11/10/2002

ALFA 147 GTA

THE GTA FAMILY IS GROWING

Attractive styling, great temperament and outstanding automotive engineering: but also top-quality interiors and finish complemented by an ultra-comprehensive electronic and telematic package. These are the distinguishing features that underpin the success of the Alfa 147.

Those who love to drive will find this small Alfa is a compact car capable of outstanding performance over any route and one that always rewards its driver with that ultimate thrill.

Now imagine an Alfa 147 that maintains these attributes but also offers better performance, better braking capacity and the dynamic performance of a racing car. Imagine the GTA version.

This aptly-chosen name identifies a range of vehicles that constitute the absolute quintessence of Brand sporting values. Models with a spirit that harks back to a great tradition of races and victories, coupled with a highly sophisticated, up-to-date engine and mechanical specification.

Today, a few short months after the launch of the 156 GTA and Sportwagon GTA, we welcome the Alfa 147 to the same family: the new car extends the product range of this type of car into a segment typified by a higher proportion of women and young people.

The model has been produced with the aim of creating an everyday car that can still offer its driver race-track performance and sensation under the right circumstances. For this reason, apart from a few tweaks to add dynamism and aggression, the body of the Alfa 147 GTA retains the original vehicle¥'s acclaimed cool, stylish lines. But everything else has been radically changed.

The engine has been swapped for a sizzling 3.2 V6 24v unit. The suspension geometry and settings have been altered. And VDC - a highly sophisticated vehicle dynamic control system - has been added as standard.

The result is a car that is the most powerful and fastest representative of its segment (250 bhp - 184 kW) and capable of thrilling performance: 246 km/h top speed; 6.3 seconds from 0 to 100 km/h and 26.1 to cover a kilometre from a standing start. Not to mention outstanding dynamism, ride and handling. These are the telling differences that ensure your Alfa will deliver a unique driving experience.

On the outside, the Alfa 147 reveals new features that reflect the changes to its chassis and mechanicals. These are also important stylistically because they make the vehicle look broader, closer to the ground and more beefy while still ensuring instant recognisability.

STYLE

Exteriors

The sophisticated mechanical array had to be complemented by styling that conveys an idea of strength and sportiness in a few brief but telling lines. This had to be achieved without altering the car's original, stylish shape that is known and loved by our customers. Changes that affected the external appearance had to be limited to parts affected by technical changes to the chassis and mechanicals.

The outcome is the Alfa 147 GTA, an out and out sporty model that borrows the clean, spare design (yet also elegant and full of appeal) that assured the basic model such success. The natural tension set up between the rounded surfaces and ridges is resolved in an ideal balance. The design also hints at historical brand motifs, albeit in a very modern and understated way. For example, the bonnet is drawn out lengthways to suggest a mighty engine capable of far from ordinary verve and alacrity. The tail tapers when viewed from top or side to make the car look more slender and dynamic.

The Alfa 147 GTA has borrowed all these exterior features from the basic model. The new model differs in its broad wings that stand out at the front to accommodate the generous 17 inch wheels (225/45); in the black headlight ground that adds to the air of sportiness and the foglights that have been shifted toward the outside of the car to free the air intakes and allow the mighty power unit to breathe more easily.

The resulting image is of a strong, compact car with mastery of the road and a pronounced personality of its own. This is also borne out by a beefy side view underscored by a new moulding linking the two broad wings. New five-ringed wheels exclusive to the GTA range add a clean, highly engineered feel (customers can also choose the spoked wheels more typical of cars used for motorsport).

At the rear, the new version features a bigger bumper. This feature is hardly apparent from the side but is apparent when the car is viewed from behind. The lower part of the 147 GTA's rear end looks completely different from the original model from boot floor level downward. One reason is that the rear bumper contains a big extractor that is visibly divided by the metal panels into one long horizontal opening and two smaller side openings. The extractor serves the aerodynamic function of carrying airflow from the front of the car to the back of the car, i.e. of extracting the airflow. The final touch is provided by two oval exhaust tailpipes in line with one of the brand's classic styling cues.

Ten body colours are available on the GTA, including the outstanding Nuvola White, an iridescent shade exclusive to the model.

Interiors

In a car of great temperament, the interior always revolves around the driver's cockpit. The Alfa 147 GTA is no exception, as you would expect from a car created for irrepressible performance. The GTA complements the basic Alfa 147 package with a few sporty styling details exclusive to the version.

