



## Technical Data Sheet 002 – Bench Testing An Engine

### Engine Testing

To test the engine in the chassis before refitting the body, you will need a temporary fuel supply, a battery, jump leads and some bits of wire or flex and battery cable.

### Before You Start

This may sound a bit obvious but before you do anything make sure that you have the correct oil in the engine and if the diff is connected ensure that the neutral is selected or at very worst that the rear axle and drive wheels are clear of the ground and the chassis very well supported and not likely to vibrate free if the engine does fire.

If you intend to run the engine for any more than a few seconds ensure the engine has coolant and all hoses are connected.

If the engine has not been used for a long period of time it may be worth priming the bores with a very small amount of oil prior to first starting the engine.

**When bench testing an engine, be extremely careful of the fan and please ensure the space is well ventilated or done outside.**

**Exhaust gasses are Carbon Monoxide and it doesn't take much to cause you serious harm. An engine run in a confined space, like a shed with no air exchange, can be FATAL.**

### Electrics for the Ignition

A feed wire is needed to go to the low tension (LT) terminal on the ignition coil +positive from the +ve of the battery, and then a feed wire from the -ve negative side of the ignition coil to the distributor low tension (points/contact set)

The high tension (HT) lead goes from the centre of the coil to the centre of the distributor cap.

### Fuel Supply

Be careful as petrol is dangerous! Make a connection to the inlet of the fuel pump with rubber petrol pipe. I can't be more specific with this joint, as some pumps have male fuel connections and some female?

Put the other end into the fuel container and seal it if possible? Try and keep the fuel pipe as short as possible and the container as close as possible to the engine and preferably level with the fuel pump.

### Electrics for the starter motor

It is safer if the starter solenoid is used. Connect the red jump lead to the positive + side of the battery terminal then to one large terminal of the solenoid and a battery cable from the other large solenoid terminal to the starter motor main terminal.

Run a wire from the small solenoid terminal to the positive terminal of the battery but **DO NOT** connect it yet!

Connect the black jump lead from the negative –ve side of the battery to a starter motor retaining bolts or similar.

Now touch the connecting wire from the small solenoid terminal onto the positive battery terminal.

There will be some sparks but the starter motor should spin the engine over.

With the engine turning over, the fuel pump will lift petrol to the carburetor, the points will open to create a spark, and the engine should start.

If the exhaust is not in place it will be very noisy!

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