

A new breed of sports car evolved in the '70s.

Born of a new era in automotive technology

d aggred to the needs of a more discerning

and geared to the needs of a more discerning generation, the small, fast hatchback took over from traditional open sports cars—and pushed them firmly into motoring history.

The new sports hatches utilised the great roadholding and handling advantages of new suspension systems. Rack-and-pinion steering quided them with pin-sharp accuracy.

Technological advances like fuel injection gave them giant-killing performance. Five-speed gearboxes made them frugal as well as fast.

Well-equipped cabins brought comfort new to performance motoring. Handy tailgates made them versatile as well as \_\_vivacious.

Such was the sports hatches' impact, journalists often dubbed them baby bombshells.

Amid this genre, one car stood taller than the others: the Vauxhall Astra GTE.

It wasn't just that it was faster to 60 mph (according to Motor magazine) than the Golf GTi and the Escort XR3i. Or that it had an impressive 116 mph top speed (as recorded by the Autocar test team).

For all-round ability – refinement as well as performance, roadholding and handling – the Astra GTE was acknowledged as the definitive sports hatch.

CAR Magazine said firmly: 'The GTE proves to be superior to its toughest competitors in most respects.'



Now, while the others are still trying to catch up, there's a new Astra GTE.

It starts with the old GTE's unrivalled combination of qualities.

Then come the new dimensions—aspects that set new criteria for sports hatch design and performance.

They're the outcome of massive research programmes and precise application of the latest automotive technology by engineers working with the world's best facilities.

The results are astonishing.

The new Vauxhall Astra GTE tops 126 mph. And it establishes new levels of stability, quietness and refinement for cars of its type. fuel-injected 1.8 litre engine is enclosed in a body at the forefront of aerodynamic achievement for volume production cars.

Its innovative design, meticulously tuned in 1200 hours of windtunnel development, gives it a drag co-efficient of only 0.30.

That makes the new Astra GTE more streamlined than any car in its class.

Its remarkable performance and superb stability are two benefits.

Stunning styling is another.

But it's the totality of its concept and the perfection of its execution that makes the new Astra GTE something else too.



# NOW, THE SHAPE OF

Until now, the idea that a 1.8 litre production car might cruise at 126 mph was just a dream.

The new Vauxhall Astra GTE makes it a reality.
Its clean, flowing lines are about much more than just style. Every inch of the GTE's body is designed for performance.

It starts with the wedge-like profile: low nose, short sloping bonnet and high rear end.

From above, the shape is like a tear-drop, widening slightly at the centre before tapering at the tail. That means improved cabin room as well as better air flow.

As it slices through the wind, the GTE's moulded polycarbonate nose and spoiler section directs the air

around as well as over the body.

Fins on the spoiler's lower edge deflect air around the wide tyres and the grille lets only the required amount of air through to the engine compartment, with seals around the headlights and bonnet minimising draginducing vortices.

So that the air glides smoothly over them, the bonnet, roof, side panels and wheel arches are curved.

Mouldings on the sills help deflect air around the wide rear tyres. Importantly, the rear wheel arches are partially-closed, and smooth wheel covers overcome another traditional area of aerodynamic disturbance.

There are no disruptive drip rails either. The front



### PURE PERFORMANCE

and rear glass is bonded flush with the bodywork, and the side windows are semi-flush.

Even the electrically-operated door mirrors are aerodynamically-shaped to deflect dirty spray away from the side windows.

And because one of Vauxhall's research studies pinpointed the optimum slope for the rear window, it automatically resists fouling in bad weather.

As the Astra's engineers know – and others have discovered to their cost – aerodynamics need to involve much more than just clean penetration.

Stability, especially in crosswinds, is crucial.

Achieving it depends not just on the nose but also on

correct tuning of the rear panels.

So the GTE's rear panels sweep around to its high tail in a precisely sculpted manner.

Its rear aerofoil was developed in the windtunnel to be the ideal size and shape. It cuts tail-end lift by 25 percent and greatly increases stability above 100 mph.

The effect of this outstanding aerodynamic engineering?

A class-leading drag co-efficient of only 0.30 which gives the GTE a huge performance advantage.

And stability that makes driving the GTE as effortless as it is exciting, regardless of speed and crosswinds.



