

ANNEX XV

IN-SERVICE CONFORMITY OF VEHICLES TYPE-
APPROVED UNDER DIRECTIVE 70/220/EEC

1. CONFORMITY OF IN-SERVICE VEHICLES

- 1.1. An audit of in-service conformity shall be conducted by the approval authority on the basis of any relevant information in possession of the manufacturer, under procedures similar to those defined in Article 10(1) and (2) and in points 1 and 2 of Annex X to Directive 70/156/EEC.
- 1.2. The Figure referred to under point 4 of Appendix 2 to this Annex and Figure 4/2 of Appendix 4 to UN/ECE Regulation 83 illustrate the procedure for in-service conformity checking.
- 1.3. Parameters defining the in-service family

The in-service family may be defined by basic design parameters which shall be common to vehicles within the family. Accordingly, those vehicle types which have in common, or within the stated tolerances, at least the parameters set out in points 1.3.1 to 1.3.11, can be considered as belonging to the same in-service family.

- 1.3.1. combustion process (two stroke, four stroke, rotary).
- 1.3.2. number of cylinders.
- 1.3.3. configuration of the cylinder block (in-line, V, radial, horizontally opposed, other). The inclination or orientation of the cylinders is not a criteria).
- 1.3.4. method of engine fuelling (e.g. indirect or direct injection).
- 1.3.5. type of cooling system (air, water, oil).
- 1.3.6. method of aspiration (naturally aspirated, pressure charged).
- 1.3.7. fuel for which the engine is designed (petrol, diesel, NG, LPG, etc.). Bi fuelled vehicles may be grouped with dedicated fuel vehicles providing one of the fuels is common.
- 1.3.8. type of catalytic converter (three-way catalyst or other(s)).
- 1.3.9. type of particulate trap (with or without).
- 1.3.10. exhaust gas recirculation (with or without).
- 1.3.11. engine cylinder capacity of the largest engine within the family minus 30 %.
- 1.4. An audit of in-service conformity shall be conducted by the approval authority on the basis of information supplied by the manufacturer. Such information shall include, but is not limited to, the following:
 - 1.4.1. the name and address of the manufacturer;
 - 1.4.2. the name, address, telephone and fax numbers and e-mail address of his authorised representative within the areas covered by the manufacturer's information;
 - 1.4.3. the model name(s) of the vehicles included in the manufacturer's information;
 - 1.4.4. where appropriate, the list of vehicle types covered within the manufacturer's information, i.e. the in-service family group in accordance with section 1.3;

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- 1.4.5. the vehicle identification number (VIN) codes applicable to these vehicle types within the in-service family (VIN prefix);
- 1.4.6. the numbers of the type-approvals applicable to these vehicle types within the in-service family, including, where applicable, the numbers of all extensions and field fixes/recalls (re-works);
- 1.4.7. details of extensions, field fixes/recalls to those type-approvals for the vehicles covered within the manufacturer's information (if requested by the approval authority);
- 1.4.8. the period of time over which the manufacturer's information was collected;
- 1.4.9. the vehicle build period covered within the manufacturer's information (e.g. vehicles manufactured during the 2001 calendar year);
- 1.4.10. the manufacturer's in-service conformity checking procedure, including:
 - (a) vehicle location method;
 - (b) vehicle selection and rejection criteria;
 - (c) test types and procedures used for the programme;
 - (d) the manufacturer's acceptance/rejection criteria for the in-service family group;
 - (e) geographical area(s) within which the manufacturer has collected information;
 - (f) sample size and sampling plan used;
- 1.4.11. the results from the manufacturer's in-service conformity procedure, including:
 - (a) identification of the vehicles included in the programme (whether tested or not). That identification shall include:
 - model name,
 - vehicle identification number (VIN),
 - vehicle registration number,
 - date of manufacture,
 - region of use (where known),
 - tyres fitted,
 - (b) the reason(s) for rejecting a vehicle from the sample;
 - (c) service history for each vehicle in the sample (including any re-works);
 - (d) repair history for each vehicle in the sample (where known);
 - (e) test data, including:
 - date of test,
 - location of test,
 - distance indicated on vehicle odometer,
 - test fuel specifications (e.g. test reference fuel or market fuel),
 - test conditions (temperature, humidity, dynamometer inertia weight),
 - dynamometer settings (e.g. power setting),
 - test results (from at least three different vehicles per family),

1.4.12. records of indication from the OBD system.

