

TECHNICAL SPECIFICATIONS

The following pages give the various specifications of the vehicle.

These pages will probably represent the main reference position in this booklet for the "experts and enthusiasts".

This section should be consulted in order to identify the main characteristics of your vehicle referred to in the previous chapters.

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IDENTIFICATION DATA

The identification data should be recorded. The identification data are carried on labels located in the following positions (fig. 1):

- 1 - Identification label
- 2 - Body label
- 3 - Bodywork paint identification label
- 4 - Engine label

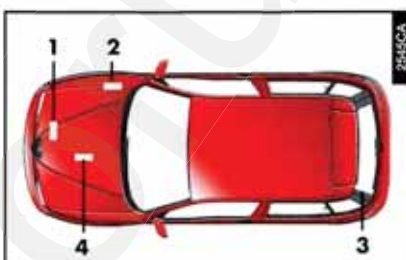


fig. 1

BODY LABEL

The body label carrying the following information is located in the engine bay to one side of the right-hand shock absorber upper connection:

- Type of vehicle: ZAR 930000.
- Manufacturer's serial number (chassis number).

ENGINE LABELS

On the rear left-hand side, gearbox side.

BODYWORK PAINT IDENTIFICATION LABEL (fig. 2)

This is applied to the inner part of the luggage compartment and carries the following data:

- A. Paint manufacturer.
- B. Name of colour.
- C. Colour code.
- D. Colour code for touching up and re-spraying.

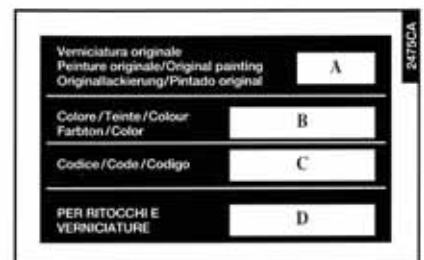


fig. 2

IDENTIFICATION LABEL (fig. 3)

This is located in the engine bay on the front crossmember.

It carries the following identification data:

- A. Space for details of national homologation
- B. Space for punching the consecutive chassis number

C. Space available for maximum weights authorised by various national laws

D. Space for version and any supplementary indications to those specified

E. Space for smoke index (diesel versions only)

F. Space for punching manufacturer's name.

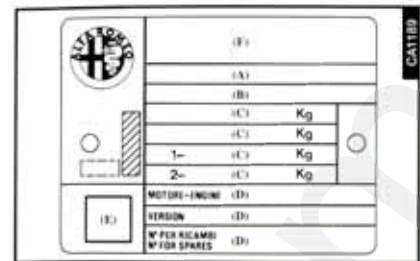


fig. 3

ENGINE AND BODY VERSION CODES


	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☘	1.9 JTD
Engine code	AR 33503	AR 67601	AR 32201	AR 32301	AR 32302
Body code	930 A3A00 23 930 A3A00 14 (*)	930 A2B00 21 930 A2B00 13 (*) 930 A2C00 22 (*)	930 A1A00 32 930 A1A00 33 (*)	930 A5000 34 930 A5000 35 (*)	930 A4B00 45

(*) Versions for specific markets

ENGINE

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☘	1.9 JTD
Position	Front transversal	Front transversal	Front transversal	Front transversal	Front transversal
Number and arrangement of cylinders	4 in line	4 in line	4 in line	4 in line	4 in line
Cycle	Otto	Otto	Otto	Otto	Diesel
Bore	82 mm	82 mm	82 mm	83 mm	82 mm
Stroke	64.87 mm	75.65 mm	82.7 mm	91 mm	90.4 mm
Total cubic capacity	1370 cm ³	1598 cm ³	1747 cm ³	1970 cm ³	1910 cm ³
Compression ratio	10.5 : 1	10.3 : 1	10.3 : 1	10 : 1	18.45 : 1
Maximum horsepower					
kW EEC	76	88	106	114	77
CV EEC	103	120	144	155	105
r.p.m.	6300	6300	6500	6400	4000
Max torque					
Nm EEC	124	144	169	187	255
kgm EEC	12.7	14.7	17.2	19.1	26
r.p.m.	4600	4500	3500	3500	2000


