





Audi A3

Sportback 1.5 TSI petrol 4x2 automatic



6.4

Clean Air Index 5.5

Energy Efficiency Index

4.8





	Laboratory Test	NMHC	NO _x	NH_3	со	PN
6.0 /10	Cold Test					
7.2 /10	Warm Test					
4.7 /10	Cold Ambient Test					
6.9 /10	Highway					
	Road Test					
3.0 /10	On-Road Drive					
5.0 /8	On-Road Heavy Load					
3.3 /5	On-Road Light Load					
4.1 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					













The A3 impresses in its control of pollutant emissions, with an impressive index of 6.4 for Clean Air. NO_x is kept comfortably below the type-approval value in all tests and even ammonia (NH₃), which is not regulated by legislation, is adequately controlled.

Comments



Energy Efficiency Tests

Laboratory Test	Energy		
6.2 /10 Cold Test			
6.5 /10 Warm Test			
4.5 /10 Cold Ambient Test			
4.9 /10 Highway			
	Consumption	Driving Range	
Average	6.3 l/100 km	812 km	
Worst-case	7.3 I/100 km	685 km	













adequate marginal weak

poor

Comments

The declared CO₂ value of 140 g/km was closely matched in the laboratory cold-start test which most closely matches the regulatory test. Energy efficiency was at least marginal in all tests, including the cold ambient temperature test and the high-load highway test.

	Greenhouse gases	CO2	N ₂ O	CH₄
3.5 /7	Cold Test			
3.8 /7	Warm Test			
3.0 /7	Cold Ambient Test			
3.2 /7	Highway			













good adequate marginal weak

poor

Comments

For unregulated greenhouse gases - N_2O and CH_4 - the A3 shows very good control. Emissions of CO₂ are not excessive and show great consistency throughout all of the laboratory tests.



Our Verdict

First introduced in the mid-90's, this fourth generation A3 shares the ubiquitous MQB platform with many of its VW-group stablemates and is tested here with the 1.5 litre petrol engine producing 110 kW and a hefty 250 Nm of torque. The car's exhaust after-treatment - a three-way catalyst and a gasoline particulate filter - does a good job of controlling pollutant emissions and the car achieves an impressive index of 6.4 for Clean Air. Efficiency is also good considering engine output, with an average consumption of 6.3 I/100 km. CO₂ emissions are moderate while control of other important, albeit unregulated greenhouse gases, is very good. The car performs well overall and fully deserves its 3 star rating.

Disclaimer

Publication Date

Mass

1,415 kg

Tested Car

Engine Size

Battery Capacity

Emissions Class

Engine Power/Torque

Published Driving Range

Tyres 225/40/R18 92Y

Published CO₂ 140 g/km

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BMW 1 Series

118i petrol 4x2 manual



4.5

Clean Air Index 5.6

Energy Efficiency Index 4.7



Laborato	ory Test N	мнс м	10 _x 1	NH ₃	со	PN
3.0 /10 Cold Test						
3.8 /10 Warm Test						
2.3 /10 Cold Ambien	t Test					
5.8 /10 Highway						
Road Tes	<u>t</u>					
3.4 /10 On-Road Dri	ive					
0.0/8 On-Road He	avy Load					
3.6 /5 On-Road Lig	ht Load					
4.7 /5 On-Road Sh	ort Trip					
2.0/2 Congestion						
Robustne	?SS					

adequate marginal

weak

poor

Comments

The 118i is equipped with a three-way catalyst and a gasoline particulate filter. This exhaust after-treatment is sufficient to exercise generally good control on pollutant emissions, or at least those that are regulated by legislation. Values of these are not excessive except for carbon monoxide in the heavy-load road test. However, emissions of ammonia, NH₃, are high in the laboratory and this reduces the score in these tests and, ultimately, limits the index to a value of 4.5.

Energy Efficiency Tests

<u> </u>	Laboratory Test	Energy		
5.9 /10 0	Cold Test			
6.3/10 V	Warm Test			
4.8 /10 0	Cold Ambient Test			
5.7 /10 H	Highway			
		Consumption	Driving Range	
A	Average	6.3 I/100 km	830 km	
V	Worst-case	7.1 I/100 km	738 km	













adequate marginal weak

poor

Comments

It is in this part of the assessment that the BMW scores best, with an average fuel consumption of 6.3 I/100 km and a worst-case of 7.1 I/100 km in the cold ambient temperature test.

	Greenhouse gases	CO ₂	N ₂ O	CH₄
3.3 /7	Cold Test			
3.7 /7	Warm Test			
3.0 /7	Cold Ambient Test			
3.5 /7	Highway			

good adequate marginal weak

poor

Comments The 118i shows good control of all greenhouse gases. Emissions of all gases, including those not regulated by legislation, are not excessive in any of the lab tests.



Tyres

Published CO₂

136 g/km

Our Verdict

The BMW 118i has a three-cylinder turbocharged 1.5 litre engine, with direct fuel injection. Such an arrangement might in the past have resulted in high particulate emissions but the gasoline particulate filter takes care of such matters in the BMW. The car scores well in the Clean Air Index but is let down by emissions of ammonia, NH_a. This pollutant is not regulated by legislation but in Green NCAP's tests it limits the car's scores. Energy efficiency is where the BMW scores best, with a index value of 5.6. Control of greenhouse gases is also good and the index of 4.7 gives an average just below what is needed for three stars. As it is, the BMW 118i emerges from Green NCAP's tests with a very creditable 21/2 star rating.

Disclaimer

Publication Date

Mass

Tested Car

Engine Size

Battery Capacity

Engine Power/Torque

Emissions Class

Published Driving Range

Sponsored by GVi







BMW X1

xDrive 18d diesel 4x4 automatic



6.9

Clean Air Index 4.7 4

Energy Efficiency Index 0.0





Laborate	ory Test NMH	IC NO _x	NΗ ₃	со	PN	
6.6 /10 Cold Test						
8.3/10 Warm Test	•					
6.4 /10 Cold Ambier	nt Test					
6.9 /10 Highway	•					
Road Tes	<u>st</u>					
3.8 /10 On-Road Dr	ive					
6.2 /8 On-Road He	eavy Load					
2.8 /5 On-Road Li	ght Load					
4.1 /5 On-Road Sh	ort Trip					
0.0 /2 Congestion						
Robustne	ess					













adequate marginal

weak

Comments

The BMW shows impressive control of pollutant emissions in virtually all tests. Values of NO_x are low and emissions of ammonia, NH_3 , are vanishingly small. Particulates are slightly elevated in two of the laboratory tests but are not excessive even here and the index of 6.9 in this part of the assessment is commendable.



Energy Efficiency Tests

<u>Laboratory Test</u>	Energy		
6.0 /10 Cold Test			
6.1 /10 Warm Test			
3.1 /10 Cold Ambient Test			
3.9 /10 Highway			
	Consumption	Driving Range	
Average	5.9 I/100 km	1,122 km	
Worst-case	7.3 I/100 km	837 km	













Comments

In general, the X1 shows respectable fuel efficiency. However, its score drops in the cold ambient temperature test and it is here that the car records the worst-case fuel consumption of 7.3 I/100 km. In the highway test, a well-matched eight speed gearbox helps maintain efficiency at a reasonable level.

	Greenhouse gases	CO2	N ₂ O	CH₄
0.0 /7	Cold Test			
0.0/7	Warm Test			
0.0 /7	Cold Ambient Test			
0.0/7	Highway			











adequate marginal

weak

poor

Comments

The X1 xDrive 18d is really let down by its performance in this part of the assessment. While emissions of Methane (CH₄) are not excessive, those of N₂O are in all cases poor. Any points scored for the other gases are negated by this poor control of N_eO and this results in an index of zero for this part of the assessment.



