

COMMUNICATION ....

# SVT MUSTANG COBRA 20

THE ESSENTIAL INGREDIENTS FOR A STIRRING DRIVING MACHINE ARE AN ENGINE THAT BREATHES DEEPLY DURING A RUSH TO THE REDLINE AND A CHASSIS THAT BALANCES POISE WITH PREDICTABILITY. COMBINE THESE VIRTUES WITH FINESSE AND YOU HAVE A VEHICLE THAT DELIVERS AN EXHILARATING DRIVING EXPERIENCE.

Ford SVT designs and develops performance vehicles that can deliver years of driving pleasure and value for the automotive enthusiast.

... between car and driver is a central doctrine of the SVT performance philosophy. All major engineering advances at SVT are geared not only toward achieving greater acceleration, braking and cornering capabilities, but also toward making the experience of piloting an SVT vehicle more invigorating.

In its evolution of the Mustang Cobra over the past eight years, SVT has remained steadfast in its pursuit of this philosophy, the evidence arriving each year in gleaming steel, glass and aluminum. First came an advanced braking system, then a high-revving quad-cam four-valve V8. And most recently an elegantly designed independent rear suspension system was added. All these engineering advances help the Mustang Cobra achieve not only greater levels of performance, but also a higher and more refined form of communication.

The gifted engineers of SVT and Team Mustang understand that humans can derive pleasure from the workings of a performance car, particularly when it communicates





Owing to its independent rear suspension and other upgrades, this Cobra is the most sophisticated production Mustang ever...

AR AND DRIVER

The ... thrust of the 4.6-liter V8 is addictive, and the ... independent rear suspension does a much better job of keeping the drive wheels in continuous contact with the pavement than the old live and

CAR AND DRIVER

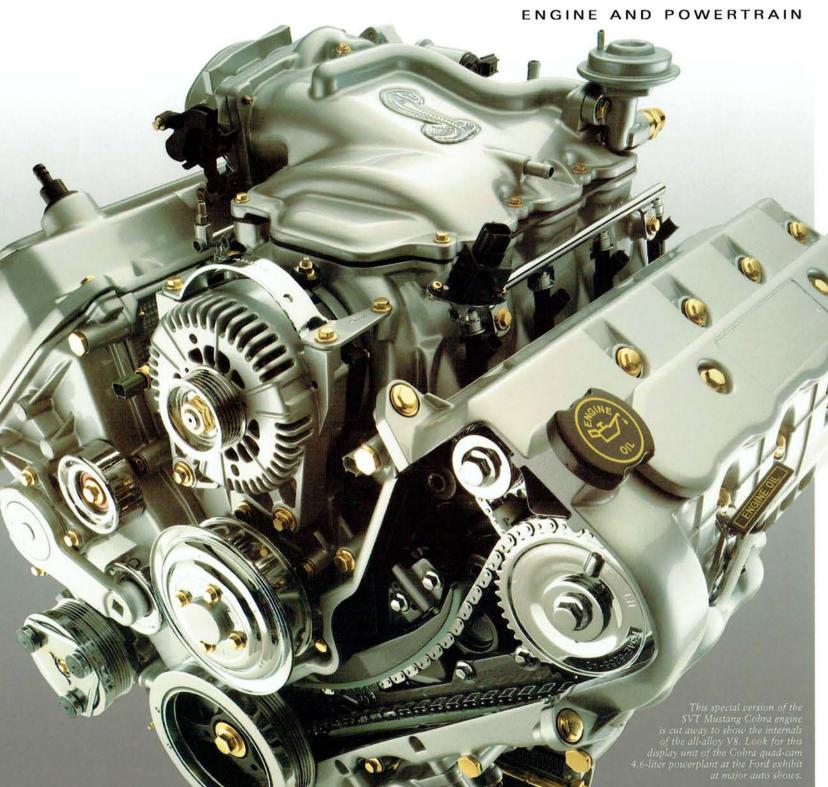
... from a handling perspective, the ... Mustang Cobra is as much a revelation as it is a delight.

In fact, the Mustang Cobra just about puts to rest the notion that pony cars by sheer definition must be hairy, grunt-off-the-line non-handlers.

...the pony-car future lies with cars such as this Mustang – whic (technically at least) has become a horse of quite a different color.