VALVE GEAR TIMING

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
Intake					
– opens before TDC	–	–	–	–	0°
– opens after TDC	8°	8°	3°	3°	–
– closes after BDC	40°	46°	51°	51°	32°
	17° (*)	17° (*)	22° (*)	22° (*)	
	15° (*)	21° (*)	26° (*)	26° (*)	
Exhaust					
– opens before BDC	26°	26°	47°	47°	32°
– closes after TDC	1°	1°	4°	4°	0°
Tappet clearance for checking timing					
– intake mm	0.45	0.45	0.45	0.45	0.50
– exhaust mm	0.45	0.45	0.45	0.45	0.50
Tappet clearance cold					
– intake mm	–	–	–	–	0.30 ± 0.05
– exhaust mm	–	–	–	–	0.35 ± 0.05

(*) With intervention of phase variator

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FUEL SUPPLY AND IGNITION

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
Supply	Electronic injection Multi Point	Electronic injection Multi Point	Electronic injection Multi Point	Electronic injection Multi Point	Direct injection with overboosting
Idle r.p.m.	880	840 ± 50	840 ± 50	840 ± 50	800 ± 30
Spark plugs (*)	NGK PFR6B + NGK PMR7A [NGK BKR6EKPA +] [NGK PMR7A]	NGK PFR6B + NGK PMR7A [NGK BKR6EKPA +] [NGK PMR7A]	NGK PFR6B + NGK PMR7A [NGK BKR6EKPA +] [NGK PMR7A]	NGK PFR6B + NGK PMR7A [NGK BKR6EKPA +] [NGK PMR7A]	–
Replace every	100.000 km	100.000 km	100.000 km	100.000 km	–
Firing order	1-3-4-2	1-3-4-2	1-3-4-2	1-3-4-2	–
Injection order	–	–	–	–	1-3-4-2


(*) there are two different spark plugs, one of each type, per cylinder
[] alternative




Alterations or repairs to the supply system not carried out correctly or without taking account of the technical specifications of the system, may cause abnormal functioning with the risk of fire.

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TRANSMISSION

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
Gearbox	Five forward gears + reverse with synchronizers for forward speeds				
Clutch	Dry single disk with hydraulic operation				
Drive	Front	Front	Front	Front	Front

TRANSMISSION RATIOS


	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
1st gear	3.909	3.909	3.909	3.545	3.800
2nd gear	2.238	2.238	2.238	2.238	2.235
3rd gear	1.520	1.520	1.520	1.520	1.360
4th gear	1.156	1.156	1.156	1.156	0.971
5th gear	0.919	0.971	0.971	0.946	0.763
Reverse	3.909	3.909	3.909	3.909	3.545

DIFFERENTIAL

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
Differential final drive pair	3.866	3.562	3.562	3.562	3.176
Number of teeth	15/58	16/57	16/57	16/57	17/54

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BRAKES

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
Service brakes	front rear Disk Drum	Disk Drum	Disk Disk	Disk Disk	Disk Drum
Handbrake	Controlled by hand lever operating rear brakes				

Servobrake. Electric control with pad wear indicator.
Environment-friendly linings. For cars fitted with ABS system
(optional for versions/markets where applicable) and electronic brake distributor (EBD)




Water, ice and salt on the roads can deposit on the brake disks, reducing the braking action the first time they are used.



Take care when fitting additional spoilers, different alloy wheels and wheel caps; they may reduce ventilation of the brakes, thus their efficiency during violent and repeated braking conditions, or on long downhill slopes.

SUSPENSION

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK		1.9 JTD
Front	McPherson type to independent wheels, with lower wishbones, telescopic struts, helical springs and stabiliser bar				
Rear	to independent wheels, with tension arms, helical springs, shock absorbers separated from the springs and stabiliser bar				

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STEERING

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☼	1.9 JTD
Type	Rack and pinion Hydraulic power steering with liquid reservoir in engine compartment				
Turning radius (between pavements)	10.5 m	10.5 m	11 m	11 m	10.5 m



Do not push on the power steering stopper with the engine running for more than 15 seconds consecutively; this produces noise and may damage the system.

WHEEL GEOMETRY

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☼	1.9 JTD
Front wheels – toe-in	-1 ± 1 mm	(0 ± 1 mm)*	0 ± 1 mm		-1 ± 1 mm

The values refer to the vehicle in running order

(*) For sports version (for versions/markets where applicable).

