



**2011 FORD MUSTANG V-6 GOES HIGH-TECH:  
NEW 305-HP ENGINE, SIX-SPEED TRANSMISSION  
EXPECTED TO DELIVER 30 MPG HIGHWAY**

- **For 2011, Mustang makes sports coupe news with a new high-performance, all-aluminum Duratec<sup>®</sup> 3.7-liter DOHC Ti-VCT V-6 that delivers 305 horsepower and an expected best-in-class 30 mpg highway with six-speed automatic transmission – no other vehicle in the industry can beat that combination**
- **Six-speed transmissions – manual and automatic – combine with newly standard limited-slip differential and revised suspension for road-carving driving dynamics and handling**
- **New technology and convenience features include: Standard integrated spotter mirrors; message center; MyKey<sup>™</sup> programmable vehicle key; and Universal Garage Door Opener**

**DEARBORN (Michigan), 2 December 2009** – The 2011 Ford Mustang puts 305 high-performance horses in the hands of V-6 coupe buyers with a new all-aluminum dual-overhead cam (DOHC) engine that delivers a projected 30 mpg on the highway with a six-speed automatic transmission and fun for drivers on nearly every road.

For 2011, Mustang's new 3.7-liter Duratec 24-valve V-6 uses advanced engineering to deliver its power and economy: Twin Independent Variable Camshaft Timing (Ti-VCT) adjusts the valvetrain in microseconds. Aluminum construction means light weight. It's an engine designed to crank out torque down low, rev to 7,000 rpm and deliver the mechanical music sports coupe lovers crave everywhere in between.

“Mustang is completely transformed with this new engine,” said Derrick Kuzak, group vice president, Global Product Development. “Everything people love about the car is still there and now under the hood is a V-6 engine that uses premium technology to deliver the power, the feel, the fuel efficiency, even the sound of the best sports coupes in the world.”

### **New 3.7-liter V-6 engine**

With Ti-VCT operating its four valves per cylinder, the new Mustang V-6 powerplant sends significantly more horsepower and torque (305 hp and 280 ft.-lb.) to the rear wheels than its predecessor – despite its smaller displacement. The behind-the-wheel feel is unlike any Mustang ever produced.

“This new V-6 engine really speaks to what Mustang is all about,” said Barb Samardzich, Ford vice president of global powertrain engineering. “It produces power everywhere in the rev range and loves to be pushed hard. The Duratec 3.7-liter builds on our promise to use advanced technology to deliver both power and fuel economy.”

The high output is due largely to Ti-VCT which allows variable control of valve operation across the rev range. The variable cams operate on a Direct Acting Mechanical Bucket (DAMB) valvetrain using polished buckets to reduce friction. The end result is as much as a 3 percent improvement in fuel economy and a 10 percent improvement in power output versus traditional engines without these advanced features.

Ti-VCT is complemented by special-tuned composite upper and lower intake manifolds for efficient air delivery and lighter weight. Ignition power is delivered by a high-energy coil-on-plug design, while piston-cooling jets and a lightweight die-cast aluminum cylinder block improve the durability and efficiency of the 3.7-liter V-6 design.

Performance was the mantra for every aspect of engine design. A cold air induction system and dual exhaust give the 3.7 its free-breathing style with a 7,000 rpm redline and near-instantaneous response to throttle inputs.

A die-cast aluminum deep-sump oil pan provides 10,000-mile oil change intervals, saving drivers money on maintenance and resulting in less waste in oil disposal.

Engineers also worked to ensure aggressive, high-performance sounds come from the new engine, from intake to exhaust. Not only does the retuned air intake system minimize losses, it also provides the driver with a satisfying intake rush on hard acceleration. The all-new dual

exhaust system is mellow at idle but opens up with a howl at full-tilt, letting Mustang drivers know they're behind the wheel of a world-class sports coupe.

“This car marks a new type of Mustang,” said David Pericak, Mustang chief nameplate engineer. “We're using a high-performance quad-cam V-6 with all the bells and whistles in a car that's become legendary for its handling and roadholding; it's really going to get a lot of new sports coupe fans excited about Mustang, some for the first time ever.”