2. The information gathered by the manufacturer shall be sufficiently comprehensive to ensure that in-service performance can be assessed for normal conditions of use as defined in section 1 and in a way representative of the manufacturer's geographic penetration.

For the purpose of this Regulation, the manufacturer shall not be obliged to carry out an audit of in-service conformity for a vehicle type if he can demonstrate to the satisfaction of the approval authority that the annual sales of that vehicle type in the Community are less than 5 000 per annum.

3. On the basis of the audit referred to in Section 1.2 the approval authority shall adopt one of the following decisions and actions:
 - (a) decide that the in-service conformity of a vehicle type or a vehicle in-service family is satisfactory and not take any further action;
 - (b) decide that the data provided by the manufacturer is insufficient to reach a decision and request additional information or test data from the manufacturer;
 - (c) decide that the in-service conformity of a vehicle type, that is part of an in-service family, is unsatisfactory and proceed to have such vehicle type tested in accordance with Appendix 1 to Annex I.

Where the manufacturer has been permitted not to carry out an audit for a particular vehicle type in accordance with Section 2, the approval authority may proceed to have such vehicle types tested in accordance with Appendix 1 to Annex I.

- 3.1. Where type 1 tests are considered necessary to check the conformity of emission control devices with the requirements for their performance while in service, such tests shall be carried out using a test procedure meeting the statistical criteria defined in Appendix 2 to this Annex.
- 3.2. The approval authority, in cooperation with the manufacturer, shall select a sample of vehicles with sufficient mileage whose use under normal conditions can be reasonably assured. The manufacturer shall be consulted on the choice of the vehicles in the sample and be allowed to attend the confirmatory checks of the vehicles.
- 3.3. The manufacturer shall be authorized, under the supervision of the approval authority, to carry out checks, even of a destructive nature, on those vehicles with emission levels in excess of the limit values with a view to establishing possible causes of deterioration which cannot be attributed to the manufacturer himself. Where the results of the checks confirm such causes, those test results are excluded from the conformity check.
- 3.4. Where the approval authority is not satisfied with the results of the tests in accordance with the criteria defined in Appendix 2, the remedial measures referred to in Article 11(2) and in Annex X to Directive 70/156/EEC are extended to vehicles in service belonging to the same vehicle type which are likely to be affected with the same defects in accordance with section 6 of Appendix 1.

The plan of remedial measures presented by the manufacturer shall be approved by the approval authority. The manufacturer is responsible for the execution of the remedial plan as approved.

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The approval authority shall notify its decision to all Member States within 30 days. The Member States may require that the same plan of remedial measures be applied to all vehicles of the same type registered in their territory.

- 3.5. If a Member State has established that a vehicle type does not conform to the applicable requirements of Appendix 1 to this Annex, it shall notify without delay the Member State which granted the original type-approval in accordance with the requirements of Article 11(3) of Directive 70/156/EEC.

After that notification and subject to the provision of Article 11(6) of Directive 70/156/EEC, the competent authority of the Member State which granted the original type-approval shall inform the manufacturer that a vehicle type fails to satisfy the requirements of these provisions and that certain measures are expected of the manufacturer. The manufacturer shall submit to the authority, within two months after this notification, a plan of measures to overcome the defects, the substance of which should correspond to the requirements of sections 6.1 to 6.8 of Appendix 1. The competent authority which granted the original type-approval shall, within two months, consult the manufacturer in order to secure agreement on a plan of measures and on carrying out the plan. If the competent authority which granted the original type-approval establishes that no agreement can be reached, the procedure pursuant to Article 11(3) and (4) of Directive 70/156/EEC shall be initiated.

Appendix 1

In-service conformity check

1. INTRODUCTION

This Appendix sets out the criteria for the in-service conformity control of vehicles type-approved under Directive 70/220/EEC.

2. SELECTION CRITERIA

The criteria for acceptance of a selected vehicle are defined in sections 2.1 to 2.8. Information shall be collected by the approval authority by vehicle examination and an interview with the owner/driver.

