



Peugeot 406

Featuring 2.0 HDi Diesel



What's new?

A plethora of interior enhancements, affecting creature comfort and control. New and revised two-litre engines for both petrol and diesel buyers

FACELIFTED VERSIONS, HALFWAY THROUGH a model's life, are frequently more impressive, more rounded in their appeal than all-new designs. When a completely new or significantly revised engine is launched at the same time, this only adds to the attraction.

The latest 406 qualifies on all counts. Subtle exterior cosmetic tweaks are accompanied by interior trim and equipment changes that enhance the model's ambience, to give a real quality feel to our wood-veneered GTX.

Underbonnet changes to the two-litre petrol version are far-reaching, improving economy, Peugeot claims, by 10

per cent – we averaged 32½mpg when we tested the earlier version. But the real interest is in the new HDi diesel, complete with “common-rail” fuel delivery under very high pressure. This augments the switch to direct injection that Peugeot has been slower to adopt than VW and Vauxhall/Opel.

Perhaps Peugeot's procrastination was due to its anxiety about DI's inherent proneness to harshness and low-speed vibration, compared with indirect injection – its previous diesels have always been regarded as the most civilised around. Now that it has made the switch, it's undoubtedly paid off in terms of enhanced acceleration, a 6mpg fuel economy gain and, especially, lower emissions – necessary to meet the political tightening of the screw. However, despite a special flywheel damper for this 110bhp version, the NVH problem, below 1500rpm, is still only too evident.

Because they produce lashings of lovely low-rev torque (pulling power), turbo-diesels' gearing is always high and long-striding, so it's 45mph before the engine is doing more than 1500rpm in top (and 35 in fourth). This

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PERFORMANCE

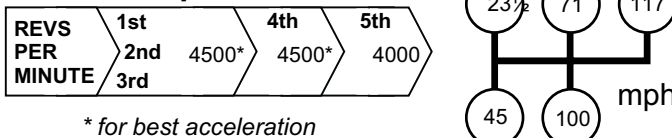
Acceleration time in seconds

mph	30	40	50	60	70
THROUGH THE GEARS		2.0	4.8	8.0	12.0
IN 5TH GEAR		7.1	12.4	17.5	23.1
IN 4TH GEAR		3.8	7.4	11.2	15.6

20 mph	30	40	50	60	70
5TH/4TH SPEED RANGES		†/9.3		10.4/7.4	
			12.4/7.4		10.7/8.2

† not possible

Maximum speeds



FUEL CONSUMPTION

Type of use - with air conditioning off*	mpg
Urban (17mph average/heavy traffic)	31½
Suburban (27mph average/6.4 miles from cold start)	42
Motorway (70mph cruising)	47½
Cross-country (brisk driving/20 miles from cold start)	49½
Rural (gentle driving/20 miles from cold start)	57
Typical mpg overall	48½

*with air conditioning switched on, consumption will increase by 2-4% in winter and 4-8% in summer

FOR THE TECHNICAL

ENGINE

Type transverse four cylinder with iron block and alloy head; five main bearings

Size 86 x 86mm = 1997cc

Power 110bhp at 4000rpm

Torque 188 lb ft at 1750rpm

Valves belt-driven overhead camshaft actuating two valves per cylinder via hydraulic tappets

Fuel/ignition direct-injection diesel with electronically controlled mechanical injection pump and high pressure common-rail delivery - turbocharged with intercooler and exhaust catalyser. 70-litre tank, with low-level warning lamp

TRANSMISSION

Type five-speed manual - front wheel drive

Mph per 1000rpm 29.2 in 5th; 22.3 in 4th

CHASSIS

Suspension front: independent damper/struts with integral coil springs and lower wishbones. Rear: independent triple transverse links, single trailing arms and coil springs. Telescopic dampers and anti-roll bars all round

Steering rack and pinion with hydraulic (variable-rate) power assistance; 3.1 turns between locks. Turning circles average 11.25m between kerbs, with 16.4m circle for one turn of the wheel

Wheels 6in steel (alloy on GLX up) with 195/16R15H tyres (Dunlop on test car). Full-size steel spare on all saloons

Brakes ventilated discs front, solid discs rear with servo. Electronic anti-lock (ABS) and brake force distribution standard on all versions

SAFETY AND SECURITY FEATURES

Assessed on their effectiveness and convenience (the more black blobs the better)

Seatbelts

front ●●●●○ rear ●●●●○

Door locking

central locking?

remote control?

