

F I A T F I O R I N O



C O M F O R T - M A T I C

This Supplement describes the procedure for using the COMFORT-MATIC electronically controlled manual gearbox.

For the correct use of the gearbox, it is essential to read this Supplement in full to find out at the outset which operations are correct and permissible.

For additional information, consult the Owner Handbook to which this Supplement is attached.

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The vehicle is equipped with an electronically controlled manual gearbox known as COMFORT-MATIC which allows two operating modes: **MANUAL** and **AUTO**.

The gearbox consists of a conventional manual transmission equipped with a lever

fig. 1, to which an electronically-controlled hydraulic device that controls the clutch and engagement of the gears has been added.

READY TO START

MANUAL MODE

IMPORTANT For the correct use of the system, only use your right foot only to operate the pedals.

- Press the brake pedal.
- Start the engine.
- Push the gear lever towards **+** **fig. 1** to engage first gear (if starting from **N** or **R** simply move the lever to the central position) or **R** **fig. 2** to engage reverse.
- Release the brake pedal and press the accelerator pedal.
- When driving, push the gear lever towards **+** **fig. 1** to engage a higher gear or towards **-** **fig. 1** to engage a lower gear.

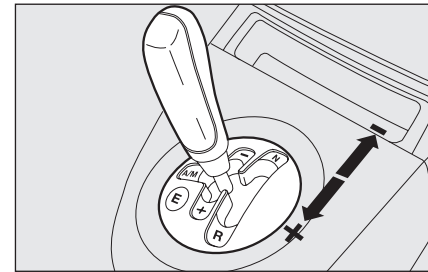


fig. 1

F0T0224m

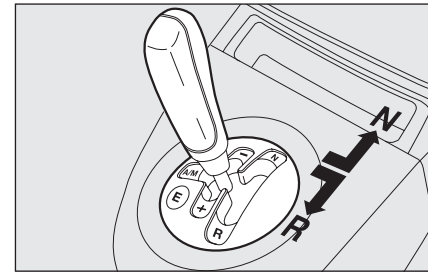


fig. 2

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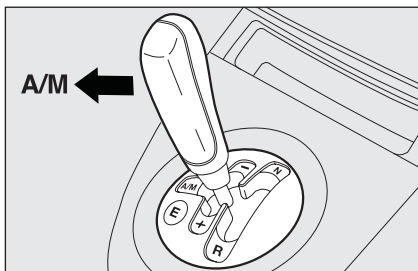


fig. 3

FOT0226m

AUTOMATIC MODE

IMPORTANT For the correct use of the system, it is advisable to use your right foot only to operate the pedals.

- Press the brake pedal.
- Start the engine.
- Push the gear lever to **A/M** fig. 3 to engage the automatic mode or to **R**-fig. 2 to engage reverse.
- Release the brake pedal and press the accelerator pedal.

OPERATING MODE

The gearbox can work in two operating modes:

- the first is manual (**MANUAL**), where the driver decides directly when to shift gear;
- the second fully automatic (**AUTO**), where the system decides when to shift gear. The **ECO** function (Economy) can be used with this mode reducing fuel consumption. To switch this function on, press button **E**-fig. 4.

Select the gear and the operating mode (**MANUAL** or **AUTO**) by operating the control lever at any speed.



Avoid keeping your hand on the lever when you are not requesting a gear shift or an Auto/Manual mode change.

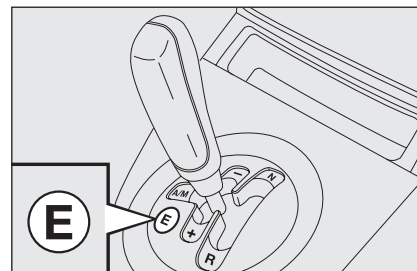


fig. 4

FOT0223m

CONTROL LEVER

The control lever fig. 1, on the centre tunnel is a floating multistable lever, i.e. it can take up three stable positions and three unstable positions.

The three stable positions correspond to neutral **N**-fig. 2, reverse **R**-fig. 2 and the central position between the unstable positions (+) and (-) fig. 1.

The unstable positions, i.e. positions left by the lever as soon as it is released, are upshift request (+), downshift request (-) and the automatic downshift mode request (**A/M**) fig. 3.

The system returns to the manual mode by returning the lever to the **A/M** position.

