

# Fiat Automobil AG

Fiat Automobil AG · Postfach 1763 · 7100 Heilbronn

Herrn  
A. Claus  
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2000 Hamburg 62

Ihre Zeichen, Ihre Nachricht vom

Unsere Zeichen

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283

29.07.1988

Zulassung von Fahrzeugen Modell 124 Spider (US-Ausführung) Typ 124 CSI im Geltungsbereich der StVZO

Sehr geehrter Herr Claus,

der Motor Typ 132 Al.031.6 ist, was die technischen Daten betrifft - ausgenommen der Motorleistung (da unterschiedliche Vergaser) - identisch mit dem Motor Typ 132 Al.040.6.

Aus diesem Grunde erhalten Sie anbei auszugsweise aus der Betriebsanleitung die uns vorliegenden Daten des Motors 132 Al.040.6 und als Beilage die abweichenden Daten des Motors 132 Al.031.6.

Hinsichtlich des Abgasverhaltens erhalten Sie anbei das entsprechende Certificate of Conformity Nr. FIAT-LDV-5 vom 23.10.1978.

Mit freundlichen Grüßen

Fiat Automobil AG  
i.V.

W. Bechtold

i.A.

K. Schühle

Anlagen

**FIAT LANCIA**

Vorsitzender des Aufsichtsrates: Josef Ferdinand Graf von Oppersdorff  
Vorstand: Fausto Gardoni, Vorsitzender: Franz Hink, stellvertr. Vorsitzender  
Mitglieder: Reinhard Bley, Dr. Adriano Frascaroli, Gerhard Katscher  
Sitz der Gesellschaft: Heilbronn - Handelsregister Heilbronn HRB 257

# U.S. ENVIRONMENTAL PROTECTION AGENCY CERTIFICATE OF CONFORMITY

WITH THE CLEAN AIR ACT OF 1970 ISSUED TO:

**FIAT**  
**MANUFACTURER**

**FIAT-LDV-5**  
**CERTIFICATE NO.**

**October 23, 1978**  
**DATE**

*P. E. Harnish*  
**OFFICE OF AIR AND WASTE MANAGEMENT**

Pursuant to section 206 of the Clean Air Act (42 U.S.C. 7525) and 40 CFR Part 86, this certificate of conformity is hereby issued with respect to test vehicles which have been found to conform to the requirements of the regulations on Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines (40 CFR Part 86) and which represent the following models of new motor vehicles, by engine family and evaporative emission family, more fully described in the application of the above named manufacturer:

The following vehicles are certified as having demonstrated conformance with Federal emission standards only at elevations equal to or lower than 1,219 meters (4,000 feet):

**FIAT: Brava 2-door Coupe, Brava 4-door Sedan, Brava Station Wagon, Spider 2000.**

This certificate covers engine family 132-AC/evaporative emission family RV-2AC, including 121.74-GID engines with air injection, exhaust gas recirculation, catalytic converter, charcoal canister, and closed crankcase emission control systems, meeting emission standards specified in the Clean Air Act Amendments of 1977. These vehicles are equipped with an emission control device which the Administrator has determined will be significantly impaired by the use of leaded gasoline. This certificate is issued subject to the conditions specified in 40 CFR 80.24.

This certificate covers only those new motor vehicles which conform, in all material respects, to the design specifications that applied to those vehicles described in the application for certification and which are produced during the 1979 model year production period of the said manufacturer, as defined in 40 CFR 86.079-2.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 86.078-7(c) which concern either the vehicle certified, or any production vehicle covered by this certificate, or any production vehicle which when completed will be claimed to be covered by this certificate. Failure to comply with all the requirements of 86.078-7(c) with respect to any such vehicle may lead to revocation or suspension of this certificate as specified in 40 CFR 86.079-30(c). It is also a term of this certificate that this certificate may be revoked or suspended for the other reasons stated in 86.079-30(c) or (d).

Catalyst-equipped vehicles, otherwise covered by this certificate, which are driven outside the United States, Canada, and Mexico will be presumed to have been operated on leaded gasoline resulting in deactivation of the catalysts. If these vehicles are imported or offered for importation without retrofit of the catalyst, they will be considered not to be within the coverage of this certificate unless included in a catalyst control program operated by a manufacturer or a United States Government Agency and approved by the Administrator.





