Fiat Auto

Panda

Informazioni del Servizio

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Service News

Fiat Auto S.p.A.
D.M.C. - Direzione Post Vendita
Servizi Assistenziali

FIAT

3/94

Panda

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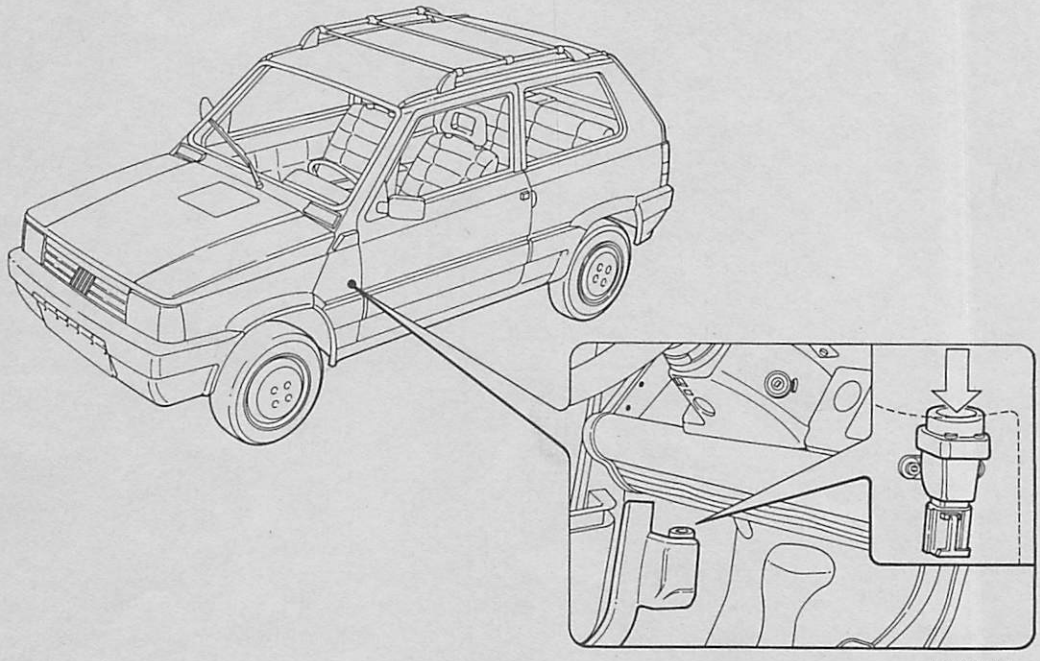
000 00 000 00 PANDA '94 RANGE

Main contents of the restyling

The entire range of the Panda has been subject to a series of restyling operations.

There follows a description which summarizes the most important features in the new range of the model in question:

- increase in the level of passive safety through the adoption of an inertia switch for blocking the fuel;
- various stylistic refinements to the interior/exterior of the vehicle (roof rack, rubbing strips, new interior fabrics, restyled dashboard).



