

Fiat Auto

Coupé Fiat

**Service
Manual**

FIAT

This manual contains the main instructions for the repair and maintenance operations for the **Coupé Fiat**.

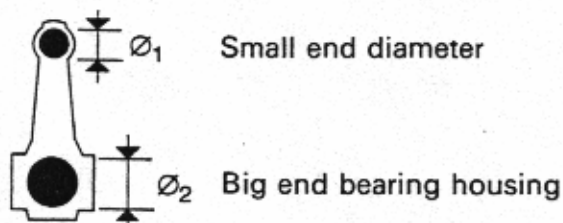
The section **INTRODUCTION AND TECHNICAL DATA (00.)** has the dual function of introducing the model and supporting the remaining part of the manual. This section includes the tables of technical data and specific information relating to the remaining sections of the manual.

The remaining sections (10. - 18. etc.) include the descriptions relating to the repair operations.

In this manual graphic representations and symbols are used in place of descriptions for mechanical components, operations or repair methods.

The use of colour for a component or part of one, serves to draw the operator's attention to the object to be measured or checked.

For example:



Tighten to torque

ENGINES Section 10 illustrates the operations of removing-refitting the power units, the operations on the vehicle and the various fuel, lubrication and cooling systems for each type of engine.

The procedure for overhauling engines, is published in a separate booklet under the following print no.:

1995 16v - 1995 16v turbo

504.578/08 and 504.589/09

GEARBOXES Section 21-27 illustrates the operations of removing and refitting the various gearboxes. The procedure for overhauling manual gearboxes at the bench is published in a separate booklet under the following print nos.:

Gearbox for 1995 16v:

505.023/03

Gearbox for 1995 16v turbo:

505.023/04

THIS PUBLICATION HAS BEEN PRODUCED IN A LOOSE LEAF FORMAT TO FACILITATE THE OPERATION OF UPDATING THE MODEL.

The **Coupé Fiat** is a three box vehicle with a load carrying bodywork, transversely mounted engine and front wheel drive



The **Coupé Fiat** is produced with 2 different engines in a Standard and Plus version.

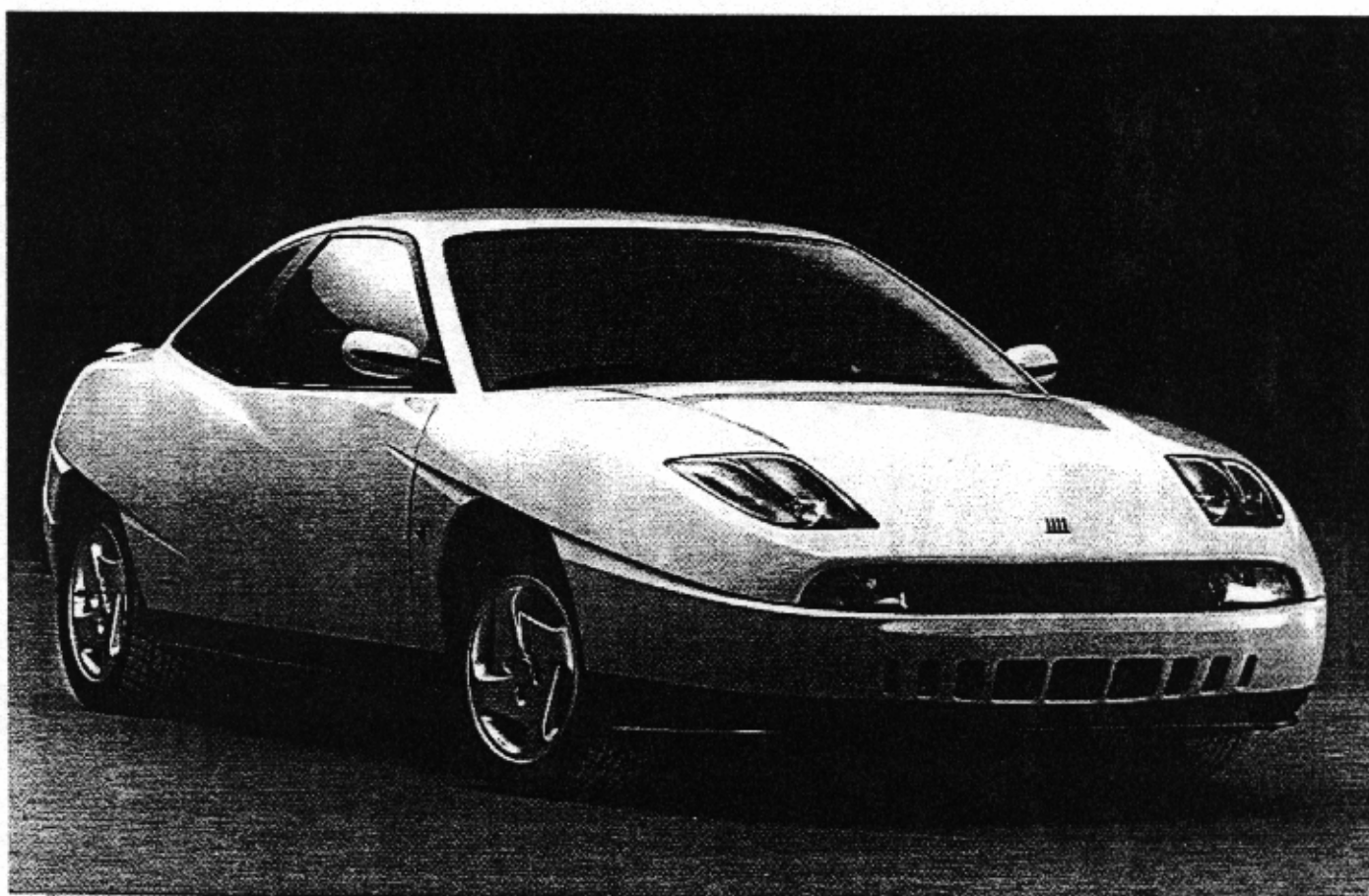
The **Coupé Fiat** is powered by a 1995 cc 4 cylinder in line engine with 4 valves per cylinder, has Weber-Marelli IAW integrated electronic injection/ignition and develops a power output of 102 kW (142 CV DIN) (bhp).

The **Coupé Fiat turbo** is powered by a 1995 cc 4 cylinder in line engine with 4 valves per cylinder, has Weber - Marelli IAW integrated electronic injection/ignition, is supercharged by a Garret T3 turbocharger and develops a power output of 140 kW (196 CV DIN) (bhp).