# SPECIFICATIONS

## ENGINE

Type . . . . .	132 A1.040.6
Number of cylinders, in line	4
Bore and stroke . . . . .	84 x 79.2 mm (3.31 x 3.12 in.)
Total piston displacement . . . . .	1756 cc (107.13 cu. in.)
Compression ratio . . . . .	8 to 1
Maximum power (SAE net)	86 HP

## Valve Gear

O. H. V. Twin O. H. camshafts driven by toothed timing belt with tensioner.

Intake	Opens: B.T.D.C.	5°
	Closes: A.B.D.C.	53°
Exhaust	Opens: B.B.D.C.	53°
	Closes: A.T.D.C.	5°

Tappet clearance adjustment, for valve timing . . . . .  
.80 mm  
(.031 in.)

Final tappet operation clearance adjustment, **cold engine**:

Intake . . . . .	.45 mm (.018 in.)
Exhaust . . . . .	.50 mm (.020 in.)

## Lubrication System

Forced circulation by gear pump.  
Pressure limiter valve on delivery circuit.  
Normal lubrication pressure at rated engine rpm and oil temperature  
4.5 to 6 kg/cm<sup>2</sup> (64 to 85.3 psi)  
Full-flow cartridge oil filter.

## Fuel System

Vertical dual-barrel downdraft WEBER 32 ADFA 11 carburetor with differential opening of secondary throttle, automatic butterfly valve choke and accelerating pump. Idle stop device (comes into operation when engine is switched off).

A vacuum bellows controls the partial opening of the 1st barrel throttle from the idling position (fast idle operation setting adjustment).

Fuel filter and pressure regulator in the feed line from pump to carburetor.

Paper cartridge air cleaner with silencer.

Carburetor feed by mechanical pump.

## Emission Control Systems

Engine feed system provided with fuel recirculation (closed circuit) and evaporative emission control system.

Crankcase emission control (CEC) system (closed circuit) by recirculation of blow-by gases and oil vapors.

Exhaust emission control system (reduces air pollution from the exhaust by gas recirculation and post-combustion process) separate from the CEC system.

## Cooling System

Radiator and translucent expansion tank.

Water circulated by centrifugal pump.

Thermostat with controlled by-pass on cylinder head water outlet duct.

Four-blade fan driven by electric motor controlled by thermostatic switch on radiator: cut-in temperature about 90° C.

### Ignition System

Firing order . . . . . 1-3-4-2  
Basic ignition timing at  
850 rpm . . . . . 0° (TDC)  
Automatic advance . . . . . 36°  
Dwell angle, for distributor  
contacts gap check  
(at 850 ± 50 rpm) . . . . . 55°  
Breaker additional points gap  
.31 - .49 mm (.012 - .019 in.)  
Spark plugs:

standard type		resistor type	
CHAMPION	N9 Y	CHAMPION	RN9 Y
AC DELCO	42-XLS	AC DELCO	R42-XLS
MARELLI	CW 7LP	MARELLI	CW 7LPR
BOSCH	W 7D	BOSCH	WR7D
Thread size		14 x 1.25 mm	
Gap		— standard type .6 to .7 mm (.023-.027 in.) — resistor type .7 to .8 mm (.027-.031 in.)	

### POWER TRAIN

#### Clutch

Single plate, dry, with disk engagement spring, mechanically controlled.  
Pedal free travel . . . . . abt. 25 mm (1 in.)

#### Transmission

Five forward speeds (all synchronized) and reverse.  
Gear ratios to 1:

1st	2nd	3rd	4th	5th	Reverse
3.667	2.1	1.361	1	0.881	3.526

### Propeller Shaft

Tubular propeller shaft in two sections, with rubber mounted central pillow block. Front section connected to transmission by flexible joint and slip yoke. The second section is connected to the first and to rear axle by universal joints.

### Rear Axle

Final drive hypoid gear:  
ratio . . . . . 10 to 43

### BRAKES

#### Service

Hydraulic disk brakes, of the floating caliper type, on all wheels, with one cylinder to each wheel, pedal operated through vacuum servo and dual master cylinder. Independent front and rear circuits. Proportioning valve in rear circuit for car load and deceleration rate variation compensations.  
Device for automatic take-up of friction pad clearance as wear progresses.

#### Parking

Mechanical, operating on rear wheel brake pads.

### SUSPENSIONS

#### Front

Independent wheels, by swinging arms, with coil springs and hydraulic, double-acting telescopic shock absorbers. Stabilizer bar. Sealed-for-life articulations.

### Rear

By rigid axle anchored to body through 5 reaction rods - 4 longitudinal and 1 transversal. Coil springs, hydraulic double-acting telescopic shock absorbers. Asymmetric wheel motions stabilized by elastic mounts of reaction rods.