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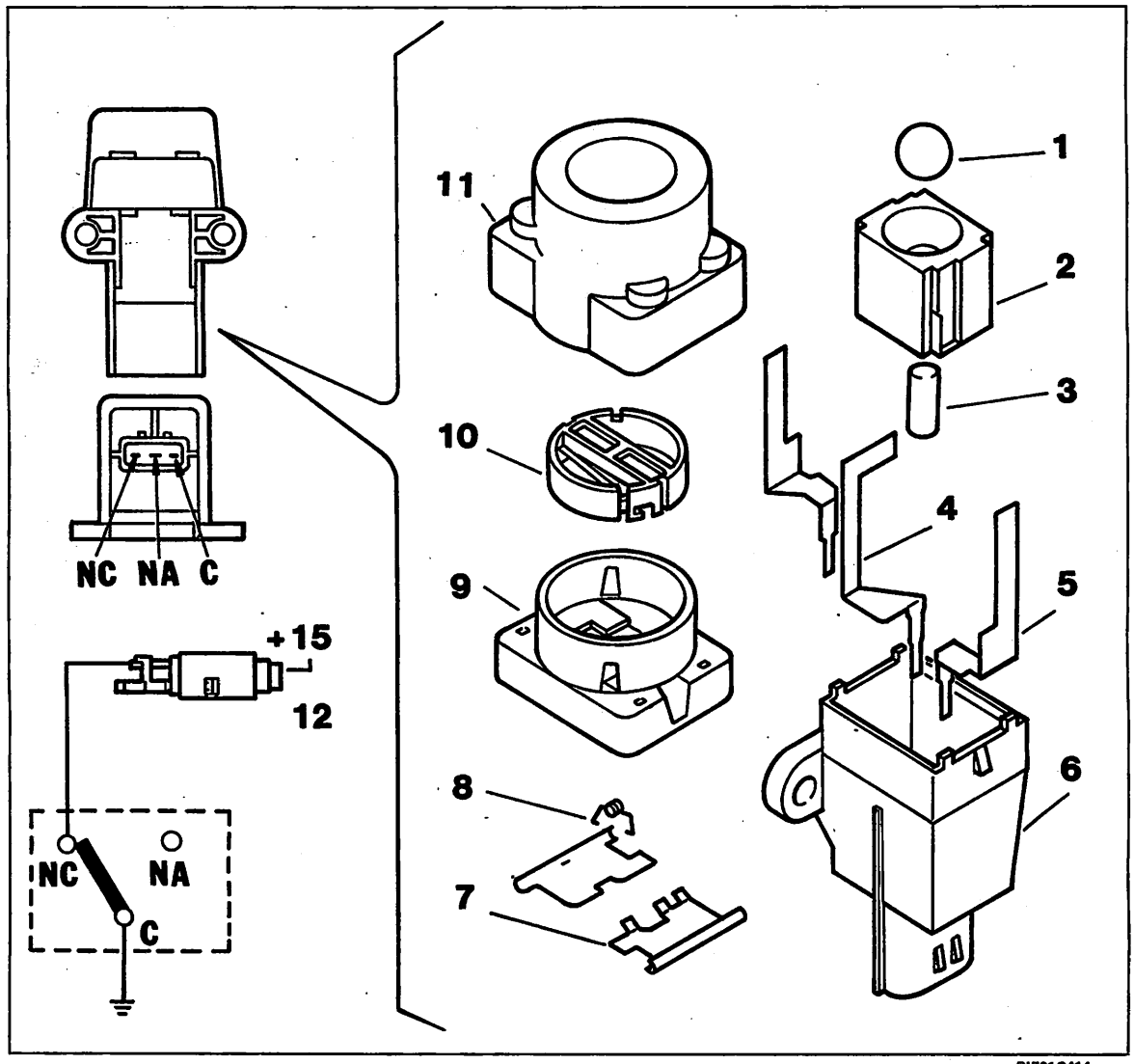
INERTIA SWITCH



PIF01C414

1. Ball
2. Magnet housing
3. Magnet
4. Terminal
5. Terminal
6. Lower casing
7. Moving contact
8. Spring
9. Upper casing
10. Push button
11. Cable outer casing
12. Electric fuel pump

Operation

- The inertia switch is a safety device which, in the case of an accident, cuts off the operation of the engine after an impact to prevent the risk of fire through fuel escaping from damaged pipes.
  When subject to strong acceleration which is presumed to be due to a collision, the switch intervenes cutting off the electrical supply to the fuel pump which involves the immediate drop in pressure in the supply ducts and to the injector with the engine cutting out and the impossibility of fuel coming out if there is damage to any of the system ducts.

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- The switch is fitted inside the vehicle, firmly attached to the bodyshell. The electrical contact is obtained via a 3 pin sealed connector. The switch can be the normally closed (NC) type or the normally open (NA) type; in current usage it is the normally closed (NC) type fitted in series to the fuel supply system.
- When the ball is subjected to an acceleration which is higher than the calibration value it overcomes the magnetic attraction force and comes out of the tapered housing. The upper part of the switch houses a quick release device that, changing position, opens a contact and interrupts the circuit to earth for the electric fuel pump.

NOTE *The inertia switch operating setting is 8 ... 14 g.*

The electrical connection is restored by pressing the special button, until the ball is heard to click back in place.

