



COMMISSION OF THE EUROPEAN COMMUNITIES

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REPORT FROM THE COMMISSION

**Quality of gasoline and diesel fuel used for road transport in the European Union:
First annual report**

(Reporting years 2001 and 2002)

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Quality of gasoline and diesel fuel used for road transport in the European Union: First annual report

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(Text with EEA relevance)

1. EXECUTIVE SUMMARY

Environmental fuels specifications for petrol and diesel fuels are, inter alia, an important element of the cost-effective package of Europe-wide and national/regional/local measures to reduce emissions into air. Therefore Directive 98/70/EC¹ sets technical specifications on health and environmental grounds for fuels to be used for vehicles equipped with positive-ignition and compression-ignition engines. Directive 2003/17/EC², amending Directive 98/70/EC, requires a further reduction of the sulphur content of petrol and diesel fuels. The introduction of fuels with a maximum sulphur content of 10 mg/kg will improve the fuel efficiency attainable with new, emerging vehicle technologies and should lead to significant reductions in emissions of conventional air pollutants when used in existing vehicles.

Significant violations of the fuel specification can lead to increased emissions and might even damage the engine and the exhaust after-treatment systems. In order to ensure compliance with the fuel quality standards required under this Directive, Member States are requested to introduce fuel quality monitoring systems.

Article 8 of Directive 98/70/EC, as amended by Article 1(5) of Directive 2003/17/EC, requires that the Commission shall publish annually, and for the first time by 31 December 2003, a report on the actual fuel quality in the different Member States. In compliance with this request this Commission Report summarises briefly Member States' submissions, on the quality of petrol and diesel, as well as the volumes sold, for the years 2001 and 2002.

The monitoring of fuel quality in 2001 and 2002 shows that the specifications for petrol and diesel laid down in Directive 98/70/EC are in general met. Only very few violations were identified. Member States need to take action in order to ensure full compliance. Most of them are doing so already, and details of the action taken by Member States with regard to non-compliance are included, where provided, in the individual country chapters of the detailed reports for the years 2001 and 2002³. The Commission will continue urging Member States to ensure full compliance with the fuel quality requirements laid down in the Directive.

For the abatement of air pollution and the introduction of new engine technology it is important to note that the share of 50 ppm fuels increased significantly from 2001 to 2002, while the shares of 10 ppm fuels remained nearly constant. Six Member States have defined

¹ OJ L 350 of 28.12.1998, p. 58.

² OJ L 76 of 22.3.2003, p. 10.

³ See <http://europa.eu.int/comm/environment/air/transport.htm#2>

national fuel grades for low (<50 ppm) or sulphur free (<10 ppm) fuels. Low sulphur fuels are available in many countries across the EU (for petrol in Austria, Germany, Ireland, Sweden and the United Kingdom; for diesel in Belgium, Denmark, Finland, Greece, Ireland, Netherlands and the United Kingdom). However, there are still five countries which did still not introduce separately marketed low (<50 ppm) or sulphur free (<10 ppm) fuels at all (France, Greece, Italy, Portugal and Spain). Sulphur free petrol was only available in Austria, Germany and Ireland, and sulphur free diesel was only available in Sweden.

The fuel quality monitoring systems established at national level differ considerably and require harmonisation in order to provide transparent and comparable results. The implementation of Directive 2003/17/EC is expected to improve the quality of reporting in this respect when Member States are required to report in accordance to the new European Standard, EN 14274, or with systems of equivalent confidence.

2. INTRODUCTION

The specifications for petrol and diesel sold in the European Union are laid down in Directive 98/70/EC. Two sets of fuel specifications are included in the Directive, the first entered into force on 1 January 2000 and the second will enter into force on 1 January 2005. The Directive also stipulates that Member States are required to report summaries of the quality of fuels sold in their territories. For the reporting the format laid out in Commission Decision 2002/159/EC of 18 February 2002⁴ should be applied. Member States were required under the Directive to report for the first time by 30 June 2002 for the preceding calendar year (i.e. 2001). Article 8 of Directive 98/70/EC, as amended by Article 1(5) of Directive 2003/17/EC, requires that the Commission should forward the results of Member States' fuel quality reporting. According to this Article 8 the Commission shall publish annually, and for the first time by 31 December 2003, a report on the actual fuel quality in the different Member States. In compliance with this request this Commission Report summarises the quality of petrol and diesel, as well as the volumes sold, in the Community for the years 2001 and 2002. The detailed reports can be found on the Commission's web page⁵. Additional reporting requirements laid down in Directive 2003/17/EC, e.g. the availability and geographical coverage of fuels with a maximum sulphur content of 10 mg/kg, are not covered by this Commission Report since Member States are not reporting in accordance with this requirement before the transposition of the Directive into national legislation is completed, e.g. at the best by mid 2005, covering then the reporting year 2004.

3. NATIONAL MONITORING SYSTEMS

A number of different approaches have been made in implementing Fuel Quality Monitoring Systems across the EU. These range from simple sampling at a number of fuel retail stations at certain periods during the year (e.g. Netherlands) through to integration of sampling and analysis of all refinery or imported batches into the requirements for distribution of fuels within the country, together with random sampling across the distribution chain throughout the year (e.g. Sweden and the UK). The monitoring approaches are under review in some Member States and it appears that few amendments or changes have been made in 2002 compared to the Monitoring Systems used in 2001. However, presumably Member States are

⁴ OJ L 53 of 23.2.2002, p. 30.

⁵ <http://europa.eu.int/comm/environment/air/transport.htm#2>

saving major revisions for the changes necessary to comply with the amended Directive (2003), which states that: "*Member States shall establish a fuel quality monitoring system in accordance with the requirements of the relevant European Standard*" (the recently adopted EN 14274⁶ & EN 14275⁷) from 1 January 2004. The Commission expects that most of the Member States will apply the CEN standards, but it should be noted that alternative monitoring systems may be permitted provided such systems ensure the results are of an equivalent confidence. Article 2 requires Member States to adopt the laws, regulations and administrative provisions necessary to comply with the Directive, and to inform the Commission thereof. Thus, Member States making use of the provision on alternative monitoring systems will have to inform the Commission about their national monitoring system. The Commission will address this question again in future monitoring reports, taking into account the information provided by Member States on this issue.

