1999 COUGAR

ADVANCE

Facts Book

E&T

1999 COUGAR

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I. SMALL SPECIALTY MARKET OVERVIEW

THE 1999 COUGAR MARKET

The 1999 Cougar will compete in the Small Specialty segment, primarily against Saturn SC2, Mitsubishi Eclipse and Dodge Avenger. Total sales volume in the segment is projected to be an average of 586,000 units for calendar years 1998–2002. For the same five years, the projected average sales volume for Mercury Cougar is 60,000 units, which is 10.1 percent of the segment.

Considering that at least 12 vehicles account for about 95 percent of the segment volume, Cougar is poised to take a big bite out of the competition's share. The closest Cougar competitor, Saturn SC2, sold 53,799 units in 1996 or about 9.5 percent of the segment. But as the new cat in town, Cougar should have great appeal for customers who want to be on the cutting edge of style. This gives the 1999 Mercury Cougar an opportunity to overtake Saturn and even exceed expectations for its own performance.

INTRODUCING THE 1999 COUGAR

The 1999 Cougar is a radical departure from the Cougar of recent years. The new Cougar is designed to attract a different buyer to Lincoln-Mercury dealerships than many Sales Consultants have seen before. Therefore, it is important to understand the needs, motivations and preferences of these buyers.

Cougar targets young, confident people who want a car that expresses their individual style and sense of adventure. They value dramatic styling, engaging driving dynamics and imaginative interior features. While they want their cars to make statements about their tastes and lifestyles, they also demand affordability and reliability. These young singles and couples are always on the go—dining out, meeting friends at a local coffeehouse, catching the latest movies and concerts, or traveling out of town for the weekend.

Cougar buyers want to get involved in the driving experience, not just watch the scenery, so excellent performance and driving dynamics are important functional needs. They appreciate practical features as well as interior amenities that make them feel special. While looking good is important to these image-conscious buyers, they also expect their cars to be environmentally responsible.

COUGAR CUSTOMERS

Youth Marketing

Most Cougar buyers are expected to be 25 to 40 years old, so it pays to understand the purchasing power of the youth market. Collectively, consumers under the age of 30 spent more than $50 billion and bought 2.8 million new vehicles. They accounted for 20 percent of the new cars purchased in 1997 and 14 percent of the new trucks. In fact, 33 percent of 1997 sales in the Small Specialty segment, in which the 1999 Cougar will compete, came from the youth market.

While you can't pigeonhole the vehicle needs of younger customers, the 1999 Cougar has many features designed especially to appeal to them. As a result, many will come into your dealership specifically to shop for this car. It features many qualities these buyers want and need including:

- Up-to-the-minute styling
- Fun-to-drive spirit
- Practicality and affordability

The under-30 Cougar customer is probably new to you as a Mercury Sales Consultant. Mercury may be new to many of these buyers. So you should try to build trust and help these customers feel comfortable with the new-vehicle purchase experience. After all, the average young customer will spend $300,000 on vehicle products and services in his or her lifetime. Clearly, building long-term owner loyalty with customers under 30 can pay off for you and your dealership. Here are some things you can do to win the confidence of these buyers and turn them into customers for life:

- Greet them quickly and offer your assistance. Determine which vehicle best fits their needs. Use a low-pressure selling approach. Give your undivided attention
- Be honest and sincere
- Mention that they may qualify for special financing deals under the College Graduate Purchase Program, the Cash and Credit Program or the College Graduate Alumni Program
- Conduct a thorough new-vehicle delivery

Selling to Women

More than half of 1999 Cougar buyers are expected to be women. In addition, 80 percent of all new-vehicle purchases are influenced by women. Even if they are not the primary driver, women will be significant influencers in a majority of your Cougar sales. Therefore, it's important for you as Lincoln-Mercury Sales Consultants to understand women's car-buying needs and purchase motivations.

It may help to keep these things in mind with your women customers:

- Treat them as individuals. Ask questions to determine what their specific needs are
- Listen carefully to their answers and use some of their own words in your product presentations
- Stress the benefits of each feature and try to relate those benefits to the customer's specific needs, based on what she has told you
- Be sure to present a vehicle's safety and security features, because most women tend to place great importance on these items
- Give them a thorough explanation of purchase or leasing details. If they want a husband, father or male friend to join the negotiation process, let them be the one to suggest it, not you
- Remember to make follow-up calls and stay in contact with your women customers because they value long-term relationships with you and your dealership
- Be open, honest and caring with your women customers. By doing so, you help them feel better about the new-vehicle purchase process and win their trust for you and your dealership

Model Availability

The 1999 Mercury Cougar is available in two series — the four-cylinder model and the V-6 model. Each series is offered with its own option group and a choice of stand-alone options, so your customers can equip their Cougar to suit their own personal needs.

II. MERCURY COUGAR WALKAROUND

The following Six-position Walkaround Presentation will help give you a thorough understanding of the 1999 Cougar and all of its great features, functions and the corresponding customer benefits.

UP FRONT

Exterior Styling

Standard on all models

- "New Edge" styling contrasts smooth aerodynamics with crisply intersecting surfaces, unlike any car currently on the market
- Offers a blend of sports car design with the stance of a race car
- Result is a truly unique three-door coupe
- Appeals to young, image-conscious buyers
- Eye-catching exterior elements include the headlamps, taillamp clusters, rear quarter panels and door handles
- Tight joint lines between bumpers and sheet-metal panels demonstrate the precise Cougar fit and finish

Exterior Colors

Standard on all models

All models feature clearcoat paint which helps keep the vehicle looking sharp and helps prevent damage from road salt and tree sap.

- Autumn Orange Clearcoat Metallic (BG)
- Ash Gold Clearcoat Metallic (BJ)
- Rio Red Clearcoat (EZ)
- Spruce Green Clearcoat Metallic (FS)
- Laser Red Tinted Clearcoat Metallic (HL)
- Melina Blue Clearcoat Metallic (K9)
- Dark Tourmaline Green Clearcoat Metallic (NE)
- Silver Frost Clearcoat Metallic (TU)
- Black Clearcoat (UB)
- Vibrant White Clearcoat (W4)

Double-beam Projector Headlamps

Standard on all models

- Headlamps have slim, flush-molded, fixed one-piece lenses to complement the sleek exterior styling
- High-output halogen headlamps help provide optimum illumination for excellent nighttime visibility and more consistent high/low beam light patterns
- High-impact plastic lenses cover the headlamps to help reduce the risk of damage from rocks and other road debris

Fog Lamps

Standard on all V-6 models

- Integrated front fog lamps contribute to the sporty appearance
- Fog lamps help improve visibility in certain inclement weather conditions for driver confidence

5-mph Bumpers

Standard on all models

- Front and rear color-keyed bumpers are tested for impacts of up to 5 mph — twice the federal requirement
- Help resist sheet-metal damage from minor front and rear impacts

Tread Width

Standard on all models

- 59.3-inch front and 58.7-inch rear tread width
- Confident handling and a muscular race-car stance
- Contributes to cornering and handling ability

UNDER THE HOOD

Powertrains

- High-technology powertrains with proven reliability
- These proven performers provide the driving fun Cougar customers crave

2.0-liter DOHC 16-valve Zetec Engine

- Standard 2.0-liter dual overhead cam Zetec I-4 engine delivers 125 horsepower at 5500 rpm and 130 lb.-ft. of torque at 4000 rpm
- About 80 percent of the engine's maximum torque is reached at only 1200 rpm, precisely within the range where most daily driving is done
- Provides flexible and responsive performance, whether driven around town or on the highway
- Features variable valve timing (VVT) to help reduce emissions and improve efficiency
- The engine management computer varies the point at which the valves open and close to adjust precisely to the engine's actual running conditions
- Features a specially designed engine-mounting system and a separate ladderframe between the crankcase and the oil pan for smooth operation
- Mounting system adds stiffness to the engine and body, helping to reduce noise and vibration

2.5-liter DOHC 24-valve Duratec V-6 Engine

- Available 2.5-liter dual overhead cam Duratec V-6 engine produces 170 horsepower at 6250 rpm and 165 lb.-ft. of torque at 4250 rpm
- Designed for smooth operation, high efficiency, long-term durability and low emissions
- Small and lightweight
- First engine in volume production to use the Cosworth casting process
- All-aluminum design is a model of reliability, with electronic engine management, low-friction graphite-coated pistons and wear-resistant aluminum bearings
- A die-cast aluminum bedplate and other reinforcements strengthen the engine block and help reduce noise and vibration

100,000-mile Scheduled Tune-up Interval

Standard on all models

- Powertrains include features like platinum-tipped spark plugs, which allow Cougar to go up to 100,000 miles between scheduled tune-ups (under normal driving conditions with regular fluid and filter changes)
- Reduces the number of scheduled maintenance visits