### THE SPARK BEHIND THE FIRE

Beneath the Astra GTE's remarkable body is an equally stirring engine.

It's a potent, free-revving, ultra-modern 18 litre unit delivering 115 horsepower. Le Mans-winning sports car racer Derek Bell pronounces it 'superb – a paragon of refined power.'

It bristles with technology as well as classic highperformance elements like an overhead camshaft and light-alloy cross-flow cylinder head.

Electronic injection controlled by a computer delivers the fuel, constantly adjusting the mixture to the engine's demands. That guarantees smooth, optimum power even from cold starts.

Motor summed up its benefits by saying: 'Crisp, clean throttle response is matched by immaculate flexibility, the engine pulling without a stutter from idle speed in any gear.

'At the other extreme it spins easily and smoothly' to its 6600 rpm redline with a purposeful buzz that's attractive in quality and moderate in volume.'

The injection system's efficiency also means between five and 15 percent better fuel economy. And with few mechanical parts, it is very reliable and needs little maintenance.

The GTE engine's ignition is also electronic. Programmed always to shoot the optimum current to the spark plugs at precisely the right moment, it's maintenance-free, ensures instant hot or cold starting, helps save fuel, reduces potential radio interference and service costs.

A silent-running toothed belt drives the overhead camshaft. Hydraulic valve lifters – a Vauxhall feature that's rare on other four-cylinder engines – mean clearances never need setting.

They maintain optimum performance and eliminate one of the heaviest costs of servicing high-performance engines.

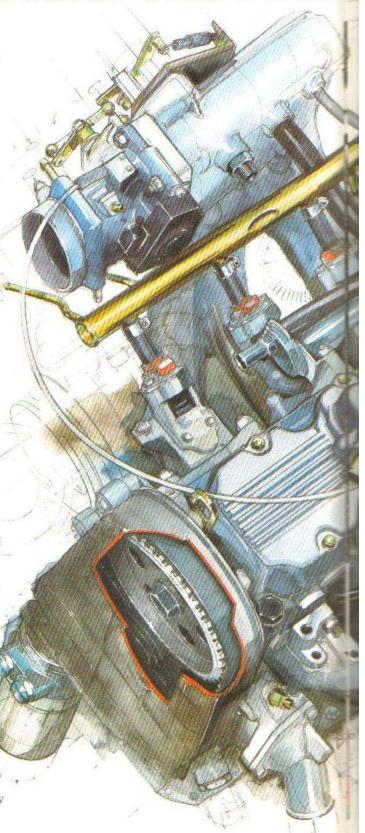
A five-speed gearbox delivers the engine's power to the GTE's front wheels.

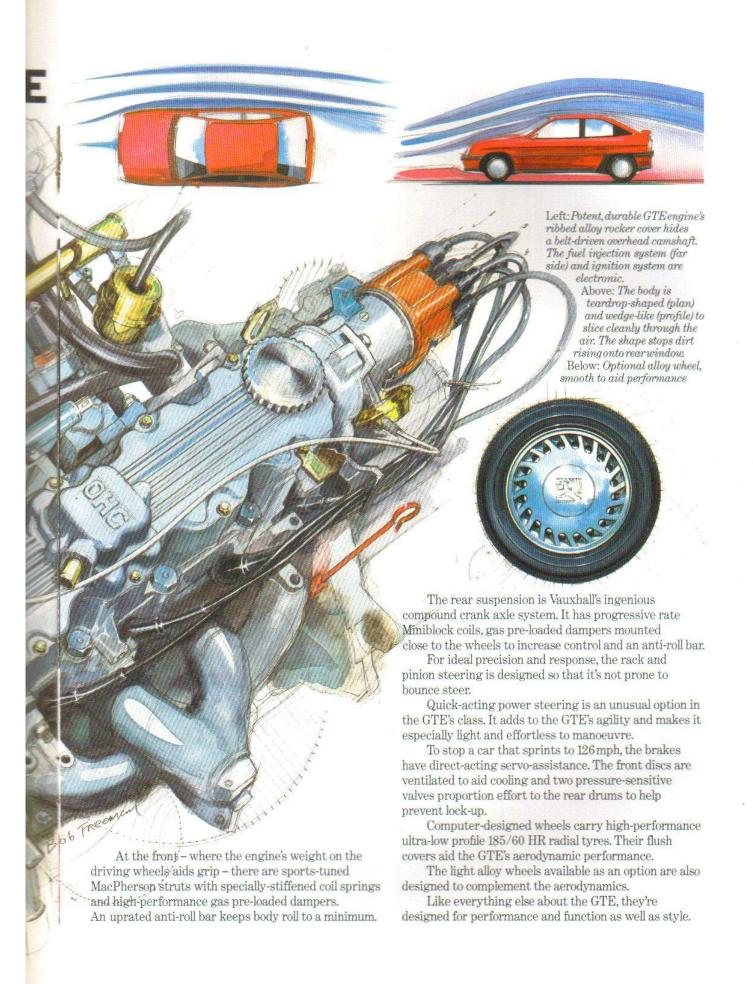
Specially developed to exploit the 1.8 injected engine's unusually high power and torque (111 lb. ft), the gearbox's close ratios reduce the drop in engine revsbetween each upward gearchange.

