information for the Sykes-Pickavant SP9550 diesel gas analyser circle 102

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## Diagnostics & Engine Management



### What can be diagnosed from a diesel gas test?

- EGR Valve blocked, or permanently closed
- EGR Valve permanently open
- Oil burning due to leaking seals/faulty turbo
- Weeping injectors
- Mechanical mis-fire
- Blocked air-filter
- Performance tuning
- Environmental testing