Transaxles

Standard on all models

- Five-speed manual transaxle gives drivers the sporty feel and fun of interacting with the car and the road
- Offers high torque capacity and low internal friction for refined performance and quiet operation
- Flexible cable gearshift system helps isolate the shift lever from vibration and engine movement for easy, smooth shifting
- Smooth operation is further enhanced by the low-inertia hydraulic clutch assembly, which reduces pedal effort while increasing efficiency and durability
- Special collar on gear handle prevents accidental reverse gear engagement
- Available four-speed automatic overdrive transaxle features electronic controls that integrate transaxle and engine functions, varying the shift strategy to suit virtually all driving conditions
- Helps ensure smooth shifting, improved performance and optimized fuel economy
- Fourth-gear overdrive allows the engine to run at a lower rpm, helping to optimize fuel economy at highway speeds
- Overdrive lockout feature allows the overdrive gear to be canceled when more engine braking is preferred, such as when driving on hilly terrain
- Brake/transaxle shift interlock prevents the gearshift from moving accidentally from Park into Drive or Reverse

Crumple Zones

Standard on all models

- Engineered to deform sheet metal progressively in a collision, absorbing the force of an impact instead of transferring it to the passenger compartment
- Exceeds the Federal Motor Vehicle Safety Standards (FMVSS) for 30-mph front and rear impacts *by meeting the more stringent Ford Motor Company corporate* 35-mph standards
- The '99 Cougar also is designed to meet a wide range of international safety standards in Europe, Canada, Australia and New Zealand

PASSENGER'S SIDE

Front-wheel Drive

Standard on all models

- First front-wheel-drive Cougar
- Front-wheel drive allows for a spacious interior, especially in the rear seat, where Cougar is able to accommodate two adults comfortably
- Helps provide the driving dynamics Cougar customers desire, combined with excellent control when road conditions are poor

Steering System

Standard on all models

- Responsive power-assisted rack-and-pinion steering system
- Low-friction ball joints and tie-rod ends help reduce steering effort and improve maneuverability, whether on twisting roads or in tight parking lots
- Reduced friction improves responsiveness and "on-center" feel over earlier designs, so that Cougar reacts quickly to the driver's inputs at the steering wheel, resulting in an exhilarating driving experience

Front Suspension

Standard on all models

- Includes specific features that reduce friction for a smooth ride
- Front coil springs are offset around the struts so that their operating areas are as close as possible to the line of suspension load inputs for a smooth, precise ride
- Helps reduce stroke friction for optimum suspension damping
- Less friction means a smooth, supple ride over road surfaces with small bumps, pavement cracks or tar strips
- Delivers the firmness and road feel customers expect from a sporty coupe
- MacPherson struts are located by lower A-arms with a separate stabilizer bar for control when cornering
- Passenger compartment is isolated from noise and vibration
- Components are attached to the rubber-mounted perimeter front sub-frame, which also supports the powertrain
- Large-diameter vertical bushings on the lower control arms also insulate the body from road shocks
- A side benefit of these bushings is that braking stability is improved, especially when right and left wheels are on differing road surfaces such as when the driver's side is on pavement and the passenger's side is on gravel

Rear Suspension

Standard on all models

- Independent Quadralink rear suspension provides surefooted control when cornering, braking or accelerating
- Uses four links to locate each wheel
- Two lower transverse links and a trailing arm are on each side, while the coil spring/damper strut acts as the fourth link
- Design not only insulates the passenger compartment from bumps and vibrations, but it also provides assured handling and sporty driving characteristics

Braking System

Standard on all models

- Models equipped with the 2.0-liter Zetec engine have ventilated 10.25-inch diameter front disc and 8-inch rear drum power brakes
- V-6 models use larger ventilated 10.9-inch diameter front and 9.9-inch rear power disc brakes
- Both systems help provide surefooted, controlled stops
- Models without the optional Anti-lock Braking System have a pressure-limiting valve that helps maintain optimum braking pressure to the rear wheels for an extra measure of control

Anti-lock Braking System (ABS)

Optional on all models

- Latest four-channel Anti-lock Braking System helps maintain vehicle steering control in severe braking situations and in a variety of road conditions
- When the electronic sensors detect wheel lockup under heavy braking, the system automatically "pumps" the brakes up to 12 times per second
- Incorporates electronic brake distribution (EBD) which limits rear-wheel slippage before the ABS activates
- Improves braking performance under more normal conditions than those required to engage the ABS
- EBD operates without "pumping" action and uses minimal valve activity; most drivers won't even notice when it's working

All-Speed Traction Control

Optional on V-6 models

- Uses the ABS computer to automatically sense wheel slippage at any speed
- Improves traction on slippery or loose driving surfaces by using a combination of:
  - Braking at one or both drive wheels
  - Fuel injection cut-off
  - Ignition spark retard
  - Air/fuel ratio control
- System searches for optimum traction several times per second and quickly makes adjustments to match road conditions

Side-impact Protection

Standard on all models

- Helps Cougar meet the federal 33.5-mph dynamic side-impact test involving impact at a diagonal angle by a moving barrier weighing 3000 lbs.
- Optional front-occupant side airbag system helps protect the driver and passenger's chest and head in side collisions

Fuel Capacity

Standard on all models

- 15.5-gallon fuel tank allows an optimum cruising range between fill-ups

AT THE REAR

Hatchback Design

Standard on all models

- Three-door coupe body style is distinctively stylish and offers the flexibility of loading and unloading cargo from the handy rear hatchback
- Generous 12.4-cubic-foot luggage compartment is large enough to pack for a weekend getaway or an everyday shopping trip
- Standard remote electric liftgate release and gas-pressurized assist struts for easy opening and closing of the liftgate add convenience

Electric Rear Window Defroster

Standard on all models

- Defogs the rear window and helps to melt snow and ice for improved visibility

Spoiler

Standard on V-6 models, optional on I-4 models

- Adds to the sporty appearance and race-car stance
- Can be deleted on V-6 models

Center High-mounted Stoplamp

Standard on all models

- Located in the rear liftgate
- Illuminates when the driver brakes, helping to provide greater stoplamp visibility and safety on the road

Warranty and Roadside Assistance

Standard on all models

- 3-year/36,000-mile Bumper-to-Bumper limited warranty helps provide long-term customer satisfaction and peace of mind
- Covers everything on the vehicle except tires (which are covered by their manufacturer), battery, wear items and maintenance
- 5-year/unlimited-mileage limited warranty covers corrosion perforation
- 3-year/36,000-mile Roadside Assistance program provides 24-hour toll-free roadside service every day of the year for the following services:
  - Changing a flat tire
  - Jump-starting a dead battery
  - Assisting in lockout service
  - Delivering fuel
  - Emergency towing to the nearest Mercury dealership

Mercury Roadside Assistance
1-800-241-3673

DRIVER'S SIDE

Exterior Mirrors

Standard on all models

- Heated, dual power remote-control side mirrors are easy to adjust for optimum rearward visibility and quick clearing on frosty mornings
- Body-color mirror housings enhance the contemporary monochromatic styling

Remote Keyless Entry System

Optional on all models as part of convenience group

- Comes with two handy key fobs that lock or unlock the driver's door or both doors and the liftgate from as far as 33 feet away
- Includes a PANIC alarm that sounds the horn and flashes the parking lamps with a push of the button
- Provides convenience and peace of mind that customers appreciate

Illuminated Entry System

Included with the optional Remote Keyless Entry System

- Illuminates all interior courtesy lights and leaves them on for 20 seconds or until the ignition is turned on
- Activated by pressing the unlock button on the key fob
- Provides convenience and security when entering the car after dark

Wheels and Tires

Standard on all models

- 15-inch cast aluminum wheels with P205/60R15 tires (Standard on I-4 series)
- 16-inch cast aluminum wheels with P215/50R16 tires (Standard on V-6 series)
- 16-inch polished cast aluminum wheels with P215/50RI6 tires (Optional on V-6 series)

Frameless Door Glass

Standard on all models

- Side windows have no upper frame, and instead form a seal directly with the weatherstripping
- Effectively seals out moisture and also enhances the vehicle's sleek appearance

Water Management System

Standard on all models

- Dripless roof molding and narrow black windshield surrounds help channel water away from the door openings and side windows
- Keeps occupants dry as they enter or exit the vehicle

INTERIOR

Interior Styling

Standard on all models

- Complements the "New Edge" exterior styling with sweeping curves around the instrument panel and door trims that create an inviting and comfortable environment

Instrument Panel

Standard on all models

- Standard instrumentation includes the following: speedometer, odometer, tachometer, fuel gauge, water temperature gauge and low-fuel warning light
- Integrated trip computer displays distance to empty, average fuel economy, average speed, trip odometer and outside temperature
- To help make gauges easy to read in bright sunlight, the dashboard curves out over the soft-feel instrument panel

Steering Wheel

Standard on all models

- Four-spoke steering wheel is mounted on a convenient tilt steering column for optimum driver comfort
- Incorporates fingertip controls for attention-getting safety and convenience (when equipped with speed control — standard on V-6 models, optional with Convenience Group on I-4 models)
- V-6 Cougar models also feature a standard leather-wrapped steering wheel and gearshift knob for a more luxurious, sporty feel

Seating

Standard on all models

- Cloth-trimmed front bucket seats have a manual recline control
- Both models are equipped with a passenger-side only tip/slide feature with memory for easy entry and exit from the rear seats
- Driver's seat has power height controls
- V-6 models also feature driver's manual lumbar adjustment and seatback map pockets
- Leather seating surfaces and an eight-way power driver's seat are optional on V-6 models. I-4 models also include a power height adjustment
- 50/50 split-fold-down rear seatbacks fold flat for cargo-carrying flexibility
- Unique "bucket" design of the rear seats provides supportive comfort for passengers