Our Verdict

A mixed bag for BMW's high-selling sub-compact SUV. The xDrive 18d variant tested here comes with a plethora of advanced exhaust after-treatment: selective catalyst reduction; low- and high-pressure exhaust gas recirculation; a three way catalyst; and diesel particulate filter. And these work extremely well to control pollutant emissions, giving an exceptionally good 6.9 in the Clean Air Index. Energy efficiency is acceptable, a well-matched gearbox assisting in this regard. However, emissions of greenhouse gases, and of N₂O in particular, are poor and the zero score in this part of the assessment drags down the average index and leads to an unexceptional 2 star overall rating.

Disclaimer

Publication Date

Mass

Tested Car

Engine Size

Battery Capacity

Emissions Class

Engine Power/Torque

Published Driving Range

Tyres

Published CO₂ 151 g/km

Sponsored by GVi



Think before you print













Citroën C3

1.2 PureTech petrol 4x2 manual



Clean Air Index

Energy Efficiency Index



4.8 Clean Air Tests

	Laboratory Test	NMHC	NO _x	NH ₃	со	PN	
4.0 /10	Cold Test						
6.0 /10	Warm Test						
3.1 /10	Cold Ambient Test						
5.2 /10	Highway						
	Road Test						
2.5 /10	On-Road Drive						
4.4 /8	On-Road Heavy Load						
2.0 /5	On-Road Light Load						
2.3 /5	On-Road Short Trip						
2.0 /2	Congestion						
	Robustness						













Comments

In most tests, the C3 1.2 PureTech controls pollutant emissions reasonably well: in the cold and warm tests, results are not excessive and the car scores well. However, the cold ambient temperature test exposes some flaws in the exhaust after-treatment and, here, particulate number (PN) and emissions of non-Methane hydrocarbons (NMHC) are high



Energy Efficiency Tests

	Laboratory Test	Energy		
6.4 /10	Cold Test			
6.6 /10	Warm Test			
5.9 /10	Cold Ambient Test			
3.9 /10	Highway			
		Consumption	Driving Range	
	Average	6.5 I/100 km	730 km	
	Worst-case	7.7 I/100 km	664 km	













Comments

Energy efficiency is what might be expected of a car in this category. Efficiency drops in the high-load highway test and it is here that the worst-case consumption of 7.7 I/100 km is recorded but, overall, the car scores well and has an index of 5.7 in this part of the assessment.

	Greenhouse gases	CO2	N ₂ O	CH₄
3.7 /7	Cold Test			
3.9 /7	Warm Test			
3.6 /7	Cold Ambient Test			
3.0 /7	Highway			

good adequate marginal weak

poor

Comments

The C3 1.2 PureTech performs well in this part of the assessment. Emissions of $\rm N_2O$ and of Methane (CH₄) are low in all of the lab tests and CO₂ is not excessive. In the cold test, measured CO₂ was very close to the published value of 135 g/km.



Tyres

Published CO₂

135 g/km

Our Verdict

The third-generation Citroën C3, first shown in 2016 and released in 2017, is tested here in petrol form, with the 1.2 litre PureTech engine producing a modest 61 kW and 118 Nm. The car is equipped with limited exhaust after-treatment - only a three-way catalyst - but manages to turn in a creditable performance nevertheless. Its control of pollutant emissions is, on the whole, quite good. A gasoline particulate filter would help to reduce particulate emissions and, when stretched, such as in the cold ambient temperature test, this is an area that suffers. But the car shows balanced performance across the three areas of assessment, with similar index values in each one, and emerges with a three-star Green NCAP rating.

Disclaimer

Publication Date

Mass

Tested Car VF7SXHMRVKT63xxxx

Engine Size

Battery Capacity

Emissions Class

Engine Power/Torque

Published Driving Range









Dacia Sandero

Sce 75 Access petrol 4x2 manual



4.0

Clean Air Index 5.7

Energy Efficiency Index 4.9



	Laboratory Test	NMHC	NO _x	NΗ ₃	со	PN
3.1 /10	Cold Test					
4.5 /10	Warm Test					
0.0/10	Cold Ambient Test					
4.3 /10	Highway					
	Road Test					
2.4 /10	On-Road Drive					
4.9 /8	On-Road Heavy Load					
3.1 /5	On-Road Light Load					
1.8 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					













adequate marginal

weak

poor

Comments

The Sandero is equipped only with a three-way catalyst and the limitations of such limited exhaust after-treatment become apparent when the boundary conditions are stretched. In the cold ambient temperature test, emissions of all pollutant emissions are high and no points are scored in this test.

Energy Efficiency Tests

	Laboratory Test	Energy		
6.6 /10	Cold Test			
6.9 /10	Warm Test			
5.0 /10	Cold Ambient Test			
4.7 /10	Highway			
		Consumption	Driving Range	
	Average	6.2 I/100 km	926 km	
	Worst-case	7.1 I/100 km	721 km	













Comments For a car that weighs so little - slightly under a tonne - energy efficiency is unexceptional. An average fuel consumption of 6.2 I/100 km is far from class-leading.

	Greenhouse gases	CO²	N ₂ O	CH₄
3.8 /7	Cold Test			
4.0 /7	Warm Test			
3.0 /7	Cold Ambient Test			
3.1 /7	Highway			











adequate marginal weak

poor

Comments

Emissions of laughing gas (N₂O) and Methane (CH₄), both very potent greenhouse gases, is limited and CO₂ emissions are not excessive, leading to an index of 4.9 in this part of the assessment.



Our Verdict

Dacia, maker of pared-down cars, first launched the no-frills Sandero in 2007. The car is tested here in second-generation form, with a three-cylinder one litre engine. In keeping with the brand's ethos, exhaust after-treatment is basic – just a three-way catalyst – and the car struggles to control pollutant emissions in the more challenging tests. The cold ambient temperature test, in particular, lays bare the car's limitations and, with the exception of NO_x , emissions of all pollutants are excessive. Energy efficiency is moderate, the small engine being made to work hard in some situations. Emissions of greenhouse gases, especially those of the unregulated pollutants – N_2O and CH_4 – are low, and those of CO_2 are not excessive. Overall, the 1.0 litre petrol Sandero emerges from Green NCAP's tests with a fair $2\frac{1}{2}$ star rating.

Disclaimer

Publication Date

Mass 988 kg Tested Car UU1B522076548xxx

> Engine Size 999 cc

999 cc

Battery Capacity P

Engine Power/Torque 54 kW/95 Nm

Emissions Class

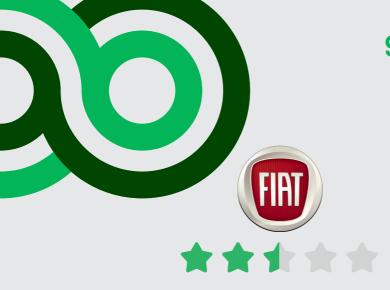
Published Driving Range n.a.

Tyres 185/65 R15 88 H

> Published CO₂ 129 g/km

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FIAT Panda

1.2 8V petrol 4x2 manual



4.3

Clean Air Index 5.7

Energy Efficiency Index

4.8/10





	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
4.7 /10	Cold Test					
6.2 /10	Warm Test					
0.0 /10	Cold Ambient Test					
0.0/10	Highway					
	Road Test					
2.8 /10	On-Road Drive					
5.1 /8	On-Road Heavy Load					
3.3 /5	On-Road Light Load					
3.3 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					













adequate marginal weak

poor

Comments

The 1.2 petrol-engined Panda shows reasonable control of its pollutant emissions. Particulate number is not excessive, even in the more challenging tests and the car picks up a lot of points for its very low values of CO and NO_x emissions, particularly in the onroad tests.