Head restraints

front ●●●●○ rear ●●●●○

auto window closure?

deadlocks?

Interior

safety padding ●●●●○

driver's airbag?

other airbags?

side impact protection ●●●●○

Luggage

secure from interior/hidden from view ●●●●○

Alarm

engine immobilised?

Fuel anti-spillage

●●●●○

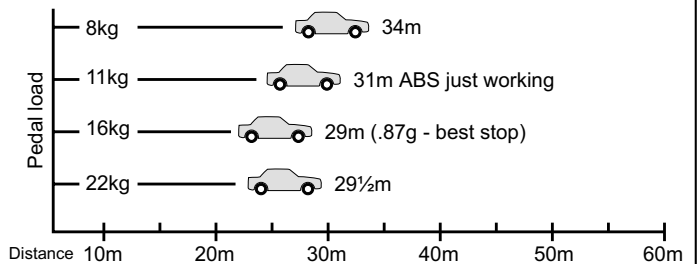
standard on test car factory fitted option not available

Euro NCAP crash test results - not available

BRAKES

Pedal feel ●●●●○ Behaviour in an emergency ●●○○○ Handbrake ●●○○○

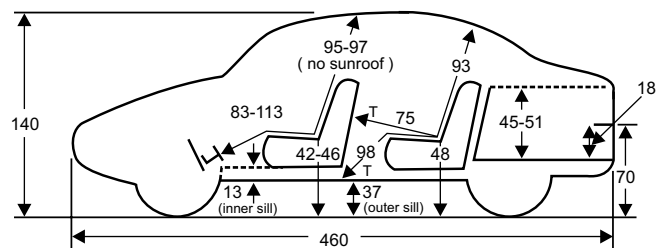
Dry road stopping distance from 50mph (with standard ABS)
A good-to-average best stop is about 26m at 15-20kg pedal load



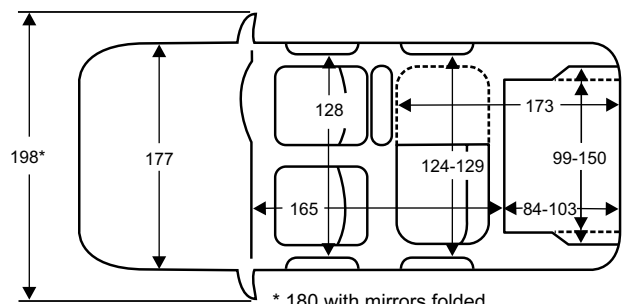
Fade test: pedal load required for a moderate (34m/.75g) stop:
8kg at start of test, 10kg at end of test (Ideal brakes show no change)

MEASUREMENTS

Centimetres



T: typical back seat space behind medium-sized front occupants



* 180 with mirrors folded

diesel is vigorous but vibrant in low-speed acceleration, while our standard 20-40mph acceleration test proved out of the question.

In the 1500-4000+ rpm band it goes a treat, cruising unobtrusively and producing an even more impressive ability to overtake in fourth than when you work the gearbox. Gears are delightfully smooth and precise, with a new hydraulic clutch possessing equal finesse.

Handling and steering are an inspiration to the keener driver – there's a poise and an alertness of response which only the Mondeo can match at this price and in this class, especially if passengers are demanding a reasonably comfortable time as well. The 406 is maybe a shade firmer than the old 405 and lacks the suppleness of an Avensis, but taken together (as they must be), its ability to deliver both ride and cornering prowess is very convincing.

