

WEIGHTS AND MEASURES

**The Measuring Instruments
(Liquid Fuel and Lubricants) Regulations
2006 (S.I. 2006 No. 1266), as amended by
The Measuring Instruments (Amendment)
Regulations 2010 (S.I. 2010 No. 2881)**

**The Measuring Equipment (Liquid Fuel
and Lubricants) Regulations 1995
(S.I. 1995 No. 1014), as amended**

Guidance on Regulation

February 2012

Version 1

Summary

This guidance covers all liquid fuel and lubricants measuring instruments in use for trade. **Part 1** of this document covers liquid fuel and lubricants measuring instruments covered by the Measuring Instruments Directive (MID) i.e. those put on the market on or after 1st October 2006. **Part 2** covers liquid fuel and lubricants measuring instruments under national control i.e. before the MID came into force and during the transitional period.

Nothing in this guidance should be construed as overriding, amending or deferring safety regulations and requirements issued by the Health and Safety Executive (in Northern Ireland the Health and Safety Executive for Northern Ireland), in connection with the conduct of persons and the condition and use of machinery and equipment on any premises.

The guidance is addressed to organisations that are required to comply with weights and measures law. Following the guidance is not in itself obligatory but, if you do follow it, this should help your organisation to meet its legal obligations.

Ultimately, only the courts can provide a definitive interpretation of the law. However, for further guidance on how to comply with the law, you can contact your local authority trading standards department, who provide this service free of charge:

<http://www.tradingstandards.gov.uk/advice/index.cfm> - simply type in your postcode and press "go".

This guidance complies with the Government Code of Practice on Guidance and will be reviewed in October 2016

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Revision History

Version number and date of change	Sections affected
Version 1	First issued February 2012 Updates existing guidance on 2006 MID Regulations (now Part 1) to comply with the BRE “Code of Practice on Guidance on Regulation” and has been expanded in Part 2 to cover the guidance on the Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995 (S.I. 1995 No. 1014), as amended

Part 1: The Measuring Instruments (Liquid Fuel and Lubricants) Regulations 2006 (SI 2006/1266), as amended by the Measuring Instruments (Amendment) Regulations 2010 (SI 2010/2881) [Pages 4 to 29]

Contents

- 1.1 Foreword
- 1.2 Background
- 1.3 Part I - Preliminary
 - Citation and commencement
 - Interpretation
 - Application
- 1.4 Part II - Placing on the market and putting into use of liquid fuel and lubricants measuring instruments
 - Requirements for placing on the market and putting into use
 - Compliance with the essential requirements
 - Conformity assessment procedures
 - Designation of United Kingdom notified bodies
 - Provisions supplemental to regulation 7
 - Fees
 - Marking and identification requirements
 - Conformity with other directives
- 1.5 Part III - Use for trade of liquid fuel and lubricants measuring instruments
 - Requirements for use for trade
 - Liquid fuel and lubricants measuring instruments to be set to zero
 - Manner of erection and installation
- 1.6 Part IV - Enforcement
 - Enforcement authority
 - Compliance notice procedure
 - Immediate enforcement action
 - Disqualification
 - Re-qualification
 - Testing of liquid fuel and lubricants measuring instruments
 - Unauthorised application of authorised marks
 - Powers of entry and inspection
 - Penalties for offences
- 1.7 Part V - Miscellaneous and supplemental
 - Electromagnetic compatibility
 - Adaptation for Northern Ireland

- Annex 1 Marking, inscriptions and stickers

- Annex 2 Quick reference guide for a fuel dispenser with standard 2 litre minimum delivery.

Part 1: The Measuring Instruments (Liquid Fuel and Lubricants) Regulations 2006 (SI 2006/1266), as amended by the Measuring Instruments (Amendment) Regulations 2010 (SI 2010/2881)

1.1 Foreword

1.1.1 The Measuring instruments (Liquid Fuel and Lubricants) Regulations 2006, SI 2006/1266, (“the Regulations”), as amended by the Measuring Instruments (Amendment) Regulations 2010, SI 2010/2881, (“the Amendment Regulations”) implement Council Directive 2004/22/EC (“the Directive”), as amended by Commission Directive 2009/137/EC¹ (“the Amendment Directive”), in relation to the class of liquid fuel and lubricants measuring instruments within the category of measuring systems for the continuous and dynamic measurement of quantities of liquids other than water (“liquid fuel and lubricants measuring instruments”). The Regulations, as amended, provide for the harmonisation of laws on liquid fuel and lubricant measuring instruments within Member States, thereby creating a single market for these instruments.

1.1.2 Separate measuring instrument regulations have been made to implement each of the instrument types prescribed in the UK under the Directive. They have been written so that for each type of instrument (measure) their field of application and in-service control mirror the scope of regulations made previously under the Weights and Measures Act 1985 and the Weights and Measures (Northern Ireland) Order 1981. A further regulation relates to instruments covered by the Directive, but not regulated within the UK². This regulation provides a means by which UK manufacturers can be permitted to undertake conformity assessment procedures on these instruments. This will allow them to export to other Member States where the particular instruments are regulated.

1.1.3 There is also a distinction between measures relating to the measuring instruments when they are first placed on the market or put into use (which are governed by the Directive, as amended,) and the in-service provisions which are derived from existing national provisions. The Regulations, as amended, therefore apply both at the point at which the instrument is placed on the market and in-service testing and subsequent repair and re-qualification.

1.1.4 This guidance covers the above Regulations and Amendment Regulations.

1.1.5 The Regulations came into force on 30 October 2006 after which date new designs of liquid fuel and lubricant measuring instruments placed on the market must comply with their provisions. The provisions of the Amendment Regulations must also be complied with from 1 June 2011 when they come into force. This guidance is intended to assist manufacturers, notified bodies and enforcement authorities in meeting the requirements of the Regulations.

1.1.6 There is significant input from WELMEC, the European Co-operation in Legal Metrology, to the understanding and interpretation of the Directive. WELMEC has already convened a number of working groups for this purpose,

¹ Commission Directive 2009/137/EC of the European Parliament and of the Council on measuring instruments in respect of exploitation of the maximum permissible errors, as regards the instrument-specific annexes MI-001 to MI-005

² The Measuring Instruments (Non-Prescribed Instruments) Regulations 2006 (S.I. 2006 No 1270) as amended by The Measuring Instruments (Amendment) Regulations 2006 (S.I. 2006 No 2625)

and the UK participates in WG10 on measuring equipment for liquids other than water. WELMEC considers questions of application and implementation, particularly in areas of technical uncertainty and acts as a forum for seeking advice from the European Commission on common issues. Document 8.15 is a guide for liquids other than water and documents 10.5 and 10.6 respectively relate to the marking of fuel dispensers and the sealing of fuel dispensers. Information regarding WELMEC and its decisions and publications can be found at www.welmec.org.

1.2 Background

1.2.1 The Directive is a “New Approach” Directive and was adopted by the EC Council of Ministers in April 2004. It consists of 27 Articles, 14 annexes and 10 instrument specific annexes and provides (subject to the transitional provisions) for the repeal of the earlier old approach Directives 71/319/EEC and 71/348/EEC on meters and ancillary equipment for liquids other than water. Member States were required to implement the provisions of the Directive into their national law by 30 April 2006 and to apply the new legislation with effect from 30 October 2006.

1.2.2 The Directive extends to all measuring instruments listed in Article 1 and provides that Member States may prescribe them for measuring tasks for reasons of public interest, public health, public safety, public order, protection of the environment, protection of consumers, levying of taxes and duties and fair trading where they consider it justified. Following a public consultation it was decided that the UK implementation should apply to areas covered by existing weights and measures Regulations only.

1.2.3 The Directive is the second "New Approach" Directive adopted in respect of measuring instruments. The first was Directive 2009/23/EC (formerly 90/384/EEC) (the Non-automatic Weighing Instruments - NAWI - Directive) and relates to non-automatic weighing instruments and came fully into force in January 2003.

1.2.4 The Commission has issued guidance on New Approach directives in “Guidance on the implementation of directives based on the New and Global Approach” which can be found at:

http://ec.europa.eu/enterprise/policies/single-market-goods/files/blue-guide/guidepublic_en.pdf

1.2.5 The principals of the Regulations are set out in the Commission Guidance as follows:

- Harmonisation is limited to essential requirements.
- Only products fulfilling the essential requirements may be placed on the market and put into service.
- Harmonised standards, the reference numbers of which have been published in the Official Journal and which have been transposed into national standards, are presumed to conform to the corresponding essential requirements.
- Normative documents drawn up by OIML and the list of the parts thereof corresponding to the essential requirements (in conformity with Article 16.1 of the Directive for which the Commission has published the references in the Official Journal.

- Application of harmonised standards or other technical specifications remain voluntary, and manufacturers are free to choose any technical solution that provides compliance with the essential requirements.
- Manufacturers may choose between different conformity assessment procedures provided for in the applicable directive.

1.2.6 The "New Approach" to Technical Harmonisation is an important part of the process for achieving the single market. It is intended to remove the technical barriers to trade caused by differing national laws. Directives agreed under the New Approach allow for the free movement (placing on the market and putting into service) in the Community of goods that conform to the essential and other requirements of those Directives. Such products carry the "CE marking" and no Member State is allowed to refuse complying products access to its market. In this case all compliant liquid fuel and lubricants measuring instruments covered by the Directive (as amended by the Amendment Directive) have free movement throughout the Community.