### STEERING AND WHEELS

#### Steering

Standard . . . . . L.H.D.  
Control: worm screw and roller, ratio 1/16.4.  
Steering shaft in three sections, incorporating two universal joints; breakaway mount.  
Independent and symmetric track rods to each wheel, with central link rod. Sealed-for-life articulations.  
Hydraulic, double-acting damper on relay support.  
Turning circle . . . . . 10.4 m  
(34 ft 2 in.)  
Front wheel camber, measured at rim . . . . . 0 to 6 mm (.00 to .24 in.)  
or 30' ± 30'  
Front wheel toe-in, measured at rim . . . . . 3 ± 2 mm  
(.118 to .079 in.)  
The above data apply to cars laden to the equivalent of 2 adults (300 lbs) plus 130 lbs of luggage.

#### Wheels and Tires

Disk wheels, ventilated, with rim size . . . . . 5 J x 13"  
Optional: light-alloy wheels.  
Radial-ply tires, size . . . . . 165 SR-13"  
or 165 HR-13"

### ELECTRIC

Voltage . . . . .

### Alternator

Continuous current  
Incorporated cut-out  
Automatic voltage regulator  
Cut-in speed at users off).

### Battery

With grounded negative  
discharge rate  
Cold (—18°C) high  
test current

### Starter

Power rating  
Direct engagement  
wheeling pinion

### Heater Fan I

Power rating . . . . .

### Engine Radiator

Power rating . . . . .

### Windshield Wipers

Power rating . . . . .

### Fuses

Eight 8-Amp fuses  
one 16-Amp fuse



chored to body through 5  
4 longitudinal and 1 trans-  
springs, hydraulic double-  
shock absorbers. Asym-  
motions stabilized by elastic  
action rods.

### 3 AND WHEELS

L.H.D.  
crew and roller, ratio 1/16.4.  
three sections, incorporat-  
iversal joints; breakaway  
and symmetric track rods to  
with central link rod. Seal-  
articulations.  
ble-acting damper on relay

10.4 m  
(34 ft 2 in.)  
mber, measur-  
0 to 6 mm (.00 to .24 in.)  
or 30' ± 30'  
e-in, measured  
3 ± 2 mm  
(.118 to .079 in.)  
ita apply to cars laden to  
nt of 2 adults (300 lbs) plus  
uggage.

### 1 Tires

entilated, with  
5 J x 13"  
t-alloy wheels.  
s, size . . . 165 SR-13"  
or 165 HR-13"

## ELECTRICAL SYSTEM

Voltage . . . . . 12 Volts

### Alternator

Continuous current rating . . . 55 Amps  
Incorporated current rectifiers.  
Automatic voltage regulator.  
Cut-in speed at starting of engine (with  
users off).

### Battery

With grounded negative; capacity at 20-hr  
discharge rate . . . . . 60 Amp. hr.  
Cold (—18°C) high-discharge  
test current . . . . . 255 Amp.

### Starter

Power rating . . . . . 1.3 kW  
Direct engagement by solenoid and free-  
wheeling pinion.

### Heater Fan Motor

Power rating . . . . . 20 W

### Engine Radiator Fan Motor

Power rating . . . . . 110 W

### Windshield Wiper Motor

Power rating . . . . . 28 W

### Fuses

Eight 8-Amp fuses, one 25-Amp and  
one 16-Amp fuses.

## Bulbs

Location	SAE Standard	FIAT Std. Part No.
Headlights (high and low beams)	« Sealed Beam » headlight unit 7031	
Front lamps		
turn signal . . . . .	—	Norm. 1/41460/90
Rear lamps		
turn signal . . . . .	No. 1073 (32 cp)	Norm. 1/41469/90
back-up . . . . .		
stop . . . . .		
Front lamps		
parking . . . . .		
Rear lamps	No. 67 (4 cp)	Norm. 1/41459/90
tail . . . . .		
license plate . . . . .		
Courtesy light . . . . .	—	12V-5W
Ideogram illumination optical fiber		Norm. 1/08630/90
light source . . . . .	—	12V-5W
Turn signal indicator . . . . .		Norm. 1/41441/90
Headlight high beam indicator . . . . .		
Battery charge indicator . . . . .		
Insufficient oil pressure indicator . . . . .		
Fuel reserve indicator . . . . .		
Parking and tail lamps indicator . . . . .		
Instrument cluster lights . . . . .	No. 158 (2 cp)	Norm. 1/41458/90
Fasten belts indicator . . . . .		or Norm. 1/41439/90
Vehicular hazard warning signal in- dicator . . . . .		
Low brake fluid level and hand brake ON indicator . . . . .		
Side marker lights . . . . .		
Vehicular hazard warning signal switch light . . . . .	—	12V-1.2W
Trunk lamp . . . . .		Norm. 1/41437/90
Cigar lighter housing indicator . . . . .	—	12V-4W
		Norm. 1/41423/90