Energy Efficiency Tests

Laboratory Test	Energy		
6.4 /10 Cold Test			
6.7 /10 Warm Test			
5.2 /10 Cold Ambient Test			
4.8 /10 Highway			
	Consumption	Driving Range	
Average	6.3 I/100 km	678 km	
Worst-case	7.1 I/100 km	557 km	













adequate marginal

weak

poor

Comments

For a car that weighs so little - barely a tonne - energy efficiency is not outstanding. An average of 6.3 I/100 km is far from class-leading with the small engine being made to work hard in some of the laboratory tests.

4.8 Careenhouse Gases Tests

	Greenhouse gases	CO2	N ₂ O	CH₄	
3.6 /7	Cold Test				
3.9 /7	Warm Test				
3.1 /7	Cold Ambient Test				
3.2 /7	Highway				











Comments

Emissions of greenhouse gases, especially those of N_2O and CH_4 which are unregulated by legislation, are impressively low, while that of CO₂ is not excessive in any of the laboratory tests.



Tyres 185/55 R15 82T

Published CO₂

136 g/km

Our Verdict

The Panda, first introduced in 1980 and since 2011 in its third generation, remains part of a FIAT model line-up that has remained largely unchanged for several years. The car is tested here with the four cylinder 1.2 litre petrol engine, now Euro 6d-Temp compliant. With only a three-way catalyst by way of exhaust after-treatment, control of pollutant emissions is limited and, in the more challenging tests - cold ambient temperature, high-load highway - CO is high enough for all points to be lost. However, even without a gasoline particulate filter, particulate number is never excessive, in the laboratory or on the road. Energy efficiency is not impressive for such a small car. Overall, the Panda 1.2 petrol delivers respectable performance all-round and achieves a fair 2½ star rating.

Disclaimer

Publication Date

Mass

999 kg

Tested Car

Engine Size

Engine Power/Torque 51 kW/102 Nm

Battery Capacity

Emissions Class

Published Driving Range

Sponsored by GVi









Ford Kuga

2.0 EcoBlue ST-Line diesel 4x2 manual



4.7

Clean Air Index 5.8

Energy Efficiency Index

1.8



Lak	ooratory Test	NMHC	NO _x	NH ₃	со	PN
5.9 /10 Cold	Test					
7.7 /10 War	m Test					
0.0 /10 Cold	Ambient Test					
7.2 /10 High	way					
Roo	ad Test					
3.4 /10 On-F	Road Drive					
0.0/8 On-F	Road Heavy Load					
2.2 /5 On-F	Road Light Load					
3.5 /5 On-F	Road Short Trip					
0.0/2 Cong	gestion					
Rok	oustness					

Comments

good

The Kuga 2.0 diesel mild hybrid generally controls pollutant emissions well: CO remains low, particulate emissions are never excessive and values of ammonia are barely detectable. However, oxides of Nitrogen, NO_x, are elevated in the cold ambient air laboratory test and the high-load road-test, and the car scores no points in these tests.

adequate marginal

weak

poor

Energy Efficiency Tests

Laboratory	Test Energy		
6.8 /10 Cold Test			
7.2 /10 Warm Test			
5.2/10 Cold Ambient Tes	st		
4.3 /10 Highway			
	Consumption	Driving Range	
Average	5.5 I/100 km	1,063 km	
Worst-case	6.6 I/100 km	899 km	













Comments

With 48 V mild hybrid technology to boost efficiency, the Kuga manages an average fuel consumption of 5.5 I/100 km, impressive for a vehicle of this size and weight.

	Greenhouse gases	CO2	N ₂ O	CH₄
1.6 /7	Cold Test			
1.6 /7	Warm Test			
0.6 /7	Cold Ambient Test			
1.5 /7	Highway			











Comments

Methane, CH_4 , is not a problem, and CO_2 is not excessive. However, laughing gas, N_2O , a potent greenhouse gas which is not regulated by legislation is high in all tests and this reduces the scores and leads to an index of 1.8 in this part of the assessment.



Tyres

Published CO₂

Our Verdict

The Ford Kuga, first introduced in 2008 and now in its third generation, is tested here with a 2.0 litre diesel engine equipped with 48 V mild hybrid technology. In general, the car performs well, and energy efficiency is impressive for a vehicle in this size category. However, despite being equipped with a lean NO_x trap, designed to reduce emissions of the oxides of Nitrogen, these remain a weak-point, reducing the indexes for both Clean Air and Greenhouse Gases and limiting the rating to $2\frac{1}{2}$ stars.

Disclaimer

Publication Date

الد دادا

Mass 1,617 kg Tested Car WF0FXXWPMFLA1xxxx

Engine Size

Euro 6d-1emp

Emissions Class

Engine Power/Torque 110.3 kW/370 Nm

Battery Capacity n.a.

Published Driving Range





Think before you print













Honda Civic

1.0 Turbo petrol 4x2 manual



Clean Air Index

Energy Efficiency Index



Laboratory Test	NMHC	NO _x	NH ₃	со	PN
1.8 /10 Cold Test					
6.4 /10 Warm Test					
0.7 /10 Cold Ambient Test					
0.0 /10 Highway					
Road Test					
2.9/10 On-Road Drive					
0.0/8 On-Road Heavy Load					
2.0/5 On-Road Light Load					
4.2 /5 On-Road Short Trip					
1.0/2 Congestion					
Robustness					



good adequate marginal

weak

poor

Comments

A gasoline particulate filter (GPF) keep the particulate emissions down to reasonable levels, and oxides of Nitrogen, NO_x , are well controlled. However, emissions of carbon monoxide, CO and of ammonia, NH₃, are high in the more challenging tests and reduce the

Energy Efficiency Tests

<u> </u>	aboratory Test	Energy		
5.9 /10 C	old Test			
6.3 /10 W	/arm Test			
4.4 /10 C	old Ambient Test			
4.1 /10 H	ighway			
	C	Consumption	Driving Range	
A	verage	6.6 l/100 km	762 km	
W	/orst-case	7.6 I/100 km	640 km	













Comments

The Civic averages $6.6\,l/100\,km$ in the laboratory tests, with a worst case of $7.6\,l/100\,km$ in the high-load highway test.

	Greenhouse gases	CO2	N ₂ O	CH₄	
3.2 /7	Cold Test				
3.8 /7	Warm Test				
2.6 /7	Cold Ambient Test				
2.7 /7	Highway				













good adequate marginal weak

poor

Comments

None of the greenhouse gases are excessive, emissions of Methane, CH_4 , and laughing gas, N_2O , being particularly well controlled.



Tyres

Published CO₂

135 g/km

Our Verdict

A stalwart of the Honda model line-up, the Civic has gone through many generational changes and a new model is expected soon. Here, the car is tested with a 1.0 turbocharged direct-injection petrol engine producing 93 kW and 220 Nm of torque. On the whole, the car does a reasonable job of limiting its emissions, the GPF keeping particulate number in check. However, in the more challenging tests, values of CO and $\mathrm{NH_3}$ are high and the car loses points. The car scores better for its energy efficiency and control of greenhouse gases and its average index puts it just into the 21/2 star band.