	Remove Disconnect
	Refitting Connect
	Dismantling Disassemble
	Refitting Composition
	Tighten to torque
	Tighten to torque plus angle
	Fully tighten
	Stake nut
	Adjustment Regulation
	Visual inspection Check
	Warning
	Lubricate Grease
	Replace Genuine spares
	Bleed braking system
	Work surface Machined surface
	Interference Force fit
	Distance to be measured Measurement - Check Thickness - Clearance
	Rolling torque

	Inlet		
	Exhaust		
	Operation		
	Tolerance Difference in weight		
	Pre-loading		
	Rotation		
	Compression ratio		
	Grades Classes		
	Oversize Greater than Maximum		Undersize Smaller than ... Idling
	Number of revs		
	Ratio		
	Pressure		
	Temperature		
	Temperature < 0°C Cold Winter		
	Temperature > 0°C Hot Summer		
	Windscreen wiper with electric washer pump		
	Rearscreen wiper with electric washer pump		
	Engine		

INTRODUCTION	page
- Car exterior	1
- Vehicle interior/exterior features	2
- Car interior features	3
- Identification data and location on vehicle	8
- Dimensions -Weights	9
- Performance - Fuel consumption	10
- Capacities	12
- Characteristics of Fiat Lubricant products	13
TECHNICAL DATA	
ENGINES  	
- Characteristics	14
- Typical curves	15
- Cylinder block/crankcase; crankshaft and associated components	16
- Cylinder head assembly and valve gear components	20
- Counter balance shafts	24
- Lubrication - Cooling system	26
- Cooling system - Fuel system	27
- Fuel system	29
- Supercharging	31
CLUTCH	32
GEARBOX AND DIFFERENTIAL	33
BRAKING SYSTEM	35
STEERING	36
WHEELS	37
FRONT SUSPENSION	39
REAR SUSPENSION	41
ELECTRICAL EQUIPMENT	43
- Starting	44
- Recharging	46
- Electronic injection/ignition	48
SPECIAL TOOLS	50
TIGHTENING TORQUES	58
MAINTENANCE	
- Planned maintenance programme	75
- Planned maintenance	76



P3N001A01

3/4 front view

Introduction

Car interior/exterior features

Coupé Fiat

00.0

VIEW OF VEHICLE SHOWING LAYOUT OF MECHANICAL COMPONENTS
(ENGINE ¹⁹⁹⁵ 16V turbo)