Console

Standard in all four-cylinder models

- Center console features a handy storage, cup holder and a convenient power point
- V-6 models feature a full-length center console with armrest/storage bin, cup holder, rear ashtray and a power point

Air Conditioning

Standard on all models

- Keeps the interior environment comfortable with ergonomic barrel-style vents in front
- Uses the latest R-134a refrigerant, which will not further deplete the earth's ozone layer, a plus for ecology-minded young customers

Rear Seat Heat Ducts

Standard on all models

- Deliver heat directly to the rear seating area
- Allow the passenger compartment to heat quickly and evenly

Particulate Air Filtration System

Standard on all models

- Filters out over 90% of airborne particles larger than 3 microns in size, preventing many pollens, road dust and other particulates from entering the car
- Filter is easily and quickly replaced. Recommended replacement interval is every 20,000 miles under normal conditions

Audio Systems

Consult your Ordering Guide for availability

- Standard AM/FM Stereo/Cassette
- Optional AM/FM Stereo/Cassette with Premium Sound
- Optional AM/FM Stereo/Single CD Radio
- Optional luggage compartment mounted 6-disc CD Changer

Safety Belts

Standard on all models

- Three-point lap/shoulder safety belts in all outboard seating positions
- Front safety belts are height-adjustable for added comfort
- All passenger seating positions are fitted with Automatic Locking Retractors (ALRs), which help restrain portable child safety seats. Remind customers to always place children in the rear seats properly restrained

Second Generation Airbag Supplemental Restraint System

Standard on all models

- Designed to further enhance protection for driver and front passenger while also reducing the risk posed to occupants including children and short-statured adults from potential airbag inflation injury
- Airbags provide added front occupant protection in the event of certain moderate to severe frontal or near-frontal collisions
- When used with properly worn safety belts, the Second Generation Airbag Supplemental Restraint System represents one of the most effective occupant-protection systems available today
- All children should ride in the rear seat properly restrained, whether in a child safety seat, a safety belt-positioned booster seat or simply using the lap/shoulder safety belt (depending upon the size of the child)

Side-impact Airbags

Optional on all models

- Help protect an occupant's head and chest in certain side collisions
- Deployed from the outboard sides of the front seatbacks by the same computer as the main airbag system, using sensors located under the outboard side of the seat

Power Door Locks

Standard on all models

- Allow convenient push-button locking and unlocking of the driver- and passenger-side doors
- Switches are illuminated for nighttime convenience

Power Windows

Standard on all models

- Offer the "Express-Down" feature for the driver's window for easy access to ATMs, drive-thru windows and tollbooths
- Illuminated control switches are mounted on each door, with a bank of two for the driver's convenience

Light Group

Available in the V-6 Convenience Group

- Glove compartment light
- Map lights
- Illuminated visor vanity mirrors
- Auxiliary warning system, which has displays for:
  - Low washer fluid
  - Brake pad wear
  - Low outside temperature
  - Bulb outage
  - Door ajar
  - Service reminder

Speed Control

Standard on V-6 models

- This feature is also included with the I-4 Convenience Group
- Tap-up/tap-down feature allows the driver to speed up or slow down in 1-mph increments at the touch of a finger
- Steering wheel-mounted controls let the driver keep his or her eyes on the road

Floor Mats

Standard on all models

- Front 12-oz. carpeted floor mats help keep the Cougar interior looking clean and sharp

SecuriLock™

Standard on all models

- Passive anti-theft system prevents the engine from starting unless a specially coded ignition key is used
- Provides additional security without any action from the driver to arm the system
- A flashing red light on the instrument panel informs the driver that the system is armed

Power Sunroof

Optional on all models

- Can be tilted up for increased interior ventilation or fully retracted for the fun of open-air driving

III. MERCURY COUGAR SPECIFICATIONS

Dimensions (All dimensions are in inches unless otherwise noted.)

Wheelbase	106.4
Overall length	185.0
Overall height	52.2
Overall width	69.6
Tread width, f/r	59.3/58.7
Seating capacity	4
Luggage capacity (cu. ft.)	12.4
Fuel tank capacity (gal.)	15.5

Powertrain

Engine (std.)	2.0L DOHC Zetec I-4
Horsepower (SAE net @ rpm)	125 @ 5500
Torque (lb.-ft. @ rpm)	130 @ 4000
Engine (opt.)	2.5L DOHC Duratec V-6
Horsepower (SAE net @ rpm)	170 @ 6250
Torque (lb.-ft. @ rpm)	165 @ 4250
Transaxle (std.)	Five-speed manual
Transaxle (opt.)	Electronically controlled four-speed automatic

Chassis

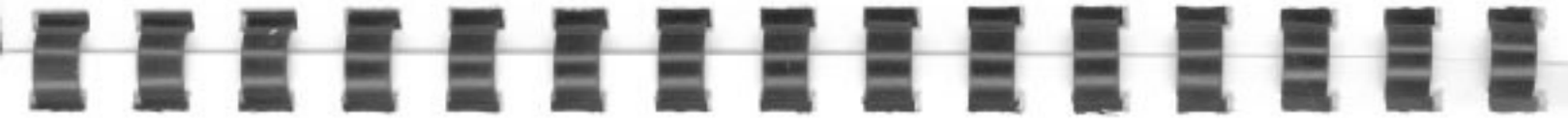
Front suspension	Independent MacPherson struts, coil springs, lower A-arms stabilizer bar
Rear suspension	Independent Quadralink, coil springs, stabilizer bar
Braking system	Std. power front disc/ rear drum (I-4); Std. power four-wheel disc (V-6); ABS opt. on both

STANDARD EQUIPMENT

	Cougar I-4	Cougar V-6
Exterior		
Brushed exhaust tip	–	S
Bumpers, 5 mph	S	S
Fog lamps	–	S
Headlamps, fixed projector beam	S	S
Mirrors, body-color, dual power heated	S	S
Side repeat turn indicators	S	S
Spoiler, color-keyed	–	S
Solar-tinted glass	S	S
Wheels, 15-inch cast aluminum	S	–
Wheels, 16-inch cast aluminum	–	S
Windows, power with driver's Express-Down feature and illuminated switches	S	S
Interior		
Audio System, AM/FM stereo/ cassette with four premium speakers	S	S
Airbags, Second Generation	S	S
Safety belts, 3-point front and rear outboard, height-adjustable (front)	S	S
Ashtray, front with cigarette lighter	S	S
Carpeting, black	S	S
Clock, electronic digital located in cluster	S	S
Console, full-length center with stowage bin, cup holder and power point	S	–
Console, full-length center with armrest/storage bin, cup holder, rear ashtray and power point	–	S
Defroster, electric rear window	S	S
Floor mats, 12 oz., front	S	S
Heat ducts, rear seat	S	S
Instrument panel, soft-feel with speedometer, odometer, tachometer, fuel and water temperature gauges, low fuel warning light and trip computer	S	S
Lights, front header-mounted courtesy light	S	S
Seats, individual bucket seats with cloth trim	S	S
Seats, individual bucket seats with high-series cloth trim and driver's manual lumbar control	–	S

STANDARD EQUIPMENT (cont'd)

	Cougar I-4	Cougar V-6
Seats, driver's seat manual recline with power height adjust, tip/slide passenger's seat with memory	S	S
Seats, 50/50 split-fold-down rear seat	S	S
Seatback map pockets	–	S
Steering wheel, four-spoke comfort	S	S
Steering wheel, leather-wrapped wheel and shift knob	–	S
Trip computer, displays distance to empty, average fuel economy, average speed, trip odometer, outside temperature	S	S
Functional		
Air conditioning, manual	S	S
Battery, maintenance-free	S	S
Brakes, power front disc/rear drum	S	–
Brakes, power four-wheel disc	–	S
Decklid release, remote power	S	S
Door locks, power	S	S
Engine, 2.0L DOHC 16-valve Zetec I-4	S	–
Engine, 2.5L DOHC 24-valve Duratec V-6	–	S
Fuel tank, 15.5 gallons	S	S
Particulate Air Filtration System	S	S
SecuriLock,® passive anti-theft system	S	S
Speed control	–	S
Steering, power rack-and-pinion	S	S
Suspension, MacPherson strut front, Quadralink rear suspension with stabilizer bar	S	S
Tires, P205/60R15 all-season	S	–
Tires, P215/50R16 all-season	–	S
Transaxle, five-speed manual	S	S
Windshield wipers, two-speed, variable intermittent	S	S



IV. MERCURY COUGAR VERSUS THE COMPETITION

	1999 Cougar	1998 Saturn SC2 Coupe
Dimensions (All dimensions are in inches unless otherwise noted.)		
Wheelbase	106.4	102.4
Overall length	185.0	180.0
Overall height	52.2	52.4
Overall width	69.6	67.3
Tread width, f/r	59.3/58.7	56.8/56.0
Seating capacity	4	4
Luggage capacity (cu. ft.)	12.4	11.4
Fuel tank capacity (gal.)	15.5	12.1
Powertrain		
Engine (std.)	2.0L DOHC Zetec I-4	1.9L DOHC I-4
Horsepower (SAE net @ rpm)	125 @ 5500	124 @ 5600
Torque (lb.-ft. @ rpm)	130 @ 4000	122 @ 4800
Engine (opt.)	2.5L DOHC Duratec V-6	NA
Horsepower (SAE net @ rpm)	170 @ 6250	NA
Torque (lb.-ft. @ rpm)	165 @ 4250	NA
Transaxle (std.)	Five-speed manual	Five-speed manual
Transaxle (opt.)	Electronically controlled four-speed automatic	Electronically controlled four-speed automatic
Chassis		
Front suspension	Independent MacPherson struts, coil springs, lower A-arms, stabilizer bar	Independent MacPherson struts, lateral link, tension struts, stabilizer bar
Rear suspension	Independent Quadralink, coil springs, stabilizer bar	Independent tri-link with strut spring module, stabilizer bar
Braking system	Std. power front disc/ rear drum (I-4); Std. power four-wheel disc (V-6); ABS opt. on both	Std. power front disc/ rear drum; Opt. power four-wheel disc ABS