1.2.7 The Amendment Directive was agreed on 10 November 2009 and entered into force on 1 December 2009. Member States were required to implement the Amendment Directive into their national law by December 2010³ and to apply the new legislation with effect from June 2011.

1.2.8 Regulation 2 of the Amendment Regulations implements the Amendment Directive in respect of liquid fuel and lubricants measuring instruments by amending the essential requirements so as to explicitly prohibit systematic exploitation of these instruments.

1.2.9 In the Regulations, as amended, it is important to distinguish between when instruments are first placed on the market or put into use and requirements that relate to in-service provisions. The first are requirements of the Directive, as amended; the second are national provisions and will therefore apply only to Great Britain.

1.2.10 The Directive provides an 'optionality clause'. This means that Member States may prescribe the category and range of applications for measuring instruments they wish to control. This will lead to a variation between Member States which will mean that for the same use, instruments in some Member States will be regulated, whereas in other Member States they will not.

1.3 PART I

PRELIMINARY

1.3.1 The Regulations, as amended, have been made using powers in the European Communities Act 1972 and, in relation to Part III, the Weights and Measures Act 1985. The Regulations, as amended, also extend to Northern Ireland except for Part III. Separate in-service regulations for Northern Ireland are covered by the Measuring Instruments (Liquid Fuel and Lubricants) (Use for Trade) Regulations (Northern Ireland) 2007 (SR 2007/385).

Citation and commencement

Regulation 1

³ The Amendment Directive was implemented into UK law on 2 December 2010.

1.3.2 This gives the title of the Regulations and states the coming into force dates of 30 May 2006 for the regulations listed in 1(2) (essentially relating to the designation of notified bodies) and 30 October 2006 for the remaining regulations.

1.3.3 Regulation 1 of the Amendment Regulations gives the title and coming into force date of 1 June 2011 of the changes to the Regulations.

Interpretation

Regulation 2

1.3.4 The following definitions are important to an understanding of the Regulations.

Manufacturer - This term means a person responsible for the conformity of a liquid fuel and lubricants measuring instrument with these Regulations with a view to either placing it on the market under his own name or putting it into use for his own purposes, or both.

Authorised representative - The manufacturer may appoint any natural or legal person to act on his behalf as an authorised representative. The authorised representative must be established in a Member State. The authorised representative must be authorised by the manufacturer, in writing, to act on his behalf, and he may be addressed by the UK authorities instead of the manufacturer with regard the latter's obligations under the Regulations. The manufacturer remains generally responsible for actions carried out by an authorised representative on his behalf.

Approved verifier - This is a term used in Regulation 22 and means a person approved pursuant to section 11(A)(1) of the Weights and Measures Act 1985 (in Northern Ireland Article 9(3B) of the Weights and Measures (NI) Order 1981).

Inspector - This is a term used in Regulation 21, and is not defined in the Regulations. It means an inspector of weights and measures appointed under section 72(1) of the Weights and Measures Act 1985 (in Northern Ireland Article 40 of the Weights and Measures (NI) Order 1981).

Importer/person responsible for placing on the market - An importer (a person responsible for placing on the market), for the purposes of the Directive, is any natural or legal person established in the Community who places a product from a third country on the Community market. The importer must ensure that he is able to provide the market surveillance authority with the necessary information regarding the product, where the manufacturer is not established in the Community, and has no authorised representative in the Community. In line with Schedule 1 of the Interpretation Act 1978 a person includes a body of persons corporate or unincorporated in that it applies to both a natural or a legal person.

Meter – This term is derived from R117 and is NOT as colloquially used in the UK. Meter in these Regulations includes the measurement transducer, pulser, calculator and the indicator.

Notified Body means—

(a) the Secretary of State i.e. National Measurement Office (NMO) Services; or

(b) a United Kingdom notified body namely a person designated under Regulation 7; and

(c) for the purposes of regulations 4(1)(c), 19(1)(b), 21(1)(c) and 24(6), a person designated by another Member State who has been notified to the Commission and the other Member States pursuant to Article 11.1 of the Directive.

Installer

The installer and assembler of a product, which is already placed on the market, should take necessary measures to ensure that it still complies with the essential requirements at the moment of first use within the Community.

Minimum measured quantity

Minimum measured quantity is the same as 'minimum delivery' which is still an acceptable marking. Although the Directive allows flexibility the norm throughout Europe will be for a 2 litre minimum delivery for conventional retail fuel dispensers.

Application

Regulation 3

1.3.5 The Application is consistent with the part of the 1995 regulations covering measuring systems in use for trade making continuous and dynamic measurement of liquid fuel in a quantity equal to or less than 100 litres. This does not mean that measuring instruments must be limited to a maximum of 100 litres although there may be Health and Safety regulations which have additional requirements. However any measuring system which is used for making deliveries up to and including 100 litres are covered by these regulations even if they can also make deliveries greater than 100 litres. Measuring systems which never make deliveries of 100 litres or less are not within the scope of these regulations.

1.3.6 Schedule 1 defines a fuel dispenser as a measuring system intended for the refuelling of motor vehicles, small boats and small aircraft but the Directive does not qualify 'small'. This is not a problem as the quantity dispensed controls whether the system is prescribed or not. If the measuring system makes trade deliveries equal to or less than 100 litres or 100 kilograms, it is prescribed by these regulations. This is compatible with the typical deliveries made to small boats and small aircraft. If a fuel dispenser is for commercial aircraft or large vessels and only ever delivers quantities greater than 100 litres or 100 kilograms it is not covered by these regulations. NMO would advise operators of such equipment to label them clearly not to be used for deliveries below 100 litres or 100 kilograms.

1.3.7 Annex MI-005 of the Measuring Instruments Directive deals with measuring systems making continuous and dynamic measurement. Therefore instruments, such as paraffin dispensers, which only dispense preset quantities, remain within the scope of the 1995 regulations.

1.3.8 All weighing machines were prescribed by The Weights and Measures Regulations 1963 (in Northern Ireland the Weights and Measures Regulations (Northern Ireland) 1967 and this included any instruments indicating mass units such as mass flow instruments. Annex MI-005 of the Measuring Instruments Directive includes both mass and volume. To rationalize the situation and maintain the status quo these regulations cover measuring systems making continuous and dynamic measurement of liquid fuel in a quantity equal to or less

than 100 kilograms. Although with most liquids 100 litres is not equal to 100 kilograms it was decided to use this nominal value as the actual equivalent mass of 100 litres would be different for different fuels and lubricants.

1.3.9 LPG (liquefied petroleum gas) and LNG (liquefied natural gas) are excluded from the scope of the Regulations. CNG (compressed natural gas) is a gas and therefore not a liquid fuel.

Regulation 3(1)

1.3.10 The Regulations apply to liquid fuel and lubricants measuring instruments in use for trade as defined by section 7 of the Weights and Measures Act 1985 (in Northern Ireland Article 5 of the Weights and Measures (NI) Order 1981 that have been first placed on the market or put into service on or after the 30 October 2006. The Regulations have similar in-service provisions to those included in the existing regulations insofar as they are consistent with the Directive.

Regulation 3(2)

1.3.11 The Regulations do not apply to liquid fuel and lubricants measuring instruments in respect of which a certificate of approval granted before 30 October 2006 under the following Regulations is still in force:

- The Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995 for volume measuring instruments.
- The Weights and Measures Regulations 1963 (in Northern Ireland the Weights and Measures Regulations (Northern Ireland) 1967) for mass flow measuring instruments.

1.3.12 A certificate of approval referred to in Regulation 3(2) will remain valid until the date on which it expires but no later than 29 October 2016. However it may remain in force in accordance with Section 12(11) of the Weights and Measures Act 1985, in which case, those instruments will still be subject to the 1995 Regulations.

1.3.13 The certificate may be modified up to the date of expiry. A liquid fuel measuring instrument may continue to be used indefinitely provided that it complies with the expired certificate.

Regulation 3(3)

1.3.14 Instruments not in conformity with the Regulations may be displayed or presented at a trade fair, exhibition or demonstration if they are clearly marked to indicate that they are not compliant with the essential requirements of the Regulations and cannot be acquired or used until they have been made to comply by the manufacturer.

1.3.15 A certificate of approval referred to in Regulation 3(2) and any authorisation of modification to that certificate shall have the effect that existing certificates of approval issued under the Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995, or the Weights and Measures Regulations 1963 (in Northern Ireland the Weights and Measures Regulations (Northern Ireland) 1967) for mass flow measuring instruments, will remain valid until the date on which they expire that is no later than 30 October 2016.

1.4 Part II - Placing on the market and putting into use of liquid fuel and lubricant measuring instruments

Requirements for placing on the market and putting into use

Regulation 4(1)

1.4.1 This is similar to 'passing as fit for trade' under earlier regulations.

1.4.2 This regulation makes it an offence to first place on the market or put into use an instrument to which the Regulations apply unless it

- (a) Meets the essential requirements,
- (b) Has demonstrated conformity with these essential requirements and
- (c) Carries the CE marking, M marking and identification number of the notified body which carried out the conformity assessment.