A rough appreciation for the existing degree/rate of sampling carried out may be obtained from Figures 1 and 2, which plots the total number of samples of petrol and diesel against the respective sales in billion litres. It is clear from these plots that there was a wide range of sampling intensities across the EU in 2001 and 2002. Of particular interest is the very high sampling rate of Belgium (from refuelling stations across the Belgium territory) in relation to the other Member States, even when compared to Sweden and the UK who incorporated sampling and analysis into a mandatory requirement for fuel distribution in their territories. This anomaly is due to the fact that the Belgium system in operation in 2001 and 2002 was designed and introduced in 1996 for the purposes of detecting fraud at retail stations. Similarly, the systems active in some other Member States were also designed for other purposes – explaining a wide variation in sampling frequency, sampling location and extent of analysis of each sample, across the EU.

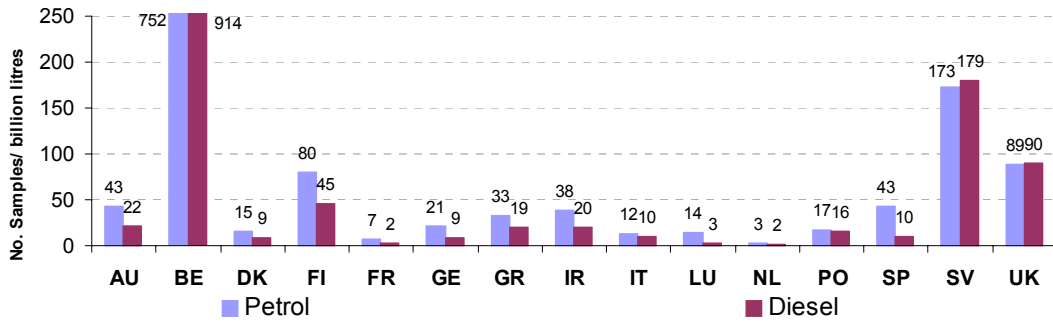
It is worth noting that the degree of sampling that may be required to statistically demonstrate compliance with Directive 98/70/EC could also include a measure of the number of refineries supplying the market, the number of fuel grades available and the number of different imported fuel grades and sources. On the basis of the information provided it would appear that the Netherlands and France have particularly low coverage with respect to sales. However, this is also taken into account in the new European Standard, where the minimum number of samples per fuel grade (in each of the winter and summer periods) is 50, 100 or 200, depending on the statistical model and the size of the country (i.e. 100, 200 or 400 samples per year per fuel grade).

The countries that are defined as "large" include France, Germany, Italy, Spain and the UK according to the definition contained in the European Standard (>15million tonnes automotive fuel sales per year). The Netherlands falls just underneath this criteria. Using these criteria it can be seen (Figures 3 & 4) that only Belgium, Italy, Spain, Sweden and the UK already satisfy the specifications for sampling numbers. (However, it should be noted that the standard specifies individual samples taken at separate refuelling stations. Samples from separate sites is not always specified in existing submissions and in some cases sampling takes place at other points of the distribution chain also).

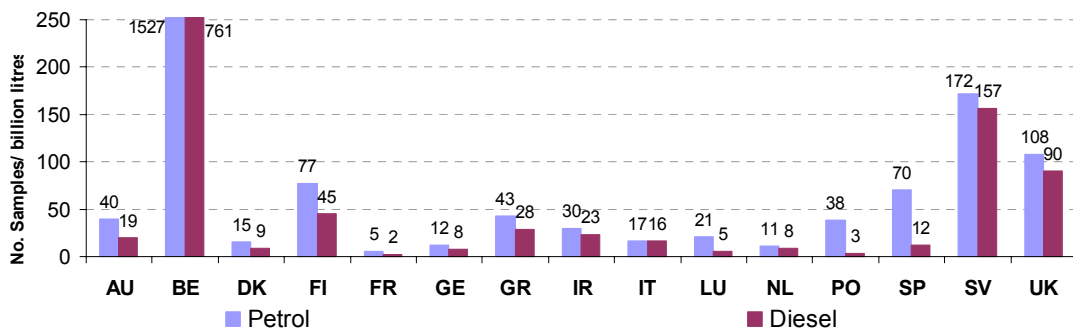
⁶ EN 14274:2003 - Automotive fuels - Assessment of petrol and diesel quality - Fuel Quality Monitoring System (FQMS).

⁷ EN 14275:2003 - Automotive fuels - Assessment of petrol and diesel fuel quality - Sampling from retail site pumps and commercial site fuel dispensers.

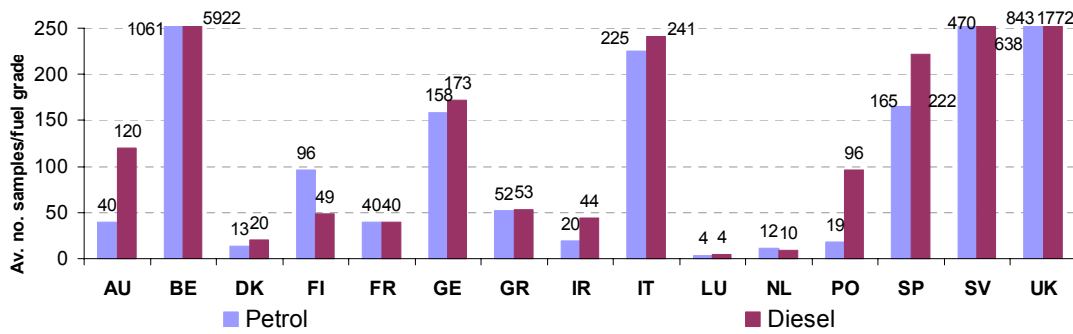
**Figure 1: 2001 FQM sampling rate across the EU
(Total Number of Samples per Billion Litres Fuel Sold)**