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TYRES (TUBELESS)

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☼	1.9 JTD
Rim size (steel)	5J x 14"	5J x 14"	6J x 15"	–	5J x 14"
(alloy)	5J x 14" (6J x 15")*	5J x 14" (6J x 15")*	6J x 15" (6J x 15")*	6J x 15"	5J x 14" (6J x 15")*
Tyres (for steel wheels)	185/60 R14" 82H PIRELLI P6000 MICHELIN MXV-3A FIRESTONE FH690 GOODYEAR NCT2	185/60 R14" 82H PIRELLI P6000 MICHELIN MXV-3A FIRESTONE FH690 GOODYEAR NCT2	195/55 R15" 84V PIRELLI P6000 GOODYEAR EAGLE NCT3 MICHELIN SXGT	–	185/60 R14" 82H PIRELLI P6000 MICHELIN MXV-3A FIRESTONE FH690 GOODYEAR NCT2
(for alloy wheels)	185/60 R14" 82H PIRELLI P6000 MICHELIN MXV-3A FIRESTONE FH690 GOODYEAR NCT2	185/60 R14" 82H PIRELLI P6000 MICHELIN MXV-3A FIRESTONE FH690 GOODYEAR NCT2	195/55 R15" 84V PIRELLI P6000 GOODYEAR EAGLE NCT3 MICHELIN SXGT	195/55 R15" 84V PIRELLI P6000 GOODYEAR EAGLE NCT3 MICHELIN SXGT	185/60 R14" 82H PIRELLI P6000 MICHELIN MXV-3A FIRESTONE FH690 GOODYEAR NCT2
	195/55 R15" 84V* PIRELLI P6000 MICHELIN SXGT GOODYEAR EAGLE NCT3	195/55 R15" 84V* PIRELLI P6000 MICHELIN SXGT GOODYEAR EAGLE NCT3	195/55 R15" 84V* PIRELLI P6000 GOODYEAR EAGLE NCT3 MICHELIN SXGT	–	195/55 R15" 84V* PIRELLI P6000 MICHELIN SXGT GOODYEAR EAGLE NCT3
Tyre pressure cold in bar (kg/cm ²)					
– reduced load (2 occupants)	Front 2,2 Rear 2	Front 2,2 Rear 2	Front 2,2 Rear 2	Front 2,3 Rear 2,1	Front 2,2 Rear 2
– full load	Front 2,5 Rear 2,5	Front 2,5 Rear 2,5	Front 2,5 Rear 2,5	Front 2,5 Rear 2,5	Front 2,5 Rear 2,5

(*) For sports version (for versions/markets where applicable).

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	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	✿	1.9 JTD
Spare wheel (compact type)					
Steel rim	4J x 15"	4J x 15"	4J x 15"	4J x 15"	4J x 15"
Alloy rim	4.00B x 15"	4.00B x 15"	4.00B x 15"	4.00B x 15"	4.00B x 15"
Tyre size	115/70 R15" 90M	115/70 R15" 90M	115/70 R15" 90M	115/70 R15" 90M	115/70 R15" 90M
Pressure in bar (kg/cm ²)	4.2	4.2	4.2	4.2	4.2

Note: The vehicles are fitted with tubeless tyres. See chapter "Getting the best out of your car" for indications concerning tyres in general and the specific recommendations for tubeless tyres. When replacing tyres and/or rims maintain the original rim/tyre match.

Warnings: Tyre pressure should be increased by 0.3 bars when driving at sustained high speed
Do not use inner tubes with tubeless tyres.



The specified dimensions remaining unchanged, for driving safety the car must be fitted with tyres of the same brand and type on all wheels.

ELECTRICAL SYSTEM

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	✿	1.9 JTD
Operating voltage	12 volt	12 volt	12 volt	12 volt	12 volt
Battery capacity	45 Ah ÷ 50 Ah (60 Ah)* (with climate control system)	45 Ah ÷ 50 Ah (60 Ah)* (with climate control system)	45 Ah ÷ 50 Ah (60 Ah)* (with climate control system)	45 Ah ÷ 50 Ah (with climate control system)	60 Ah
Alternator	14 V - 75 A ÷ 14 V - 85 A (with climate control system)	14 V - 75 A ÷ 14 V - 85 A (with climate control system)	14 V - 75 A ÷ 14 V - 85 A (with climate control system)	14 V - 75 A ÷ 14 V - 85 A (with climate control system)	14 V - 85 A ÷ 14 V - 100 A (with climate control system)

(*) For versions/markets where applicable




Alterations or repairs to the electric system carried out incorrectly and without taking account of the system specifications, may cause abnormal functioning with the risk of fire.

