

PURCHASE ADVICE

Dino 246 GT/GTS

The Dino is the ancestor of all mid engine FERRARI cars. It has a chassis for high curve speeds, has an excellent braking system and a timeless, emotional design.

With the Dino, FERRARI scored a direct hit. For the first time, a series production sports car had a mid-engine, and one which was also ravishingly packaged by Aldo Bravarone – designer of former champion Pininfarina. With its short, flat front section the Dino clearly stood apart from its competitors and their longer bonnets.

The most striking design feature of the Dino is its vertical rear windscreen. With its 90° angle in the B column, it provides a great rear view.

The small chrome lever on the window frame, which opens easily with a single finger, allowing the driver or passenger to take their seat, is a particularly original touch. Once seated, the driver feels a part of the Dino, as the seat is positioned so perfectly both towards the controls and in terms of the all-round visibility. It feels like a car that is really meant for driving.

We set off. The first thing we notice is the close contact with the road as we're only sitting a few centimetres above the asphalt. Once it's warmed up, you feel the urge to put the Dino to the test on winding country roads. You are struck by the car's low lateral inclination at very high curve speeds. One quirk is noticeable on tight cornering, however – the engine starts to stutter slightly. Those familiar with the Dino know that a compromise always has to be found for the optimum positioning of the float needle valve. If adjusted too low, it causes the engine to run intermittently when negotiating curves, if set too high, it causes petrol discharges and the associated odour nuisance.

The driver also negotiates his own curves when touring. With three turns from stop to stop, s/he learns to value the directly positioned rack and pinion steering. It is very sensitive, conveys road contact, and allows the driver to feel the reactions of the Dino in his or her own hands.

The sound that the lively, rev-happy engine of the Dino produces sounds like a concert in all pitches. The lower tones are deep and the upper ones, robust. Now we're talking about the tour de force of the Dino: the engine, with its 65° cylinder inclination and the four camshafts situated above, is a sight for sore eyes. The crankshaft provides a further special touch. It only has four crankshaft bearings but six different throws, which means every piston rod has its own crankshaft flange. This unique construction type causes the unique Dino sound.

An unloaded weight of 1,200 kg, 195 BHP and a speed range of up to 7,800 revs/min. means rapid speeds are reached without any trouble. Driving at such high speed levels isn't necessary, as even though the maximum torque of 226 Nm is achieved at 5,500 RPM, the Dino also performs exceptionally well at the kind of speed levels that are more gentle on the driver's ears.

Alfredo Ferrari, the only marital son of the company owner, had the original idea for this enormously powerful engine, preparing his first construction sketches for it in 1954. Unfortunately, he wasn't able to finish his work as he died in 1956 from the consequences of a kidney infection. The Engineer Vittorio Jano then completed the project of the young Ferrari. The engine was given the name Dino in remembrance of Alfredo Ferrari, as this is the name with which his father had always addressed him.

The Dino engines powered racing cars in the Formula 1, Formula 2 and Sports Cars racing categories. The car which was given the Dino nameplate as its proprietary name is also powered by one of these race-tested engines.

Any driver who really puts his foot down and keeps it there will quickly notice how the low-cut seat shell can quickly turn into a "hot seat". Driver and passenger can both feel the heat of the engine on their backs like an open fire. Add the summer sunshine which will enter the car through the large front windscreen, and the interior rapidly becomes an incubator unless an air conditioning system has been fitted.

Dino competitors like the Porsche 911 S were clearly cheaper and more practical. In 1971, a 911 S cost DM 29,980, whilst a Dino was DM 39,905. There was little to choose between either car in terms of the performance stats. But in terms of actual road performance, it was the German which came in a clear second. In a starting line up of 160 cars at the AUSTRO CUP 2005 eight challenging rallies in Austria, Slovenia and Italy the Dino 246 GT once again took first and second place. Things are looking the same for 2006. In Dino veritas!

Technical Data

206 GT

Engine:

V6 engine (65° angle), fitted crossways as a mid engine, bore x stroke 86 x 57 mm, cubic capacity 1,987 cm³, compaction 9.0:1, performance 180 BHP (132 kW) at 8,000 revs/min., max. speed 184 Nm at 6,500 revs/min., mixture preparation through three Weber downdraft 40 DCN 14 carburettors

Power transmission:

Rear wheel drive, single disc dry clutch, five-speed gear box.

