

PUNTO eMANUAL

Introduction & Technical Data

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P3M01BA01

3/4 front view of vehicle with hood down



P3M001BA2

3/4 rear view of vehicle with hood down

Introduction

Car exterior

00.0

Punto Cabrio





P3M02BA01

3/4 front view of vehicle with hood up




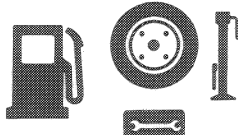






P3M02BA02

3/4 rear view of vehicle with hood up

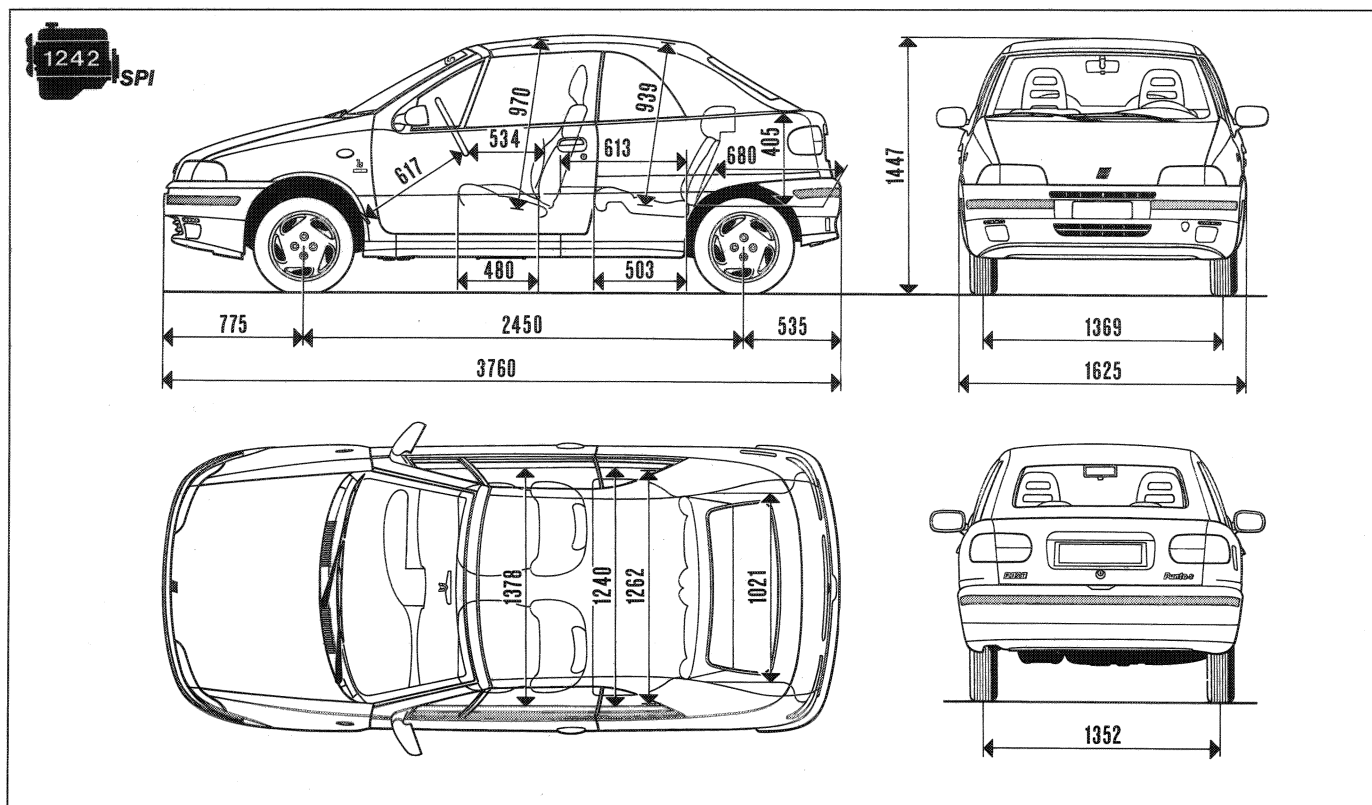
	CHASSIS	ENGINE	VERSION	VERSION	GEARBOX
					5 speed
	ZFA 176.000	176 A7.000	156 AB 52C	Cabrio S	●
			176 BB 52C (*)		●
		176 A9.000	156 AL 52C	Cabrio ELX	●
			176 BL 52C (*)		●