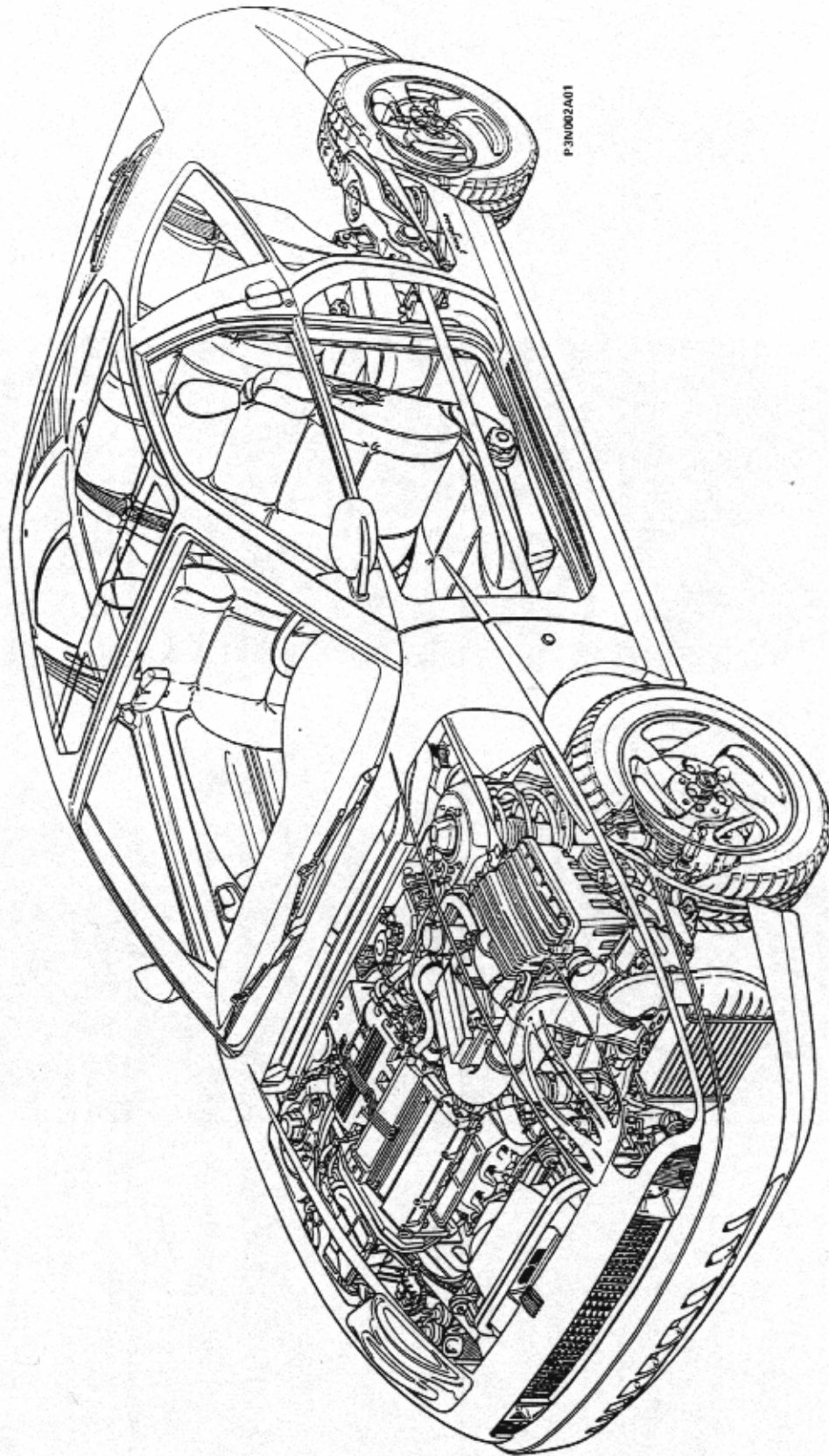
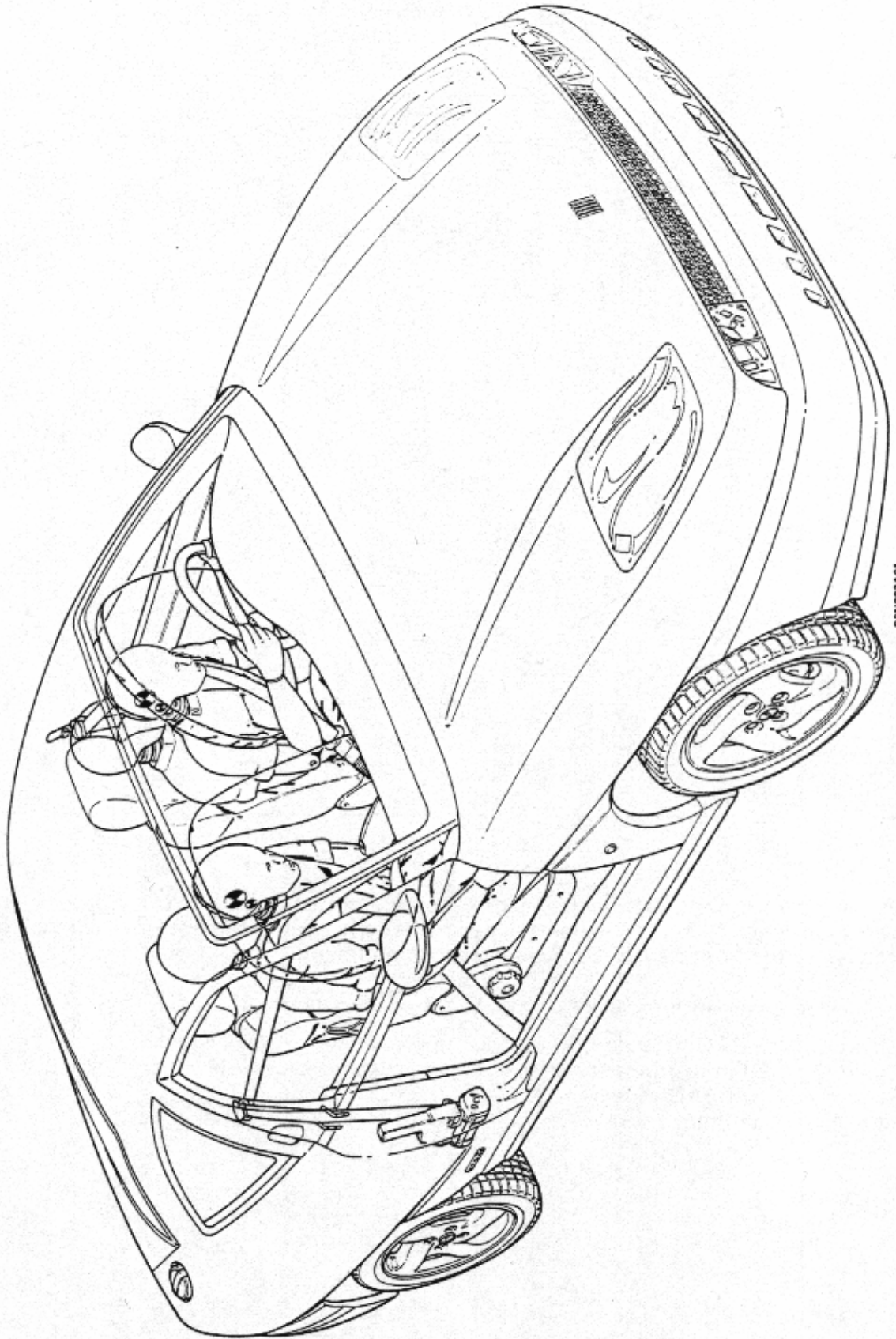
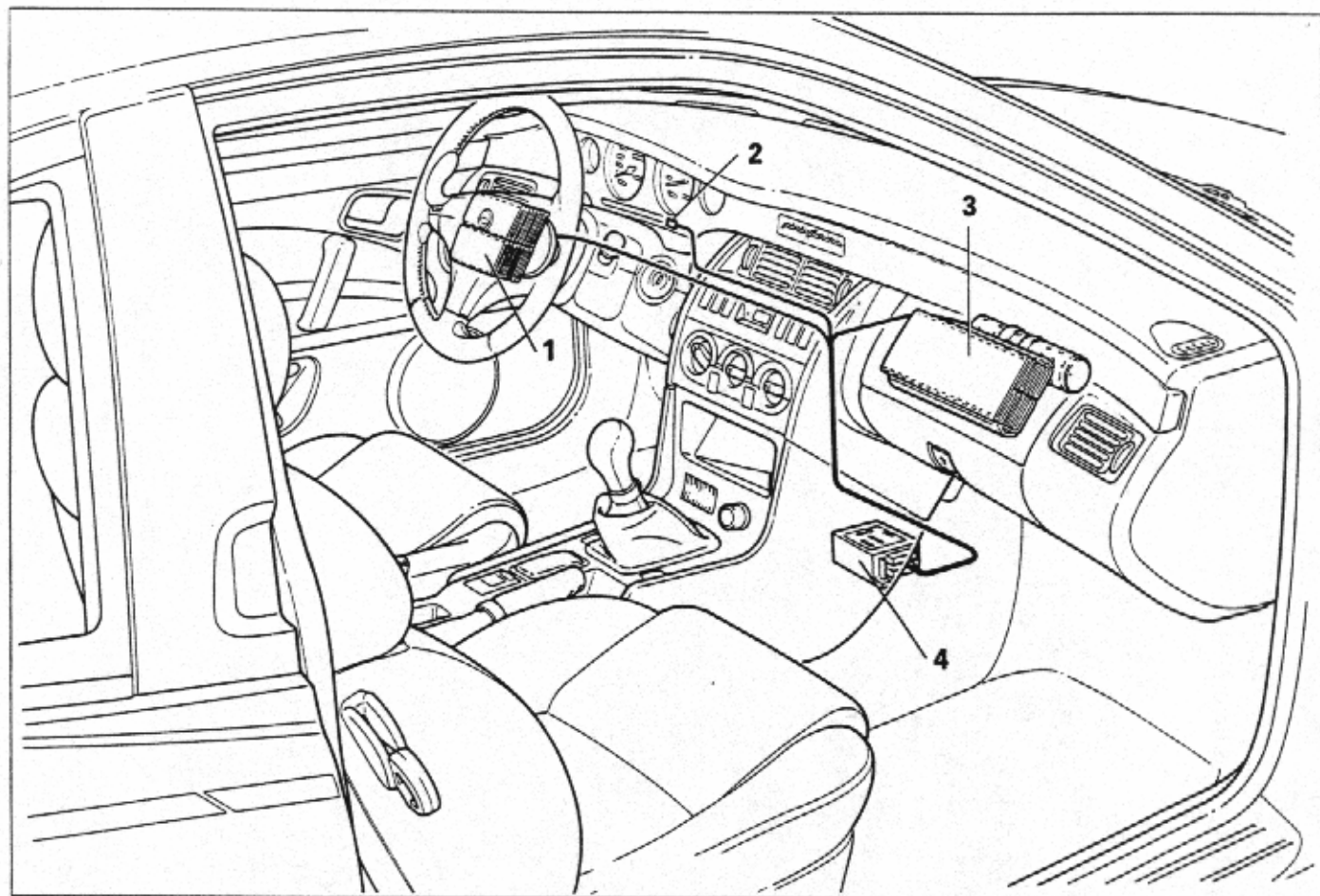