CHARACTERISTICS AND TECHNICAL SPECIFICATIONS

The **Panda 94 range** is a two box vehicle with a load carrying structure, transversely mounted engine and front wheel drive.

The **Panda 1000 i.e.** powered by a 999 cc, 4 cylinder in line, petrol driven engine with SPI Weber integrated electronic injection/ignition develops a power output of 33 kW (bhp).

The **Panda 1100 i.e.** powered by an 1108 cc, 4 cylinder in line, petrol driven engine with SPI Weber integrated electronic injection/ignition develops a power output of 37 kW (bhp).

The **Panda Selecta i.e.** powered by an 1108 cc, 4 cylinder in line, petrol driven engine with SPI Weber integrated electronic injection/ignition develops a power output of 37 kW (bhp).

The **Panda 4×4 i.e.** powered by an 1108 cc, 4 cylinder in line, petrol driven SPI Weber integrated electronic injection/ignition system develops a power output of 37 kW (bhp).

The characteristics and repair instructions are given in the "New Panda" Service Manual Print No. 504.669.

FIAT
Printed 10/05/1994

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FIAT

7-8/92

Panda

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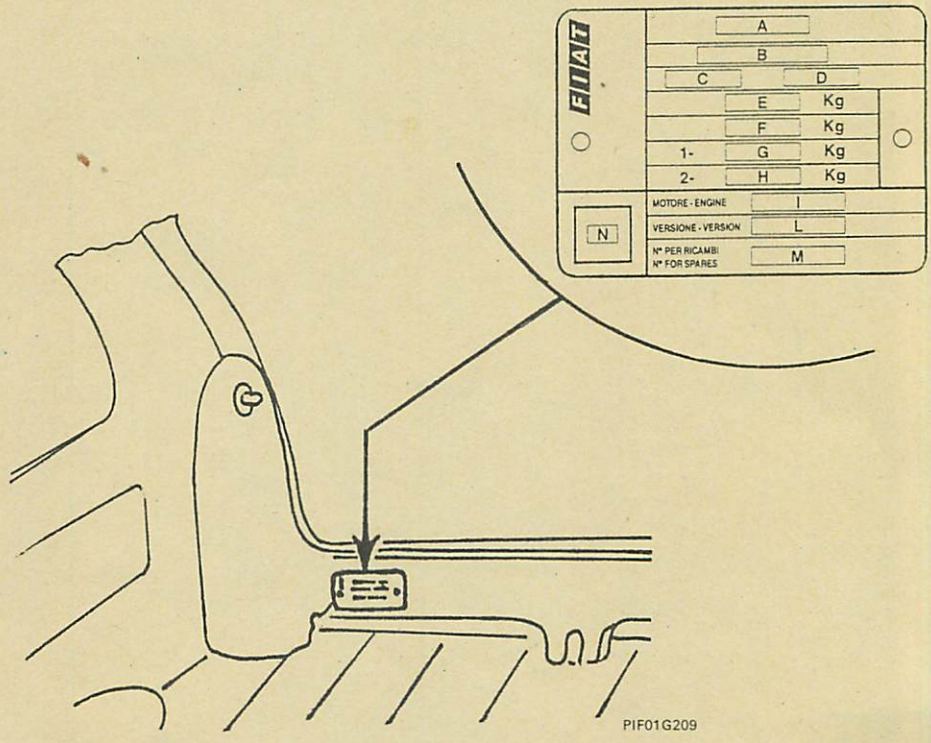
000 00 000 00 PANDA 900 CAT.

main data for new 900 S.P.I. catalyzed version (USA '83 limits)

A new version of the Panda has recently been marketed which has an 899 cc engine with S.P.I. electronic injection/ignition (IAW Marelli-Weber).

The new engine with the camshaft in the cylinder block/crankcase is equipped with hydraulic tappets, an automatic belt tensioner, a three-way catalytic silencer with a Lambda sensor and an anti-evaporation fuel system.

Amongst the features on this new feature we should like to highlight the EEC VIN Plate which is located in the luggage compartment, fixed to the floor rear cross member, on the right hand side, as shown in the diagram.



