

# Vauxhall Astra

Featuring 1.6i 16v Saloon and Estate

**TEST  
UPDATE**

## What's new?

- A 16-valve replacement for the former 1.6-litre engine
- Steering and suspension modifications
- Improved security and safety features

**O**UR EARLIER ASTRA TESTS LOOKED AT the most-sold Astra hatchback, but here we sample and measure both the saloon and estate car derivatives, and the new 1.6-litre, 16-valve Ecotec engine.

## Measuring up

There's no difference in the accommodation up front between the various body styles, but it's a different story behind. The saloon's seat comfort and room are similar to those in the hatch, but they're inferior in the estate – its softer, lower cushion leaves thighs unsupported. In view of the sculptured headlining and stepped roofline that give more than generous headroom, this all seems unnecessary – but that's the

way it is. On the other GLSs, rear passengers have their own footwell heating, but this is omitted on the estate car.

The estate is indisputably the most commodious cargo-carrier, of course – it's 9in longer than the hatch. It opens up a useful load platform without the other models' load sill and there's less wheelarch intrusion. The tailgate has a helpful hand recess inside and ideal gas-strut assistance, which take all the grime and effort out of closing it on a wet day. There's a load screen, but none of these versions protects the cargo area from unwelcome access from inside the passenger area – the release latches are on the seat tops.

The saloon has most of the estate's extra external length, and interior load length reflects this as an advantage over the hatch when long rolls of carpet or planks need to be carried. Naturally, it doesn't possess the load height of the hatch, but only the estate offers lashing eyes.

## At the wheel

If you want a really supportive front seat, try the

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# Vauxhall Astra 1.6i 16v GLS Saloon

## PERFORMANCE

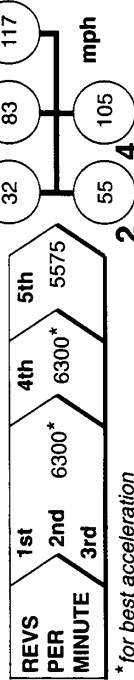
### Acceleration time in seconds

<b>STANDING START</b>	0-30mph	0-60mph	1/4 mile
	3.6	11.0	18.2

<b>THROUGH THE GEARS</b>	30	40	50	60	70
		2.0	4.3	7.4	11.4
<b>IN 5TH GEAR</b>		6.0	12.1	18.3	24.6
<b>IN 4TH GEAR</b>		4.2	8.4	12.5	16.8

<b>20 mph</b>	30	40	50	60	70
		13.0/8.9	12.3/8.3		
<b>5TH/4TH SPEED RANGES</b>		12.1/8.4			12.5/8.4

### Maximum speeds



## FUEL CONSUMPTION

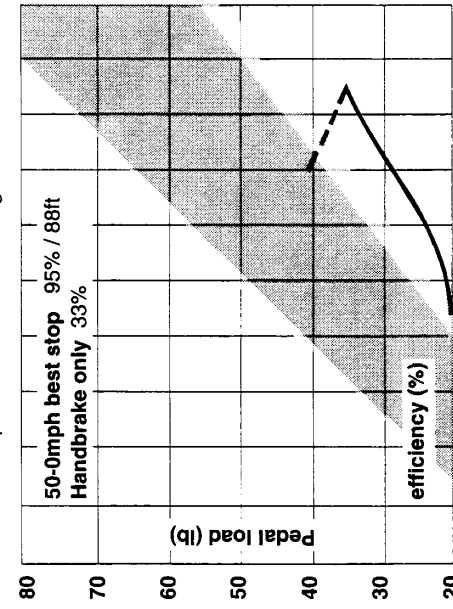
Fuel grade for tests: unleaded Premium, 95 octane

<b>Normal range</b>	mpg
Hard driving, heavy traffic	32
Short journeys in the suburbs	32 1/2
Motorway - 70mph cruising	41 1/2
Brisk driving, mixed roads	40 1/2
Gentle driving, rural roads	48
<b>Typical mpg overall</b>	<b>40 1/2</b>
Realistic tank range*	47 litres/420 miles

\*based on fuel gauge/warning lamp and filling station experience

## SAFETY

### Brakes



Ideally the braking curve should be a gentle sweep and lie within the shaded zone of this graph. If it's above, the brakes are too heavy; if it's below, they are too light - although this is more acceptable on cars with ABS. When the curve becomes broken, the wheels are skidding.