124 Sport Spider / US

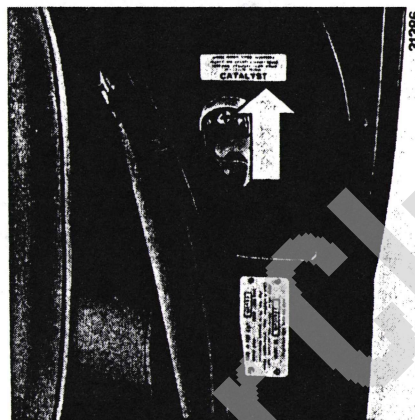
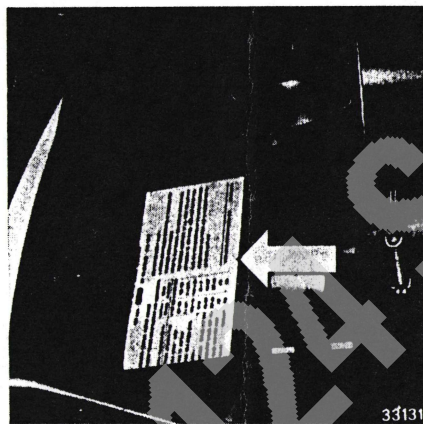
## IDENTIFICATION DATA

### Engine Type 132 A1.031.6

■ **Vehicle Emission Control Information Label** - Located on left door pillar.

■ **E.P.A. and California Regulations Conformity Tag**

Engine family 132 C.C. air pollution control specifications for correct engine tuneups and adjustments.



## OPERATION

### WARNING

#### Fuel Refilling

Strictly adhere to the label on glove compartment lid and on filler cap.

**UNLEADED FUEL ONLY**

Leaded fuel will damage the catalytic converter beyond repair. Always refill at Service Stations which carry unleaded fuel (small pump nozzle).

## SPECIFICATIONS

### ENGINE

Max. power - SAE net 83 HP

### Fuel System

Carburetor: WEBER 32 ADFA 14

### ELECTRICAL SYSTEM

#### Fuses

Fuse **A** also protects:

- Electrovalve for diverter valve
- Relay winding of electrovalve for diverter valve

### WEIGHTS

Curb weight . . . . . 2 260 lbs

Vehicle load capacity (total 430 lbs):  
2 adults (300 lbs) + 130 lbs of luggage

Gross weight (fully laden) 2 690 lbs

### Exhaust Em

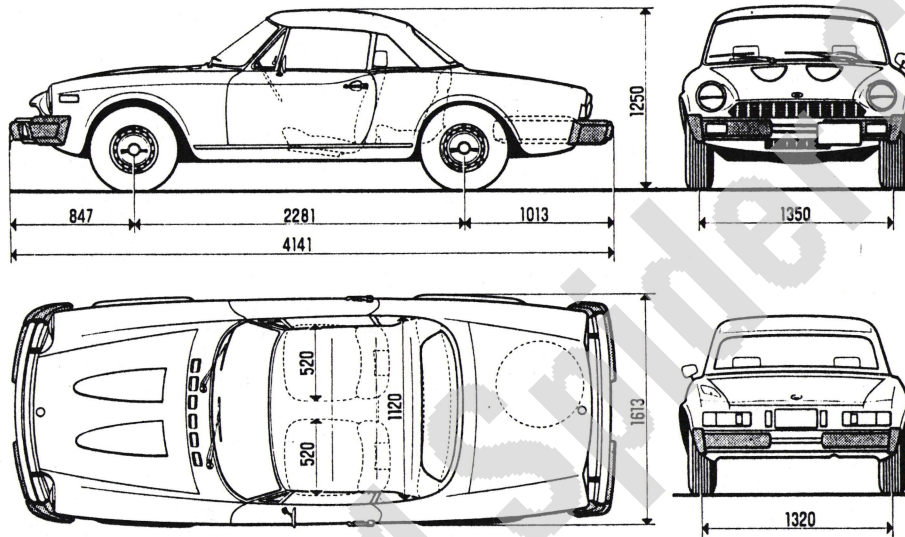
A catalytic converter to further oxidize post-combustion

1. Exhaust gas valve -
2. Electrovalve for diverter valve
4. Exhaust gas line -
5. Exhaust manifold -
7. Air pump
9. Inner pellet EGR cut-out valve
12. Exhaust gas tapping line
13. Air valve -
15. Air pump line, carburetor
19. Electrovalve



## MAIN DIMENSIONS

mm	520	847	1 013	1 120	1 250	1 320	1 350	1 613	2 281	4 141
in.	20.5	33.4	39.9	44	49.2	52	53.2	63.5	89.7	163



Overall height is measured with unladen car. Trunk volume: 180 cu. dm (6.4 cu. ft.).

