

7. EU Official Data Show Car CO₂ Trends

EU carbon dioxide emissions from new cars fell by 1.25 per cent in 2007 to reach an average of 158 grams per kilometer (g/km), according to the latest official monitoring report published by the European commission. The report charts carmakers' progress in cutting CO₂ emissions from new vehicles between 2005 and 2007. The official data confirm the findings of an analysis published by T&E last August.

The commission's emission monitoring reports were originally conceived to track manufacturer's progress towards a voluntary reduction target of 140g/km by 2008. The reports are now used to measure the industry's compliance with new legal limits on CO₂ emissions from new vehicles.

A. Average CO₂ Emissions for the New Car Fleet In 2005, 2006 And 2007

Following the enlargement of the EU¹ on 1 May 2004 and 1 January 2007, data on the average CO₂ emissions for the new car fleet became available for the EU25 and EU27 Member States. For the monitoring years 2005, 2006 and 2007 the following table² presents the EU15, EU10, EU25 and EU 27 situation:

Table 1 : Monitoring Data

2005	EU 15		EU 10		EU 25			
Fuel	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km		
Petrol	6,896,573	168	507,746	158	7,404,319	167		
Diesel	6,966,671	155	199,518	154	7,166,189	155		
Petrol + Diesel	13,863,244	161	707,264	157	14,570,508	161		
2006	EU 15		EU 10		EU 25			
Fuel	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km		
Petrol	6,816,135	164	513,111	157	7,329,246	164		
Diesel	7,243,160	157	210,746	155	7,453,906	157		
Petrol + Diesel	14,059,295	160	723,857	156	14,783,152	160		
2007	EU 15		EU 10		EU 25		EU 27 ³	
Fuel	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km	Registrations	g CO ₂ /km
Petrol	6,432,418	161	526,920	157	6,959,338	160	7,126,498	160
Diesel	7,440,235	155	248,768	156	7,689,003	155	7,820,165	155
Petrol + Diesel	13,872,653	158	775,688	157	14,648,341	158	14,946,663	158

In 2005, the CO₂ average⁴ for the EU25 was 161g/km. The CO₂ average for the EU10 was approximately 2.5% lower than for the EU15. The total number of registrations in the EU10

¹ Data for Romania and Bulgaria are not relevant for the reporting period 2005 and 2006 as they joined the EU in 2007.

² The table includes vehicles of all manufacturers irrespective of their origin.

³ Excluding Bulgaria as no data for the year 2007 was delivered.

accounted for about 5% of the registrations in the EU25. In the EU10, almost 72% of the vehicles were petrol fuelled while in the EU15 the petrol share was just below 50%.

In 2006, the CO₂ average for the EU25 decreased by 1g/km to reach 160g/km. The CO₂ average for the EU10 was 2.5% lower than for the EU15. The total number of registrations in the EU10 accounted for about 5% of the registrations in the EU25 (a slight increase from 4.8% in 2005, to 4.9% in 2006). The EU10 share of petrol vehicles amounted to 71% while in the EU15 the petrol share dropped to 48.5%. There was thus an increase in the share of diesel vehicles in both parts of the EU but at different absolute levels.

In 2007, the CO₂ average for the EU25 decreased to 158g/km, 1.25% down compared to 160g/km for 2006. The EU27 average CO₂ was also 158g/km. The EU27 share of petrol vehicles was 47.7%. The share of petrol vehicles dropped further for the EU15 (46.4%) and the EU10 (67.9%). Compared to the number of registrations in the EU27, the EU12⁵ accounted for about 7.2% (5.2% for the EU10)⁶.

B. Vehicle Mass

In 2007, the EU25 average vehicle mass was 1382kg. The EU27 average mass for the same year was 1380kg and thus almost the same as for the EU25. This is to be expected as Bulgaria and Romania have a relatively small share in the market and are not expected to influence the EU27 average significantly. Additional details are shown in Table 2.

