

**MERKUR XR4Ti**









**From Germany,  
now comes a new breed  
of sporting machine.**

**It is designed and  
engineered by one of  
Europe's biggest  
and most successful  
carmakers:**

**Ford of Germany.**

**The breed is Merkur,  
pronounced mare-koor.**

**In a short time a full line of  
high-performance Merkurs  
will be offered.**

**The first of these, XR4Ti,  
is here today.**

XR4Ti is a precisely designed and engineered three-door, five-passenger sports sedan. It represents the culmination of Ford's 70-plus years experience manufacturing high-performance automobiles in Europe.

Merkur XR4Ti's heritage includes domination of the world's most demanding test beds—the Formula One circuits and World Championship Rally trails that span the globe.

It could change your mind about which company offers the most exciting European car.

XR4Ti is a skillfully designed aerodynamic form that cuts through the wind almost effortlessly, thanks to its class-leading 0.33 drag coefficient.

It is an aggressive machine bred on the high-speed autobahns of its homeland.

XR4Ti is designed and engineered with a precise driver-centered philosophy that looks at driving as a no-nonsense skill.

This philosophy defines the interior of the XR4Ti as an environment intended to enhance driver performance and enjoyment.

It establishes a relationship of confidence between driver and machine, enhancing XR4Ti's ability to conquer the road.

And this philosophy demands that the XR4Ti offer high performance and good handling capabilities to go with its ergonomic and aerodynamic efficiency.

XR4Ti generates its performance from an electronically fuel-injected, turbocharged, overhead-cam 2.3-liter four-cylinder engine.

It transmits that power to the wheels through a five-speed overdrive manual transmission. A three-speed automatic transmission will be available later in the model year. Both are ideally suited to handle XR4Ti's impressive power band.

XR4Ti grips the road surely and smoothly thanks to a four-wheel independent suspension with stabilizer bars in both the front and the rear.

It stops quickly with the assistance of power-assisted front disc and rear drum brakes.

And it responds to its driver's commands swiftly and accurately through variable-ratio power-assisted rack-and-pinion steering.

These systems on the XR4Ti are impressive. More impressive is the way they function in harmony to provide balanced performance.

Even Merkur XR4Ti's alphanumeric identity is functional. The family name, Merkur, is German for Mercury, the Greek god of commerce known for his winged feet and fleet speed, and for the element commonly called quicksilver.

The "XR" in its name is derived from a series of high-performance cars designed and built by Ford in Europe; "4" is the model series. The "T" designates XR4Ti's turbocharged powerplant, and the "i" is the accepted European designation for fuel injection.

This publication describes the Merkur XR4Ti for you, but truly to appreciate its precision one must experience it in person.

The Merkur XR4Ti is imported from Ford of Germany and sold exclusively through selected Lincoln-Mercury Dealers in the United States.

Experience the XR4Ti at a Merkur Dealer, and redefine your notion of what a total performance European sports sedan is all about.





**It has been said many times, about this car or that car, that it was designed to cheat the wind.**

In truth, only that which does not confront the wind cheats it. Merkur XR4Ti is designed to confront the wind. Boldly and aggressively. XR4Ti is designed to manipulate the wind, to manage air for its own intent and device.

**XR4Ti's shape contributes to fuel economy, wind noise reduction, and road hugging ability.**

The shape of the XR4Ti is such that it diminishes the wind's power-robbing and fuel-depleting prowess.

From the beginning, the goals set for the XR4Ti were formidable: It must be the most aerodynamically efficient production automobile ever produced by Ford of Germany. It must be a leader in its class. It also must be attractive.

To accomplish this, Ford engineers from all over the world were consulted. From Cologne, Germany to Sao Paulo, Brazil, and from Dearborn, Michigan to Dunton, England, they remained in constant communication via satellite.

Advanced design methods such as Computer-Aided Design — CAD — and Finite-Element Modeling — FEM — were used extensively in the development of the Merkur XR4Ti.

CAD techniques allowed engineers to critically evaluate design elements, testing each new concept and then improving it.

The time and effort saved were invested in exploring more potential design concepts, thus always working toward the best possible design solution.

FEM enabled the engineers to analyze how stress and external forces would act on any given design element. This helped them determine where the car needed

structural reinforcement, or whether an equivalent-strength lightweight material could be used to help keep the vehicle's overall weight to a minimum.

As a result, high-strength, light-alloy steel is used extensively in the construction of the Merkur XR4Ti.

Other lightweight materials, such as polyurethane and aluminum, also are used to keep XR4Ti's weight down and its performance up.

Always, the use of any material or construction technique was weighed against preserving the aerodynamic efficiency of the Merkur XR4Ti.

**With a drag coefficient of just 0.33, XR4Ti is one of the most aerodynamically efficient production cars ever built.**

Ford of Germany designers and engineers spent thousands of hours working on a form that would maximize the aerodynamic efficiency of the Merkur XR4Ti. They then spent nearly 4,000 hours testing different designs in the wind tunnel, modifying their designs, and retesting them in the wind tunnel until they were sure they had met their objective.

In the end, Merkur XR4Ti had undergone nearly 1,000 separate tests in the wind tunnel, an extraordinary number of visits that culminated with its bold, innovative new shape, a shape that emerged with a drag coefficient of just 0.33. That makes the XR4Ti the aerodynamic leader

in its class, and one of the most aerodynamically efficient cars ever produced.

The stunning result of this intensive search for maximum airflow management can be seen by folding out this page.

Merkur XR4Ti looks like no other car in America. Its form is dictated by its function.

That function is to use airflow management as no other car in its class has.

The emphasis placed on aerodynamic efficiency is not a result of whim or passing trend. It is based on proven research and testing that demonstrate the practical benefits of sound aerodynamic design.

Merkur XR4Ti's aerodynamically superior body shape contributes to increased fuel efficiency, to the reduction of interior wind noise, to better engine and brake cooling, and to its ability to hug the road at highway speeds. Merkur XR4Ti's efficient form also contributes to less accumulation of dust on its lights, glass surfaces, and underbody.

In the rain, its shape uses the wind to shed water from the windshield, side windows, and backlight.

From its flush-mounted, sealed halogen headlamps to its biplane rear spoiler, Ford of Germany engineers sought aerodynamic purity for a purpose: to create in the Merkur XR4Ti a well-balanced high-performance sports sedan that would use nature's powerful force, the wind, to its own benefit.









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**XR4Ti's rounded wedge shape aggressively manages the wind.**

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XR4Ti's overall shape is a rounded wedge, with the nose falling dramatically toward the road surface away from the windshield and the rear deck rising slightly.

In a very real sense, though, the aerodynamic success of XR4Ti is due to the sum total of its smaller design elements.

To achieve XR4Ti's class-leading 0.33 coefficient of drag, it was necessary for Ford of Germany designers to be concerned with each of the smaller elements that comprise the overall design.

For instance, XR4Ti's front windshield contributes to the overall wedge profile, with its steeply angled glass set in at 60 degrees. The rear glass is inset at an even steeper angle, 65 degrees. And both the front and rear glass are fixed directly to the body to improve the airflow over the car and add stiffness to the body.

Besides being a very efficient aerodynamic shape that aggressively manages the wind, this basic design also affords good visibility.

Additionally, XR4Ti's design contributes to a low interior noise level by reducing wind noise.

A 360-degree polycarbonate anti-corrosion system combines with polyurethane 5-mph bumpers to cover the lower portion of the car and contributes to the aerodynamic design purity.



Starting at the front bumpers, this lower bodyside cladding, visible on the fold-out, guides the flow of air under, over, and around the car, reducing wind resistance and eliminating some of the turbulence around the spinning wheels—traditionally one of the most aerodynamically "dirty" areas of a car.

Additionally, because of the manner in which XR4Ti directs airflow into the wheel well areas on the car, the lower bodyside cladding contributes to brake cooling and helps keep the area free of dust and water.

The polycarbonate lower bodyside cladding also protects the XR4Ti from stones, mud, and water.

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**The biplane spoiler located on XR4Ti's rear deck improves its handling by reducing lift.**

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Another key design element on the XR4Ti is the biplane rear spoiler:

This "double-wing" rear spoiler consists of two sections: an upper, basically independently mounted section, and a lower part, mounted near the bottom of the decklid and which functions very much like the classic decklid spoiler.

Airflow on the Merkur XR4Ti is directed uninterrupted over the roof and the bodysides toward the rear end of the car.

Clean airflow around the sides of the car is extremely important because it enables the air to be directly "aimed" at both parts of the rear spoiler, so that the upper portion of the spoiler improves the flow of air to the lower portion.

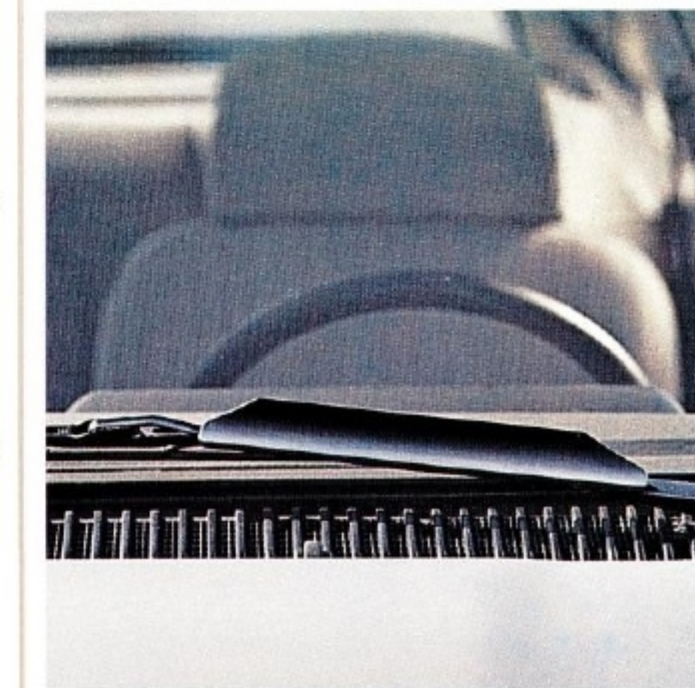
The result is that airflow disruption—in the form of rotating turbulence in the lower rear window area—is greatly reduced.

