



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 05.06.1997
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Amended proposal for a

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE

**RELATING TO MEASURES TO BE TAKEN AGAINST AIR POLLUTION BY
EMISSIONS FROM MOTOR VEHICLES AND
AMENDING DIRECTIVES 70/220/EEC AND 70/156/EEC**

**(presented by the Commission pursuant to Article 189 a (2)
of the EC-Treaty)**

EXPLANATORY MEMORANDUM

The Commission has adopted on 18 June 1996, a proposal of a European Parliament and Council directive relating to measures to be taken against air pollution by motor vehicle emissions and amending directives 70/220/EEC and 70/156/EEC. This proposal would result in a 40% reduction of limit values for noxious pollutants applicable to the type approval of new vehicles from the year 2000. In addition, the mandatory fitment of on-board diagnostic systems, the introduction of a new in-use conformity testing procedure and a new test to limit evaporative emissions will result in improved control of the day to day emissions of vehicles in use.

This proposal formed a part of the integrated strategy for the control of atmospheric emissions from road transport as set out in the Commission's Communication to the European Parliament on a future strategy for the control of atmospheric emissions for road transport.

On 10th April 1997, the European Parliament approved the proposal from the Commission with 88 amendments.

Out of the 88 amendments proposed by Mr Lange, 16 amendments will be totally accepted and 6 partly which cover the following aspects :

- amendments n° 19 partly, 24 relating to fiscal incentives ; subject to minor changes drafted by the Commission ;
- amendments n° 14 partly, 67, 68, 78 partly, 81 partly and 85 to amend the OBD requirements ;
- amendments n° 53, 54, 55 partly, 56, 57 and 58 relating to the evaporative emissions test procedure ;
- other minor or editorial amendments, namely amendments n° 5, 6, 7 partly, 30, 52, 64, 86 and 89 ;

Amendments n° 1, 2, 3, 4, 10, 11, 12, 13, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 29, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 59, 60, 61, 62, 63, 65, 66, 69, 70, 71, 72, 73, 74, 75, 76, 77, 79, 80, 82, 83, 84, 87, 88, 90, 92 and 93 are not accepted. These amendments deal, in particular, with :

- a tightening of the limit values applicable from the year 2000 and a change to the reference fuel used for approval testing. Limit values proposed by the Commission are part of the cost-effective strategy which will permit the EU to reach its air quality standards. In addition, limit values are a sensitive issue and will be discussed until the very last moment, since technology is always evolving permitting environmental gains at lower costs. Moreover, emission limit values, the intrinsic quality of the fuel used for testing and the quality of market fuels are all interdependent and need to be examined together ;
- a modification of the 'indicative limit values' proposed by the Commission for 2005 into mandatory values, with a tightening the values themselves. Mandatory values will have the advantage of giving a clear indication, with a long lead time, to the car industry and component suppliers, enabling them to manage their research and development efforts in an efficient manner. However, there is a prerequisite, notably

that of better quality fuels available across the market. Further study is needed, the outcome of which can not be prejudged. In any case, the Commission is committed to undertake an Auto/Oil 2 programme, with one of the objectives being to confirm or revise the year 2005 limit values at the earliest stage ;

- a new test procedure to reduce emissions during cold temperature conditions. The Commission has already indicated its interest in such a test but will evaluate it during the Auto-Oil 2 programme ;
- a different approach for in-use compliance testing. These proposals are incompatible with the principles of the European type-approval system and are therefore unacceptable. The proposals by the Commission for in-use compliance testing is an important step towards better emission control by application of in-use compliance testing at a harmonised European level and are closely linked to the existing provisions for type approval and conformity of production ;
- the mandatory fitment of on-board diagnostic systems, or OBD, on diesel vehicles from the year 2000. As of today, the experience and capability of the car and component supply industries with OBD for diesel vehicles is less than for petrol vehicles. OBD monitoring capability will not be available for all diesel vehicles by 2000 ;
- extension of the durability requirement beyond 80,000km to 160,000km. Current technology cannot control emissions at such high distances as well as when the vehicle is new ;
- terms of reference of the Auto-Oil 2 programme. At this stage it is premature to change them. In any case, the Auto/Oil II Programme remains the responsibility of the Commission.