(*) For the French market

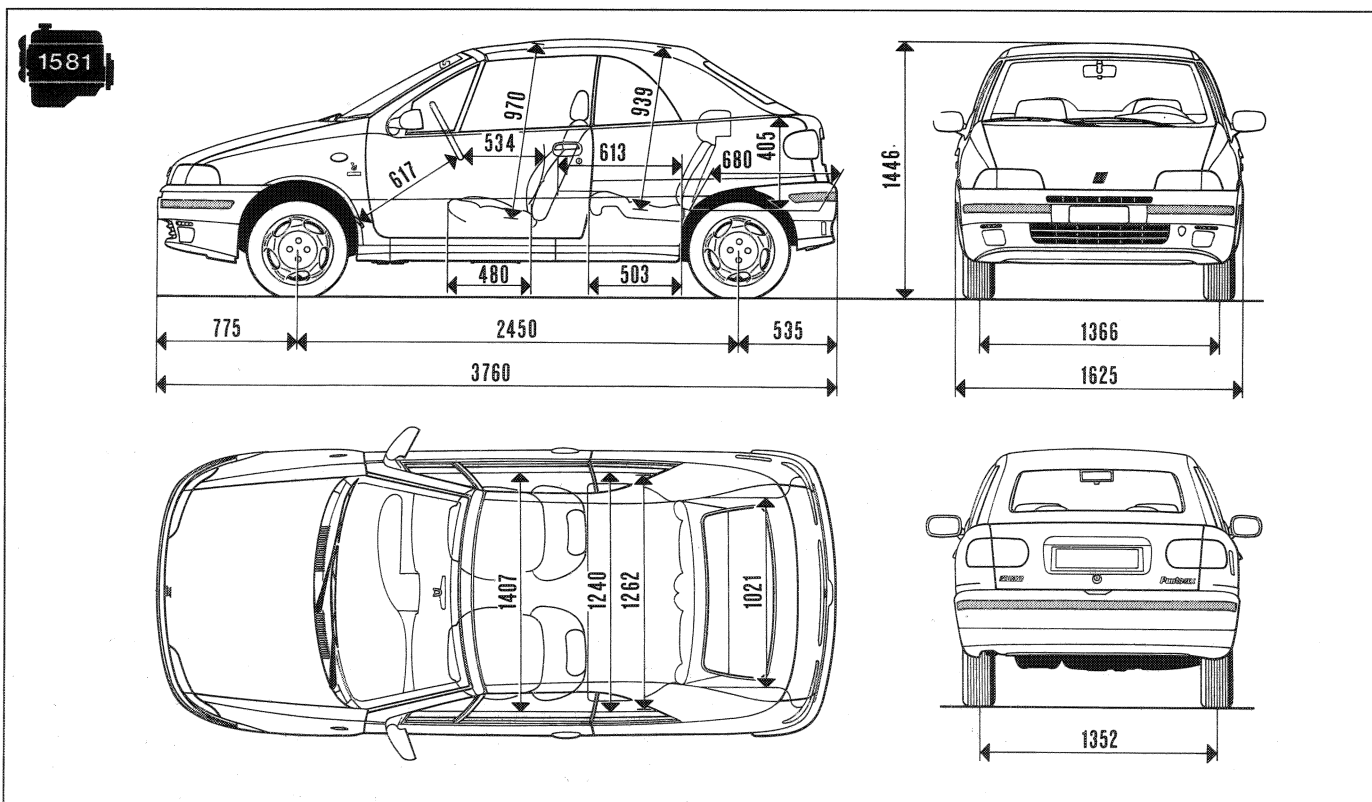
WEIGHTS (in kg)	ENGINE		
		960	1070
 + 360 = 		1320	1430
Maximum permissible loads on the axles ■ 		740	820
		680	700
Maximum load on the towing hook (trailer with braking system)		70	
	Without braking system	400	
	With braking system	1000	