Additionally, the air is forced to flow down below the upper wing on the spoiler, contributing positively to pressure conditions in the entire rear end area of the car.

Thanks to the special design of the double-wing rear spoiler, negative pressure in the rear area of the XR4Ti is substantially reduced.

This not only helps contribute to a 5% reduction in overall vehicle drag, compared to a car without the spoiler, but it also significantly improves straight-ahead stability through a 14% reduction in "yawing"—side-to-side movement—and a 50% reduction in rear axle lift.

Lighting, too, contributes to the overall effectiveness of the XR4Ti's shape. Fully integrated



aerodynamic headlamps help guide the wind up and over XR4Ti, reducing resistance and helping keep their surfaces clean.

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**The designers who worked on XR4Ti even went so far as to devise a functional spoiler for the windshield wiper blade.**

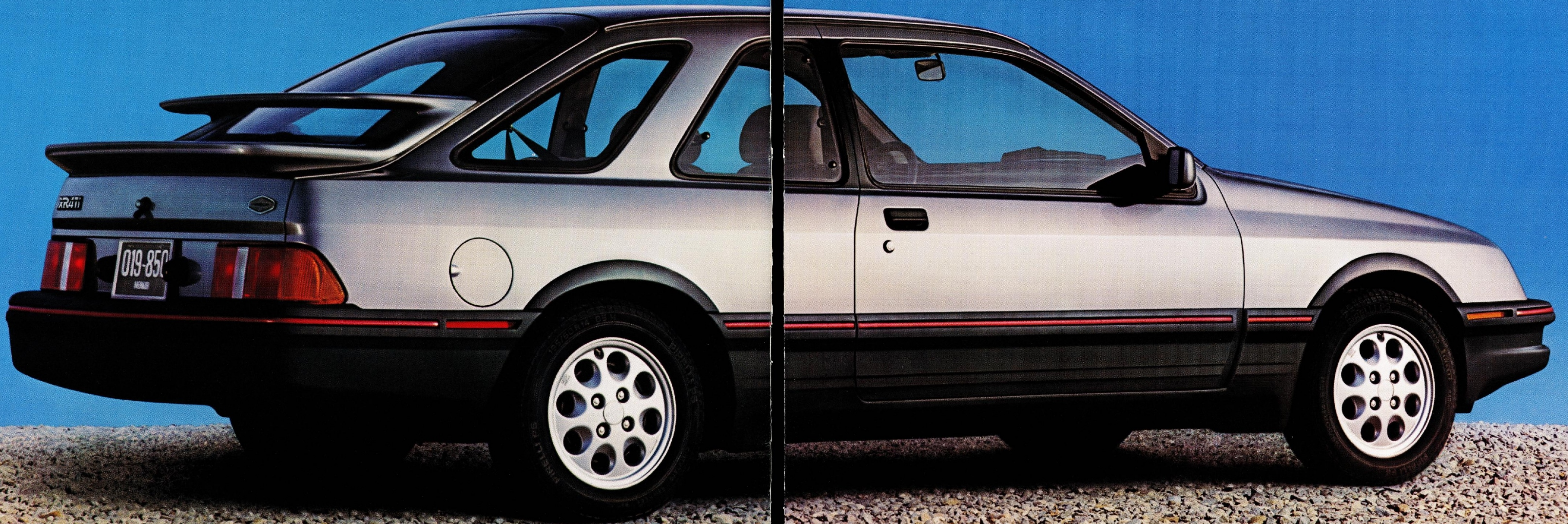
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In their quest for aerodynamic purity, Merkur XR4Ti's designers even designed a windshield wiper spoiler, shown above. Affixed to the front wiper blade, this small plastic spoiler uses the air that passes over the windshield to keep the wiper blade pressed firmly against the glass when it is in use.

When the wiper blade is not in use, the spoiler directs air up over the recess where it rests.

Merkur XR4Ti's designers have taken care of all the little things so you can enjoy the biggest reason for owning it: the pure, unadulterated driving pleasure this remarkable import delivers.









**Life on the autobahn, in Germany where the Merkur XR4Ti is built, passes by very quickly.**

It is imperative, therefore, that the driver have every essential control within reach, that all instrumentation is within a quick, yet comprehending glance. It is equally important the driver remain comfortable, at ease, while performing vital functions.

**Merkur XR4Ti is designed with a driver-centered philosophy as its core.**

In short, the driver must be the center of a small but all-important universe comprised of himself, the car, and the path traveled.

Merkur XR4Ti was designed precisely with such a driver-centered philosophy as its core.

To help assure the driver remain an active and enthusiastic participant — whether the journey

be the daily commute to work or a cross-country trip — XR4Ti is equipped with anatomically designed front seats (shown at left with optional Gray leather interior) capable of accommodating a wide variety of human forms.

The front seats in XR4Ti incorporate integral thigh and torso supports to keep the driver and front-seat passenger firmly in place.

**The view from the XR4Ti driver's seat is testimony to the emphasis its engineers placed on ergonomics.**

Fully adjustable head restraints, infinitely adjustable seatback rests, and adjustments for fore/aft travel and driver seat height are designed to suit a large number of driving styles. There is even a lower lumbar support to further enhance driving enthusiasm. The view from the driver's command post, shown on the next page, is testimony to the emphasis European Ford engineers have placed on ergonomics — the interaction of driver and machine.

The steering column holds three stalks: on the left for the turn signals and the flash-to-pass indicator/high beam control, and on the right for parking/headlamp control and the windshield wiper/washer control. All can be reached without losing sight of the road even momentarily.

The thickly padded steering wheel contains spokes at 4 and 8 o'clock and a center horn blow

control. Through the wheel, the main instrument pod is easily read.

The instrument panel is the result of painstaking attention to logic, detail, and sensory perception; not just to sight, as might be expected, but to touch as well.

The most vital instrumentation, the speedometer and tachometer, is of analog — not digital — design. The speedometer is located on the left of the main instrument pod, and the tachometer is on the right. An analog boost gauge for the turbocharger is incorporated into the tachometer face.

The fuel and temperature gauges, also analog designs, are located in the center of the main instrument cluster.

Heating, ventilation, and air conditioning controls are sensibly laid out in a vertical format just to the right of the main pod.

At the left are rocker switches for the fog lamps, rear defroster, and rear window wiper/washer.

These rocker switches provide evidence of the intense degree of detailing that went into the XR4Ti. On each of the switches' surface are 30 raised points intended to increase contact with the driver's finger. Whether the finger is dry, wet, even enveloped in a driving glove, these little friction points ensure quick, easy operation.

Below the rocker switches are the left-side vent and vent control. Climate control, thanks largely to XR4Ti's airflow management, is superb.

To the right of the main

instrument pod are two main vents with controls. Just below are XR4Ti's graphic warning panel, a two-dimensional warning display, and the car's solitary digital readout: a clock/calendar/alarm.

**Collectively, the interior and instrumentation confirm XR4Ti's commitment to the driver as the key element.**

The area below these displays and controls houses the three-speed air conditioning fan control, the electronically tuned Grundig™ AM/FM stereo cassette sound system and cassette tape storage area, and a joystick for balancing the sound system's four speakers. Nearby, an ashtray, cigarette lighter, and switches for the optional heated seats easily are reached.

At night, only the instrument panel is backlit, so the individual numbers and gradations are illuminated. This helps reduce irritating glare while lighting only the instrumentation that is necessary.