Disclaimer

Publication Date

Mass 1,295 kg

Tested Car SHHFK6760LU00xxxx

Engine Size

Battery Capacity

Emissions Class

Engine Power/Torque

Published Driving Range

Sponsored by GVi











2021

Hyundai NEXO

hydrogen 4x4 automatic



10.0

Clean Air Index 7.3

Energy Efficiency Index

10.0



Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
10.0 /10	Cold Test					
10.0 /10	Warm Test					
10.0 /10	Cold Ambient Test					
10.0 /10	Highway					
	Road Test					
5.0 /10	On-Road Drive					
8.0 /8	On-Road Heavy Load					
5.0 /5	On-Road Light Load					
5.0 /5	On-Road Short Trip					
2.0/2	Congestion					
	Robustness					



good adequate marginal weak

poor

Comments

The NEXO is powered by a hydrogen fuel cell. Hydrogen is used to generate the electricity which is used to drive the car. The only thing that is emitted from the exhaust is water, so the vehicle scores maximum points in this part of the assessment.

Energy Efficiency Tests

Laborat	ory Test Energy		
8.3/10 Cold Test			
8.9 /10 Warm Test	•		
6.5 /10 Cold Ambie	ent Test		
5.7 /10 Highway			
	Consumption	on Driving Rang	e
Average	1.3 kg/100 k	km 495 km	
Worst-case	1.7 kg/100 k	m 378 km	













Comments

Energy efficiency is extremely high, though not as high as a pure electric vehicle. Nevertheless, the car scores well in this part of the assessment with an index of 7.3.

	Greenhouse gases	CO2	N ₂ O	CH₄
7.0 /7	Cold Test			
7.0 /7	Warm Test			
7.0 /7	Cold Ambient Test			
7.0 /7	Highway			













good adequate marginal weak

poor

Comments

The NEXO emits no greenhouse gases, its only tailpipe emission being water. Accordingly, maximum points are scored in this part of the assessment.



Our Verdict

First shown in 2018, the Hyundai NEXO is one of a small number of vehicles powered by a hydrogen fuel cell. In such vehicles, the hydrogen is not used directly as a source of power. Rather, the fuel cell uses the hydrogen to generate electricity which is then used to propel the vehicle, as in a conventional pure electric vehicle. There are no tailpipe emissions other than water. As a result, the NEXO scores full points for both the Clean Air and Greenhouse Gas indexes. Energy efficiency is also very high and the NEXO emerges with an average index just high enough to earn the car a maximum 5 star rating.

Disclaimer

Publication Date

Mass 1,799 kg Tested Car KMHJ8816FKU00xx

Engine Size n.a.

Battery Capacity

Emissions Class

Engine Power/Torque 120 kW/395 Nm

Published Driving Range 666 km Tyres

Published CO₂

Sponsored by GVi



Think before you print







Hyundai Tucson

1.6 GDI petrol 4x2 manual



2.6

Clean Air Index 2.8

Energy Efficiency Index

3.4

Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
0.0/10	Cold Test					
5.4 /10	Warm Test					
0.0 /10	Cold Ambient Test					
0.0/10	Highway					
	Road Test					
2.7 /10	On-Road Drive					
0.0/8	On-Road Heavy Load					
2.0 /5	On-Road Light Load					
3.8 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					



adequate marginal

weak

poor

Comments

NOx is well controlled in all of the tests and particulate number is never excessive, despite the lack of a gasoline particulate filter. However, in most of the laboratory tests, emissions of CO are high, sufficiently so that the car loses all points for these tests. This contributes to a Clean Air Index of only 2.6.

Energy Efficiency Tests

Laboratory Tes	t Energy		
3.5 /10 Cold Test			
4.3 /10 Warm Test			
1.6 /10 Cold Ambient Test			
2.0 /10 Highway			
	Consumption	Driving Range	
Average	8.2 l/100 km	774 km	
Worst-case	9.3 l/100 km	668 km	













Comments

Energy efficiency is unimpressive with a worst-case fuel consumption of 9.3 I/100 km in the cold ambient temperature test and index value of 2.8 in this part of the assessment.

	Greenhouse gases	CO²	N ₂ O	CH ₄
2.7 /7	Cold Test			
3.1 /7	Warm Test			
1.9 /7	Cold Ambient Test			
2.2 /7	Highway			

good adequate marginal weak

poor

Comments

Emissions of ammonia, NH_3 , and of Methane, CH_4 , which are unregulated by legislation, are low in all of the tests. However, CO₂ emissions are quite high, exceeding the declared value of 183 g/km in the cold ambient temperature and high-load highway tests.



Our Verdict

The Tucson has been in Hyundai's line-up for many years and is tested here in its third-generation form, available since 2015. The test vehicle's 1.6 petrol engine delivers 97 kW and 161 Nm of torque and, as after-treatment, has only a three-way catalyst. The Tucson has uniformly low index values in all three areas of assessment. Carbon monoxide emissions severely limit the scoring in the Clean Air index. While emissions of the more potent greenhouse gases are low, emissions of carbon dioxide (CO_2) are relatively high, reflecting the low energy efficiency of the vehicle. Overall, the third-generation Tucson disappoints with a $1\frac{1}{2}$ star rating and it is hoped that the recently-introduced all-new vehicle will perform better.

Disclaimer

Publication Date

02 2021

Mass 1,483 kg Tested Car

Engine Size

Battery Capacity

Published Driving Range

Engine Power/Torque

97 kW/161 Nm

Emissions Class Tyres
Euro 6d-Temp 225/60R17 99H

Published CO₂ 183 g/km

Sponsored by GVi



Think before you print









2021

Land Rover Discovery Sport

D180 2.0 diesel 4x4 automatic





Clean Air Index

Energy Efficiency Index

0.6

Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN	
6.7 /10	Cold Test						
6.8 /10	Warm Test						
3.9 /10	Cold Ambient Test						
5.3 /10	Highway						
	Road Test						
3.1 /10	On-Road Drive						
5.9 /8	On-Road Heavy Load						
2.6 /5	On-Road Light Load						
3.3 /5	On-Road Short Trip						
0.0/2	Congestion						
	Robustness						













adequate marginal

weak

poor

Comments

The Discovery Sport D180 emits minimal quantities of ammonia, NH₃, in the laboratory tests. Particulate number is also well controlled by the filter with which the car is equipped. Emissions of NO_x are excessive in the cold ambient temperature laboratory test and in the on-road congestion test.

2.0 4

Energy Efficiency Tests

Laboratory Test	Energy		
2.3 /10 Cold Test			
4.3 /10 Warm Test			
0.0 /10 Cold Ambient Test			
1.7 /10 Highway			
	Consumption	Driving Range	
Average	7.5 l/100 km	909 km	
Worst-case	9.2 l/100 km	706 km	













Comments

CO₂ emissions are quite high, both in the laboratory and the road tests, the vehicle's weight counting against its energy efficiency.

	Greenhouse gases	CO2	N ₂ O	CH₄
0.0 /7	Cold Test			
0.7 /7	Warm Test			
0.0 /7	Cold Ambient Test			
1.3 /7	Highway			











Comments

Emissions of Methane, CH₄, are low in all of the laboratory tests. However, those of CO₂ and of N_2O are high, sufficiently so that in some tests, no points are scored overall, and the Discovery Sport achieves an index of only 0.6 in this part of the assessment.



Our Verdict

The Land Rover Discovery Sport weighs over two tonnes and, in the 2.0 litre diesel form tested here, has a modest 132 kW of power but a hefty 430 Nm of torque. With high and low-pressure exhaust gas recirculation, selective catalytic reduction and a diesel particulate filter, the car makes a fine job of controlling pollutant emissions, only NO, being overly high in some of the more challenging tests. It is in the areas of Energy Efficiency and, especially, Greenhouse Gases that the vehicle struggles. Here, its high weight counts against it and values of CO₂ are high, the declared value of 188 g/km being achieved only in the cold-start laboratory test. Emissions of N₂O, a particularly potent greenhouse gas, are also high, contributing to a low index in this part of the assessment and dragging the average down to give an overall 1½ star rating.

