



Double Diesel Debut For Toyota Corolla Verso

5 October 2005

KEY POINTS

- Two versions of Toyota's new 2.2-litre D-4D engine introduced into the Corolla Verso range
- D-4D 180, a 175bhp (177 DIN hp) engine with Toyota D-CAT, the most powerful and cleanest diesel engine in the Verso's class
- D-4D 140, a 134bhp (136 DIN hp) engine which delivers performance improvements on the previous 114bhp 2.0-litre D-4D unit
- All-aluminium engine construction, first alloy cylinder block in segment
- D4-D engine has lowest-in-class compression ratio (15.8:1) and adopts ceramic glow plugs and piezoelectric fuel injection system
- Improved NVH performance
- New six-speed manual transmission
- D-4D 180 engine exclusively available in new flagship T 180 grade with rear privacy glass, 17-inch alloy wheels, special interior trim and perforated leather steering wheel trim
- D-4D 140 available in T2, T3 and T Spirit grades
- On-the-road prices from £16,100
- Insurance group 8E for 140 T2 and T3, 9E for 140 T Spirit and 11E for T 180
- On sale from 1 November

TOYOTA COROLLA VERSO - DYNAMIC VERSATILITY

The Toyota Corolla Verso set new standards in the compact MPV market when it was launched in 2004, with a sporty, dynamic design, true car-like driving performance, superb interior versatility with its Easy Flat-7™ folding rear seat system and a top five-star ranking for passenger safety in Euro NCAP testing.

The introduction of engines from Toyota's new generation of D-4D power units increases the appeal of the Corolla Verso even further. Two 2.2-litre units are offered: the D-4D 140, which replaces the 2.0-litre D-4D engine in the range; and the D-4D 180, which is the most powerful and cleanest engine in its class, developing 175bhp and using Toyota D-CAT (Diesel - Clean Advanced Technology) to achieve ultra-low exhaust emissions.

D-4D 180: FLAGSHIP ENGINE FOR THE COROLLA VERSO

The D-4D 180 is the first true high-power diesel to be launched in the compact MPV segment. It develops 175bhp and 400Nm of torque at 2,000rpm, giving the car sporty but smooth performance, with 0-62mph acceleration in 8.8 seconds and a top speed of 128mph. Combined cycle fuel consumption is 42.8mpg.

The Toyota D-CAT (Diesel - Clean Advanced Technology) in the D-4D T 180 gives the engine the lowest combined nitrogen oxides and particulate matter (NOx and PM) emissions of any diesel engine on the market. Central to this radically low emissions performance is the Diesel Particulate NOx Reduction (DPNR) four-way catalyst, a maintenance-free unit that simultaneously reduces the levels of NOx, particulate matter (PM), hydrocarbons (HC) and carbon monoxide (CO) in the engine's exhaust.

The engine uses piezoelectric injection technology, which means larger volumes of fuel can be injected more quickly than with conventional injectors. This in turn delivers better fuel atomisation and more precise injection timing. It also has the lowest compression ratio in its segment, 15.8:1, which means less effort is required to compress the fuel-air mixture. This in turn results in higher efficiency, better performance and lower fuel consumption.

The D-4D 180 is equipped with the latest Toyota-engineered ceramic glow plugs. They are more durable and reach their ideal operating temperature more quickly, which enables more rapid cold starts at lower air temperatures.

D-4D 140: AT THE HEART OF THE COMPACT MPV MARKET

The 134bhp D-4D 140 is engineered to deliver performance that meets the demands of the core market for compact MPVs. Power, torque and performance are all greater than the engine it replaces, yet fuel consumption and emissions levels are only marginally higher than for the previous, smaller capacity, 2.0-litre D-4D unit.

It is a sharp performer, with acceleration from rest to 62mph in 9.4 seconds. A maximum 310Nm of torque is delivered at 2,000rpm, giving the seven-seat vehicle smooth overtaking power.

The D-4D 140 is the first engine in its segment to feature an aluminium cylinder block, which helps achieve a significant reduction in engine weight; the unit is 13 per cent lighter than the 2.0-litre D-4D. Like the more powerful D-4D 180 unit, this engine has a very low compression ratio - 16.8:1 - contributing to all-round efficiency and low levels of NVH.