With the vehicle at a standstill and the key extracted, the lever may be moved with/without the brake pedal pressed. The system does not carry out any action after the lever has been moved and remains in the gear memorized before the key was removed.

IMPORTANT With the engine running, a buzzer sounds to indicate errors between the lever position and the gear effectively engaged until the inconsistency is resolved.

MANUAL OPERATION (MANUAL)

In this operating mode, the driver is responsible for choosing the best gear ratio to engage, depending on vehicle usage conditions.

Proceed as follows to shift gear:

move the lever to the **+** position **fig. 1** to engage a higher gear;

or

move the lever to the **-** position **fig. 1** to engage a lower gear.

The accelerator pedal need not be released during the gear change.

The system will not allow the gear change if the gear shift request could impair the correct operation of the engine and gearbox.

In this case, the system will notify the driver that it is not possible to change gear accompanied by a buzzer.

The system will shift down through the gears automatically when the engine is idling (e.g. during deceleration).



fig. 5

FOT0227m

AUTOMATIC OPERATION (AUTO)

To switch the automatic operation (**AUTO**) on/off, push the lever to the **A/M fig. 3** position; activation will be signalled by the display of the word **AUTO fig. 5** and the gear engaged.

In **AUTO** mode the system will change gear depending on the speed of the vehicle, the engine speed and the intensity with which the accelerator pedal is pressed. A gear shift may be requested by operating the gear lever, but without necessarily switching this mode off: this function, known as 'gear suggestion', suspends the automatic mode for the time required to select the ratio requested by the driver.

Automatic operation (AUTO - ECO)

The **ECO** function can only be activated with the automatic mode engaged.

The **ECO** function is turned on by pressing button **E - fig.4**. After this function has been activated, the display will show the gear engaged and the words **AUTO** and **E** (see next paragraph).

The **ECO** function activates the system selecting the most suitable gear depending on the speed of the vehicle, the engine speed and the intensity with which the accelerator is pressed with fuel economy being the main objective.

Where necessary (e.g. overtaking), the system will react to the accelerator being pressed to the floor by shifting down through one or more gears in order to deliver the power and torque required to give the vehicle the acceleration required by the driver (all this takes place in automatic mode, irrespective of whether the **ECO** function is on or off).

INFORMATION ON DISPLAY

When the ignition key is turned to the **MAR** position, after about 1 second, the display shows the gear engaged and the last mode used (**AUTO** or **MANUAL**):

N = neutral;

1 = first gear;

2 = second gear;

3 = third gear;

4 = fourth gear;

5 = fifth gear;

6 = sixth gear;

R = reverse.



fig. 6

F0T0228m

If the **ECO** function is used the display will show the letter **E** (Economy) next the gear engaged **fig. 6**.

IMPORTANT If the display does not show the gear engaged after 10 seconds with the ignition key in **MAR**, turn the ignition to **STOP**, wait for the display to turn off and then repeat the manoeuvre. If the problem persists, contact the Fiat Dealership.

ENGINE STARTING

The system permits engine start-up with a gear engaged and also with the gearbox in neutral (**N**); the brake pedal must always be pressed with the gear engaged.

It is advisable to place the gear lever in neutral (**N**) before starting the engine.

After start-up:

- the gearbox automatically engages neutral (**N**)
- the lever remains in the same position as the last time the engine was turned off
- the reconfigurable multifunction display shows the letter (**N**) and an acoustic signal indicates any inconsistency between the lever position and the gear engaged
- the gears that may be engaged are 1st, 2nd or reverse (**R**), with the brake pedal pressed.

IMPORTANT If start-up is requested with the gearbox in a position other than **N** and without the brake pedal pressed, display shows a dedicated message see (“Warning lights and messages” paragraph). In this case, repeat the starting procedures pressing the brake pedal.

IMPORTANT If the starting request takes place with the gearbox in failure conditions, carry out the “Delayed ignition” procedure (also see relevant messages): turn the key to the **AVV** position for at least 7 seconds with the brake depressed and the engine will start. The system will remain in recovery mode (maximum speed permitted: 3rd, Automatic mode not available). If the engine does not start, contact a Fiat Dealership.

IMPORTANT When the driver’s door is opened, the system activates the hydraulic part to prepare it for subsequent engine start-up.



If the engine does not start with the gear engaged, a potentially hazardous situation because the gearbox has automatically shifted to neutral is indicated by a buzzer.