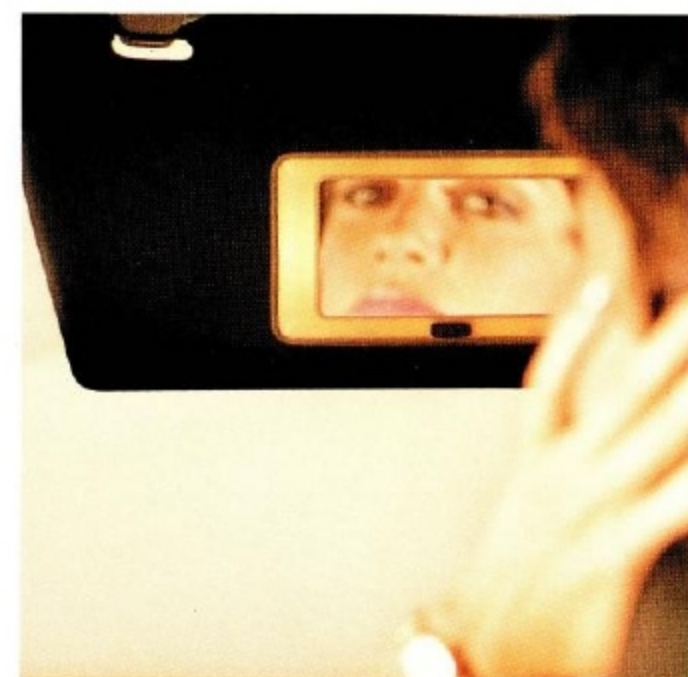
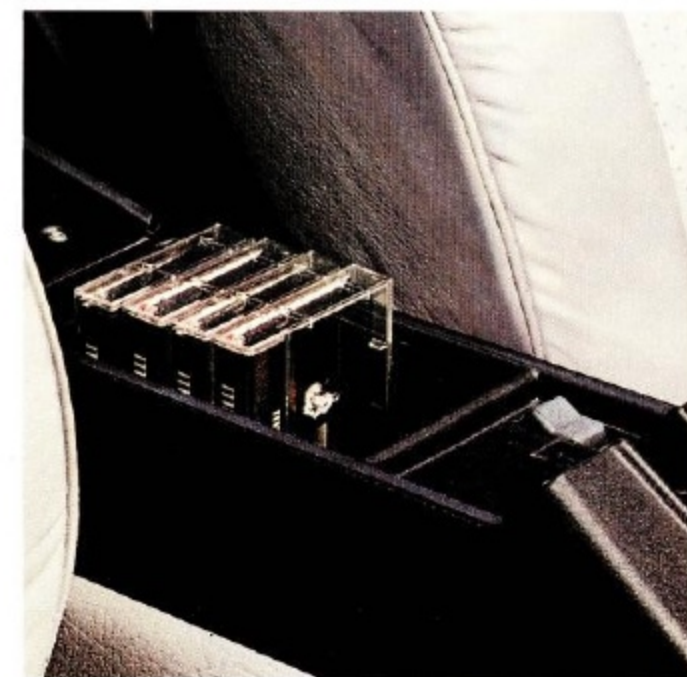
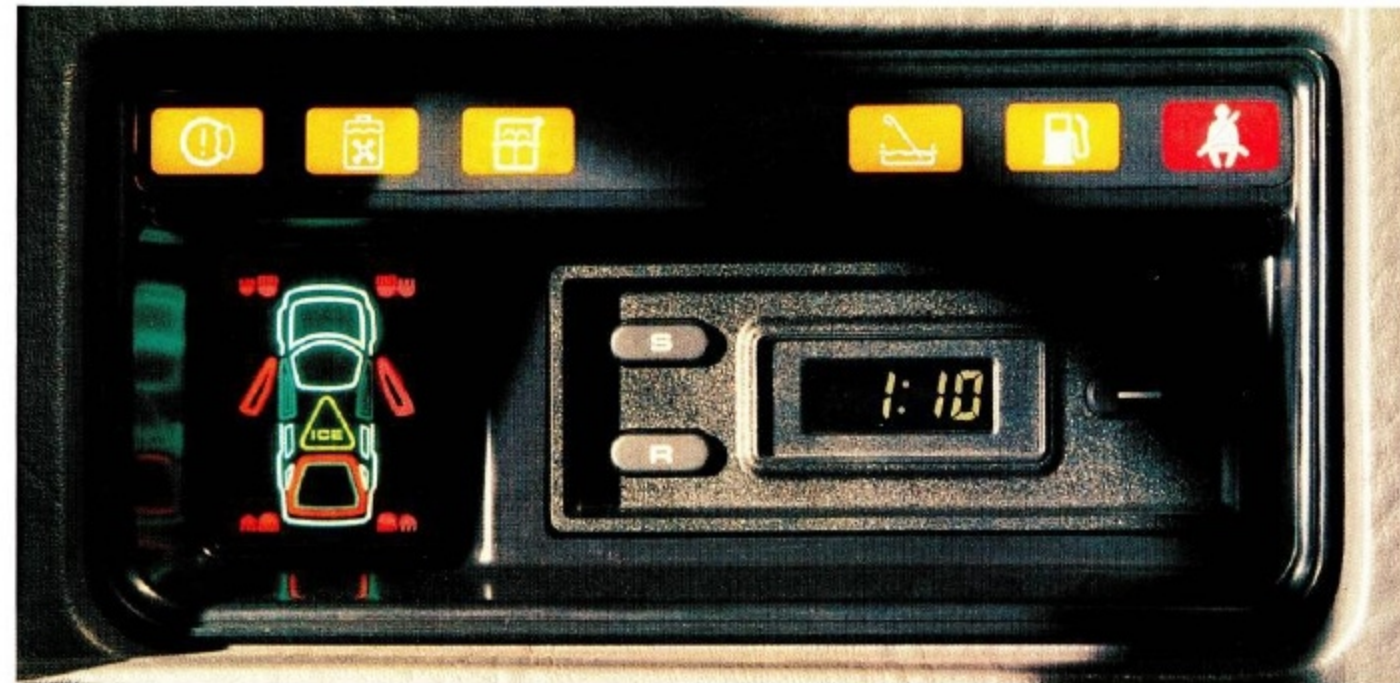
Soft, blue-green backlighting is used for all main instrumentation, with all other controls and switches marked in internationally recognized symbols and colors.

Collectively, the interior controls and instrumentation confirm XR4Ti's commitment to the driver as the key element. Everything falls within the sweep of the driver's hand, a glance of the driver's eye. It is a simple, logical, immensely sound and convenient arrangement.









**Moonroof:** The optional moonroof available on XR4Ti can be either tilted or slid open and includes a screen to filter out harsh sunlight if desired.

**Overhead lighting:** XR4Ti is standard equipped with adjustable dual overhead map lights for night navigation or quick location of personal items.

**Graphic warning display:** XR4Ti keeps an open dialogue with the driver through its graphic warning display and systems warning panel.

**Heated seat switches:** Drivers in northern climates can order XR4Ti with optional electrically heated front seats. Note the 30 raised points on the rocker switch for improved surface contact.

**Climate control:** XR4Ti's climate control system, complete with standard air conditioning, was designed in Europe and torture-tested in the Arizona desert.

**Rear wiper heat surround:** Another ingenious touch devised by European Ford engineers is a heat surround element for the rear window wiper. Activated along with the rear defroster, it helps keep the rear wiper blade from freezing in place.

**Coin storage area:** There's no more fumbling for pocket change to pay highway tolls, thanks to a conveniently located coin storage area on the instrument panel to the right of XR4Ti's driver.

**Cassette tape storage area:** Located right beneath XR4Ti's Grundig™ AM/FM stereo cassette sound system is a cassette tape storage area. A touch of a button, and out comes your favorite tape.

**More cassette storage:** Additional storage area for cassette tapes is located on the center console between XR4Ti's front sport seats.

**Glove box:** With an eye on ergonomics, XR4Ti's engineers designed its glove box to open with minimum intrusion on the passenger's knees.

**Passenger-side visor vanity:** XR4Ti is standard equipped with a lighted visor vanity mirror for the front-seat passenger.





ENVIRONMENT



Don't be misled by all the attention garnered on the driver of the XR4Ti. Although the driver is of prime importance, this person isn't the only one to whom XR4Ti's engineers paid attention.

The Merkur XR4Ti is a true five-passenger sedan, spacious and comfortable.

Witness the ample dimensions of XR4Ti's rear passenger zone, pictured at far left with the optional Gray leather interior.

provide rear seating for up to two persons.

**XR4Ti instills a sense of confidence in the passengers as well as the driver.**

The hatch area is covered with the same carpet trim as the rest of the car, so delicate possessions can be placed there with a minimum of concern about them being tossed about.

A convenient parcel tray can be reached from the rear seat and can be detached so it rests over the deck when the hatch is opened, concealing valuables if desired. Built right into the parcel shelf is a handy storage box, shown at bottom right.

Beneath the parcel tray are tie-downs to hold luggage or packages in place and prevent them from sliding and shifting in the event of spirited driving. Additionally, a cargo net is provided to ensure further that things don't bounce around, as shown at bottom left.

Sound absorption material is placed between the body and the gas tank, the lower rear body panel, and the rear quarter panels to help ensure a tranquil ride for XR4Ti's rear-seat passengers.

The XR4Ti in this way instills a sense of confidence in the passengers as well as the driver. Each shares the overall experience of XR4Ti while enjoying the distinct pleasures designed into their own ergonomic zones.

**The inside of the XR4Ti was designed for driver involvement and passenger comfort.**

Whereas the driver's environment was conceived with total involvement in mind, the rear seating was designed for maximum comfort and quietness.

The exterior design also allows for a good amount of cargo space within the XR4Ti's hatchback. XR4Ti provides 17.1 cubic feet\* of luggage space within its hatch area, as shown at center left.

With the rear seatback folded down, luggage space increases to 35.7 cubic feet\*.

The rear seat is split asymmetrically—60/40—so that three persons can be seated with the entire seatback up. With the 60% section of the seatback folded up, one person can be seated, and the remaining 40% of surface area is available for cargo, as shown at top left.

This 60/40 split enables XR4Ti more easily to handle oversized items, such as skis, and still



\*Based on 1985 MVMA passenger car specifications.



## DYNAMICS



**Merkur XR4Ti's aggressive exterior appearance lets its autobahn-inspired heritage be known at a single glance.**

And its ergonomically fine-tuned interior reaffirms its position as a driver-oriented automobile.

It is the unseen, however, the technologically advanced hardware beneath its brazen skin, that certifies the XR4Ti as one of the most exciting European sports sedans available.

**XR4Ti's four-cylinder OHC electronically fuel-injected turbocharged engine delivers ample power and smooth operation.**

Merkur's dynamic operating systems—its engine, transmission, and chassis components—are what performance is all about.

Consider XR4Ti's power center, its engine, for instance. XR4Ti arrives in the U.S. with a 2.3-liter, overhead cam, electronically fuel-injected, turbocharged four-cylinder engine that delivers quick acceleration, a broad power band, smooth operation even at high rpm, and good mileage\* for a high-performance sports sedan.

The engine's cylinder block and cylinder head are of lightweight, thin-wall, cast-iron construction to help reduce weight and permit a high level of usable power.

**The cam used on the Merkur XR4Ti with five-speed is designed to provide good performance at high rpm.**

The block itself is designed with 4.17-inch bore centers and a nominal bore diameter of 3.78 inches. The crankshaft is constructed from nodular iron for strength and has a relatively short, 3.12-inch stroke.

The engine cam used on the Merkur XR4Ti with five-speed overdrive manual transmission is

designed to provide high rpm and performance.

At the nose of the crankshaft is a toothed belt that drives the cam. The engine's hydraulic lash adjusters are designed so that throughout the life of the engine they require no maintenance or adjustment.

Connecting rods are forged from premium steel, while the pistons are forged aluminum to help contain the heat and pressures developed by turbocharging the engine.

The 2.3-liter turbo breathes through a crossflow designed cylinder head with the induction system hardware located on the left (driver) side of the engine closest to the intake valves. The turbocharger and exhaust systems are placed on the right (passenger) side of the block where exhaust gas can be fed to the turbo unit most directly.

Modified wedge-shaped combustion chambers inside the cylinder head operate at a nominal compression ratio of 8.0:1, burning 92-octane (anti-knock index) premium unleaded fuel.

The 2.3-liter OHC turbo engine is ideally suited to the XR4Ti. The on-demand power offered by the turbocharger is enhanced by advanced multi-port electronic fuel injection and fourth-generation Electronic Engine Controls (EEC-IV) which monitor spark, electronic fuel injection, and other vital engine functions.

The 2.3-liter turbo engine also offers high output per cubic inch, low maintenance and ownership

costs, and easy access for servicing the car's engine compartment.

**It is in the driving that the enthusiast will discover XR4Ti's true beauty.**

At peak output, Merkur XR4Ti's 2.3-liter turbocharged engine mated to the five-speed overdrive manual transmission produces 175 horsepower at 5000 rpm and 200 lbs-ft of torque at 3000 rpm.\*\* This power is sufficient to move the Merkur XR4Ti from zero to 60 mph in an impressive 7.8 seconds.