Disclaimer

Publication Date

Mass 2,090 kg **Tested Car**

Engine Size

Emissions Class

Engine Power/Torque

Battery Capacity

Tyres

Published CO₂ 188 g/km

Published Driving Range

Sponsored by GVi







2021

Mazda CX-30

Skyactiv-X 180 petrol 4x2 manual



4.6

Clean Air Index 4.7 4

Energy Efficiency Index 4.0



Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
5.4 /10	Cold Test					
6.6 /10	Warm Test					
3.4 /10	Cold Ambient Test					
0.0 /10	Highway					
	Road Test					
3.1 /10	On-Road Drive					
4.0 /8	On-Road Heavy Load					
2.2 /5	On-Road Light Load					
4.3 /5	On-Road Short Trip					
1.0 /2	Congestion					
	Robustness					













good

adequate marginal weak

poor

Comments

In general, control of pollutant emissions is good. A three-way catalyst, exhaust gas recirculation and a gasoline particulate filter all help to keep emissions down. However, in the high-load highway test, values of CO are extremely high and the vehicle loses all points for this test.

Energy Efficiency Tests

Lab	oratory Test	Energy		
5.5 /10 Cold	Test			
5.9 /10 Warm	n Test			
4.7 /10 Cold	Ambient Test			
3.0 /10 Highv	vay			
	Cor	nsumption D	riving Range	
Avero	nge 7.1	l/100 km	801 km	
Wors	t-case 8. 3	l/100 km	713 km	













Comments The CX-30 scored an index of 4.7 in this part of the assessment, with an average fuel consumption of 7.1 I/100 km and a worst-case of 8.3 I/100 km in the high-load highway test.

	Greenhouse gases	CO2	N ₂ O	CH₄
3.2 /7	Cold Test			
3.5 /7	Warm Test			
2.8 /7	Cold Ambient Test			
1.9 /7	Highway			











Comments

Emissions of the unregulated pollutants ammonia, NH_3 , and Methane, CH_4 , are well controlled. CO₂ is slightly elevated in the high-load highway test but, otherwise, is not excessive.



Our Verdict

The CX-30 180 petrol employs Mazda's Skyactiv-X technology, with a very high compression ratio and lean fuel mixture to try to reduce emissions. This is combined with a 24 V mild-hybrid system to improve fuel efficiency. Together with the exhaust after-treatment - three-way catalyst, exhaust gas recirculation and a gasoline particulate filter - the car shows generally low values of pollutant emissions. The weakness is at high engine loads where values of carbon monoxide and carbon dioxide become elevated. This limits the scores in the Clean Air and Greenhouse Gas indexes. Overall, the CX-30 scores similarly across the three areas of assessment and emerges with a solid 2½ star rating.

Disclaimer

Publication Date

Mass 1,467 kg Tested Car

Engine Size

Engine Power/Torque

Emissions Class

Battery Capacity Published Driving Range n.a. n.a.

Tyres

Published CO₂ 133 g/km

Sponsored by **GVi**











2021

Mercedes-Benz A-Class

A180d diesel 4x2 automatic



4.4

Clean Air Index 6.2

Energy Efficiency Index 3.0

Greenhouse Gas Index



Laboratory Te	est NMHC	NO _x	NH ₃	со	PN	
6.3 /10 Cold Test						
7.1 /10 Warm Test						
0.0 /10 Cold Ambient Test						
0.0 /10 Highway						
Road Test						
2.7/10 On-Road Drive						
5.3/8 On-Road Heavy La	oad					
3.3/5 On-Road Light Loc	ad 💮					
3.7/5 On-Road Short Tri	p					
0.0/2 Congestion						
Robustness						

Comments

In most of the tests, NO_x is well controlled. However, in the more challenging tests such as the cold ambient temperature and high-load highway scenarios, emissions of this pollutant are sufficiently high that the car loses all points for those tests and this reduces the index in this part of the assessment to 4.4.

adequate marginal

weak

poor



Energy Efficiency Tests

<u>Laboratory Test</u>	Energy		
7.1 /10 Cold Test			
7.7 /10 Warm Test			
5.3 /10 Cold Ambient Test			
5.1 /10 Highway			
	Consumption	Driving Range	
Average	5.1 l/100 km	1,049 km	
Worst-case	6.1 l/100 km	839 km	













Comments

The A180d scores well in this part of the assessment, with an average fuel consumption of 5.1 I/100 km and an index of 6.2.

	Greenhouse gases	CO2	N ₂ O	CH₄
2.2 /7	Cold Test			
2.4 /7	Warm Test			
1.9 /7	Cold Ambient Test			
2.0 /7	Highway			











Comments

Emissions of CO_2 are never excessive and those of Methane, CH_4 , are very small. However, laughing gas, N₂O, a powerful but unregulated greenhouse gas, is not so well controlled and points are lost for emissions of this gas.



Tyres

Published CO₂

125 g/km

Our Verdict

The original A-Class came to the market in 1997 and, now in its fourth generation, remains part of Mercedes-Benz's line-up. The car tested by Green NCAP is the 180d, with Daimler's 1.5 litre, turbocharged four cylinder diesel engine. Energy efficiency is a strong point for the car, with low fuel consumption for a car of its weight. For pollutant emissions, the car has selective catalyst reduction, a three-way catalyst and a diesel particulate filter. On the whole, these work well and emissions of pollutants and greenhouse gases are well controlled. Oxides of Nitrogen are the only weak point: in the Clean Air index, NO_x is elevated in the more challenging tests and emissions of N_2O , a powerful greenhouse gas, reduce the score in that part of the assessment. The indexes in these two areas of assessment reduce the average and result in an overall $2\frac{1}{2}$ star rating.

Disclaimer

Publication Date

02 2021

Mass 1,405 kg Tested Car

Engine Size

Battery Capacity

Uphlished Driving Pan

Emissions Class

Engine Power/Torque

Published Driving Range n.a.

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Think before you print







2021

MINI Cooper

Steptronic petrol 4x2 automatic



4.2

Clean Air Index 4.6

Energy Efficiency Index 3.8



Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
3.6 /10	Cold Test					
3.1 /10	Warm Test					
1.3 /10	Cold Ambient Test					
0.0/10	Highway					
	Road Test					
3.3 /10	On-Road Drive					
5.4 /8	On-Road Heavy Load					
3.6 /5	On-Road Light Load					
4.5 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					













adequate marginal

poor

Comments

Control of NO_x is generally good, both in the laboratory tests and on the road. The car has a gasoline particulate filter and particulate number is not excessive in any of the tests. However, emissions of ammonia, NH₃, a pollutant that is unregulated by legislation, are high and points are lost in the laboratory tests leading to an index of 4.2 in this part of the assessment.

Energy Efficiency Tests

Laborato	ry Test Energy		
5.8 /10 Cold Test			
5.5 /10 Warm Test			
3.8 /10 Cold Ambien	t Test		
3.6 /10 Highway			
	Consumption	Driving Range	
Average	7.0 I/100 km	640 km	
Worst-case	7.9 I/100 km	513 km	













Comments

Given the car's low weight, energy efficiency is not as good as might be expected, with an average fuel consumption of 7.0 l/100 km.

	Greenhouse gases	CO2	N ₂ O	CH₄	
3.3 /7	Cold Test				
3.3 /7	Warm Test				
2.6 /7	Cold Ambient Test				
1.7 /7	Highway				











good adequate marginal weak

poor

Comments

The CO_2 value recorded in the cold and warm tests are extremely close to the declared value of $145\,\mathrm{g/km}$. In the more challenging tests, emissions of CO_2 are elevated and, in these tests, points are scored only for the good control of N₂O and CH₄ that the car demonstrates.