■ Loads which should never be exceeded

NOTE FOR VERSIONS WITH ACCESSORIES: *If special equipment is fitted (non standard air conditioner, sun roof, trailer towing device), the empty weight increases and therefore the carrying capacity may decrease in relation to the maximum permissible loads.*



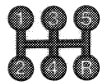
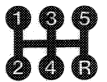


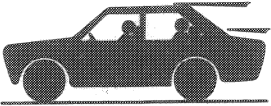
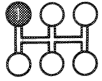
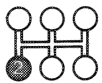
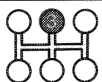
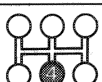
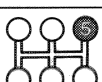
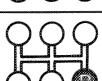
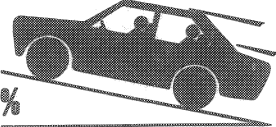

P3M04BA01



P3M04BA02

Luggage compartment capacity (V.D.A. standards): in normal conditions: 200 dm³; extended: 440 dm³
The height refers to an unladen car













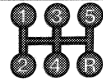


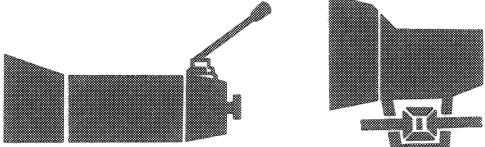


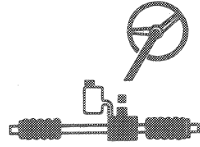

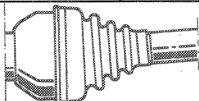

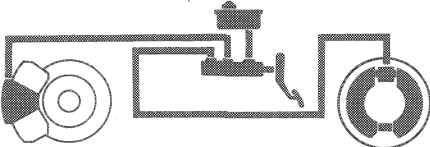



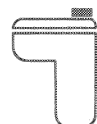



ENGINE		
GEARBOX		

<p>Speed kph (average load)</p> 		38 (43 ●)	43 (44 ●)
		68 (78 ●)	78 (80 ●)
		100 (118 ●)	113 (129 ●)
		132 (150 ●)	149 (170 ●)
		150 (141 ●)	170 (160 ●)
		38 (43 ●)	43 (44 ●)
<p>Maximum gradient fully laden</p> 		37	40
<p>EEC fuel consumption figures (litres/100 km)</p> 	Urban cycle (A)	8 (7,7 ●)	10,1 (10 ●)
	Constant speed 90 km/h (B)	5,4 (5,1 ●)	6,5 (6,3 ●)
	Constant speed 120 km/h (C)	7,2 (7 ●)	8,6 (8,1 ●)
	Average consumption (CCMC proposal) A + B + C 3	6,9 (6,6 ●)	8,4 (8,1 ●)

The fuel consumption figures in the table have been defined in the course of official tests and in accordance with procedures laid down by EEC regulations. In description the bench tests measure simulated urban cycle consumption whilst consumption at constant speeds of 90 and 120 km/h is measured directly on a flat, dry road and in equivalent bench tests. These figures can provide useful information for a comparison between different vehicles. Traffic conditions, driving styles, atmospheric conditions and the general state of the vehicle can in practice lead to fuel consumption figures which differ from those established using the above mentioned legal procedures.