STANDARD AND OPTIONAL FEATURES

	1999 Cougar	1998 Saturn SC2 Coupe
Anti-lock Braking System (ABS)	O	O
All-Speed Traction Control	O	O
Dual Airbag Supplemental Restraint System	S	S
Side Impact Airbags	O	NA
Remote Keyless/Illuminated Entry System	O	O
SecuriLock™ passive anti-theft system	S	O
Fog Lamps	S (V-6 only)	S
Air Conditioning	S	O
Particulate Air Filtration System	S	NA
Speed Control	O (I-4); S (V-6)	O
AM/FM Stereo/Cassette	S	O

	1999 Cougar	1998 Mitsubishi Eclipse GS
Dimensions (All dimensions are in inches unless otherwise noted.)		
Wheelbase	106.4	98.8
Overall length	185.0	172.4
Overall height	52.2	49.8
Overall width	69.6	68.5
Tread width, f/r	59.3/58.7	59.6/59.4
Seating capacity	4	4
Luggage capacity (cu. ft.)	12.4	16.6
Fuel tank capacity (gal.)	15.5	15.9
Powertrain		
Engine (std.)	2.0L DOHC Zetec I-4	2.0L DOHC I-4
Horsepower (SAE net @ rpm)	125 @ 5500	140 @ 6000
Torque (lb.-ft. @ rpm)	130 @ 4000	130 @ 4800
Engine (opt.)	2.5L DOHC Duratec V-6	2.0L DOHC I-4 turbocharged
Horsepower (SAE net @ rpm)	170 @ 6250	210 @ 6000; 205 @ 6000 (auto.)
Torque (lb.-ft. @ rpm)	165 @ 4250	214 @ 3000; 220 @ 3000 (auto.)
Transaxle (std.)	Five-speed manual	Five-speed manual
Transaxle (opt.)	Electronically controlled four-speed automatic	Electronically controlled four-speed automatic
Chassis		
Front suspension	Independent MacPherson struts, coil springs, lower A-arms, stabilizer bar	Independent multi-link, coil springs, stabilizer bar
Rear suspension	Independent Quadralink, coil springs, stabilizer bar	Independent multi-link, coil springs, trailing arm, stabilizer bar
Braking system	Std. power front disc/rear drum (I-4); Std. Power four-wheel disc (V-6); ABS opt. on both	Std. power four-wheel disc; Opt. ABS

STANDARD AND OPTIONAL FEATURES

	1999 Cougar	1998 Mitsubishi Eclipse GS
Anti-lock Braking System (ABS)	O	O (NA on RS)
All-Speed Traction Control	O	NA
Dual Airbag Supplemental Restraint System	S	S
Side Impact Airbags	O	NA
Remote Keyless/ Illuminated Entry System	O	NA on RS; O on GS, GS-T; S on GSX
SecuriLockTM passive Anti-theft system	S	NA
Fog lamps	S (V-6 only)	S (NA on GS)
Air conditioning	S	O (S on GS-T, GSX)
Particulate Air Filtration System	S	NA
Speed Control	O (I-4); S (V-6)	O (S on GS-T, GSX)
AM/FM Stereo/Cassette	S	S

	1999 Cougar	1998 Dodge Avenger
Dimensions (All dimensions are in inches unless otherwise noted.)		
Wheelbase	106.4	103.7
Overall length	185.0	190.2
Overall height	52.2	53.0
Overall width	69.6	69.1
Tread width, f/r	59.3/58.7	59.5/59.3
Seating capacity	4	5
Luggage capacity (cu. ft.)	12.4	13.1
Fuel tank capacity (gal.)	15.5	16.9
Powertrain		
Engine (std.)	2.0L DOHC Zetec I-4	2.0L DOHC I-4
Horsepower (SAE net @ rpm)	125 @ 5500	140 @ 6000
Torque (lb.-ft. @ rpm)	130 @ 4000	130 @ 4800
Engine (opt.)	2.5L DOHC Duratec V-6	2.5L SOHC V-6
Horsepower (SAE net @ rpm)	170 @ 6250	163 @ 5500
Torque (lb.-ft. @ rpm)	165 @ 4250	170 @ 4350
Transaxle (std.)	Five-speed manual	Five-speed manual
Transaxle (opt)	Electronically controlled four-speed automatic	Electronically controlled four-speed automatic
Chassis		
Front suspension	Independent MacPherson struts, coil springs, lower A-arms, stabilizer bar	Independent modified double wishbone, coil springs, stabilizer bar
Rear suspension	Independent Quadralink, coil springs, stabilizer bar	Independent double wishbone, coil springs, stabilizer bar on ES
Braking system	Std. power front disc/ rear drum (I-4); Std. power four-wheel disc (V-6); ABS opt. on both	Std. power front disc/ rear drum; Std. power four-wheel disc (ES) Opt. ABS on both models

STANDARD AND OPTIONAL FEATURES

	1999 Cougar	1998 Dodge Avenger
Anti-lock Braking System (ABS)	O	O
All-Speed Traction Control	O	NA
Dual Airbag Supplemental Restraint System	S	S
Side Impact Airbags	O	NA
Remote Keyless/ Illuminated Entry System	O	O
SecuriLock™ passive anti-theft system	S	NA
Fog Lamps	S (V-6 only)	NA (S on ES)
Air Conditioning	S	O (S on ES)
Particulate Air Filtration System	S	NA
Speed Control	O (I-4); S (V-6)	O (S on ES)
AM/FM Stereo/Cassette	S	O (S on ES)

V. MERCURY COUGAR DELIVERY TIPS

The goal of successful new-vehicle delivery is two-fold:

1. Give your customers a thorough understanding of the operation of their new vehicle.
2. Leave your customers with a positive impression of both you and the dealership to help cultivate owner loyalty.

Be sure to focus on the following areas with your 1999 Cougar customers during the delivery process.

Second Generation Airbag Supplemental Restraint System
Tell your customers that airbags are designed to be used in conjunction with properly worn safety belts and that they will deploy only in certain moderate-to-severe frontal or near-frontal collisions. Remind customers that children should be transported in the rear seat, properly restrained, and that rear-facing child safety seats should never be secured in front of an airbag.

Side-impact Airbags
Your Cougar customers who choose this optional safety feature should know that the side airbag system is designed to protect an occupant's head and chest in certain side collisions. The airbags are deployed from the outboard sides of the front seatbacks and are operated by the same computer as the main airbag system using sensors under the outboard side of the seat.

Trip Computer
Demonstrate how this standard Cougar feature displays distance to empty, average fuel economy, average speed and outside temperature with a touch of the SELECT button. Show your customers how to set these functions as well as the trip odometer and the digital clock by following the instructions in their Cougar Owner Guide.

Particulate Air Filtration System
Explain how the filter removes over 90% of airborne particles larger than 3 microns in size. Remind customers that they should replace the filter after 20,000 miles under normal driving conditions or 10,000 miles of continual operation in adverse conditions, such as driving on dirt roads. Instructions for changing the filter are in the Cougar Owner Guide.

Remote Keyless/Illuminated Entry System
For customers who have purchased a 1999 Cougar with the optional Remote Keyless/Illuminated Entry System, demonstrate all of its features and how they operate. When you show them how to lock and unlock the doors and unlatch the liftgate, be sure you also explain how to activate the PANIC alarm, and especially how to deactivate it.

All-Speed Traction Control
Customers who choose this option should be told how this system works together with the Anti-lock Braking System and engine throttle to automatically sense wheel slippage at any speed on dry (gravel, sand) or wet (snow, rain, ice) pavement. The system flashes the traction control light while modulating braking and engine torque to improve traction on slippery or loose driving surfaces. The driver may notice a slight temporary decrease in engine performance when the system is working. He or she should not be alarmed. This means the system is working properly.

SecuriLock™
Tell your customers how this passive anti-theft system requires no direct action from the driver to arm or disarm the vehicle. Explain how the car will not start without the specially coded ignition key. Customers may purchase additional keys from the dealership and may program them easily by following the instructions in their Cougar Owner Guide.

Electronic Speed Control
Explain to your customers how to use the steering wheel-mounted fingertip controls. The button will engage the speed control and set or increase cruising speed. The = button is used to resume the set speed. Demonstrate how the + and - buttons adjust speed in 1-mph increments.

Power Windows
Demonstrate the driver's side "Express-Down" feature and explain how it can be convenient at fast-food drive-thru windows, ATMs and toll booths.