This keeps the engine within its strongest power band for dramatic mid-range acceleration and less frequent gearchanging in heavy traffic.

Fifth brings economy and quietness on the open road but still provides sparkling response and acceleration (at 70 mph the engine is turning at only 3500 rpm).

The GTE's suspension, a system *Motor* credit with 'excellent handling and grip,' has been developed to a new level of performance and refinement.





Open the Astra GTE's door and you enter a very special driver's environment.

The cockpit layout is the result of an advanced computer-aided 'functions concept' programme in which all aspects of driver control and comfort were scrutinised and correlated.

It determined the relationship of the tall, hiphugging sports seat to the wheel, pedals, gearshift and switches. Vision, control and comfort were the priorities.

The seat itself was designed using new techniques and materials. Its springing was matched by computer to harmonise with the suspension and damp vibration.

As an option, the seat is also adjustable for height.

The three-spoke sports steering wheel isn't just padded for comfort. It is also adjustable for tilt through a range of five settings.

Extend your left arm and you'll find it drops ideally to the gearshift. Try the pedals. They're straight ahead and set for swift, easy operation. The GTE was designed for Britons and has no conversion quirks.

Specially-shaped stalks on the steering column put the vital functions – indicators, headlight dip, windscreen wash and wipe – at your finger tips. The two-speed windscreen wipers also have an intermittent mode. Bar charts – with the rev counter shaped like a power curve and peaking at the engine's power peak – cover the other main functions (oil pressure, voltage, water temperature and fuel level).

Switching on the ignition activates a five-second check mode, enabling you to check the functioning of the various displays and the warning lights. The speedo briefly displays 125 then 288 – figures that check all the necessary LCD facet lines.

The check control bank on the upper dash panel (covering front brake pad wear, engine oil level, brake fluid and washer fluid levels, brake lights and front and rear lamps) also lights up. With everything normal, they extinguish after five seconds.

On the move, the LCD system's micro-processor continuously checks for malfunctions, ready to warn you by flashing the appropriate symbol.

At high speed this means you can concentrate on driving and leave monitoring of the instruments to the micro-processor.

With the main controls and the instruments straight ahead within your primary zone of vision and reach, the curved dashboard puts the remaining controls immediately alongside within the secondary zone.

## WELCOME TO THE HOT SEAT

Then comes one of the GTE's technological masterstrokes. Straight ahead and perfectly visible through the wheel is a complete Liquid Crystal Display instrument panel.

It displays the road speed in big, easy-to-read yellow figures, instantly switchable from miles per hour to kilometres per hour. So the ventilation and heater controls, radio/tape player and even the cigarette lighter and ashtray are on the full-depth console just beyond the wheelrim.

As a result of such carefully-considered ergonomics, your eyes never have to move far from the road, your hands never far from the wheel.

But there's still more to the effectiveness of the





## FOR THOSE WHO WANT

Hot as it is, the Astra GTE isn't only about speed, handling and driver pleasure.

Part of its design target was even more interior room and comfort than its pace-setting predecessor.

As a result, the GTE's cabin is outstanding – and it explodes a motor industry myth: that a streamlined shape compromises interior space.