DIAGRAM SHOWING SEAT BELT PRE-TENSIONERS



P3N003A01

DIAGRAM SHOWING AIR BAG SYSTEM

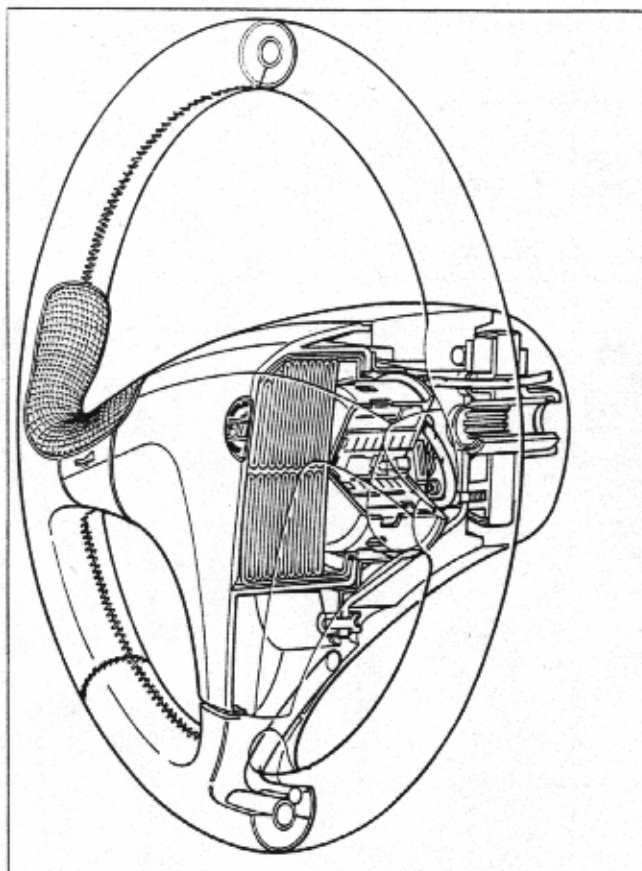


P3N004A01

The AIR BAG is a passive safety device made up of one or two cushions which automatically inflate if there is a frontal collision and place themselves between the body of the occupants in the front seats and the structures of the front part of the passenger compartment.

The main components of the AIR BAG system are as follows:

1. Driver's side AIR BAG module
2. Red warning light in instrument panel signalling system failure
3. Passenger side AIR BAG module
4. Electronic control unit



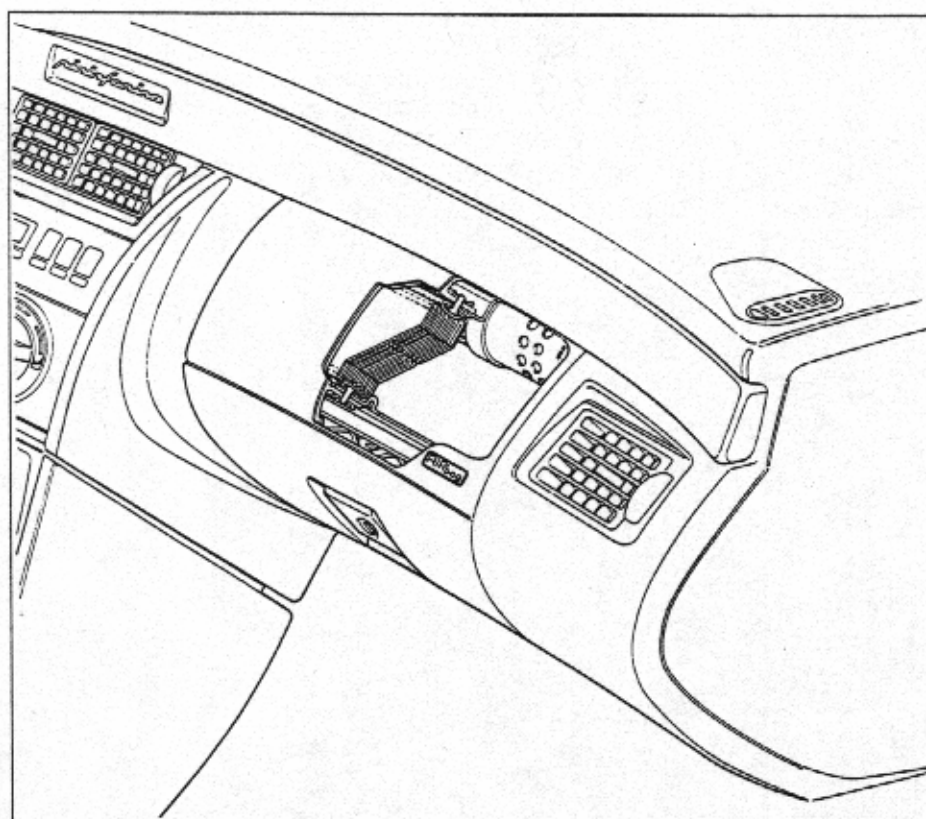
P3N005A01

STEERING WHEEL WITH AIR BAG, PARTIAL CROSS SECTION

The steering wheel is fitted with side controls for the horns and the centre section contains the AIR BAG module.

The module contains the cushion, suitably folded and the electrically activated inflation device.

The rear part of the cushion contains suitable sized openings which help in deflating the cushion immediately after it has been rapidly inflated.