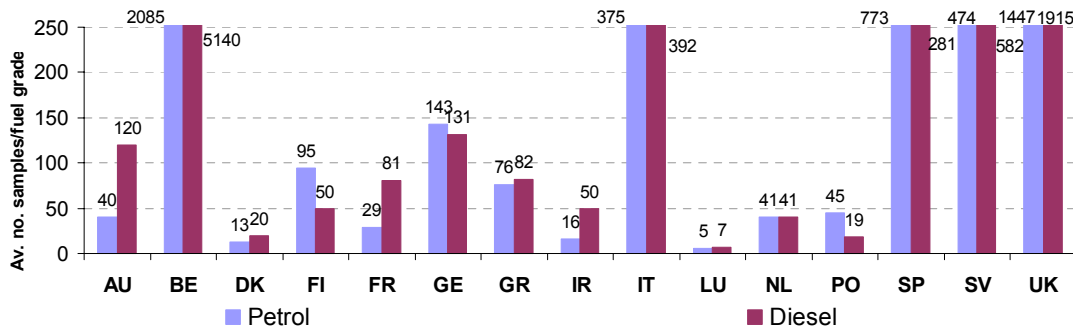
**Figure 2: 2002 FQM sampling rate across the EU
(Total Number of Samples per Billion Litres Fuel Sold)**



**Figure 3: 2001 FQM sampling rate across the EU
(Average Number of Samples per Fuel Grade)**



**Figure 4: 2002 FQM sampling rate across the EU
(Average Number of Samples per Fuel Grade)**

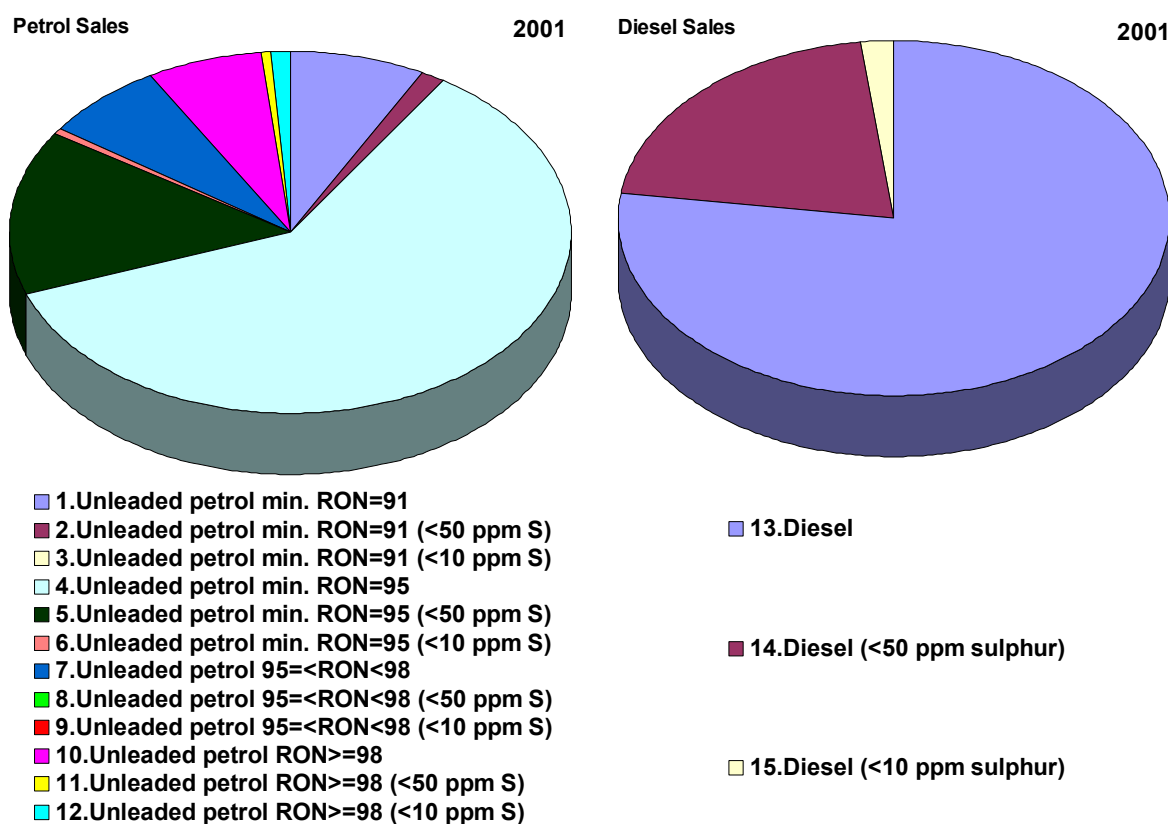


4. 2001 REPORTING

4.1 Fuel Qualities and Volumes

Figure 5 (see Annex Table 3 for full details by Member State) shows that in 2001, whilst a wide variety of RON and sulphur grade fuels were available across the EU, the majority of sales comprised of RON95 (76%, with 60% regular, 15% low sulphur and 1% sulphur free⁸). Of all petrol sold, 83% was regular sulphur grade, 15% low sulphur (<50 ppm) and 2% sulphur free (<10 ppm). Of all diesel sold the equivalent split was 77%, 21% and 2%. Please note that a general ban on the marketing of leaded petrol was agreed by EU institutions from 2000.

Figure 5: 2001 EU fuel sales proportions by fuel type (%)



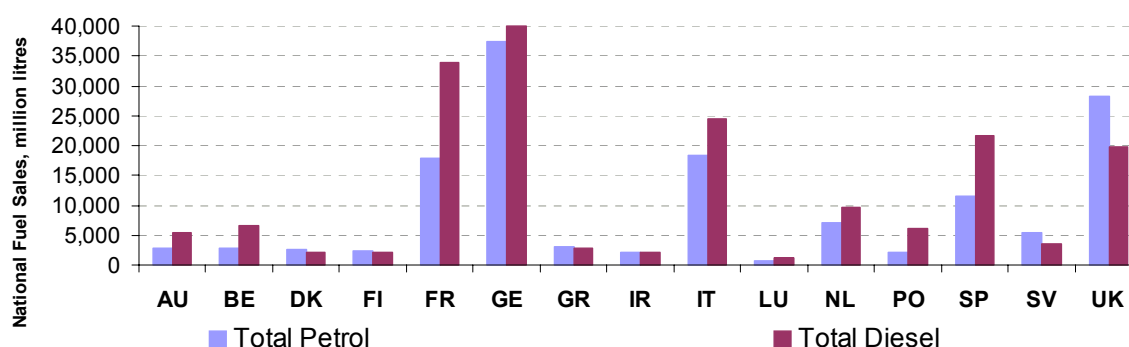
⁸ The term “regular” is used for fuels with a sulphur content which is in accordance with Directive 98/70/EC (150 ppm for gasoline and 350 ppm for diesel); the term “low sulphur” corresponds to a sulphur content of 50 ppm; the term “sulphur free” to a sulphur content of 10 ppm.