Our Verdict

The MINI, manufactured by BMW since 2001 and available in many guises, is tested here in its latest form and with the 3 cylinder turbocharged 1.5 litre petrol engine. The car has a gasoline particulate filter (GPF) and a three-way catalyst and, on the whole, these work well to curb pollutant emissions. NO_x is especially well controlled in all tests and the GPF helps to keep particulate number down. Ammonia, NH_3 , is the weak point and in the high-load highway test emissions of this unregulated greenhouse gas are high enough to negate the positive scores gained for the good control of other pollutants. Energy efficiency is unexceptional. N_2O and CH_4 are well controlled but emissions of CO_2 result in modest scores in the tests. Overall, the car's indexes are consistent in all three areas of assessment and lead to a $2\frac{1}{2}$ star rating.

Disclaimer

Publication Date

05 5051

Mass 1,060 kg Tested Car

Engine Size

Engine Power/Torque

Battery Capacity Pu

Emissions Class Tyres
Furo6d-Temp 205/45 R17

Published CO₂ 145 g/km

Published Driving Range n.a.





Think before you print







Opel/Vauxhall Corsa

1.2 DI Turbo petrol 4x2 automatic



3.7

Clean Air Index 5.9

Energy Efficiency Index 4.6



Greenhouse Gas Index

3.7 Clean Air Tests

Laboratory Te	est NMHC	NO _x	NΗ ₃	со	PN	
4.6 /10 Cold Test						
7.1 /10 Warm Test						
0.0 /10 Cold Ambient Test						
0.0 /10 Highway						
Road Test						
3.1 /10 On-Road Drive						
0.0/8 On-Road Heavy Lo	ad					
2.6/5 On-Road Light Loa	d					
4.0/5 On-Road Short Trip						
2.0/2 Congestion						
Robustness						

The 1.2 direct-injection petrol Corsa performs well in the less challenging tests. In the warm-start test especially, emissions are well controlled and the car scores 7.1 out of a possible 10 points. However, in the tougher tests, the car struggles to limit pollutant output and in the cold ambient temperature test the car scores no points.

Comments

adequate marginal

weak

poor

Energy Efficiency Tests

<u>Laboratory Test</u>	Energy		
6.5 /10 Cold Test			
7.7 /10 Warm Test			
4.9 /10 Cold Ambient Test			
4.6 /10 Highway			
	Consumption	Driving Range	
Average	6.1 I/100 km	794 km	
Worst-case	7.2 I/100 km	628 km	













Comments

Energy efficiency is not class-leading, with an average fuel consumption of 6.1 l/100 km and worst-case of 7.2 I/100 km.

	Greenhouse gases	CO²	N ₂ O	CH₄
3.4 /7	Cold Test			
4.2 /7	Warm Test			
2.5 /7	Cold Ambient Test			
2.9 /7	Highway			













Emissions of Methane, CH_4 , and laughing gas, N_2O , are very low in all of the tests. These are very potent greenhouse gases, unregulated by legislation, so it is very much to Opel's credit that emissions of these gases should be so low.



Tyres

Published CO₂

129 g/km

Our Verdict

The Corsa, an iconic vehicle in the Opel/Vauxhall model line-up for many years, is tested here with a 1.2 litre turbocharged direct-injection petrol engine. In the past, such cars would have struggled to limit particulate emissions but, equipped as it is with a gasoline particulate filter (GPF), the Corsa does a fine job in this regard. Indeed, pollutant emissions are generally well controlled in most tests but the car struggles in the more demanding tests such as cold ambient temperature and, here, emissions of several gases are high. For such a small car, the Corsa does not excel in energy efficiency but its greenhouse gas emissions are generally low, especially those of the unregulated gases. Overall, the Corsa emerges from Green NCAP's tests with a $2\frac{1}{2}$ star rating.

Disclaimer

Publication Date

02 2021

Mass

Tested Car

Engine Size

1,199 cc

Battery Capacity
n.a.

Emissions Class

Euro 60

Engine Power/Torque 96 kW/230 Nm

Published Driving Range n.a.

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Think before you print







2021

SEAT Leon

Sportstourer 2.0 TDI DSG diesel 4x2 automatic



6.7

Clean Air Index 6.5

Energy Efficiency Index 3.6



Greenhouse Gas Index



<u> </u>	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
7.2 /10 (Cold Test					
7.6 /10 \	Warm Test					
5.9 /10 (Cold Ambient Test					
6.1 /10 H	Highway					
<u> </u>	Road Test					
3.6 /10 (On-Road Drive					
5.9 /8 (On-Road Heavy Load					
2.3 /5	On-Road Light Load					
4.3 /5	On-Road Short Trip					
1.0/2	Congestion					
	Robustness					











An excellent result for the Leon 2.0 diesel. Emissions of all pollutant are very well controlled by the exhaust after-treatment of a three-way catalyst, selective catalytic reduction and a diesel particulate filter, leading to an index of 6.7 in this part of the assessment.



Energy Efficiency Tests

Laboratory Test	Energy		
7.1 /10 Cold Test			
7.8 /10 Warm Test			
5.6 /10 Cold Ambient Test			
5.6 /10 Highway			
	Consumption	Driving Range	
Average	5.0 l/100 km	1,051 km	
Worst-case	5.8 l/100 km	865 km	













Comments

The 2.0 diesel Leon demonstrates high energy efficiency with an average fuel consumption of just 5.0 l/100 km and a worst-case of only 5.8 l/100 km in the cold ambient temperature test.

	Greenhouse gases	CO2	N ₂ O	CH₄
2.5 /7	Cold Test			
2.8 /7	Warm Test			
2.5 /7	Cold Ambient Test			
2.5 /7	Highway			











Good performance here too from the SEAT. Emissions of CO_2 are not excessive and those of Methane, CH₄, are extremely low. Only those of N₂O, a potent greenhouse gas, are elevated in some tests but the car still achieves an index of 3.6 in this part of the assessment.



Tyres

Published CO₂

Our Verdict

The Leon, part of the SEAT line-up since it was first introduced in 1998, greatly impresses in this fourth-generation 2.0 diesel form. Equipped with the latest emissions abatement technology three-way catalyst, selective catalytic reduction and a diesel particulate filter - the car scores well in all three areas of Green NCAP's assessment. Pollutant emissions are very well controlled and energy efficiency is high, helped, no doubt, by the well-matched seven speed automatic gearbox with which the test car was equipped. Emissions of N_2O reduce performance for greenhouse gas emissions to a relatively low index of 3.6/10 but the Leon emerges from Green NCAP's tests with a solid and very creditable 3 star rating.

Disclaimer

Publication Date

Mass

1,493 kg

Tested Car

Engine Size

Battery Capacity

Emissions Class

Engine Power/Torque

Published Driving Range

Sponsored by GVi







2021

Škoda Fabia

1.0 TSI petrol 4x2 manual





Clean Air Index 6.5

Energy Efficiency Index **5.0**



Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
4.7 /10	Cold Test					
6.3 /10	Warm Test					
4.8 /10	Cold Ambient Test					
4.6 /10	Highway					
	Road Test					
3.4 /10	On-Road Drive					
5.4 /8	On-Road Heavy Load					
3.4 /5	On-Road Light Load					
4.3 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					













good

adequate marginal weak

poor

Comments

Control emissions, especially those pollutants regulated by legislation, was generally good. CO and NO_x remained low even in the toughest of Green NCAP's tests and particulate number was never excessive. In some of the laboratory tests, emissions of ammonia, NH₃, were elevated, lowering the scores slightly.