PERFORMANCE

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☼	1.9 JTD
Maximum speed	185 km/h	195 km/h	207 km/h	211 km/h	185 km/h
Acceleration from 0-100 km/h	11.2 s	10.2 s	9.1 s	8.3 s	10.4 s
Kilometer from stationary	32.8 s	31.3 s	30 s	29.3 s	32.7 s

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WEIGHTS

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☼	1.9 JTD
Kerb weight	1135 kg	1165 kg	1195 kg	1240 kg	1210 kg
Max permitted weight (*)	1655 kg	1685 kg	1715 kg	1765 kg	1730 kg
Payload including driver (**)	520 kg	520 kg	520 kg	525 kg	520 kg
Towable weight	1100 kg	1200 kg	1200 kg	1200 kg	1300 kg
Towable weight Certified only for 	800 kg	900 kg	900 kg	1200 kg	1300 kg

(*) Weight not to be exceeded: the driver must arrange the goods in the luggage compartment and/or load surface so that they comply with these limits.

(**) If special equipment is fitted (sunroof, tow hitch etc.) the unladen weight increases, thus reducing the payload as specified in the maximum weight allowed.

LUGGAGE COMPARTMENT

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	☼	1.9 JTD
Capacity (litres)					
with rear seat back raised	320	320	320	320	320
with rear seat back folded	1130	1130	1130	1130	1130