1.4.3 In Regulation 4(b) "its" refers to "the instrument's".

1.4.4 The terms placing on the market and putting into use are defined in the regulations and originate from the Directive. The requirements of Regulation 4(1) apply only to when liquid fuel and lubricants measuring instruments are first placed on the market or put into use. Any subsequent re-qualification is addressed by Part IV of the regulations. It should be remembered that it is intended these regulations apply only to instruments that are being used for trade as defined in Section 7 of the Weights and Measures Act 1985 (in Northern Ireland Article 5 of the weights and Measures (NI) Order 1981). This applies to instruments when they are first placed on the market or re-qualified.

Compliance with the essential requirements

Regulation 5(1)

1.4.5 Manufacturers can use more than one method to demonstrate compliance with the essential requirements. Regulation 5(1) lists some of these methods:-

- (a) using any technical solution that complies with the essential requirements;
 - (b) correctly applying solutions set out in the relevant national standard; or
 - (c) correctly applying solutions set out in the relevant normative document,
- and selecting and following one of the conformity assessment procedures referred to in regulation 6.

Regulations 5(2) and (3)

1.4.6 This includes the presumption that instruments which conform fully or in part to relevant national standards or normative documents will be presumed to conform fully or in part with the essential requirements. Relevant national standards and normative documents for this purpose will be published by the NMO, or the competent authority in another Member State in accordance with Regulation 2. Normative document references for liquid fuel and lubricants measuring instruments identified by the Commission are published on the NMO web-site and can be found at: <http://www.bis.gov.uk/nmo>. Currently no harmonised standards exist in this field.

1.4.7 Where conformity is only in part to relevant national standards or normative documents then either alternative, or parts of both documents, where available, should be used to give full conformity or other technical solutions provided. Other technical solutions could include the use of European standards which are not harmonised standards and international standards such as OIML Recommendations which are not normative documents.

1.4.8 The appropriate OIML Recommendation for liquid fuel and lubricants measuring instruments is Recommendation R117 (Edition 1995) which can be found on the OIML website at <http://www.oiml.org>.

Regulation 5(4)

1.4.9 Provides for devices which do not meet the essential requirements and which are not in use for trade. These can be connected to a measuring instrument without affecting the conformity of the instrument to the essential requirements. This could for example be optical reading or data storage devices for management purposes only. These devices are likely to carry their own CE marking under directives other than 2004/22/EC.

Conformity assessment procedures

Regulation 6(1)

1.4.10 The different conformity assessment procedures available to manufacturers are set out as modules in the annexes of the Directive. These are numbered A to H1.

The options available to manufacturers for liquid fuel and lubricant measuring instruments are as follows:

	B+D	B+F	G	H1
Measuring Systems for Liquids other than Water	•	•	•	•

The options above represent:

- Type examination followed by declaration of conformity by the manufacturer based on formal quality assurance of the production process (including test and final inspection) as two separate processes (Modules B + D)
- Type examination followed by 3rd Party verification (Modules B + F)
- 3rd Party verification for one off ‘bespoke’ instruments which would otherwise need type examination (Module G)
- Design examination together with declaration of conformity by the manufacturer based on full formal quality assurance of the design and production process (including test and final inspection) as part of an integrated process (Module H1)

1.4.11 For further information on conformity assessment procedures and other aspects regarding the interpretation of the Directive reference should be made to “Guide to the implementation of directives based on the New Approach and the Global Approach”. This document can be found at the following website:

http://ec.europa.eu/enterprise/policies/single-market-goods/files/blue-guide/guidepublic_en.pdf

1.4.12 For Module F under 4.1 and 5.2 the recommended tests to be carried out for initial and subsequent verification should be identified together with the standards necessary to ensure traceability of measurement.

1.4.13 The EU Commission in relation to the Directive has published a list of references to normative documents in the Official Journal (2011/C 33/01 and 2006/C 269/01) which in part gives presumption of conformity to the essential requirements. This includes OIML R117 edition 2007, and OIML R117 edition 1995 and OIML D11 edition 2004 respectively. This information can be found on the NMO website or by reference to the EU website under the following two links:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:033:0001:0012:EN:PDF>

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2006:269:0001:0028:EN:PDF>

1.4.14 The normative references address all the relevant provisions of the Directive i.e. both the general and instrument specific requirements, in tabular form, in relation to the corresponding paragraphs of the respective OIML Recommendation and makes comment, in general terms only, of any differences.

1.4.15 WELMEC documents, published on the WELMEC website, set out as guidance full versions of these simplified tables with background information and comment for interested parties. Liquids other than water are covered by document WELMEC 8-15. Other WELMEC documents of interest are the guides 10.5 and 10.6 in relation to the marking of fuel dispensers and sealing of fuel dispensers respectively which can be found at <http://www.welmec.org>.

1.4.16 It will be for the manufacturer and/or Notified Body to decide how to interpret the guidance.

Regulation 6(2)

1.4.17 Schedule 3 of the Regulations outlines the nature of the technical documentation that a manufacturer or his authorised representative must maintain. This information must be provided to a notified body to enable them to carry out the relevant assessment. This documentation must be provided in the language of the notified body or any other acceptable language acceptable to it in compliance with paragraph 10 of Part II of Schedule 2.

1.4.18 The 2006 Regulations do not provide for manufacturers that 'self verify' to notify the Chief Inspector of Weights and Measures of details such as the location, certificate number and date of installation of a liquid fuel and lubricants measuring instruments. However, should the manufacturer wish to do so in the interests of openness, there is nothing to prevent this from happening.

Designation of United Kingdom notified bodies

Regulation 7(1)

1.4.19 Under Article 11 of the Directive notified bodies are required for the tasks relating to the conformity assessment of modules A to H1 (see paragraph 1.4.9 of this guidance for those relevant to liquid fuel and lubricants measuring

instruments). The criteria for designation of these bodies in accordance with Article 12 are included in Schedule 2 Part 1 of the Regulations.

Regulation 7(2)

1.4.20 If an organisation meets the requirements of Schedule 2 Part I of the Regulations permit the Secretary of State (NMO) to designate a person, whether that is a person resident or incorporated or carrying on a business in the United Kingdom or any other type of person e.g. a local weights and measures authority, to be a UK notified body. The definition of a notified body includes a person although it would appear unlikely that an individual person would be appointed. Where the designation is in respect of a particular description of a liquid fuel or lubricant measuring instrument the Secretary of State must be satisfied that the applicant meets the criteria as respects that instrument. As with the definition of an importer and, in line with Schedule 1 of the Interpretation Act 1978, a person includes a body of persons corporate or unincorporated in that it applies to both a natural or a legal person. The application form for bodies applying to be designated as a United Kingdom notified body under Regulation 7 is available on the NMO website: www.bis.gov.uk/nmo

Regulation 7(3)

1.4.21 If a person applying to be a notified body operates an approved quality system under a relevant harmonised standard e.g. EN 17025/17020 and EN45011/45012 he shall be presumed to meet the criteria of the Directive only to the extent that the standard corresponds with the criteria of the Directive. The application form for persons applying to be designated as a notified body under Article 11 and bodies wishing to extend their current status to include conformity assessment tasks in the Directive can be found on the NMO website: www.bis.gov.uk/nmo/regulation.

Regulation 7(4)

1.4.22 Designations under the Regulations must be in writing which may be either in electronic or hard copy format. They may include conditions such as the scope of the designation.

Regulation 7(5) and 8

1.4.23 In addition to the criteria in Schedule 2 Part I of the Regulations the Secretary of State may consider any matter appearing to him to be relevant prior to designating a person to be a UK notified body under Regulation 7. The functions of a notified body in Regulation 8 are set out in Part 2 of Schedule 2 to the Regulations.

Provisions supplemental to regulation 7

Regulation 9

1.4.24 These provisions of Regulation 9 deal with the publication of lists of notified bodies and the inspection of notified bodies. The Secretary of State will periodically carry out an inspection of UK notified bodies. The purpose of that inspection shall be to verify whether the notified body meets the notified body criteria and complies with any designation to which it is subject and complies with the Regulations. It is important to remember that although such an inspection

may result in a visit to a manufacturer, it is the notified body that will be being inspected, not the manufacturer.

Regulation 9(1)

1.4.25 The Secretary of State will publish a list which specifies for which instruments the notified body is designated and any conditions to which it is subject. These details will be available on the NMO website at:
<http://www.bis.gov.uk/nmo/regulation>.

1.4.26 The European Commission also publishes a list of notified body numbers which gives details of the notified body and the instruments on the NANDO website. For the MID click on:
<http://ec.europa.eu/enterprise/newapproach/nando/>.

1.4.27 Search by Annex for the relevant declaration of conformity and then by instrument type.
Search by country and then by notified body number to give name and for MID the instruments for which it has been notified and the applicable procedures/annexes

1.4.28 This site will enable you to find the European notified bodies as well as third country bodies designated under formal agreements [Mutual Recognition Agreements (MRAs), Protocols to the Europe Agreements on Conformity Assessment and Acceptance of Industrial Products (PECAs) and European Economic Area (EEA)] responsible for carrying out the conformity assessment procedures referred to in the application.

Fees

Regulation 11

1.4.29 This Regulation permits notified bodies (which includes the Secretary of State) to charge such fees in connection with or incidental to the carrying out of conformity assessments or specific tasks as it may determine.

1.4.30 Section 56 of the Finance Act 1973 requires the Secretary of State to define by statute the fees he charges for certain tasks to be carried out in relation to EU commitments/obligations.

1.4.31 The Regulations do not govern the fees that may be charged by other notified bodies other than identifying broad parameters in which all notified body fees should be set. The Regulations do not govern other duties undertaken by local authorities relative to the Regulations i.e. in service inspection, subsequent re-qualification and market surveillance.