These include a brand-new three-spoked steering wheel, gear lever with leather gaiter and surrounds in Puma grey, a darker shade than that of other Alfa 147 versions. The out and out sporty pedals include aluminium pedal covers and footrests with rubber inserts and ergonomic shapes. These are complemented by a mat in the central

storage compartment made out of metalluro with rubber detailing.
The seats are sports-configured and cloth trimmed. The model offers three exclusive colours: red, silver and blue. Leather upholstery is also an option: this comes in one shade (black) or as a two-tone combination. The latter offer black leather side bands while the central cushion and backrest insert may be in natural, grey or blue as required by the customer. The seat design displays the horizontal ridged design made famous by so many Italian sports cars of the past. The front seats come with a built-in head-restraint and adjustable seat. They are divided by an armrest with storage compartment. The rear seat offers the same sports configuration but all the comfort of a true five-seater.
The Alfa 147 GTA interiors may also be distinguished from other model versions by other features. The door panels, for example, come with cloth and leather inserts that reflect the same motifs and colours as the central part of the seats. The ceiling is grey-black, while the boot trim is completely black. The same applies to the sun visors, courtesy light and pillars. One more distinctive trait that has become a standard feature on the Alfa 147 GTA is a mat fastened mechanically to the carpet. The sill plates come with a satinised metal insert bearing the wording GTA in bright metal.
The control panel also displays new features, with special gauges and a black background. The reading scales also look different, while a screen on the multifunction display shows engine oil temperature.

MECHANICALS

SUSPENSION

The Alfa 147 GTA suspension layout is based on the formidable combination of high double wishbones at the front (the only car in its segment to offer this configuration) and an advanced MacPherson arrangement at the rear. This engineering option has already brought the Alfa 147 great success and has been specially adapted to the upgraded features of the new car to assure the Alfa 147 GTA outstanding dynamic performance coupled with superlative comfort.
The suspension is the final outcome of a long and thorough development process carried out on the basic layout with the aim of achieving the highest levels of driveability and handling. These features allow the person behind the wheel maximum mastery of the new car's great sports performance for the best possible results on the road. From the customer's viewpoint, the new version:

- is responsive;
- is smooth and accurate in its steering;
- is very stable and easy to control even when close to the grip limit;
- features highly contained body movements;

- and offers great comfort in all service and road surface conditions.

- Front

The Alfa 147 GTA offers its drivers the great control typical of front wheel drive cars plus outstanding sportiness and driving precision. This is particularly evident over mixed routes. The credit for this goes first and foremost to the high double wishbone front suspension. The new front suspension was developed specifically for the model by the Fiat Research Centre and Alfa Romeo Research. It departs from the configuration used on the Alfa 147 in offering a reinforced lower beam, lower ride, new shock absorber and spring settings, a special wheel strut that is fastened to the steering link in a different position - and a larger diameter stabiliser bar.

These engineering improvements increase the dynamic performance of the high double wishbone suspension - known as a quadrilateral suspension because the arms (two overlapping triangles with their bases hinged to the car body and their tips to the wheel unit) create a four-sided figure.

The device structure consists of a cast iron lower arm, a steel strut and an upper light alloy arm. The coaxial spring-shock absorber unit is connected to the body via a flexible mount and to the lower arm via a light alloy fork. For reasons of space and structural stiffness, the upper arm is jointed to an aluminium shell (anchored to the body) which acts as a support to the upper spring-shock absorber attachment. From a dynamic viewpoint, the high double wishbone layout ideally combines broad wheel travel with outstanding control of tyre service conditions. This is achieved because the upper arm is located higher than the wheel centre: this means that the area between wheel and power unit accessories can be exploited to the full. And more. Other benefits of this configuration include excellent tyre grip, improved traction even under extreme conditions, a self-alignment effect proportional to the side acceleration applied on a bend, greater steering precision and sensitivity, gradual and even steering wheel effort to the grip limit - and also cancelling of lift (lifting of the front during acceleration) and antidive effect (dipping of the front end when braking).

Great attention has also been devoted to the absorption of minor roughness. Hence the choice of fluid dynamic bushes to hinge the upper triangle to the shell; split gaskets and bushes in Teflon loaded with fibreglass for the shock absorber stems - plus a Teflon seal for the shock absorber piston.