Of course, this four-door is blatant about giving preference to people in the cosy back seats, rather than cargo in the boot. As a concession, the rear backrests tilt forwards, but their release latches are inside the boot, so enhancing security. There isn't as much rear leg-stretching space as in some rivals, but it's (unusually) apportioned evenly from side to side – the passenger sitting behind an average-sized driver gets more than usual.

Lots of oddments spaces plus really effective door sill protection and illumination were welcome features on our GTX – they should be provided lower down the range, as well.

Anti-lock brakes are now standard on all versions, however, as are twin airbags; the side airbags are a £175 option on GLX and below. The ABS works well, although we didn't achieve as impressive an emergency stop as on some cars we've tested, and the handbrake is heavy going.

The air conditioning settings, together with ambient temperature, oil level and service reminders, are graphically displayed in a repositioned location in the fascia centre and the minor controls have been tidied – most are now on stalks, including one for the radio-cassette.

A good driving position for all is now more likely, thanks to reprofiled seats using longer cushions with tilt and height adjustment, to augment the same dual (reach and rake) adjustments for the wheel; melodic horns are controlled by the full-width centre pad, surmounting its airbag. These may be mere details, but they all add up to ensure satisfaction in daily use.

VERDICT

We resurrected a 10-year-old report on the 405 turbo-diesel – its statistics are included in our comparison table. At first glance, one may glibly question whether all the research and complexity to produce today's 406 were worth the effort.

It has no more space inside (although it's bigger outside), only minor improvements to performance and economy, and over 240kg added to its weight. But this is to ignore the fact that today's cars have to meet much more stringent pollution, safety and durability criteria – not to mention the whole host of creature comforts that we now like to have as standard.

The 406 runs better than ever, and at last is as nicely finished as we hope the new 206 will be in a year or two. Although this new diesel's fuel economy doesn't quite match that of a Passat or a Vectra, existing Peugeot/Citroën diesel owners can expect a 15 per cent improvement, with acceleration gains to match.

LIKES AND GRIPES

Load height in boot improved	...	but still a prominent sill
Gas struts for bonnet	...	but very complex "works" nowadays
Digital air conditioning system distributes the air flow well	...	but fan won't work without engine running - bad in summer traffic jams
Cableless accelerator prevents engine shunt	...	but it can't stop the vibes at low revs
Deep, effective sun visors	...	but mirrors self-fold only on top version
Passenger airbag can be switched off - if child seat fitted, for example	...	but front seatbelt adjustment not low enough for smaller occupants

HOW THE 406 HDi COMPARES	Engine cap/power (cc/bhp)	Revs at 70mph (rpm)	30-70mph through gears (sec)	30-70mph in 5th/4th gears (sec)	Fuel economy (mpg)	Brakes best stop (m/kg)	Maximum legroom - front (cm)	Typical leg/kneerom - rear (cm)	Steering turns/ (p) circle (m)	Overall length (cm)
PEUGEOT 406 2.0 HDi	1997/110	2400	12.0	23.1/15.6	48½	29/16*	113	98/75	3.1/11.25	460
Vauxhall Vectra 2.0 DTi	1994/100	2630	11.0	24.7/16.5	52½	24½/28*	111	103/75	3.0/10.9	450
VW Passat 1.9 TDi	1896/110	2450	11.1	21.4/15.9	53	24½/18*	110	102/74	2.8/10.9	468
Rover 420 SDi (Saloon)	1994/105	2640	11.3	26.6/16.2	47½	25/20*	110	99/71	3.2/11.4	449
Peugeot 405 1.8 GTDT (1989)	1769/91	2770	13.4	26.6/17.5	47	28½/18	109	101/80	3.2/10.8	441

* with ABS

(p) all power assisted