



Words: Martyn Collins
Photos: Alisdair Cusick

Tunit One D

Tunit's modded Mini One diesel proves performance doesn't have to come at the expense of economy.

The Mini Cooper, Cooper S and, to a lesser extent, the One, have earned a reputation built on the driving experience. The One Diesel is almost the black sheep of the Mini family. There's no denying its sharp handling, but there's a shortfall in the performance department. So it's good to see a tuning company like Tunit turning its attention to the newest member of the Mini range.

The chances are you haven't heard of Tunit Diesel Performance. It's mostly concentrated on developing individual programming and re-mapping for modern diesel vehicles, although it's now developing Tunit 2FF and should be able to help improve the performance of One, Cooper and Cooper S models in the future.

The conversion for the Mini centres on a Tunit V-CR box the

size of a credit card. This box is fitted via the original connecting plug on the left-hand side of the engine and it interrupts the signals from the Mini's electronic brain or ECU and overlays a new map. It's unique in the fact that it can be DIY-fitted.

The Tunit V-CR has seven different manual settings and can be modified to individual needs and engine characteristics. No two engines are the same and the Tunit enables owners to optimise the maximum performance gain possible.

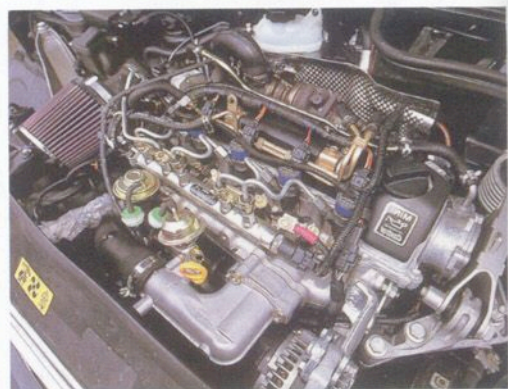
The company also claims that fitting the unit can improve fuel economy by between seven and 10 per cent. In the Mini One diesel, however, it's fitted more for performance advantages.

Finished in metallic Cosmos Black, this logo'd 2004 Mini One D showcases the company's trick parts of the One DX conversion.



These include a specially developed free-flow K&N air filter, a competition aluminium inter-cooler — which allows increased air into the engine — and a specially developed Milltek sports exhaust.

The exhaust is available in two sections: one fitted from the cat-back and the other from the front section to the cat. The company recommends fitting the full exhaust for maximum effectiveness and Tunit claims that the performance gain from the cat





back system is minimal. All of these parts are available individually and One Diesel owners can mix 'n' match according to their budget. Tunit is still developing the car and eventually hopes to crack 110 bhp.

Worried about invalidating your TLC maintenance pack (if you have it)? Tunit claims that, because the V-CR box can be removed, there should be no problems with the warranty.

Out on the road, the Tunit car feels noticeably smoother, more eager and much torquier from low down the rev range. This conversion alters the throttle mapping and it's obvious right from the start that you don't have to push the DX too hard to get it to perform. The standard One D doesn't come alive until it hits 2500 rpm and it's all done by 4000 rpm, which is disappointing. The Tunit DX pulls strongly right through the rev-range but, at 4000 rpm, it's really at peak power.

One of the criticisms of the standard One D is that its sporty chassis doesn't sit well with the refined, if underwhelming, Toyota

D-4D common-rail diesel unit. The DX feels genuinely sporty but performance may still only rival a standard Cooper in BHP terms. Its torquey, rev-happy feel helps you to enjoy the extra power and the added bonus of frugal diesel consumption.

The Tunit car was also fitted with optional factory fit 17 inch S-Spoke alloy wheels with sports suspension, that added to the usual go-kart feel. The K&N air filter gives more induction noise and is worth an extra 3 bhp, but this Mini doesn't feel any less refined than standard and gives a harder, more sporting edge.

The biggest surprise is the bespoke Tunit/Milltek exhaust. It's not just added for its good looks — Tunit claims a 4 bhp gain with the fully fitted system. Apparently, much of the development work went into the front pipe, where the most gains were made.

The One DX still sounds like a diesel with a deeper, rortier exhaust note that really worked for me, yet it also remains pleasingly quiet inside the cabin, even at high revs. It's also worth

Who Are Tunit?

Managing director Michael Bromley adopted the Tunit brand name in Chorley, Lancashire four years ago. Much of its worldwide business revolves around the sale of its Tunit interactive computer, which exploits the full potential of the modern diesel engines. The company is now offering performance upgrades for large HGV commercials, agricultural vehicles and is in the process of marketing its new 2FF product (for petrol vehicles). Tunit also sells high capacity dyno rolling road systems that measure 1000 bhp and 3800 Nm of torque with extreme and unparalleled accuracy.

Spec

Engine	1363cc, in-line four-cylinder, 16-valve common-rail turbo-diesel engine, Tunit V-CR box, K&N free-flow airfilter, Tunit aluminium intercooler and sport hoses, Tunit/Milltek exhaust system.
Max power	90 bhp (Tunit V-CR), 104.5 bhp (DX kit).
Max torque	90 lb.ft @ 2003 rpm.
0-60 mph	Not quoted.

Prices

Tunit V-CR
£398

Tunit aluminium intercooler. For models with or without air conditioning
£350

K&N free-flow air filter
£93.60

Tunit/Milltek exhaust. Exhaust rear section cat back
£198

Front section cat replacement
£130

Full Mini One DX kit
£993.65 (plus VAT)

Typical installation costs inc dyno testing
£112.50

mentioning that the aluminium intercooler, fitted to the Tunit development car, will not fit cars with air conditioning. Tunit offers an alternative type which they assure me will fit air-conditioned New Minis.

Trade offs? Well, for all their go-kart feel, the 17 inch alloys and Pirelli run-flat rubber give a choppy ride and have a bad effect on the turning circle. There can also be an alarming amount of smoke coming from the sports exhaust under heavy acceleration and when cold.

Overall, it's an appealing take on the New Mini formula. Having fun at 40+ mpg with the One DX from Tunit looks entirely possible. |