Regulation 11(4)

1.4.32 Provides that, in cases where fees (charged after work is completed or payment of fees has been requested in writing) have not been paid to the notified body within a period of 28 days, then the notified body may give 14 days' notice in writing that the certificates or notification appropriate to the conformity assessment will be suspended until the fees have been paid.

Marking and identification requirements

Regulation 12

1.4.33 Annex 1 to this guidance describes the CE marking, supplementary metrology (M) marking and the identification number of the notified body concerned with the conformity assessment which must be affixed to each instrument so as to be visible and legible. The M mark denotes that the instrument meets the requirements of the MID. WELMEC has issued guide number 10.5 titled Guide for Common Application of Marking of Fuel Dispensers. This can be downloaded free from: www.welmec.org. This guide addresses the marking with issues such as multi product dispensers, common calculators and gives recommendations for marking plates with multiple markings.

1.4.34 It should be noted the supplementary markings are different from those in the NAWI Directive 2009/23/EC For the purposes of the Directive; the M marking does not have to be on a green background as it does under 90/384/EEC but it must be accompanied by the last two digits of the year in which it is affixed. See drawings in Annex 1 to this guidance.

Conformity with other directives

Regulation 13

1.4.35 Where the liquid fuel and lubricant measuring instrument falls within the scope of other directives which provide for the affixing of the CE marking the CE marking affixed to the measuring instruments shall, in addition to conformity with the Measuring Instruments Directive, indicate conformity with those other directives which provides for the affixing of the CE marking. These directives could include the following:

- 89/336/EEC (amended by 91/263/EEC, 92/31/EEC and 2004/108/EC) on electro-magnetic compatibility, as implemented by The Electromagnetic Compatibility Regulations 2005 (as amended);
- 89/392/EEC (amended by 91/368/EEC, 93/44/EEC and 93/68/EEC) on machinery safety (for some but not all industrial products), as implemented by the Supply of Machinery (Safety) Regulations 2008 (SI 2008/1595);
- 2006/95/EC on low voltage, as implemented by the Electrical Equipment (Safety) Regulations 1994; and
- 94/9/EC on equipment in potentially explosive atmospheres (ATEX), as implemented by the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 1996.

This list is not exhaustive.

1.5 Part III – USE FOR TRADE OF MEASURING SYSTEMS

Requirements for use for trade

Regulation 14

1.5.1 This part applies to liquid fuel and lubricant measuring instruments in use for trade once they have been placed on the market and put into use in Great Britain (see paragraph 1.7.2 regarding Northern Ireland). It applies irrespective of whether the instrument was attested under the Regulations or the corresponding regulations issued by another Member State.

1.5.2 This part of the Regulations is made under section 15 of the Weights and Measures Act 1985. This part of the Regulations prescribe the requirements for use for trade of the instruments and for the avoidance of doubt prescribe the instruments for the purposes of section 11(1) of the Act once put into use. The enforcement provisions of Part IV of the Regulations make reference to Regulation 14 in Part III by providing the inspector or approved verifier the criteria under which a disqualification or re-qualification sticker/mark may be applied to an instrument. Only the inspector of weights and measures can apply a disqualification mark to an instrument. The activities of an approved verifier are controlled by an approval issued by the Secretary of State under section 11A of the Weights and Measures Act 1985. Approved verifiers must apply to the Secretary of State to have any liquid fuel and lubricants measuring instruments covered by the Regulations that they propose to re-qualify added to the appendix which accompanies their approval.

1.5.3 Although Regulation 14(a) requires the system to be compliant with the essential requirements most of this will have been addressed by the conformity assessment procedure. When the system is in service it is normally only necessary to check conformance with the conformity assessment certificate, check no modifications or changes have been made, and confirm it remains within the in service error limits in schedule 5.

1.5.4 Regulation 14(b) requires that the measuring system is positioned so that can be tested with relative ease.

1.5.5 There is no requirement under these Regulations for there to be visibility between any kiosk control equipment and a dispenser, however, there may be Health and Safety legislation requiring this.

Maximum permissible error (mpe)

Regulation 15

1.5.6 This gives the in service errors to be as detailed in the tables in Schedule 5. The values are twice in excess, and once in deficiency, times the putting into use error limits. The values have been calculated where possible and in some cases are overridden by other requirements. These are complex because of the number of accuracy classes and minimum measured quantities that are possible. Most of these will never apply but were included as such instruments were within the scope of the previous regulations and it was decided to maintain the status quo. This Regulation requires instruments to continue to meet the essential requirements in-service. There are separate in-service values for maximum permissible errors (MPEs).

Annex 1 at the end of this guidance gives simplified data for common petrol and diesel fuel dispensers with a 2 litre minimum measured quantity.

1.5.7 The mpe is doubled for the minimum measured quantity, and so a larger delivered quantity shall not have a smaller mpe, the error for any other quantity is never less than the mpe for the minimum measured quantity.

1.5.8 Regulation 15(3) does not add any additional requirement but attempts to clarify how to read the table.

Manner of use

Regulation 16

1.5.9 This regulation requires that the instrument is used within its design parameters and the operating parameters against which it was assessed during its conformity assessment.

1.5.10 Regulation 16(2) requires that the product is marked sufficiently clearly so that the buyer can differentiate between similar products on offer. Additionally, if an incorrect product is delivered legal action may be taken based on the product marking not corresponding to that which was delivered.

Regulation 16(3)

1.5.11 This Regulation 16(3) will be satisfied if the instrument is used for its intended purpose, measuring the liquids for which it has been approved, and within its rated operating conditions.

Regulation 16(4)

1.5.12 This Regulation requires sales indicators to be at zero before a new measurement starts to simplify reading the result, this is particularly important when the instrument is operated by a member of the general public. The requirement to remain at zero until liquid is delivered ensures accurate measurement and prevents excessive hose dilation. Consumers find it unsatisfactory for the quantity and price indication to start to increment when the pump is switched on but before any liquid is delivered.

Adjustment of calibration

Regulation 16(5)

1.5.13 This Regulation requires that when an instrument is adjusted it is set as close to zero as practical. This supersedes the requirement in the 1995 Regulations to 'straddle strike' although it will probably result in most instruments having results which straddle the zero error line.

1.5.14 Why has the requirement changed? Tests carried out at NMO show that there is a large spread of errors when smaller deliveries are taken. These are associated with the meter errors which are the same irrespective of whether a large or small delivery is made. They are therefore more significant for small quantities and represent a larger percentage of the quantity delivered. As the quantity delivered increases, these meter errors become less and less significant and the calibration error of the measuring transducer becomes the main error contribution. This wide spread of errors at minimum delivery could allow the instrument to straddle strike while still exploiting the error allowance at typical delivery quantities. The solution is to set the instrument as close to zero as practical for deliveries which are typical.

NMO advises that the calibration is set as close to zero error as is practical using the 20 litre fast flowrate tests for standard fuel dispensers

1.5.15 This will satisfy the requirements of regulation 16(5), provide the best accuracy for the majority of deliveries, and will probably result in the other test results straddling the zero error line.

Regulation 16(7)

1.5.16 The Regulation prohibits an instrument from being used in circumstances in which it may be prevented from operating consistently or accurately. An example of this might be when a supply tank is consistently allowed to run dry.

Regulation 16(8)

1.5.17 The Regulation allows the buyer to take a delivery at his own risk which is below the minimum measured quantity. Fuel dispensers are normally approved for a 2 litre minimum delivery and will be marked with a corresponding legend. However, if the buyer chooses to take a small delivery, where convenience is more important than accuracy, e.g. for a moped or to fill a can for a lawn mower, then this is not an offence.

1.5.18 The equipment in paragraph 9(5) of Schedule 1 to the Regulations relating to any special equipment that may be needed to permit the control of measuring tasks when the instrument has been placed on the market must be incorporated in the instrument and the operation manual must describe the procedure for testing the equipment. These might include controlled access to a higher resolution mode, or the ability to display programmed measurement parameters for example viscosities of different liquids to be metered.

1.6 Part IV - ENFORCEMENT

Enforcement authority

Regulation 17

1.6.1 All enforcement of these regulations will be under the European Communities Act. The powers of the Weights and Measures Act (in Northern Ireland the Weights and Measures (NI) Order 1981) do not extend to enforcement for these regulations.

17(2)

1.6.2 This regulation imposes a duty on every local weights and measures authority in Great Britain to enforce the Regulations within its area. (In Northern Ireland the enforcement authority is the Department of Enterprise, Trade and Investment). It also authorises the Secretary of State to enforce Part II of the Regulations and for that purpose gives him the power to appoint any persons to act on his behalf. The power of the Secretary of State is independent of a weights and measures authority and is to ensure the Secretary of State is able to fulfil his obligations to conduct market surveillance. Those authorised by this regulation are referred to as "enforcement authorities".

Compliance notice procedures

Regulation 18

1.6.3 In cases where the enforcement authority has established that the CE marking and/or M mark have been inappropriately affixed for an the instrument that has been placed on the market or put into use it may serve a notice on the manufacturer or his authorised representative requiring him to end the infringement. It must be noted that this power rests with an enforcement authority, not with an officer of that authority. It therefore does not limit the issuing of these notices to inspectors.