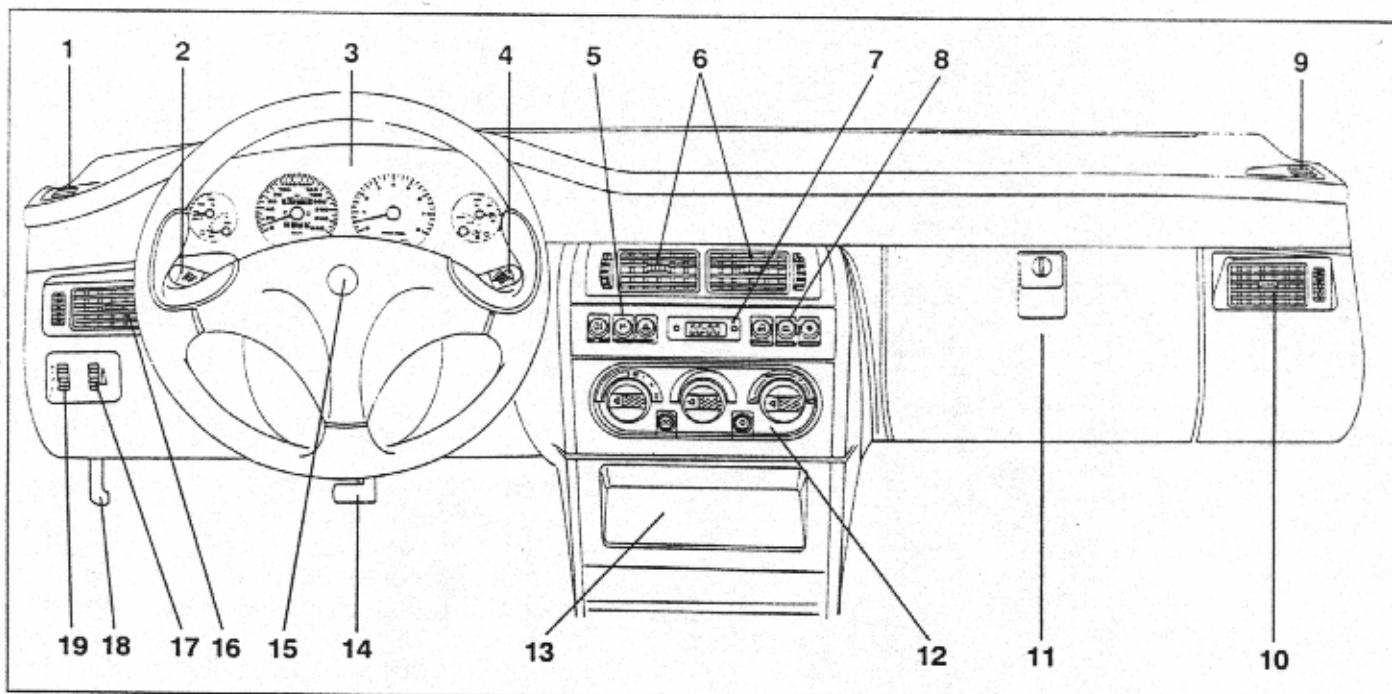
P3N005A02

PASSENGER SIDE AIR BAG, PARTIAL CROSS SECTION

The passenger side AIR BAG is enclosed in a container fixed to a metal frame.

The composition and the operating principle are the same as for the one fitted on the driver's side.

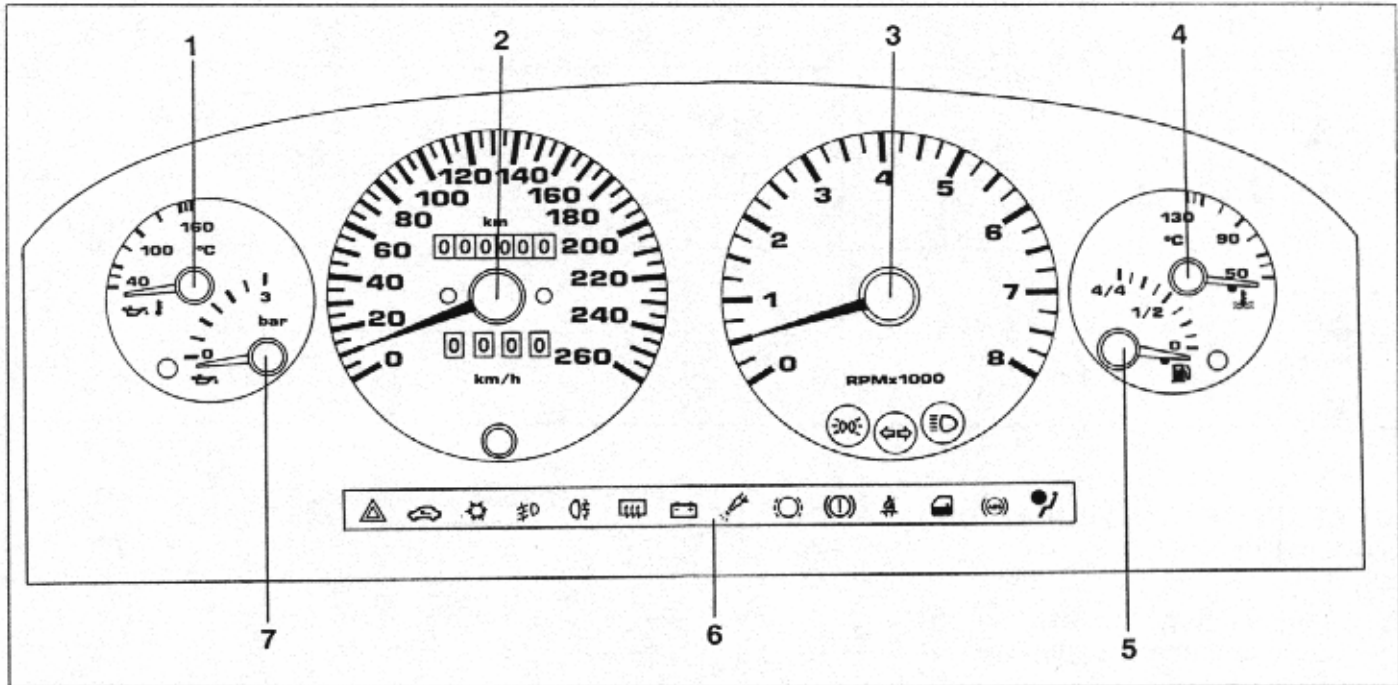
DASHBOARD



P3N006A01

1. Speaker housing and vent for sending air to the side windows
2. Exterior lights control lever
3. Instrument panel
4. Windscreen/rearscreen wash/wipe control lever
5. Switch unit for fog lights, rear fog light and hazard warning light
6. Centre adjustable air vents
7. Digital clock
8. Switch unit for central locking, heated rear windscreen and anti-theft LED
9. Speaker housing and vent for sending air to the side windows
10. Adjustable right air vent
11. Lockable glove compartment
12. Heater/air conditioning controls
13. Glove compartment or radio console
14. Lever for locking/releasing steering wheel
15. Horn
16. Adjustable left air vent
17. Instrument panel light dimmer
18. Bonnet release
19. Headlamp alignment correction switch

INSTRUMENT PANEL



P3N007A01



- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Engine oil temperature gauge 2. Speedometer, milometer and trip meter, trip meter zeroing button 3. Rev counter 4. Engine coolant temperature gauge | <ul style="list-style-type: none"> 5. Fuel gauge with reserve warning light 6. Service warning lights 7. Engine oil pressure gauge with insufficient pressure warning light |
|---|--|