Recital 4b (new)

Current Proposal

Altered Proposal

Whereas an adequate legislative and fiscal framework should be created as soon as possible to accelerate the introduction onto the market of vehicles with innovative propulsion technologies and vehicles which use alternative fuels with a low environmental impact; whereas the introduction of vehicles using alternative fuels such as natural gas produces a significant improvement in the quality of city air;

Recital 4c (new)

Current proposal

Altered Proposal

Whereas, in order to help resolve the problem of atmospheric pollution, it is necessary to step in with a global strategy, encompassing the technological, management and fiscal aspects, for the development of sustainable mobility, taking into account the specific characteristics of the various European urban areas;

Recital 5

Current Proposal

Whereas the Commission has implemented a European programme on air quality, road traffic emissions, fuels and engines technologies (the Auto/Oil programme) with a view to fulfilling the requirements of this Article 4 of Directive 94/12/EC; whereas the European car and oil industries have carried out the European Programme on Engines Fuels and Emissions (EPEFE) to determine the contribution which can be made both by future vehicles and the fuels which propel them; whereas the Auto/Oil and EPEFE programmes strove for ensuring that proposals for Directives on polluting emissions seek the best solutions for both the citizen and for the economy; whereas a cost/effectiveness study within the Auto/Oil programme has shown that a further improvement of car emission technology was necessary with a view to achieving air quality in year 2010 as described in the Communication by the Commission on the Auto/Oil Programme;

Altered Proposal

Whereas the Commission has implemented a European programme on air quality, road traffic emissions, fuels and engines technologies (the Auto/Oil programme) with a view to fulfilling the requirements of this Article 4 of Directive 94/12/EC; whereas the Commission has implemented the APHEA Project which estimates the external costs of air pollution by motor vehicles at 0.4% of EU GDP, and further assessments conclude that the external costs amount to 3% of EU GDP, and whereas however the cost-effectiveness approach outlined in Article 4 of Directive 94/12/EC did not require to take into account a precise assessment of medical impact costs; whereas the Commission has implemented the 'Car of Tomorrow' Action Plan which strives to contribute to the promotion of the 'Car of Tomorrow' which will be clean, safe, energy-efficient and 'intelligent'; whereas this action plan reinforces Community action promoting R&D leading to clean cars and whereas neither the R&D efforts undertaken in the framework of the 'Car of Tomorrow' Action Plan nor EU competitiveness in automobile R&D should be jeopardised; whereas the European car and oil industries have carried out the European Programme on Engines Fuels and Emission (EPEFE) to determine the contribution which can be made both by future vehicles and the fuels which propel them; whereas the Auto/Oil and EPEFE programmes strove to ensure that proposals for directives on polluting emissions seek the best solutions for both the citizen and the economy; whereas it has become clear that a further improvement of car emission technology is necessary with a view to achieving air quality in year 2010 as described in the Communication by the Commission on the Auto/Oil Programme;

Recital 9

Current Proposal

Whereas new provisions for on-board diagnostics (OBD) should be introduced with a view to permitting an immediate detection of a failure of anti-pollution vehicle equipment and thus allowing a significant up-grading of the maintenance of initial emissions performances on in-use vehicles through periodical or kerbside control; whereas, however, OBD are at a less developed stage for diesel vehicles and can be fitted on such vehicles as an option.

Altered Proposal

Whereas new provisions for on-board diagnostics (OBD) should be introduced with a view to permitting an immediate detection of a failure of anti-pollution vehicle equipment and thus allowing a significant up-grading of the maintenance of initial emissions performances on in-use vehicles through periodical or kerbside control; whereas in order that the Member States may ensure that vehicle owners meet their obligation to repair faults once they have been indicated, the distance travelled since a fault occurs shall be recorded;

Recital 13

Current Proposal

Whereas Member States should be allowed to encourage, by means of tax incentives, the introduction of vehicles which satisfy the improved requirements of this Directive.

Altered Proposal

Whereas Member States should be allowed to encourage, by means of tax incentives, the introduction of vehicles which satisfy in advance the emission limit values set out for 2000 and 2005; whereas such incentives may be introduced by the individual Member States provided that they do not produce distortions in the single market;

Recital 15b (new)

Current Proposal

Altered Proposal

Whereas Member States should take measures to encourage faster progress towards replacing existing vehicles with low-emission vehicles;

ARTICLE 1(3)

Article 12, new subparagraph (Directive 70/156/EEC)

Current Proposal

All decisions taken pursuant to the provisions adopted in implementation of this directive and adopting planned measures to restore the conformity of vehicles in service, shall state in detail the reasons on which they are based. The competent authorities of each Member State which decide to initiate the planned measures shall notify the party concerned who shall, at the same time, be informed of the remedies available to him under the laws in force in the Member States and of the time limits allowed for the exercise of such remedies.

Altered Proposal

All decisions taken pursuant to the provisions adopted in implementation of this directive and adopting planned measures to restore the conformity of vehicles in service, shall state the reasons on which they are based. The competent authorities of each Member State which decide to initiate the planned measures shall notify the party concerned who shall, at the same time, be informed of the remedies available to him under the laws in force in the Member States and of the time limits allowed for the exercise of such remedies.