1.6.4 It should also be remembered that the application of the CE and the M marking confirms compliance with the essential requirements in Schedule 1 of the Regulations, as amended (see paragraph 16 'Accuracy classification and maximum permissible errors (MPEs)', Schedule 1), when the instrument was placed on the market or put into use. This will include selecting and following one of the conformity assessment routes. Any contravention that falls outside of these definitions is not caught by the compliance notice procedure.

1.6.5 This regulation is not applicable to crown-stamped instruments.

Immediate enforcement action

Regulation 19

1.6.6 An enforcement authority has powers to take action pursuant to this Regulation where it has reasonable grounds for considering that either:

(a) the requirements of a compliance notice procedure have not been complied with; or

(b) a liquid fuel measuring instrument which has been placed on the market or put into use, does not bear one or more of the CE marking, the M marking and the identification number of the notified body which carried out the conformity assessment procedure in respect of that instrument; or

(c) a liquid fuel measuring instrument bearing the CE marking and the M marking does not meet all the essential requirements when placed on the market, or properly installed and put into use in accordance with the manufacturer's instructions.

1.6.7 The Secretary of State will publish particulars of any notice issued withdrawing a certificate or notification. It is expected that this will take the form of advice to trading standards officers/interested parties and published on the NMO website (www.bis.gov.uk/nmo).

Disqualification

Regulation 21

1.6.8 In cases where an instrument has been altered and the inspector has been notified in writing of the alterations a disqualification sticker will be required in all cases where the instrument no longer meets the essential requirements.

1.6.9 The disqualification mark will not in all cases be a sticker and may include other methods of obliteration of the marks where this would be more appropriate. In cases where an instrument has been altered and the inspector has been notified in writing of the alterations a disqualification sticker/mark will be required in all cases where the instrument no longer meets the essential requirements.

Re-qualification

Regulation 22

1.6.10 It is important to contrast this process with that relating to initially placing a measure on the market for the first time which requires the involvement of a notified body. Re-qualification may be by an inspector of weights and measures or by an approved verifier, e.g. the manufacturer or a repairer.

Testing of liquid fuel and lubricants measuring instruments

Regulation 23

1.6.11 The Regulations do not stipulate a test procedure for conformity assessment or verification. They only stipulate that an instrument must comply with the essential requirements. The use of a harmonised standard or normative document will demonstrate compliance with the essential requirements. The reference for normative documents covering liquid fuel and lubricants measuring instruments is given in the section describing regulation 5(2) above.

1.6.12 For Module F the recommended tests to be carried out for initial verification will vary according to the design of the instrument, for example its flowrate, minimum delivery, and typical delivery.

1.6.13 For instruments which are not typical fuel dispensers, due consideration of design parameters should be taken into consideration. For example:

- a. If a fuel dispenser is approved with a minimum delivery of 5 litres because of a long hose or high flow rates then the minimum test quantity must not be below 5 litres.
- b. If the typical delivery from a fuel dispenser is large, mainly used to refill large vehicles, consideration should be given to taking test deliveries above 20 litres.
- c. For lubricating oil meters. Tests should be carried out at, or just above, minimum delivery; and at other values that are representative of typical deliveries for example 5 and 10 times the minimum delivery. These tests should also be carried out at different flowrates. Tests might also reflect the normal mode of operation which might include a typical fast delivery followed by a 'topping up' delivery all within one transaction.

1.6.14 It should be noted that both OIML R117 2007(E) and 1995(E) have been notified in the Official Journal as normative documents. The web links are as follows:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:033:0001:0012:EN:PDF>

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2006:269:0001:0028:EN:PDF>

1.6.15 Where third party testing is carried out in accordance with Module F the testing requirement is specified in the harmonised standard or normative

document or equivalent tests. In the absence of these documents the Notified Body is responsible for specifying the appropriate tests to be used for the purposes of Sections 6.1 and 7.2 of Annex F1 to the Directive.

Reference value for Accuracy class

1.6.16 The reference value for accuracy class shall be stated in the certificate of approval and shall be equal to the best accuracy class, that is to say the class of the highest level of precision, for which that instrument may be tested and passed as fit for use for trade.

1.6.17 The reference value is the best accuracy class that has been established for the instrument by laboratory testing (for type approval). An instrument can be declared as meeting the requirements even if subsequent testing with “liquid” indicates a better accuracy class.

1.6.18 This regulation, being part of Part IV (Enforcement), relates only to the testing carried out by the inspector in relation to his duties as an enforcement officer when he makes an in-service inspection of the measuring system. It does not apply to testing for conformity assessment or re-qualification.

Unauthorised application of authorised marks

Regulation 24

1.6.19 Any liquid fuel measuring instrument in use for trade but not marked with the notified body number, CE mark and M mark and put in use on or after 30 October 2006 may be disqualified unless it can be demonstrated that the instrument is not subject to the Regulations, as amended.

Powers of entry and inspection

Regulation 25(1)

1.6.20 It is important to consider the definition of Enforcement Officer. It is either an inspector as defined in the Weights and Measures Act (in Northern Ireland the Weights and Measures (NI) Order 1981), or a person appointed by the Secretary of State to act on his behalf to enforce Part II of the Regulations, as amended.

1.6.21 It should be noted that this Regulation gives an enforcement officer the authority to inspect and test a liquid fuel measuring instrument, but it is only an inspector of weights and measures that may reject the instrument if it is found not to comply with the Regulations, as amended. The enforcement authority does have the power to issue a compliance notice (regulation 18) or take immediate enforcement action (regulation 19) if the requirements of those regulations are not met.

1.6.22 The powers under regulation 25(1) should be contrasted with those existing in relation to the NAWI Regulations 2000, SI 2000/3236, as amended - ‘the NAWI Regulations’. These give an authorised officer an extra power to inspect relevant quality systems. A similar power has not been included in these regulations. This means that an enforcement officer will not have the power to look at the quality systems that a manufacturer or approved verifier may be using when engaging in conformity assessment procedures of their own instruments. Where this becomes a necessity such action may be authorised as part of a market surveillance exercise.

1.6.23 It should be noted that there is no provision in these regulations which allows a person to refuse to give information if it may incriminate them. This should be contrasted with the NAWI regulations which do contain such a provision.

Penalties for Offences

Regulation 27

1.6.24 The enforcement provisions for these Regulations, as amended, have been made under the European Communities Act. The maximum penalty is a fine not exceeding level 5 on the standard scale levied on summary conviction. The scale has 5 levels, each corresponding to a certain amount. This means that the level of fines can be updated by changing the value of each level, without the need to amend the legislation relating to each separate offence. The current values of the standard scale are section 37 of the Criminal Justice Act 1982 provides as follows:

Level on the scale	Amount of fine
1	£200
2	£500
3	£1,000
4	£2,500
5	£5,000

1.6.25 This penalty avoids the threat of imprisonment previously applicable to offences made under the Weights and Measures Act 1985.

1.7 Part V - Miscellaneous and Supplemental

Adaptation for Northern Ireland

1.7.1 The Regulations, as amended, apply to Northern Ireland subject to Schedule 6. This means that these amended Regulations apply the requirements relating to placing on the market and putting into use to the whole of the UK. However the in-service provisions relate to Great Britain. Northern Ireland will make in-service provisions for liquid fuel and lubricant measuring instruments.

The Electromagnetic Compatibility regulations 2005

1.7.2 The Electromagnetic Compatibility Directive was implemented in the UK by the Electromagnetic Compatibility Regulations 2005 (S.I. 2005 No 281) and applies to all instruments. The MID specifically provides electromagnetic immunity requirements in relation to instruments within its scope and therefore these implementing regulations have been disapplied for all MID instruments by Regulation 33 of S.I. 2006 No 1258 the Measuring Instruments (Automatic Gravimetric Filling Instruments) Regulations 2006. The EMC Regulations 2005 remain in force for all other liquid fuel and lubricant measuring instruments not subject to these regulations i.e. all those instruments that are not regulated whether because the instrument type is not regulated in the UK or is a regulated instrument that is not in use for trade, or is not within the scope of these regulations.

Annex 1

MARKING AND INSCRIPTIONS

Regulation 12(3)

Supply of Stickers

The Secretary of State has decided that it is necessary to provide a long-term, professional solution to resolve the difficulties that have arisen in securing a consistent good quality source for the supply of the metrology stickers that local authorities and others require to fulfil their statutory obligations for both initial verification, disqualification and subsequent re-qualification activities.

A new solution has been identified which will enable NMO to produce printed versions of the stickers described below on demand. The system has the capability to incorporate the specific identification data required in thermal printed form. This solution will replace the current stop-gap solution introduced in 2006 to allow for the changes to the marking requirements in the MID which meant that, when re-qualifying an instrument, an inspector has to apply both his number and the year of re-qualification in manuscript on a modified NAWI sticker using a “permanent” marker. It has become clear that these marks were not sufficiently permanent so as to withstand the harsh cleaning requirements in some conditions of use particularly in the food preparation sector.

The new stickers have been tested and performed well in a harsh cleaning environment and have been found to meet the requirements applicable in the food industry.

It is the opinion of the Secretary of State that the following stickers should be required to be used for the statutory marks. The new stickers are 12.7 mm x 11.1 mm.

It is not envisaged that the Weights and Measures (Prescribed Stamp) Regulations 1968 (SI. 1968/1615) will need to be amended as re-qualification is carried out under the provisions of these regulations.

The Green M metrology mark, and the CE mark for initial verification which are the responsibility of the instrument manufacturer will not be supplied centrally.