### Fade test

How hard use affects braking (ideal brakes show no change)

<b>Pedal load needed for 75% stop (lb)</b>	After constant use	After severe use
	23	25
	At start of test	27

### Safety features

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

<b>Seatbelts</b>	front ●●●●○	rear ●●●●○
<b>Head restraints</b>	front ●●●●○	rear ●●●●○
<b>Interior</b>	safety padding ●●●●○	driver's airbag? <input checked="" type="checkbox"/>
	other airbags? <input type="checkbox"/> (1)	side impact protection ●●●●○
<b>Fuel</b>	anti-spillage measures ●●●●○	comprehensive and convenient <input type="checkbox"/>
	engine immobilised? <input type="checkbox"/>	factory fitted option <input checked="" type="checkbox"/> not available

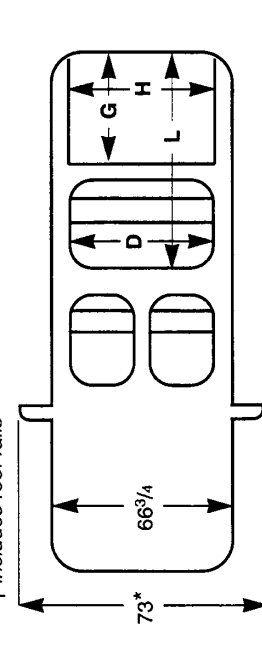
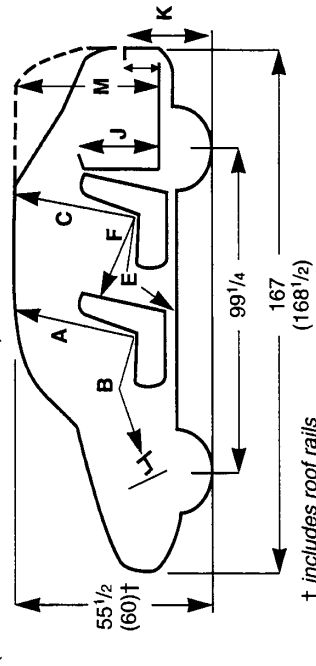
### Anti-theft features

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

<b>Doors</b>	locking ●●●●○	central locking? <input checked="" type="checkbox"/>
	remote control? <input checked="" type="checkbox"/>	auto window closure? <input checked="" type="checkbox"/>
<b>Luggage</b>	secure from interior/hidden from view ●●●●○	Alarm <input type="checkbox"/>

## MEASUREMENTS

### Dimensions for saloon



\* 70 3/4 with mirrors folded (not an easy procedure)

### Inside

<b>A</b> Front headroom (with sunroof)	36-38	<b>G</b> Load length	36 (42)
<b>B</b> Front legroom (min - max)	34-42 1/4	<b>H</b> Load floor width (min - max)	40-51 (44-52)
<b>C</b> Rear headroom	36 (40)	<b>J</b> Load height	19-20 (18)
<b>D</b> Back seat width (between armrests)	50	<b>K</b> Sill height (inner/outer)	9/25 1/2 (0/20)
<b>E</b> Typical rear * legroom	39 1/2 (37)	<b>L</b> Load length	62 (66)
<b>F</b> Typical rear * kneeroom	27 1/4	<b>M</b> Load height (to tailgate hinge)	NA (36 1/2)

\* "Typical" represents the mean measurement behind the driver's seat set at 39in legroom and the passenger's seat set at 41in

cheaper Sport version – it's conspicuously better than the GLS, which distinctly lacks lumbar thrust (with no adjusters, either). The seat height control is vital now that the standard airbag has robbed the Astra of its wheel rake adjustment. Gear selection continues to baulk a bit down into second and first, but the clutch is light and shunt is well controlled in slow traffic. The horn buttons aren't easy to locate and the sun visors miss the areas next to the screen pillars; the split-image door mirror is a new feature.

### **New 16-valve power**

Our test car stalled occasionally when slowing down, and some underlying uneven surging could just be detected on a light throttle. The secondary air injection, that runs a high-speed electric motor for a couple of minutes from cold, is apparent, but is no more intrusive than the heater fan.

This is an engine that represents a new level of complexity for Vauxhall, but results largely justify all the effort. It always starts at the first turn of the key, normally has a smoother tickover than the previous 1.6 8-valve, and is more refined and non-intrusive in every sort of use. It's quiet on a motorway, despite its lower gearing (the engine now runs at 3330rpm instead of the former 3000 in top gear) and it revs eagerly and smoothly to the red line.

Much of this 16-valve's development is to meet the tighter emission rules which will bite in a couple of years' time. It's no surprise, therefore, to find that power output and ultimate acceleration show no

advantage over those of the previous 8-valve, 1.6-litre unit. The lower gearing has worked to improve in-gear acceleration, however (its 30–70mph time is improved by 14sec in top gear and it's now as quick and responsive in that fifth ratio as the previous version was in fourth).

Neither has fuel economy suffered; our overall figure is as good as on many smaller, lower-powered cars and represents a loss of just 1mpg compared with the 1.6 estate car we sampled in 1992 (see R9245A). In fact, both performance and economy would benefit on this engine, with its knock sensors, if it were run on super unleaded/98 octane petrol – but perhaps only by less than a second from 30 to 70mph and 1mpg overall – certainly not cost effective at present pump prices.

### **Other improvements**

All Astras now come with power steering and a drivers' airbag, together with twin door reinforcement beams and improved "anti-submarining" seat cushions. Security is of a high order, but the alarm, which includes a glass-breakage sensor, is a £200 option even on the GLS. There's no remote control locking, either, and although the deadlocking facility is valuable and well shielded, it works only on the drivers' side; this means that it's difficult to be courteous when returning to the car with passengers. The engine immobiliser system, built into the key and engine computer, is highly effective, however.