For driver and front passenger, front legroom is exceptional. *CAR Magazine*, calling the GTE's cabin 'refreshingly smart', said: 'You can take it as read that passenger and luggage accommodation is better than most rivals, including the new Golf and the Escort'.

Bigger door apertures and increased opening angles make entry and exit easier, with rear seat access helped by the folding action of the front seat backrests.

An integral part of both front seats' design are side bolsters that hold occupants comfortably during the fast cornering of which the GTE is capable.

Delighted with what they called the seats' 'embracing resilience,' *CAR* said: 'Support, pressure distribution and damping properties are all that GM claim, making these seats among the very best.'

Padded headrests add a further touch of luxury and the seatbelt buckles are mounted on the seatframes so that the inertia reel belts fit snugly and comfortably.

In the rear, where the scalloped shape of the front seat backrests increases knee room, inertia reel belts are an option.

The upholstery is a combination of soft, tasteful, hard-wearing Mosaic/Turin velour cloth. Continental-style armrests are an integral part of the fully-trimmed front door panels.

The moulded headlining is computer-designed to reduce noise by acting as an acoustic insulator.

It's just one outcome of the Astra's engineers' application of very advanced computer-aided design techniques to cut noise and vibration to amazingly low levels as an inherent GTE quality.

At the build stage, separating or overlapping sheet metal parts – known as body decoupling – stops vibration travelling from one part of the body to another.

Patented double-channel door seals reduce windnoise. A new, heavy foam material covers the cabin bulkhead, footwell and floor up to the front seats to absorb high-frequency noise and block out engine and tyre noise. A new silencer design cuts exhaust noise.

The end product of all this is a car that carries four people as comfortably as it does quickly, and with such refinement that even well beyond 120 mph it's impressively quiet.

The GTE's long list of standard equipment includes items to pamper and safeguard passengers as well as to please the driver.





### T TO TAKE A BACKSEAT



Above: Sports hatch for four. Rear seat belts are an extra-cost option. Below: Split seat, vast space means versatility. Above right: Rear wash/wipe

The glass all-round is bronze-tinted and the laminated windscreen has a graduated tint shade-band across the top.

Four adjustable face-level vents are part of a high-capacity heating and ventilation system that allows independent adjustment of the amount of air fed to the screen and footwells. Seven outlets ensure that the windscreen is demisted evenly and outlets at each end of the facia demist the side windows.

For total passenger comfort, special ducts carry heated air to the rear seat compartment. Similarly, the digital display radio/cassette player has four speakers.

The dipping rear view mirror is tinted to reduce glare at night. High-pressure washers keep the

headlights clean and, while the slope of the tailgate automatically stops the rear window being fouled in normal driving, there's a wash/wipe system with intermittent mode to clear rain or snow after the car has been standing or is in slow-moving traffic.



On top of all this, the Astra GTE has the added benefit of a tailgate that opens all the way down to the bumper line for easy access to its remarkable load space. So long loads as well as rear passengers can be carried, the rear seat is split to fold 60/40.

The load compartment is carpeted, along with its hinged cover which also has tray sections to supplement the storage provided by the lidded glove box, facia top shelf, facia recess, centre console and door pocket bins.

Like the engine and load compartments, the glove box is lit at night. The GTE also has twin map reading lamps and delay cut-off for the cabin courtesy lamp.

Extensive safety engineering is another fundamental element of the GTE's construction. And Vauxhall's emphasis on exceptional build quality – with £65 million being invested in ultra-advanced techniques and equipment at the Ellesmere Port plant to build the Astra – also gives the GTE outstanding durability.

A great deal of design effort has also gone towards ensuring low running costs, with minimal service times and swift easy repairs should they ever be necessary.

Among the GTE's optional equipment is central door locking (which includes the tailgate), electrically-operated front windows, power-assisted steering, electrically-operated aerial, metallic paint, alloy wheels, Philips' AC741 stereo radio/stereo cassette and a sliding/tilting glass sunroof with interior sunblind.

In total, then, the Astra GTE is a superbly complete sports hatch with comfort, refinement, luxury and versatility to match its performance.

So what's it like to drive a car as powerful and aerodynamic as the Astra GTE?

First of all, you're in a seat *Motor* describe as 'terrific: cossetting in its soft embrace yet firmly supportive too.'