The new stickers will also be relevant to local authorities who are notified bodies and to approved verifiers under the regulations. Commercial organisations which need to obtain supplies are invited to contact stickers@nmo.gov.uk to discuss availability and prices.

The Secretary of State has determined that there will be benefits arising from a change of process with the stickers produced centrally and

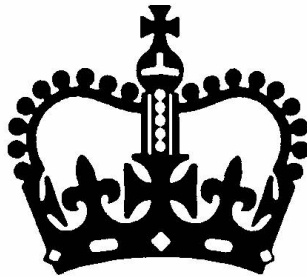
supplied by NMO directly to local authorities. To that end the decision has been made to supply a limited quantity of stickers free of charge to all inspectors. The stickers used for re-qualification of NAWI and MID instruments will be supplied overprinted with the inspector's number and on an annual basis with the year also overprinted. Stickers can also be overprinted with the relevant Notified Body/Approved Verifier numbers on request

If you have a requirement for a larger quantity , or you are not a local authority, please contact stickers@nmo.gov.uk. It will be possible to agree terms under which larger numbers/other stickers can be provided (at a cost).

STICKER 1 – RE-QUALIFICATION

Inspector or

INS/0704/08



This is all white label printed on which with the prescribed crown and the information for Inspector's number will be overprinted using thermal printing technology for use for NAWI and MID instruments.

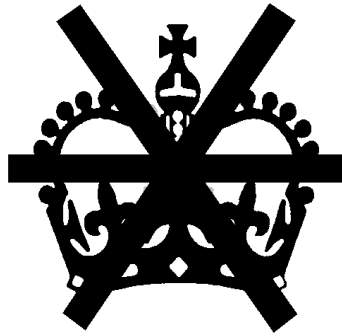
Approved Verifier

AV/0704/08



This is all white label printed on which with the prescribed crown and the information for Approved Verifier number will be overprinted using thermal printing technology.

STICKER 2 – DISQUALIFICATION



This is a plain white label bearing the prescribed crown mark which has been printed with the disqualification mark. No overprinting is required.

STICKER 3 - NOTIFIED BODY IDENTIFICATION NUMBER FOR INITIAL VERIFICATION

NB 0126

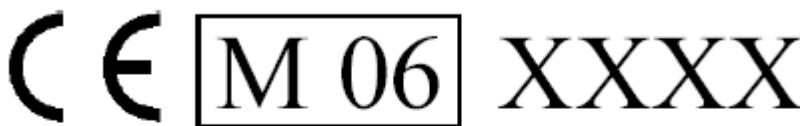
This is a plain white label in which the Notified Body number has been overprinted using a thermal printer. It is not a requirement for the number to be pre-fixed by NB.

Other marks and requirements for MID instruments

1. The CE marking consists of the symbol “CE” according to the design laid down in paragraph I.B(d) of the Annex to Decision 93/465/EEC. The CE marking shall be at least 5 mm high.
2. The M marking consists of the capital letter “M” and the last two digits of the year of its affixing, surrounded by a rectangle. The height of the rectangle shall be equal to the height of the CE marking. The M marking shall immediately follow the CE marking.
3. The identification number of the notified body concerned shall follow the CE marking and the M Marking.
4. The CE marking and the M marking shall be indelible. The identification number of the notified body concerned shall be indelible or self destructive upon removal. All markings shall be clearly visible or easily accessible.

Directive 2004/22/EC does not itself contain diagrams for any of these marks although **the CE mark** is prescribed by reference to paragraph 1.B(d) of the Annex to Decision 93/465/EEC.

Possible Examples of Article 17 Markings required by the MID Directive



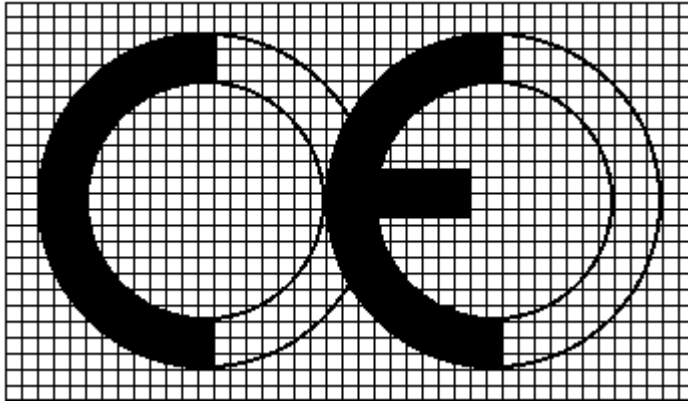
CE Mark
At least 5 mm high

Supplementary metrology mark
Rectangle height the same as CE
'Immediately follows' CE

Identification number of the notified body
'Follows' CE and Supplementary metrology mark



“The CE mark must not be less than 5mm in its vertical height, and the proportions maintained. It is generally shown on a grid in the guidance booklets, as below (the grid does not form part of the marking and is for information only):



This mark looks the same as some previous marks, but there are subtle changes, and it should be studied closely. It should be noted, for example, that the C and E are not formed by perfect semi-circles, i.e. the top and bottom arms extend one square beyond the semi-circles, and the middle arm of the E stops one square short.

The graphic is not made available for download from any official sources, but can be obtained in a wide variety of file formats from commercial organisations, sometimes freely available for download.

As far as **the M mark** is concerned the manufacturer applying the mark has freedom over the design provided that the M marking meets the criteria set down in Paragraph 2 of Schedule 4 of Directive 2004/22/EC, as to being surrounded by a rectangle also containing the last two digits of the year of affixing, and is placed immediately after the CE mark.

Similarly **the Notified Body** must place its mark, or authorise the manufacturer to do so on its behalf, so that it follows the CE and M markings.

The identification number of the notified body concerned shall follow the CE marking and M marking.

When a liquid fuel and lubricants measuring instrument consists of a set of devices operating together, the markings shall be affixed on the instrument's main device.

The CE marking and the M marking must be indelible. The identification number of the notified body concerned must be indelible or self-destructive upon removal. All markings shall be clearly visible or easily accessible.

The Directive does not specify in detail the form and appearance of all the various markings. It has therefore been necessary to decide on the details that will apply under the Regulations as indicated in the examples statutory marks above.

Annex 2

Quick reference guide for a Class 0.5 fuel dispenser with standard 2 litre minimum delivery

Use high resolution mode, 'Inspector's digit', where available. It is normally only necessary to check accuracy, conformance with the conformity assessment certificate, and that no modifications or changes have been made.

Error allowances for initial qualification and re-qualification:

Quantity (L)	MPE (%)	MPE (mL)
2	± 1	± 20
> 2 to ≤ 4	$\pm 1\%$ of 2L	± 20
>4	± 0.5	---
5	± 0.5	± 25
10	± 0.5	± 50
20	± 0.5	± 100

Error allowances in-service:

Quantity (L)	MPE (%)	MPE (mL)
2	+ 2, - 1	+40, -20
> 2 to ≤ 4	+2%, -1% of 2L	+40, -20
>4	+1, - 0.5	--
5	+1, - 0.5	+50, -25
10	+1, - 0.5	+100, -50
20	+1, - 0.5	+200, -100

Setting to Zero:

For standard fuel dispensers NMO advises that the calibration is set as close to zero error as is practical using the 20 litre fast flow rate tests.

This will satisfy the requirements of regulation 16(5), provide the best accuracy for the majority of deliveries, and will probably result in the other test results straddling the zero error line.

Markings:

In addition to Annex 1 above see **WELMEC 10.5 Guide for Common Application of Marking of Fuel Dispensers** for possible solutions which satisfy the MID.

Part 2: The Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995 (S.I. 1995 No. 1014), as amended [Pages 30 to 59]

Contents

- 2.1 Foreword
- 2.2 Background
- 2.3 Scope of the regulations
- 2.4 Principles of construction and marking of measuring equipment
- 2.5 Testing
- 2.6 Passing as fit for use for trade
- 2.7 Retesting
- 2.8 Measuring equipment imported from another member State or EEA State
- 2.9 Prescribed Limits of Error
- 2.10 Stamping
- 2.11 Obliteration of Stamps
- 2.12 Lawful use for trade of equipment where stamps destroyed, obliterated or defaced

Annex 1

Reproduction of the Secretary of State's Opinions given in Memoranda for the Guidance of Inspectors of Weights and Measures (WMs)

Part 2: The Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995 (S.I. 1995 No. 1014), as amended

2.1 Foreword

2.1.1 This guidance is intended for use alongside the Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995 (“the Regulations”), as amended, to assist with the application of their practical and technical aspects and to give additional guidance. These notes should not be used in place of the Regulations, since they do not detail all of the Regulations’ requirements. In general, guidance has been given only where it is thought to be necessary; and does not cover every aspect of the Regulations’ provisions.