ROAD & TRACK

...gripes are few.
AUTOMOBILE MAGAZIN



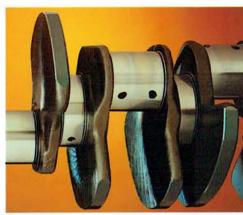
An unmistakable quad-cam symphony rises every time the throttle is opened. In a composition whose playfulness and intricacy could have inspired a young Mozart, the tenor sound of air shooting through the upper intake toward eight combustion chambers plays against the precision whir of four cams and 32 valves dancing on the rooftop. A sonorous basso exhaust fills the low-end, spreading a wake that precious few performance cars can match.

Since 1996 the SVT Cobra has featured a potent aluminum-alloy V8 with four valves per cylinder, double overhead cams, and a 6,800-rpm redline. As Automobile Magazine stated,

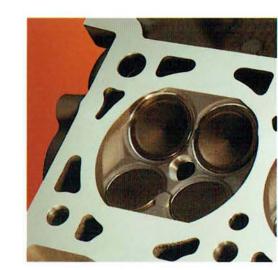
"To be sure, if you'd been told not so long ago that the SVT's V8 was a Ferrari product, you might have even believed it." The Cobra V8 is a quintessential modern performance engine.

# **Engine Architecture**

Carried within the stout architecture of the aluminum-alloy Cobra block is a forged and fully counterweighted steel crankshaft. The main bearing caps that



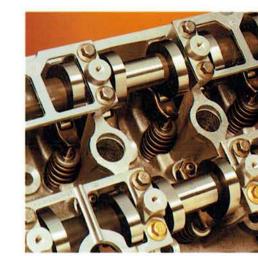
The forged steel Cobra crankshaft is manufactured by Krupp Gerlach-Werke in the United States. Counterweights, placed opposite every throw of the crankshaft, contribute to the engine's exceptionally smooth reveing characteristics from idle to redline.



The SVT Cobra cylinder beads feature four values per cylinder.

carry the crankshaft are secured to the block with six high-tensile bolts, spreading loads over a broad area of the block. The eight shallow-skirt aluminum-alloy pistons provide a compression ratio of 9.85:1.

Upstairs, the aluminum-alloy SVT Cobra cylinder heads follow classic double-overhead cam design. The cams are chain-driven, and the cam lobes act upon roller-fin ger followers which incorporate hydraulic valve-lash adjusters.



The SVT Cobra cylinder beads follow classic double overbead cam design

The upper intake manifold employs siamesed intake runners above the eight pairs of intake valves. The runners and the ports cast within the head cause the fuel-air charge to "tumble" as it enters the combustion chamber. The tumble port method promotes combustion by making the charge more volatile and thus more powerful.

**Engine Breathing, Electronics** The SVT Cobra V8 begins the process of making horsepower with a specially designed conical air cleaner that sits just ahead of an 80mm mass-air flow sensor. The air then moves further downstream to the twin 57mm bores of the throttle body. The butterfly valves in the bores open simultaneously, not in stages, giving the engine exceptional throttle response by quickly yet progressively delivering large volumes of air to the cast-alloy plenum.

The Ford EEC-V engine computer system monitors engine functions - airflow, rpm, crankshaft position, camshaft position and can make millions of adjustments per second to deliver the spark and fuel-air mixture at just the optimum time to maximize power. And each cylinder is fired by a distributorless coil-on-plug ignition system, which brings a greater measure of ignition precision and simplicity.

The SVT Cobra high-silicon, molybdenum iron exhaust manifolds feed spent gases into a stainless steel dual exhaust designed to maximize exhaust flow through the lowrestriction mufflers and 2.25-inch exhaust pipes. The system is accented by twin 3.0inch polished exhaust tips that integrate with the rear valance panel.

# Cooling, Transmission

Consistent oil temperatures in this highperformance engine are achieved with a water-to-oil cooler mounted between the left side of the block and the oil filter. The

engine coolant system is designed to maintain normal-range coolant temperatures even under high-performance conditions.

The SVT Cobra V8 delivers power to the rugged five-speed Tremec T45 through an 11.0-inch clutch plate. Power is delivered to the rear wheels through a limited-slip differential and a 3.27 axle ratio.