(●) For the French market

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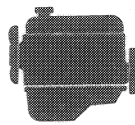
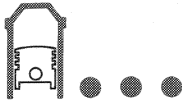
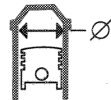
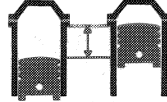
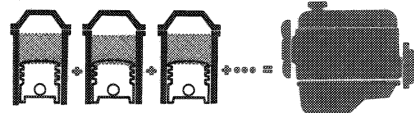
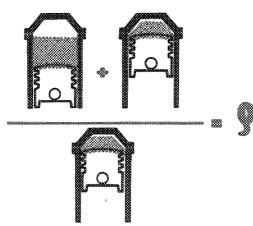
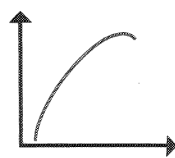
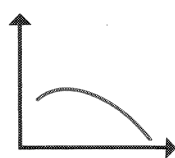
Capacities		Unit		Quantity	
				dm ³ (l)	(kg)
	Petrol ≥ O.R. 95 (●)			47	—
 50% + H ₂ O (▲) 			1242	4,6	—
		Total capacity of cooling system	1581	5,9	—
Petrol engines:  SELENIA (SAE 15 W/40) Diesel engines  SELENIA Turbo Diesel (SAE 15 W/40)	Total capacity 		1242	3,85	3,5
			1581	4,15	3,75
	Partial capacity (periodic replacement) 		1242	3,74 3,3*	3,4 3*
			1581	3,63 3,3*	3,3 3*
 a = TUTELA ZC 80S   b = TUTELA GI/A 			a	2,37	2,15
			b	—	—
 a = TUTELA GI/A  b = K 854	a		a	—	0,65
			b	—	0,126
 c = TUTELA MRM2	c		c	—	0,080
 TUTELA TOP 4 (270°C)	 Total capacity		without ABS	0,4	—
			with ABS	0,5	—
 +  AREXONS		3%	 + 	2,5 (7 h/lm wsh)	—
		~ - 10°C 50%			
		~ - 20°C 100%			