You also have what they call 'the wholly unexpected luxury of an adjustable steering column.'

Then you fire up an engine they dub 'a gem' and savour a clutch, throttle and gearchange they enthusiastically pronounce 'first class'.

standards. GM have somehow achieved steering which does not suffer so badly from the intrusions of power and married it to superb on-the-limit behaviour.'

When they talked about the optional power steering, *Autosport* said: 'It says much for the system that you cannot tell it is fitted, except for some lightness!'

But leave the open road and tackle thick traffic and you find the GTE just as impressive there too. Calling the engine's flexibility uncanny, *CAR* said: 'You can floor

TOO HOT TO HANDLE?
You give the GTE its head and - as the impressed

the throttle at walking pace in fourth, or no more than a jog in fifth, without inducing

test team from Performance Car found – it thrusts you from standstill to 60 mph in a scintillating eight seconds. That's around half a second faster than most rivals.

'From then on,' said Performance Car, describing the experience, 'the GTE ran away until

cribing the experience,
the GTE ran away until
by the time it chalked up
three figures it was more
than eight seconds ahead of the
old GTE and new Golf GTi.
Going on to record no less i

Going on to record no less than 126.5 mph, *Performance Car* said:
Forgetting the top speed figure, which leaves the Golf GTi some 10 mph in arrears, the two things that impressed us most about the new GTE were how easily it ran up to its maximum (there was no suggestion of having to wind it up for lap after lap, which is so often the case with this class

of car) and how stable and quiet it was.'
Apart from what they called its 'extraordinary top speed,' Autocar, too, were struck by the other elements of the GTE's performance: 'excellent stability and unusually good wind noise suppression.'

There, then, shining through in acceleration, speed, stability and quietness, is positive proof of the GTE's aerodynamic supremacy.

And right through the performance spectrum, the GTE's other abilities weren't lost on *Autosport*.

They said: 'Of all the sporting hatchbacks, the GTE is the most refined and comfortable, with the best ride.'

2 4

Nor are the experts in any doubt about the GTE's handling.

'It inspires the greatest confidence,' said *Autocar*. 'It feels tauter and more precise, hanging on superbly round a corner taken fast.

Yet it is one of those rare cars that whilst they are being cornered really hard do not take up all their suspension movement so that ride quality does not disappear, which is more than you can say for many.

'Ultimate handling is a delight by front-drive



hesitation or drivetrain judder.

'With no more than 1000 rpm on the tachometer, pickup is eager – and remains so, unabated, all the way to the red line.'

At the end of it all, switch off, weigh up the totality of the GTE's performance, consider its blend of excitement and refinement, ponder its finish, comfort, equipment, versatility and durability and you'll be as firm in your conclusion as the experts.

CAR said: There seems to be precious little that's wrong with the GTE and a great deal that's right.

The last word, though, is *Motor's*. 'The GTE', they pronounced, 'is now the hot hatch to beat.'







## THE HOT

#### ENGINE

1796cc single overhead cam 4-cylinder.
Power: 115PS (DIN) @ 5800rpm.
Torque (max): 111.4lb.ft (151Nm) @ 4800rpm.
Bosch LE-Jetronic fuel injection with fuel cut-off on trailing throttle. Automatic cold start device.
Engine oil cooler.
Compression ratio 9.5:1 (4-star fuel).

Engine rev limit 6600 rpm.
Engine features: transverse mounting, alloy cross-flow cylinder head, hydraulic tappets, electronic breakerless ignition, electric cooling fan.

#### TRANSMISSION

Front-wheel-drive, 5-speed all-synchromesh closeratio gearbox. Mechanical asbestos-free 8.5 inch single-plate clutch.

#### GEAR RATIOS

First 3.42:1; Second 2.16:1; Third 1.48:1; Fourth 1.12:1; Fifth 0.89:1; Reverse 3.33:1. Final Drive Ratio 3.74:1.

#### SUSPENSION

Front: Independent, MacPherson struts with gas pressure damper cartridge, coil springs, uprated antiroll bar

Rear: Compound crank with twin trailing arms, double conical Miniblock coil springs and telescopic gas pressure dampers and anti-roll bar.