FIAT
Printed 15/11/1992

CHARACTERISTICS AND TECHNICAL DATA

The technical data and the repair instructions are dealt with thoroughly in the special update for the Service Manual - print n° 505.669/07.

Below are the main data:

PANDA 900 (USA '83 limits)

Bodywork version code	141 AT 53A
Engine marking	1170 A1.046
Total capacity	cc 899
Max power EEC	kW 29 (40 CV DIN)
Corresponding speed	rpm 5500
Max torque EEC	Nm 65 (6,7 kgm DIN)
Corresponding speed	rpm 3000
Timing	1 camshaft in cylinder block/crankcase
Fuel system	S.P.I. electronic injection (I.A.W)
Ignition	electronic combined with injection
Type of fuel recommended	Unleaded petrol (95 RON min)
Top speed (in 4th gear)	kph 135

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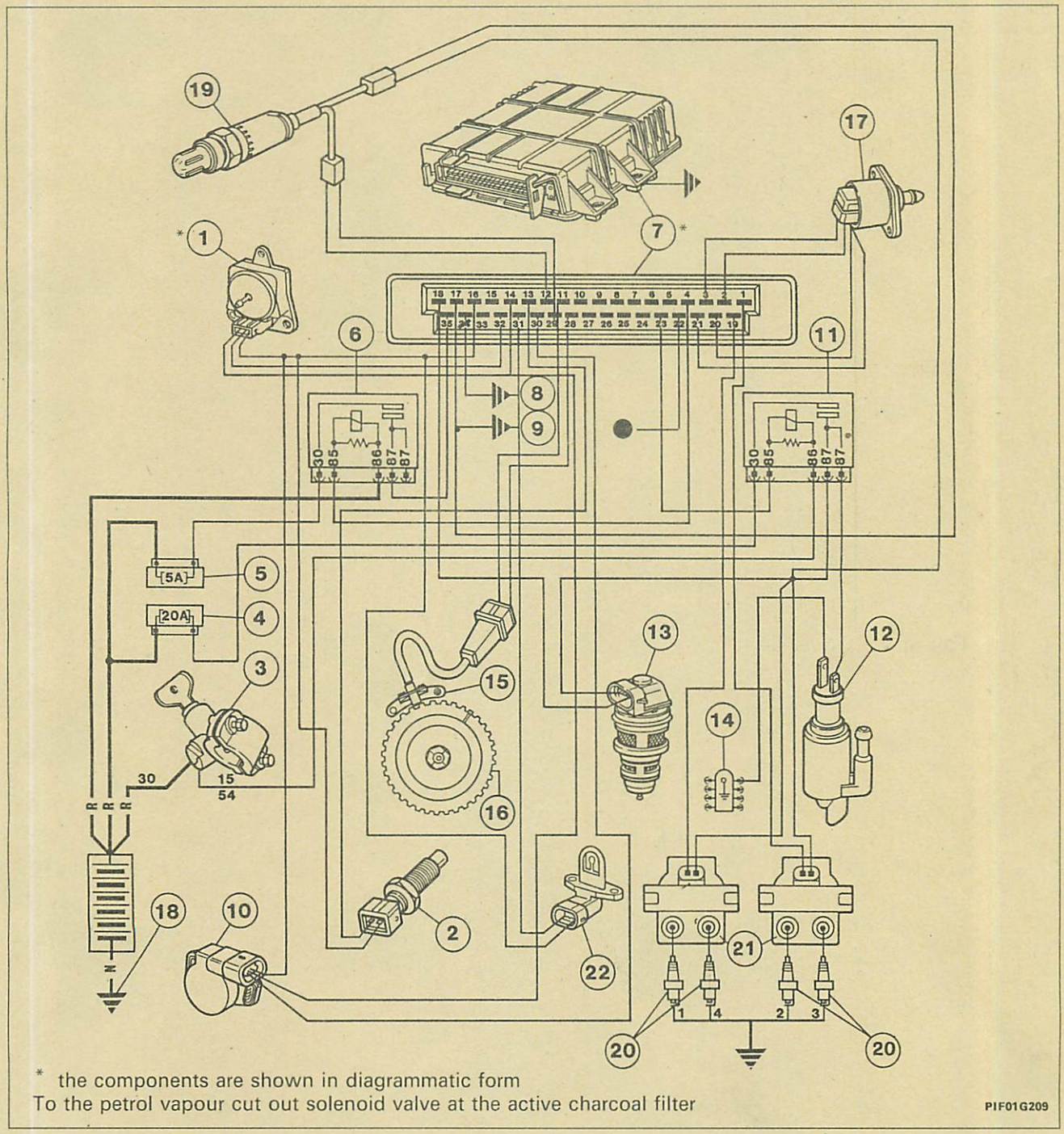
DIAGRAM SHOWING I.A.W. INJECTION/IGNITION SYSTEM FOR 889 CC ENGINE - USA '83 LIMITS