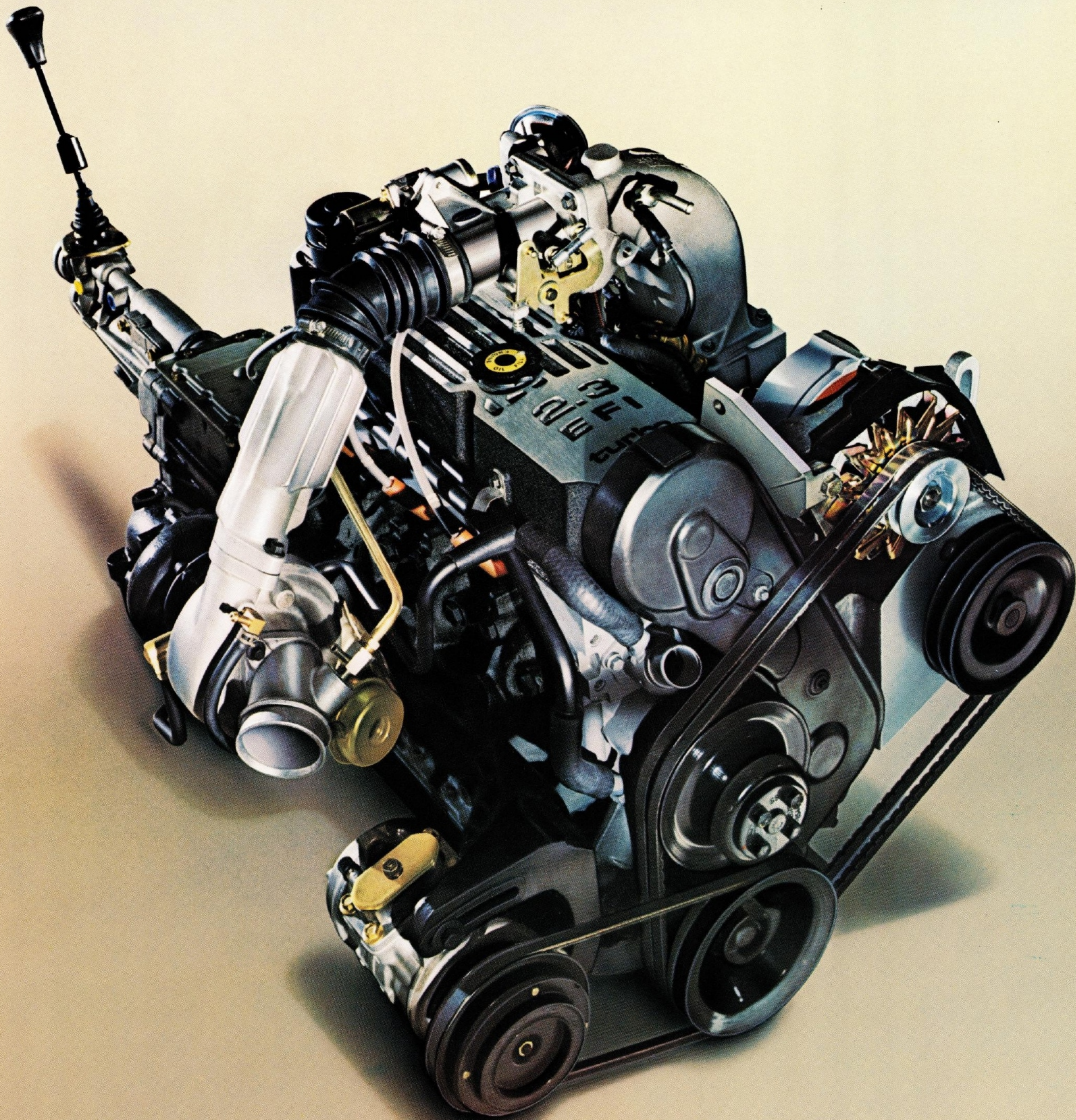
As shown on page 24, the engine is aesthetically pleasing, even at rest. It is in operation, however, that the driving purist will discover and appreciate its true beauty.

\*1985 Merkur XR4Ti with five-speed overdrive. 24 HWY., 19 CITY, EPA estimates. Actual mileage will vary with maintenance, options, driving conditions, and driving habits.  
\*\*Based on SAE Standard J1349.





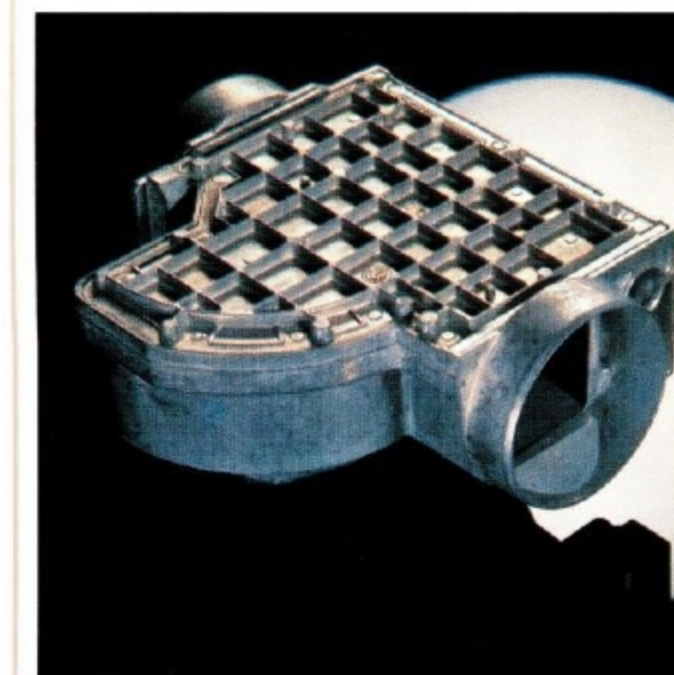




**In order to deliver the kind of acceleration and performance expected of a European sports sedan like the Merkur XR4Ti, it is necessary to use technologically advanced hardware and components.**

Nowhere is this more evident on XR4Ti than on its multi-port electronic fuel injection system and its advanced electronics.

XR4Ti uses a fuel injection system powered by two electric fuel pumps—a high-pressure unit mounted downstream of the fuel tank and a low pressure unit in the gas tank—to help assure maximum efficiency in fuel delivery.



The engine is throttled by a mechanical throttle plate in the intake tract and assisted by an electric air bypass valve.

**Merkur XR4Ti uses a vane airflow meter to increase fuel supply in high-boost, high-rpm driving situations.**

The electric valve controls airflow for special conditions such as cold-starting, fast idle for additional accessory loads—like air conditioning—and closed throttle deceleration, while the mechanical plate controls normal cruising and acceleration.

The fuel-injection system also uses a vane airflow meter (shown above with the intake manifold to its right) and large fuel-injection nozzles to increase the fuel supply in high-boost, high-rpm driving situations.

The vane airflow meter sends important information to XR4Ti's electronic fuel injection system. It measures the force of the incoming air acting against a



vane—or door—held closed by spring pressure.

As more air enters the engine, the vane opens wider and wider. A position sensor on the vane's shaft tells the control unit how much air is flowing and, thus, how much fuel should be delivered to each cylinder to maintain the optimal air/fuel ratio for all modes of engine operation, from idling to full throttle.

Of course, airflow alone is not enough to operate the system, which must know not only how much air is flowing, but also how hot or cold the air is, what the ambient barometric pressure is, how hot or cold the engine coolant is, how much free oxygen is contained in the exhaust gases feeding the turbo unit, the degree of spark advance or retard, and the boost level from the turbocharger.

The EEC-IV system, mentioned briefly on page 21, monitors each of these systems and updates them to continuously accommodate a full spectrum of engine operating conditions.

XR4Ti also has other design

elements to help ensure smooth engine operation. Its lubrication system, for instance, includes a low oil-level warning system and a large capacity oil filter.

Additionally, extensive research went into eliminating noise, vibration, and harshness levels (NVH) normally associated with high-revving four-cylinder engines.

Starting with the engine, XR4Ti's engineers went through the entire car using sophisticated electronic and sonic instruments to identify and eliminate the sources of resonance and vibration.

**Hydraulic engine mounts hold XR4Ti's engine in place and help eliminate noise and vibration.**

As a result, the XR4Ti engine rides on two hydraulic engine mounts that act as shock absorbers, dampening engine vibration both horizontally and vertically.

The result of all of this impressive technology is that the XR4Ti delivers performance in a league with any sports sedan in its class, excellent drivability and response, and good fuel economy.\*

With its advanced engine controls, its sophisticated multi-port electronic fuel injection, and its 2.3-liter OHC turbocharged engine, the XR4Ti is ready to meet the challenge of any other European sports sedan in its class.

To be perfectly frank, XR4Ti isn't here to meet their challenge; its objective is to surpass it.

\*See EPA statement on page 21.

**XR4Ti is here not to challenge the competition; its objective is to surpass it.**

The engine is fitted with heat-resistant alloy intake valves that have been specially tuned in length and cross-section area to provide maximum performance through a wide range of rpm.



**Of course, an aerodynamically efficient shape, a totally driver-centered interior, and impressive power don't make their full contribution if the chassis' dynamic systems can't keep up with their performance.**

XR4Ti delivers the good road handling, the responsive steering, and the confident braking to match its many other impressive attributes.

**The independent rear suspension on XR4Ti reduces unsprung weight, contributing to better handling.**

Perhaps the most impressive among the many refined chassis components on the XR4Ti is its independent rear suspension.

Here, two stamped-steel trailing arms are fastened to a crossmember via isolated rubber mounts. Progressive rate coil springs are mounted into the trailing arms close to the axle

centerline. Gas-pressurized rear shock absorbers are similarly mounted. The shock absorbers are designed to respond almost directly in proportion with wheel movement.

A 10-mm rear stabilizer bar, its ends attached at points ahead of the centerline, is attached to the car's body with rubber mounts.

The independent rear suspension system used on XR4Ti reduces unsprung weight, contributing to better handling on rough roads. It also intrudes less into the cargo and passenger space in the rear than would a conventional live rear axle suspension. Additionally, it provides easy access and servicing to the driveshaft, differential, and the rear portion of the exhaust system.