ANNEX (1), indent 3, List of annexes (directive 70/220/EEC)

Current Proposal

Annex X: Control of compliance of vehicles in service

Altered Proposal

Annex X: Control of compliance of vehicles in service

Appendix I: Selection of test vehicles and failure criteria

ANNEX (18) indent 2a (new)

Annex III, Appendix 1 (directive 70/220/EEC)

Current Proposal

Altered Proposal

- Sampling shall begin on initiation of the engine-start-up procedure

ANNEX (21)

Annex VI (4.3.1.3.) (directive 70/220/EEC)

Current Proposal

4.3.1.3. The repeatability of the analyser expressed as one standard deviation shall be better than 1% of full scale deflection at zero and at $80 \pm 20\%$ of full scale on all ranges used.

Altered Proposal

4.3.1.3. The repeatability of the analyser expressed as one standard deviation shall be better than 1 % of full scale deflection at zero and at $80 \pm 2\%$ of full scale on all ranges used.

ANNEX (21)

Annex VI (5.1.3.7.) (directive 70/220/EEC)

Current Proposal

5.1.3.7. Breakthrough may be checked as is described in Sections 5.1.6.1 and 5.1.6.2 of this Annex, or with the use of another sampling and analytical arrangement capable of detecting the emission of hydrocarbons from the canister at breakthrough.

Altered Proposal

5.1.3.7. Breakthrough may be checked as is described in Sections 5.1.5 and 5.1.6 of this Annex, or with the use of another sampling and analytical arrangement capable of detecting the emission of hydrocarbons from the canister at breakthrough.

ANNEX (21)

Annex VI (5.1.3.8.) (directive 70/220/EEC)

Current Proposal

5.1.3.8. Purge the canister with 25 ± 5 litres per litre of charcoal and per minute using the emission laboratory air until 300 bed volume exchanges are reached.

Altered Proposal

5.1.3.8. Purge the canister with 25 ± 5 litres per litre of charcoal and per minute with emission laboratory air until 300 bed volume exchanges are reached.

ANNEX (21)

Annex VI (5.1.5.6.) (directive 70/220/EEC)

Current Proposal

5.1.5.6. When the fuel temperature of the fuel tank reaches 293 K (20 °C) a linear heat build of 15 K (15 °C) begins. The fuel shall be heated in such a way that the temperature of the fuel during the heating shall conform to the function below to within ± 1.5 K. The elapsed time of the heat build and temperature rise is recorded.

$$T_r = T_o + 0.2333 \cdot t$$

where :

T_r = required temperature (K);

T_o = initial temperature (K);

t = time from start of the tank heat build in minutes.

Altered Proposal

5.1.5.6. When the fuel temperature reaches 293 K (20 °C) a linear heat build of 15 K (15 °C) begins. The fuel shall be heated in such a way that the temperature of the fuel during the heating shall conform to the function below to within ± 1.5 K. The elapsed time of the heat build and temperature rise is recorded.

$$T_r = T_o + 0.2333 \cdot t$$

where :

T_r = required temperature (K);

T_o = initial temperature (K);

t = time from start of the tank heat build in minutes.

ANNEX (21)

Annex VI (5.1.5.7.) (directive 70/220/EEC)

Current Proposal

5.1.5.7. As soon as breakthrough occurs or when the fuel temperature reaches 308 K (35 °C), whichever occurs first, the heat source shall be turned off, the enclosure doors shall be unsealed and opened, and the vehicle fuel tank cap(s) shall be removed. If breakthrough has not occurred by the time the fuel temperature reaches 308 K (35 °C), the heat source shall be removed from the vehicle, the vehicle shall be removed from the evaporative emission enclosure and the entire procedure outlined in Section 5.1.7. shall be repeated until breakthrough occurs.

Altered Proposal

5.1.5.7. As soon as breakthrough occurs or when the fuel temperature reaches 308 K (35 °C), whichever occurs first, the heat source shall be turned off, the enclosure doors shall be unbolted and opened, the vehicle fuel tank cap(s) shall be removed, the vehicle shall be removed from the enclosure for the preconditioning driving cycle laid down in 5.2. If breakthrough has not occurred by the time the fuel temperature reaches 308 K (35 °C), the heat source shall be removed from the vehicle, the vehicle shall be removed from the evaporative emission enclosure and the entire procedure outlined in Section 5.1.7. shall be repeated until breakthrough occurs.

