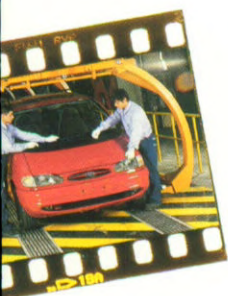


Photographs of the Galaxy



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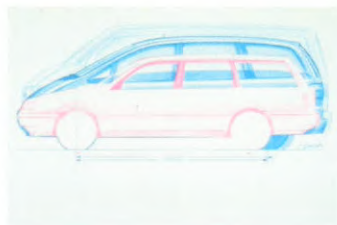
Albert Caspers,
Chairman, Ford of Europe

As the saying goes, pictures speak louder than words. That is why this brochure brings you a wide range of shots of our new Ford rather than a lot of text. We have called it the Galaxy, firstly because of its spacious passenger compartment, but also because of the future importance of this type of vehicle. "People carriers" are constantly gaining in popularity. But if they are to stay competitive they will have to be more than just fashionable. With the Galaxy, Ford has concentrated on the important areas of safety, comfort, the environment and reliability. The collaboration of two experienced European car manufacturers in the brand new AutoEuropa plant at Setubal, Portugal, also guarantees the very highest production standards, through state-of-the-art production technology and environmental protection, and progressive, group-orientated working methods to produce a vehicle which is capable of meeting all the expectations of its buyers.

A. Caspers

Design

The designers of the Galaxy have created an MPV with a unique character which is both exceptionally spacious, seating up to seven passengers, and extremely versatile. Tinted windows, a low beltline and darker A, B and C pillars emphasise its elongated lines.



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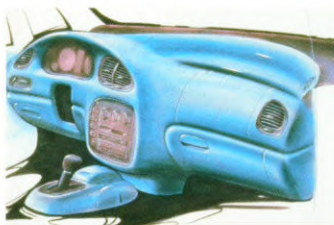
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Wind Tunnel

and Vibration Testing

The Ford engineers set the car's standards for low fuel consumption, low noise levels and high degree of driving safety during extensive wind tunnel testing.

The vibration testing of the new car, using hydraulic units, was rather less gentle. The body and all its mechanical units were subjected to strong, continuous vibration in order to detect any concealed weaknesses.



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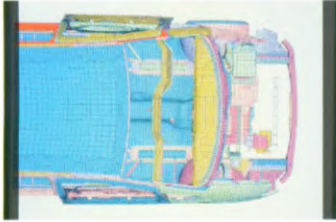
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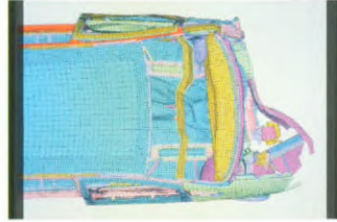
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Computer Crash

Simulation

Using up to 65000 individual data elements combined in 400000 equations, main-frame computers simulate every conceivable accident scenario. This enables the engineers to lay a strong foundation for passenger safety long before the first prototype is subjected to an actual crash test.



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Pilot Build

Long before production began, Ford employees at the Cologne-Niehl pilot plant started assessing the manufacturing process. The first Ford Galaxy prototypes were hand-assembled on a small-scale replica of the production line. A team of engineers, employees and suppliers worked together to optimise the production process, develop manufacturing techniques and prepare for the training of the Portuguese workforce. In this way, the pilot plant team played a vital role in guaranteeing the production quality of the Galaxy.



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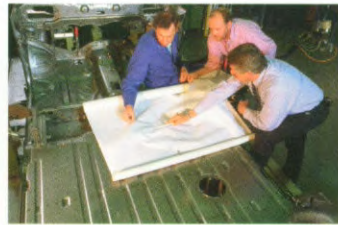
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Low Temperature Testing

Ford's engineers and test drivers have tested all the Galaxy's characteristics under the harshest winter conditions beyond the Arctic Circle. Vehicle handling, the durability of seals and gaskets, gearbox operation and cold starting all formed part of the checklist, along with the effectiveness of the heated exterior mirrors, windscreens and rear windows.