Halfshafts can be removed and replaced entirely without disturbing the rear wheel bearings or brakes. The exhaust system is routed directly to the rear of the XR4Ti, using a straighter path that affords less power loss and more weight savings.

The geometry applied to this system creates a shallow angle between the trailing arms and the transverse axis. This permits a smooth ride and consistent steering and handling over a wide range of surface conditions and speeds.

It also provides a smooth, comfortable ride for passengers while delivering excellent road interpretation back to the driver.

Up front, XR4Ti uses a MacPherson strut front suspension with gas-filled struts. Each strut is attached to the hub carrier

by a slip collar mount, so it can be replaced quickly and inexpensively. The carrier is designed around sealed, non-adjustable front wheel bearings that are lubricated for life.

A 26mm front stabilizer bar is mounted behind the engine, directly to the body where loads can be absorbed by the stronger part of the car. Steering scrub radius is set at 15mm positive to provide increased highway feel and low steering effort during low-speed maneuvers, like parking.

Linear rate front coil springs within the strut assembly handle bumps, contributing to a smooth ride even over very inconsistent surfaces.

**The Merkur XR4Ti's power-assisted braking system was designed to meet the exacting demands of European roads.**

XR4Ti's power-assisted braking system, designed to cope with autobahn cruising speeds, is equally impressive. Front disc brakes with a diameter of 10.2 inches and a 0.94-inch thickness are vented for superior cooling properties. Rear drum brakes are of equally generous dimensions, measuring 10 x 2.2 inches.

A deceleration-sensitive pressure relief valve designed into the rear hydraulic circuit helps eliminate rear wheel lock-up.

The pin slider-designed front caliper uses a single piston, while the rear drum brakes have a self-

adjusting feature. Additionally, front disc pad wear is monitored through a warning system displayed on a panel inside the car.

The entire braking system is designed to meet the demands of exacting European roads.

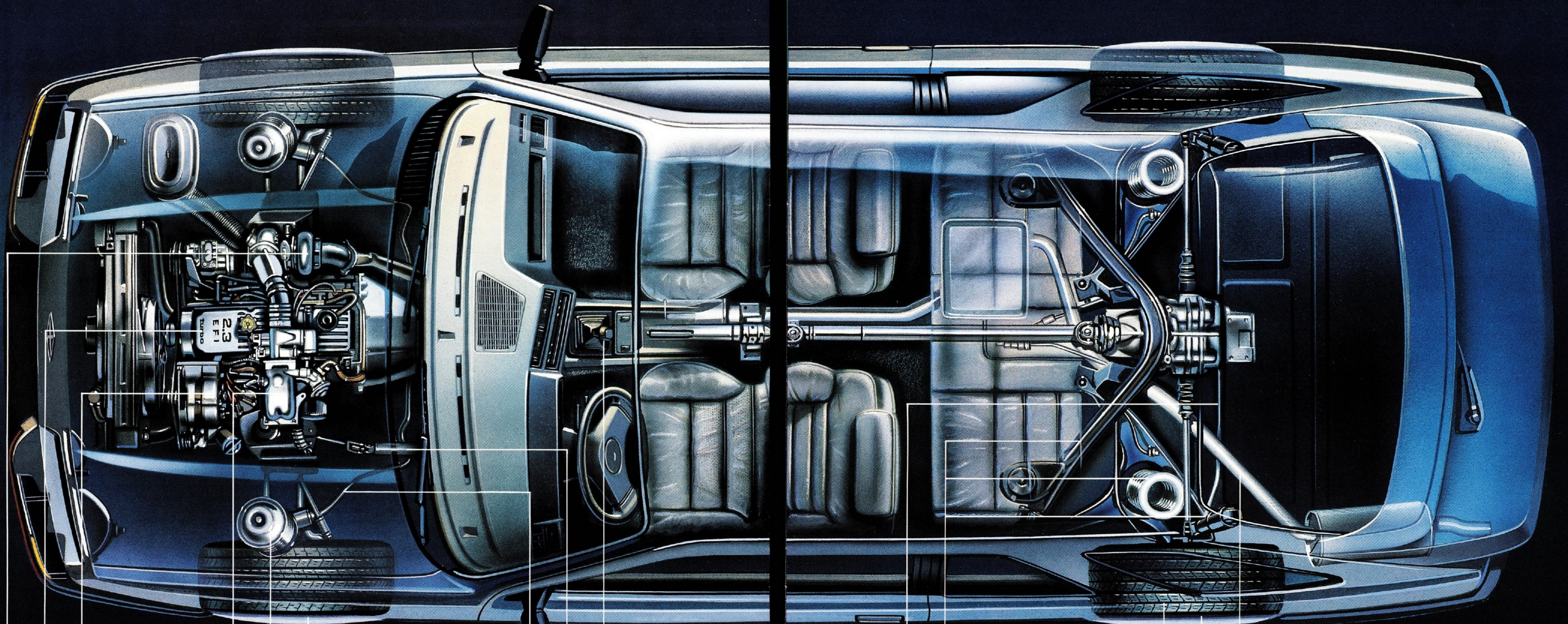
**Each individual chassis component was selected to complement XR4Ti's own formidable performance. The result is stunning.**

XR4Ti's steering uses a variable-ratio power-assisted rack-and-pinion design with just 2.84 turns lock to lock for amazing responsiveness. With the overall ratio fluctuating from 13.18 to 15.71:1, the system provides minimal effort in low-speed driving situations and maximum road feel at highway cruising speeds.

Finally, to help assure good adhesive properties to road surfaces and a consistently smooth, quiet ride, XR4Ti is equipped with 195/60HR14 Pirelli P6 tires mounted on 14 x 5.5-inch vented cast-aluminum wheels. The P6 tire was selected after extensive testing showed its road gripping ability and rolling feel were well suited to XR4Ti's drive characteristics.

Together, these chassis components are designed to maximize XR4Ti's handling capabilities. They were selected and designed to complement each other and XR4Ti's own formidable performance. The result is stunning.





90-ampere alternator with integral voltage regulator.

2.3-liter overhead cam inline four-cylinder electronically fuel-injected turbocharged engine.

Garrett T03B turbocharger with 15 psi maximum boost.

10.2-inch power-assisted ventilated front disc brakes.

Independent front suspension with modified MacPherson struts, 97 lbs./in. rated coil springs, and nitrogen-pressurized shocks.

Multi-port electronic fuel injection.

Five-speed overdrive manual transmission.

Variable-ratio (13.18-15.71:1) power-assisted rack-and-pinion steering.

26mm front stabilizer bar.

Independent rear suspension with semi-trailing arms, variable-ratio (257-502 lbs./in.) coil springs, and nitrogen-pressurized shock absorbers.

10mm rear stabilizer bar.

Low-restriction exhaust system.

10 x 2.2-inch power-assisted rear drum brakes.

195/60HR14 Pirelli P6 steel-belted radial tires.





PROTECTION



**The Merkur XR4Ti is designed to provide protection for its driver and passengers, not only in the conventional sense of occupant safety, but in the sense of active participation by both driver and machine.**

All of the dynamic systems on the XR4Ti—the powerful turbo engine, the road-gripping suspension, the surefooted braking, and the highly responsive steering—are designed to work in conjunction with each other to provide the driver with the tools to avoid trouble. Should a troublesome situation arise, however, they are designed to help get the driver out of it as efficiently as possible.

**By keeping in constant communication with its driver, XR4Ti helps provide a sense of confidence.**

XR4Ti is a machine that is in constant communication with its driver; another facet that helps instill confidence and thus foster its protective characteristics.

Take XR4Ti's safety warning panel, for instance. It alerts the driver as to front disc brake pad wear, low coolant level, low washer fluid level, low oil level, and low fuel level—all systems that play an active part in the dynamics of driving and, hence, that play an active part in safety.

A quick scan of the graphic display monitor alerts the driver as to whether a brake lamp has burned out or whether a door is ajar.

**XR4Ti even lets the driver know when the temperature outside is approaching freezing.**

XR4Ti's open dialogue with its driver even extends to letting him know when the temperature outside is approaching the freezing point and that extra care should be exercised because icy conditions may prevail.

XR4Ti is designed to meet or exceed all applicable federal safety standards. The car is equipped with three-point harnesses for

front seat passengers and the outboard rear passengers—a rarity in U.S. cars. The center rear seat is equipped with a lap belt. Use of seat belts has been proven to reduce injuries and help prevent fatalities in an accident.

And XR4Ti automatically instructs its driver and passengers to buckle up when the ignition key is turned to on.

Occupant protection, however, isn't confined to adults. Almost every state now requires the use of protective child restraints. Ford Motor Company's Tot-Guard Safety Seat and Infant Carrier are both designed to meet or exceed applicable federal safety standards. Use of both protective child restraints and seat belts is strongly encouraged.

To minimize component damage that could occur in low-speed impacts, XR4Ti is equipped with 5-mph bumpers, not the 2 1/2-mph bumpers required by federal law that are now installed on many sports sedans.