## PERFORMANCE

### Speeds

Maximum speeds after break-in, fully laden

	m.p.h.
1st gear . . . . .	28
2nd gear . . . . .	50
3rd gear . . . . .	75
4th gear . . . . .	102
5th gear, over . . . . .	105

### Gradeability

Maximum grades climbable, fully laden

1st gear . . . . .	50%
2nd gear . . . . .	25%
3rd gear . . . . .	15%
4th gear . . . . .	10%
5th gear . . . . .	8%

## WEIGHTS

Curb weight . . . . . 2 250 lbs

Vehicle load capacity (total 430 lbs):

2 adults (300 lbs) + 130 lbs of luggage

Gross weight (fully laden) . . 2 680 lbs

Designated seating capacity . 2 persons

Occupant distribution . . . . 2 in front

1024,5 kg

**ATIONS**

VE net 83 HP

R 32 ADFA 14

**YSTEM**

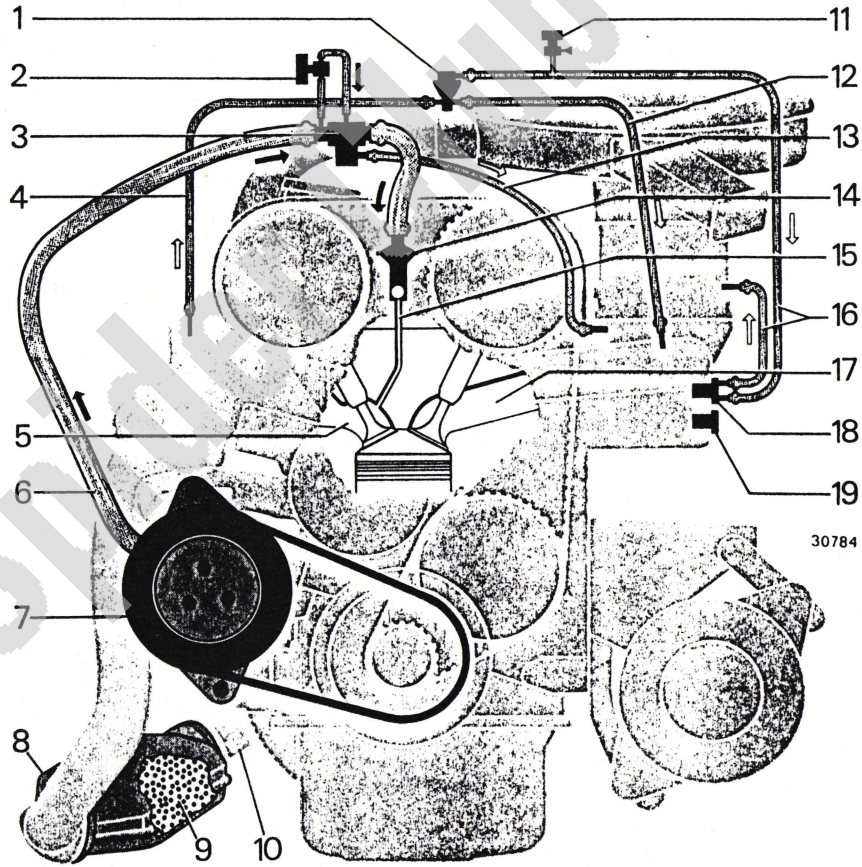
ects:  
r diverter valve  
of electrovalve for

..... 2 260 lbs  
icity (total 430 lbs):  
lbs) + 130 lbs of  
lly laden) 2 690 lbs

**Exhaust Emission Control System**

A catalytic converter has been added to further oxidize the hot gases during post-combustion process.

- 1. Exhaust gas recirculation (EGR) control valve - 2. Electrovalve, normally closed, for diverter valve - 3. Diverter valve - 4. Exhaust gas recirculation tapping line - 5. Exhaust manifold - 6. Air distribution line - 7. Air pump - 8. Catalytic converter - 9. Inner pellets - 10. Exhaust pipe - 11. EGR cut-out thermostatic switch on 5th gear - 12. Exhaust gas feedback line - 13. Vacuum tapping line, intake manifold, for diverter valve - 14. Air injection non-return valve - 15. Air injector - 16. Vacuum tapping line, carburetor, for EGR valve - 17. Intake manifold - 18. EGR thermostatic switch - 19. Electrovalve 2 thermostatic switch.



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Fiat 124 Spider Club e.V.