Legend: EU fuel sales by fuel type (%)

	Petrol												Diesel		
Fuel ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
% EU Sales	7.7%	1.4%	0.0%	60.3%	14.7%	0.5%	7.2%	0.0%	0.0%	6.6%	0.5%	1.1%	77.3%	20.8%	2.0%

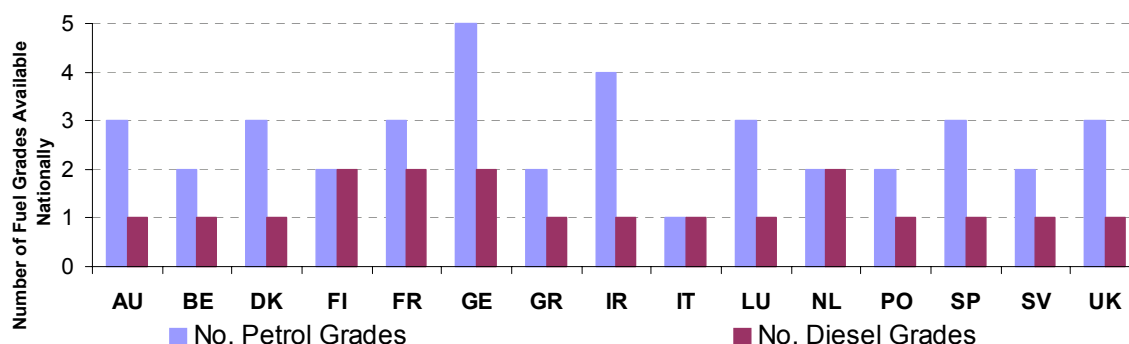
Unsurprisingly the largest total sales of fuels in 2001 were made in France, Germany, Italy, Spain and the United Kingdom (Figure 6). Whilst diesel sales are higher in many Member States, it is interesting to note the variations in relative sales of petrol and diesel. In France and United Kingdom the differences are particularly pronounced, with diesel sales in France being almost double those of petrol, and diesel sales being almost 30% less than petrol in the United Kingdom.

Figure 6: 2001 national fuel sales by fuel type across the EU (million litres)



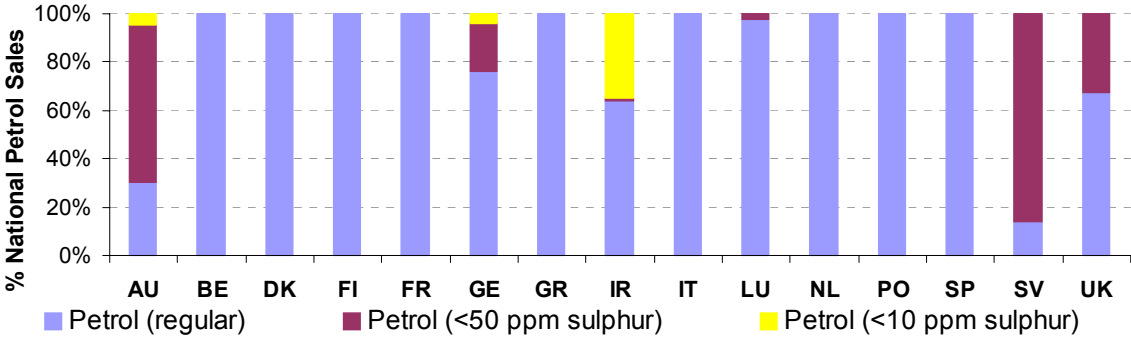
There is also a variation in the number of grades of fuel reported to be available across the EU (Figure 7) in 2001, with clearly more petrol grades available, despite the larger quantities of diesel sold. It also appears that only four Member States have actually defined *national fuel grades* for low (<50 ppm) or sulphur free (<10 ppm) fuels (Austria, Germany, Luxembourg and Sweden). Other Member States have either left the availability of low or sulphur free fuels simply to market conditions, or provided some form of incentive to encourage market change (e.g. the reduction in duty for low sulphur fuels in the UK). Reporting of fuel sales under the Commission Decision (which allows Member States to define their own "national fuel grades") has also been varied.

Figure 7: Number of fuel grades available nationally by fuel type across the EU



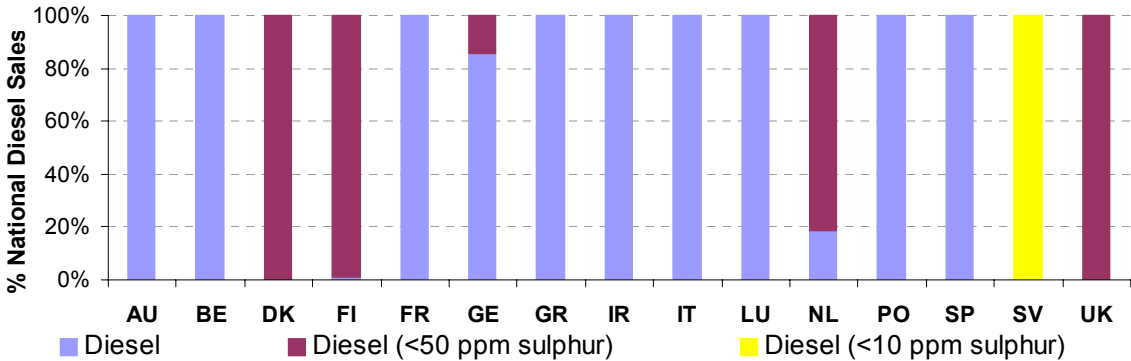
Although low sulphur fuels were available in many countries across the EU (see Figures 8 and 9), some countries were yet to introduce separately marketed low (<50 ppm) or sulphur free (<10 ppm) fuels at all (Belgium, France, Greece, Italy, Portugal and Spain). Fuels that have low sulphur content were available in these countries in some cases. However, it was not completely clear whether the sulphur content was either not guaranteed (as needed for some next-generation cleaner technologies to function at optimum efficiency), or whether insufficient data is available to specify the sales/availability of low sulphur fuel grades.

Figure 8: National sales proportions of low sulphur petrol grades across the EU (%)



Whilst sulphur free petrol was available in Austria, Germany and Ireland; sulphur free diesel was only available in Sweden. Also, in 2001 three countries (Denmark, Sweden and the UK) had fully moved over to low or sulphur free diesel fuel, but no countries had fully switched to low or sulphur free petrol.