Power Liftgate Release
Standard on all Cougar models, this feature provides convenient access to the luggage compartment. Show customers that the release button is under the instrument panel by the driver's door. Explain that the liftgate has two locking positions — one slightly open and one fully closed.

O/D (Overdrive) Off Indicator
In vehicles with the optional electronic four-speed automatic transaxle, the O/D Off Indicator is illuminated when the Transaxle Control switch has been pressed, canceling overdrive operation. The vehicle will operate only in first through third gear ranges until the Transaxle Control switch is pressed again. Once the ignition is turned off, the Transaxle Control switch will disengage. It is recommended that overdrive be turned off when driving with a heavy load, when traveling up and down steep hills, or when additional engine braking is desired.

Quality Care Maintenance (QCM)
Introduce your customers to the Service Department. Remind them to schedule their first Quality Care Maintenance appointment (Scheduled Maintenance).

Safety Advice Card
Review the Safety Advice Card with your customers so they are familiar with the safety features of Cougar, including safety belts, the airbags and the procedures for the safe transportation of children.

Auxiliary Warning System
These optional overhead warning lights are included with the V-6 Convenience Group. Be sure your customers understand what these lights mean. The service interval light will illuminate after 4800 miles or 358 days to indicate that it's time for routine service. The light may be reset by pressing the SELECT and UNITS buttons on the trip computer for 5 seconds. The frost warning light illuminates when outside temperatures are 34°F to 39°F. The ice warning light comes on when temperatures are below 32°F. The bulb outage light indicates the failure of an exterior bulb. The light stays on until the brake pedal is pressed after starting the engine. The auxiliary warning system also includes lights indicating brake pad wear, low washer fluid and door ajar.

Power Driver's Seat
The eight-way power driver's seat is optional on V-6 Cougar models. The controls are on the left front corner of the seat. Point out how the buttons are shaped like a seat so customers can intuitively understand how to adjust seat height, fore and aft movement, seatback recline and lumbar support.

Audio System

The standard Cougar audio system has several outstanding features your customers will want to know about. Automatic Volume Control (AVC) increases or decreases the unit's volume level to compensate for engine and road speed noise. The Cougar Owner Guide explains how to activate this function. For greater security, a release button under the volume control allows an anti-theft protection panel (station presets 2-5) to be removed. The audio unit can operate for up to one hour with the ignition turned off.

Seating Operations

Both Cougar models have standard 50/50 split-fold-down rear seatbacks for cargo-carrying flexibility. The seatbacks are released by pulling on the knobs in the luggage compartment. A tip/slide front passenger's seat with memory is also standard on Cougar. Pull the lever on the outside of the seatback to tip the seatback and slide the seat forward, allowing rear-seat passengers to get in and out easily. When the seat and seatback are pushed back, the memory function allows them to return to the previously set position.

Airbag Supplemental Restraint System (SRS), Second Generation

An inflatable, passive safety device deployed from the steering wheel and instrument panel to cushion the impact of a collision for a driver and right front seat passenger. The airbag is called a passive safety device because it requires no action on the part of the operator in order to function. Deployment is completely automatic and will occur only in a moderate-to-severe frontal impact.

For 1999, Cougar has been equipped with Second Generation airbags for both the driver and right front passenger seats. Second Generation airbags have been depowered to inflate with less force than current airbags. The airbags are depowered by reducing the peak inflation pressure and/or rise rate. Rise rate is the force and speed with which an airbag inflates, which is controlled by factors such as type and amount of inflator gas, airbag size and the vent design in the bag itself.

- Airbags are supplementary to the safety belts, not a substitute. Safety belts must be worn at all times to maximize the effectiveness of the system
- Airbags work only once. If the vehicle is hit multiple times, the safety belt is the best protection
- Depowered airbags are designed to provide maximum protection when used with safety belts. They reduce airbag inflation risks for belted front seat occupants, especially children and small adults
- See the Safety section of the Product Portfolio for a detailed description of the operation of the airbag system

Side-impact Airbags

Help protect an occupant's head and chest in certain side collisions. Deploy from the outboard sides of the front seatbacks by the same computer as the main airbag system, using sensors located under the outboard side of the seat.

Air Conditioning, CFC-free

To help protect the environment, all Lincoln-Mercury vehicles use air-conditioning refrigerants that do not contain chlorofluorocarbon (CFC) compounds. Because the new refrigerant, R-134a, does not contain chlorine, it will not contribute to the depletion of the earth's ozone layer.

Air Dam

Located under the front bumper, this aerodynamic device is designed to manage the flow of air. Usually made of a soft polypropylene material, it can reduce aerodynamic drag by channeling airflow away from the vehicle's underside. An air dam also can improve engine cooling by directing air to the radiator.

Air Extractor

Automatic pressure-activated valves that balance interior air pressure with outside conditions to improve ventilation and allow easier door closing. Often located in a natural low-pressure area of the vehicle's body, such as in the rear fender concealed behind the bumper, extractors help to maintain a constant flow of fresh air for occupants.

Air/Fuel Mixture

An engine runs most efficiently when the ratio of air to gasoline is maintained within precise tolerances. This air/fuel mixture ratio is expressed numerically, ideally about 14.7:1 by weight.

- For peak fuel economy and low exhaust emissions, the electronic engine-management system constantly adjusts the amount of fuel injected into the engine

Alignment

For safe handling, comfortable ride and maximum tire-tread life, all suspension components must be in precise geometric adjustment (alignment) as specified by the manufacturer. Any variation can affect the road-holding stability and tracking of the vehicle.

- Toe-in refers to the intentional setting of wheels to point slightly toward the center of the vehicle when stopped
- Caster describes the angle by which the vehicle's steering axis diverges from vertical. Caster helps the wheels return to a straight-ahead position, and it reduces wheel shimmy
- Camber is the relative tilt of the wheels, usually slightly inward at the top edge, as viewed from the front of the vehicle. Camber is set to optimize handling and tire wear
- Front and rear wheels must also be aligned with respect to each other

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Anti-lock Braking System (ABS)

ABS uses wheel-speed sensors to determine if wheels are about to lock up under braking. If necessary, ABS will modulate braking to prevent wheel lockup.

- The most important benefit of ABS is that it enables the driver to maintain steering control even while braking on slippery road surfaces
- For a complete explanation of Lincoln-Mercury ABS, see the Safety section of the Product Portfolio

Aspect Ratio

In referring to tires, the relationship between the section height and the tire width. A tire designated as P205/70R15 has an aspect ratio of 70. This means the tire's vertical dimension is 70 percent as great as its width.

- Typical passenger car tires have an aspect ratio of 65 or 70
- Performance tires, with wide tread and short section height, often have a numerically lower aspect ratio of 50 or 55, resulting in optimized steering response and adhesion during acceleration, braking and cornering

Audio Systems

Original-equipment audio systems as fitted to many Lincoln-Mercury models.

Automatic Locking Retractors (ALR)

Automatic locking retractors have the capability to lock the safety belt into position and hold it so that a child-safety seat may be securely fastened into a vehicle. They are engaged by pulling the safety belt to the fully extended position, at which time a clicking sound is heard. When the belt retracts from this position, it locks in that final setting. To release an ALR safety belt from its locked position, it must be unfastened and fully recoiled.

See the Safety section of the Product Portfolio for more information.

Axle Ratio

In exact terms, the number of transmission output shaft revolutions required to rotate the drive axle one full turn, typically about 3.00:1.

- A numerically higher ratio (3.50:1) would provide more torque at the drive wheels for better acceleration or easier trailer towing
- A numerically lower ratio (2.50:1) would offer improved fuel efficiency by reducing engine rpm for a given road speed

B

B-pillar

The roof-support member between the front and rear side-door windows. On two-door models, the B-pillar is between the front side-door window and the rear-quarter window.

Backlite

The window that spans the rear of the vehicle from side to side.

Battery, Heavy-duty

A high-capacity, maintenance-free battery that offers a reserve of starting power for cold weather.

- Recommended for areas where temperatures drop below -20°F

Beltline

The line formed by the lower edge of the window glass, separating the upper, or greenhouse, section from the lower body.

Bezel

A surrounding frame or trim piece, primarily used to give a finished appearance to lamp housings or instrument panels.

Body Insulation/Soundproofing

To prevent noise and vibration originating at the engine or suspension from being transmitted into the passenger compartment, special materials are used to isolate the sources. Dense substances are used to fill joints and wire/cable pass-through points to lessen sound intrusion.

Body Sealing Materials

Specially formulated sealers and adhesives prevent the intrusion of outside noises into the passenger compartment at body seams and joints. In some applications, these materials also contribute to the structural strength of the body. Among the types used on Lincoln-Mercury vehicles:

- Vinyl sealers used at panel seams, joints and exposed holes
- Urethane and butyl sealers for the windshield and backlite
- Heat-cured sealers in the passenger and luggage compartments
- Rubber and vinyl plastic seals at the drip rails and rear deck trough

Bore and Stroke

These measurements determine the engine's displacement, or working volume. The measurements are usually in millimeters and liters or in inches and cubic inches.

- Bore is the diameter of a single cylinder, the cavity in an engine block in which the pistons travel up and down
- Stroke is the distance traveled by the piston between the top and the bottom of its motion inside the cylinder

Brake/Shift Interlock

To prevent the driver from unintentionally shifting out of Park and into gear, this safety mechanism requires the driver to press the brake pedal before the shift lever will move.