(▲) Distilled water

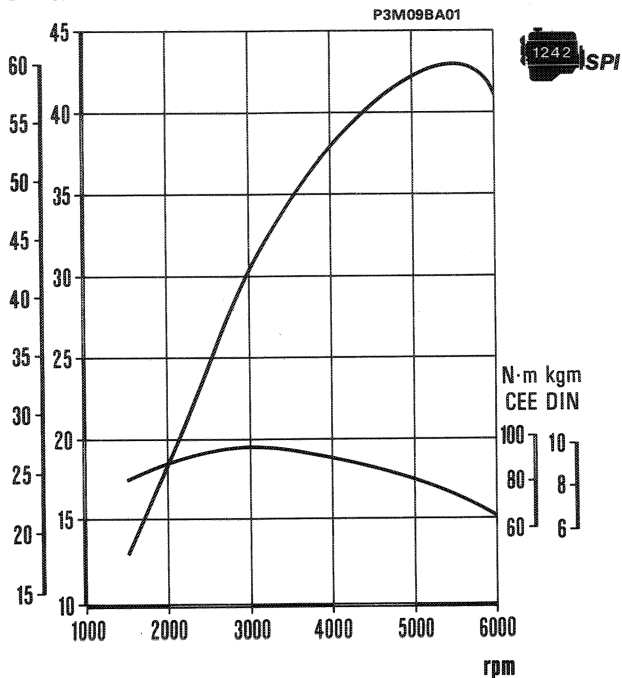
(●) Unleaded petrol only must be used

* Engine sump only

Name of product	Description International designation	Usage
SELENIA SAE 15 W/40	Semi-synthetic multigrade engine oil. Exceeds specifications API SG, CCMC-G4 and UNI 20153	Temperature - 15°C ÷ 40°C
VS MAX SAE 15 W/40	Mineral based multigrade engine oil. Exceeds specifications API SG, CCMC-G4 and UNI 20153	Temperature - 15°C ÷ 40°C
SELENIA Turbo Diesel SAE 15 W/40	Semi-synthetic, multigrade engine oil. Exceeds specifications API CD, CCMC-PD2, UNI 20153	Temperature - 15°C ÷ 40°C
VS MAX Diesel SAE 15 W/40	Multigrade, mineral based engine oil. Exceeds specifications API CD, CCMC and UNI 20153	Temperature - 15°C ÷ 40°C
TUTELA ZC 80S	SAE 80W EP oil. Satisfies standards MIL-L-2105 and API GL4	Manual gearboxes and differentials
TUTELA ZC 90	Non EP SAE 80 W/90 oil, for manual gearboxes, containing anti-wear additives.	Gearboxes and non hypoid differentials
TUTELA W 90/M DA	Special SAE 80 W/90 EP oil for normal and self-locking differentials. Satisfies standards MIL-L-2105 D and API GL5	Hypoid differentials Self-locking differentials. Steering boxes
TUTELA GI/A	"DEXRON II" type oil for automatic transmissions.	Automatic gearboxes Power assisted steering
TUTELA CVT Universal	Oil for continuous variation automatic transmissions.	Continuous variation automatic transmissions
TUTELA JOTA 1	Lithium soap based grease, consistency NLGI = 1	Greasing the vehicle except for components particularly exposed to water requiring special greases
TUTELA MRM2	Water-repellant, lithium soap based grease containing molybdenum disulphide, consistency NLGI = 2	Constant velocity joints
TUTELA MR3	Lithium soap based grease, consistency NLGI= 3	Wheel hub bearings, st/rod, various comps
TUTELA PLUS 3 (240 °C)	Synthetic fluid, F.M.V.S.S. n° 116 DOT 3 ISO 4925, CUNA NC 956-01	Hyd. brakes & hydraulically operated clutches
TUTELA TOP 4 (270 °C)	Synthetic fluid, F.M.V.S.S. n° 116 DOT 4 ISO 4925, CUNA NC 956-01	Hyd. brakes & hydraulically op. clutches
K 854	Lithium soap based grease, consistency NLGI = 000, containing molybdenum disulphide	Rack and pinion steering boxes
SP 349	Special grease compatible with brake fluid	Load proportioning valve Load proportioning valve rod bush
Arexons DP1	Mixture of alcohol, H2O & surf. act. agents CUNA NC 956-11	To be used neat or diluted in windscreen washer systems
Paraflu¹¹	Mono-ethylene glycol based anti-freeze for cooling system, CUNA NC 596 - 16	Cooling circuits. Percentage to be used 50% up to - 35°C
Diesel Mix Arexons	Additive for diesel fuel with protective action for diesel engines	To be mixed with diesel (25 cc per 10 litres)

CHARACTERISTICS			
	Cycle	OTTO 4 stroke	
	Timing	single overhead cam	
	Fuel system type	I.A.W. WEBER-MARELLI electronic integrated injection/ignition	MPI GM electronic integrated injection/ignition
	Number of cylinders	4 in line	
	Cylinder liner (bore) mm	70,8	86,4
	Stroke mm	78,86	67,4
	Capacity cc	1242	1581
	Compression ratio	9,6	9,5 ^{+0,1} _{-0,2}
	Max power	kW (ECE) (CV)(ECE)	43 (60)
		rpm	5500
	Max torque	daNm (ECE) (kgm)(ECE)	9,6 (10)
		rpm	3000

CV kW
DIN CEE



Typical power curves obtained by EEC method

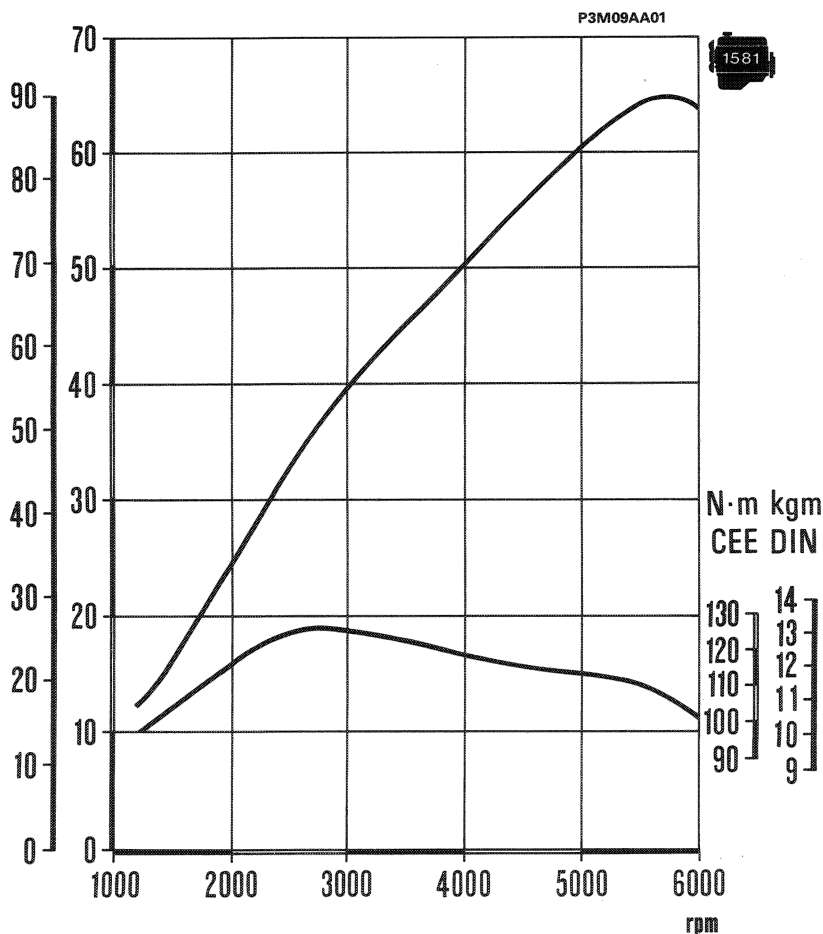
The power and torque curves illustrated can be obtained with the engine overhauled and run in (50 hours of operation) without a fan, with a silencer and air filter fitted at sea level.