Power, Torque, Performance The SVT Cobra V8 is free revving from idle to its 6,800-rpm redline (fuel shut-off occurs at 7,000). It produces 320 horsepower at 6,000 rpm, and 317 lbs./ft. of

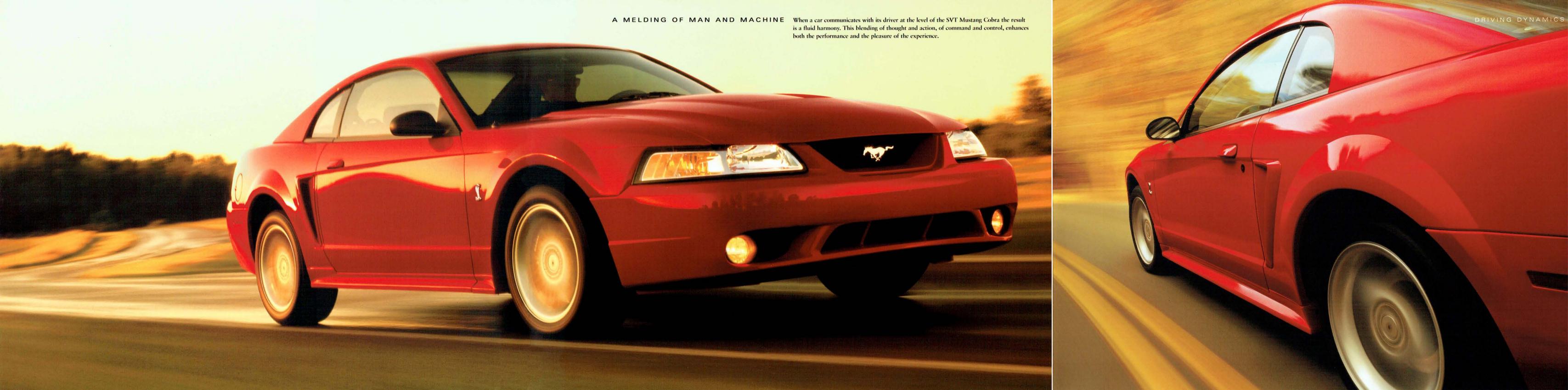
quarter-mile is covered in 13.8 seconds with a terminal speed of 102 mph. In closed-course testing, the SVT Mustang Cobra achieved a top speed of 150 mph.

torque at 4,750 rpm. The 2000 SVT Cobra accelerates from a standstill to 60 mph in 5.4 seconds. The The main bearing caps that carry the forged crankshaft are secured to the lightweight aluminum-alloy Cobra block with six bigb-tensile bolts, spreading loads over a broad area of the block.

