R0070
See also R9861 + R9984
November 2000

Audi A6

Featured model: 2.4SE (2WD) Multitronic

WE'VE SAMPLED THE A6 before, in both 2.4 manual and automatic versions. However, this test is on a significant new automatic transmission dubbed Multitronic. In fact, it's a continuously variable type, that until recently has been seen only in small cars with low-powered engines.

This Audi is far and away the most powerful CVT to date. To achieve this, Audi and partner LuK have developed the internal chain-drive and the variable pulley mechanism significantly. Just as important, they've drastically reduced the mechanical losses associated with the hydraulic pump that's needed to clamp the pulley surfaces together. And to ensure that this 'box drives without unwelcome surging or clumsy take-offs from rest, the whole thing is electronically controlled, which makes it possible to add some useful driving responses.

For example, when the car is going down a steep hill, the transmission "changes down" to enhance engine braking, as you feather the brake. Also, the ECU will "learn" what driving mood you're in by your pedal actions and use high or low gearing to suit. Creep is present for easy hill starts, but with the brake on, this effect is lessened, to save fuel.

Because of its efficiency, this transmission will out-accelerate both the five-speed manual and the conventional automatic A6 (which are currently still available); it also puts illustrious competitors in the shade, as our table of rivals shows. Show restraint and it will give impressive mpg figures – overall, we found it matched the five-speed manual exactly.

Any remaining snags? Well, there's still a second's delay as you stab the accelerator hard from rest (at a T-junction in the rush hour, say). You can get round this by "two-footing" i.e., gently squeezing the gas pedal while holding the car back on the brake for a couple of seconds before you make your move. In fact, if you squeeze the accelerator more gently, the car glides away without the delay, but less rapidly, of course.

The other impediment to this transmission's general acceptance is a psychological one. Most drivers, familiar with engines revving up and down as a sign that they're making progress, aren't used to the idea of gearing that continuously varies to keep the engine speed the same. This enhances mechanical refinement, of course – the engine is wonderfully smooth. However the A6 suspension is less so; set up for smooth West German roads, it becomes too disturbed on British byways.

VERDICT

With delightful (if unecessary) manual six-speed control offering an alternative pastime, this CVT keeps its promise. No manual gearbox or ace-driver can beat it and it's the first automatic we've tested that costs no more to fuel.

AT A GLANCE

considering size, price and rivals

Overtaking ability	✪✪✪✪○
Space/practicality	✪✪○○○
Controls/displays	✪✪✪○○
Safety	✪✪✪○○
Handling/steering	✪✪✪○○
Comfort	✪✪○○○
Fuel economy	✪✪✪✪○

SPECIFICATION

engine 2393cc, V6 petrol; 165bhp at 6200rpm, 170 lb ft at 3200rpm; belt-driven twin overhead camshafts, 30 valves
transmission continuously variable automatic, front wheel drive; highest ratio gives 29.9 mph/1000rpm in Drive or 6th gear Tiptronic (manual) mode
suspension front: four link with wishbones and coil springs, anti-roll bar. Rear: torsion beam (dead) axle, trailing arms, coil springs, anti-roll bar
steering Servotronic hydraulic power assistance; 2.8 turns lock-to-lock; 11.15m diameter turning circle between kerbs (15.85m for one turn of the wheel)
brakes ventilated discs front, solid discs rear, with standard anti-lock and traction controls
wheels/tyres 7in alloy with 205/55R16W tyres (Dunlop SP Sport 8000 on test car); full size alloy spare

LIKES AND GRIPES

fit and finish inside - superb
lined, expandable door oddments cubbies
twenty courtesy lamps - no less!
rear heating and ventilating outlets

fore and aft seat adjusters too coarse
rake handwheel heavy going
boot contents not protected from cabin
dial dimmer, beam trimmer get confused
prominent rear centre hump

THE A6 RANGE

size/type large/executive (premium priced) 4 door saloon and estate (Avant)
trim levels standard, SE + additions related to quattro (4WD) versions
engines petrol: 4 cylinder/1.8 litre Turbo/150bhp; V6/2.4/165
diesel: 4/1.9/110; V6/2.5/150 all 2WD
4WD (quattro) models: the above plus
petrol: V6/2.8/207; V8/4.2/300 or 340;
diesel: V6/2.5/180
drive 2/4 wheel drive; 5/6sp man; 4/5sp stepped auto; CVT auto