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DIMENSIONS

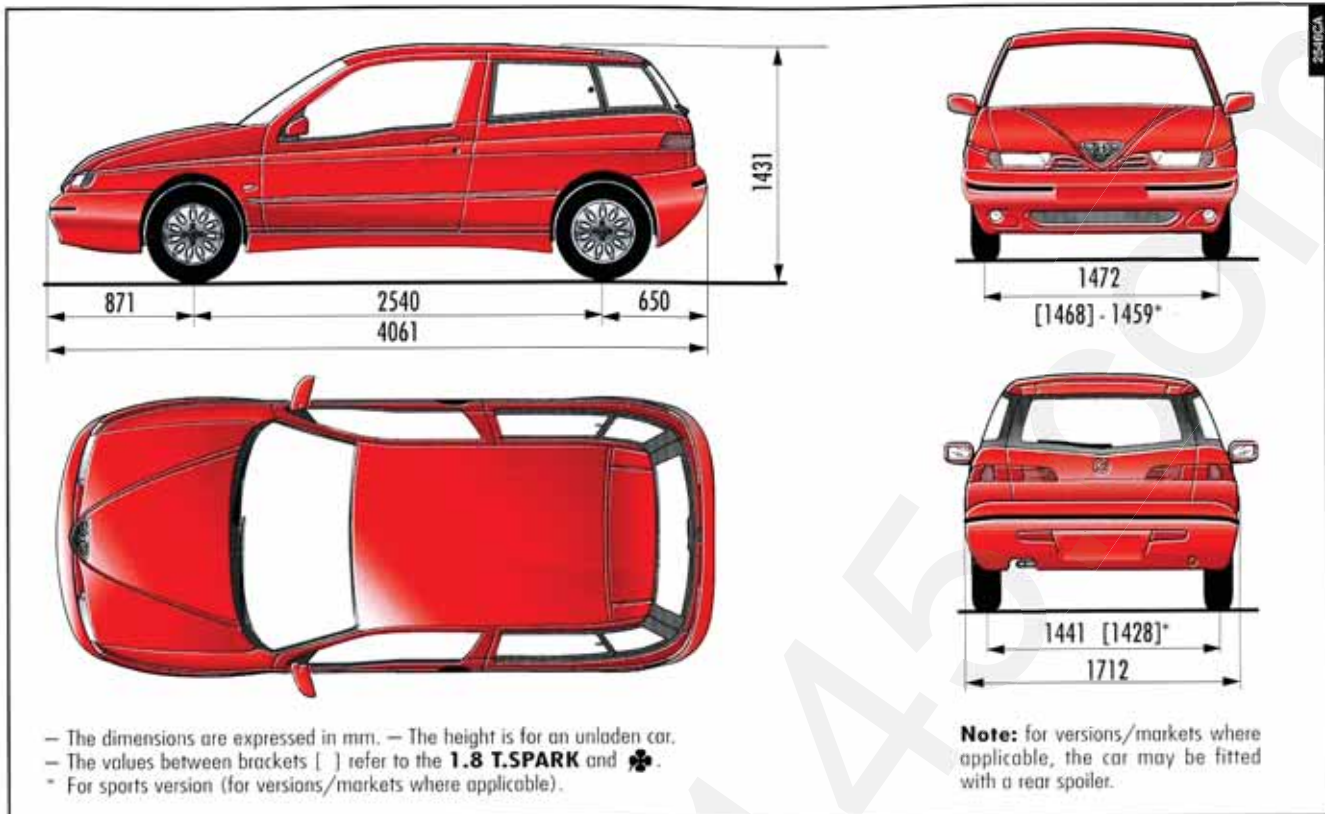


fig. 4

SERVICING

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	♣	1.9 JTD
Type of fuel	Four star unleaded petrol with an octane number (R.O.N.) above 95				Fuel oil
Capacity of fuel tank	51 litres	51 litres	61 litres	61 litres	61 litres
Reserve of	5÷8 litres	5÷8 litres	5÷8 litres	5÷8 litres	5÷8 litres
Engine oil (quantity for periodical substitution)	4.4 litres	4.4 litres	4.4 litres	4.4 litres	4.2 litres
Gearbox/differential oil	2 litres	2 litres	2 litres	2 litres	2 litres
Capacity of engine cooling circuit	8.4 litres	8.4 litres	8.4 litres	8.3 litres	6.1 litres
Windscreen washer fluid reservoir capacity	2.5 litres	2.5 litres	2.5 litres	2.5 litres	2.5 litres

ENGINE OIL CONSUMPTION

Consumption depends on how the car is driven and on the conditions of use.

Oil consumption of up to one litre every 1,000 km is permissible.

During the initial period of use of the vehicle the engine is settling, therefore engine oil consumption may be considered stabilised only after the first 5,000 - 6,000 km.

RECOMMENDED FLUIDS AND LUBRICANTS

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	♣	1.9 JTD
Engine	20K – SAE 10W40 ACEA A3-96, API SJ (*)				TURBODIESEL SAE 10W40 - (ACEA B3-96, API CD)
Gearbox/differential	TUTELA ZC 75 SYNTH – SAE 75W90, API GL 5				
Power steering	TUTELA GI/A (G.M. DEXRON II)				
Hydraulic brake and clutch fluid	Alfa Romeo BRAKE FLUID SUPER DOT 4 (DOT 4, SAE J1703 F)				
Engine coolant fluid	Alfa Romeo Climaf fluid Super Permanent –40 °C				

(*) For sports type driving Alfa Romeo recommends Racing 10W60 entirely synthetic oil.

For use under particularly harsh weather conditions, Performer 5W30, ACEA A1, API SJ engine oil is recommended.

Warning: Do not top up with a different engine oil than the already existing one.

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FUEL CONSUMPTION

CONSUMPTION ACCORDING TO EEC STANDARD 93/116 (litres x 100 km)

Fuel consumption values given in the tables were measured in accordance with the methodology described by the Directive 93/116/CE in force from January 1996. This Directive prescribes realistic fuel consumption measurement procedures based on everyday conditions of vehicle use.

Fuel consumption measurement procedures consist in:

- an urban cycle which is started with a cold start and simulates driving in built-up areas;
- an extraurban cycle characterised by frequent acceleration in all gears corresponding to normal use of the vehicle in an extraurban context; the driving speed varies from 0 to 120 kph;
- average combined consumption is obtained by taking about 37% of the urban cycle and about 63% of the extra-urban cycle.

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	♣	1.9 JTD
Consumption on urban route	10.7	11.1	11.5	12.4	7.6
Consumption on extraurban route	6.3	6.5	6.6	6.6	4.7
Consumption on mixed route	7.9	8.2	8.4	8.7	5.7

Note: Fuel consumption is influenced by factors such as road, traffic, and weather conditions, driving style, overall vehicle conditions, trim, fittings and accessories, vehicle load, roof racks, and other conditions which can effect vehicle aerodynamics. Actual fuel consumption may vary from the values measured (see paragraph "Economy and environment-friendly driving").

CO₂ EMISSION AT THE EXHAUST (g/km)

	1.4 T.SPARK	1.6 T.SPARK	1.8 T.SPARK	♣	1.9 JTD
Max value	187	195	200	210	152

The CO₂ emission levels (g/km) are measured on a mean combined cycle.

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