- Rear

The rear suspension has also undergone many technical improvements. The geometry and the constructional details of the tried and tested MacPherson configuration have both been revised. The outcome is a different body attachment position; special spring setting; different shock absorber and bush stiffness; antiroll bar with bigger diameter.

The GTA's MacPherson suspension also adopts innovative construction features. For example, the coil springs not

only offer a different stiffness and lower ride to those of the Alfa 147 but also rest on a lower and upper plate with an interposed rubber ring to reduce noise levels. And a stabiliser bar (connected directly to the shock absorber via plastic connecting rods and jointed on steel ball joints) with a Cellasto upper end travel block (closed cell polyurethane that maintains its flexible properties over time). The double-acting hydraulic shock-absorbers, also new, are pressurised and built in high strength steel with reduced thickness. Lastly, the side levers, suspension arm and rear beam bushes are all made especially for the Alfa 147 GTA. The upper shock absorber attachment also displays a new tapered block fastening system. Assembly is easier and the system is more reliable because the attachment need not be bolted to the body.

These significant technical innovations and features are bound to improve performance and driving comfort still further. Suffice it to say that the modified rear suspension can absorb obstacles more easily because the wheels withdraw lengthways to keep the car on its trajectory. The system also assures maximum directional stability when the car meets obstacles such as tram lines, dilation joints on motorway bridges. And more. The Alfa 147 GTA rear suspension increases the smoothness and alacrity of steering response and means the car is more able to align itself automatically, even under extreme conditions. This is achieved by ensuring the wheel steers consistently under side load. Not to mention the fact that the Alfa 147 GTA gains negative wheel camber during roll due to the new rear suspension. In other words, cornering grip is increased to ensure the roll centre position is more accurate to improve the car's general balance.

ENGINE AND GEARBOXES

The Alfa 147 GTA power unit is the same 3.2 V6 24 valve engine fitted to the Alfa 156 and Alfa Sportwagon GTA. It is a spirited, well-rounded engine as befits a six-cylinder unit and is derived from the now classic three-litre V6 24 valve unit fitted to top of the range Alfa 166 and GTV models.

The Alfa 147 GTA engine differs from its predecessor in certain respects. First and foremost, power has been increased by making radical mechanical changes. The power could simply have been increased by adjusting the timing, fuel system and electronics. But instead the engineers changed the crankshaft and pistons on the GTA to increase the cylinder capacity to 3.2 litres and lengthened the stroke to 78 millimetres. This was done with one very specific aim: to ensure absolute performance and high power and torque peaks combined with smooth, gradual delivery from low speeds. For this reason, the 3.2 V6 24v unit can deliver thrilling performance - and that means a top speed of 246 km/h and 0 to 100 km/h in 6.3 seconds - but can also be used as an everyday car. The self-confessed goal of the GTA is this: to offer sensations unique to a racing car yet still be perfectly serviceable for everyday use.

The 3.2 V6 24v unit fitted to the Alfa 147 GTA develops 250 bhp at 6200 rpm with a maximum torque of 300 kgm (30.6 kgm) at 4800 rpm. These figures are all it takes to achieve exciting performances and are complemented

by a torque curve that permits high values at low speeds. The car can also travel in sixth gear at less than 2000 rpm and unleash speed spurts without changing gear. Extremely satisfying behaviour, therefore, even during daily use.
The increased cylinder capacity naturally required further changes. For example, the control unit software has been rewritten, the cooling system has been upgraded with the addition of an engine oil radiator - and the intake and exhaust ports have been tuned by applying a new timing pattern.
The transmission has also been reinforced: the half-axles are new, while the clutch is bigger and the six-speed gearbox offers new, sturdier components. The current manual gearbox will be joined in 2003 by a Selespeed version. Developed by Magneti Marelli, this sophisticated device has a Formula 1-derived operating system that makes for swifter gear shifts at both low and high speeds. The 3.2 V6 24 valve unit fitted on the Alfa 147 GTA already meets the tough Euro 4 emission limits.

SAFETY

In addition to a braking system with outstanding performance (consisting of 305 mm ventilated front discs with dual pump Brembo calipers and 276 mm rear discs), the Alfa 147 GTA also comes with state-of-the-art electronic devices for controlling the car's dynamic performance: from braking to traction.
Hence not merely an ABS but also an EBD to distribute brakeforce over front and rear wheels and a sophisticated VDC to control dynamic stability on corners, complemented by MSR and ASR (the former moderates brake torque while changing down through the gears while the latter limits wheel slip during acceleration).

