2022

Ford Puma

1.0 EcoBoost Flexifuel Petrol Mode E10 FWD manual

5.2 /10	5.2 /10	3.7 /10
Clean Air Index	Energy Efficiency Index	Greenhouse Gas Index

5.2 /10 Clean Air Tests

	Laboratory Test	NMHC	NO_x	NH_3	CO	PN
4.6/10	**Cold Test**					
7.3/10	**Warm Test**					
3.0/10	**Highway**					
	Cold Ambient Test	Does not qualify for additional robustness testing				
	Road Test					
6.3/10	**On-Road Drive**					
2.6/5	**On-Road Short Trip**					
	On-Road Heavy Load	Does not qualify for additional robustness testing				
	On-Road Light Load	Does not qualify for additional robustness testing				
	Congestion	Does not qualify for additional robustness testing				

n.a. good adequate marginal weak poor

Comments

The Puma, tested with regular E10 petrol, shows good aftertreatment performance in the Warm Lab Test but the scores decrease in the Cold Test and under high engine load conditions of the Highway Test. Ammonia (NH_3), a compound not yet regulated by law, is not sufficiently controlled and the efficiency in particle emissions reduction is mediocre, although their levels are always well below the set thresholds. The powerful acceleration phases in the Highway cycle result in CO output higher than the upper threshold defined by Green NCAP, which results in negative points for CO.

5.2 /10 Energy Efficiency Tests

	Laboratory Test	Energy
5.8/10	**Cold Test**	
5.9/10	**Warm Test**	
3.8/10	**Highway**	
	Cold Ambient Test	Does not qualify for additional robustness testing

	Consumption	Driving Range
Average	**6.2** l/100 km	**687** km
Worst-case	**7.8** l/100 km	**575** km

n.a. good adequate marginal weak poor

Comments

In this campaign, the Flexifuel Puma is tested running on standard E10 petrol. In the Warm and Cold engine start laboratory tests, about 5.7 liters are needed per 100 km, just a little higher than the value measured for the standard On-Road Drive. Short urban trips are highly dependent on the exact conditions, but the measured 6.4 l/100 km is a realistic figure. In the Highway test, the consumption value increases to 7.3 l/100 km. The figures are enough for the Puma to collect half of the possible points in this part of the assessment.

3.7 /10 Greenhouse Gases Tests

Greenhouse gases	CO_2	N_2O	CH_4
4.6/10 **Cold Test**			
4.8/10 **Warm Test**			
2.0/10 **Highway**			
Cold Ambient Test	Does not qualify for additional robustness testing		

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. N_2O and CH_4 are well controlled and tailpipe CO_2 emissions are about 129 g/km and 126 g/km in the Cold and Warm laboratory WLTC+ tests, respectively. These values closely match the declared figure. In the Highway test, 164 g CO_2/km are emitted directly. The total score is noticeably influenced by the addition of the upstream emissions for the fuel supply – around 33-43 g CO_2-eq./km, depending on the test.

Our Verdict

Tested here is the Ford Puma, a compact crossover car, equipped with a 1 liter direct injection turbo engine. This car can be operated on a flexible mixture of petrol and ethanol, from pure petrol to almost pure ethanol. Green NCAP investigated the vehicle's environmental performance in two modes – a standard petrol mode with E10 (tested here) and E85, a mixture of 85 vol.-% ethanol and 15 vol.-% petrol. Like other small petrol engines, the three-cylinder power unit increases its pollutant emissions under high load conditions like in the Highway Test. Here, the car emits elevated amounts of CO and the as-yet unregulated ammonia (NH_3). The performance in reducing particle number is stable but unexceptional. The real-world exhaust aftertreatment performance is above average. The car scores 5.2/10 points in the Clean Air Index and could easily reach a higher result if the identified weaknesses are addressed. The Puma's fuel consumption values are typical for petrol vehicles with this type of body and engine, allowing consumers to cover most drives with 5.5-7.5 l/100 km, depending on the ambient conditions and driving style. With a score of 5.2/10, the car collects a little more than half of the available points in the Energy Efficiency Index. Closely related to the fuel consumption are the greenhouse gas emissions. Laughing gas (N_2O) and methane (CH_4) output values are low and the Puma receives the bonus points for their adequate control. Combining the climate damaging emissions measured at the tailpipe with those related to the production and supply of the fuel, the Greenhouse Gas Index of the Puma ends up at 3.7/10. In total, the Ford Puma, tested in E10 petrol mode, reaches a Weighted Overall Index of 4.7 and receives 2½ Green stars.

Disclaimer

Specifications

Publication Date	Tested Car	Tyres	Emissions Class
12 2022	WF02XXERK2MR485xxxx	215/50 R18	Euro 6d AP
Mass	**Engine Size**	**Power/Torque**	**Declared CO_2**
1,244 kg	999 cc	91.9 kW/200 Nm	126 g/km
Declared Battery Capacity	**Declared Driving Range**	**Declared Consumption**	
n.a.	n.a.	5.6 l/100 km	

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