FIAT

FIAT SPIDER

Service Manual

IMPORT PARTS AMERICA
FIAT DIVISION

FIAT

124 Spider
1975 thru 1982

Factory Workshop Service Manual Set

Fiat Motors of North America, Inc.

FOREWORD

This manual has been written to provide basic information for the proper servicing of the Spider models.

The information is grouped in sections. Each section is identified by two-digit numbers. Each section covers the service procedures for the individual groups and sub-groups. They are identified by a number. The root of the number is taken from the general sub-group code now being used for the Parts Catalogue and the Service Time Schedule. This number identifies the service time schedule operation, parts catalogue sheet for the part covered by the service procedure, and the service procedure.

HOW TO USE THE MANUAL

The information identification number consists of five digits, as follows:

a) The first two digits identify the section.

b) The third designates the group within the section and is used in conjunction with the first two.

c) The last two digits indicate an assembly or task consisting of several parts. This number identifies the sub-group. It refers to the sub-group in both the Parts Catalog and the Service Time Schedule.

Find the information required as follows:

1) Find the tab index page for the information on the first page of the manual.

2) Find the group and sub-group for the information on the table of contents.

UPDATING THE MANUAL

– Revision sheets are supplied together with a revised "Composition of the Manual" sheet.

– Revision sheets can be of two types:

1) Replacement sheets: In this case the new sheet will carry the same page number as the old one. A notation in the bind margin will read Supersedes page . . . dated . . ."

2) Complementary sheets on topics already dealt with: In this case the additional sheet will carry the same sub-group number as the sheet on which the topic has been first dealt with. The page number will be followed by a letter suffix.

Example: If additional information is needed for information on page 2, the new sheet will be 2A.

GENERAL INFORMATION - MAINTENANCE - 00

SPIDER

ENGINE (1975 to 1978)

Type	1975/1976 132A1.040.5	1977/1978 132A1.040.6
(with catalytic converter)	132A1.031.5	132A1.031.6
Cycle	Four-stroke, gasoline	
No. of cylinders	Four	
Bore	3.31 in. (84 mm)	
Stroke	3.12 in. (79.2 mm)	
Displacement	107.13 cu. in. (1756 cc)	
Compression ratio	8 to 1	
Horsepower rating, S.A.E. net at	86 HP 6200 rpm	
Horsepower rating, S.A.E. net (catalytic converter version) at	83 HP 5800 rpm	
Torque rating, S.A.E. net at	90 ft. lbs. 2800 rpm	
Torque rating, S.A.E. net (catalytic converter version) at	86 ft. lbs. 2800 rpm	
Arrangement	Front in line	
Valve arrangement	Overhead valves. Twin overhead camshafts driven by toothed timing belt with tensioner.	
Valve Timing:		
Intake		
Opens	5° B.T.D.C.	
Closes	53° A.B.D.C.	
Exhaust		
Opens	53° B.B.D.C.	
Closes	5° A.T.D.C.	
Valve clearance:		
– for checking valve timing	0.031 in. (0.80 mm)	
– operation clearance, engine cold:		
Intake	0.018 in. (0.45 mm)	
Exhaust	0.020 in. (0.50 mm)	

ENGINE (1979)

Type	
49 State version	132C2.040
California version	132C2.031
Cycle	Four-stroke, gasoline
No. of cylinders	Four
Bore	3.31 in. (84 mm)
Stroke	3.54 in. (90 mm)
Displacement	121.74 cu. in. (1995 cc)
Compression ratio	8.1 to 1
Horsepower rating, S.A.E. net at rpm	
49 State version	86 HP at 5100 rpm
California version	80 HP at 5000 rpm
Torque rating, S.A.E. net at rpm	
49 State version	104.3 ft. lbs. at 3000 rpm
California version	100.0 ft. lbs. at 3000 rpm
Arrangement	Front in line
Valve arrangement	Overhead valves. Twin overhead camshafts driven by toothed timing belt with tensioner.
Valve timing:	
Intake	
Opens	5° B.T.D.C.
Closes	53° A.B.D.C.
Exhaust	
Opens	53° B.B.D.C.
Closes	5° A.T.D.C.
Valve clearance:	
For checking valve timing	0.031 in. (0.80 mm)
Operating clearance, engine cold	
Intake	0.018 in. (0.45 mm)
Exhaust	0.020 in. (0.50 mm)

ENGINE (1980)