A series of detailed revisions to the suspension, including new gas-filled dampers, works with the



power steering to make the Astra a more responsive, friendlier car when it comes to the twisty and bumpy bits. It's still happiest on smooth dual carriageways, though. Because of this, and the way that some cushioned agitation and extraneous body movement develop at times, the Astra still can't match the unflappable poise of a Citroën ZX or a Peugeot 306.

Revised braking results in powerful response to lower pedal pressures and there's no fade – the latter is an improvement, but it's too easy to skid by pressing hard in a panic stop; the ABS option is the answer.

The nicest small improvement on our latest car was that the speedometer read only 4mph high at 70mph; the odometer under-read by 1½ per cent. The fuel gauge and low-level lamp were less alarmist, too.

A word of praise for the buffet-free sunroof: it may not have electric power, but it works beautifully at low or high speeds.

## VERDICT

We don't relish this new Astra 1.6's complexity, but we do like the results – it's cleaner, remarkably frugal and lively. It's also much smoother than the smaller-engined variants in the Astra line-up. In fact, only the diesels and the 1.6 E-Drive represent a sensible alternative for buyers concerned more with costs.

The saloon works well in its traditional role and maintains a useful level of versatility, as well. It's a pity about the estate car's compromised back seat – we like this elegant workhorse in many ways.

Whichever you choose, the plush GLS trim promises more cossetting than the seats and the suspension can deliver in practice. It's worth opting for the Sport trim in the hatch, to enjoy the better front seats at £600 less, with the burglar alarm included for added reassurance.

HOW IT COMPARES	Engine cap/power (cc/bhp)	Maximum speed (mph)	30-70mph through gears (sec)	30-70ph in 5th/4th gears (sec)	Fuel economy (mpg)	Brakes best stop (%g/lb)	Maximum legroom – front (in)	Typical leg/kneerom – rear (in)	Steering turns/circle (ft)	Overall length (in)
Vauxhall Astra 1.6 16v GLS (4-door)	1598/100	117	11.4	24.6/16.8	40½	106/35	42¼	39½/27¼	3.5/32½ (p)	167
Ford Escort 1.6i 16v LX (5-door)	1597/90	113	12.2	32.0/22.3	36½	103/100	42	39¼/27¾	3.0/34 (p)	163*
Honda Civic 1.5LS (4-door)	1493/89	107	11.3	28.4/21.2	37½	102/35	43½	38/27	3.5/32½ (p)	173½
Peugeot 306 1.8SR (4-door)	1761/103	112	11.4	24.8/17.1	35	89/38	41½	37/26¼	3.3/35 (p)	166¾
Hyundai Lantra 1.6GLS (4-door)	1596/112	114	10.6	27.0/19.1	32½	90/30	41	39½/29¼	3.0/34½ (p)	171½

(p) power-assisted  
\* 4-door: 169in

## TECHNICAL SPECIFICATION

### ENGINE

**Type and size** front-mounted, transverse 4 in line; water-cooled. 79.0mm bore x 81.5mm stroke = 1598cc. Iron block and alloy head; 5 main bearings

**Compression ratio** 10.5:1

**Valve gear** cross-flow head; belt-driven twin overhead camshafts actuating four valves per cylinder via hydraulic tappets

**Fuel system** electronic multi-point sequential injection; three-way exhaust catalyser with lambda sensor. Exhaust gas recirculation and secondary air injection. 52-litre (11.4-gallon) tank (50-litre on Estate) with low-level warning lamp. Fuel required: unleaded only, 95 octane minimum

**Ignition system** fully programmed electronic, integrated with fuel system with knock sensor for each cylinder

**Maximum power** 100bhp at 6200rpm

**Maximum torque** 109 lb ft at 3500rpm

### TRANSMISSION

**Clutch** 7.9in diaphragm-spring, single dry plate; cable operated. Pedal load/travel 16 lb/5½in

**Gearbox** 5-speed (all synchromesh) and reverse.

Ratios: first 3.73, second 2.13, third 1.41, fourth 1.12, top 0.89 and reverse 3.31:1

**Final drive** 3.55:1, to front wheels

**Mph per 1000rpm** 21.0 in top, 16.7 in 4th

**Rpm at 70mph** 3330 in top gear

### CHASSIS

**Suspension** front: independent by MacPherson struts with integral coil springs and an anti-roll bar (revised attachment points and new lower control arm bushes for 1995 models). Rear: torsion beam (dead) axle with twin trailing arms, coil springs and an anti-roll bar. Dampers: gas-filled telescopic all round

**Steering** power-assisted rack and pinion (on all 1995 derivatives) with 3.5 turns between full locks – 3.0 on Sport. Turning circles average 32½ft between kerbs, with 55ft circle for one turn of the wheel

**Wheels** 5½in steel with 175/65R14 82H tyres (Michelin Energy XSE on test car) – 195/55R15 on Sport

**Brakes** 9¼in solid discs front, 8in drums rear, with vacuum servo. ABS optional extra