### **Powertrain improvements**

Drivers can get the most out of the new V-6 engine's output using either an all-new six-speed manual gearbox or a six-speed automatic transmission. Both come with the flexibility and fuel economy benefits of six forward ratios regardless of whether buyers want to shift for themselves or not.

Drivers who prefer a manual gearbox will enjoy the short throws and direct feel of the shifter along with the relaxed cruising permitted by the extra top gear ratio. Customers choosing the automatic will be pleasantly surprised to find the advanced six-speed 6R60 transmission does not sacrifice fuel economy – or performance – for convenience, delivering an expected 30 mpg highway with crisp, quick shifts that maximize torque and horsepower.

The automatic transmission also features a grade-assist or “hill mode” to improve drivability on hilly terrain. This technical innovation uses vehicle input – acceleration, pedal position, vehicle speed and brake status – to automatically determine the correct gear ratio while on an incline or decline. Hill mode eliminates sixth gear, extends lower gear operation on uphill climbs, and provides additional grade or engine braking for coast downs.

The standard 2.73 rear axle provides an ideal blend of cruising fuel economy and acceleration, aided by the wide ratio spread permitted through the use of six forward speeds in the gearboxes. Performance enthusiasts can select an available 3.31 rear axle ratio for better off-the-line launch characteristics.

## **Fuel economy improvements**

Extra horsepower and refined engine operation will be the most noticeable features to new 2011 Mustang 3.7-liter V-6 buyers while projected class-leading fuel economy, also a standard feature, offers an additional bonus. The numbers speak for themselves:

- 19 mpg city/30 highway with six-speed automatic transmission, up from 16 mpg city/24 highway on the 2010 model with automatic – a 25 percent improvement over 2010
- 18 mpg city/29 highway with six-speed manual transmission, up from 18 mpg city/26 highway on the 2010 model with manual

Refinements throughout Mustang's body, powertrain and chassis design contribute to the improved fuel economy numbers. Examples include:

- The new Electric Power Assist Steering (EPAS) system which eliminates the drag of an engine-operated hydraulic power steering pump
- Six-speed transmissions that allow lower cruising revs without sacrificing off-the-line performance
- Aerodynamic improvements such as a new front fascia, tire spats on the rear wheels, modified underbody shields, a taller air dam and an added rear decklid seal

## **Handling and driving dynamics**

With so much additional horsepower standard, the 2011 Mustang received enhancements to its chassis to maintain the outstanding balance and driving behavior Mustang owners expect. Damper tuning and spring rates were revised to provide a smooth highway ride while a new rear lower control arm and stiffened stabilizer bar bushings improve stiffness and handling for better cornering response.

While Mustang's aerodynamic improvements were designed mainly to improve fuel economy, engineers also adjusted the vehicle's front/rear lift balance. The result is a car that tracks more securely and feels more "planted" to the road surface at higher speeds, helping to keep the tires in better contact with the pavement.

The addition of EPAS marks a new era in driving dynamics for Mustang owners. Steering effort at parking lot speeds is reduced, while high-speed and highway feel is improved for

more precise steering and handling. Because the belt-driven power steering pump is eliminated, EPAS provides a quieter vehicle with fewer components drawing engine power.

EPAS also enables new technologies that adjust for minor driving annoyances. Pull-Drift Compensation adjusts the steering to correct for crosswinds and road crowning, while Active Nibble Control helps eliminate the “shimmy” at high speeds when a wheel is out of balance or a brake rotor is warped. Both conditions are alleviated by EPAS independent of driver input, to ensure Mustang delivers a smooth, comfortable driving experience in all conditions.

Mustang buyers choosing the new V-6 will also get a standard limited-slip differential that provides better handling and more sure-footed grip in poor weather conditions by directing engine torque to the rear wheel with the most traction. When the time comes to slow things down, the 2011 Mustang is also equipped with larger four-wheel ABS disc brakes, with 11.5 inch front and 11.8 inch rear rotors.

### **Refinements complement advanced features**

To reinforce the sporty nature of the 2011 Mustang, all V-6 models will come standard with new instrument cluster graphics, including a speedometer that reads up to 160 mph and a tachometer that reads to 8,000 rpm, reflecting the free-revving style of the new engine.

Additional lightweight soundproofing measures help filter unpleasant, high-frequency noises while tuned intake and dual exhaust add the sounds Mustang buyers relish.