Even the lower bodyside

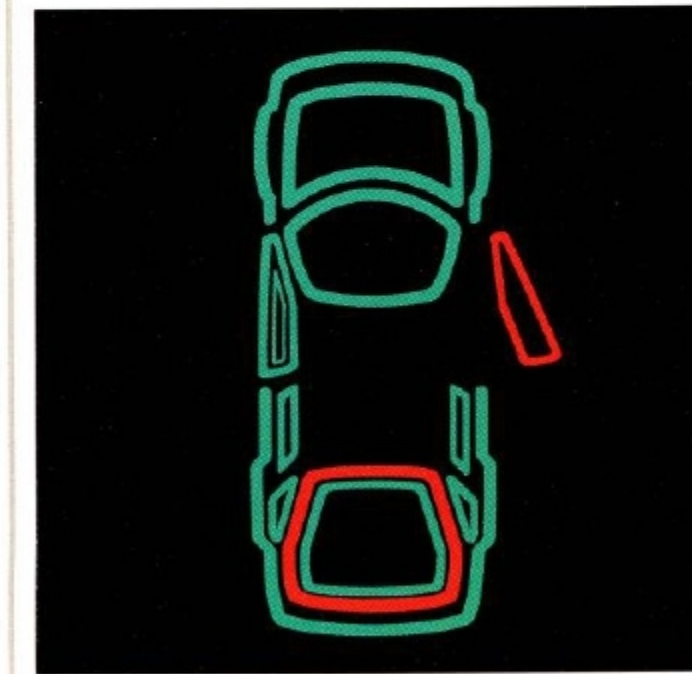
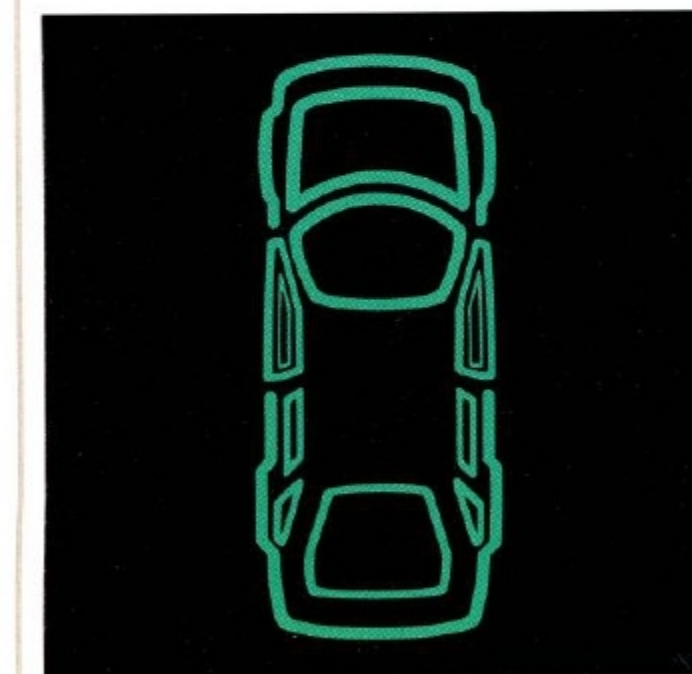


cladding on XR4Ti is designed to provide a measure of corrosion protection. Its polycarbonate composition protects the lower body of XR4Ti from stone chips, door whips, and water damage.

XR4Ti's front and hood area is designed to crush in a controlled manner, so that some of the energy which might otherwise be transmitted to the passenger compartment during an impact is absorbed.

Special attention was given to the interior of XR4Ti, and energy-absorbing material is used on such areas as the padded instrument panel, the visors, and the soft-padded steering wheel to help minimize potential injury, should an accident occur.

Of course, the primary intent of the XR4Ti is to deliver to the driver the capability to avoid an accident in the first place; capability that was deliberately designed into the car. It's just another example of how XR4Ti is engineered so that its abilities meet those of its driver.





## LINEAGE

**For the North American continent the Merkur XR4Ti represents an innovative, new total performance machine.**

But a European would look at it as the latest in a long line of exciting sports-minded cars from one of Europe's biggest carmakers: Ford of Germany.

technologically advanced automotive arenas. As far back as 1911, Ford manufactured cars in Europe.

By 1913, Ford of England had captured 29% of the British car market. Soon afterward, Fords were exported from Great Britain to the Continent.

And by 1930, European Ford companies had firmly entrenched themselves in Continental Europe and were manufacturing cars in Germany, France, Belgium, and Spain.

In less than a quarter of a century, Ford's presence in Europe went from virtually non-existent to one of leadership—a leadership that in large measure continues today despite increased competition.

**By 1930, Ford had firmly entrenched itself on the European Continent.**

Ford of Germany actually began manufacturing cars in Europe before such other highly respected carmakers as BMW, Saab, and Volvo.

Today, European Ford companies have manufacturing facilities in six different countries and have achieved a reputation as some of Europe's biggest carmakers.

Numbers alone, however, don't convey the whole story. Ford's image in Europe is one of innovation and performance. Its Ghia Design Studio in Turin, Italy, for instance, has long been a leading influence in aerodynamic

design. Show cars and fully engineered concept vehicles from Turin, recognized by many as the Mecca of automotive design, have long captured the spotlight at the world's premier auto shows—Paris, Frankfurt, Turin, Geneva... even Tokyo.

And automobiles that were once just two-dimensional inkings from the pens of Ghia's design artists today are traversing European highways.

Because of the preponderance of high-speed roads in Europe—Germany's autobahns, France's autoroutes, Britain's motorways, and Italy's autostradas—the European driver traditionally has judged his automobile by a different set of criteria than his American cousin.

It is not enough for a European car to be capable of meeting the demands of an open autobahn. It must also instill the confidence in its driver to negotiate the narrow, rutted dirt roads of the Welsh forests, to grip the ice-laden switch-backs along the Route of Napoleon in the French Alps, and to withstand the rigors along the rocky, parched Targa Florio route in Sicily.

At the same time, the European driver demands that his car be comfortable swathing through Rome's unlit piazzas at midnight or entering a crowded British roundabout.

Ford of Germany's reputation for building well-balanced, high-performance cars can be traced directly back to its proven successes on the world's most illustrious—and sometimes

infamous—racetracks and rally trails.

These successes have been earned in competition with legendary European marques: Ferrari, BMW, Porsche, Alfa Romeo, Lancia, and others.

With no less than 150 victories to its credit, the Ford Cosworth DFV Formula One engine dominated the Grand Prix circus for almost two decades while garnering more first-place finishes than any other engine ever. In a slightly different form, the turbocharged Ford Cosworth DFX engine remains the most dominating engine on the American Indy-car scene.

**Ford's reputation in Europe stems from success on the world's most famous racetracks.**

And from the opulent surroundings of Monte Carlo to the remote equatorial trails of Africa, European Ford teams have been a dominant force in World Rally Championship competition.

Ford's involvement in racing in Europe runs so deep that an entire class of racing cars and an entire racing series bear its name: Formula Ford.

It is with this rich heritage that the Merkur XR4Ti crosses the Atlantic to North America. A tradition founded on proven technology and experience from Ford of Germany.

Merkur XR4Ti. A totally new experience with almost three-quarters of a century of proven heritage behind it.

## ASSEMBLY

**Great care went into selecting a facility where a car as complex, as demanding, and as technologically advanced as the Merkur XR4Ti could be assembled with the proper precision.**

Ultimately, the perfect solution was found just a stone's throw from Ford of Germany's Cologne headquarters—in Osnabruck, West Germany, home of one of the world's most prestigious coach-builders, Wilhelm Karmann GmbH.

The first automotive body rolled out of the Karmann coachworks in 1902. Midway through the 1920's, Wilhelm Karmann changed production techniques based on his study of car manufacturing in the U.S. In 1932, it took Karmann 150 employees to turn out eight cars a day. Seven years later, 800 employees were churning out 65 cars a day.

Even Professor Walter Gropius, famous for his Bauhaus school of design and for his philosophy of form following function, was drawing designs of car bodies for Karmann at the beginning of the 1930's.

**Many of the world's most prestigious cars have been assembled at Karmann.**

Since that time, the firm has produced more than one million automobiles, many considered to be among the finest offered, not only in Europe, but throughout the world. Many of Europe's most prestigious carmakers have turned—and continue to turn—to Karmann for design, stamping, and assembly of finely crafted automobiles and automobile parts.

The Merkur XR4Ti is assembled at Karmann's newest facility in Rheine, West Germany. This plant is far from unfamiliar to Ford of Germany. The European Ford Escort Cabrio convertible also is assembled at the Rheine facility.

Karmann's commitment, to the XR4Ti specifically, is evident

from the amount of time the firm has invested in the project. The master craftsmen at Karmann weren't content to simply assemble the XR4Ti, they were involved at nearly every stage of testing and development.

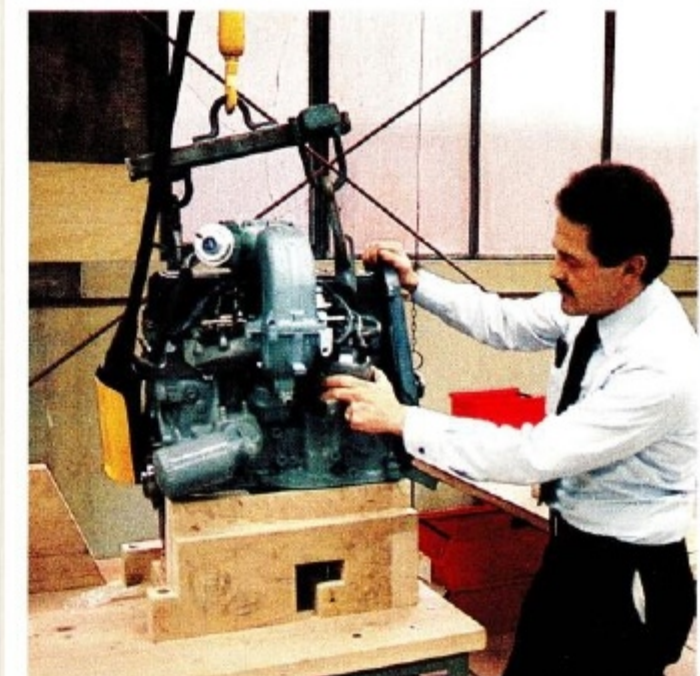
Karmann was responsible for building the preproduction prototypes that were subjected to harsh testing in such diverse locations as the Arizona desert, Ford's Romeo, Michigan proving ground, and Ford's European testing ground at Lommel, Belgium. Karmann also was responsible for providing the prototypes that underwent the rigid and critical crash testing required by the federal government.

The result is that Karmann's technicians are intimately familiar with the XR4Ti and its operating systems. With this background, they were able to determine an efficient system for assembling the XR4Ti.