Energy Efficiency Tests

Laboratory Test	Energy		
7.2 /10 Cold Test			
7.4 /10 Warm Test			
6.2 /10 Cold Ambient Test			
5.2 /10 Highway			
	Consumption	Driving Range	
Average	5.8 l/100 km	885 km	
Worst-case	6.8 I/100 km	734 km	













adequate marginal

weak

poor

Comments

The Fabia is a small, light car and its declared CO_2 value of 125 g/km was easily achieved or bettered in the cold and warm tests. In the cold ambient temperature and high-load tests, CO₂ emissions are a little higher but the car scores well in all of the tests and achieves an impressive 6.5 in this index.

	Greenhouse gases	CO2	N ₂ O	CH₄
3.8 /7	Cold Test			
4.0 /7	Warm Test			
3.6 /7	Cold Ambient Test			
2.8 /7	Highway			











Ammonia, NH_3 , and Methane, CH_4 , are well controlled in all tests and values of CO_2 are low in the warm and cold tests, rising slightly in the more challenging scenarios.



Our Verdict

The soon-to-be-replaced third generation Škoda Fabia is tested here with the 3 cylinder 1.0 litre turbocharged direct injection engine. In the past, such engines might have had issues with the number of particulate they emitted but a gasoline particulate filter (GPF) takes care of the problem, and to good effect. Emissions of particulates are never excessive, even in the more challenging tests. Emissions of NO_x and CO are very well controlled, especially in the road tests. The story remains good when we look at energy efficiency, with the small engine emitting low values of CO_2 . This serves the car well in the Energy Efficiency index too, and excellent control of laughing gas, N_2O and of Methane, CH_4 , contribute to a good index of 5 in this part of the assessment. Overall, the average index is only a little short of gaining the Fabia an extra half-star but it emerges from the tests with a very creditable 3 star rating.

Disclaimer

Publication Date

Mass

Tested Car
TMBEP6NJ6LZ11xxxx

Engine Size

Battery Capacity

Emissions Class

Engine Power/Torque

Published Driving Range

Tyres 85/60 R1

Published CO₂ 125 g/km

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Think before you print





2021

Škoda Octavia

Combi 2.0 TDI diesel 4x2 manual



6.7

Clean Air Index 7.7

Energy Efficiency Index 4.6



Greenhouse Gas Index



<u> </u>	_aboratory Test	NMHC	NO _x	NH ₃	со	PN
6.3 /10 C	Cold Test					
7.9 /10 V	Varm Test					
5.6 /10 C	Cold Ambient Test					
7.9 /10 H	lighway					
<u> </u>	Road Test					
3.5 /10 C	On-Road Drive					
5.8 /8	On-Road Heavy Load					
2.3 /5	On-Road Light Load					
4.3 /5	On-Road Short Trip					
0.0/2	Congestion					
<u> </u>	Robustness					













good adequate marginal weak

poor

Comments

The 2.0 diesel Octavia Combi shows excellent control of pollutant emissions. Even in the toughest of the laboratory tests - cold ambient temperature and high-load highway - the emissions are never excessive, and the on-road tests generally show a similar level of performance.

Energy Efficiency Tests

	Laboratory Test	Energy		
8.5 /10	Cold Test			
8.9 /10	Warm Test			
6.6 /10	Cold Ambient Test			
7.1 /10	Highway			
		Consumption	Driving Range	
	Average	4.2 I/100 km	1,133 km	
	Worst-case	5.1 I/100 km	876 km	













Comments An average fuel consumption of just 4.2 I/100 km is an excellent result for a car in this category, and demonstrates high energy efficiency.

	Greenhouse gases	CO2	N ₂ O	CH₄
3.4 /7	Cold Test			
3.5 /7	Warm Test			
2.8 /7	Cold Ambient Test			
3.4 /7	Highway			













good adequate marginal weak

poor

Comments

Emissions of CO_2 are never excessive and those of Methane, CH_4 , are barely measurable. Values of N₂O, a potent greenhouse gas, are elevated in some tests, but this has little influence on the Greenhouse Gas Index of 4.6.



Our Verdict

The Škoda Octavia 2.0TDI demonstrates what can be achieved from a modern diesel equipped with the latest exhaust after-treatment technology. The car scores highly in all three areas of assessment: 6.7/10 for Clean Air, 7.7/10 for Energy Efficiency and 4.6/10 for Greenhouse Gases. This leads to a rating of $3\frac{1}{2}$ stars, a remarkable achievement for a combustion-engined car with no electrification to assist its efficiency.

Disclaimer

Publication Date

Mass

1,428 kg

Tested Car

Engine S<u>ize</u>

ingine Size 1,968 cc

Battery Capacity

Published Driving Range

Emissions Class

Engine Power/Torque

n.ea b.

Tyres

Published CO₂ 118 g/km

Sponsored by CVI



Think before you print













2021

Toyota Yaris

1.5 hybrid 4x2 CVT



Clean Air Index

Energy Efficiency Index

Greenhouse Gas Index



<u>Laboratory Test</u>	NMHC	NO _x	NH ₃	со	PN	
6.6 /10 Cold Test						
7.6 /10 Warm Test						
4.8 /10 Cold Ambient Test						
4.8 /10 Highway						
Road Test						
3.2 /10 On-Road Drive						
5.1/8 On-Road Heavy Load						
3.1 /5 On-Road Light Load						
3.8/5 On-Road Short Trip						
2.0/2 Congestion						
Robustness						

The Yaris turns in good results all-round. Particulate emissions are well below critical values in all tests, CO is well controlled, especially in the road tests, and NO_x is almost zero.

adequate marginal weak

poor

7.4

Energy Efficiency Tests

	Laboratory Test	Energy		
8.5 /10	Cold Test			
9.2/10	Warm Test			
6.8 /10	Cold Ambient Test			
5.4 /10	Highway			
		Consumption	Driving Range	
	Average	5.1 l/100 km	804 km	
	Worst-case	6.6 I/100 km	632 km	













Comments

The Yaris achieves an impressive 7.4 in Green NCAP's tests, with average fuel consumption of 5.1 l/100 km.

	Greenhouse gases	CO ₂	N ₂ O	CH₄
4.5 /7	Cold Test			
4.9 /7	Warm Test			
3.9 /7	Cold Ambient Test			
3.4 /7	Highway			













good adequate marginal weak

poor

Comments

Emissions of N_2O and CH_4 , two important greenhouse gases which are not regulated by legislation, are very low. Emissions of CO₂ are also generally low, helping the Yaris to an index of 5.9/10 in this part of the assessment.



Our Verdict

The new Yaris comes in hybrid form, a 1,5 litre petrol engine being supplemented by an electric motor. Together, they deliver some impressive results. On-road emissions of NO_x and CO are very low, and particulate number is well controlled. The car scores well in energy efficiency and its emissions of greenhouse gases are, in the case of CH_4 and N_2O , vanishingly small. All in all, the Yaris achieves a well-deserved $3\frac{1}{2}$ star rating.

Disclaimer

Publication Date

Mass

Tested Car
VNKKBAC360A00xxx

Engine Size 1,490 cc Engine Power/Torque 68 kW/120 Nm

Emissions Class

Battery Capacity Published Driving Range n.a. n.a.