* the components are shown in diagrammatic form
To the petrol vapour cut out solenoid valve at the active charcoal filter

PIF01G209

1. Absolute pressure sensor - 2. Engine coolant temperature sensor - 3. Ignition switch with key - 4. 20A protective fuse for injection/ignition system - 5. 5A protective fuse for injection control unit - 6. Injection/ignition system relay feed - 7. Injection/ignition control unit - 8.9. Injection system earths - 10. Butterfly valve position sensor - 11. Injection/ignition system power stages relay feed - 12. Electric fuel pump - 13. Injector - 14. Left rear earth -15. Rpm sensor and synchronism - 16. Flywheel (crankshaft pulley) - 17. Idle speed adjustment stepping motor - 18. Battery earth - 19. Lambda sensor - 20. Spark plugs - 21. Ignition coils - 22. Air temperature sensor.

Printed 15/10/1992

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FIAT

S.A.-Divisione Fiat
Assistenza Tecnica

No. 5/91

PANDA 000

000 00 000 01 PANDA NEW RANGE
main features and renewal contents - Italy

Since June 1991, Panda range has been involved by renewal modifications as follows:

Externally, the new range features:

- new black front mask on all versions (except the Shopping one with car's same colour)
- new graphics and new personalization identifying different versions
- new range of body colours
- more modern passenger compartment due to new linings, new clothing and carpeted floor panel
- more functional front seats (adjustable, more wrapping, with headrest and mechanism making the access to rear seats easier)
- new 4-spoke steering wheel for Dance, CLX, Shopping, Super and 4x4 (soft foamed steering wheel on Super and 4x4)
- switches on instrument panel with lighted function symbols (on CLX, Dance and Shopping versions)
- larger armrest handle and door opening lever

000 00 000 01 PANDA NEW RANGE

- improved sound deadening inside passenger compartment due to actions on dashpanel insulation and new sound deadening weatherstrip.

- better driveability due to springs and shock absorbers with changed calibration.

VERSION RANGE

The new range consists of 13 versions among which the following ones are emphasized:

- "Selecta" with ECVT automatic gearbox

- "Elettra" the first series electric car

- "CLX", featured by the same contents of "CL" but with a richer standard equipment including 5-speed gearbox, tinted windows and additional rear view mirror.

- emission controlled versions (USA '83 restrictions) with Fire 1000 and 1100 electronic injection engines, 3-way catalytic converter and Lambda Probe.

Versions	Engine cm3	Power HP-EE	Speed km/h
Panda 750 Young	770	34	125
Panda 750 Fire	770	34	125
Panda 750 CLX	770	34	125
Panda 900 Dance	903	45	135
Panda 1000 Shopping	999	45	140
Panda 1000 CLX cat	999	45	140
Panda 1000 S	999	45	140
Panda 1000 S cat	999	45	140
Panda CL Selecta	999	45	140
Panda CL Selecta cat.	1108	50	140
Panda 4x4 Trekking	999	50	130
Panda 4x4 Trekking cat.	999	45	125
Panda Elettra	-	9.2KW	70