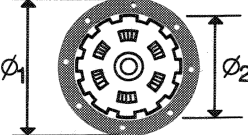
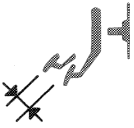
Bench test of overhauled engine



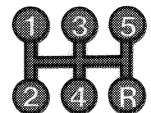
During the bench test for the overhauled engines, it is not advisable to run the engines at maximum speed but to stick to the figures given in the table; complete the running in of the engines in the actual cars.

Test speed (rpm)	Time in minutes	Load on the brakes
800 ÷ 1000	10'	no load
1500	10'	no load
2000	10'	no load

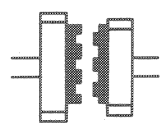


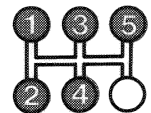
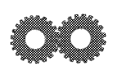

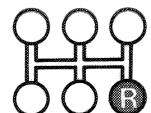

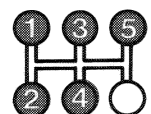

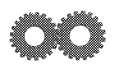






CV kW
DIN CEE






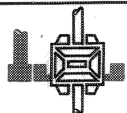

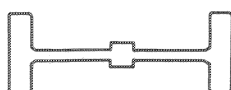






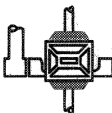



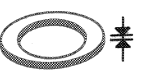

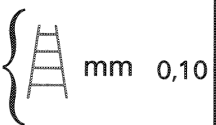
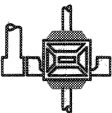
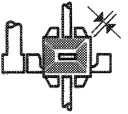

		 	
		Values in mm	
Type		 dry, single plate	
 Operating mechanism		 diaphragm spring	
Spring loading	daN	350	400
 Lining	Ø ₁	181,5	190
	Ø ₂	127	134
 Distance between pedal in end of travel position and rest position		140 ± 5	
Clutch release		mechanical	

GEARBOX

		Tipo	C.514.5.10	C.514.5.13
 Synchronizers	spring ring (Porsche type)		-	
	bauk ring type			
 Gears	straight toothed			
	helical toothed			
 Gear ratios			3,909	3,909
			2,157	2,157
			1,480	1,480 (1,345 ●)
			1,121	1,121 (0,974 ●)
			0,902	0,902 (0,766 ●)
			3,818	3,818

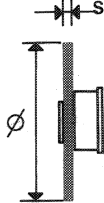

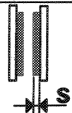


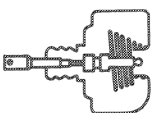
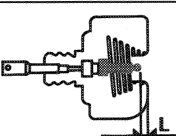
(●) For the French market

		 	
DIFFERENTIAL			
 	Ratio crown wheel & pinion reduction	4,071 (14/57) 3.563 ● (16,57 ●)	3,867 (15/58) 3.733 ● (15/56 ●)
 		15,913 (13,928 ●)	15,116 (14,592 ●)
		8,781 (7,685 ●)	8,341 (8,052 ●)
		6,025 (5,273 ●)	5,723 (5,021 ●)
		4,563 (3,994 ●)	4,335 (3,636 ●)
		3,672 (3,214 ●)	3,488 (2,859 ●)
		15,543 (13,603 ●)	14,764 (14,252 ●)
			