Figure 9: National Sales Proportions of Low Sulphur Diesel Grades across the EU (%)



4.2 Compliance with Directive 98/70/EC in 2001

In terms of compliance with Directive 98/70/EC, five Member States (Greece, Luxembourg, Portugal, Sweden and UK) were in complete compliance with limit values for both petrol and diesel.

In 2001, ten of the Member States reported at least one petrol sample that was noncompliant with Directive 98/70/EC. Of these, the main parameters of concern were summer vapour pressure (the most often exceeded, across all fuel grades), distillation (evaporation at 100°C) and aromatics content. Motor octane number (MON), benzene content and sulphur content were also exceeded by some samples for more than one Member State. However, for all parameters at least one sample exceeded the limit value (and the limit of tolerance for the test method).

For diesel reporting, only four of the Member States reported at least one sample that was noncompliant with Directive 98/70/EC. Of these, the main parameters of concern were sulphur content and density, however for all parameters the Directive's limit values were exceeded by at least one sample.

The following Table 1 summarises the compliance of Member States with Directive 98/70/EC for the year 2001 reporting.

Table 1: Summary of MS compliance with 98/70/EC for 2001 reporting.

Member State	Limit value non-compliance (1) (95% confidence limits)		Incomplete reporting	
	Petrol	Diesel	Petrol	Diesel
Austria	X	(2)	X	
Belgium	X	X	X	X
Denmark	X		X	
Finland	X	X		
France	X	X	X	X
Germany	X	X		
Greece			(3)	
Ireland	(4)			
Italy	X		(5)	
Luxembourg			X	X
Netherlands	X		X	
Portugal			(5)	
Spain	X			
Sweden	(6)		X	
United Kingdom				

Notes:

1. It is not possible to confirm whether limit values have been respected in all samples, where reporting data is incomplete.
2. Insufficient information provided to enable assessment of whether one particular sample was noncompliant with the distillation limit value.
3. Although all oxygenates not were measured (other than ethers with more than 5 carbon atoms per molecule), Greece has stated the other oxygenates were not added and the oxygen content can be calculated directly from the oxygenates content, so would also be compliant.
4. Ireland is of the opinion that the exceedances found could not be categorically confirmed because the samples were stored for a longer period than desirable prior to analysis, which could have affected the results disfavouredly.
5. Although all oxygenates were not measured (other than ethers with more than 5 carbon atoms per molecule), Italy and Portugal have stated no other oxygenates are added to the fuels.
6. The format of the data provided by Sweden (though in compliance with the Commission Decision) does not enable confirmation of whether petrol samples complied with the summer limits. However, Sweden has confirmed that all samples did comply.

The quality of the compliance assessment suffers in some cases due to the incomplete information provided by Member States. Details on specific exceedances are provided in the individual country chapters of the full report.

The cases of non-compliance identified seem not to have major negative repercussions on fuel quality in general. However, the Commission expressed its concern at an expert meeting and

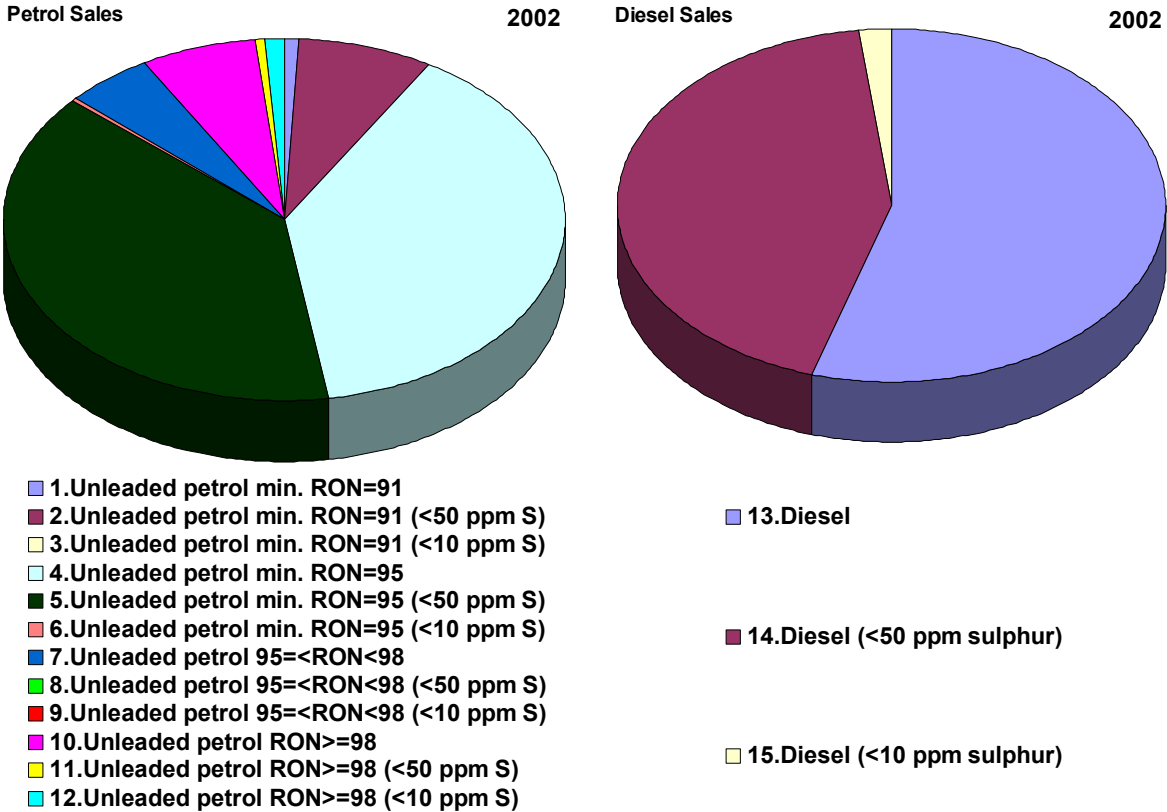
asked Member States to explain the measures taken in order to avoid future violations. A number of member States did so; the replies are given in the detailed report.