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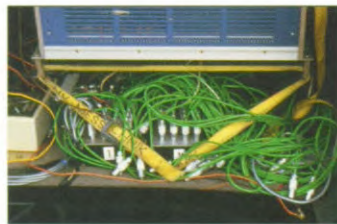
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High Temperature Testing

The Galaxy's qualities have been tried and tested in several million kilometres of driving on the worst road surfaces and in all weather conditions. High temperature testing was one aspect of this programme. The test drivers have ensured that such basic features as the high-volume but draught-free ventilation system function as reliably as the CFC-free air conditioning system, and that the seat upholstery stays pleasantly cool and yet durable throughout the Galaxy's long service life. The programme also involved endless start-stop tests in blazing heat, together with fully laden start-from-rest and extreme braking tests on steep gradients. Ford's test engineers and drivers apply rigorous standards to the operation of all their engines, transmissions and chassis components and, by means of such demanding test programmes, produce vehicles which are well able to match any customer demand.



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The Lommel Proving Ground

Ford's Lommel proving ground in Belgium, one of the largest and most comprehensive test facilities in use by a European vehicle manufacturer, provides all the hazards which can challenge a vehicle, including test gradients of up to 33%, the worst road surfaces, steam baths and salt spray systems. All the vehicle's components are tested to breaking point by Ford's specialists.



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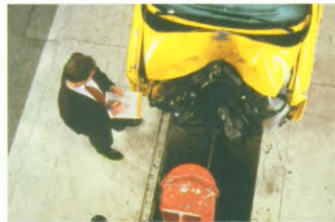
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Crash Testing

The Galaxy is proof positive of Ford's safety commitment. The MPV already meets all upcoming frontal impact safety standards, both full-frontal and offset. At offset impact of 35mph (55km/hr), the Galaxy side doors can still be opened. Side impact beams offer additional safety, meeting both the existing US FVMSS side impact requirements and the new European regulations planned for 1995. Standard driver air-bag, height adjustable head restraints and inertia-reel safety belts throughout and seatpans profiled to overcome the problem of occupant "submarining" in frontal impacts all add to passenger safety.



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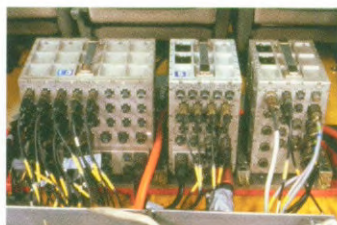
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Dummies

Galaxy crash tests were carried out using the latest in crash test dummies. Specially designed for frontal and side impact testing, they are designed to reproduce the reactions of the human body in crash conditions. Test results are measured at 54 different points during an impact lasting one-tenth of a second.