2.1.2 These Regulations have been amended as follows:

- a. Measuring Equipment (Liquid Fuel and Lubricants) (Amendment) Regulations 1998, S.I. 1998 No 2218, from 12 October 1998, by specifying the tests to be carried out for verification of equipment subject to these regulations; exclude equipment used to measure liquefied natural gas from the scope of the regulations, and permitting what is defined as 'testing equipment' to be used for testing. The amendments also provide for equipment that is tested at a place other than its place of use to be tested with substituted parts, and provide a definition of the 'maximum delivery' of fuel that the equipment is intended to deliver. Some textual amendments have also been made in order to clarify some of the requirements of these regulations.
- b. Weights and Measures (Metrication Amendments) Regulations 2001, S.I. 2001 No 85, from 8 February 2001, by inserting a deadline of 31 December 2009 for the end of the authorised use of supplementary units of measurement, and making various technical changes to definitions of, and permitted abbreviations for, units of measurement, in accordance with the provisions of Directive 1999/103/EC of the European Council and the Parliament, amending Council Directive 80/181/EEC.
- c. Weights and Measures (Standards Amendment) Regulations 2003, S.I. 2003 no 214, from 28 February 2003, by substituting a reference to Standard BS EN ISO 17025 for that to the subsequently withdrawn Standard EN45001, as being the appropriate Standard for the accreditation of laboratories who may carry out testing of equipment imported into Great Britain.
- d. Measuring Equipment (Liquid Fuel and Lubricants) (Amendment) Regulations 2003, S.I. 2003 No 2110, from 3 November 2003, by making a number of minor amendments and clarifications to the principal regulations, introduces a requirement to indicate the product delivered, and relaxes an earlier requirement to carry out a 20 L test at a slow flow rate.
- e. Measuring Equipment (Liquid Fuel and Lubricants) (Amendment) Regulations 2006, S.I. 2006 No 2234, from 30 October 2006, by substituting a new reg 6A, which replaces the original requirement to label instruments with the appropriate British Standard for the fuel

dispensed with a requirement to enable the buyer to identify the product that the equipment delivers.

- f. The Weights and Measures (Metrication Amendments) Regulations 2009, S.I. 2009 No 3045, from 1 January 2010 new UK legislation came into force which removed the deadline that would have prevented the use of imperial units in dual labelling after 31 December 2009.

2.1.3 In this guidance references made to approved verifiers refer to persons approved to conduct the testing, passing as fit for use for trade and stamping of equipment (collectively called verification) of equipment under section 11 of the Weights and Measures Act 1985 as amended by the Deregulation (Weights and Measures) Order 1999 S.I. 1999 No. 503 and the Legislative Reform (Verification of Weighing and Measuring Equipment) Order S.I. 2008 No. 3262. Such persons will be in possession of a valid approval, issued by the Secretary of State stipulating the type of equipment which they are authorised to verify. The Weights and Measures Act 1985, as amended, can be found at <http://www.legislation.gov.uk/>.

2.2 Background

2.2.1 The Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1995 (“the Regulations”) replace the Measuring Equipment (Liquid Fuel and Lubricants) Regulations 1988 (SI 1988/128) and take account of International Recommendation R117 “Measuring Systems for Liquids Other Than Water” issued by the International Organisation for Legal Metrology (OIML). They have been amended by the Measuring Equipment (Liquid Fuel and Lubricants) (Amendment) Regulations 1998 (“the amendment Regulations”).

2.2.2 The Regulations make provision for:

- a. the principles of construction and marking of measuring equipment used for measuring liquid fuel and lubricants (which includes, for example, petrol pumps);
- b. inspection and testing by an inspector (inspector of weights and measures, otherwise known as a Trading Standards Officer) and passing as fit for use for trade and stamping of such equipment (and obliteration of stamps on equipment). The Regulations provide for measuring equipment to be tested using a liquid with similar properties to that which it is intended to deliver, and also for the testing and stamping of equipment at the place of manufacture;
- c. testing, passing as fit for use for trade, and stamping of equipment by approved verifiers as permitted by section 11 of the Weights and Measures Act 1985 as amended by the Deregulation (Weights and Measures) Order 1999;
- d. the prescribed limits of error; meaning the amount, or degree, by which the equipment may lawfully under or over deliver. The Regulations make provision for limits of error with respect to passing equipment as fit for use for trade and for in-service testing in relation to obliteration of the stamp, and for different limits of error to apply to liquids having different dynamic viscosities; and

- e. the acceptance of test results from other states of the European Community or contracting parties to the European Economic Area Agreement (the countries concerned are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom).

2.2.3 It is unlawful to use for trade purposes any equipment to which the Regulations apply unless it has been tested, passed as fit for such use and stamped by an inspector or approved verifier.

2.2.4 The Measuring Instruments Directive (MID) 2004/22/EC came into force on the 30 October 2006. The MID is a European Directive that covers a number of different measuring instrument types including measuring systems for the continuous and dynamic measurement of quantities of liquids other than water (which includes fuel dispensers). The aim of the MID is to create a single market in measuring instruments for the benefit of manufacturers and, ultimately, consumers across Europe.

2.2.5 The MID enables a manufacturer to obtain a single approval certificate which is valid throughout the whole of Europe. In addition, the MID provides manufacturers with a range of conformity assessment routes to gain certification and access to the European market.

2.2.6 There is a 10 year transitional period following the coming into force of the MID on the 30th October 2006 for instruments requiring type approval. This means that existing EEC and UK National Type Approval Certificates will remain valid until the certificate expires. Whilst a certificate is still valid NMO will continue to support it, i.e. issue amendments.

When a UK or EEC certificate expires no new instruments can be placed on the market under that certificate. Any new instruments will then need to satisfy the requirements of the MID. For instruments that come under the scope of the MID any UK or EEC certificate that now expires cannot be renewed.

2.2.7 The derogation period for instruments which now fall under the MID will end on 30th October 2016 so after this no new instruments covered by MID will be placed on the market under UK national legislation.

2.2.8 Inspectors or approved verifiers may find it useful to refer to NMO's guidance WM1001, 'Control of Modular Equipment during the MID Transition Period and Beyond' which can be found on NMO's website at: <http://www.bis.gov.uk/nmo/regulation/weights-and-measures-enforcement/guidance-for-local-weights-and-measures-authorities/wandm-bulletins>. This document has been drawn together to address issues associated with the normal development of liquid fuel dispensing sites in UK during the transition periods identified in the Measuring Instruments (Liquid Fuel and Lubricants) Regulations 2006.

2.3 Scope of the regulations

2.3.1 The Regulations apply to all measuring equipment (e.g. dispensers for delivering petrol, diesel, kerosene (paraffin) or oil, and ancillary or other equipment) in use for trade (as defined in section 7 of the Weights and Measures Act 1985) to measure liquid fuel or lubricants (except liquefied petroleum gas or liquefied natural gas), or any mixture of such fuel and lubricants, in a quantity not exceeding 100 litres; except where the delivery is automatic and measures a constant nominal quantity (regulation 2 (1) and (2)). Note that the words 'dispenser' and 'pump' have been used within this guidance. 'Dispensers' as used here is the generic term for all types of fuel dispensers, including those that are supplied from a remote pumping unit and supply source. 'Pump' is more specific; it means those dispensers that do actually contain a pumping unit.

2.3.2 Equipment used for the following transactions is excluded from Regulations:

- (a) liquefied petroleum gas; because of the technical problems associated with its measurement and control and its minority use (regulation 2(1));
- (b) liquefied natural gas; because of potential safety problems during testing, and because of its minority use (regulation 2(1));
- (c) measurement by capacity of liquid fuel, not exceeding 100 litres, which, in accordance with a programme of automatic control and without the intervention of an operator during the measurement process, measures separate quantities, to a constant nominal capacity. This effectively excludes some packaging equipment from control by the Regulations (regulation 2(2)).

2.3.3 It is an offence for such equipment to be false or unjust, whether or not it falls under the scope of the Regulations (section 17 of the Weights and Measures Act 1985).

2.3.4 Equipment complying with relevant EEC Directives (see list below) and bearing the mark of EEC initial verification (the e-mark and date hexagon) need only comply with regulations 3 and 9, which relate to purpose and manner of use. (This exception is provided by regulation 6(2) of the Measuring Instruments (EEC Requirements) Regulations 1988 as amended (SI 1988/186)). Breaches of regulations 3 and 9 of the Regulations may give rise to prosecution under section 15(3) of the Weights and Measures Act 1985, rather than to obliteration of any stamp or mark.

EEC Directives

Meters for liquids other than water

71/319/EEC

Ancillary equipment for meters for liquids other than water

71/348/EEC

Measuring systems for liquids other than water

77/313/EEC

2.3.5 Since 1st October 1995 the Regulations ceased to prescribe imperial measuring equipment, and any conversions of equipment to measure in metric would have been completed before that date if the equipment was to remain in use for trade. The references within the Regulations to such equipment - regulation 2(3) and the words to which it relates in 2(1), and also 17(5), 17(7) and 25(4) and the words to which it relates in 25(1) - are therefore no longer of relevance.

2.4 Principles of construction and marking of measuring equipment

2.4.1 The Regulations make provision as to the principles of construction and marking of measuring equipment. All measuring equipment to which the Regulations apply is subject to pattern approval, meaning that it must be made in accordance with a pattern in respect of which a certificate of approval is in force (regulation 4(1)).

2.4.2 Full details concerning the examination of patterns, procedures, costs, testing requirements etc., from the Certification Services Team at the National Measurement Office.

2.4.3 All measuring equipment must be legibly and durably marked with the relevant approval or certificate number, unless first stamped before 1 January 1981. This enables comparison with the (approved) pattern with which it is supposed to conform (regulation 4(2)).

2.4.4 A full and correct certification number must be given for any equipment submitted for testing (e.g. 2005/1, not just 2005). Equipment cannot be stamped if this is not provided (regulation 4(1)).