5. 2002 REPORTING

5.1 Fuel Qualities and Volumes

Submissions have been received from all Member States, although some of them were so late that the Commission Report could not be finalised before 31 December 2003. Figure 10 (see also Annex Table 4) show that in 2002, whilst a wide variety of RON and sulphur grade fuels were available across the EU, the majority of sales still comprised of RON95 (78 %, with 38.7 % regular, 38.9 % low sulphur and 0.5% sulphur free). Of all petrol sold, 51% was regular sulphur grade, 47% low sulphur (<50 ppm) and 2% sulphur free (<10 ppm). Of all diesel sold the equivalent split was 59%, 43% and 2%. Compared to 2001 the quantities of 50 ppm fuels increased significantly, while the quantities of 10 ppm fuels remained nearly constant.

Figure 10: 2002 EU fuel sales proportions by fuel type (%)

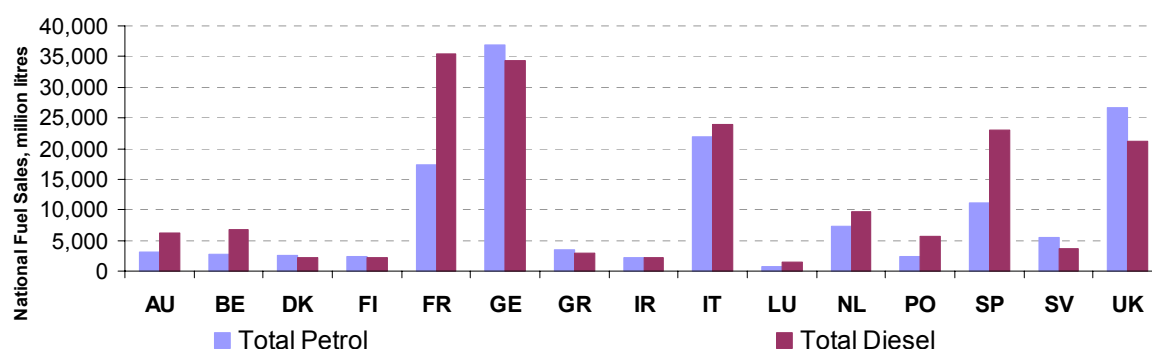


Legend: EU fuel sales by fuel type (%)

Fuel ID	Petrol												Diesel		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
% EU Sales	0.9%	7.8%	0.0%	38.9%	38.7%	0.5%	4.8%	0.0%	0.0%	6.7%	0.6%	1.0%	54.6%	43.3%	2.1%

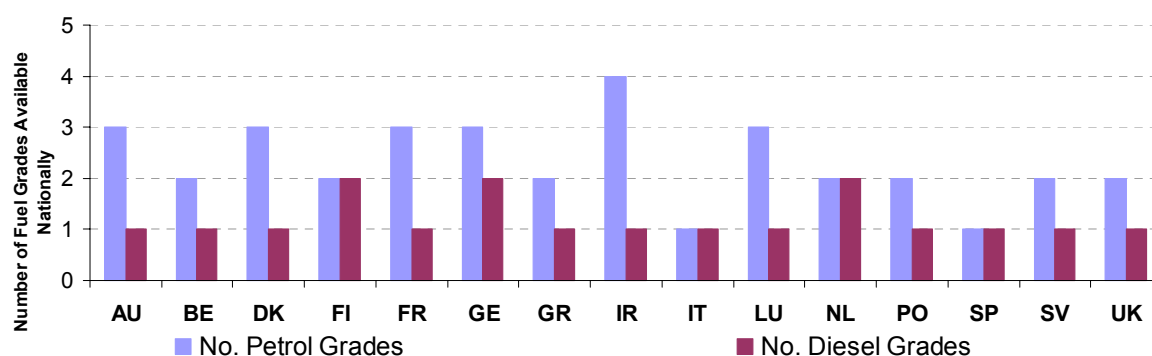
Similarly to 2001, the largest total sales of fuels (of submissions received to date) in 2002 were made in France, Germany, Italy, Spain and the United Kingdom (Figure 11). Whilst diesel sales are dominant in many Member States, there are still variations in relative sales of petrol and diesel.

Figure 11: 2002 national fuel sales by fuel type across the EU (million litres)



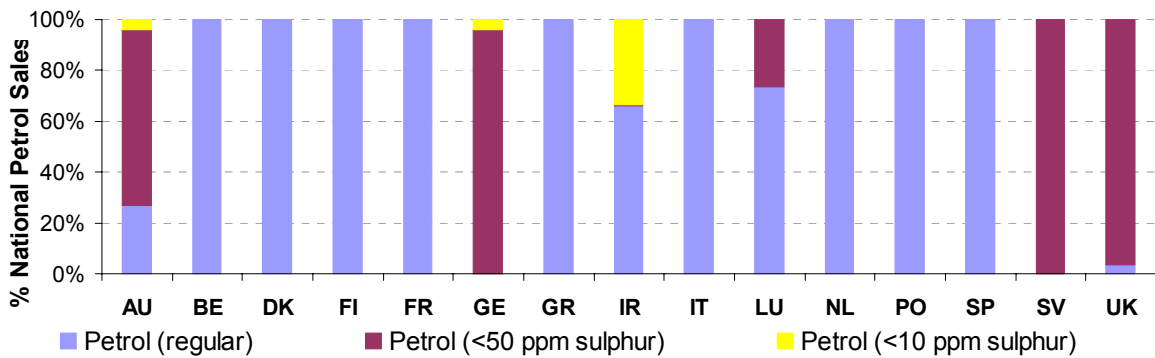
As in 2001, there is also still a variation in the number of grades of fuel reported to be available across the EU (Figure 12) in 2002, with clearly more petrol grades available, despite the larger quantities of diesel sold (though less than in 2001). Six Member States, two more than in 2001, have actually defined *national fuel grades* for low (<50 ppm) or sulphur free (<10 ppm) fuels. Reporting of fuel sales under the Commission Decision (which allows Member States to define their own "national fuel grades") has also been varied again, though improved since 2001.