#### STEERING

Rack and Pinion. Power-assisted rack and pinion optional. Tiltable energy absorbing steering column with mesh section, telescopic steering shaft and tear-off support. Three-spoke safety steering wheel. Turning circle kerb to kerb 32.2ft. 4.1 turns lock-to-lock (3.4 turns with optional power steering).

#### BRAKES

Diagonally split, dual circuit, servo assisted.
Front: 9.3 in ventilated discs with floating calipers.
Rear: 7.9 in self adjusting drums.
Two pressure conscious reducing valves.
Asbestos-free pads.
Handbrake-on and low brake fluid warning light.

#### WHEELS

5 1/2J x 14 steel wheels with flush covers. 5 1/2J x 14 alloy wheels optional. NB: Flush wheel covers or alloy wheels on Polar White

### GTE are in body colour. TYRES

185/60 HR 14.

#### ELECTRICS

Battery: AC Delco Maintenance-free battery. Voltage/battery capacity: 12V/44Ah. Alternator: 55amp. Ignition system: Maintenance-free transistorised.

#### FUEL CAPACITY

9.2 Imperial gallons (42 litres).

#### BODY

All steel body with extensive anti-corrosion protection. Safety crumple zones front and rear. Rigid passenger safety cell. Single 2-way key operated locks, ignition and fuel cap. Burst-proof door locks.

Tailgate assist struts.
Colour-keyed polycarbonate bumpers and front spoiler.
Total anti-corrosion protection: extensive zinc treatment before assembly is followed by multi-stage rustproofing processes. They include all door and tailgate flanges treated with an epoxy-based adhesive/sealant.

The entire body is phosphated and primed several times, including an electrostatically-applied primer coat, followed by three coats of glossy, hard wearing acrylic lacquer paint.

Any panels susceptible to stone chipping are protected with a stone impact primer prior to the application of the top coat. Protective wax is applied extensively to such areas as the entire engine compartment and underbody, the front wings, the lower sections of door cavities and the insides of sill panels. Tough plastic liners are fitted in the front wheelarches.

#### INSTRUMENTS AND CONTROLS

Cockpit-style instrument panel incorporating LCD speedometer, rev counter, voltmeter, oil pressure, water temperature and fuel gauges, odometer and trip odometer.

Check control warning panel covering front brake pad wear, engine oil level, brake fluid and washer fluid levels, brake lamps and front and rear lamps. Warning lights for alternator, oil pressure, high beam, turn indicators, handbrake-on and brake fluid loss. Stalk controls for headlamp dip/flash, turn indicators, wipers and electric screen wash. Illuminated switches and heater controls. Horn push on steering wheel.

### Steering column lock.

Headlamps-on warning buzzer.

Instrument panel light dimmer

### FEATURES

Interior:
Fully reclining sports style front seats.
Padded, quick release front seat head restraints.
Combination of Mosaic and Turin velour cloth trim.
Tiltable steering column.
Three-spoke sports steering wheel.
Philips AC441 mono radio/stereo cassette player - 4 speakers (\*see further on).
Cigar lighter.
Quartz clock.



Integral centre console. Courtesy lamp delay cut-off. Dipping, tinted rear-view mirror. Courtesy lamp with integral map reading light. Continental-style front door armrests.

Front door pockets.

Air blend heater.

3-speed fan.

Side window demist vents.

Adjustable face-level air vents.

Rear passenger compartment heating ducts.

60/40 split and folding rear seat.

Illuminated load area.

Illuminated glovebox.

Underbonnet lamp.

Carpeted, hinged load compartment cover.
\*For details of Philips AC441 and AC741 please refer to

Vauxhall-Opel Range Catalogue.

Exterior and mechanical

Five-speed close-ratio gearbox.

Engine oil cooler.

Laminated windscreen with graduated shade band.

Bronze tinted glass.

Electrically operated and heated door mirrors. Halogen headlamps with high pressure washers.

Aerodynamic sill mouldings and rear aerofoil.

Reversing lights.

Hazard warning lights.

Twin rear fog lamps.

Two-speed windscreen wipers with intermittent wipe.

Intermittent tailgate wash/wipe.

Opening rear quarter windows.

Heated rear window. Locking fuel cap.

Two-tone horn.

