Ferrari F50

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Ferrari F50 Overview Manufacturer <u>Ferrari</u> Production 1995-1997 (349 produced) Assembly Maranello, Italy <u>Pininfarina</u> **Designer Body and chassis** Berlinetta/Barchetta **Body style**

<u>Layout</u>	RMR layout
Related	Ferrari F50 GT
	Powertrain
Engine	4.7 L <u>V12</u>
Dimensions	
Wheelbase	2,580 mm (101.6 in)
Length	4,480 mm (176.4 in)
Width	1,986 mm (78.2 in)
Height	1,120 mm (44.1 in)
Curb weight	1,230 kg (2,712 lb)
Chronology	
Predecessor	<u>Ferrari F40</u>
Successor	Enzo Ferrari

The **Ferrari F50** is a <u>mid-engined range-topping sports car</u> made by <u>Ferrari</u>. The F50 was introduced in 1995. The car is a two door, two seat<u>convertible</u> with a removable hardtop. It has a 4.7 L <u>naturally aspirated 60-valve V12 engine</u> that was developed from the 3.5 L V12 used in the 1992 <u>Ferrari F92A</u> Formula One car.

Only 349 cars were made. The last F50 was produced in Maranello, Italy in July 1997.

The F50's <u>engine</u> predated the car; it was used in the <u>Ferrari 333 SP</u> for the American <u>IMSA</u> series in 1994, allowing it to become eligible for the stock engine <u>WSC</u> category.

Contents

[hide]

- 1 Racing
- 2 Specifications
 - o 2.1 General
 - o 2.2 Dimensions
 - o 2.3 Engine
 - o 2.4 Transmission
 - o 2.5 Chassis
 - o 2.6 Suspension
 - o 2.7 Steering
 - o 2.8 Miscellaneous
 - o 2.9 Wheels/Tires/Brakes
 - o 2.10 Colour popularity
- 3 Performance
- 4 References

Racing[edit]

Following the <u>motorsport</u> theme, Ferrari developed the <u>F50 GT</u>, a prototype based on the F50 that was built to compete in GT1-class racing. The car had a fixed roof, large rear spoiler, new front spoiler and many other adjustments. The 4.7 litre V12 engine was tuned to generate around 750 bhp (559 kW). In testing in 1996 the car proved to be quicker even than the 333SP, but this went unnoticed as Ferrari cancelled the F50 GT project, instead focusing on <u>Formula One</u>. Ferrari sold off the three complete chassis that were built—the test car 001, 002 and 003. Chassis 002 and 003 had bodies fitted before being sold. The remaining three tubs were apparently destroyed.

A <u>custom-made</u> F50 variant named the Bolide was commissioned by the <u>Sultan of Brunei</u> in 1998 and delivered in the same year. [citation needed] It used the F1 derived <u>V12 engine</u> and the same chassis, but was completely redesigned due to the <u>monocoque</u> construction of the body on the F50. [citation needed] One car was produced in the <u>coupe</u> configuration. Very few images and no official performance statistics of this car are available. At least one car was produced in RHD for the sultan, and was subsequently bought by a collector in Ireland.

Specifications[edit]



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Ferrari F50 in Melbourne, Australia

General[edit]

• Price (1995): \$480,000 – \$555,000

Manufactured in: <u>Maranello</u>, <u>Italy</u>

• Number produced: 349 (1995 to July 1997)

• Inspiration: 1990 Ferrari 641 as driven by Alain Prost

Dimensions[edit]

Weight: 2712 lb (1230 kg)

• <u>Distribution</u>: 42%/58 % (front/rear)

Length: 177 in (4,496 mm)

Height: 44.1 in (1,120 mm)

• Width: 78.2 in (1,986 mm)

Wheelbase: 101.6 in (2,581 mm)

• Front track: 63.8 in (1,621 mm)

• Rear track: 63.1 in (1,603 mm)

Engine[edit]

Type: Tipo 040-derived, model SFE 4.7 VJGAEA

• Position: mid-engine, rear-wheel drive

Configuration: longitudinal 60-valve 65° V12, derived from F1 unit

Aspiration: natural, with variable length intake manifold via <u>butterfly valve</u> in intake manifold