DRIVING OFF IN THE VEHICLE

Driving off in the vehicle is permitted in 1st gear, 2nd gear (recommended on road surfaces with poor grip) and reverse (R).

IMPORTANT It is advisable to use the handbrake for hill starts on a steep gradient.

To engage 1st gear

- press the brake pedal;
- with the lever in (N) or (R) move the lever to the middle position;
- with the lever already in the middle position, move the lever toward + fig. 1;
- release the brake pedal and press the accelerator pedal (pressing the pedal quickly so that it reaches the end of travel to allow a responsive take off).

To engage 2nd gear

- press the brake pedal;
- with the lever in (N) or (R) Fig. 2 move the lever to the middle position and then towards + fig. 1;
- with the lever already in the middle position, move the lever twice toward + fig. 1;
- release the brake pedal and press the accelerator pedal.

For departures on a hill with a medium-steep gradient, it is advisable to use the handbrake.

To engage reverse (R)

- press the brake pedal;

IMPORTANT If the vehicle is moving, the request is accepted and carried out if the vehicle speed is less than 3 km/h within 1.5 seconds of the request: if the request is not implemented, the system will maintain the gear engaged or if vehicle speed drops below 10 km/h it will put the gearbox in neutral (N) and the manoeuvre must then be repeated.

- Shift the lever to (R) fig. 2;
- release the brake pedal and press the accelerator pedal.

BUZZER WARNING

For safety reasons, a buzzer warning sounds when the vehicle is parked with the gearbox in neutral (N) (the warning sounds when the ignition key is turned to STOP);

With the vehicle at a standstill, the engine running and (1), (2) or (R) gear engaged, the system turns on the buzzer and automatically shifts the gearbox to neutral (N) when:

- the accelerator and/or brake pedals are not operated for at least 3 minutes;
- the brake pedal is pressed for longer than 10 minutes;
- the driver's door is opened and the accelerator and brake are not operated for at least 1.5 seconds;
- a fault has been detected in the gearbox.

PARKING THE VEHICLE

To park safely, it is essential to engage 1st gear or reverse (**R**) gear with your foot on the brake pedal. If parking on a slope, operate the brake pedal. It is also essential to wait until the gear engaged disappears from the display before releasing the brake pedal.

IMPORTANT NEVER leave your vehicle with the gearbox in neutral (**N**).

GENERAL WARNINGS

- With the vehicle at a standstill and a gear engaged, keep the brake pedal pressed until you decide to set off. Then release the brake and accelerate gradually;
- when parked for long periods with the engine running, it is advisable to keep the gearbox in (**N**);
- to safeguard clutch efficiency, do not use the accelerator to keep the vehicle at a standstill (e.g.: parking on a hill); the clutch could be damaged by overheating. Use the brake pedal instead and operate the accelerator only when you are ready to set off;
- use second gear only when you need more control of take-off during manoeuvres on surfaces with poor grip;
- if, with reverse (**R**) engaged, you need to engage first speed or vice versa, only change gear when the vehicle has come to a stop and the brake pedal is pressed;;
- although very inadvisable, if the vehicle is unexpectedly allowed to roll downhill with the gearbox in neutral (**N**) the system will automatically engage the gear best suited to vehicle speed when a gear shift is requested to allow drive to be correctly transmitted to the wheels;
- if necessary, gear changes can be made with the engine off with the ignition in the **MAR** position and the brake pressed. In this case, gear shifts must be made allowing at least 5 minutes to elapse between one gear shift and the next to safeguard the operation of the hydraulic system and the pump in particular;
- fully depressing the accelerator pedal quickly activates a function that allows a lively take off;
- during hill starts, accelerate gradually but fully immediately after releasing the handbrake or brake pedal to allow the engine to increase its rpm to a greater extent and overcome higher gradients with more torque.

WARNING LIGHTS AND MESSAGES



“COMFORT-MATIC” GEARBOX FAILURE (red)

When the ignition key is turned to **MAR**, the warning light turns on and should go off after a few seconds.

The warning light in the panel comes on flashing (together with a message in the display and a buzzer) to indicate that the gearbox is faulty.



If the gearbox is faulty, contact a Fiat Dealership as soon as possible to check the system.

REDUCE GEAR CHANGES

The warning light comes on in the panel (together with a message in the display) to signal the incorrect use of the gearbox by the driver.

Incorrect use (by the driver) could automatically activate a procedure for protecting the system.