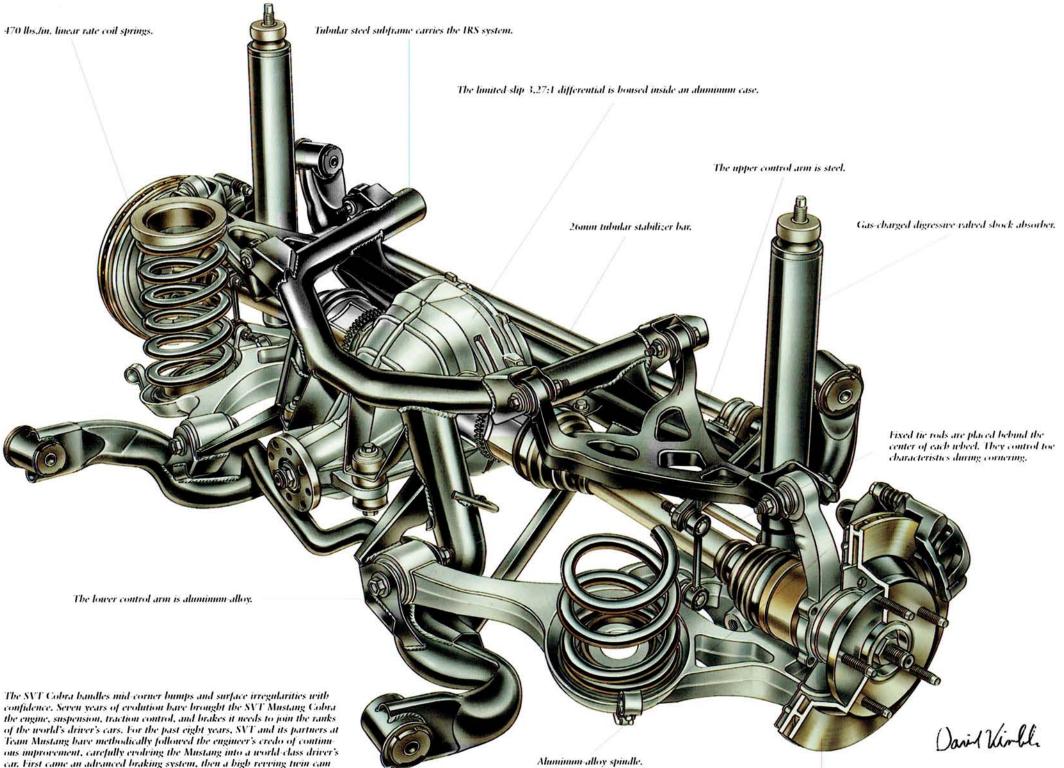
317 lbs./ft. 320 hp

@4,750 rpm @6,000 rpm









The rear rotors measure 11.65 in, and are clamped by single-piston calipers.

A favorite asphalt trampoline of switchbacks, bowled curves, rippled pavement, dips, and rises is just ahead, sequined with golden dew in the early morning light. Braking to enter the first hairpin gives testimony to the excellent stopping power of the SVT Cobra, while the precise and linear feel of the rack and pinion e-mails to the driver's palms clear messages about grip. The taut, controlled motions of the suspension deliver a wealth of information to the skilled driver. With the throttle squeezed firmly open while exiting, the SVT Cobra rushes headlong to the next corner, the singing exhaust note promising miles of driving delight.

As this sort of conversation between car and driver lies at the heart of the SVT performance philosophy, a sophisticated and athletic suspension is a prerequisite.

# Independent Rear Suspension The IRS system – unique to the SVT Cobra

in the Mustang model line – is carried by a tubular steel subframe that fits neatly under the existing Mustang platform. The system consists of steel upper control arms and aluminum lower control arms, with aluminum spindles. Fixed tie rods are placed behind the center of each wheel to control toe characteristics during cornering, acceleration, and braking. Other design details include a 26mm tubular stabilizer bar, linear-rate coil springs, and a robust limited-slip differential housed inside an aluminum case.

greatly reduces the potential for suspension bottoming, and lessens the suspension's sensitivity to road surface imperfections. Excellent body and wheel control under hard deceleration helps keep the rear end of the car planted when braking. Car and Driver stated that "The IRS makes the car feel more supple and thus more readable in corners," and Automobile Magazine for-

The benefits are significant. The system



The Cobra forged 17 x 8 in, aluminum-alloy wheels are The SVT Cobra front suspension – a shod with 245/45-17 BFGoodrich M Comp T/A ZR tires.

scale of evolutionary progress, the independent rear suspension is not quite up there with the opposable human thumb. But where performance cars are concerned, it's not far off. One need only drive the new Ford SVT Mustang Cobra to find out why."

# Traction Control

A sophisticated all-speed traction control system developed specifically for Mustang works in concert with the new rear suspension. When either of the rear pair of shared ABS/traction control sensors detects rear wheel spin, the system selects one or all of three possible electronic strategies. The engine control can limit torque by retarding ignition timing, modulating air/fuel ratio, and cutting off cylinders in conjunction with brake applications. The engine controls work at all speeds, and brake application can occur at one or both driven wheels at speeds up to 62 mph.

The traction control system communi-

cates with the engine control module every 64 milliseconds, which means the drive wheels are effectively searching for optimum traction several times a second. On dry pavement during a full-power launch, warded the pithy argument that "On the the traction control system allows the drive

wheels to spin as long as the car is acceleron 13.0-inch Brembo<sup>IM</sup> rotors that have ating forward. The system can be switched off at the driver's discretion.

The sophistication of this system improves the all-weather capabilities of the Cobra without reducing its performance or entertainment value. Car and Driver concluded that "the neat part about the Cobra's traction control is that it has a so-called power-start feature that allows the driver to make wheelspin starts as long as both front wheels are spinning at the same rate."