Body / chassis:

Space frame, aluminium body, independent suspension front and rear on wishbone and coil springs, anti roll bar, hydraulic telescopic shock absorbers front and rear, rack and pinion steering, disc brakes, 6.5 J x 14 rims, 185 / 70 VR 14 tyres.

Dimensions / weight

Wheel base / length 2280/4150 mm, width/height 1700/1115 mm, tracks front/rear 1425/1400 mm, unloaded weight 900 kg, front/rear weight distribution 45/55.

Performance:

Acceleration 0 -100 km/h in 8.2 sec., maximum speed 225.00 km/h

246 GT/S

Engine:

V6 engine (65° angle), fitted crossways as a mid engine, bore x stroke 86 x 57 mm, cubic capacity of 2,418 cm³, compaction 9.0:1, performance 195 BHP (143 kW) at 7,600 revs/min., max speed 213 Nm at 5,000 revs/min., mixture preparation through three Weber downdraft 40 DCNF carburettors / from E-Series onwards, 40 DCNF 13.

Power transmission:

Rear wheel drive, single disc dry clutch, five-speed gear box.

Body / chassis:

Space frame, sheet steel body, aluminium front bonnet, independent suspension, front and rear, on wishbone and coil springs, anti roll bar, hydraulic telescopic shock absorbers front and rear, rack and pinion steering, disc brakes, 6.5 J x 14 rims, 185/70 VR 14 tyres / from chassis no. 00530 205/70 VR 14.

Dimensions / weight:

Wheel base / length 2340/4230 mm, width/height 1700/1115 mm, tracks front/rear 1425/1400 mm, from chassis no. 0118 rear 1430 mm, unloaded weight GT/GTS 1080/1100 kg, front/rear weight distribution 43/57.

Performance:

Acceleration 0 -100 km/h in 7.4 sec., maximum speed 238.4 km/h

PURCHASE ADVICE**Type history & chassis numbers
206 -246 GT/GTS**

Type	Series	Chassis no.	Year of Manufacture	Units
206 GT		00102 - 00406	1967/69	152
246 GT L	(Series 1)	00400 - 01116	1969/70	357
246 GT M	(Series 2)	01118 - 02130	1970/71	506
246 GT/GTS E	(Series 3)	02132 - 08518	1971/74	2898

Type	1967	1968	1969	1970	1971	1972	1973	1974
206 GT	2	99	51					
246 GT			81	272	832	828	471	3
246 GTS						280	681	313
Total	2	99	132	272	832	1108	1152	316

The total number of units for all types was 3,913.

- 1965 On 25th April, the first Dino 166 P competed in its first race in Monza. In October, the Dino Berlinetta Speciale prototype was presented on a 206 S chassis.
- 1966 Presentation of a Dino Berlinetta GT at the Turin Motor Show. Already very similar to the later series production car, engine installed lengthways, however.
- 1967 Presentation of the Dino 206 GT at the Turin Motor Show. Almost identical to the later series car. Engine fitted crossways leaving more boot space.
- 1968 Start of production of the 206 GT, aluminium body, manufactured at Scaglietti.
- 1969 End of production of the 206 GT, start of production of the 246 GT L series, central wheel lock rims.
- 1970 End of the L series / start of production of the 246 GT, M series, introduction of the 5 hole rim, wider tracks on rear wheel, single reverse light fitted centrally.
- 1971
one corona
7, in the
squared bumper
- End of the M series / start of production of the 246 GT, E series, changed gearbox, fuel pump instead of two by Bendix, 40 DCNF 14 carburettor instead of 40 DCNF current series, the windscreen wipers were set in parallel instead of crossways, bar no longer reached into the radiator opening.
- 1972 Start of series production of the Dino 246 GTS (Spider version)
- 1974 End of production of the Dino 246 GT/GTS.

Body

As in real life, beauty has to be continually worked on. This applies to the Dino especially. The body, built at Scaglietti, usually became badly affected by rust within only a few years, as preventative rust protection wasn't carried out then. You can talk of a 'natural undercoat' in this sense.

Today, an original Dino is very rare, as most of them have been dealt with by an auto body specialist.

Potential buyers today are more concerned with the quality of a restoration than looking for signs of rust.

All of the body sections that are regularly exposed to water should nonetheless be thoroughly checked. The wheel arches, the door sills and the lower door areas are especially prone to rusting. In many Dinos, on these areas, steel plating has previously been welded in. This is also true of the plating on the rear section, where particular attention should be paid to the lower corners, as three unprotected plates have been 'welded' over each other, which particularly encourages the formation of rust.