ABS with EBD

The new model is fitted as standard with a Bosch 5.7 ABS, one of the most advanced units currently available on the market with an integral electronic brakeforce distributor (EBD). The beauty of this device - which comes with four active sensors, four channels and a hydraulic control unit with 12 solenoids - lies in the fact that its active sensors can process a wheel input signal themselves instead of sending it on to the control unit. The system can therefore cut in more quickly and also detect speed signals close to zero (passive sensors do not detect speeds lower than 4 km/h). They are also less sensitive to interference caused by electromagnetic fields and road surface heating.
Because they can detect very low speeds, the active sensors also allow more effective use of the satellite navigation system to allow more accurate updating of data on the route covered by the car.
This cutting-edge ABS is complemented by an electronic brakeforce distributor (EBD), that distributes braking action over all four wheels to prevent them locking and ensure full control of the car in all situations. The system also adapts its operation to wheel grip conditions and brake pad efficiency to reduce pad overheating.

This ABS is so sophisticated it ensures: maximum braking force on each wheel close to locking depending on grip on the ground; full car control even with the brake pedal pressed to the floor; high ability to adapt automatically to different service conditions and very prompt responses.

VDC - MSR

To ensure absolute mastery of the car under al conditions, however extreme, the Alfa 147 GTA is also fitted with the VDC (Vehicle Dynamic Control) device that first made its appearance on the Alfa range leader: the Alfa 166 3.0 V6 24V.

This innovative device cuts in under extreme conditions when car stability is at risk and also helps the driver control the car. As befits a true Alfa, the VDC is a sporting device that allows outstanding roadholding. It allows the driver to enjoy the full satisfaction of controlling the car as long as conditions remain normal and does not cut in until the situation is just about to become critical.

The VDC is permanently engaged.

The MSR (Motor Schleppmoment Regelung) cuts in when the gear is shifted down abruptly in low grip conditions. This device restores torque to the engine to prevent the wheel skidding as a result of lock. To achieve this result, the VDC continually monitors tyre grip in both longitudinal and lateral directions. If the car skids, it cuts in to restore directionality and ride stability. It uses sensors to detect rotation of the car body about its vertical axis (yaw speed), car lateral acceleration and the steering wheel angle set by the driver (which indicates the chosen direction). It then goes on to compare these data with parameters generated by a computer and establishes - via a complex mathematical model - whether the car is cornering within its grip limits or if the front or rear is about to skid (understeer or oversteer).

To restore the correct trajectory, it then generates a yawing movement in the opposite direction to the movement that gave rise to the instability by braking the appropriate wheel (interior or exterior) individually and reducing engine power (via the throttle). This is the key attribute of the device designed by Alfa Romeo engineers. It acts in a modulated fashion on the brakes to ensure the action is as smooth as possible (and the drive is not therefore disturbed). The engine power reduction is contained to ensure outstanding performance and great driving satisfaction at all times.

As it carries out its complex task, the VDC stays in constant communication with the brake sensors and engine control unit but also with:

- the steering wheel and steering column (via the steering sensor);
- the control panel (active warning lights);
- the Body computer that constantly exchanges information with the ABS, engine management unit and automatic transmission unit;
- the electronic throttle (that communicates with the ABS in turn);

- a gyroscopic sensor installed on the passenger compartment floor to record car yaw and lateral acceleration.

ASR

The Alfa 147 GTA also comes with ASR (Anti Slip Regulation), a feature of the VDC system, to limit drive wheel slip in cases of low road surface grip. This sophisticated device works at any speed and prevents the drive wheels from slipping by adjusting torque according to the grip coefficient detected at the time of slip.
The device computes degree of slip on the basis of wheel rpm calculated by the ABS sensors and activates two different control systems to restore grip:

- when an excessive power demand causes both drive wheels to slip (e.g. in the case of aquaplaning or when accelerating over an unsurfaced, snowy or icy road), it reduces engine torque by reducing the throttle opening angle and thus air flow;
- if only one wheel slips (e.g. the inside wheel following acceleration or dynamic load changes), this is automatically braked without the driver touching the brake pedal. The resulting effect is similar to that of a self-locking differential.