Bumpers, 5-mph Energy-absorbing

To reduce the possibility of damage in minor impacts, all Lincoln-Mercury vehicles are designed to resist damage up to 5 mph to ensure that they exceed federal mandate standards of 2.5 mph.

- By minimizing the chance of damage to body components, lamps, lenses and exhaust pipes, repair costs can be reduced or eliminated altogether in minor, low-speed impacts

C

C-pillar

The roof-support pillar between the rearmost side window and the backlite (back window) of hatchback and most sedan bodies. On station wagons, the C-pillar is between the rear door and the quarter-panel glass.

CAFE

An acronym for the government-mandated Corporate Average Fuel Economy standard. This single mileage figure is determined by taking a sales-weighted average of the fuel economy for all cars and/or trucks produced by a manufacturer.

Camber

See Alignment.

Camshaft

An engine shaft that uses inclined lobe sections, or cams, to open the valves that control the flow of intake and exhaust gases. Camshafts are mounted either in the block, operating the valves via pushrods, or in the cylinder head. The latter type, typical of performance-oriented engines, is known as an overhead cam layout. Camshafts are driven by a belt or chain and operate the valves directly. Some engines, such as the InTech™ System V-8, use as many as four camshafts.

Caster

See Alignment.

Catalytic Converter

Part of the emissions-control system in which engine exhaust undergoes a chemical reaction to reduce the levels of regulated pollutants.

CD4E

Corporate codes that designate specific electronic, four-speed, automatic, overdrive transaxles or transmissions. Cougar uses CD4E for its transaxle code.

Chassis

The basic mechanical systems of a vehicle, including powertrain, suspension, steering and brakes, that attach to the structural framework.

Clearcoat Paint

The top, protective layer of paint that helps preserve the richness and luster of the color layer below it.

Clutch

A mechanical device that links the engine and transmission/transaxle. The clutch provides a method of interrupting the connection, such as when starting, stopping or shifting.

- Automatic transmissions use internal clutches to disengage the power flow and provide smooth gear changes

Coil Spring

A thick metal wire wound into a spiral configuration. Often used in front- and rear-suspension systems, the coil spring compresses or extends to compensate for road irregularities encountered by the tires. Such springs typically are designed to deliver variable spring rates. That means the spring will be stiffer as it is compressed, combining the smoothest possible ride qualities under normal loads but adding resistance as loads are increased or the suspension is compressed.

Combustion Chamber

The combustion chamber is the portion of the engine's cylinder head where the air/fuel mixture is ignited and converted to mechanical energy.

Comfort/Convenience Group

A package of options that adds to driving pleasure. The makeup of this group varies by vehicle line.

Compression Ratio

The ratio between the engine cylinder volume (including the combustion chamber) when the piston is at the bottom of its stroke, and the volume when the piston is at the top of its stroke.

- Within certain limits, the higher the compression ratio, the more power an engine will produce from a given amount of fuel

Connecting Rod

The mechanical link between the piston and the crankshaft that enables the piston's up-and-down travel to be converted into the crankshaft's rotational motion.

Constant Velocity Joint

Half-shafts that carry power from the differential or transaxle to the wheels (also known as a CV joint).

A refined version of the common universal joint engineered to avoid vibrations and shaft-speed variations inherent with conventional joint designs.

Cornering Lamps

Activated with the turn signals, these lights illuminate the way around turns and alert others to the driver's intention.

Cowl

The portion of the car body behind the hood and immediately in front of the windshield.

Crankshaft

A key component inside an engine that converts the reciprocating (up-and-down) motion of the pistons to rotary motion and then directs it to the transmission.

Crossmember

A structural support element that runs from side-to-side between longitudinal (front-to-rear) chassis members.

Crossmember Beam

This is a structural beam mounted between the A-pillars that's designed to stabilize the steering column and enhance the vehicle's structural rigidity.

Crumple Zones

Engineered to deform sheet metal progressively in a collision, absorbing the force of an impact instead of transferring it to the passenger compartment.

Exceeds the Federal Motor Vehicle Safety Standards (FMVSS) for 30-mph front and rear impacts *by meeting the more stringent Ford Motor Company corporate* 35-mph standards.

The '99 Cougar also is designed to meet a wide range of international safety standards in Europe, Canada, Australia and New Zealand.

Crush Zones

See Crumple Zones.

Curb Weight

Total vehicle weight including standard equipment, a full tank of fuel, and the vehicle's lubricants and coolant.

D

D-ring, Adjustable

The D-ring is the upper anchor for outboard shoulder belts. The adjustable anchor available on some Lincoln-Mercury models improves comfort for front seat occupants of different heights by allowing them to adjust the height of the D-ring on the B-pillar.

Defroster, Electric Rear-window

An electric heating grid that quickly defogs the backlite and melts frost, snow or ice. Required by law in the state of New York.

- A silver-filled ceramic grid is applied to the interior glass surface
- The instrument-panel switch incorporates an indicator light and an automatic timer for shutoff after 10 minutes

Designated Seating Capacity

A vehicle's legal maximum occupancy. Under federal standards, safety belts must be provided for each designated seating position.

Detonation

Detonation is the ignition of the air/fuel mixture in an internal combustion engine. Engine knocking or pinging occurs when detonation of the mixture is abnormal.

Differential

A gearset used in a vehicle's final-drive assembly that allows the wheels to rotate at different speeds even while under power. This is necessary because when cornering, the wheel at the outside of the turn must rotate faster than the wheel on the inside of the turn.

Dive

The nose-down motion of a car caused by load transfer under braking. Anti-dive geometry designed into the front suspension is used to reduce this motion.

Double-beam Projector Headlamps

Headlamps have slim, flush-molded fixed one-piece lenses to complement the sleek exterior styling. High-output halogen headlamps help provide optimum illumination for excellent nighttime visibility and more consistent high/low beam light patterns. High-impact plastic lenses cover the headlamps to help reduce the risk of damage from rocks and other road debris.

Drag Coefficient

Also expressed as Cd, this measure is an indication of a vehicle's efficiency as an aerodynamic shape. The drag coefficient multiplied by the frontal area of a vehicle is its total aerodynamic drag.

- Aerodynamic drag is measured in a wind tunnel. If testing and experimentation result in lower drag figures, then improved fuel economy and/or improved handling can result
- Cd does not take into account the vehicle's frontal area, so it is possible for a large, sleek sedan to have a lower figure than a small, squared-off subcompact

Driveability

An evaluation of a vehicle's refinement in overall operating quality. Engine-smoothness, throttle-response and power-delivery characteristics all contribute to the determination of whether a vehicle is easy and enjoyable to drive.

Drivetrain

See Powertrain.

Dual Overhead Cam (DOHC) Engine Design

Also known as Double Overhead Cam, this is a state-of-the-art engine design in which two camshafts are fitted atop the cylinder head, one to operate the intake valves and one to operate the exhaust valves. Commonly written as DOHC. Such engines permit optimizing the angle at which the valves enter the combustion chamber and the shape of the combustion chamber itself. This results in improved performance and fuel efficiency.

- DOHC V-8 engines, which are designed with cylinders in two banks, have a total of four cams, two for each cylinder head. A DOHC in-line four-cylinder engine usually has two cams
- All engines using the overhead cam design offer the potential for greater power output and higher engine speeds (rpm)

E

EGR (Exhaust Gas Recirculation)

A component of the emissions-control system. By routing some of the engine's exhaust back into the cylinder with the fresh air/fuel mixture, combustion temperatures are reduced and nitrogen-oxide emissions are lowered.

Electronic Engine Controls (EEC-V)

The sophisticated electronic engine-management system used in all Lincoln-Mercury vehicles employs advanced microprocessor technology to control both engine and automatic-transaxle functions.

- EEC-V, the newest generation of control systems by Ford Motor Company, performs 25 percent more functions than its predecessor, and does it with much greater speed. Fuel management, ignition timing and transaxle shifting are but a few of the functions regulated by this system

Electronic Fuel Injection

Its sequential multi-port electronic fuel injection (SEFI) also delivers fuel directly to each cylinder intake port, but in precisely timed pulses that correspond to the opening of the intake valve. This improves performance because the atomized fuel spray burns more readily in the combustion chamber.

Emissions System Standards (Vehicles destined for California, Massachusetts, New York or Connecticut)
Because of differing emissions-control regulations in certain areas, alternate option codes are listed for these special situations. California Emissions Systems are required on cars sold for registration in states with California law-based emissions standards.

Ergonomics

An applied science that, in the context of automotive design, relates to the placement of instruments and controls so that more frequently used controls are within easy reach.

Exhaust Manifold

The piping that collects burned engine gases and directs them to the catalytic converter and exhaust system.

"Express-Down" Power Window

A one-touch power-window control that completely lowers the glass without the need to hold a finger on the button. Windows also can be stopped in any intermediate position. This feature is ideal for drivers who encounter anything from tollbooths to drive-up bank tellers on a regular basis.

F

Fascia

A soft, durable covering used on the front and rear ends of some vehicles, including the bumpers.

Floor Pan

A stamped-metal structure, usually welded together from smaller stampings, that forms the vehicle's basic structural foundation. Besides providing the actual floor, it also acts as an attachment point for many major mechanical systems.

