



Engine Misfire Detection

With ACE Misfire Detective you can instantly identify misfiring cylinders without complicated equipment or diagnostic procedures.

- Just push a button to identify misfires by cylinder on ALL petrol engines
- Accurately pinpoint even partial and intermittent misfires
- Detect if misfires are originating from just one cylinder or multiple cylinders
- Interactive [thumbs up/thumbs down helps determine your next step](#)
- Easy [relative compression testing](#)
- Easy [vacuum/MAP pressure by cylinder testing](#)
- Easy [injector relative pressure testing](#)
- Quickly [print a customised report](#) for your customers
- Free software updates

No more guessing what cylinder is causing the problem

At times even the ECM can't detect the misfire so relying on scan tool data is not always the solution. Thompson Auto Labs have developed a proven system that cures this headache. No more guessing which cylinder is causing the problem.

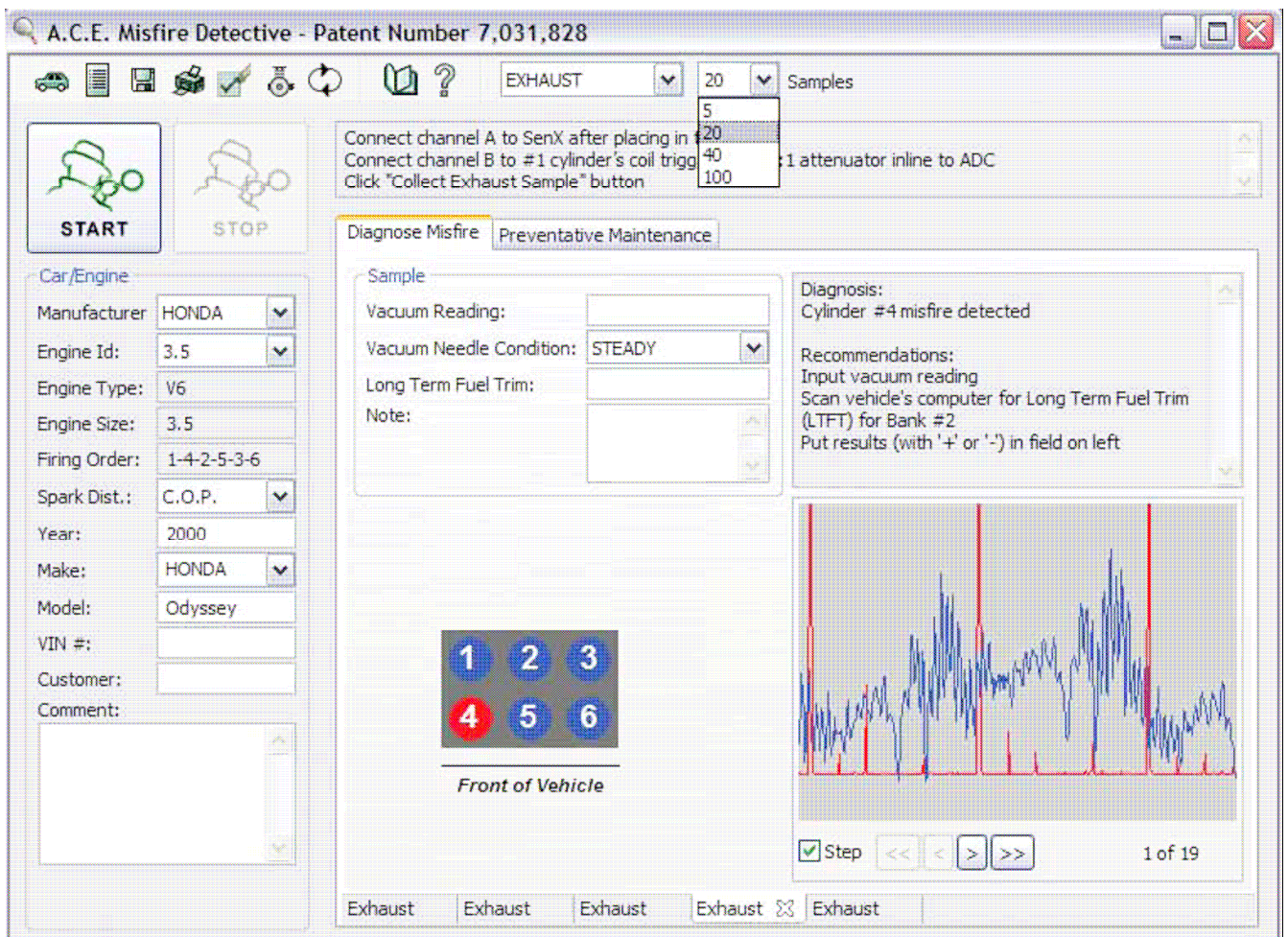
To find a misfire, just follow these four steps:

- Start the ACE Misfire software on your computer.
- Select the manufacturer and engine type.
- Connect a lead from your Pico lab scope to an ignition reference for number 1 cylinder, and connect another lead to the oxygen sensor of the bank you want to test (or to the FirstLook Sensor in the exhaust).
- Click Start. It is that simple!

The ACE software uses the Pico lab scope to sample and display the engine combustion data in real time. ACE displays a diagram of the engine being worked on and flashes cylinders in firing order sequence. Healthy cylinders flash green. Cylinders flashes red when a misfire is detected.

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Once ACE has found the misfire you will be notified which cylinder is causing the symptoms. By inputting key information into the software the ACE Misfire Detective will also advise you of the most likely cause of the misfire — fuel system, ignition system or mechanical problem.



How it works

ACE uses a Pico [automotive oscilloscope](#) to identify the high-pressure pulse of the exhaust stroke of a misfiring cylinder driven by the unconsumed oxygen of a misfire. ACE can also sense the high frequency dip in voltage of an oxygen sensor signal when a cylinder partially misfires. By comparing the results to a known database ACE is able to advise you as to what is the most likely cause of the misfire. You can add your own vehicles to the database and updates can also be downloaded from the internet.



You can connect ACE Misfire to a lambda (O2) sensor, however, to make ACE even easier and faster to use, a [FirstLook Sensor](#) can be inserted in the exhaust and a sync probe connected to an ignition wire (or an injector). Using ACE with a FirstLook Sensor allows you to identify misfires by cylinder on any petrol vehicle.

What you need

ACE Misfire does not require any complicated equipment: a PicoScope automotive oscilloscope and an inductive pick-up is all that is required. (A FirstLook Diagnostic Sensor is also required if you want to test through the exhaust.)

Find misfires fast

With ACE Misfire Detective you can save time locating misfires. The ACE Misfire software will effortlessly detect even the slightest misfires no matter how elusive they may be to conventional detection methods.

The ACE Misfire software can also be used as a preventive maintenance tool that can show you when the injectors need to be cleaned and even print a report of before and after results that you can give to your customers.