Table 2: Average mass^(1, 2) of new passenger cars for the EU 15, EU10, EU25 and EU 27

YEAR	EU15 ⁽⁸⁾	%Change	EU10	%Change	EU25 ⁽⁷⁾	%Change	EU27 ⁽⁶⁾
1995 ⁽³⁾	1099	-					
1996 ⁽³⁾	1123	+ 2.18%					
1997 ⁽³⁾	1137	+ 1.25%					
1998 ⁽³⁾	1166	+ 2.55%					
1999 ⁽³⁾	1185	+ 1.63%					
2000 ^(3, 5)	1186	+ 0.08%					
2001 ^(3, 5)	1197	+ 0.93%					
2002 ^(4, 5)	1413	+ 18.05%					
2003 ^(4, 5)	1404	- 0.64%					
2004 ⁽⁵⁾	1351	- 3.77%	1277	-	1347	-	
2005 ⁽⁵⁾	1362	+ 0.81%	1247	- 2.35%	1357	+ 0.74%	
2006 ⁽⁵⁾	1376	+ 1.03%	1281	+ 2.73%	1372	+ 1.11%	

⁴ Emission values for vehicles of associations ACEA, JAMA and KAMA and other manufacturers are corrected by 0,7% for the change in driving cycle, more information related to this change can be found in COM(2004) 78 final.

⁵ Except Bulgaria.

⁶ Compared to EU25, EU10 accounted for 5.3%.

2007 ⁽⁵⁾	1386	+ 0.73%	1313	+ 2.50%	1382	+ 0.73%	1380
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- (1) Article 2(8) of decision 1753/2000/EC, Section 2.6 of Annex I to Directive 70/156/EEC.
- (2) Petrol and diesel-fuelled vehicles only, other fuels and statistically not identified vehicles are not expected to affect these averages significantly.
- (3) Mass data as delivered by the associations. This is the mass of the empty vehicle which is 75kg lower than the mass of the car in running order which is employed in the reporting from 2002 onwards. See footnote 12 of section 2.2 for definitions of mass.
- (4) Mass data inflated because reported values partly related to one Member State to maximum mass rather than mass as defined in Decision 1753/2000/EC.
- (5) Values for ACEA, JAMA & KAMA members. New passenger cars placed on the EU15 market by other manufacturers would not influence the EU15 average significantly.
- (6) Excluding Bulgaria as no data for the year 2007 was delivered.
- (7) Excluding Malta 2005-2007, Slovakia in 2006 and 2007 as explained in footnote 12.
- (8) Excluding Greece 1995-2001 for ACEA and 1995-2000 for KAMA. Excluding Finland 1995-1999 for KAMA and 1996-2000 for ACEA

C. Vehicle Emissions by Fuel Type

Table 3: Average specific emissions of CO₂ of new passenger cars per fuel type, for the EU 15, EU10 and EU25

CO ₂ (g/km)															
EU15	1995 (1)	1996 (1)	1997 (1)	1998 (1)	1999 (1)	2000 (1)	2001 (2)	2002 (2)	2003 (2)	2004 (2)	2005 (2)	2006 (2)	2007 (2)	Change 95/07 [%] (4)	Change 04/07 [%] (4)
Petrol	189	186	184	182	180	178	173	172	171	170	168	164	161	-14.8 %	-5.3%
Diesel	179	178	175	171	165	163	156	157	157	155	155	157	155	-13.4 %	0%
Petrol + Diesel ⁽³⁾	186	184	182	180	176	172	167	166	164	163	161	160	158	-15.1%	-3.1%
EU10										2004 (2)	2005 (2)	2006 (2)	2007 (2)		Change 04/07 [%] (4)
Petrol										158	158	157	157		-0.6%
Diesel										151	154	155	156		3.3%
Petrol + Diesel ⁽³⁾										156	157	156	157		0.6%
EU25										2004 (2)	2005 (2)	2006 (2)	2007 (2)		Change 04/07 [%] (4)
Petrol										169	167	164	160		-5.3%
Diesel										155	155	157	155		0 %
Petrol + Diesel ⁽³⁾										162	161	160	158		-2.5%

- (1) Data as delivered by manufacturers associations.
- (2) CO₂ values for 2001-2007 are corrected by 0.7 % for the change in driving cycle. For 2002-2007 official EU data are taken.
- (3) Petrol and diesel-fuelled vehicles only, other fuels are not expected to affect these averages significantly.

(4) All percentage values are based on rounded numbers.

Table 4: Average specific emissions of CO₂ of new passenger cars per fuel type, for each association in the EU15