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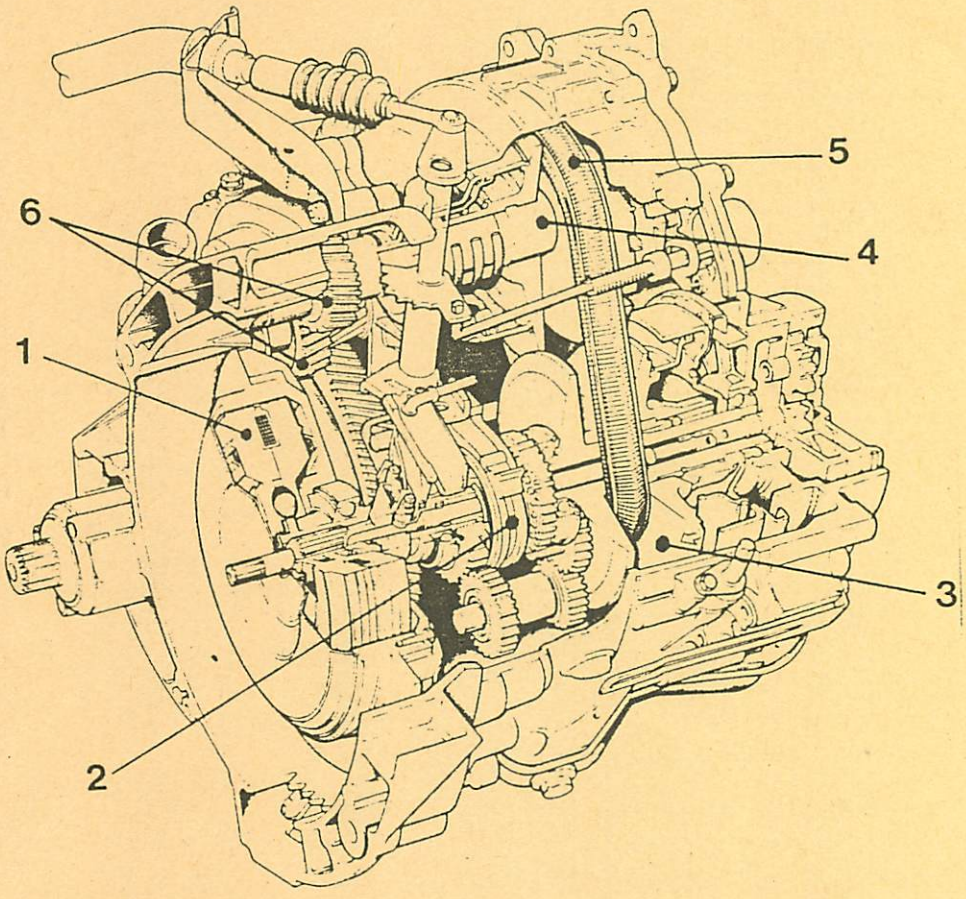
MAIN FEATURES AND TECHNICAL DATA

Features and technical data of the versions having same engines are reported below.
Further data as well as repair instructions are reported on specific Service manuals of different version, engine or gearbox type.

For Panda Elettra, a special supplement to relevant Service Manual print no. 505.655 is being prepared.



ECVT AUTOMATIC GEARBOX

1. Electromagnetic clutch
2. Mechanism for engaging/desangaging forward and reverse gear
3. Driving pulley
4. Driven pulley
5. Belt
6. Final drive unit

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Panda 750 Young

- Body version code	
- 4-speed manual gearbox	141AI43A
- 5-speed manual gearbox	141AI53A
- Engine marking	141B.000
- Total displacement	770 cm3
- EEC max power	25 KW (34HP)
- at	5250 rpm
- EEC max torque	54 Nm (5.5 kgm)
- at	3000 rpm
- Valve gear	single camshaft in crankcase
- Fuel system	Weber carburettor 32 ICEV 60
- Ignition	mechanical distributor
- Fuel prescribed:	
	Leaded or unleaded petrol (95 RON min.)
- Max speed	125 km/h

Panda 750 Fire - 750 CLX

- Body version code	
- 4-speed manual gearbox	141AA43A
- 5-speed manual gearbox	141AA53A
- Engine marking	156A4.000
- Total displacement	770 cm3
- EEC max power	25 KW (34HP)
- at	5250 rpm
- EEC max torque	57 Nm (5.8 kgm)
- at	3000 rpm
- Valve gear	1 OHC
- Fuel system	Weber carburettor 32 TLF 11
- Ignition	mechanical distributor
- Fuel prescribed:	
	Leaded or unleaded petrol (95 RON min.)
- Max speed	125 km/h