#### ADDITIONAL FEATURES

Interior: Inertia reel front seat belts, front and rear ash-trays, front door courtesy light switches, extensive sound insulation, lidded glove box, under facia tray, storage recess on top of facia, gear lever gaiter, front and rear passenger assist handles, colourkeyed door sill plate, one piece moulded headlining. twin sunvisors with driver's ticket pocket, grey velour carpet, fully carpeted load compartment, four multidirectional heating and ventilation outlets, internal bonnet release.

Exterior: Flush wheel covers (colour-keyed on Polar White models), retractable aerial, tailgate handle with pushlock, locking fuel cap, grey door handles, colourkeyed bumpers and door mirror housings, special front spoiler with concealed towing eye, black foil on centre pillars and between tail lamps, NACA bonnet air ducts, tail lamps of dark appearance, clear glass front turn indicators with orange bulbs.

Power-assisted steering Slide/tilt glass sunroof with interior sunblind. Electrically-operated front windows Central door locking including tailgate Electrically operated aerial.

Metallic paint.

Alloy wheels (body colour on Polar White model).

Driver's seat height adjuster.

Two inertia reel rear seat belts.

Two inertia reel rear belts and one centre lap belt. Philips AC741 stereo radio/stereo cassette player

LOAD CAPACITY (cuft)	Usable	Gross
Rear seat up	13.8*	17.1*
Rear seat down	35.3	48.9
*Volume under hinged load cover	1	

### WEIGHTS (kg)

GVW Kerb weight Payload 950 1435 485

Gross vehicle weight (GVW) is the total permissible weight of the vehicle including passengers to the designated seating capacity and their luggage. Roof rack: maximum 100kg (220lb) evenly distributed.

#### TOWING

Gross Towing limit 450kg (8.9cwt).

#### COLOURS AND TRIM

Mosaic/Turin Velour Exterior Colour Black Grey Polar White Grey

Carmine red Grey Silver\* Grey \*metallic paint at extra cost.

NB: For illustration, refer to separate colour card.

#### DOT FUEL CONSUMPTION TESTS-MPG (Litres/100 km)

Simulated Constant speed Constant speed urban driving 56mph (90km/h) 75mph (120km/h) 25.2 (11.3) 50.4 (5.6) 39.2 (7.2)

#### DIMENSIONS (inches)

Overall length 157.4 Overall width 65.5 Overall height 54.9 Wheelbase 99.2

#### PERFORMANCE

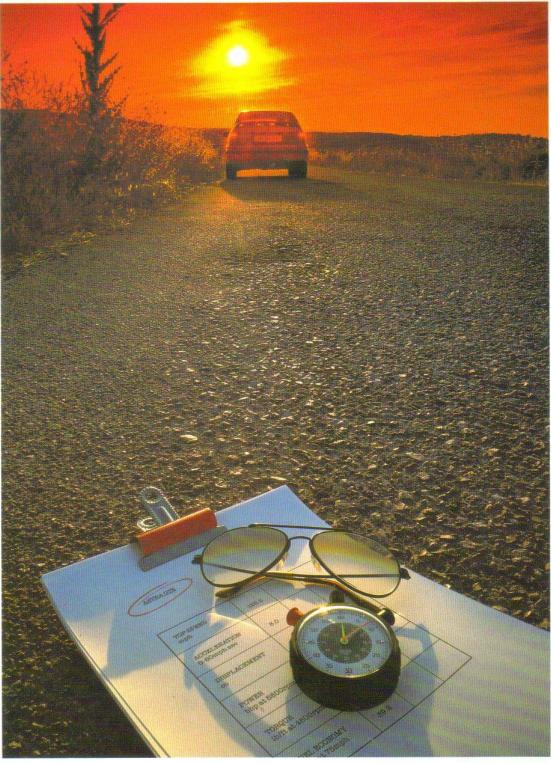
Maximum speed 126.1 mph (Manufacturer's figure)

126.5 mph (fastest 1/4 mile)\*

0-60 mph 8.0 sec\* 0-100 mph 23.6 sec\* Standing 1/4 mile 16.0 sec\*

\*Figures recorded by Performance Car Magazine.

### **ASTRA GTE. THE HOTTEST ONE**



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REMEMBER, WE GOT HERE FIRST





