



Road Test

## 2010 Ferrari 458 Italia First Drive

Speed Is a Passionate Science

By **Jean-Jacques Michaux, Contributor** | Published Nov 10, 2009

★★★★★ 19 Ratings

Ping open the driver-side door — it's a high-pressure die-cast piece, all metal and yet light as carbon fiber and it does indeed open with a resounding *ping*. You're presented with a fairly challenging new cabin design, as Ferrari has been brave here and rethought many of the standard control functions of a sports car.

It doesn't take long for the 4.5-liter V8 to come alive. Given the stratospheric specific output of 570 horsepower at 9,000 rpm and peak torque of 398 pound-feet at 6,000 rpm, it works from surprisingly low revs. Throttle response is razor-sharp, and the exhaust noise, as you'd expect from Ferrari, is sensational.



Was it a mistake to fit a dual-clutch gearbox? Quite simply, no. The seven-speed automated manual transmission involves you to just the right degree, but retains that almost otherworldly smoothness and efficiency only present with a dual-clutch design.

The 2010 Ferrari 458 Italia is not just a Ferrari; it's one of the most modern sports cars on the road. It says that Ferrari is not just about passion and performance but also about technology and leadership.

### **Speed Is a Passionate Science**

The 2010 Ferrari 458 Italia is the ideal car with which to plot the remarkable performance increase seen in sports cars over the past two decades.

If you can remember the 1975 Ferrari 308 GTB, it had a 255-hp 3.0-liter V8. After various iterations it gave way at last to the 1989 Ferrari 348 with a 3.4-liter V8 that produced 295 hp. This was followed by the 1994 Ferrari 355 with 380 hp, which in turn gave way to the 1999 [Ferrari 360 Modena](#) with 400 hp and then the 2004 [Ferrari F430](#) with 483 hp. And now, just as the Fun Police look to be calling time on motoring enjoyment, Ferrari gives us the 2010 Ferrari 458 Italia with a 570-hp 4.5-liter V8. This latest 87-hp leap is the single biggest power advance in all that time.

Power comes from the new 4,499cc F163FB V8. This engine retains the fundamental architecture of the F430's engine including the flat-plane crankshaft but also adds direct fuel injection, which helps make possible a tall 12.5:1 compression ratio. Suffice it to say Ferrari has excelled itself and given us a specific output of 127 hp per liter without resorting to forced induction. This is more than just power; it's the use of technology to enhance the kind of power we expect from Ferrari. There's not just more power; there's more *Ferrari*.

### **Stretched Out for Aero Stability**

The 2010 Ferrari 458 Italia sits on an entirely new aluminum platform that is 20 percent more structurally rigid than the 430's chassis structure. It's much like the F430 in concept with its aluminum extrusions, sheets and die-cast pieces, but new technology has dramatically reduced wall thickness, and the hood, roof and door skins are in fact just 1.0mm thick. Meanwhile, the style of the Pininfarina-designed body clearly refers to the [Ferrari FXX](#) track car (itself a development of the [Enzo](#)), yet it's also interesting for the way it manages airflow within the bodywork, much like a Formula 1 car.

If the profile of the car looks especially elegant, that's because the 458 has an especially long wheelbase relative to its overall length, as there's an extra 2 inches between the axles. As you'd expect, a double-wishbone suspension lies at the front end and Ferrari's own multilink arrangement

is in place at the rear, while an evolution of the Delphi-developed magnetorheological damper technology controls the wheel movement.

As with all new Ferraris, the Brembo-developed brakes feature ceramic-composite rotors, and they measure 15.7 inches in diameter in the front and 14.2 inches in the rear. The 20-inch Michelin Pilot Sport tires have been specially tuned for this car.

### **Clutch or Not?**

Perhaps the biggest news encased in this latest chapter of the purest Ferrari sports car is contained in the transmission. For starters, the 2010 Ferrari 458 Italia will not be available with a manual gearbox — we're told the demand for one just isn't there. But rather than persist with the current single-clutch automated manual transmission (even though it affords very quick shifts, just 60 milliseconds for the [430 Scuderia](#) compared to 40 milliseconds for a Ferrari F1 car), Ferrari has equipped the 458 Italia with the Getrag-built, dual-clutch seven-speed automated manual introduced by the [Ferrari California](#).

For all their smooth-shifting competence, dual-clutch automated manuals aren't known for being especially involving or exciting. They do, however, offer significant improvements in fuel-efficiency and thus air emissions, and that is currently a big incentive for Ferrari. The 458 Italia produces 307 g/km of CO2 emissions, a figure that's a useful margin better than the V12-powered [Ferrari 599](#).

### **Find Your Seat**

The interior of the 2010 Ferrari 458 Italia has been executed by Ferrari design director Donato Coco, and it's a fairly challenging new cabin design.



The instrument cluster consists of a large, centrally placed tachometer with a 10,000-rpm dial. It's flanked by two screens using TFT technology (thin-film transfer, which you usually see on laptop computer screens) and they display instrument readouts selected by separate controls on either side of two air vents. All the extraneous levers and switches have been swept aside.