Introduction

Coupé Fiat

Identification data and location on vehicle

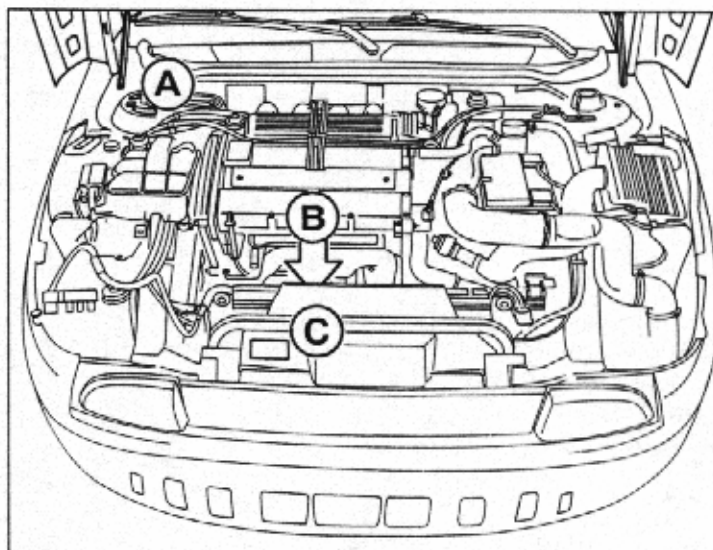
00.0

	CHASSIS	ENGINE	TRIM LEVEL	VERSION	GEAR BOX
					5 speed
 16V	ZFA 175.000	836 A3.000	BASIC	FACA1AAAAA324	
			PLUS	FACA1AAAAA324	
 16V turbo		175 A1.000	BASIC	FACB1ABBAA224	
			PLUS	FACB1ABBAA224	

LOCATION OF IDENTIFICATION DATA ON VEHICLE

A. Vehicle type identification code and chassis number

B. Engine type and number
Stamped on the crankcase near the starter motor



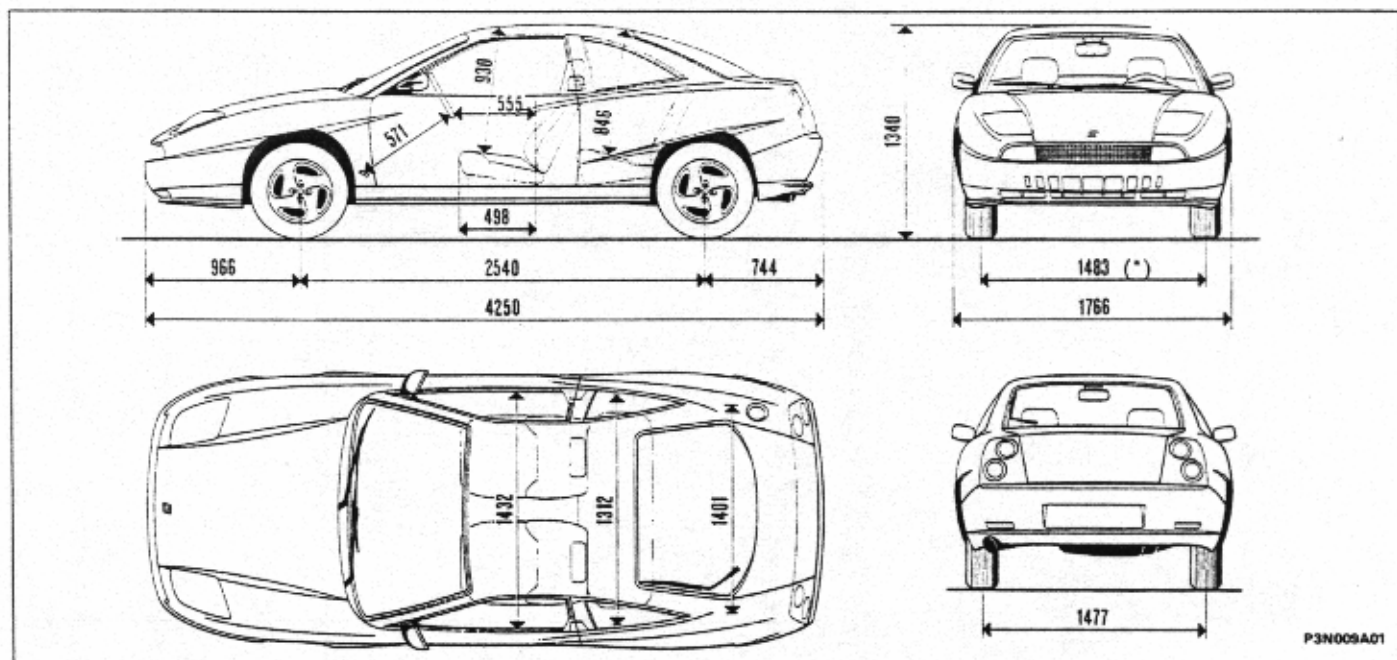
P3N008A01

C. V.I.N. Plate (EEC regulations.)

- A. Name of manufacturer
- B. Homologation number
- C. Vehicle type identification code
- D. Chassis manufacture number
- E. Maximum authorized weight of vehicle fully laden
- F. Maximum authorized weight of vehicle fully laden plus tow
- G. Maximum authorized weight on first axle (front)
- H. Maximum authorized weight on second axle (rear)
- I. Engine type
- L. Bodywork version code
- M. Spares number

FIAT	A		
	B		
	C	D	
	E	kg	
	F	kg	
	1-	G kg	
	2-	H kg	
	MOTORE - ENGINE		I
	VERSIONE - VERSION		L
	N° PER RICAMBI N° FOR SPARES		M

P3N008A02



The luggage compartment capacity (according to VDA standards) is 295 dm³
 The height refers to an unladen car
 (*) 1491 for the 16 V turbo version

WEIGHTS (in kg)	ENGINE	16V	16V turbo
			1250
+ 370 =		1620	1690
Maximum permissible loads on the axles ■		960	1030
		800	800
Maximum permissible load on the roof		80	80
Load on the tow hook bearing (trailer with braking system)		80	80
	Without braking system	500	500
	With braking system	1200	1200

■ Loads which should never be exceeded













NOTE FOR ACCESSORIZED VERSIONS: In the presence of special equipment (non standard air conditioner, sun roof, trailer), the empty weight increases and therefore the carrying capacity may decrease in relation to the maximum permissible loads.