Differential internal casing bearing		conical roller bearing	
			
Adjustment of bearing pre-loading		by shims	
  		2,00 ÷ 3,00	
Thickness of shims			
		mm	bearings not pre-loaded = 0,12 bearings pre-loaded (350 daN) = 0,08
		mm	≤ 0,10
Clearance btwn planet/satellite gears			
		no adjustment is carried out	
Adjustment of clearance btwn planet/sat. gears			



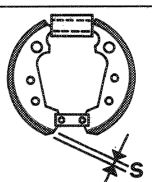
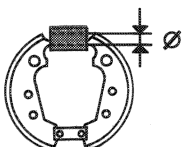
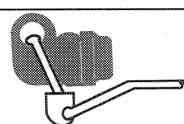
(●) For the French market



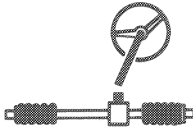
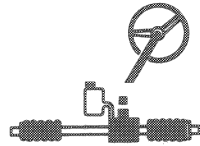

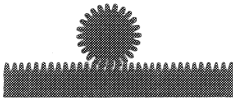
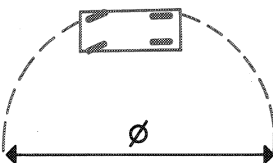
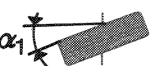
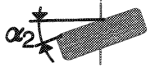
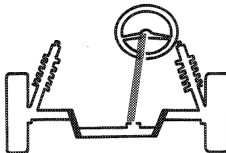

	
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FRONT BRAKES

		Values in mm	
 <p>Disc</p> <p>ϕ</p> <p>s</p> <p>s {  allowed</p>	ϕ	240	257
		10,80 ÷ 11,10	11,80 ÷ 12,10
		9,55	10,55
		9,20	10,20
 <p>Brake pads</p> <p>s < allowed</p>		1,5	
 <p>Caliper</p> <p>ϕ</p>	ϕ	48	
 <p>Master cylinder (pump)</p> <p>ϕ</p>	ϕ	20,65 (13/16")	
 <p>Servo brake</p>		Isovac 8" hydro-pneumatic vacuum servo acting on all four wheels	
 <p>Distance of hydraulic piston push rod from master cylinder support plate</p> <p>L</p>	L	22,45 ÷ 22,65	

REAR BRAKES

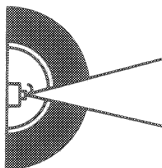
 <p>Drum</p> <p>ϕ</p> <p>ϕ {  allowed</p>		180,00 ÷ 180,25
		180,85
		181,35
 <p>Shoes</p> <p>s < allowed</p>		1,5
 <p>Wheel cylinders</p> <p>ϕ</p>	ϕ	20,65 (13/16")
 <p>Pressure adjusters</p>		acting on the rear wheels
Ratio (reduction)		0,25

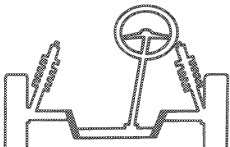


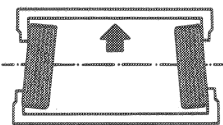
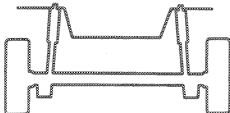

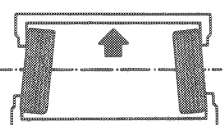
ENGINE			
Type		 rack and pinion with variable ratio	 rack and pinion power assisted
Ratio	 no. of turns lock to lock	4,25	about 2.9
	 rack travel	137 mm	
 Minimum turning circle		9,7 m	
Steering angle	 outer wheel α_1	33°14'	33°46'
	 inner wheel α_2	39°24'	38°02'
 Steering col.		 with 2 universal joints	



unladen car (*)

WHEEL GEOMETRY



 <p>Front suspension</p>	camber (**)		- 25' ± 30'	- 15' ± 30'
	caster (**)		1° 20' ± 30'	2° 50' ± 30'
	toe in		0 ± 1 mm	
	front wheel offset ▲		0°	
 <p>Rear rear</p>	camber (**)		- 25' ± 30'	- 20' ± 30'
	toe in (**)		1 ± 2 mm	
	rear wheel thrust angle ▲		0°	