An observant eye will look for the tubular frames which are to be found under the riveted base plate. If this load bearing steel construction is particularly badly corroded then the only thing that helps is the gutting of the entire vehicle, as moulded fibre glass parts obscure the view.

The headlight area represents a further weak point, as well as the air intake opening at the front and on the sides as well as on the C pillar, particularly with GTS models.

Those who go on the search for concealed patches using a magnet should bear in mind that certain parts of the body are made out of aluminium. The bodies of the 206 GT and a few of the first 246 GTs were completely made out of aluminium, whilst subsequently only the doors and bonnets were manufactured using this material. The front bonnet on all Dinos is made out of light alloy.

Where aluminium was used, however, there is often contact corrosion, as the light alloy was flanged to the corresponding frame section without any lagging.

Technology

Dinos which are mostly driven over short distances can be due an engine overhaul after 50,000 km. The costs for this usually total € 15,000.

Owners who give the green light to an overhaul should insist on the installation of modern, full shank valves. The original sodium filled exhaust valves have a tendency to break. In addition, new sintered metal seat rings should also be shrunk as they allow the use of led free petrol and only require the valves to be adjusted every 30,000 km. The series camshafts wear out more quickly than average. Remedial action is realised through a laser boring on every cam, as at a low level of revolutions, the sling lubrication is not sufficient to build up a sustained lubricating film between cam and tappet. High quality camshaft reproductions with these borings are available by now.

The Magneti Marelli distributor also has a short lifespan. It should be regularly overhauled, and if the engine has trouble starting in cold weather at the latest. Here, modification to a contact free ignition or modernisation to a map controlled ignition system which can function without a distributor. For the engine to run willingly, it should be warmed up over at least 20 kilometres. It can then be checked as to whether it revs up and accelerates smoothly and without interruptions. If this isn't the case, then the throttle valve shafts of the three Weber twin carburettors may be worn out. Sealed roller bearings provide an enhancement in this case.

The chain adjusters require a checking. Is there a hexagonal bolt on the top of the casing which is fixed in place by a screw nut? If not, then upgrade immediately as otherwise there will be excessively chain clearance.

When functioning correctly, a Dino's gearbox should be heavy. The lighter the gear lever feels in the selecting gate, the more it is worn out. If scratchy noises become audible and the gears de-rail, then the gearbox must be overhauled.

Prices in June 2006

Type	State of repair	Price in €	State of repair	Price in €
246 GT	2+	90.000	4	45.000
246 GTS	2+	101.000	4	55.000

Extras like air conditioning systems, Daytona seats and Campagnolo rims should be added to the price.

Spare parts

The availability of spare parts has eased up. Almost everything is available and at significantly lower prices than a few years ago. Only a complete front or rear section requires a delivery time of 4 weeks.

The interior fittings, including leather steering wheel, can also be supplied. The original artificial leather 'Zebra' neba' with its special pitting is also available again, not to mention the rare 'Alcantara' tone for the dashboard.

The ammeters are frequently destroyed through short circuits which can lead to total loss through the Dino burning out. Help is provided with an original style volt meter which costs € 188.00.

The series production alternator is a further weak spot as it is subject to extremely high levels of heat in the engine compartment, and functions via a contact controlled charge controller under the front bonnet. This problem area is removed via modernisation to a stronger light machine with an integrated regulator.

Similar things can be reported about the starter motor. The original component guzzles electricity with considerable weight and little performance. Sitting a modern starter motor with half the weight, double the performance and speed frequency which is 1.5 times higher is a good decision for the engine.

The magnesium Dino rims which break easily can also now be replaced with the high quality cast aluminium ones of today.

Some example prices:

Exhaust valve €38.50; inlet valve € 29.00; set of camshafts, 4 units, € 1,298.00;
Complete clutch € 470.00; original Dino aluminium rims € 386.00.

Dino Specialists

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or the DinoShop www.dinoparts.de

Summary

Buying a Dino in a good state of repair is generally recommended as a complete restoration can cost over €60,000. This means it may well be worth buying a really excellent car for clearly over € 80,000 if a detailed documentation of its restoration is available. Seeking the advice of a Dino expert is always a good idea.

Meinhard, Germany, 18.06.2006

Jörg Temmesfeld