- 2.1. The vehicle shall belong to a vehicle type that is type-approved under Directive 70/220/EEC and covered by a certificate of conformity in accordance with Directive 70/156/EEC. The vehicle shall be registered and used in the European Community.
- 2.2. The vehicle shall have been in service for at least 15 000 km or 6 months, whichever is the later, and for no more than 100 000 km or 5 years, whichever is the sooner.
- 2.3. There shall be a maintenance record to show that the vehicle has been properly maintained, e. g. has been serviced in accordance with the manufacturer's recommendations.
- 2.4. The vehicle shall exhibit no indications of abuse (e. g. racing, overloading, misfuelling, or other misuse), or other factors (e. g. tampering) that could affect emission performance. In the case of vehicles fitted with an OBD system, the fault code and mileage information stored in the computer are taken into account. A vehicle shall not be selected for testing if the information stored in the computer shows that the vehicle has operated after a fault code was stored and a relatively prompt repair was not carried out.
- 2.5. There shall have been no unauthorized major repair to the engine or major repair of the vehicle.
- 2.6. The lead content and sulphur content of a fuel sample from the vehicle tank shall meet the applicable standards laid down in Directive 98/70/EC of the European Parliament and of the Council⁽¹⁾ and there shall be no evidence of misfuelling. Checks may be done in the tailpipe etc.
- 2.7. There shall be no indication of any problem that might jeopardize the safety of laboratory personnel.
- 2.8. All anti-pollution system components on the vehicle shall be in conformity with the applicable type-approval.

3. DIAGNOSIS AND MAINTENANCE

Diagnosis and any normal maintenance necessary shall be performed on vehicles accepted for testing, prior to measuring exhaust emissions, in accordance with the procedure laid down in section 3.1 to 3.7.

- 3.1. The following checks shall be carried out: checks on air filter, all drive belts, all fluid levels, radiator cap, all vacuum hoses and electrical wiring related to the antipollution

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system for integrity; checks on ignition, fuel metering and pollution control device components for maladjustments and/or tampering. All discrepancies shall be recorded.

- 3.2. The OBD system shall be checked for proper functioning. Any malfunction indications in the OBD memory shall be recorded and the requisite repairs shall be carried out. If the OBD malfunction indicator registers a malfunction during a preconditioning cycle, the fault may be identified and repaired. The test may be re-run and the results of that repaired vehicle used.
- 3.3. The ignition system shall be checked and defective components replaced, for example spark plugs, cables, etc.
- 3.4. The compression shall be checked. If the result is unsatisfactory the vehicle shall be rejected.
- 3.5. The engine parameters shall be checked to the manufacturer's specifications and adjusted if necessary.
- 3.6. If the vehicle is within 800 km of a scheduled maintenance service, that service shall be performed according to the manufacturer's instructions. Regardless of odometer reading, the oil and air filter may be changed at the request of the manufacturer.
- 3.7. Upon acceptance of the vehicle, the fuel shall be replaced with appropriate emission test reference fuel, unless the manufacturer accepts the use of market fuel.

4. IN-SERVICE TESTING

- 4.1. When a check on vehicles is deemed necessary, emission tests in accordance with Annex III to Directive 70/220/EEC shall be performed on pre-conditioned vehicles selected in accordance with the requirements of sections 2 and 3 of this Appendix.
- 4.2. Vehicles equipped with an OBD system may be checked for proper in-service functionality of the malfunction indication, etc., in relation to levels of emissions (e.g. the malfunction indication limits defined in Annex XI to Directive 70/220/EEC) for the type-approved specifications.
- 4.3. The OBD system may be checked, for example, for levels of emissions above the applicable limit values with no malfunction indication, systematic erroneous activation of the malfunction indication and identified faulty or deteriorated components in the OBD system.
- 4.4. If a component or system operates in a manner not covered by the particulars in the type-approval certificate and/or information package for such vehicle types and such deviation has not been authorized under Article 5(3) or (4) of Directive 70/156/EEC, with no malfunction indication by the OBD, the component or system shall not be replaced prior to emission testing, unless it is determined that the component or system has been tampered with or abused in such a manner that the OBD does not detect the resulting malfunction.

5. EVALUATION OF RESULTS

- 5.1. The test results are submitted to the evaluation procedure in accordance with Appendix 2 to this Annex.
- 5.2. Test results shall not be multiplied by deterioration factors.