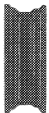
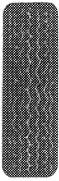
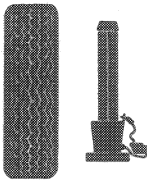


(*) With tyres inflated to the correct pressure and vehicle in running order

(**) Angles cannot be adjusted

(▲) Angular values, which cannot be adjusted, used for the correct alignment of the vehicle

Wheels

00.44

ENGINE	 Wheel rim pressed steel, type	*  Tubeless tyre radial, type	 Tyre inflation pressure			
			Front		Rear	
			average load	full load	average load	full load
 1242 SPI	5.0 B x 13"	155/70 R 13"	2 bar	2,2 bar	1,9 bar	2,2 bar
 1581	5.0 B x 14"	175/60 R 14"	2,1 bar	2,2 bar	2 bar	2,2 bar
Spare wheel	4.5 B x 13" 4.5 B x 14"	135/80 B 13" 135/80 B 14"	2,8 bar			

NOTE The spare wheel should only be used when strictly necessary to reach a service station where it can be repaired. Do not exceed the speed of 80 kph.

* Air chambers should not be used with tubeless tyres.



Front suspension independent, Mac Pherson type with track control arms connected by two flexible bushes to a cross member.

Offset coil springs and double acting hydraulic shock absorbers.

For-life joints.

Torsion and anti-roll bar

Coil springs

				
Coil springs				
Diameter of wire	mm		12,9±0,05	11,7±0,1
Number of turns			3,25	5,25
Direction of coil			clockwise	
Height of spring released	mm		328	435
Height of spring under a load of:	{	275±10 daN mm	213	-
		310±10 daN mm	-	210,5
The springs are subdivided into two categories, identifiable by a mark:				
yellow (1) for those under a load of:	{	275±10 daN height of mm	> 213	-
		310±10 daN height of mm	-	> 210,5
green (1) for those under a load of:	{	275±10 daN height of mm	≤ 213	-
		310±10 daN height of mm	-	≤ 210,5

(1) Springs of the same category must be fitted.

Shock absorbers

Type:		telescopic, hydraulic, double acting	
Travel (start of damping action)	mm	171	161
Maximum extension	mm	466 ± 2	



Rear suspension

00.44

Rear suspension independent, cast iron track control arms.
Coil springs and gas shock absorbers with vulcanized bushes.
Anti-roll torsion bar.

Auxiliary, rigid H frame made up of transverse tubular element and two pressed steel longitudinal side members welded to it.

Coil springs

			
Diameter of wire	mm	12,3±0,05	11,9±0,05
Number of turns		4,5	4,75
Direction of coil		clockwise	
Height of spring released	mm	264	277
Height of spring under a load of:	299±11 daN mm	185	-
	294±10 daN mm	-	185
The springs are subdivided into two categories, identifiable by a mark:			
yellow (1) for those under a load of:	299±11 daN height of mm	> 185	-
	294±10 daN height of mm	-	> 185
green (1) for those under a load of:	299±11 daN height of mm	≤ 185	-
	294±10 daN height of mm	-	≤ 185

(1) Springs of the same category must be fitted.

Shock absorbers

Type: telescopic, double acting		low pressure gas
Travel (start of damping action)	mm	88
Maximum extension	mm	300 ± 2



STARTER MOTOR	M. Marelli E80 - 12V - 1 kW	
ALTERNATOR	M. Marelli A115 I - 14V - 38/65A	
VOLTAGE REGULATOR	BUILT IN ELECTRONIC	
BATTERY	12V - 40Ah - 200A	
IGNITION SYSTEM	I.A.W. Weber-Marelli integrated electronic injection/ignition	M.P.O. G.M. integrated electronic injection/ignition
IGNITION COIL	M. Marelli BAE 800 AK	AC Rochester 1103905
SPARK PLUGS	Fiat/Lancia 9GYSSR Champion RC9YCC M. Marelli L7LCR	Fiat/Lancia 7GYSSR Champion RC7YCC