The ASR maintains vehicle safety as much as possible and is particularly useful when grip is lost (icy multi-storey car park ramps are one example) and whenever the asphalt does not guarantee even friction.
Another not inconsiderable advantage of the ASR is the lower stress exerted on mechanical parts such as the differential and gearbox due to more effective control of low speed take-off and traction.
The ASR comes on automatically whenever the engine is started. To turn off the device, all you have to do is press a switch on the central console. When the ASR is active, a warning light on the control panel flashes. A control panel warning light comes on (with the switch led off), to indicate system faults or irregularities.
ASR deactivation is required when snow chains are used because the wheel must be able to slip by tiny amounts to pile up the snow so that force can be transmitted to the ground and the ASR tends to avoid this type of action.

GTA, AN ITALIAN LEGEND

During the Sixties, the Touring category was one of the areas of motor sport most followed by the public and consequently also by the Manufacturers. Cars derived from standard production models battled it out on the main circuits watched by crowds of fans. And the best drivers were not ashamed to race in this category. Great

names included Jim Clark, John Whitmore and Andrea de Adamich.

Alfa Romeo wanted to be part of it all and the company decided to commission an up-and-coming workshop to prepare its cars: Autodelta, headed by Carlo Chiti, a world-famous designer from the Ferrari stable. The resulting marriage between engineering and motor sport has become the stuff of legend.

On February 18 1965, Autodelta's first creation was presented at the Amsterdam Motor Show. The car was a development of the Giulia GT, rechristened the GTA. The new car differed from its sister externally in the addition of front air intakes, handles and the triangular Autodelta badge. The 1600 Twin Spark twin shaft engine was vigorously reinforced to increase the power output from 106 to 115 bhp.

The GTA triumphed even on its first outings, though nothing less was expected of this winning car. Seven GTAs took the first seven places, for example, at the Jolly Club 4-hour race in Monza. With great drivers at the helm, the cars began to steal the thunder of the Lotuses that had previously reigned supreme.

The GTAs continued their domination of the European Challenge over the next few years.

In 1968, Alfa Romeo presented on-road and racing versions of the GTA 1300 Junior. The car looked the same as the standard production Junior, but was made leaner and meaner by long white bands along the sides. The racing version delivered 160 bhp (the on-road version 103 bhp). It goes without saying that the new GTA swept the board as soon as it went out on the track.

Now there were two racing GTAs and their domination lasted until 1970, the year that saw the arrival of the GTAm, derived from the 1750 GT Veloce America The body was completely transformed compared to the original version, as was the engine - a 230 bhp two litre unit. The car, with the Dutchman Tonie Hezemans at the wheel, won the European Touring Championship in 1970 and 1971, taking six first places in eight races.

In 1992, Alfa Romeo decided to return to the track with a version of the 155 Q4 prepared to Italian SuperTouring Championship standards and rechristened GTA. Like the others, this car retained very little of the standard production version: carbon wings, a rear spoiler that could be tilted to different angles, a 16 valve turbocharged engine capable of 400 bhp of power (compared with 186 bhp of the normal version) plus an intercooler cooled by nebulised air. The four team cars were driven by Larini, Francia, Nannini and Tamburini. The new GTA won 17 of the 20 races it was entered for and Larini won the title.

Once the season was over, the GTA cars stood aside to let other Alfa Romeo models take over. Until this year, when the legendary GTA tag reappeared on the powerful Alfa 156 cars raced in the FIA EURO TCC 2002 European Championship.

TECHNICAL SPECIFICATION, EQUIPMENT AND COLOURS

Technical specification

Caratteristiche motore	
No. of cylinders, layout	6, in 60° V, front transverse
Bore x stroke (mm)	93 x 78
Capacity (cc)	3179
Compression ratio	10.5 : 1
Max. power output EC: kW (bhp)	184 (250)
at rpm	6200
Peak torque EC: Nm (kgm)	300 (30.6)
at rpm	4800
Timing control	2 OHC, per row, hydraulic tappets and variable valve timing (toothed belt), 4 valves per cylinder
Fuel feed	Bosch Motronic ME 7.3.1 electronic MPI with selective knock control
Ignition	static, electronic digital combined with injection, 2 knock sensors and 6 HT coils fitted in the head
Electrical equipment (12 V)	
Battery: capacity (Ah)	60
Generator (A)	140
Transmission	
Drive	front
Gearbox: 1st	3.500 : 1
2nd	2.235 : 1
3rd	1.520 : 1
4th	1.156 : 1
5th	0.971 : 1