Figure 12: Number of fuel grades available nationally by fuel type across the EU



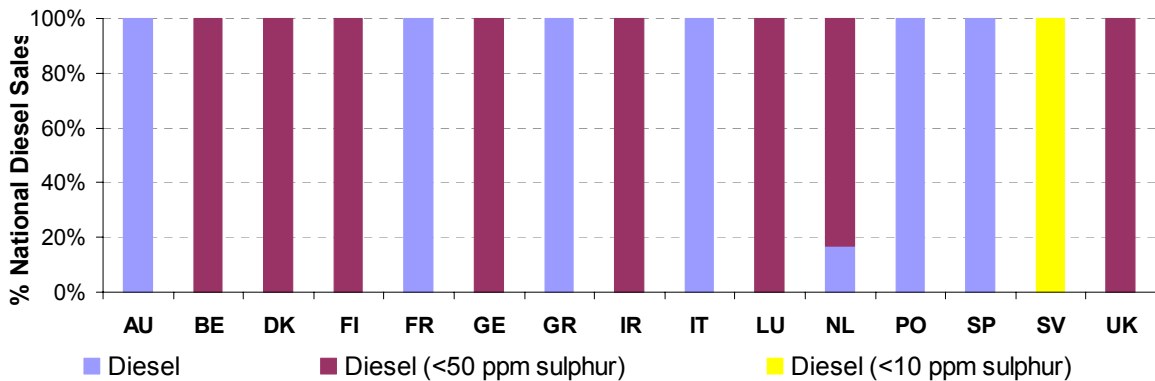
Already in 2001 low sulphur fuels were available in many countries across the EU (see Figures 13 and 14). However, there are still five countries which are yet to introduce separately marketed low (<50 ppm) or sulphur free (<10 ppm) fuels at all (France, Greece, Italy, Portugal and Spain). Compared to 2001, Belgium now disappeared from this list since all diesel marketed is of the <50 ppm quality.

Figure 13: National sales proportions of low sulphur petrol grades across the EU (%)



As in 2001, sulphur free petrol was only available in Austria, Germany and Ireland, and sulphur free diesel was only available in Sweden. Also, in 2002 seven countries (only three in 2001) had fully moved over to low or sulphur free diesel fuel; Sweden had moved completely over to sulphur free diesel, but none of the countries had fully switched to sulphur free petrol.

Figure 14: National sales proportions of low sulphur diesel grades across the EU (%)



5.2 Compliance with Directive 98/70/EC in 2002

In terms of compliance with Directive 98/70/EC, four Member States (France, Luxembourg, Portugal, Spain and Sweden) were in complete compliance with limit values for both petrol and diesel (compared to five in 2001).

In 2002, nine of the Member States reported at least one petrol sample that was noncompliant with Directive 98/70/EC (compared to ten in 2001). Of these, the main parameters of concern were summer vapour pressure (the most often exceeded, across all fuel grades), research and motor octane number (RON, MON). Distillation (evaporation at 100°C), ethers with 5 or more C atoms per molecule, benzene and aromatics content were also exceeded by some samples for more than one Member State. However for all parameters at least one sample exceeded the limit value (and the limit of tolerance for the test method).

For diesel reporting, six of the Member States reported at least one sample that was noncompliant with Directive 98/70/EC (compared to four in 2001). Of these, the main parameters of concern were sulphur content and Distillation 95% point, however for all parameters the Directive's limit values were exceeded by at least one sample.

The following table summarises the compliance of Member States with Directive 98/70/EC for the year 2002 reporting in terms of the results of analysis of samples against limit values and the reporting format and content.

Table 2: Summary of MS compliance with 98/70/EC for 2002 reporting.

Member State	Limit value non-compliance (1) (95% confidence limits)		Incomplete reporting	
	Petrol	Diesel	Petrol	Diesel
Austria	X	X	X	
Belgium	X	X	X	
Denmark	X	X	X	
Finland	(2)			
France			X	X
Germany	X	X		
Greece		X	(3)	
Ireland	X			
Italy	X	X	(4)	
Luxembourg			X	
Netherlands	X		X	
Portugal			(4)	
Spain				
Sweden			X	
United Kingdom	X			

Notes:

1. It is not possible to confirm whether limit values have been respected in all samples, where reporting data is incomplete.
2. The Finnish Customs Laboratory is of the opinion that all samples comply with the requirements of the Directive on the basis of expanded uncertainty limits of +/-10% for ethers [i.e. 90% confidence limits].
3. Although all oxygenates were not measured (other than ethers with more than 5 carbon atoms per molecule), Greece has stated the other oxygenates were not added and the oxygen content can be calculated directly from the oxygenates content, so would also be compliant.
4. Although all oxygenates were not measured (other than ethers with more than 5 carbon atoms per molecule), Italy and Portugal have stated no other oxygenates are added to the fuel.

As in 2001 the quality of the compliance assessment suffers in some cases due to the incomplete information provided by Member States. Details on specific exceedances are provided in the individual country chapters of the full report.

The Commission is concerned about the violations identified. Member States will be asked to explain the reasons as well as the measures taken, or planned to be taken, in order to Ensure that the fuel quality specifications are met.

6. CONCLUSIONS

The monitoring of fuel quality in 2001 and 2002 shows that the specifications for petrol and diesel laid down in Directive 98/70/EC are in general met. Only very few violations were identified namely related to exceedances of the maximum limit for vapour pressure during the summer period.

Details of action taken by Member States with regard to non-compliance are included, where provided, in the individual country chapters of the detailed reports for the years 2001 and 2002⁹. The Commission will continue urging Member States to ensure full compliance with the fuel quality requirements laid down in the Directive. The recent amendments to Directive 98/70/EC (see Directive 2003/17/EC) included the insertion of a paragraph which states *"Member States shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties determined must be effective, proportionate and dissuasive."* It is expected that the implementation of this requirement will have positive repercussions on compliance.

It should be noted that the share of 50 ppm fuels increased significantly from 2001 to 2002, while the shares of 10 ppm fuels remained nearly constant.

The fuel quality monitoring systems established at national level differ considerably and require harmonisation in order to provide transparent and comparable results. The implementation of Directive 2003/17/EC is expected to improve the quality of reporting in this respect when Member States are required to report in accordance to the new European Standard, EN 14274, or with systems of equivalent confidence.