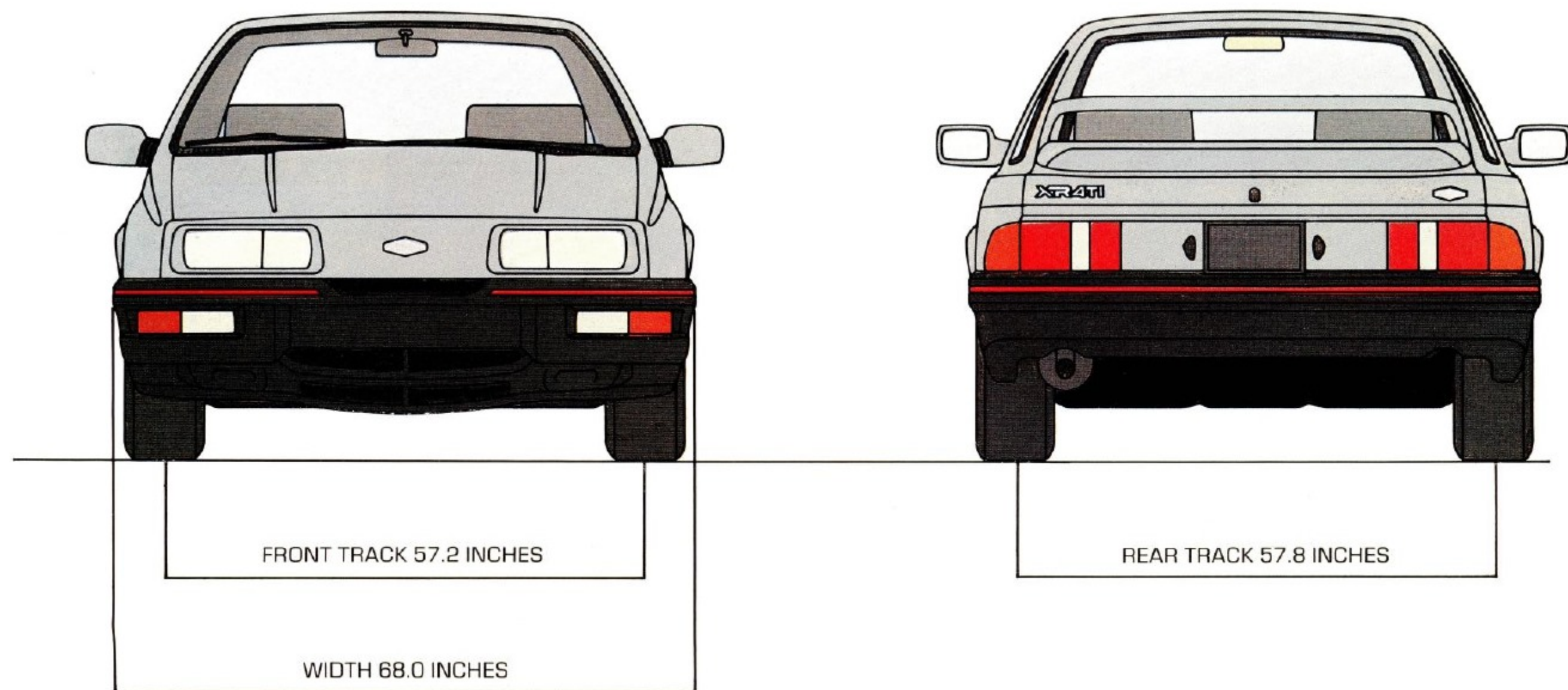
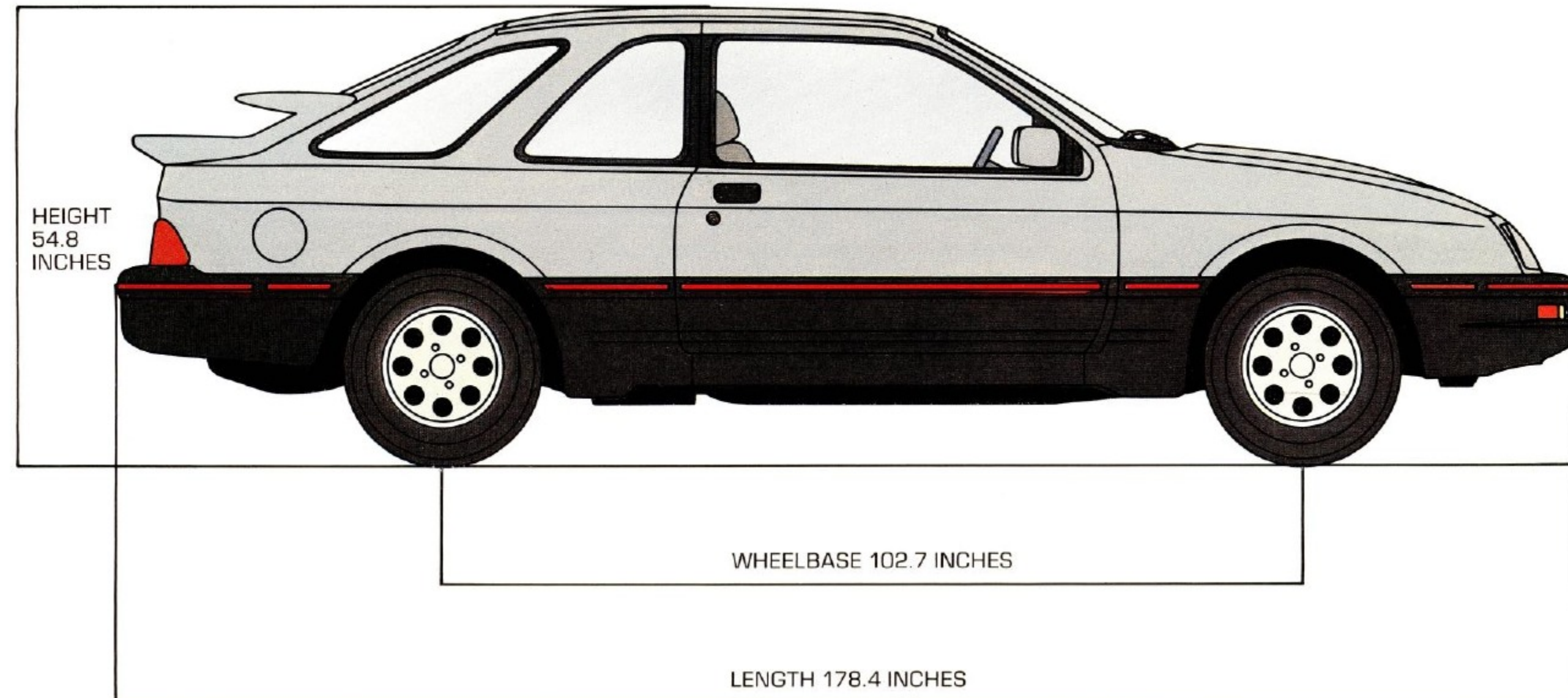
**The end result is an automobile of great integrity.**

One look at the Merkur XR4Ti and this is apparent. A combination of modern technology and centuries-old coachbuilding artistry is combined to produce the XR4Ti. Sophisticated robot welders perform their tasks adjacent to skilled European artisans.

The end result is an automobile of integrity that stands as a peer with the truly great sports sedans from throughout Europe and the world.







## 1985 MERKUR XR4Ti SPECIFICATIONS

Vehicle type: five-passenger, three-door sedan

<b>DIMENSIONS:</b>	Wheelbase (in.):	102.7
	Track (in.) front:	57.2
	rear:	57.8
	Length (in.):	178.4
	Width (in.):	68.0
	Height (in.):	54.8
	Curb weight (lbs.):	2920
	Weight distribution (% F/R):	53/47
	Fuel capacity (gals.):	15.0
	Oil capacity (qts.):	5.0
Cargo space (cu. ft.) rear seatback up:	17.1	
	rear seatback down:	35.7

<b>ACCOMMODATIONS:</b>	Head room (in.) front:	38.5
	rear:	37.9
	Leg room (in.) front:	41.0
	rear:	34.7
	Hip room (in.) front:	51.2
	rear:	44.6
Shoulder room (in.) front:	53.9	
	rear:	54.1

<b>ENGINE:</b>	Layout:	front engine, rear drive
	Type:	inline overhead cam turbocharged four-cylinder
	Displacement (liters/cu. in.):	2.3/140
	Bore & stroke (mm/in.):	96.04 x 79.40/3.78 x 3.12
	Compression ratio:	8.0:1
	Horsepower (SAE @ rpm):	175 @ 5000*
	Torque (lbs. ft. @ rpm):	200 @ 3000*
	Redline (rpm):	6200
	Peak boost (psi):	15.0
	Fuel delivery:	multi-port electronic fuel injection
	Fuel requirement:	92 octane premium unleaded (anti-knock index)
	Lbs./hp:	16.7:1
	0 to 60 mph (seconds):	7.8

<b>DRIVETRAIN:</b>	Transmission type:	five-speed manual
	Gear ratios: I:	3.36:1
	II:	1.81:1
	III:	1.26:1
	IV:	1.00:1
	V:	0.83:1
	final drive:	3.02:1

<b>CHASSIS:</b>	Body:	unit construction with welded stamped-steel panels
	Suspension front:	independent with MacPherson struts, lateral links, coil springs, gas-over tube shocks, 26mm stabilizer bar
	rear:	independent with tubular sub-frame, semi-trailing arms, variable-rate coil springs, gas-over tube shocks, 10mm stabilizer bar
	Steering type:	variable-ratio power-assisted rack-and-pinion
	Overall ratio:	13.18-15.71:1
	Turns, lock to lock:	2.84
	Turning circle (ft.):	32.8
	Brakes front:	10.2-inch power-assisted disc
	rear:	10.0 x 2.2-inch power-assisted drum
	Wheels:	14 x 5 1/2-inch cast-aluminum alloy
Tires:	195/60HR14 Pirelli P6 steel-belted radial tires	

\*Based on SAE Standard J1349



### Merkur XR4Ti selected standard functional features

2.3-liter overhead cam electronically fuel-injected turbocharged four-cylinder engine

Electronic boost control to 15 psi

EEC-IV Electronic Engine Controls

Five-speed overdrive manual transmission

Four-wheel independent suspension

MacPherson strut front suspension

Rear-mounted 26mm front stabilizer bar

Semi-trailing arm independent rear suspension with tubular subframe

10mm rear stabilizer bar

Gas-filled shock absorbers

Variable-rate rear springs

Variable-ratio power-assisted rack-and-pinion steering

Power-assisted 10.2-inch front disc, 10 x 2.2-inch rear drum brakes

195/60HR14 Pirelli P6 steel-belted radial tires

14 x 5 1/2-inch cast-aluminum alloy wheels

Full analog instrumentation, including speedometer, tachometer, turbo boost gauge, and warning lights for oil pressure, turn indicators, high beam, ignition/handbrake/brake failure, low fuel, low oil, low coolant, low washer fluid, front brake pad wear

