Proposal for a Council Directive amending Directive 77/143/EEC on the approximation of the laws of the Member States relating to roadworthiness tests for motor vehicles and their trailers (Exhaust emissions)

(91/C 189/17)

COM(91) 244 final

(Submitted by the Commission on 12 July 1991)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular Article 75 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas Council Directive 77/143/EEC (1), as amended by Directive 88/449/EEC (2), provides for the regular roadworthiness testing of certain road vehicles only (buses, heavy and light goods vehicles, heavy trailers and semi-trailers, taxis and ambulances) but not yet for passenger cars;

Whereas through Council Directive 91/225/EEC (3) it is the intention to establish procedures for the announcement of separate directives for testing the standard of the items listed in Annex II of the above Directives;

Whereas through the above Directive it is also the intention to establish a Technical Committee which gives the Commission the mandate to adopt measures in order to adjust the technical requirements to progress;

Whereas by this Directive it is the intention to maintain the exhaust emission of vehicles at a low level during their useful life by means of a periodical exhaust emission test and ensure that vehicles which are gross polluters are removed from service until they are correctly maintained;

Whereas most Member States have adopted procedures for testing heavy commercial vehicles with regard to the opacity of their exhaust smoke;

Whereas several Member States have national rules for testing the gaseous emissions from lighter vehicles including passenger cars;

Whereas assessment of the type-approval testing for gaseous emissions and diesel smoke for all vehicle types shows that the reproduction of those testing procedures within the roadworthiness test is not realistic;

Whereas standards that are dictated for in-service testing should focus on the maintenance condition of the vehicle, and thereby its ability to meet type-approval performance criteria, during a relatively simple, quick and inexpensive test;

Whereas wrong tuning of the engine and insufficient maintenance are detrimental to the engine and to the environment through increases in pollution and fuel consumption;

Whereas, as far as diesel engines (compression ignition) are concerned, measurement of the opacity of the exhaust emissions is considered a sufficient indicator of the condition of the vehicles emission control system;

Whereas for conventional petrol engines (spark ignition) the measurement of the vehicles' tailpipe emissions of carbon monoxide taken at engine idle speed is considered to give a sufficient indication of the vehicle's maintenance condition;

Whereas it is expected that the failure rate of the above vehicles relating to exhaust emissions could be high if the vehicle has not been subjected to routine maintenance;

Whereas, for petrol-engined vehicles where the type-approval requirements necessitate that they be equipped with advanced emission control systems such as closed-loop, 3-way catalytic converters which are lambda-probe controlled, the standard for in-service emission testing will be more severe than for conventional vehicles;

Whereas it is the intention to adapt this Directive to take account of future developments on the provision of vehicle construction measures which facilitate in-service inspection and advances in testing methodology designed to better reflect conditions in service,

(1) OJ No L 47, 18. 2. 1977, p. 47.
(2) OJ No L 222, 12. 8. 1988, p. 10.
(3) OJ No L 103, 23. 4. 1991, p. 3.

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. Subparagraph 8.2 of Annex II to Directive 77/143/EEC as amended by Directive 88/449/EEC which concerns exhaust emissions is hereby replaced by the following:

'8.2. Exhaust emissions

8.2.1. Motor vehicles equipped with spark ignition (petrol) engines

(a) Where the exhaust emissions are not governed by an advanced emission control system such as a closed-loop 3-way catalytic converter which is lambda-probe controlled.

1. Visual inspection of the exhaust system in order to check that there are no leakages;

2. Visual inspection of the emission control system if applicable in order to check that the necessary equipment is present.

After a reasonable period of engine conditioning commensurate with the vehicle manufacturer's recommendations the carbon monoxide (CO) content of the exhaust gases will be measured at engine idle speed (no load).

The maximum allowable content of CO in the exhaust gases shall be that which is stated by the vehicle manufacturer and recorded at the time of initial type approval with a tolerance of 0,5 vol %. Where this data is not available or where Member States' testing authorities decide not to use this data as a reference value then the exhaust gas content of CO must not be greater than the following:

— CO — 4,5 vol % for vehicles manufactured prior to October 1986 or the date on which Member States required the vehicles at first registration to comply with Directive 70/220/EEC (1) as amended by the consolidated emissions Directive (2),

— CO — 3,5 vol % for vehicles manufactured after 1 October 1986.

Vehicles manufactured prior to 1 January 1970 are exempted from these requirements.

(b) Where the exhaust emissions are governed by an advanced emission control system such as a closed-loop 3-way catalytic converter which is lambda-probe controlled or where the vehicles' exhaust emissions are governed by some other method in order to comply with the provisions of Directive 70/220/EEC, as amended by the consolidated emissions Directive.

1. Visual inspection of the exhaust system in order to check that there are no leakages and that all parts are complete.

2. Visual inspection of the emission control system in order to verify that the necessary equipment is present.

3. Determination of the efficiency of the vehicle's emission control system by measuring the lambda value and the CO content of the exhaust gases according to point 4 below or according to the manufacturer's optional procedures as recorded at the time of initial type approval. The vehicle shall undergo a period of engine conditioning commensurate with the vehicle manufacturer's recommendations for each of the tests.

4. Tail pipe emissions — limit values

— Measurement at engine idle speed:

The maximum allowable content in the exhaust gases of CO shall be that which is stated by the vehicle manufacturer and recorded at the time of initial type approval. Where this data is not available then the CO limit of 0,5 vol % should not be exceeded.

— Measurement at increased idling speed without engine load, engine speed to be at least 2 000 r. p. m:

CO-content: no greater than 0,3 vol %,

lambda: 1 ± 0,03 or in accordance with the manufacturer's specifications.

(1) OJ No L 76, 9. 4. 1970.

(2) Doc. 4102/91, adopted by the Council on 4 March 1991.

8.2.2. Motor vehicles equipped with compression ignition (diesel engines)

Measurement of exhaust gas opacity upon revving the engine with transmission in neutral (no load), i.e. the engine is accelerated from idling speed up to cut-off speed. The level of opacity shall be no more than that which is stated by the vehicle manufacturer and recorded on the vehicle at the time of initial type approval with a tolerance of 0,5 m^{-1}. Where this data is not available or where Member States' testing authorities decide not to use this value as a reference then the following limit values should not be exceeded:

maximum coefficient of absorption for:

— naturally aspirated diesel engines = 2,5 m^{-1},

— turbo-charged diesel engines = 3,0 m^{-1}.

Vehicles manufactured prior to 1 January 1970 are exempted from these requirements.

8.2.3. Test equipment

The testing of both petrol-engined and diesel-engined vehicles will require the use of equipment capable of accurately testing vehicles against the prescribed or stated limit values.'

Article 2

1. Member States shall take the measures necessary to comply with this Directive before 1 January 1993. They shall forthwith inform the Commission thereof.

2. When the Member States adopt the provisions referred to in paragraph 1, these shall contain a reference to this Directive or shall be accompanied by such a reference at the time of their official publication. The form of this reference shall be decided by the Member States.

3. Member States shall communicate to the Commission the provisions of national law which they adopt in the field governed by this Directive.

Article 3

This Directive is addressed to the Member States.