• Intake manifold: carbon fiber

Block: nodular cast iron

- Heads/Pistons: might-alloy aluminum heads/forged Mahle pistons
- Oil sump: aluminium
- Connecting rods: forged titanium
- Crankshaft: forged steel
- Cam covers/Oil and water pump housing: magnesium sand castings
- Exhaust manifold: stainless steel
- Engine <u>weight</u>: 436.5 lb (198.0 kg)
- Timing gear: 5 valve/cyl (3 intake, 2 exhaust), 4 overhead camshafts (2 per cylinder bank) driven by low-noise Morse chain
- Displacement: 4698 cc/286.68 ci
- Max. power: 520 PS (382 kW; 513 hp) @ 8000 rpm
- Max. torque: 347 lb-ft (470 N·m) @ 6500 rpm
- Power/Disp.: 109.1 bhp/litre
- Weight/Power ratio: 5.8 lb/bhp
- Bore x Stroke: 3.35 in (85 mm). x 2.72 in (69 mm)
- Bore:Stroke ratio: 1.23:1 (oversquare)
- Compression ratio: 11.3:1
- Redline: 8500 rpm
- <u>ECU</u>: Bosch Motronic 2.7 (controls the fuel feed, <u>ignition timing</u>, and variable length intake and exhaust systems)
- Fuel feed: Sequential injection
- Ignition: Bosch static electronic distributor-less ignition
- <u>Lubrication</u>: dry sump, tank incorporated within the final drive housing, 3 scavenger pumps
- Variable intake: butterfly valve in carbon fiber intake manifold closed at low rpm, open at high rpm
- Variable <u>exhaust</u>: butterfly valve in upper tailpipes closed at low rpm, open at high rpm
- Fuel tank: foam filled, aeronautical-style Sekur rubber bladder, 27.7 US gal (105 L; 23 imp gal)

Transmission[edit]

- Configuration: longitudinal 6 speed manual + reverse, limited slip differential, RWD
- <u>Gear ratios</u>: 2.933:1 (1st), 2.157:1 (2nd), 1.681:1 (3rd), 1.360:1 (4th), 1.107:1 (5th), 0.903:1 (6th), 2.529:1 (reverse)
- Final drive: 3.70:1
 - Flywheel: steel

- Final Drive Assembly: aluminum sand casting
- Remaining gearset housing: magnesium sand casting
- Support bracing: steel
- Clutch: dry, twin plate
- Cooling: oil-water intercooler between gearbox lubricant and engine

Chassis[edit]

- Type: central carbon fiber tub, light-alloy suspension and engine-gearbox assembly mounting points co-polymerised to the chassis
- Materials: <u>carbon fiber</u>, <u>epoxy</u> resin, Nomex honeycomb core, sandwich construction
- Weight: 2,249 lb (1,020 kg)
- Torsional stiffness: 25,500 lb-ft (34,570 N-m) per degree

Suspension[edit]

- Front: Rose-jointed unequal-length <u>wishbones</u>, push-rods, coil springs, Bilstein gas-pressurised monotube dampers, electronic adaptive damping, electronic height adjustment (40 mm max)
- Rear: Rose-jointed unequal-length <u>wishbones</u>, push-rods, coil springs, Bilstein gas-pressurised monotube dampers, electronic adaptive damping, mounting points on a spacer between the engine and gearbox
- Travel: 55 mm bump, 60 mm rebound
- Camber angle: -0.7 degrees front, -1.0 degrees rear
- Anti-roll bars: front and rear
- Max. roll angle: 1.5 degrees

Steering[edit]

- Type: TRW <u>rack and pinion</u>, 3.3 turns lock to lock, unassisted
- Caster angle: 5.5 to 5.7 degrees
- Turning circle: 41 ft (12 m)

Miscellaneous[edit]

- Electronic adaptive damping (based on steering wheel <u>angle</u> and <u>velocity</u>, the body's vertical and longitudinal acceleration, brake line pressure, and vehicle speed)
- Maximum <u>reaction time</u> (from minimum to maximum damping force or vice versa):
 140 <u>milliseconds</u> (0.14 sec)

 Average <u>reaction time</u> (from minimum to maximum damping force or vice versa): 25 to 30 <u>milliseconds</u> (.025 to .03 sec)

Wheels/Tires/Brakes[edit]

- Wheels: magnesium alloy, manufactured by Speedline
- Hubs: titanium
- Brake disc bells/suspension uprights/brake calipers: <u>aluminum</u>
- Upper and lower wishbones: black powder-coated steel
- Front wheels: 18 in. x 8.5 in.
- Front tires: 245/35ZR-18 Goodyear Eagle F1 GS Fiorano (35psi)
- Front brakes: 14.0 in. <u>Brembo</u> cross-drilled & ventilated cast iron discs, 4
 piston <u>aluminum</u> Brembo calipers, Pagid brake pads, (without <u>ABS</u>)
- Rear wheels: 18 in. x 13 in.
- Rear tires: 335/30ZR-18 Goodyear Eagle F1 GS Fiorano (30psi)
- Rear brakes: 13.2 in. <u>Brembo</u> cross-drilled & ventilated cast iron discs, 4 piston aluminum
 Brembo calipers, Pagid brake pads, (without <u>ABS</u>)
- Unsprung mass: 99 lb/121 lb (front corners/rear corners)

Colour popularity[edit]

- Rosso Corsa (Red): 302
- Giallo Modena (Yellow): 31
- Rosso Barchetta (Dark red): 8
- Argento Nurburgring (Silver): 4
- Nero Daytona (Black): 4