# Front Suspension

modified MacPherson-type design, with linear-rate coil springs on the lower control arms, MacPherson struts, and a 28mm tubular stabilizer bar – delivers great ride and steering refinement. Hydraulically assisted rack-and-pinion steering gives a communicative, precise feel.

A significant element in the makeup of any driver's car is an exceptional braking system. At the front, the PBR™ calipers

to allow you to precisely place the car where you want it." PBR™ calipers clamp on 13.0-inch Brembo™ rotors excellent stopping

proven both durable and resistant to fade. At the rear are 11.65-inch rotors and single piston calipers. The SVT Cobra four-wheel vented discs are controlled by a four-channel, four-sensor anti-lock system. The forged alloy Cobra wheels measure

17 x 8 inches and wear the proven 245/45 17 BFGoodrich™ Comp T/A ZR tires which evolved from those first used by SVT on the 1995 SVT Mustang Cobra R race car.

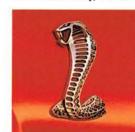
Perhaps Road & Track summed it up

best: "All told, the Cobra offers up a good combination of ride comfort and surefootedness. Not only does the car feel more settled through tight turns, the Mustang's steering gives the confidence you need to push the suspension to its limits. It has the right amount of weight, linearity, and feedback



A functional and comfortable driving environment is a requisite for a driver's car like the SVT Cobra. And exterior design cues must be subtle, the sort that fellow enthusiasts will notice but the average citizen will not recognize.

The SVT Cobra is distinguished from other Mustang models by a number of



exterior visual signatures. At the front, these include a unique hood design, a fascia incorporating round driving lights and a deep

intake that helps force air through the engine cooling system, and Cobra badges on the front fenders.

At the rear, tri-color taillamps, polished 3.0-inch exhaust tips, an SVT badge, the word "COBRA" across the rear fascia, and an optional spoiler set the SVT Cobra apart. Both the hood and rear deck are constructed of lightweight composite materials.

# The Driving Environment

The driver's seat of the SVT Cobra provides six-way power adjustment, and includes ample rearward travel to accommodate more long-legged drivers. The steering wheel and shift knob are leather-wrapped, and the shifter boot is also leather.

Standard SVT Cobra equipment includes SVT white-faced instruments with black numbers; at night, the numbers turn blue for better visibility. Other amenities include a tilt steering wheel; a MACH\* 460 AM/ FM stereo cassette with CD player; dual electric remote control mirrors, power side windows, power door locks, and a power deck lid release; speed control; and remote keyless illuminated entry.

# SecuriLock™

An important standard feature on all SVT products is the Ford SecuriLock<sup>TM</sup> passive anti-theft system. Each SVT Cobra key carries a radio transponder with a unique code selected from a potential of 72 million

The SVT Cobra is distinguished from other Mustang models by elements including a unique bood, a front fascia with round driving lights and a rear fascia with "COBRA" across its width. Mystic Gold Clearcoat (shown below) will also be a Cobra exclusive. This special exterior color will have limited availability.





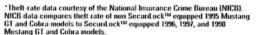
A spoiler remains optional for 2000.

billion combinations. If the key's code matches the one stored in the car, a signal is sent to the EEC-V computer system to "enable" the engine to run. The SecuriLock<sup>TM</sup> system has proven itself effective in reducing the possibility of theft.\*

## SVT Cobra Color Schemes

The SVT Cobra Coupe and Convertible are available in five exterior colors: Laser Red Tinted Clearcoat, Black Clearcoat, Crystal White Clearcoat, Silver Clearcoat Metallic and Atlantic Blue Clearcoat Metallic. A sixth color – Mystic Gold Clearcoat – will be available in limited numbers late in model year 2000. As with the pioneering Mystic Clearcoat which was available on the 1996 SVT Mustang Cobra, Mystic Gold Clearcoat achieves its color changing ability from a combination of pigment and refractive elements in the paint.

The SVT Cobra comes standard with leather trim. Available interior colors are Dark Charcoal or Medium Parchment.