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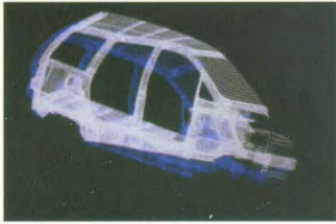
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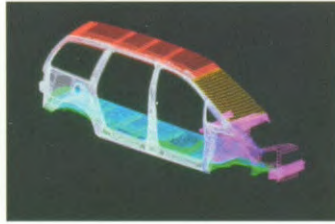
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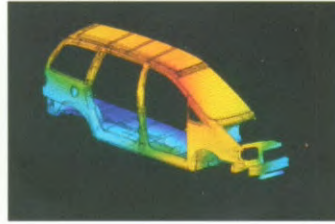
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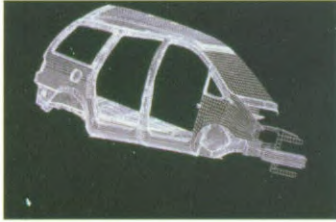
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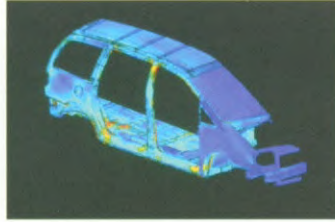
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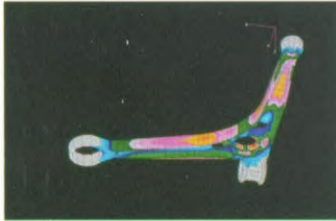
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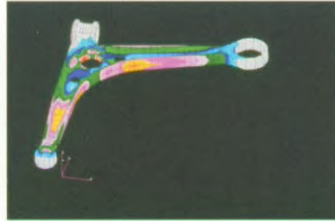
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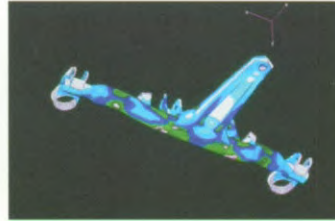
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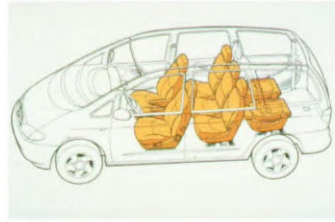
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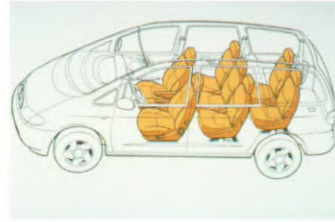
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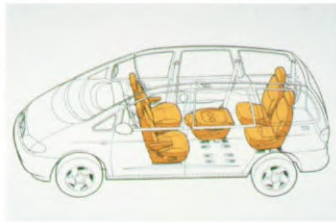
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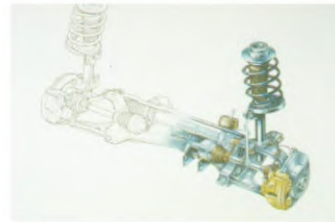
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Torsional Stiffness

Calculation

The unimaginable was depicted on a CAD computer in the Ford Design Office: a Galaxy body was twisted like a can of drink being crushed to wring out the last few drops. The purpose of the exercise was to analyse and improve the body's torsional stiffness through computer simulation. The finite-element approach, processed by means of the CAD computer, makes it possible to represent and visualise the strains imposed on all parts of the vehicle.

X-Ray View

The interior of the Ford Galaxy: a flexible passenger cabin accommodating two to seven seats, ideal for use as a camping vehicle or a load transporter. The chassis design employs all-round independent suspension, using MacPherson struts at the front and a sophisticated semi-trailing arm arrangement at the rear.

Production Machinery

Five of the most modern three-axis hydraulic presses have been installed in the AutoEuropa works in Setubal. For the very first time in a Ford plant, it is possible to press the Galaxy underbody from a single steel sheet. All the large presses are fed automatically, and the emerging pressed parts are stacked without being touched by hand. If high technology is to be integrated efficiently into the production process, however, precision and skill are essential in the manufacture of the tools themselves. The toolmaking specialists are responsible for the casting and machining of the dies before complex technical and quality control checks are carried out.



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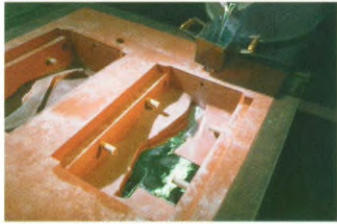
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Exterior, Engines, Interior

The Ford Galaxy combines great versatility, class-leading comfort, maximum efficiency and car-quality handling in one harmonious design. Up to seven occupants can travel in comfort on individual, ergonomically profiled seats. The second and third seat rows can be removed without tools to transform the Galaxy into a two-seater with over 3.5 m³ of load space. The Galaxy comes with a choice of engines: a 2.0-litre 4-cylinder DOHC engine which delivers 115 PS (85 kW) at 5500 rpm and develops maximum torque of 167 Nm at 2500 rpm and a 1.9-litre direct-injection turbodiesel engine, which delivers a maximum torque of 197 Nm at 1940 rpm and is equipped with oxidising catalytic converter and exhaust gas recirculation (90 PS/66 kW at 4000 rpm) and a 2.8-litre V6 engine (174 PS/128 kW) which delivers a maximum torque of 235 Nm at 4200 rpm.