CO ₂ (g/km)														
ACEA	1995 (1)	1996 (1)	1997 (1)	1998 (1)	1999 (1)	2000 (1)	2001 (2)	2002 (2)	2003 (2)	2004 (2)	2005 (2)	2006 (2)	2007 (2)	Change 95/07 [%]
Petrol	188	186	183	182	180	177	172	172	171	170	169	166	162	-13.8 %
Diesel	176	174	172	167	161	157	153	155	154	153	153	155	154	-12.5 %
Petrol + diesel ⁽³⁾	185	183	180	178	174	169	165	165	163	161	160	160	157	-15.1 %
JAMA	1995 (1)	1996 (1)	1997 (1)	1998 (1)	1999 (1)	2000 (1)	2001 (2)	2002 (2)	2003 (2)	2004 (2)	2005 (2)	2006 (2)	2007 (2)	Chang e 95/07 [%]
Petrol	191	187	184	184	181	177	174	172	170	171	166	160	157	-17.8 %
Diesel	239	235	222	221	221	213	198	180	177	170	168	165	162	-32.2 %
Petrol + diesel ⁽³⁾	196	193	188	189	187	183	178	174	172	170	167	162	159	-18.9 %
KAMA	1995 (1)	1996 (1)	1997 (1)	1998 (1)	1999 (1)	2000 (1)	2001 (2)	2002 (2)	2003 (2)	2004 (2)	2005 (2)	2006 (2)	2007 (2)	Chang e 95/07 [%]
Petrol	195	197	201	198	189	185	179	178	171	160	158	154	150	-23.1 %
Diesel	309	274	246	248	253	245	234	203	201	189	187	184	178	- 42.4 %
Petrol + diesel ⁽³⁾	197	199	203	202	194	191	187	183	179	168	167	165	162	-17.8 %

(1) Data as delivered by manufacturers associations.

(2) CO₂ values for 2001-2007 are corrected by 0.7 % for the change in driving cycle. For 2002-2007 official EU data are taken.

(3) Petrol and diesel-fuelled vehicles only, other fuels are not expected to affect these averages significantly.

(4) All percentage values are based on rounded numbers.

Table 5: Trends in composition of new cars registered in the EU25 for each association

EU 25					
ACEA	2004 (1)	2005 (1)	2006 (1)	2007 (1)	Change '04- 07'(2)
Petrol	47.0%	45.6%	45.0%	42.5 %	-4.5

Diesel	50.9%	52.8%	53.9%	55.3 %	4.4
Totals (3)	12,207,279	12,024,503	12,121,720	12,154,993	-0.4 %
JAMA	2004 (1)	2005 (1)	2006 (1)	2007 (1)	Change '04- 07'(2)
Petrol	67.1%	67.4%	65.7%	61.9 %	-5.2
Diesel	29.4%	29.1%	31.3%	31.9 %	2.5
Totals (3)	2,001,546	2,058,302	2,156,273	2,214,826	10.7 %
KAMA	2004 (1)	2005 (1)	2006 (1)	2007 (1)	Change '04- 07'(2)
Petrol	70.6%	67.7%	63.0%	57.5 %	-13.1
Diesel	25.4%	29.5%	34.6%	36.6 %	11.2
Totals (3)	629,893	736,911	713,978	713,603	13.3 %
EU25 (4)	2004 (1)	2005 (1)	2006 (1)	2007 (1)	Change '04- 07'(2)
Petrol	50.7%	49.7%	48.8%	46.1 %	-4.6
Diesel	46.9%	48.3%	49.7%	51.0 %	4.1
Totals (3)	14,838,718	14,819,716	14,991,971	15,083,422	1.7 %

(1) For 2004-2007 official EU data are taken.

(2) The change over the period 1995 to 2007 for petrol and diesel driven cars represents the change in the absolute share of each fuel type of total registrations. The change for the total cars is the growth or drop in absolute new registrations. The change in total cars represents the growth in the EU25 new registrations over the period.

(3) Totals include statistically unidentified vehicles and vehicles using 'other fuel' types.

(4) New passenger cars put on the EU market by other manufacturers do not affect the numbers significantly.

D. Conclusions

The average emissions from new cars registered in the EU in 2007 amounted to 158g CO₂/km, 15.1% below the 1995 starting point of 186 g CO₂/km⁷. The emission level dropped by 1.23% from 2004 to 2005, by 0.6% from 2005 to 2006 and by 1.25% from 2006 to 2007. The EU25 average mass in 2005 was 1357kg, 1372 kg in 2006 and 1382kg in 2007 (1380kg for the EU-27).

8. UK Report Says Diesel Cars 'Take Decades to Become Cost Effective'

The pump price, combined with the higher cost of the initial purchase of a diesel vehicle, means it can take many years for switching to diesel to pay off for low mileage drivers according to a new analysis. The fuel has long been seen as more cost effective than petrol because it provides more miles to the gallon but having previously been less expensive than petrol it now costs about 12p a liter more. The pump price, combined with the higher cost of the initial purchase of a diesel vehicle, means it can take many years for switching to diesel to pay off for low mileage drivers.

⁷ EU15.