⁹ See <http://europa.eu.int/comm/environment/air/transport.htm#2>

ANNEX

Table 3: 2001 EU fuel sales by fuel type (million litres)

ID No.	Million litres Fuel grade	Austria AU	Belgium BE	Denmark DK	Finland FI	France FR	Germany GE	Greece GR	Ireland IR	Italy IT	Luxembourg LU	Netherlands NL	Portugal PO	Spain SP	Sweden SV	UK UK	EU15 EU	EU15 % Total
1	Unleaded petrol min. RON=91	831	0	481	0	0	9,792	0	0	0	28	0	0	0	0	0	11,133	7.7%
2	Unleaded petrol min. RON=91 (<50 ppm S)	0	0	0	0	0	1,983	0	0	0	0	0	0	0	0	0	1,983	1.4%
3	Unleaded petrol min. RON=91 (<10 ppm S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4	Unleaded petrol min. RON=95	0	1,863	1,972	2,046	8,628	18,696	2,942	1,292	18,424	507	6,434	0	7,400	0	17,279	87,483	60.3%
5	Unleaded petrol min. RON=95 (<50 ppm S)	1,807	0	0	0	0	5,574	0	17	0	0	0	0	0	4,660	9,304	21,362	14.7%
6	Unleaded petrol min. RON=95 (<10 ppm S)	0	0	0	0	0	0	0	724	0	0	0	0	0	0	0	724	0.5%
7	Unleaded petrol 95=<RON<98	0	959	0	0	2,871	0	215	31	0	0	0	1,510	3,041	0	1,760	10,387	7.2%
8	Unleaded petrol 95=<RON<98 (<50 ppm S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9	Unleaded petrol 95=<RON<98 (<10 ppm S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10	Unleaded petrol RON>=98	0	0	130	367	6,475	0	0	0	0	207	649	697	1,041	0	0	9,566	6.6%
11	Unleaded petrol RON>=98 (<50 ppm S)	0	0	0	0	0	0	0	0	0	17	0	0	0	758	0	775	0.5%
12	Unleaded petrol RON>=98 (<10 ppm S)	123	0	0	0	0	1,427	0	0	0	0	0	0	0	0	0	1,551	1.1%
	Petrol (regular)	831	2,822	2,583	2,412	17,974	28,488	3,157	1,324	18,424	743	7,083	2,207	11,482	0	19,039	118,569	81.8%
	Petrol (<50 ppm sulphur)	1,807	0	0	0	0	7,557	0	17	0	17	0	0	0	5,418	9,304	24,119	16.6%
	Petrol (<10 ppm sulphur)	123	0	0	0	0	1,427	0	724	0	0	0	0	0	0	0	2,275	1.6%
	Total Petrol	2,761	2,822	2,583	2,412	17,974	37,473	3,157	2,065	18,424	759	7,083	2,207	11,482	5,418	28,343	144,964	100.0%
13	Diesel	5,447	6,476	0	22	33,944	34,121	2,733	2,207	24,553	1,247	1,779	6,107	21,642	0	0	140,277	77.3%
14	Diesel (<50 ppm sulphur)	0	0	2,221	2,137	0	5,810	0	0	0	0	7,772	0	0	0	19,733	37,673	20.8%
15	Diesel (<10 ppm sulphur)	0	0	0	0	0	0	0	0	0	0	0	0	0	3,556	0	3,556	2.0%
	Total Diesel	5,447	6,476	2,221	2,159	33,944	39,930	2,733	2,207	24,553	1,247	9,551	6,107	21,642	3,556	19,733	181,506	100.0%

Table 4: 2002 EU fuel sales by fuel type (million litres)

ID No.	Million litres Fuel grade	Austria AU	Belgium BE	Denmark DK	Finland FI	France FR	Germany GE	Greece GR	Ireland IR	Italy IT	Luxembourg LU	Netherlands NL	Portugal PO	Spain SP	Sweden SV	UK UK	EU15 EU	EU15 % Total
1	Unleaded petrol min. RON=91	818	0	492	0	0	0	0	0	0	26	0	0	0	0	0	1,335	0.9%
2	Unleaded petrol min. RON=91 (<50 ppm S)	0	0	0	0	0	11,386	0	0	0	0	0	0	0	0	0	11,386	7.8%
3	Unleaded petrol min. RON=91 (<10 ppm S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4	Unleaded petrol min. RON=95	0	1,878	2,062	2,100	9,265	0	3,259	1,413	21,969	529	6,783	0	7,665	0	0	56,921	38.9%
5	Unleaded petrol min. RON=95 (<50 ppm S)	2,082	0	0	0	0	24,029	0	12	0	0	0	0	0	4,774	25,795	56,692	38.7%
6	Unleaded petrol min. RON=95 (<10 ppm S)	0	0	0	0	0	0	0	718	0	0	0	0	0	0	0	718	0.5%
7	Unleaded petrol 95=<RON<98	0	0	0	0	2,099	0	0	11	0	0	0	1,725	2,250	0	953	7,038	4.8%
8	Unleaded petrol 95=<RON<98 (<50 ppm S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9	Unleaded petrol 95=<RON<98 (<10 ppm S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10	Unleaded petrol RON>=98	0	852	40	356	5,984	0	277	0	0	0	565	630	1,136	0	0	9,840	6.7%
11	Unleaded petrol RON>=98 (<50 ppm S)	0	0	0	0	0	0	0	0	0	200	0	0	0	738	0	938	0.6%
12	Unleaded petrol RON>=98 (<10 ppm S)	127	0	0	0	0	1,406	0	0	0	0	0	0	0	0	0	1,533	1.0%
	Petrol (regular)	818	2,730	2,594	2,455	17,348	0	3,537	1,423	21,969	554	7,348	2,355	11,051	0	953	75,135	51.3%
	Petrol (<50 ppm sulphur)	2,082	0	0	0	0	35,415	0	12	0	200	0	0	0	5,512	25,795	69,017	47.1%
	Petrol (<10 ppm sulphur)	127	0	0	0	0	1,406	0	718	0	0	0	0	0	0	0	2,251	1.5%
	Total Petrol	3,026	2,730	2,594	2,455	17,348	36,822	3,537	2,154	21,969	755	7,348	2,355	11,051	5,512	26,748	146,403	100.0%
13	Diesel	6,195	0	0	1	35,412	0	2,910	0	24,005	0	1,630	5,650	22,975	0	0	98,776	54.6%
14	Diesel (<50 ppm sulphur)	0	6,750	2,264	2,205	0	34,371	0	2,209	0	1,380	7,972	0	0	0	21,219	78,370	43.3%
15	Diesel (<10 ppm sulphur)	0	0	0	0	0	0	0	0	0	0	0	0	0	3,717	0	3,717	2.1%
	Total Diesel	6,195	6,750	2,264	2,206	35,412	34,371	2,910	2,209	24,005	1,380	9,602	5,650	22,975	3,717	21,219	180,863	100.0%