ANNEX (22)

Annex VI, appendix 1 (2.3.) Title (directive 70/220/EEC)

Current Proposal

Calibration and hydrocarbon retention test of the chamber

Altered Proposal

Calibration and leak test of the chamber

Annex (25)

Annex X (5.4.) (directive 70/220/EEC)

Current Proposal

Diagnosis and restorative maintenance
5.4. Diagnosis and restorative maintenance will be performed on vehicles accepted for testing, prior to in service survey testing, according to Sections 5.4.1 - 5.4.8.

Altered Proposal

Diagnosis and maintenance
5.4. Diagnosis and maintenance will be performed on vehicles accepted for testing, prior to in service survey testing, according to Sections 5.4.1 - 5.4.8.

ANNEX (25)

Annex X (5.4.7.) (directive 70/220/EEC)

Current Proposal

5.4.7. If the vehicle is [before]within 800 km of a scheduled maintenance service, that maintenance will be performed according to the manufacturer's service instructions. Regardless of odometer reading, change of oil and air filter may be performed at the request of the manufacturer.

Altered Proposal

5.4.7. If the vehicle is [i.e. less than]within 3000 km of a scheduled maintenance service, that maintenance will be performed according to the manufacturer's service instructions. Regardless of odometer reading, change of oil and air filter may be performed at the request of the manufacturer.

ANNEX (25)

Annex X (6.4.5.) (directive 70/220/EEC)

Current Proposal

6.4.5. A description of the procedure to be followed by vehicle owner to obtain correction of the non-compliance. This shall include a date after which when the non-compliance may be remedied, the estimated time for the workshop to perform the remedy, and where the remedy can be done. The repair shall be done expediently, within a reasonable time after delivery of the vehicle.

Altered Proposal

6.4.5. A description of the procedure to be followed by the vehicle owner to obtain correction of the non-compliance. This shall include a date after which when the non-compliance may be remedied, the estimated time for the workshop to perform the remedy, and where the remedy can be done. The repair shall be done expediently, within a reasonable time after delivery of the vehicle. The information supplied to the vehicle owner must make it clear that there will be no charge to him.

ANNEX (25)

Annex X (6.6a.) (new) (directive 70/220/EEC)

Current Proposal

Altered Proposal

6.6a. The repair and/or modification or addition of new equipment shall be recorded in the vehicle's documents

ANNEX (26)

Annex XI (5.3.1.) (directive 70/220/EEC)

Current Proposal

Altered Proposal

5.3.1. The tests are carried out on the vehicle used for the Type V durability test, given in Annex VII, and using the test procedure in Appendix I to this Annex. Tests are carried out at the conclusion of the Type V durability testing. When no Type V durability testing is carried out, or at the request of the manufacturer, a suitably aged and representative vehicle may be used for these OBD demonstration tests.

5.3.1. The tests are carried out using the test procedure in Appendix I to this Annex. A suitably aged (up to 80,000 km) and representative vehicle supplied by the manufacturer may be used for these OBD demonstration tests.

ANNEX (26)
Annex XI (5.6.) (directive 70/220/EEC)

Current Proposal

5.6. Fault code storage.

The OBD system shall record code(s) indicating the status of the emission control system. Separate status codes shall be used to identify correctly functioning emission control systems and those emission control systems which need further vehicle operation to be fully evaluated. Fault codes that cause MI activation due to deterioration or malfunction or permanent emission default modes of operation shall be stored and that fault code shall identify the type of malfunction.

Altered Proposal

5.6. Fault code storage.

The OBD system shall record code(s) indicating the status of the emission control system. Separate status codes shall be used to identify correctly functioning emission control systems and those emission control systems which need further vehicle operation to be fully evaluated. Fault codes that cause MI activation due to deterioration or malfunction or permanent emission default modes of operation shall be stored and that fault code shall identify the type of malfunction. The distance travelled by the vehicle since a fault code is stored shall be available through the serial port on the standard data link connector⁽¹⁾

ANNEX (26)
Annex XI, appendix 1 (6.5.3.5.) (directive 70/220/EEC)

Current Proposal

6.5.3.5. The connection interface between the vehicle and the diagnostic tester shall meet the all requirements of SAE J1962 "Diagnostic Connector, June 1992" (ISO XXX-A "Road vehicles - Diagnostic systems - On-board connector"). The installation position shall be subject to agreement of the approval authority such that it is readily accessible by service personnel but protected from tampering by non-qualified personnel.

Altered Proposal

6.5.3.5. The diagnostic connector on the vehicle shall meet all the requirements of ISO 15031-3 "Road vehicles - Diagnostic systems - On-board connector". The installation position shall be subject to agreement of the approval authority such that it is readily accessible by service personnel but protected from tampering by non-qualified personnel.

⁽¹⁾ This requirement is applicable only to vehicles with an electronic speed signal to the engine management systems. It shall apply to all vehicles from 1/1/2005.

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