Occupants also benefit from new door seals and a rear wheel arch liner that reduce road noise for a quieter, more enjoyable drive, with minimal weight gain compared to the 2010 model.

Enthusiasts who want a premium performance-oriented Mustang V-6 can opt for the new Performance Package, which will be available August 2010. Designed for driving enthusiasts, the Mustang V-6 Performance Package comprises:

- A 3.31 rear axle ratio for quicker off-the-line acceleration
- Firmer Mustang GT suspension
- 19-inch wheels
- Summer performance tires for improved grip
- A strut tower brace for increased chassis rigidity
- Unique electronic stability control calibration with sport mode for performance driving

For 2011, Mustang also ups the ante on technology and convenience features, including a standard driver's message center in the instrument cluster and integrated blind-spot mirrors in the side-view mirror housings.

Ford's MyKey™ system, designed to encourage safer teen driving and safety belt use, also is newly available on Mustang. MyKey allows owners to program the vehicle key using the driver's message center to incorporate features such as limited top vehicle speed and audio volume, a traction control system that cannot be deactivated, a persistent Belt-Minder® safety belt reminder and various speed alert chimes.

### **Top safety marks expected**

Mustang's technological advances are also incorporated in the structure of the vehicle to improve safety. The 2010 Mustang coupe earned the U.S. government's top five-star crash-test rating, a designation the 2011 model is expected to achieve.

The Mustang's considerable body stiffness contributes to the coupe and convertible's driving performance and has a parallel benefit in accident protection. While the coupe's body structure is approximately 31 percent stiffer than the previous Mustang platform, the convertible's is more than twice as stiff – creating a structure that helps protect the cabin from deformation and intrusion in an impact.

Mustang also uses high-strength steel in its body structure and ultra-high-strength steel in the door intrusion beams for additional side-impact protection.

The front structure's crush zones are computer-designed to absorb energy in a controlled manner and help dissipate it before it can reach the passenger compartment. Ford engineers have run thousands of design iterations of the Mustang's front rails to arrive at an octagonal shape that helps spread crash forces evenly to aid in protecting occupants.

State-of-the-art technology adds to the convenience and safety of the 2011 Mustang, from the availability of the latest version of Ford SYNC®, with applications such as Traffic, Directions and Information, 911 Assist™ and Vehicle Health Report, to standard AdvanceTrac® Electronic Stability Control, which complements the all-speed traction control and standard Anti-lock Braking System (ABS).

Additional standard safety equipment includes the Personal Safety System™ which features dual-stage driver and front passenger air bags, safety belt pretensioners and Belt-Minder.

The 2011 Mustang will be built at the Auto Alliance International Plant in Flat Rock, Mich. The new 3.7-liter V-6 will be built at Ford's recently retooled Cleveland Engine Plant No. 1.

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**Ford**

Tuned composite upper and lower intake manifolds for efficient air delivery and lighter weight

Direct Acting Mechanical Bucket (DAMB) valvetrain using polished buckets to reduce friction for improved fuel economy

Die-cast aluminum deep sump oil pan provides 10,000-mile oil change intervals

High-energy coil-on-plug ignition system for more complete combustion

Lightweight die-cast aluminum cylinder block helps balance front/rear weight distribution

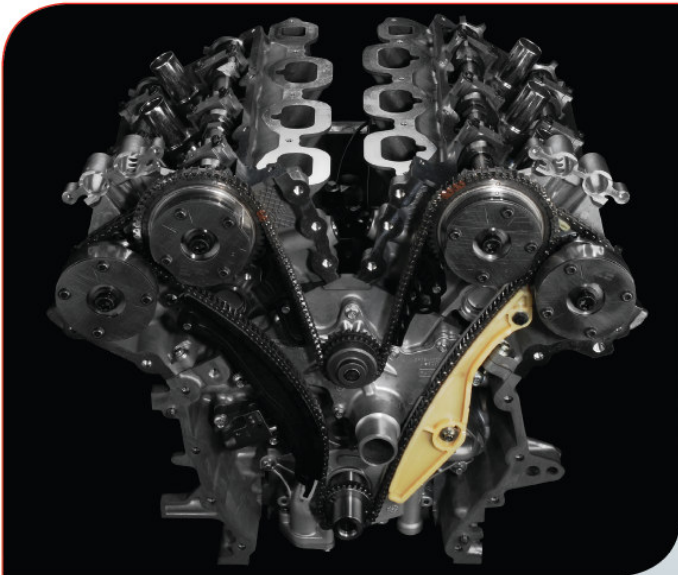
Six-speed automatic or manual transmissions for better launch characteristics and improved fuel economy