Introduction

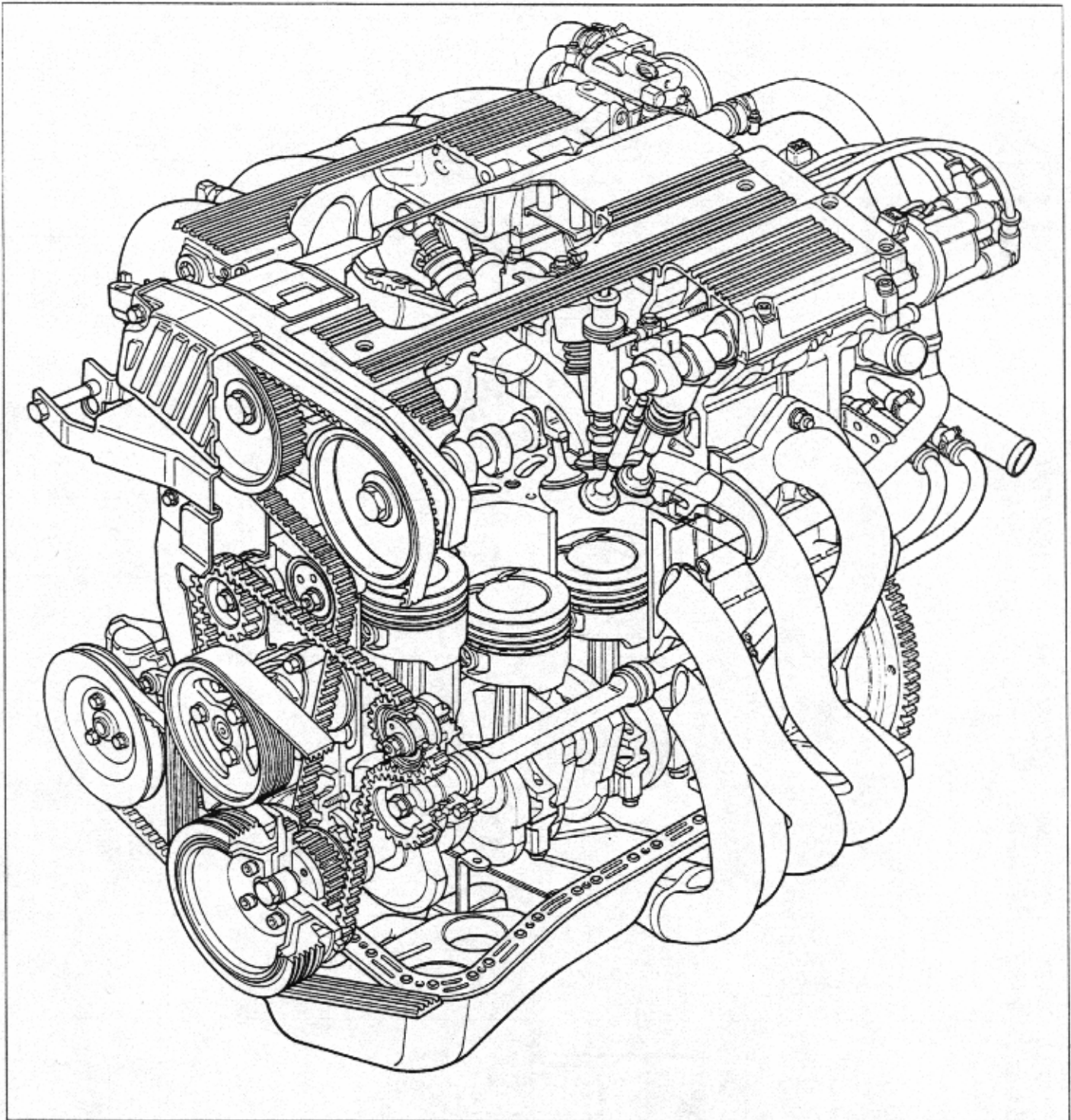
Coupé Fiat

Performance - Fuel consumption

00.0

ENGINE		 16V	 16V turbo
GEARBOX			
 Speed kph (average load)		56	63
		89	100
		129	145
		172	190
		208	225
		50	62
Maximum climable gradient  %		39	42
Gradient calculated and valid for vehicle moving with engine speed corresponding to maximum torque.			
EEC fuel consumption figures (litres/100 km) 	Urban cycle (A)	11,5	12,5
	Constant speed 90 km/h (B)	7	7,4
	Constant speed 120 km/h (C)	8,5	9,2
	Average consumption (CCMC proposal) $\frac{A + B + C}{3}$	9	9,7

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 particular the bench tests measure simulated urban cycle consumption whilst the consumption at constant speeds of 90 and 120 Km/h are 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 through the above mentioned legal procedures.



P3N011A01






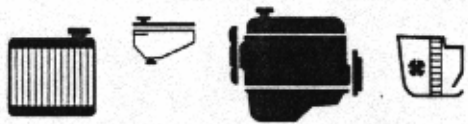










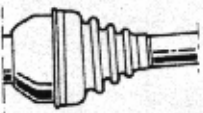

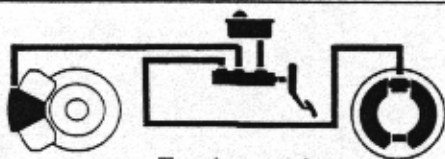



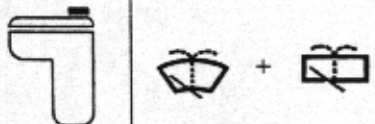

Engine  16V partial cross section

Introduction

Coupé Fiat

Capacities

00.0

Capacities	Unit		Quantity		
			dm ³ (l)	(kg)	
 Petrol \geq O.R. 95 Unleaded			60	-	
 50% + H ₂ O (▲) 			1995 16V	7	-
		Total capacity of cooling system	1995 16V turbo	7,5	-
 SELENIA (SAE 10 W/40)	Total capacity 		1995 16V	5,75	5,20
			1995 16V turbo	6	5,40
	Partial capacity (periodic replacement) 		1995 16V	5,2	4,7
			1995 16V turbo	5,2	4,7
 a = TUTELA ZC 80S 			2,4	2,15	
 a = TUTELA GI/A	a 		0,75	-	
 b = TUTELA MRM2	b 		-	0,095	
 TUTELA TOP 4 (270°C)	 Total capacity		0,65(*) 0,77(■)	-	
 +  AREXONS		3%		6,5	-
	- 20°C	50%			
	< - 20°C	100%			