6. PLAN OF REMEDIAL MEASURES

- 6.1. The approval authority shall request the manufacturer to submit a plan of remedial measures to remedy the non-compliance when more than one vehicle is found to be an outlying emitter that meets either of the following conditions:
 - (a) meets the conditions set out in section 3.2.3 of Appendix 4 to UN/ECE Regulation 83 and both the type-approval authority and the manufacturer agree that the excess emission is due to the same cause, or
 - (b) meets the conditions set out in section 3.2.4 of Appendix 4 to UN/ECE Regulation 83 and the type-approval authority has determined that the excess emission is due to the same cause.
- 6.2. The plan of remedial measures shall be filed with the approval authority not later than 60 working days from the date of the notification referred to in section 6.1. The approval authority shall within 30 working days declare its approval or disapproval of the plan of remedial measures. However, where the manufacturer can demonstrate, to the satisfaction of the competent approval authority, that further time is required to investigate the non-compliance in order to submit a plan of remedial measures, an extension is granted.
- 6.3. The remedial measures shall apply to all vehicles likely to be affected by the same defect. The need to amend the type-approval documents shall be assessed.
- 6.4. The manufacturer shall provide a copy of all communications related to the plan of remedial measures, and shall also maintain a record of the recall campaign, and supply regular status reports to the approval authority.
- 6.5. The plan of remedial measures shall include the requirements set out in points 6.5.1 to 6.5.11. The manufacturer shall assign a unique identifying name or number to the plan of remedial measures.
 - 6.5.1. A description of each vehicle type included in the plan of remedial measures.
 - 6.5.2. A description of the specific modifications, alterations, repairs, corrections, adjustments, or other changes to be made to bring the vehicles into conformity including a brief summary of the data and technical studies which support the manufacturer's decision as to the particular measures to be taken to correct the non-conformity.
 - 6.5.3. A description of the method by which the manufacturer informs the vehicle owners.
 - 6.5.4. A description of the proper maintenance or use, if any, which the manufacturer stipulates as a condition of eligibility for repair under the plan of remedial measures, and an explanation of the manufacturer's reasons for imposing any such condition. No maintenance or use conditions may be imposed unless it is demonstrably related to the non-conformity and the remedial measures.
 - 6.5.5. A description of the procedure to be followed by vehicle owners to obtain correction of the non-conformity. This shall include a date after which the remedial measures may be taken, the estimated time for the workshop to perform the repairs and where they can be done. The repair shall be done expeditiously, within a reasonable time after delivery of the vehicle.
 - 6.5.6. A copy of the information transmitted to the vehicle owner.

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- 6.5.7. A brief description of the system which the manufacturer uses to assure an adequate supply of component or systems for fulfilling the remedial action. It shall be indicated when there will be an adequate supply of components or systems to initiate the campaign.
- 6.5.8. A copy of all instructions to be sent to those persons who are to perform the repair.
- 6.5.9. A description of the impact of the proposed remedial measures on the emissions, fuel consumption, driveability, and safety of each vehicle type, covered by the plan of remedial measures with data, technical studies, etc. which support these conclusions.
- 6.5.10. Any other information, reports or data the approval authority may reasonably determine is necessary to evaluate the plan of remedial measures.
- 6.5.11. Where the plan of remedial measures includes a recall, a description of the method for recording the repair shall be submitted to the approval authority. If a label is used, an example of it shall be submitted.
- 6.6. The manufacturer may be required to conduct reasonably designed and necessary tests on components and vehicles incorporating a proposed change, repair, or modification to demonstrate the effectiveness of the change, repair, or modification.
- 6.7. The manufacturer shall be responsible for keeping a record of every vehicle recalled and repaired and the workshop which performed the repair. The approval authority shall have access to the record on request for a period of 5 years from the implementation of the plan of remedial measures.
- 6.8. The repair and/or modification or addition of new equipment shall be recorded in a certificate supplied by the manufacturer to the vehicle owner.

Appendix 2

Statistical procedure for in-service conformity testing

1. This procedure shall be used to verify the in-service conformity requirements for the type 1 test. The applicable statistical method shall be the one set out in Appendix 4 to UN/ECE Regulation No 83, with the exceptions set out in sections 2, 3 and 4.
2. Footnote 1 shall not apply.
3. In paragraphs 3.2.3.2.1 and 3.2.4.2 of Appendix 4 to UN/ECE Regulation No 83, the reference to paragraph 6 of Appendix 3 shall be understood as reference to Section 6 of Appendix 1 to Annex XV to this Regulation.
4. In Figure 4/1. of Appendix 4 to UN/ECE Regulation No 83, the following shall apply:
 - (a) the references to paragraph 8.2.1 shall be understood as reference to Section 1.1 of Annex XV to this Regulation;
 - (b) the reference to Appendix 3 shall be understood as reference to Appendix 1 of Annex XV to this Regulation;
 - (c) footnote 1 shall be understood as follows: In this case, TAA means the approval authority that granted the type-approval according to Directive 70/220/EC.

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- (1) OJ L 350, 28.12.1998, p. 58.

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