6th	0.818 : 1
Reverse	3.545 : 1
Final drive ratio	3.733 : 1 (56/15)
Wheels	
Tyres	225/45 ZR 17
Steering	
Steering box	rack and pinion with power steering
Turning circle between kerbs (m)	12.1
Suspension	
Front	independent, dual high wishbone with double trailing arm and anti-roll bar mounted on ball joints
Rear	independent, MacPherson struts with transverse levers of different lengths anchored to aluminium cross beams, reaction arms, offset coil springs, and anti-roll bar mounted on ball joints and linked to the shock absorber
Brakes D (disc)	
Front: dia. (mm)	D 305 (ventilated)
Rear: dia. (mm)	D 276
Bodywork - Dimensions	
No. of seats / No. of doors	5 /2
Length / Width (mm)	4213 / 1764
Height, unladen (mm)	1412
Wheelbase (mm)	2546
Front/rear track unladen (mm)	1516 / 1504
Boot capacity VDA (dm3)	280
Capacities - Weights	

Fuel tank (litres)	63
Kerb weight (DIN) (kg)	1360
Performance	
Speed with engine at 1000 rpm in 6th (km/h)	38.2
Top speed (km/h)	246
Acceleration (1 adult + 30 kg): – 0 to 100 km/h (s) – 0 to 1000 m (s)	 6.3 26.1
Fuel consumption	
Fuel consumption as per EC directive 1999/100 (l/100 km): – urban cycle – out-of-town cycle – combined cycle	 18.1 8.6 12.1
Emissions control	Euro 4
CO2 emissions (g/km)	287

Equipment

	GTA
ASR	S
ABS + EBD	S
Driver's and passenger airbag	S
Front sidebags	S
Window bag	S
Fire prevention system	S
Alfa CODE	S
Split folding rear seat (60/40)	S

Rear armrest	S
Foglights	S
Cruise control	S
Xenon headlights	O
On-board instruments with multifunctional display and trip computer	S
Body-coloured heated electric door mirrors (SX aspherical)	S
Central locking control with position lights feedback	S
Bi-zone climate control system	S
Special leather steering wheel (spokes in puma grey) and gear lever knob	S
Steering wheel with radio controls	S
Steering wheel with radio and phone controls	O
RDS radio with CD + 8 speakers + aerial	S
Bose® hi-fi system with amplifier and subwoofer	O
16″ 205/55 alloy wheels, can be fitted with chains	O
17″ x 7″1/2 alloy wheels and 225/45 tyres (spoked)	O
17″x7″1/2 alloy wheels and 225/45 tyres (5-hole design)	S
CONNECT Nav+ (radio, CD, colour display, hands-free, dual-band GSM phone, map navigation system, CONNECT button for services, voice controls, phone and voice memo)	O
Electric sunroof	O
CD-changer in luggage compartment	O
Volume-sensing and anti-lift antitheft system	O
Metallic paint	O
Iridescent paint	O
Headlight washers	S
Tyre kit	O
Sports configuration seat in cloth	S
Sports configuration seat in leather	O
Winter Pack	O

Climate Pack	O
Comfort Pack	O
S = standard O = option	

Colours

Alfa 147 GTA (standard upholstery)			
Cloth			
	Black/Red	Black/Blue	Black/Silver
NON-METALLIC COLOURS			
Alfa Red	X	-	X
Luxor Black	X	X	X
METALLIC			
Boreal Green	O	-	O
Cosmos Blue	X	X	X
Metallic Blue	O	X	X
Metallic Grey	X	X	X
Seagull Blue	X	X	X
Sterling Grey	X	X	X
Metallic Black	X	X	X
IRIDESCENT COLOURS			
Nuvola White	X	X	X
X = recommended match O = available match - = match not available			

Alfa 147 GTA (optional upholstery)		
Leather		
	Single	Two-tone with Royal Blackside strip

	colour			
	Royal Black	Imola natural-coloured	Silverstone Grey	Le Mans Blue
NON-METALLIC COLOURS				
Alfa Red	X	X	O	-
Luxor Black	O	X	X	-
METALLIC				
Boreal Green	X	X	-	O
Cosmos Blue	X	X	X	-
Metallic Blue	X	X	O	O
Metallic Grey	X	X	X	O
Seagull Blue	X	O	-	X
Sterling Grey	X	X	-	O
Metallic Black	X	O	X	O
IRIDESCENT COLOURS				
Nuvola White	X	X	-	O
X = recommended match O = available match - = match not available				