If the warning light (together with the message in the display) continues to remain on in the panel, go to a Fiat Dealership.

MANUAL METHOD UNAVAILABLE

The message appears in the display when it is not possible to select **MANUAL** mode with the engine running.



Contact a Fiat Dealership if the message remains in the display.

AUTOMATIC METHOD NOT AVAILABLE

The message appears in the display when it is not possible to select **AUTO** mode with the engine running.



Contact a Fiat Dealership if the message remains in the display.

CLUTCH OVERTEMPORAT. SEE HANDBOOK

The message appears in the display together with a buzzer when the clutch overheats.

In this situation, limit take-off and gear shifts or if necessary park (turning off the engine) until conditions are optimum.



If the message still appears in the display, contact a Fiat Dealership.



To safeguard clutch efficiency, do not use the accelerator to keep the vehicle at a standstill (e.g.: parking on a hill); the clutch could be damaged by overheating. Use the brake pedal instead and operate the accelerator only when you are ready to set off.

DEPRESS BRAKE PEDAL

The message is shown in the display together with a buzzer during an attempt at starting when the brake pedal is not pressed.

DEPRESS BRAKE PEDAL- DELAYED IGNITION

The display shows these messages alternately and in sequence together with a warning buzzer when the system does not recognise the brake pedal to be operational during a starting attempt.

In these circumstances, turn the key to the **AVV** position for at least 7 seconds with the brake depressed and the engine will start. The system will be in recovery mode (maximum speed permitted: 3^a).

IMPORTANT If start-up is requested with the gearbox faulty, run the “Delayed ignition” procedure (see associated messages): turn the key to the **AVV** position for at least 7 seconds with the brake depressed and the engine will start. The system will be in recovery mode (highest gear permitted 3rd, automatic mode not available). If the engine does not start, contact a Fiat Dealership.

IMPORTANT Messages are displayed only if start-up takes place in a gear other than neutral (**N**).



Contact a Fiat Dealership if the messages remain in the display.

GEAR UNAVAILABLE

This message appears in the display together with a warning buzzer in the following cases:

when it is not possible to change gear due to a fault in the system;

or

when, due a fault in the system, is only possible to engage 1st (1), 2nd (2), 3rd (3) or reverse (R).



Contact a Fiat Dealership if the message remains in the display.

OPERATION NOT ADMISSIBLE

The message appears in the display together with a warning buzzer when the system will not accept a gear change via the control lever because certain conditions required for acceptance of the gear change are missing.

DEPRESS BRAKE PEDAL & REPEAT OPERATION

The message appears in the display accompanied, in some cases, by a warning buzzer for safety reasons if you attempt to change gear without previously pressing the brake pedal.



Contact a Fiat Dealership if the message remains in the display.

SET GEARBOX LEV. TO NEUTR. (neutral)

This message appears in the display together with a warning buzzer when the system asks the driver to perform the manoeuvre.

When the gearbox is shifted to (N) the message in the display should go off.



Contact a Fiat Dealership if the message remains in the display.

TOWING THE VEHICLE

Ensure the gearbox is in neutral (**N**) (by checking that the vehicle moves when pushed) and tow in the same way as a normal vehicle with a manual gearbox (see instructions in Owner Handbook).

If it is not possible to put the gearbox in neutral, do not tow the vehicle and contact a Fiat Dealership.

FUSE REPLACEMENT

For the location of the fuses, see the illustrations in the paragraph “Fuse replacement” in the “In an emergency” section of the Owner Handbook.

	FUSE	AMPS
Power supply (+ battery) for COMFORT-MATIC pump	82	30
COMFORT-MATIC gearbox control unit (power supply + battery)	84	10
COMFORT-MATIC gearbox control unit and gear selector lever (power supply + ignition)	16	7.5

SERVICE SCHEDULED

The Service Schedule, in addition to all of the operations already described (see Owner Handbook, “Maintenance and care” chapter), also includes the checks/replacements listed in the table below:

	I.3 Multijet
Check gearbox oil level	every 30,000 km
Check fluid in hydraulic clutch activation system	every 30,000 km
Change hydraulic clutch activation system fluid	every 60,000 km (or every 2 years)

CHECKING FLUID LEVELS

COMFORT-MATIC GEARBOX HYDRAULIC ACTIVATION SYSTEM FLUID

To check the gearbox oil level and to check/change the hydraulic clutch operating system fluid, contact only a Fiat Dealership.