Panda 900 Dance

- Body version code	141AL53A
- Engine marking	146A.048
- Total displacement	903 cm3
- EEC max power	33 KW (45HP)
- at	5600 rpm
- EEC max torque	67 Nm (6.8 kgm)
- at	3000 rpm
- Valve gear	single camshaft in crankcase
- Fuel system	Weber carburettor 32 ICEV 61
- Ignition	mechanical distributor
- Fuel prescribed:	
	Leaded or unleaded petrol (95 RON min.)
- Max speed (IN iv)	135 km/h

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Panda 1000 - Shopping

- Body version code	
- 4-speed manual gearbox	141AB43A
- 5-speed manual gearbox	141AB53A
- Engine marking	156A2.000
- Total displacement	999 cm3
- EEC max power	33KW (45HP)
- at	5000 rpm
- EEC max torque	78 Nm (8.0 kgm)
- at	2750 rpm
- Valve gear	1OHC
- Fuel system	Weber carburettor 32 TLF 6
- Ignition	mechanical distributor
- Fuel prescribed:	
	Leaded or unleaded petrol (95 RON min.)
- Max speed	140 km/h

Panda 1000S - CLX cat.(with catalytic converter-USA 83)

- Body version code	141A053A
- Engine marking	156A2.246
- Total displacement	999 cm3
- EEC max power	33KW (45HP)
- at	5250 rpm
- EEC max torque	74 Nm (7.5 kgm)
- at	3250 rpm
- Valve gear	1OHC
- Fuel system	electronic S.P.I. Bosch "Mono-Jetronic"
- Ignition	"Breakerless"
- Fuel prescribed:	
	Unleaded petrol (95 RON min.)
- Max speed (in IV)	140 km/h

Panda CL Selecta (with ECVT automatic gearbox)

- Body version code	141AB13A
- Engine marking	156A2.000
- Total displacement	999 cm3
- EEC max power	33KW (45HP)
- at	5000 rpm
- EEC max torque	78 Nm (8.0 kgm)
- at	2750 rpm
- Valve gear	1OHC
- Fuel system	Weber carburettor 32 TLF 6
- Ignition	mechanical distributor
- Fuel prescribed:	
	Leaded or unleaded petrol (95 RON min.)
- Max speed (in IV)	132 km/h

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Panda CL Selecta cat. (with catalytic converter - USA '83 restrictions and ECVT automatic gearbox

- Body version code	141AS13A
- Engine marking	156 C.046
- Total displacement	1108 cm3
- EEC max power	37KW (50HP)
- at	5500 rpm
- EEC max torque	78 Nm (8.0 kgm)
- at	3000 rpm
- Valve gear	10HC
- Fuel system	electronic S.P.I. Bosch "Mono-Jetronic"
- Ignition	"Breakerless"
- Fuel prescribed:	Unleaded petrol (95 RON min.)
- Max speed (in IV)	140 km/h

Panda 4 x 4 Trekking

- Body version code	141AE53B
- Engine marking	156A3.000
- Total displacement	999 cm3
- EEC max power	37KW (50HP)
- at	5500 rpm
- EEC max torque	78 Nm (8.0 kgm)
- at	3000 rpm
- Valve gear	10HC
- Fuel system	Weber carburettor 32 TLF 8
- Ignition	electronic "Breakerless"
- Fuel prescribed:	Leaded or unleaded petrol (95 RON min.)
- Max speed (in IV)	130 km/h

Panda 4x4 Trekking cat. (with catalytic converter - USA '83 restrictions

- Body version code	141A053B
- Engine marking	156A2.246
- Total displacement	999 cm3
- EEC max power	33KW (45HP)
- at	5250 rpm
- EEC max torque	74 Nm (7.5 kgm)
- at	3250 rpm
- Valve gear	10HC
- Fuel system	electronic S.P.I. Bosch "Mono-Jetronic"
- Ignition	"Breakerless"
- Fuel prescribed:	Unleaded petrol (95 RON min.)
- Max speed (in IV)	125 km/h

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PANDA ELETTRA
main technical data

- Body version code 141 AZ43C

- Engine marking TTL 1800
- Engine type: d.c. current, excitated in series, 72 V rated voltage

- Engine performances

- Rated power	9.2 KW
- Rated Torque	35 Nm
- at	2500 rpm
- Max power under temporary overload	14 KW
- Torque under overload	65 Nm
- at	2000 rpm
- Continous max	5000 rpm

The engine is cooled by forced ventilation through thermal sensor located on engine frame.

