

[<sup>F1</sup>ANNEX XI

## ON-BOARD DIAGNOSTICS (OBD) FOR MOTOR VEHICLES

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**Textual Amendments**

- F1** Inserted by [Directive 98/69/EC of the European Parliament and of the Council of 13 October 1998 relating to measures to be taken against air pollution by emissions from motor vehicles and amending Council Directive 70/220/EEC](#).

## 3. REQUIREMENTS AND TESTS

## 3.5. Activation of malfunction indicator (MI)

3.5.1. The OBD system must incorporate a malfunction indicator readily perceivable to the vehicle operator. The MI must not be used for any other purpose except to indicate emergency start-up or limp-home routines to the driver. The MI must be visible in all reasonable lighting conditions. When activated, it must display a symbol in conformity with ISO 2575<sup>(1)</sup>. A vehicle must not be equipped with more than one general purpose MI for emission-related problems. Separate specific purpose telltales (e. g. brake system, fasten seat belt, oil pressure, etc.) are permitted. The use of red for an MI is prohibited.

[<sup>F2</sup>3.5.2. For strategies requiring more than two preconditioning cycles for MI activation, the manufacturer must provide data and/or an engineering evaluation which adequately demonstrates that the monitoring system is equally effective and timely in detecting component deterioration. Strategies requiring on average more than 10 driving cycles for MI activation are not accepted. The MI must also activate whenever the engine control enters a permanent emission default mode of operation if the emission limits given in 3.3.2 are exceeded or if the OBD system is unable to fulfil the basic monitoring requirements specified in section 3.3.3 or section 3.3.4 of this Annex. The MI must operate in a distinct warning mode, e.g. a flashing light, under any period during which engine misfire occurs at a level likely to cause catalyst damage, as specified by the manufacturer. The MI must also activate when the vehicle's ignition is in the 'key-on' position before engine starting or cranking and de-activate after engine starting if no malfunction has previously been detected.]]

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**Textual Amendments**

- F2** Substituted by [Commission Directive 2002/80/EC of 3 October 2002 adapting to technical progress Council Directive 70/220/EEC relating to measures to be taken against air pollution by emissions from motor vehicles \(Text with EEA relevance\)](#).

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*Status: EU Directives are being published on this site to aid cross referencing from UK legislation. After IP completion day (31 December 2020 11pm) no further amendments will be applied to this version.*

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- (1) [<sup>F1</sup>International Standard ISO 2575-1982 (E), entitled ‘Road vehicles — Symbols for controls indicators and tell-tales’, Symbol Number 4.36.]

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