Graphic information module, including three-way door ajar, low air temperature, and bulb outage monitor

55-amp-hr battery

90-amp alternator

15-gallon fuel tank

15-inch mini spare tire

Variable speed intermittent windshield wipers

### Merkur XR4Ti selected standard exterior features

Three-door hatchback design

Unitized body construction

Integrated halogen headlights

Five-mph polyurethane front and rear bumpers with integral side marker lamps

Polycarbonate bodyside protection cladding with wheel lip covers

Low-drag aerodynamic-designed body with 60-degree windshield, 65-degree backlite, biplane rear spoiler, and rocker panel wheel air deflectors

Body-colored power adjustable heated exterior rearview mirrors

Blackout treatment on windshield, and backlite moldings, cowl top panel, license plate housings, and door handles

Tinted glass

### Merkur XR4Ti selected standard convenience features

Electronic AM/FM stereo cassette radio with four speakers

Cassette tape storage areas

Torch key

Footwell courtesy lights with time delay

Overhead console with dual adjustable map lights

Rear window wiper and washer

Dual power heated outside rearview mirrors

Electric rear window defroster with element surround on rear wiper

Coin storage area

### Merkur XR4Ti selected standard interior features

Oxford cloth-covered front bucket seats with infinitely variable manual reclining seatbacks, adjustable lumbar support, and fully adjustable headrests

Driver seat manual height adjustment

Asymmetrically split (60/40) folding rear seats

Front and rear seat center armrests

Front and rear outboard inertia reel three-point seat belts and center rear seat lap belt

Side window demister

Passenger assist handles (3)

Illuminated passenger-side visor vanity mirror

Two-piece package tray with storage box area

Cargo compartment tie-downs

Sport steering wheel with center horn blow

Black gearshift lever, handbrake grip, and center console controls

Soft-feel upper/hard-feel lower color-keyed instrument panel

Black instrument control clusters, controls, and registers

Front seatback map pockets

Molded vinyl-covered door trim panels with cloth inserts and carpet-covered storage bins

Cloth-covered molded headliner

Passenger and cargo compartment cut-pile carpeting

### Merkur XR4Ti options

Three-speed automatic transmission (available later in the model year)

Gray leather interior

Metallic paint (see exterior color chart on page 37)

Tilt/slide screened glass moonroof

Heated front bucket seats

Convenience group, includes power central door locking, power windows, and speed control (available later in the model year)

Fuel mileage computer (available later in the model year)

### Merkur XR4Ti exterior and interior colors

Black with Gray Oxford cloth interior

Diamond White with Gray Oxford cloth interior

Rosso Red with Gray Oxford cloth interior

### Merkur XR4Ti optional metallic colors

Regency Red Metallic with Gray Oxford cloth interior

Strato Silver Metallic with Gray Oxford cloth interior

Nimbus Gray Metallic with Gray Oxford cloth interior

Paris Blue Metallic with Blue Oxford cloth interior

Mineral Blue Metallic with Blue Oxford cloth interior

Gray leather interior is available with all exterior colors.

### The Merkur Commitment

The uncompromising commitment that goes into every Merkur XR4Ti does not end when each car leaves Germany. On the contrary, it is then that the most crucial stage begins: assuring that each XR4Ti owner is satisfied with his car; assuring that owning, driving, and servicing his XR4Ti is a totally pleasurable experience.

To attain that assurance, the Merkur Commitment begins when each XR4Ti reaches North American shores. On its arrival at one of five ports, each XR4Ti is individually inspected and test driven by specialists before it is shipped to the dealer. By the time an XR4Ti arrives at a dealership, it already has undergone extensive port-side testing to confirm its high quality standards.

Once at the Merkur dealership, each XR4Ti again is inspected, test driven, and given its final preparation before it is shown to potential customers.

Every Merkur dealership has been carefully selected to assure that it maintains the highest quality standards in its sales and service operations.

A precision machine like the XR4Ti demands precise service, so each Merkur dealership has at least one Merkur specialist who has been fully trained in every aspect of the XR4Ti. He can be recognized by a special Merkur XR4Ti uniform patch.

Every Merkur dealership has the unique tools needed to service properly the XR4Ti and a comprehensive parts inventory to avoid a delay in servicing the car.

To ensure that parts are readily available, a national parts distribution center and eight regional parts centers have been established.

Another important part of the Merkur Commitment provides for direct communication with key Ford Parts and Service Division personnel through an 800 number.

Every XR4Ti owner is issued an owner identification card with the 800 number, which should be used if service-related problems arise.

Centrally based product coordinators then will contact the nearest field owner relations manager so the problem receives top priority.

The Merkur Commitment, essentially, is the assurance that owning and driving an XR4Ti will be a pleasurable and fulfilling experience for as long as you have the car.

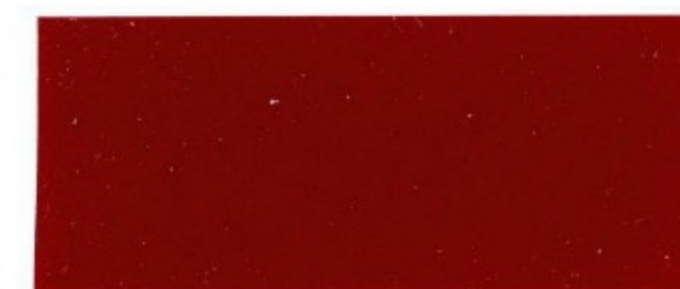


BLACK

DIAMOND WHITE



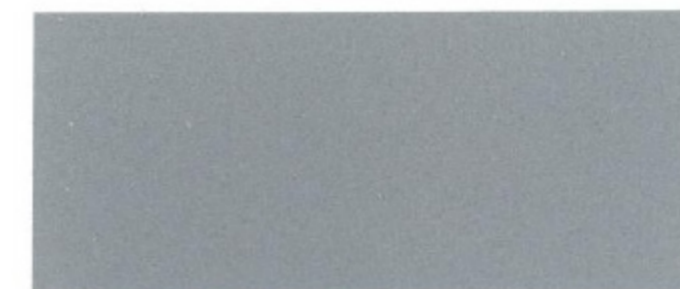
ROSSO RED



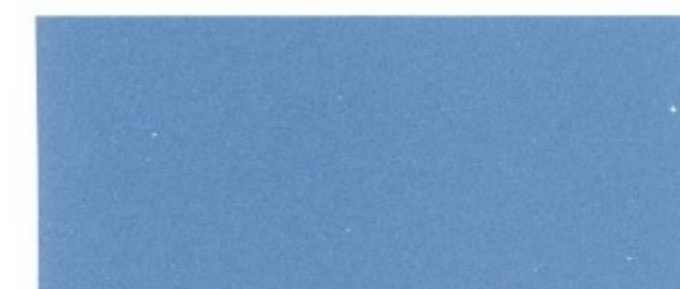
REGENCY RED METALLIC



STRATO SILVER METALLIC



NIMBUS GRAY METALLIC



PARIS BLUE METALLIC



MINERAL BLUE METALLIC



### Extended Service Plan

Lincoln-Mercury dealers offer an optional Extended Service Plan designed by Ford Motor Company to protect you against major repair expenses after the basic warranty expires on new Merkur cars. The Ford ESP plan provides customized protection for easy ownership and even scheduled maintenance can be covered. Ford ESP is the best service protection available anywhere. Ask your selected Lincoln-Mercury dealer for complete details of the plan which is available on cars sold and normally operated in the 50 United States and Canada.



### Lifetime Service Guarantee

Participating Lincoln-Mercury dealers are now offering the Lifetime Service Guarantee which guarantees their work on your Merkur XR4Ti for as long as you own it. This means that you pay for a covered repair once and never again. If it ever has to be fixed again, the repairing dealer will fix it free. Free parts. Free labor. Even if the car is kept a lifetime. It doesn't matter where the car was purchased or whether it's new or used, the work is still covered by the repairing dealer. This limited warranty covers vehicles in normal use. Not covered are routine maintenance parts, belts, hoses, sheet metal, and upholstery. See your participating Lincoln-Mercury dealer for details.

### Ford-paid repair programs after the warranty period

Sometimes Ford Motor Company offers adjustment programs to pay all or part of the cost of certain repairs. These programs are intended to assist owners and are in addition to the warranty or to required recalls.

Ask Ford Motor Company or your Lincoln-Mercury dealer about such programs relating to your Merkur XR4Ti.

To get copies of any adjustment programs for your XR4Ti or the

vehicle of interest to you: Call Ford toll-free at 1-800-241-3673. In Alaska or Hawaii, call 1-800-243-3711. In Georgia, call 1-800-282-0959 or write Ford at Ford Customer Information System, P.O. Box 95427, Atlanta, GA 30347.

Please include your name and address, year, make, model, and vehicle identification number, as well as engine size.

### Technical Service Bulletins

All vehicles need repairs during their lifetime. Sometimes Ford issues Technical Service Bulletins (TSBs) and easy-to-read explanations describing unusual engine or transmission conditions which may lead to costly repairs, the recommended repairs, and new repair procedures. Often a repair now can prevent a more serious repair later. Ask Ford Motor Company or your Lincoln-Mercury dealer for any such TSBs and explanations relating to your Merkur XR4Ti.

To get copies of these Technical Service Bulletins and explanations for your XR4Ti or the vehicle of interest to you: Call Ford toll-free at 1-800-241-3673. In Alaska or Hawaii, call 1-800-243-3711.

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Please include your name and address, year, make, model, and vehicle identification number, as well as engine size.

**Get it together—buckle up.**

Specifications and descriptions used were in effect when this publication was approved for printing.

Lincoln-Mercury Division reserves the right to discontinue options at any time, or change specifications, equipment, or designs without notice and without incurring obligation.

Standard and optional equipment listed is subject to change. Some features described are optional at extra cost. Some options are required in combination with other options.

Availability of some features may be subject to a slight delay.

Buy or lease your Merkur XR4Ti from selected Lincoln-Mercury Dealers.



# MERKUR XR4Ti



IMPORTED FROM GERMANY  
EXCLUSIVELY FOR LINCOLN-MERCURY