NEW SIX-SPEED MANUAL TRANSMISSION

The new 2.2-litre D-4D engines are fitted as standard with a new six-speed manual transmission, which offers smooth, quick and precise gear changes. Measuring 384mm long, the unit is very compact and shorter than all other six-speed transmissions with equal or smaller torque capacity.

Using the lowest viscosity oil available for manual transmissions has reduced fuel consumption by one per cent and the introduction of an oil separator has cut losses through oil agitation.

IMPROVED NVH PERFORMANCE

At the same time as it has adopted the new D-4D engines, the Corolla Verso has been given a new NVH package, including thicker insulation under the bonnet and extra sound insulation measures in the engine compartment.

GRADE STRUCTURE AND PRICING

The D-4D 140 is available in the established T2, T3 and T Spirit grades, while the D-4D 180 is offered exclusively in a new, sporting T 180 grade that stands as the new flagship of the Corolla Verso range. T 180 builds on the T Spirit specification with a number of additional features,

including 17-inch alloy wheels, dark-tinted rear privacy glass, a perforated leather steering wheel cover and special interior trim details.

The new models go on sale in the UK on 1 November with on-the-road prices from £16,100. In 2005, Toyota aims to sell 95,000 Corolla Verso models to raise its segment share from 4.6 to 6.2 per cent. In the UK 9,000 sales are targeted in 2006, equivalent to a five per cent share of the compact MPV market.

On-the-road prices for the complete range are detailed in the table below.

MODEL - ON THE ROAD PRICE

- 1.6 VVT-i T2 - £13,995
- 1.8 VVT-i T2 - £15,000
- 2.2 D-4D 140 T2 - £16,100
- 1.8 T3 - £17,000
- 1.8 T3 with MMT - £17,500
- 2.2 D-4D 140 T3 - £18,100
- 1.8 T Spirit - £18,800
- 1.8 T Spirit with MMT - £19,300
- 2.2 D-4D 140 T Spirit - £19,900
- 2.2 D-4D T 180 - £20,900

TOYOTA COROLLA VERSO D-4D TECHNICAL SPECIFICATIONS

ENGINE	D-4D 140	D-4D 180
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Type

4 cylinders in-line with variable nozzle turbocharger and intercooler

Cylinder head material

Aluminium

Engine block material

Aluminium

Fuel type

48 cetane diesel (or higher)

Injection type

Direct, common rail, multiple fuel injection

Emission control system	Oxidation catalyst	Toyota D-CAT plus oxidation catalyst
Valve mechanism	DOHC 16-valve	
Displacement (cc)	2,231	
Bore x stroke (mm)	86.0 x 96.0	
Compression ratio (:1)	16.8	15.8
Injection pressure (bar)	1,700	1,800
Max. power (bhp/rpm)	134 @ 3,600	175 @ 3,600
Max. torque (Nm/rpm)	310 @ 2,000 - 2,800	400 @ 2,00 - 2,600

TRANSMISSION

Drive type	Front-wheel drive
Gearbox type	6-speed manual

Gear ratios	1 st	3.538	3.538
	2 nd	1.913	1.913
	3 rd	1.219	1.219
	4 th	0.881	0.881
	5 th	0.810	0.810
	6 th	0.674	0.638
	Reverse	3.831	3.831
Final gear ratio	1 st - 4 th	4.059	4.059
	5 th , 6 th , reverse	3.450	3.450

PERFORMANCE

Max. speed (mph)	122	128
0-62mph (sec)	9.4	8.8

FUEL CONSUMPTION (mpg)

Combined	44.8	42.8
Extra-urban	53.3	49.6
Urban	35.3	34.0

CARBON DIOXIDE EMISSIONS (g/km)

Combined	167	178
Extra-urban	141	151
Urban	211	219

OTHER EMISSIONS (g/km)

Nitrogen oxides (NOx)	0.219	0.147
Particulate matter (PM)	0.0167	0.0026
Carbon monoxide (CO)	0.097	0.207
Hydrocarbons (HC) & NOx	0.226	0.207

ENDS