OVERTAKING ABILITY ✪✪✪✪○

Rivals table proves this CVT's superiority for swift, hassle-free overtaking; only the perceptible delay at T-junctions spoils things. Excellent six-speed manual option (with no clutch) if you want it

acceleration *in seconds*	in Drive (CVT) to 5800rpm	manual hold to 6400rpm	**in ④th**	**in ⑤th**
20-40mph	2.8	2.8	No	No
30-50mph	3.3	3.6	8.6	14.0
40-60mph	4.0	4.4	8.1	13.2
50-70mph	5.0	5.5	8.5	13.0
30-70mph	8.3	9.1	17.1	27.0

max speed in each gear *(using manual Tiptronic kickdown) to 6400rpm**

gear	①*	②*	③*	④*	⑤	⑥	**D**
speed (mph)	34½	60	83½	115	134	121	134

SPACE AND PRACTICALITY ✪✪○○○

Typical four-door limits to versatility, but the rear backrests flip forwards 60/40 - they can't be locked from boot, though. Below average rear space but thoughtful oddments provision

in centimetres (4-door saloon)

outside	
length	480
width *- inc mirrors*	196
- mirrors folded	181
height *(no roof bars)*	145
load sill height *(inside/outside)*	17/69
steering	
turns lock-to-lock	2.8
turning circle *(metres)*	11.15
easy to park/garage?	✪✪✪○○

inside († *without sunroof*)	
front - legroom	83-109
- headroom	99-104†
rear - typical leg/kneeroom	100/74
- headroom	93
- hiproom	131-140
load space *(all seats in use)*	
(litres/cu ft)	575/20.4
load length	108/180
full length to facia	No
load width	105
load height *(to shelf)*	51
(to top of aperture)	NA

CONTROLS AND DISPLAYS ✪✪✪○○

Dials dim by day and inaccurate. Supportive seats, sensible pedals and gear selector. Not easy to reverse-park – no rear wiper, either. Interior exudes quality

SAFETY ✪✪✪○○

Excellent panic stopping-power and n o fade, either. Security good – convenient to use as well. Crash test results not quite so impressive

braking

pedal feel	✪✪✪✪○
in emergency	✪✪✪✪○
handbrake	✪✪○○○

dry road stopping distance *from 50mph (with standard ABS)*

pedal load	**distance**
10kg	35m
18kg	**23m** ***best stop***
+4kg ie 22kg	24m

EURO NCAP CRASH TEST RATINGS *(tested September 98)*

front impact	56%	side impact	78%
overall	68% ✪✪✪○○	pedestrian rating	✪✪○○

SECURITY FEATURES

central locking	✓	alarm	✓
remote control	✓	immobiliser	✓
auto window closure	✓	luggage security	✪✪○○○
deadlocks	✓		

✓ *standard* 0 *factory option* ✗ not available

HANDLING AND STEERING ✪✪✪○○

Cornering prowess better than ride, with some genuine road feel in nicely weighted steering

COMFORT ✪✪○○○

Seats firm but supportive; ride not good enough, but excellent mechanical refinement. Air con cools feet too much on lower auto settings – VW system better

FUEL ECONOMY ✪✪✪✪○

The figures below (almost identical to the manual five speed) are a "first" for us – an auto that's a match for the manual. We had hoped for a better motorway figure, though

type of use *(air conditioning off)*	**AA test** *(mpg)*
urban *(17mph average/heavy traffic)*	19½
suburban *(27mph average/6.4 miles from cold start)*	25
motorway *(70mph cruising)*	33½
cross-country *(brisk driving/20 miles from cold start)*	30
rural *(gentle driving/20 miles from cold start)*	34½
typical mpg overall	30½

realistic tank capacity/range	60 litres/400 miles
official mpg *(urban/extra urban/combined)*	19.9/40.4/29.4
CO_2 emissions about 240g/km	car tax band D

HOW THE A6 2.4 V6 MULTITRONIC COMPARES	engine cap/power (cyl/cc/bhp)	revs at 70mph (rpm)	30-70mph through gears (sec)	30-70mph in 5th/4th gears (sec)	fuel economy (mpg)	brakes - best stop from * 50mpg (m/kg)	maximum legroom - front (cm)	typical leg/ kneeroom - rear (cm)	steering turns/ (p) circle (m)	overall length (cm)
AUDI A6 MULTITRONIC	**V6/2393/165**	**2340**	**8.3**	**27.0/17.1**	**30½**	**23/19**	**109**	**100/74**	**2.8/11.15**	**480**
Volvo S80 2.9 auto	6/2922/204	2500	8.3	No	24	25½/20	112	114/80	3.0/11.6	482
Toyota Camry V6 auto	V6/2995/188	2600	8.8	No	24½	26/18	107	109/79	3.1/11.6	476
Mercedes-Benz E240 auto	V6/2398/170	2870	9.7	No	26½	26/16	120	112/79	3.2/10.6	479
Audi A6 2.4 5-speed man	V6/2393/165	3100	8.8	21.6/15.2	30½	23/19	109	100/74	2.8/11.15	480
Audi A6 2.4 Tiptronic	V6/2393/165	2390	9.6	No/21.9	29½	23/19	109	100/74	2.8/11.15	480

* all with ABS

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