Flush-mounted Glass

To decrease aerodynamic drag, designers prefer to locate window glass at the outer edge of the body's roof pillars and door frames.

- By lowering the aerodynamic drag, fuel economy is improved and wind noise is lowered
- Flush-mounted glass contributes to a sleek, modern look

Flywheel

A heavy metal disc (flex plate on automatic transaxles) bolted to the rear of the engine's crankshaft for the purpose of smoothing the power flow. A ring gear on the flywheel circumference provides an engagement point for the starter motor's drive gear. In manual transaxle vehicles, the clutch pressure plate is bolted to the flywheel's transaxle-side surface.

Fog Lamps

Special lights that are aimed low on the roadway and are designed specifically to pierce through misty conditions.

Foot-pounds

See Pound-feet.

Four-valve-per-cylinder Engine Design

The leading edge in powertrain engineering is found in designs that use two intake and two exhaust valves per cylinder. The improved flow of air/fuel mixture into the engine and exhaust gas out of the engine boosts power.

- Because each valve in a four-valve design can be smaller and lighter than the valves of a two-valve design, maximum engine rpm, and thus power, can be greater. Valve float common to a two-valve engine (the inability of the valve springs to close the valves firmly at high rpm) is largely eliminated
- The layout of the four-valve combustion chamber places the spark plug in the ideal central position for complete combustion, improving performance and lowering exhaust emissions

Fuel Pump Inertia Shutoff Switch

An impact-activated switch automatically shuts off the fuel being pumped to the engine in the event of a collision.

- Once the switch is triggered, it must be reset manually
- Refer to the vehicle's Owner Guide for proper reset procedure

FWD

Short for front-wheel drive (not to be confused with 4WD, or four-wheel drive). This drive system has gained acceptance by offering superior space utilization inside the vehicle and an extra measure of control when road conditions are poor.

G

Glass, Solar-tinted

To prevent heat buildup in the passenger compartment on bright days, special window glass formulations are used to absorb and reflect much of the sun's radiation. Solar-tinted glass also reduces the ultraviolet Type A radiation entering the passenger compartment, which reduces interior fading.

Greenhouse

The portion of a vehicle's body that includes all of the roof structure and glass surfaces above the beltline.

H

Halfshafts

The shafts that carry engine power from the transaxle or rear differential to the wheels.

Halogen Headlamps

All Lincoln-Mercury vehicles are equipped with headlamps that use bulbs filled with halogen gas. Producing a whiter, brighter beam than conventional incandescent sealed-beam lights, halogen headlamps also offer the convenience of replaceable bulbs.

Headliner

The cloth or plastic finish material that covers the vehicle's inside roof surface.

Heater, Engine Block Immersion

An electric heating element powered by household current that is used to keep the engine coolant warm in severely cold weather.

- Provides quick engine starting and warm-up and fast heater operation
- Suggested for temperatures below 0°F
- Strongly recommended below -20°F

Horsepower

The standard unit of measure used to express engine output.

I

Illuminated Entry System

Illuminates all interior courtesy lights and leaves them on for 20 seconds or until the ignition is turned on. Activated by pressing the unlock button on the key fob. Provides convenience and security when entering the car after dark.

K

Keyless Entry System

See Remote Keyless Entry System.

L

Lock Group, Power

Includes power door locks, power decklid or liftgate release and remote fuel-filler door release. Package contents vary by model line, so check the individual model sections of the Product Portfolio for exact equipment.

Lockup Torque Converter

Because the automatic transaxle is linked to the engine by a fluid coupling, rather than by the mechanical clutch of a manual transmission, there is a potential loss of efficiency due to slippage. A lockup torque converter improves fuel economy by eliminating this slippage. An internal clutch system provides a positive, direct connection between the engine and transaxle.

- Torque converter lockup is usually controlled by the powertrain computer
- The lockup function operates only after the vehicle has moved away from a stop and shifted out of low gear

M

MacPherson Strut

Named for Ford of England engineer Earle MacPherson, who developed the design in 1950, the MacPherson strut combines a reinforced shock-absorber unit with a surrounding coil spring to both locate the wheel and support the body weight. This compact, lightweight, low-friction design is used on several Mercury models.

Main Bearings

The crankshaft of an engine is supported in the cylinder block by main bearings. Customer benefits of this high-strength design include smooth engine operation and long operating life.

Message Center

An LED display in the middle of the instrument panel on some vehicles that provides a wide range of information to the driver.

- Useful computerized trip data includes fuel economy, fuel status, miles to empty and compass heading
- Warning messages regarding monitored systems may include fluid levels, engine temperature, voltage level and maintenance items

Mirrors (interior and exterior)

- Dual Outside Power Remote-control Mirrors: Electrically adjustable mirrors can be easily set from the driver's seat
- Heated Mirrors: Electric elements clear frost and mist from these outside mirrors. They are activated whenever the electric rear-window defroster is switched on

Molding, Bodyside

Durable trim that protects doors and fenders from dents and paint chips often incurred when adjacent vehicle doors are carelessly opened in parking lots.

Moonroof, Power

A transparent, usually tinted, roof panel that can be opened completely or simply tilted up at the rear as a vent. Both a windscreen and an integral sliding sunshade are provided. Also called a sunroof.

N

NVH

Abbreviation for noise, vibration and harshness.

O

Octane Rating

The measure of a gasoline's ability to resist abnormal detonation or pinging. Performance engines with higher compression ratios require higher-octane gasoline to prevent damage. The octane rating numbers used in the Product Portfolio are an average of a Motor Octane Number (MON) and a Research Octane Number (RON), which corresponds to the number used on fuel pumps.

Odometer

An instrument that indicates accumulated distance traveled. Many vehicles also offer trip odometers to record distance covered in a particular travel segment.

OHC (Overhead Cam)

Overhead cam engine designs locate the valve-actuating camshaft atop the cylinder head. This design offers accurate control of valve timing and the potential for higher engine speeds. See also Single Overhead Cam Engine Design and Dual Overhead Cam Engine Design.

On-Board Diagnostics II System (OBD-II)

The On-Board Diagnostics II System continuously monitors the powertrain and records defects and wear of 50 different components. This allows Service Technicians to diagnose intermittent engine problems.

100,000-Mile Spark Plugs

Tipped with platinum rather than the nickel used in other spark plugs, these plugs have a higher melting point, which means it takes longer for them to corrode. (Normal engine oil and fluid checks and changes, brake inspections, tire rotations and other items normally associated with maintenance must still be performed as directed by maintenance schedules.)

Outboard Rear Safety Belt Built-in Locking Feature

See Automatic Locking Retractors.

Overdrive

To improve fuel economy, many transaxles are designed with an overdrive top-gear ratio that allows the engine to operate at a lower rpm while maintaining a given road speed. In technical terms, any gearset in which the output shaft turns faster than the input shaft (a ratio of less than 1:1) is considered an overdrive gear.

Oversteer

A condition in which a vehicle turns more than the steering wheel input would dictate, generally caused by greater slip angles of the rear tires. Because it can make vehicle control hard to maintain (the rear end tends to swing out), engineers design suspensions to counteract oversteer by having understeer or neutral steering qualities.

P

Particulate Air Filtration System

A system of air filters that filters out over 90 percent of particles larger than 3 microns before they reach the passenger cabin. This includes microscopic particles of dust, pollen and molds to which many vehicle occupants are allergic.

Passive Safety Features

Systems designed to protect the occupants of a vehicle without any activity on the occupant's part. Passive restraint systems, energy-absorbing crumple zones and energy-absorbing steering columns are all examples of passive safety systems.

Platform

A manufacturing term describing the basic vehicle structure that may be shared between model lines, even with completely different body styles.

Platinum-tipped Spark Plugs

Platinum-tipped spark plugs offer the convenience of 100,000-mile scheduled tune-up intervals under normal driving conditions with regular fluid and filter changes.

Pound-feet

The unit of measure for engine torque. Commonly abbreviated as lb.-ft. The commonly used term of "foot-pounds" more properly is a measurement of work, rather than of torque.

Power-to-weight Ratio

The relationship between total vehicle weight and engine horsepower generally expressed as the ratio: pounds-per-horsepower:1. The lower the number of pounds for each horsepower, the greater the performance potential of the vehicle.

Powertrain

The combination of components that produces and transmits power to the drive wheels, including the engine, transmission and differential (rear-wheel-drive vehicles), or engine and transaxle (front-wheel-drive vehicles). Also known as Drivetrain.

PSI (Pounds per Square Inch)

The most common unit of pressure, frequently used in components such as tires, fuel systems and air suspensions.

Q

Quarter Panel

The body area extending from the back edge of the rear door opening to the taillamp area, and from the lower edge of the bodyside to the base of the roof or greenhouse structure. Its equivalent at the front of the vehicle is known as the front fender, but the rear is different in that it is generally welded, not bolted, into place.

R

Radiator

A heat-exchanger unit that provides cooling by transferring the heat of a fluid to the outside air through a grid of thermally conductive tubes and fins. Most commonly used for engine coolant, but sometimes fitted to automatic transaxles and power-steering systems.

Radios

For a complete description of these systems, see the Sound Systems section of the Lincoln-Mercury Product Portfolio.

Redline

The maximum recommended engine speed in rpm, often indicated as a red section on the tachometer face.