# THE ULTIMATE GOAL

At the heart of the SVT Mustang Cobra and the SVT philosophy is a deep commitment to skillful and enthusiastic driving. Everyone at SVT – engineers, designers, product planners and marketers – is an enthusiast, someone who loves to drive quickly and well. They are fluent in the language of performance driving

To help SVT owners speak that langual more fluently, SVT offers new SVT owners a discount at the Bob Bondurant School of High-Performance Driving, where skill can be honed that can improve driving in all conditions, from performance driving to the everyday commute. The SVT Cobratas served as the principal student car at The Bondurant School since 1997 for advanced courses.

Great test results published by a magazin are not enough. It is equally important how a performance vehicle achieves those numbers, and how it engages its driver. The intelligent performance vehicle entertains with brilliant conversation. Excellent communication lies at the heart of the SVT

In the design of our vehicles and the pe formance of our dealers, our ultimate goa is to provide the enthusiast many years of enjoyable performance driving.

# FORD SVT MUSTANG COBRA TECHNICAL DATA

# ENGINE

Displacement

# Configuration

Longitudinally mounted, 90-degree V8, cast aluminum block and heads, iron cylinder liners, fully counterweighted forged crankshaft

4,601cc/280cid

90.2 x 90.0mm Bore x Stroke

Compression ratio 9.85:1

320 hp @ 6,000 rpm Horsepower 317 lbs./ft. @ 4,750 rpm 6.800 rpm (fuel shut-off Redline occurs at 7,000 rpm)

Double overhead camshafts, chain drive to exhaust cams, secondary chains from exhaust to intake cams, roller finger followers with hydraulic lash adjustment, oval-wire beehive-shaped valve springs, four valves per cylinder

Intake valves 2 per cylinder, 37mm head diameter 2 per cylinder, Exhaust valves 30mm head diameter Ignition system Distributorless coil-on-plug Sequential electronic Fuel system fuel injection Cast aluminum. Intake manifold

tuned equal length runners 57mm twin bore Throttle body 80mm diameter Mass-air sensor

Cast iron

polished exhaust tips

8.8-in, ring gear with 3.27:1 limit-

Exhaust system Dual, stainless steel, 2.25-inch diameter, 3.0-inch

## DRIVETRAIN

Exhaust manifolds

		rential, aluminum case
Driveshaft	Steel, with hardened yoke	
Transmission	Tremec™ T45 5-speed manual	
Clutch	11.0-in, single-plate	
Gear	Ratio	Speed
1st	3.37	45 mph (72 kph)
2nd	1.99	77 (124)
3rd	1.33	115 (185)
4th	1.00	150 (241)
5th	0.67	
Reverse	3.22	
Final drive	3.27	

# **Traction Control**

Accomplished by engine ignition timing, cylinder cutoff, brake application, Linked to ABS module and engine control module. Driver-controlled on-off switch

## SUSPENSION

Front Modified gas-charged MacPherson strut, with

separate 500 lbs./in. spring on lower arm, 28mm tubular stabilizer bar

Multi-link independent, steel Rear upper control arm, aluminum

> lower control arm, fixed toecontrol tie rod, aluminum spindle, gas-charged tubular shock absorber, 470 lbs. Jin. coil spring, 26mm tubular stabilizer bar

# STEERING

Rack and pinion, power assist

Gear ratio 15.0:1 Turns, lock to lock 2.5 Turning diameter 37.9 ft.

## BRAKES

Front	13.0-in. (330mm) vented Brembo <sup>TM</sup> disc, PBR <sup>TM</sup> twin- piston caliper
Rear	11.65-in. (296mm) vented disc. single-piston caliper
ABS	Four-channel, four-sensor system. Linked to all-speed traction control

#### WHEELS & TIRES

Wheels	17 x 8 in., five-spoke, forged aluminum-alloy, painted surface, exposed lugs
Tires	BFGoodrich <sup>1M</sup> Comp T/A,

# COBRA INCLUDES

 Supplemental restraint system; driver and passenger airbags. Always wear your safety belt and secure children in the rear seat

245/45ZR-17

- Independent rear suspension (IRS)
- Anti-lock brake system (ABS)
- All-speed traction control
- SecuriLock™ passive anti-theft system
- Articulated front sport seats (standard six-way) power for driver) with leather seating surfaces and power lumbar support
- Tilt steering wheel
- MACH® 460 electronic AM/FM stereo cassette and CD player
- Power Equipment Group: Dual electric remote control mirrors, power side windows, power door locks, power deck lid release