- Pulling regulator
  It is based on an electronic MOSFET power Chopper with 18KHZ frequency changing the voltage at engine connection from zero up to battery voltage, so allowing rpm to change as well as car speed. pulling regulator allows the electrical braking of the vehicle up to a complete stop. This braking begins by pressing brake pedal in the first section of its stroke.

The components of the adjusting system are:
- Main relay, NO, which is closed under operating conditions of the vehicle (key on).
- Accelerator unit consisting of a potentiometer controlled by accelerator pedal.
- Power and check unit
- A relay plus two remote control reversers to allow the electrical braking.

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The electrical features of the electronic regulator are:

- Rated voltage	72V
- Max pulling current	280A
- Constant current	250A

Protections:
- Regulator start locking when the car is under recharging

- Self-protections with relay opening due to:
  - MOSFET short circuit
  - Battery down
  - Over temperature
  - Accelerator signal control cutoff
  - Engine circuit cutoff

- Power fuses
  - 2 250A fuses as battery protection
  - 50A fuse as engine under braking protection

- Pulling batteries

Storage batteries connected in series are put in two containers with forced ventilation, isolated and located:

- a rear one containing storage batteries for 60V
- a front one for 12V

Each container is protected by a fuse located on the side of the container itself.

Pulling battery poles (positive and negative) are isolated with respect to car body.

The battery has a system for topping up distilled water and collecting the gases with outer exhaust.

Storage battery features:

- Type	FIAMM 3V240
- Rated voltage	6V
- Rated capacity in 5 hours	185 Ah
- Outer dimensions	244x190x298 mm
- Weight	31 kg
- Centralized battery top-up	

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- Pulling battery charger

It is a a.c./d.c converter supplied through 220V 16A single-phase alternate mains, located behind rear battery package.

The charger is automatically started by fully connecting the recharge plug (with differential switch on) and it locks electronic regulator operation.

Located behind radiator grille: 220 V socket for battery charger, differential switch for cutting the voltage in case of failure when recharging the battery.

Mains cable behind charger.

- Battery charger for Users

It is a d.c./d.c. converter with input-output electrically isolated. It draws the energy from pulling battery and keeps user battery under charge.

The charger operates when the vahicle is operating and during pulling battery re-charge. It is located in the engine compartment.

Electrical features:

- Max input voltage	100 V
- Max output voltage	14 V
- Max re-charge current	17 A

Chassis

- Manual gearbox and differential

4 speeds and reverse with synchronizers for gearshifting (except reverse).

Gear ratios are:

1st	3.909
2nd	2.056
3rd	1.344
4th	0.978
Reverse	3.727

Final drive 4.321 (13/55)

- Wheel rims
  printed steel — 4.00 B x 13H

- Tyres
  Tubeless — 145 SR 13 reinforced

- Spare wheel
  Rim — 4.00B x14
  Tyre — T 105/70 R 14

- Inflation pressure (bar)
  Front wheels — 2.5
  Rear wheels — 2.6
  Spare wheel — 4.0

- Toe-in, measured between front wheel rims with unladen car — 0....2 mm

Performances

- Max speed allowed after running-in:
  1st speed — 15 km/h
  2nd speed — 30 km/h
  3rd speed — 45 km/h
  4th speed — 70 km/h

Max climbable gradients with fully laden cars:
  1st speed — 23%
  2nd speed — 11%
  3rd speed — 7%
  4th spedd — 4%

Weights

Kerb weight — 1150 kg
Payload — 240 kg
Fully laden — 1390 kg

Dimensions

Height of unladen car — 1420 mm

Capacities

Fuel tank
(for heating passenger compartment) — 10 dm3 (litres)