Remote Keyless Entry System

The Remote Keyless Entry System allows the doors and luggage compartment to be unlocked without a conventional key, though the key still can be used when desired. See Owner Guide for operating instructions.

Ride Height

The distance between the road surface and a specified reference point on the body. This factory specification is used in setting the suspension alignment.

Road-holding

The ability of a car to grip the pavement.

Roll

The leaning motion of a vehicle's body in turns, caused by its rotation along the vehicle's lengthwise axis.

RPM (Revolutions Per Minute)

The expression of engine speed derived from the number of crankshaft rotations measured over a 60-second period. Continental reaches its peak horsepower (260) at 5500 rpm.

S

SAE (Society of Automotive Engineers)

An organization of professional engineers that sets industry design standards.

Safety Belts

Safety belts are any vehicle's single most important occupant-protection feature and should be properly worn at all times. Cougar includes three-point lap/shoulder safety belts in all outboard seating positions. The front safety belts are height-adjustable for added comfort. All passenger seating positions are fitted with Automatic Locking Retractors (ALRs), which help restrain portable child safety seats.

Safety Belt Grabber

Upon impact, this feature "grabs" the safety belt, limiting belt slack in microseconds. This results in improved protection for the driver from impact with the steering wheel. This feature responds faster than other systems, including the inertia reel.

"Safety Cell" Construction

A vehicle body constructed with a variety of components that are designed to help maintain the integrity of the passenger compartment in the event of a frontal, side or rollover collision. Collectively, these components comprise the vehicle's "safety cell." The cross-car beam helps improve structural rigidity and stabilize the steering column. The front and rear crumple zones help absorb many of the forces of a collision.

Seats

Cloth-trimmed front bucket seats have a manual recline control. Passenger-side tip/slide feature has memory for easy entry and exit from the rear seats. Driver's seat has power height controls. V-6 models also feature driver's manual lumbar support adjustment and seatback map pockets. Leather seating surfaces and an eight-way power driver's seat are optional on V-6 model. 50/50 split-fold-down rear seatbacks fold flat for cargo-carrying flexibility. Unique "bucket" design of the rear seats provides supportive comfort for passengers.

SecuriLock™ Passive Anti-theft System

The SecuriLock™ passive anti-theft system utilizes a sophisticated, electronically coded ignition key to start the vehicle. If the key does not have the correct code, the vehicle will not start. There is no battery on the key to wear out; the small amount of energy required to identify the key is supplied by the vehicle.

This system is referred to as passive since the driver of the vehicle need not follow any procedure to arm the system. It automatically becomes armed when the key is removed from the ignition. To disarm the system, simply insert the ignition key.

Spare keys are available from dealerships. Customers can program their keys themselves by inserting the new key into the ignition within 15 seconds of removing the original key.

Although similar to General Motors' PASS-Key® anti-theft system, SecuriLock provides superior security with more possible combinations and improved reliability (no contacts to wear out).

Shipping Weight

Vehicle weight with standard equipment and lubricants, but without fuel or coolant.

Shock Absorbers

A suspension component that damps suspension oscillations by converting the motion to heat. More properly known as "dampers." Damping is accomplished by a piston forcing hydraulic fluid through small passages inside the cylindrical housing. Because the hydraulic fluid can become aerated and lose efficiency under heavy loadings, many shock absorbers have a gas-pressurized chamber that keeps the fluid under constant pressure, reducing or eliminating the aeration. These are gas-pressurized hydraulic shock absorbers.

Side Door Intrusion Beams

These structural beams are built into doors to help provide additional passenger protection in the event of certain collisions.

Speed Control, Fingertip

This Lincoln-Mercury feature increases driving comfort by automatically holding the speed set by the driver. It can be operated without removing hands from the steering wheel.

Squat

The tendency of the rear end of a vehicle to lower itself under acceleration.

Stabilizer Bar

Also known as an anti-roll bar. A solid rod or tube suspension element that reduces body lean in corners by resisting the unequal motion between the wheels at either side of the vehicle. Can be installed at the front end, rear end or both.

Steering Systems

Depending on the application, Lincoln-Mercury vehicles use either rack-and-pinion or recirculating ball and nut steering equipment.

- Rack-and-pinion steering systems consist of a small pinion gear (attached to the steering shaft) that meshes with a long-toothed bar known as the rack (linked to the front wheels by the tie rods). This system is lightweight and offers precise control

Sub-frame

A structural member used at the front or rear of a unibody vehicle to carry the powertrain and/or suspension components.

- Isolated sub-frame: Intrusion of road noise and vibration can be greatly reduced by using liquid-filled or rubber mounts to isolate the sub-frame structure from the unibody. This prevents unwanted disturbances from reaching the passenger compartment.

Suspension System

The springs, struts and/or shock absorbers, linkages and locating members that act together to control motions caused by tires passing over uneven road surfaces to reduce the effect on the vehicle body.

T

Tachometer

An instrument that indicates engine speed in revolutions per minute (rpm).

Things Gone Right (TGR)

Features that are repeatedly praised by vehicle owners during research.

Things Gone Wrong (TGW)

A ratio that expresses the number of reported problems per 100 vehicles, as determined by research with vehicle owners.

Tires

All Mercury vehicles are supplied with P-metric steel-belted, radial-ply tires as standard equipment. The tires are carefully matched to the vehicle's suspension characteristics and have been designed to optimize fuel economy.

Size: Reading the sidewall data reveals important facts about a tire. Using a size designation of P185/70R14 as an example, the following information can be determined:

P — Designates a passenger-car tire

185 — Width of the cross section in millimeters

70 — Aspect ratio

R — Radial construction

14 — Rim diameter, in inches

The aspect ratio is the relationship between the height of the tire's section height and its overall width, expressed as a percentage. In this example, the section height is 70 percent of 185 millimeters, or approximately 130 millimeters.

- Speed rating: Depending on the application, tires may be laboratory-tested for sustained high-speed operation. The speed rating is designated as a letter immediately following the aspect ratio and preceding the R, which denotes radial construction. For example: P225/60VR16 tires carry a V speed rating.
- H-rated tires are tested for speeds up to and including 129 mph. V-rated tires are tested for speeds up to and including 149 mph. Z-rated tires are tested for speeds over 149 mph.
- Applications: Tires are engineered for specific usage patterns. The principal categories are all-season and performance tires.

Most Mercury vehicles are equipped with all-season tires. They use a tread design that offers excellent traction in mud and snow, yet they function well as year-round tires. The tread compounds and construction designs are engineered to minimize flexing and heat buildup, providing lower rolling resistance for improved fuel economy.

Torque

A turning or twisting force that produces rotation, expressed in pound-feet. Torque affects the vehicle's performance when accelerating, carrying heavy loads or towing a trailer.

Torque Steer

An unwanted imbalance of driving forces between the front wheels of a front-wheel-drive vehicle, which causes the car to pull left or right under hard acceleration.

- Torque steer can be sensed by the driver as a turning force at the steering wheel when the vehicle is accelerating from a standstill

Track

The distance between the centers of the left and right tire-tread contact areas at one end of a vehicle. Front and rear wheels may possess slightly different track dimensions. A wide track reduces the amount of body lean during cornering or in crosswinds, improving handling.

Traction Control, All-Speed

- Controls wheel spin on slippery or loose driving surfaces
- Controls traction through brake intervention and engine torque modulation
- Monitors front brake application to prevent front brake overheating
- Operates at all driving speeds

Transverse-mounted Engine

An engine compartment layout in which the engine is mounted side-to-side, with the crankshaft perpendicular to the vehicle's fore-and-aft axis. Many front-wheel-drive cars are designed with a transverse-mounted engine layout to optimize interior space.

Turning Diameter

The diameter of the circle within which a vehicle can be turned around, a good indicator of maneuverability.

- Curb-to-curb measurement is made at the outside of the outer front tire
- Wall-to-wall diameter is taken at the point of the greatest front-end overhang

U

Understeer

A condition in which a vehicle turns less than the steering wheel input would dictate, generally caused by slippage at the front tires. In general, engineers design suspensions that tend toward understeer as a safety measure. Understeer causes a vehicle to run wide in corners if the entry speed is too great.

Unsprung Weight

Components such as tires, wheels and brakes are not supported by the suspension and are considered unsprung weight. Reducing unsprung weight improves ride and handling by allowing the tires to respond more rapidly to road irregularities.

Urethane Coating, Lower Bodyside

Treatment applied to body panels that helps resist stone and gravel damage to the paint finish.

V

V-angle

The angle formed by the cylinder banks in a V-type engine design, measured in degrees. For smooth operation, there are ideal configurations, though this may conflict with available underhood space, requiring certain trade-offs. For example, a 60-degree V-6 is narrow by design and has excellent natural balance characteristics; a 90-degree V-6 is lower (fits better under low hoodlines), but requires a balance shaft or offset crankpins in order to quell vibration forces. Engine vibration is reduced as the number of cylinders is increased, whatever the V-angle, because the impulse of each cylinder firing occurs more frequently.

W

Washer/Wiper, Rear Window

Ensures visibility in wet, snowy weather or in dusty conditions.

Weight Distribution

The allocation of vehicle weight between front and rear tires. The front-to-rear balance of weight affects handling, braking, traction and the service life of tires and brake components.

Wheelbase

The distance between the front- and rear-wheel center points. Longer wheelbases contribute to improved ride comfort.