Tyres 205/45 P17 84W

> Published CO₂ 97 g/km

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Think before you print





2021

Volvo XC60

B4 diesel 4x4 automatic



6.7

Clean Air Index 2.5

Energy Efficiency Index 0.0



Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
6.9 /10	Cold Test					
8.1 /10	Warm Test					
6.0 /10	Cold Ambient Test					
7.3 /10	Highway					
	Road Test					
3.2 /10	On-Road Drive					
5.4 /8	On-Road Heavy Load					
3.5 /5	On-Road Light Load					
3.6 /5	On-Road Short Trip					
0.0/2	Congestion					
	Robustness					

good adequate marginal weak

poor

The XC60 shows very good control of pollutant emissions, even in the more challenging tests. Particulate number is low, values of ammonia, NH₃, are barely measurable and, with the exception of the congestion test, NO_x is kept in check.



Energy Efficiency Tests

Labe	oratory Test	Energy		
3.7 /10 Cold 1	Test			
4.2 /10 Warm	n Test			
0.6/10 Cold A	Ambient Test			
1.5 /10 Highw	vay			
	Cor	nsumption D	riving Range	
Avero	ige 7.3	3 I/100 km	1,047 km	
Worst	t-case 8.8	3 I/100 km	807 km	













Comments

The XC60 is a large, heavy car and this counts against its energy efficiency. The car has an average consumption of 7.3 I/100 km and its index in this part of the assessment is 2.5.

	Greenhouse gases	CO2	N ₂ O	CH₄
0.0 /7	Cold Test			
0.0 /7	Warm Test			
0.0 /7	Cold Ambient Test			
0.0 /7	Highway			











Emissions of Methane, CH_4 , are not high. However, those of CO_2 and of laughing gas, N_2O , are above Green NCAP's upper limits. The negative points for these greenhouse gases offset those gained for CH₄ and the vehicle ends up with a index of 0 in this part of the assessment.



Tyres

Published CO₂

167 g/km

Our Verdict

The XC60 is tested here with the 2.0 litre turbodiesel engine. Its exhaust after-treatment does an excellent job of controlling pollutant emissions. Particulate number is very low for a vehicle of this type and low emissions of other pollutants lead to an impressive 6.7/10 in this part of the assessment. Sadly, this level of performance is not repeated in in energy efficiency or emissions of greenhouse gases. The car's size and weight count against it and it gets 2.5/10 for Energy Efficiency. But it is in the area of greenhouse gases that the XC60 B4 really performs poorly, with values of $\rm N_2O$ sufficiently high that the car scores nothing in this part of the assessment. Overall, the Volvo's average index only just puts it into the 2 star band.

Disclaimer

Publication Date

Mass

Mass 1,952 kg Tested Car

Engine Size

tory Canacity

Battery Capacity n.a.

Emissions Class

Engine Power/Torque 145 kW/420 Nm

Published Driving Range n.a.

Sponsored by **GVİ**



Think before you print





2021

VW Golf

1.5 TSI petrol 4x2 manual



6.2

Clean Air Index 6.9

Energy Efficiency Index **5.3**



Greenhouse Gas Index



	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
5.6 /10	Cold Test					
7.0 /10	Warm Test					
4.4 /10	Cold Ambient Test					
7.2 /10	Highway					
	Road Test					
2.9 /10	On-Road Drive					
5.0 /8	On-Road Heavy Load					
3.2 /5	On-Road Light Load					
3.8 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					













good adequate marginal weak

poor

Comments

Control of pollutant emissions is good all-round, none being excessive and many remaining very low in all tests.



Energy Efficiency Tests

Laboratory Test	Energy		
7.3 /10 Cold Test			
7.7 /10 Warm Test			
6.4 /10 Cold Ambient Test			
6.3 /10 Highway			
	Consumption	Driving Range	
Average	5.5 I/100 km	962 km	
Worst-case	6.1 I/100 km	836 km	













Comments

The 1.5 litre Golf scores well in all tests, including cold ambient air and high-load highway. An average consumption of 5.5 I/100 km rises to just 6.1 I/100 km in the high-load test and leads to an impressive 6.9/10 in this part of the assessment.

	Greenhouse gases	CO2	N ₂ O	CH₄
4.0 /7	Cold Test			
4.3 /7	Warm Test			
3.5 /7	Cold Ambient Test			
3.2 /7	Highway			











 CO_2 is never excessive and emissions of laughing gas, N_2O , are low. The Methane, CH_4 , emitted is very much below critical values and scores in all tests are high.



Our Verdict

The iconic Volkswagen Golf, now in its eighth generation, is tested here in 1.5 litre direct-injection petrol form. A GPF ensures that particulate number is kept in check and the car shows excellent control of other pollutant emissions. NO, and CO emissions are low and, with good all-round control, the car scores well in all tests. Energy efficiency is good and emissions of greenhouse gases is low. Overall, the latest Golf impresses in all three areas of assessment and fully deserves its 3½ star rating.

Disclaimer

Publication Date

Mass 1,269 kg **Tested Car**

Engine Size

Engine Power/Torque

Battery Capacity Published Driving Range

Emissions Class 205/55 R16 91V

Published CO₂

Tyres

122 g/km

Sponsored by GVi





2021

VW ID.3

PRO 150 kW electric 4x2 automatic



Clean Air Index

Energy Efficiency Greenhouse Gas Index

10.0



Index

10.0 Clean Air Tests

	Laboratory Test	NMHC	NO _x	NH ₃	со	PN
10.0 /10	Cold Test					
10.0 /10	Warm Test					
10.0 /10	Cold Ambient Test					
10.0 /10	Highway					
	Road Test					
5.0 /10	On-Road Drive					
8.0 /8	On-Road Heavy Load					
5.0 /5	On-Road Light Load					
5.0 /5	On-Road Short Trip					
2.0 /2	Congestion					
	Robustness					



good adequate marginal weak

poor

Comments

The ID.3 is a pure electric vehicle and no pollutants are emitted at the tailpipe. Accordingly, the car scores the maximum index of 10 in this part of the assessment.

Energy Efficiency Tests

	Laboratory Test	Energy		
10.0 /10	Cold Test		\rightarrow	19.2 kWh/100 km
10.0 /10	Warm Test		\rightarrow	16.9 kWh/100 km
8.6 /10	Cold Ambient Test		\rightarrow	38.3 kWh/100 km
10.0 /10	Highway		\rightarrow	23.8 kWh/100 km
		Consumption	1	Driving Range
	Average	20.0 kWh/100	km	296 km
	Worst-case	38.3 kWh/100	km	151 km













Comments

The ID.3's energy efficiency is comfortably above Green NCAP's limit for maximum points in three of the four tests. Only in the cold ambient temperature test are some fractions of a point lost but, overall, the index is a near-perfect 9.6.

	Greenhouse gases	CO2	N ₂ O	CH ₄
7.0 /7	Cold Test			
7.0 /7	Warm Test			
7.0 /7	Cold Ambient Test			
7.0 /7	Highway			

good adequate marginal weak

poor

Comments

Because no greenhouse gases are emitted at the tailpipe of an all-electric vehicle, the ID.3 scores maximum points in this part of the assessment.



Tyres

Published CO₂

Our Verdict

VW's long-anticipated ID.3 went on to the market in late 2019. It is part of VW's drive towards electrification, with the ID.4 set to make an appearance later this year. At the moment, Green NCAP assesses vehicles only on what is emitted at the tailpipe so the ID.3 gets maximum points in two of the three areas of assessment – Clean Air and Greenhouse Gases – as emissions of these are zero. Energy efficiency is also extremely high and, overall, the car emerges comfortably with a maximum 5 star rating.

Disclaimer

Publication Date

Mass

Tested Car WVWZZZE1ZLP01xxxx

Engine Size n.a.

Battery Capacity 58.0 kWh Emissions Class

Engine Power/Torque 150 kW/310 Nm

Published Driving Range 418 km

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