Type	
Carburetor version	132C3.040
Fuel injected version	132C3.031
Cycle	Four-stroke, gasoline
No. of cylinders	Four
Bore	3.31 in. (84 mm)
Stroke	3.54 in. (90 mm)
Displacement	121.74 cu. in. (1995 cc)
Compression ratio	8.1 to 1
Horsepower rating, S.A.E. net at rpm	
Carburetor version	80 HP at 5000 rpm
Fuel injected version	102 HP at 5500 rpm
Torque rating, S.A.E. net at rpm	
Carburetor version	100 ft. lbs. at 3000 rpm
Fuel injected verions	110 ft. lbs. at 3000 rpm
Arrangement	Front in line
Valve arrangement	Overhead valves. Twin overhead camshafts driven by toothed timing belt with tensioner.
Valve timing:	
Intake	
Opens	5° B.T.D.C.
Closes	53° A.B.D.C.
Exhaust	
Opens	53° B.B.D.C.
Closes	5° A.T.D.C.
Valve clearance:	
For checking valve timing	0.031 in. (0.80 mm)
Operating clearance, engine cold	
Intake	0.018 in. (0.45 mm)
Exhaust	0.020 in. (0.50 mm)

ENGINE (1981 and 1982)

Type	
Fuel injected version and turbocharged version	132C3.031
Cycle	Four-stroke, gasoline
No. of cylinders	Four
Bore	3.31 in. (84 mm)
Stroke	3.54 in. (90 mm)
Displacement	121.74 cu. in. (1995 cc)
Compression ratio	8.1 to 1
Horsepower rating, S.A.E. net at rpm	
Turbocharged version	120 HP at 6000 rpm
Fuel injected version	102 HP at 5500 rpm
Torque rating, S.A.E. net at rpm	
Turbocharged version	130 ft. lbs. at 3600 rpm
Fuel injected version	110 ft. lbs. at 3000 rpm
Arrangement	Front in line
Valve arrangement	Overhead valves. Twin overhead camshafts driven by toothed timing belt with tensioner.
Valve timing:	
Intake	
Opens	5° B.T.D.C.
Closes	53° A.B.D.C.
Exhaust	
Opens	53° B.B.D.C.
Closes	5° A.T.D.C.
Valve clearance:	
For checking valve timing	0.031 in. (0.80 mm)
Operating clearance, engine cold	
Intake	0.018 in. (0.45 mm)
Exhaust	0.020 in. (0.50 mm)

FUEL SYSTEM

Carburetor Version

Vertical, dual-barrel downdraft WEBER carburetor with differential opening of the secondary throttle, automatic butterfly valve choke and idle stop solenoid.

Enrichment system consists of mechanical and vacuum assisted accelerator pumps and a power valve.

Carburetor fed by mechanical pump. Fuel filter installed in fuel line between fuel pump and carburetor.

Carburetor equipped with thermostatic air cleaner containing paper cartridge element.

Fuel Injection Version

Electronically controlled fuel injection with engine and exhaust sensors supplying information to the electronic control unit to optimize the fuel/air mixture in all engine operating conditions.

Four injectors, one per cylinder and a cold start valve, all supplied at constant fuel pressure.

Fuel flow controlled by variation in opening time of injectors.

An air flow sensor to measure air flow variation.

Air cleaner with paper cartridge installed before air flow sensor.

LUBRICATION SYSTEM

Forced circulation by gear pump.

Pressure limiter valve on delivery circuit. Normal lubrication pressure at rated engine rpm and oil temperature 50 to 71 psi (3.5 to 5 kg/cm^2).

Full-flow cartridge oil filter.

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 194°F (90°C).

EMISSION CONTROL SYSTEMS

Engine fuel 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 separate from CEC system. System reduces air pollution from exhaust by gas recirculation, post-combustion processes and catalytic converter.

CHASSIS

CLUTCH

Single-plate, dry, with disc spring mechanically controlled.

TRANSMISSION

Manual transmission: five forward speeds (all synchronized) and reverse.

Automatic transmission: three forward speeds and reverse, fully automatic.

	Manual			
Gear Ratios	1975–1978	1979–1980	1981–1982	Automatic
First	3.667	3.612	3.667	2.4 to 1
Second	2.1	2.045	2.1	1.48 to 1
Third	1.361	1.357	1.361	1 to 1
Fourth	1	1	1	–
Fifth	0.881	0.830	0.881	–
Reverse	3.526	3.244	3.244	1.92 to 1

PROPELLER SHAFT

Dual, center pillow with ball bearing mounted on rubber cushion. Universal joints at rear section. Flexible joint at transmission end.

REAR AXLE

Semi-floating.

Hypoid final drive.

Gear ratio: 4.30 to 1 (10/43) – 1975 to 1978
3.58 to 1 (12/43) – Automatic Trans. 1979 and up
3.90 to 1 (10/39) – Manual Trans.

STEERING

Worm screw and roller type.

Ratio: 1/16.4

Turning circle diameter: 34 ft. 2 in. (10.4 m)

Steering column of the break-away mount type with two universal joints. Independent and symmetric track rods to each wheel. Sealed-for-life joints. Hydraulic, double-acting damper on relay support.