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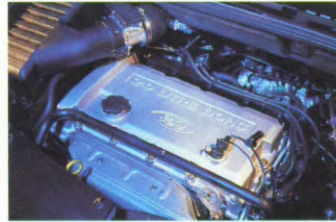
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Setubal

The AutoEuropa Works in Setubal, a few kilometres outside Lisbon, represents the single biggest industrial investment in Portugal's history. The new plant will contribute about 2 billion DM (£800 million) a year to the country's balance of payments and the plant's 5000 workers will produce up to 860 Galaxies a day. Work stations and working procedures have been created to the latest standards and team work and a continuous-improvement approach guarantee high product quality. A "just in sequence" operation has been achieved by locating all the major suppliers in an industrial park only a few hundred yards from the plant. Up-to-date technology ensures optimum environmental protection. For example, all paints, including clearcoat finishes, are water-based and all heavy metals have been eliminated from the painting process. When Setubal achieves its full output, and taking account of the opportunities created in the supply system and fully developed infrastructure, it will have created 12000 new jobs.



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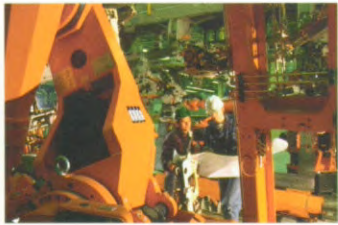
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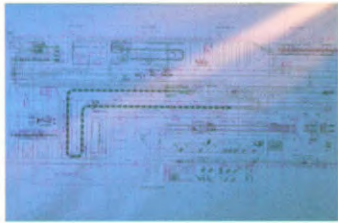
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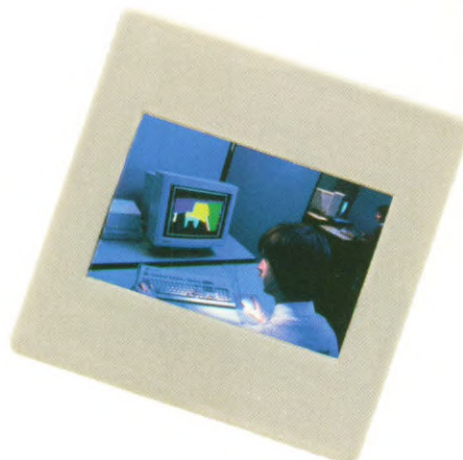
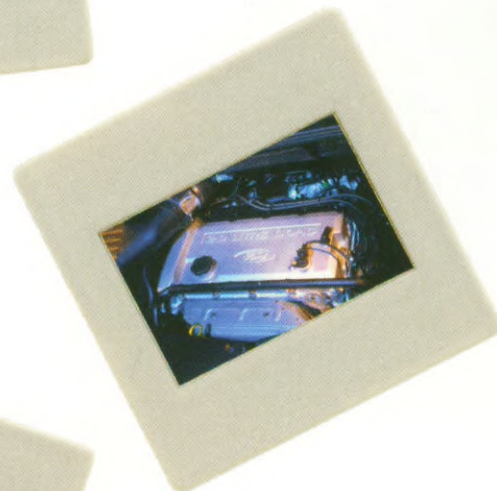
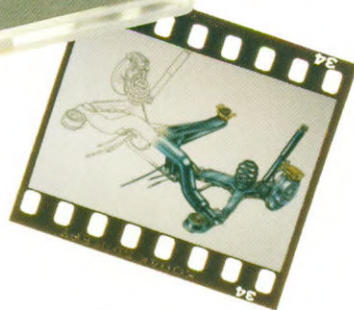
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Publisher:
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Design: Hans Günter Schmitz, Visual Communication