There's everything from a lap timer to an overall warm-up management function to conventional clock faces. The steering wheel houses the indicator functions and the wipers. It's compact, futuristic-looking and — best of all — the design works, largely because the balance between ergonomic sense and childish titillation has been cleverly judged.

### **Switch On, Fire Up, Drive Off**

Twist the key, thumb the starter button and the 90-degree V8 fires enthusiastically, but then like all high-performance direct-injection engines, it settles to a rather flat, uninteresting idle. Sitting stationary, it sounds like a Civic with a gammy exhaust.

The situation quickly improves, though. Pull the right-side shift paddle toward you, the gearbox engages 1st without a judder and you're under way. It would be churlish to suggest that the 458's new low-speed manners in any way detract from the overall experience. The driver doesn't feel as connected to the experience, even at a dawdle, but anyone who's gagged on burning clutch material while attempting a three-point turn in a Ferrari 360 Modena with the first Ferrari automated manual will marvel at how good this new Getrag-engineered dual-clutch gearbox is.

It doesn't take long for the motor to come alive, because Ferrari has worked very hard to reduce frictional losses, including a dual-scavenge pump for the dry-sump oil system that stops its splashing between the crank throws. There's a whole list of details aimed at reducing friction, including super-finished camshafts, carbon coatings on valves and graphite coatings on the pistons. The direct-injection system delivers fuel at a pressure of 200 bar, and a very clever variable intake geometry can work in four different sequences.

It all combines to leave an engine free from inertia, one that will lump from 1,500 rpm without a problem. Some 80 percent of the power output is available at just 3,250 rpm, reassuring the driver with the knowledge that the remaining 5,750 rpm to the power peak of 9,000 rpm will deliver only even greater amusement. The exhaust noise is as sharp as the throttle response, and while only the center exhaust outlet is open at light throttle, the outer pair spring to life as soon as you push on the throttle a bit harder.

### **Around Fiorano and Onto the Road**

The dual-clutch transmission weighs about 25 kilograms (55 pounds) more than the F430's gearbox, but Ferrari has worked very hard to get as much as possible of the Italia's overall weight increase of 100 pounds within the span of the wheelbase, so the effect on agility is barely felt on the road. The gearchanges themselves are crisp yet very smooth, and you do get a nice little nudge in the small of your back. In short, the 2010 Ferrari 458 Italia's seven-speed transmission involves you to just the right degree, but retains that almost otherworldly smoothness and efficiency only present with a dual-clutch. If you're worried by a possible delay between paddle flick and the meshing of the gears, then don't — it takes less than 50 milliseconds.



There are several chassis settings on the now familiar manettino dial on the steering wheel for adjusting the configuration of the engine, transmission and chassis electronics, including the traction control, stability control, electronically controlled differential and the new ABS brake system. You have your choice of Slippery, Sport, Race, CT (traction control) and CST (traction and stability control) disabled. Somehow Ferrari has developed an ECU that allows all of these devices to communicate with each other, and the result is very impressive. More important, where the F430 would offer only a firm suspension damping setting if the driver wanted a fast gearshift, it is now

possible to have the car in the most aggressive engine configuration and yet make the dampers compliant enough for a bumpy road.

Despite its longer wheelbase, the 458 changes direction more keenly and manages to deal with the inputs of a new, very quick steering rack. It has just two turns lock-to-lock, and though some people will think the quick steering lacks some feel, it is very well matched with the chassis, and the driver feels confident placing the car exactly where he wants on the road — even narrow Italian roads littered with mad people in battered Fiats.

### **Flying on the Ground**

As you'd expect in a car that not only is expected to reach 100 km/h (62 mph) in 3.4 seconds but also reach a top speed of 202 mph, aerodynamics also play a large part in the 458's dynamic armory. At speed, the key figure is 794 pounds of downforce at 202 mph, which is achieved with no rear wing and a lower drag coefficient than the F430. There's some lovely detailing on the car, including intakes on the nose that reduce lift over the front fenders by a full 40 percent, while those clever little movable vanes within the front air intakes are pushed downward at speed and redirect the air underneath the car to reduce drag.

Every great drive must come to an end, and the 2010 Ferrari 458 Italia's braking performance is exceptional and far beyond any eventuality you'll find on the public road. On track, these carbon-ceramic brakes can sustain continued high-speed use and will resist fade long after the Michelin tires have given up.

### **Passionate Technology**

It's a very clever car, the 2010 Ferrari 458 Italia. Fast, comfortable, refined and yet still overtly exciting. It packages Ferrari's motorsport knowledge into a road car that takes the business of accessible supercar performance to new levels. It will arrive in the U.S. in June 2010, and we can expect a price increase of about 10 percent over the F430, which brings us to about \$225,000.

And yet this is a bit more than the usual Ferrari. That old stereotype of a hastily cobbled together package with a ferocious engine and antiquated chassis might be broken at last. Ever since the Ferrari 308 GTB, Ferrari has been experimenting with the latest technologies, and each generation of its midengine sports car has incorporated them. But now with the 2010 Ferrari 458 Italia, there's the same feeling that still comes to you in a walk between the gorgeous buildings of the factory, with the wind tunnel on one hand and the Formula 1 race shop on the other.

The 2010 Ferrari 458 Italia is about science, not just speed.