- Rear window defroster
- Air-conditioning (manual control)
- Speed control
- Front floor mats
- Dual illuminated visor mirrors
- Remote keyless illuminated entry

# COLOR & TRIM

## Exterior

Crystal White Clearcoat, Ebony Clearcoat, Laser Red Tinted Clearcoat, Medium Atlantic Blue Clearcoat Metallic, Silver Clearcoat Metallic, Mystic Gold Clearcoat

#### Interior

Dark Charcoal, Medium Parchment

# DIMENSIONS, CAPACITIES

Wheelbase	101.3 in.;2,573mm
Length	183.5 in.;4,661mm
Height	53.2 in. (53.5in.); 1,351mm (1,359mm)
Width	73.1 in.;1,857mm
	** * * *** ***

Track, F/R 59.9 in./59.9 in.; 1,521mm/1,521mm 38.1 in./35.5 in.; Head room, F/R 968mm/901mm

41.8 in./29.9 in.; Leg room, F/R 1,062mm/759mm 3,430 lbs. (3,560 lbs.); Curb weight

1,557 kg (1,617 kg) 15.7 gal.;59.4 liters Fuel capacity Weight Distribution, F/R 55.5%/44.5%

(Numbers in parentheses are for Convertible)

## PERFORMANCE

100 ft. skidpad

-60 mph	5.4 seconds
-100 kph	5.6 seconds
Quarter mile	13.8 seconds @ 102 mpl
op speed	150 mph
raking, 60-0 mph	127 ft.

Horsepower and torque numbers are the mean of test results generated according to Society of Automotive Engineers Standard 11349.

Performance data are generated under closed-course conditions on a test track according to Ford Corporate Engineering Test Procedure R-403. Observed data are corrected to standard ambient conditions. Vehicle test weight is corrected to production curb weight plus 300 pounds. Many factors, including variability within production toler-

All photographs were produced under closed-road/ closed-course conditions with a professional driver.

ances, may affect vehicle performance.

## Ownership Experience

We've gone to great lengths to make the experience of driving a new SVT Mustang Cobra enjoyable. We've done the same for the experience of ownership, too.

We stand behind your car with our New Vehicle Limited Warranty, And we look after your security with our Roadside Assistance Program. Expect nothing less from a "customer-driven" company.

## Roadside Assistance Program

Every new Ford includes the assurance of an emergency Roadside Assistance Program provided by Ford Auto Club, Inc. during the 3-year/36,000-mile limited warranty period.

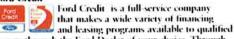
Help is just a toll-free phone call away, 24 hours a day, anywhere in the 50 United States, should you need any towing assistance, fuel delivery, tire change, a jump start, or even help when you're locked out of your car.

Ask your Ford Dealer for complete details on the Ford Roadside Assistance Program and also for a copy of the New Vehicle Limited Warranty.

## Bumper-to-Bumper Coverage

The 3-year/36,000-mile bumper-to-bumper coverage of the Ford New Vehicle Limited Warranty covers all vehicle parts (except tires, and certain other items as described in the Vehicle Warranty Guide) against defects in factorysupplied materials or workmanship, For complete information, see your dealer.

#### Ford Credit



buyers through the Ford Dealer of your choice. Through Ford Credit's financing or Red Carpet leasing, arrangements suited to your special needs can be made quickly and conveniently right at the dealership.

#### Ford Extended Service Plan



Optional Ford Extended Service
Plans can cover major communication Plans can cover major components on new Ford cars and light trucks

after your bumper-to-bumper warranty coverage expires. Your dealer has the full details.

## Dealer-Installed Accessories

The enjoyment of owning a new car begins before you take delivery, when you're selecting colors and features.

Along with the items listed elsewhere in this catalog, there are Ford brand accessories available at your dealer. They meet or exceed our strict specifications, and they are custom designed and manufactured to complement the style and quality of your Ford built vehicle.

Following publication of this catalog, certain changes in standard equipment, options, prices, and the like, or product delays, may have occurred which would not be included in these pages. Your Ford Dealer is the best source for up-to-date information. Ford Division reserves the right to change product specifications at any time without incurring obligation.



# THE SVT FAMILY



