**New high-performance all-aluminum 3.7-liter Ti-VCT V-6 engine**

Mustang's new 3.7-liter Duratec® 24-valve V-6 uses advanced engineering to deliver its power and economy: Twin Independent Variable Camshaft Timing (Ti-VCT) adjusts the valvetrain in microseconds for more low-speed torque and better fuel economy than non-VCT-equipped engines. Aluminum construction means light weight. It's an engine designed to crank out torque down low, rev to 7,000 rpm and deliver the mechanical music sports coupe lovers crave everywhere in between.

NEW 2011  
**MUSTANG**  
**V-6**

“ Projected to achieve **305 horsepower and 30 hwy mpg** – no other vehicle in the industry can beat that combination. ”



NEW 2011  
**MUSTANG**  
**V-6**

**The high-revving heart of a new era in Mustang performance**

For 2011, Mustang hits the road with a lightweight, all-new high-performance powerplant designed to rev with the best sports coupes in the world. Displacing 3.7 liters, the dual-overhead-cam (DOHC) 24-valve V-6 uses Ford's Twin Independent Variable Camshaft Timing (Ti-VCT) to produce remarkable power output – 305 horsepower and 280 ft.-lb. of torque – while still achieving up to 30 mpg highway.

Drivers can get the most out of the new V-6 engine's output using either an all-new six-speed manual or automatic transmission. With either choice comes the flexibility and fuel economy benefits of six forward ratios.

Of course, with so much additional horsepower standard, the 2011 Mustang has received enhancements to its chassis to maintain the outstanding balance and driving behavior Mustang owners expect. Combined with state-of-the-art safety and technology features, the 2011 Mustang sets a new standard in the sports coupe class.

**Chassis and Driving Dynamics**

The new Electric Power Assist Steering (EPAS) system eliminates the drag of an engine-operated hydraulic power steering pump.

Damper tuning and spring rates were revisited to provide a smooth highway ride, while a new rear lower control arm and stiffened stabilizer bar bushings improve rigidity and handling for better cornering response.

Large 11.5-inch front and 11.8-inch rear ABS disc brakes help ensure short stopping distances.



**Fuel Economy**

New front fascia, tire spats on the rear wheels, modified underbody shields, a taller air dam and an added rear decklid seal improve aerodynamics for better economy. EPAS reduces engine drag, while the new six-speed transmissions allow lower engine speeds while cruising.

Combined with low-friction engine components and a lightweight aluminum block, the 2011 Mustang is capable of achieving:

- 19 mpg city/30 highway (auto)
- 18 mpg city/29 highway (manual)



**Safety and Technology**

AdvanceTrac® Electronic Stability Control – which complements the all-speed traction control and standard Anti-lock Braking System (ABS) – along with an exceptionally stiff structure are expected to give 2011 Mustang the U.S. government's top five-star crash-test rating.

Ford SYNC®, now with Traffic, Directions & Information, 911 Assist and Vehicle Health Report, combines with new instrument cluster graphics, including a speedometer that reads up to 160 mph and a tachometer that reads to 8,000 rpm.





