



2022

FIAT 500

Hybrid 1.0 GSE petrol FWD manual



4.3 
/10

**Clean Air
Index**

6.3 
/10

**Energy Efficiency
Index**

5.2 
/10

**Greenhouse Gas
Index**

4.3

/10



Clean Air Tests



Laboratory Test

	NMHC	NO _x	NH ₃	CO	PN
4.6/10 Cold Test	●	●	●	●	●
5.0/10 Warm Test	●	●	●	●	●
0.0/10 Highway	●	●	●	●	●
3.5/10 Cold Ambient Test	●	●	●	●	●



Road Test

5.7/10 On-Road Drive	●	●	●	●	●
2.4/5 On-Road Short Trip	●	●	●	●	●
3.9/8 On-Road Heavy Load	●	●	●	●	●
3.2/5 On-Road Light Load	●	●	●	●	●
2.0/2 Congestion	●	●	●	●	●



n.a.



good



adequate



marginal



weak



poor

Comments

The FIAT 500 performs moderately in the standard test drives and increases its performance slightly during the additional robustness testing. The biggest challenge overall are particulates – the vehicle is not equipped with a gasoline particulate filter and the emissions are close to the upper limit. The exceedance of CO, NH₃ and particle emission thresholds sets the score of the Highway test to zero. The small FIAT scores the maximum points for clean air during the Congestion simulation, as NO_x emission remain close to zero.

Energy Efficiency Tests



Laboratory Test

Energy

6.8/10 Cold Test



6.9/10 Warm Test



5.7/10 Highway



5.8/10 Cold Ambient Test



Consumption

Driving Range

Average

5.2 l/100 km

680 km

Worst-case

6.2 l/100 km

565 km



n.a.



good



adequate



marginal



weak



poor














Comments

The FIAT 500 is a compact and light vehicle with a 3-cylinder engine. It scores above average in all tests for energy efficiency, even in the -7°C Cold Ambient lab test. This mild-hybrid uses less than 5 liters of petrol for 100 km during both the Cold and the Warm Laboratory tests. The standard real world test resulted in 5.1l/100 km, whereas the aggressive On-Road Heavy Load test pushed the consumption to above 6.2 liters. The best case is found in the On-Road Light Load test – 4.6l/100 km.

5.2

/10

Greenhouse Gases Tests

 <u>Greenhouse gases</u>	CO ₂	N ₂ O	CH ₄
5.8/10 Cold Test			
6.0/10 Warm Test			
4.5/10 Highway			
4.7/10 Cold Ambient Test			



n.a.



good



adequate



marginal



weak



poor

Comments

The Greenhouse Gas Index is based on a Well-to-Wheel+ approach, meaning that the greenhouse gas emissions related to the supply of the energy are added to the tailpipe emissions. The test vehicle emits about 110 g CO₂/km in the Cold and Warm laboratory WLTC+ tests and 130 g CO₂/km in the BAB130 highway and in the Cold Ambient tests. With upstream greenhouse gas emissions of approx. 30 g CO₂-eq./km on top, that leads to moderate but creditable results for a petrol vehicle. The emissions of N₂O and CH₄ are barely measurable and grant the vehicle bonus points for robust control.

Our Verdict

The tested FIAT 500 is a compact car with a naturally aspirated 3-cylinder petrol engine. It uses quite a small hybrid battery with only 11 Ah capacity (at 12 V). The overall system manages to keep the consumption at around 5.2l/100 km, close to the officially reported value. The vehicle could make use of more robust and efficient exhaust aftertreatment, especially for ammonia (NH₃) and CO in high power demand phases, as well as for particle number. Here, a gasoline particle filter would help boost up the result. The total score of 5.2 represents an average performance and leaves potential for improvement. Overall, the vehicle is awarded 3 Green stars.

Disclaimer [↗](#)

Specifications

Publication Date 10 2022	Tested Car ZFA3120000JE6 _{xxxx}	Tyres 185/55 R15	Emissions Class Euro 6d AP
Mass 1,029 kg	Engine Size 999 cc	Power/Torque 51 kW/92 Nm	Declared CO ₂ 120 g/km
Declared Battery Capacity 0.13 kWh	Declared Driving Range n.a.	Declared Consumption 5.3l/100 km	



Think before you print