(▲) Distilled water

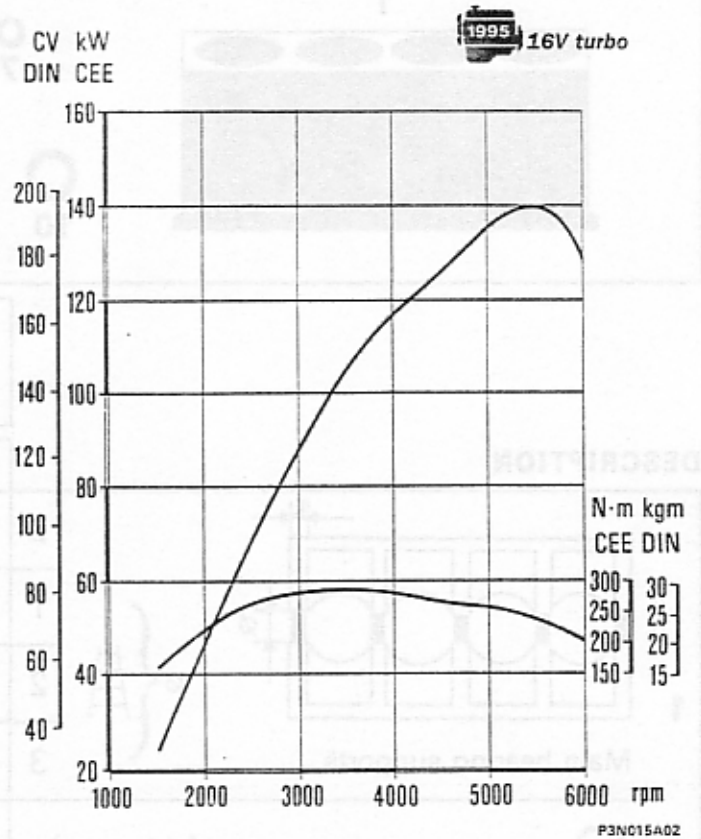
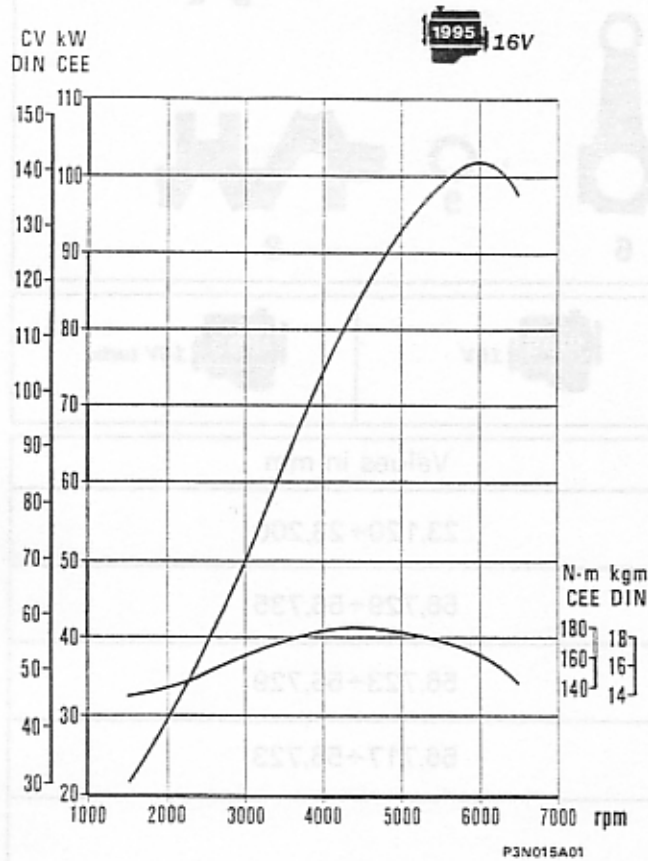
(■) Vehicles equipped with anti-lock brakes

(*) Including hydraulically operated clutch

Name of product	Description International designation	Usage
SELENIA SAE 10 W/40 SAE 15 W/40	Semi-synthetic multigrade engine oil. Exceeds specifications API SH, CCMC-G5	Temperature - 15°C ÷ 40°C - 25°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	Mineral based multigrade 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	Type oil for automatic transmissions "DEXRON II".	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 & hyd. op. 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 & hyd. 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, water and surface active agents CUNA NC 956-11	To be used neat or diluted in windscreen washer systems
Parafli¹¹	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)

Typical power curves obtained by eec method

The power curves illustrated can be obtained with the engine overhauled and run in, without a fan and with a silencer and air filter fitted at sea level, without a fan, with a silencer and air filter fitted, at sea level.



Test bench cycles of overhauled engines

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

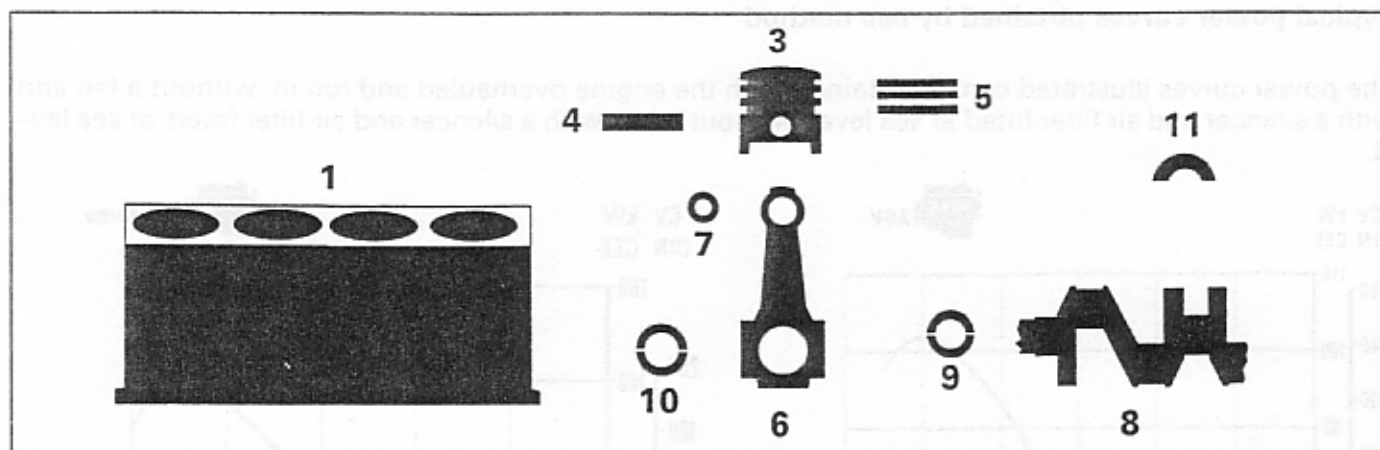
Test speed (rpm)	Time in minutes	Load on the brakes
800 ÷ 1000	10'	no load
1500	10'	no load
2000	10'	no load

Technical data

Coupé Fiat

Engine: cylinder block/crankcase, crankshaft and associated components

00.10



--	--

DESCRIPTION

		Values in mm	
<p>1 Main bearing supports</p>	L	23,120 ÷ 23,200	
	1	56,729 ÷ 56,735	
	2	56,723 ÷ 56,729	
<p>Cylinder bore</p>	3	56,717 ÷ 56,723	
	Ø (Tolerance)	84,000 ÷ 84,030	
<p>3 Piston</p>	Y	15,7	15
	A	83,950 ÷ 83,960	83,940 ÷ 83,950
	B	83,960 ÷ 83,970	83,950 ÷ 83,960
	C	83,970 ÷ 83,980	83,960 ÷ 83,970
		0,4	
3	<p>Diff. in weight btwn pistons</p>	± 5 g	
3-1	<p>Piston Cylinder bore</p>	0,040 ÷ 0,060	
3	<p>Gudgeon pin housing</p>	1	21,996 ÷ 21,999
		2	21,999 ÷ 22,002