## 2011 FORD MUSTANG V-6 TECHNICAL SPECIFICATIONS

<b>BODY</b>	
Construction: Unitized welded steel body, aluminum hood	
Final assembly location: Flat Rock, Michigan (USA)	
<b>POWERTRAIN AND CHASSIS</b>	
<b>ENGINE</b>	<b>V-6</b>
Type	3.7L V-6
Manufacturing location	Cleveland, Ohio (USA)
Configuration	Aluminum block and aluminum head
Intake manifold	Composite shell-welded with internal runner pack
Exhaust manifold	Cast iron
Redline	6,850 rpm, hard limit 7,000 rpm
Valvetrain	DOHC, 4 valves per cylinder, twin independent variable camshaft timing
Pistons	Cast aluminum
Connecting rods	Forged steel
Ignition	Distributor-less with coil-on-plug
Bore x stroke	3.76 x 3.41/95.5 x 86.7 mm
Displacement	227 cu. in./3,731 cc
Compression ratio	10.5:1
Engine control system	PCM
Horsepower	305 @ 6,500 rpm
Horsepower per liter	82
Torque	280 ft.-lb. @ 4,250 rpm
Recommended fuel	Unleaded 87 octane
Fuel capacity	16 gallons
Fuel delivery	Sequential multi-port electronic
Oil capacity	5 quarts with filter

<b>DRIVETRAIN</b>	
<b>Layout</b>	<b>Rear-wheel drive</b>
<b>TRANSMISSION</b>	
<b>Standard</b>	<b>6-speed manual</b>
<b>Gear ratios</b>	
1st	4.236
2nd	2.538
3rd	1.665
4th	1.238
5th	1.00
6th	0.70
Final drive	2.73 or 3.31

<b>Optional</b>	<b>6-speed automatic</b>
1st	4.171
2nd	2.340
3rd	1.521
4th	1.143
5th	0.867
6th	0.691
Final drive	2.73 or 3.31

### **SUSPENSION**

Front	Reverse-L independent MacPherson strut, 28.6-mm tubular stabilizer bar
Rear	3-link solid axle with coil springs and Panhard rod and solid stabilizer bar

### **STEERING**

Type	Rack-and-pinion with electric power assist
Ratio	15.7:1
Turning circle curb-to-curb	33.4 ft.

### **BRAKES**

Type	Four-wheel power disc brakes with 4-sensor, 4-channel anti-lock braking system (ABS)
Front	293 (11.5-in.) x 30-mm vented disc, twin-piston 43-mm floating aluminum calipers
Rear	300 (11.8-in.) x 19-mm vented disc, single-piston 43-mm floating iron calipers

### **TIRES AND WHEELS (TYPE, SIZE)**

Standard	Manual: P225/60R-17 A/S BFGoodrich Radial T/A Auto: P215/65R-17 A/S Michelin Energy Saver 17 x 7.0-in. silver painted aluminum wheels
Optional	17 x 7.0-inch machined face, dark painted aluminum wheels P235/50ZR-18 A/S Pirelli PZero Nero with: 18 x 8.0-in. narrow-spoke painted aluminum wheels 18 x 8.0-in. dark-stainless painted aluminum wheels 18 x 8.0-in. polished aluminum wheels

### **DIMENSIONS (inches unless otherwise noted)**

	<b>Coupe</b>	<b>Convertible</b>
<b>EXTERIOR</b>		
Wheelbase	107.1	107.1
Overall length	188.1	188.1
Overall width	73.9	73.9
Overall height	55.6	56.1
Track, front/rear	62.3/62.9	62.3/62.9
<b>INTERIOR</b>		
Seating capacity	4	4
Front headroom	38.5	38.8
Front legroom	42.4	42.4
Front shoulder room	55.3	55.3
Front hip room	53.4	53.4

Rear headroom	34.7	36.5
Rear legroom	29.8	29.8
Rear shoulder room	51.6	45.0
Rear hip room	46.8	45.2
<b>WEIGHTS AND CAPACITIES</b>		
SAE passenger volume	83.3 cu. ft.	81.0 cu. ft.
Cargo volume	13.4 cu. ft.	9.6 cu. ft.
Maximum towing capacity (properly equipped)	1,000 lbs.	1,000 lbs.
<b>FUEL ECONOMY (city/hwy)</b>	<b>6-speed automatic</b>	<b>6-speed manual</b>
3.7-liter DOHC V-6	19/30 mpg estimated	18/29 mpg estimated
<b>BASE CURB WEIGHT (POUNDS)</b>		
Manual transmission	3,750 estimated	4,000 estimated
Automatic transmission	3,750 estimated	4,000 estimated
Weight distribution (f/r)	54/46 estimated	54/46 estimated
Power-to-weight ratio	TBD	TBD
Manual transmission	TBD	TBD
Automatic transmission	TBD	TBD

*Specifications subject to change.*

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