WARNING

Used gearbox oil contains substances that are hazardous for the environment. It is advisable to have the oil changed by a Fiat Dealership where used oil will be disposed of according to the law.

ENGINE CODE - BODYWORK VERSIONS

	Engine code	Bodywork versions
I.3 Multijet	199A2000	225BxB11 AX (□) 225BxB11 AX1 (○) 225AxB11 02 (■) 225CxB11 ZA (●) 225CxB11 ZA1 (▲)

(□) Cargo versions

(○) Cargo Adventure versions

(■) Combi versions (people carriers)

(●) Combi versions (goods transportation)

(▲) Combi Adventure versions (goods transportation)

PERFORMANCE

Top speed after vehicle is run in is 157 km/h (*) - 155 km/h (**).

(*) Cargo versions

(**) Combi versions

TRANSMISSION

I.3 Multijet	
Gearbox	Six forward speeds plus reverse with electronically managed electrohydraulic control system
Clutch	Single dry plate with electrohydraulic activation
Drive	Front

WEIGHTS

Weights (kg)

	I.3 Multijet				
	Versions Combi N1 "Minimum" (4 places)	Versions Combi N1 "Maximum"(4 places)	Versions Combi M1 (5 places)	Versions Cargo "Minimum"	Versions Cargo "Maximum"
Unladen weight (with all fluids, fuel tank filled to 90% and without optional equipment)	1190	1265	1185	1090	1200
Payload including the driver (*):	565	490	515	610	500
Payload excluding the driver (*):	490	—	445	535	425
Maximum permitted loads (**)					
– front axle:	950	950	950	900	900
– rear axle:	950	950	950	950	950
– total:	1755	1755	1700	1700	1700
Towable loads					
– trailer with brakes:	600	600	600	600	600
– trailer without brakes:	400	400	400	400	400
Maximum load on roof (with roof rack bars) (***):	100	100	100	100	100
Maximum load on tow hitch (trailer with brakes):	60	60	60	60	60

NOTE Versions Adventure have the same payloads as the other versions.

(*) **CATEGORY N1:** the payload for full optional versions (110 Kg) is progressively reduced up to 500 kg.

CATEGORY M1: the options are included in the payload.

(**) Loads not to be exceeded. The driver is responsible for arranging the loads in the boot and/or in the load compartment so that they comply with the maximum permitted limits.

(***) Including weight of any carrying systems fitted (Lineaccessori Fiat bars/container).

CAPACITIES

	1.3 Multijet		Recommended fuels Recommended products
	litres	kg	
COMFORT-MATIC gearbox hydraulic activation system	0.505	0.43	TUTELA CAR CS SPEED
Clutch hydraulic operating system	0.03	0.040	TUTELA TOP4

FLUIDS AND LUBRICANTS

RECOMMENDED PRODUCTS AND SPECIFICATIONS

Use	Specifications of fluids and lubricants for the correct operation of the vehicle	Genuine Fluids and Lubricants	Applications
Lubricants for transmission of drive	Special fluid for electrohydraulic actuators ratio selector Qualification FIAT 9.55550-SAI	TUTELA CAR CS SPEED Contractual Technical Reference N° F005.F98	COMFORT-MATIC electrically operated electrohydraulic actuator
Brake fluid	Synthetic fluid for braking and clutch systems Exceeds specifications: FMVSS n° 116 DOT4, ISO 4925, SAE J 1704 Qualification FIAT 9.55597	TUTELA TOP 4 Contractual Technical Reference N° F001.A93	Hydraulic brakes and hydraulically operated clutches

FUEL CONSUMPTION

Fuel consumption according to Directive 1999/100/CE
(litres x 100 km)

	Urban	Extraurban	Combined
I.3 Multijet	5.5 (*) / 5.7 (**)	3.7 (*) / 3.8 (**)	4.4 (*) / 4.5 (**)

The consumption figures in the table refer to the AUTO-ECO logic.

(*) Cargo versions

(**) Combi versions

CO₂ EMISSIONS

The CO₂ emission refer to combined consumption.

CO₂ EMISSIONS IN ACCORDANCE WITH 1999/100 EC DIRECTIVE

I.3 Multijet: 116 g/km (*) / 119 g/km (**)

(*) Cargo versions

(**) Combi versions

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If you have any further questions please consult your FIAT dealer.

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