2.4.5 The equipment must be legibly and durably marked with the manufacturer's name (regulation 5).

2.4.6 Sales indicators must be capable of being (and must be) set to zero before a delivery is started. It must not be possible to advance the reading of the indicator except by the proper operation of the equipment (regulations 6 and 9).

2.4.7 All indications (including illustrations) on measuring equipment intended to describe the operation of the equipment or the quantity of fuel delivered, are required to be conspicuous, legible and durable, and suitably placed. The appropriateness and suitability of such markings will be considered when the equipment is submitted for type approval; and certificates of approval may prescribe the precise form and size of certain legends. Following this, it is the responsibility of the inspector to judge whether any additional markings will interfere with the approved markings or whether they might confuse the operator (regulation 7). Approved verifiers should seek advice from either NMO or an inspector where there is any doubt as to whether marking may cause confusion to the operator.

The certificate for a petrol pump might include the following:

Typical example of the markings required to be placed on a petrol pump:

“The legends on the display face are given in the following table:

LEGEND	CHARACTER HEIGHT
£	18 mm
This Sale	15 mm
Litres	15 mm
Pence per litre	5 mm
See that indicator is at zero before	5 mm
Delivery commences	5 mm
Minimum delivery two litres	

Legends associated with grade indication are 5 mm high and there is an illuminated pump number 80 mm high. Additionally, there may be the following typical instructions adjacent to the display face:

- 1 Remove fuel tank filler cap
- 2 Place nozzle in fuel tank
- 3 Squeeze trigger until required quantity is indicated or delivery stops automatically
- 4 Replace nozzle in holster
- 5 Replace fuel tank filler cap
- 6 Check indication and pay cashier.

2.4.8 Measuring equipment which forms part of a fixed installation must be positioned so that customers have a clear view of any deliveries made on their behalf by any other person, and a clear view of any device which indicates the quantity supplied or amount payable. Where the measurement of lubricants is concerned, this requirement only applies to equipment used in the presence of the buyer. The requirement does not apply to kerosene measuring instruments other than those situated at premises where petrol is sold, or those used to measure kerosene in the course of delivery into the fuel tanks of vehicles (regulation 8 (1), (2) and (3)). Customer displays should be positioned such that they are easy for the customer to read.

2.4.9 The Regulations make provision for a metric indication of the quantity of liquid fuel supplied to be accompanied by a “supplementary indication”. A supplementary indication is one which accompanies a metric indication, but is expressed in another unit of measurement which is not permitted as the primary indication of quantity - typically imperial gallons or pints, which are not authorised for use as a primary indication of quantity for liquid fuels and lubricants. The metric indication must be the more prominent; in particular supplementary indications cannot be indicated in larger characters than the metric ones, and care should be taken to ensure that supplementary indications do not gain prominence by the use of relatively bright colours or particularly contrasting backgrounds. (see section 8(5A) in the Weights and Measures Act 1985 as amended by SI 1994/2867). Where a manufacturer wishes to make provision for a supplementary indication on equipment, he should consult NMO in case a pattern approval is required (regulation 8(4)).

2.4.10 Measuring equipment fitted with a digital indicating device, which gives an indication of the amount to be paid by the buyer in part-of-a-penny, may not be used for trade (regulation 3).

2.5 Testing

Testing to be carried out under working conditions

2.5.1 Measuring equipment should be tested under practical working conditions (regulation 10). Consideration will not normally need to be given to the environment in which equipment is tested, since it will be designed to operate at any temperature or humidity level within the range of temperatures and humidity levels normally experienced in the UK (and would only have received pattern approval if it could perform accurately within this range).

Use of test liquids

2.5.2 Measuring equipment should be tested using either the actual liquid that the equipment is intended to deliver or a liquid with similar properties (regulation 10). Whilst the Regulations do not stipulate in detail which liquids may be used as test liquids, the following options may be used as a guide:

(a) The actual liquid that the equipment is intended to deliver may be used for testing purposes (regulation 10(a)) e.g. petrol, diesel or lubricating oil. In the case of petrol, the petrol used during testing would need to be the same in terms of whether it was leaded or unleaded as that with which the equipment will eventually operate, since leaded and unleaded petrol may produce different test results.

(b) A liquid having properties which replicate in all respects relevant to testing those of the liquid fuel which the equipment is intended to deliver may be used - it is most important that the liquid is matched for viscosity, or if not, that a reliable correction factor be applied. The lubricating abilities and surface tension of the test liquid should also be closely matched to the liquid which the equipment will be used to measure (regulation 10(b)). Such liquids include kerosene, white spirit and special liquids manufactured by oil companies for use as a test liquid. Such test liquids often have a viscosity which differs from the actual liquid by a factor of two or more, and before they may be used for testing the inspector or approved verifier should establish through the manufacturer's documentation that the test liquid is suitably matched (documentation might cover inter-comparison tests on a number of meters, using the actual liquid to be dispensed and the test fluid). If results show a repeatable difference between the two liquids, a correction should be applied when calibrating the meter with the test liquid.

2.5.3 Those submitting measuring equipment to an inspector (and those whom an inspector has reasonable cause to believe have possession of such equipment) shall, if requested, provide for the inspector's use such test liquid as the inspector may reasonably require; and the test liquid will be returned to that person or placed in another suitable container (regulation 14). Where the inspector has not been provided with test liquid, but has drawn liquid directly from the tank or container which forms a part of the equipment he is testing, it shall upon

completion of the test be returned to the tank or container, if agreeable to the proprietor; or shall be placed in another suitable container (regulation 15(2)).

2.5.4 Tables 1 and 2 in the Schedule to the Regulations provide the limits of error applicable on testing, using test liquids that are either above 1000 mPa.s (millipascal seconds) or less-than-or-equal-to 1000 mPa.s. The limits of error are wider for testing in relation to obliteration of the stamp on the equipment, than in relation to passing the equipment as fit for use for trade (see also section 6 on Prescribed Limits of Error). Most of the liquids that will be used with the equipment to which the Regulations apply will be below 1000mPa.s, although some may rise above this if the temperature falls. The supplier of the liquid should be able to provide information about how the viscosity of the liquid varies with temperature changes. The viscosity values of the liquids that are most commonly used for testing purposes are provided in the following table, which may be used to assist the inspector or approved verifier in selecting the appropriate error limit from Tables 1 and 2:

Typical viscosity values of liquids at 15°C	
Liquid	Dynamic Viscosity (mPa.s)
Petrol	0.35 to 0.55
white spirit	1.35
Kerosine (paraffin)	1.6
DERV ⁴	2.0 to 5.0
engine oil	100
heavy gear oil	1000

N.B. Viscosity varies with temperature

Kinematic Viscosity (ν) = Dynamic Viscosity (η) / Density (ρ)

Dynamic Viscosity : 1 mPa.s = 1 centipoise (cP)

Kinematic Viscosity : 1 mm² s⁻¹ = 1 centistoke (cSt)

Note that all of the liquids in this table are less-than-or-equal-to 1000 mPa.s.

2.5.5 When testing, the inspector or approved verifier may wish to satisfy himself that the temperature of the test liquid or of the fuel on the forecourt is not significantly above or below that which would normally be expected (about 11 degrees centigrade). However, the effect of using test liquid at temperatures above or below this is unlikely to be significant. The measure (a Local Authority 'working standard' or equivalent) used in the test should in any case be referenced to the temperature at which it was calibrated, and this will act as a further guide as to the validity of the test results obtained.

Opening and Closing of Tanks

2.5.6 An inspector (or verifier) may open locked or sealed sections of equipment or tanks for the purpose of carrying out tests, but must refasten or reseal them as soon as the tests are complete (regulation 15(1) and 16).

Test Installations [the Regulations do not provide any detail on this aspect]

⁴ Diesel Engine Road Vehicle

2.5.7 Test installations at the place of manufacture or assembly or at testing premises should represent, in all relevant respects, site installations. For example, petrol and diesel pumps should draw the test liquid from a source providing a negative head, that is, the liquid level should be below the dispenser pumping unit, and the dispenser pumping unit should operate within its pressure range. Typical lift heights might be in the range one to four metres depending on how full the supply tank is, however, this is not a critical factor for positive displacement meters being supplied by a pumping unit - as long as the liquid will flow it will be measured accurately by the equipment. There is no requirement to attempt to simulate the actual length of pipe run to which the equipment will finally be connected. Typically forecourt pipework is either 1½” or 2” and will often include check valves and gate valves. 2” pipework is usually used for long lines or where one line supplies several pumps. Test installations can be inside or outside of the building, and should meet with sound engineering practice. Testing equipment and installations require the approval of the National Measurement Office.

2.5.8 Dispensers without their own integral pumping unit should be tested using a submerged turbine pump in the supply tank. This should be set to supply fuel at a typical site pressure.

2.5.9 Lubricating oil meters are often supplied from relatively small, above ground, supply tanks and so it should be straightforward to simulate the supply lines and delivery lines that are typical of the pattern (note that the supply lines are not included in the pattern).

2.5.10 Where equipment is tested at a place other than the site at which it will be installed, clearly some means of transportation will be necessary following the tests. Such equipment must be transported in such a way that its accuracy and function are not affected.

Equipment tested to be complete

2.5.11 Measuring equipment may only be tested, passed as fit for use for trade and stamped at the site of installation provided it is completely erected, installed and ready for use and complete with all parts specified in the certificate of approval or notice of examination (which may include associated kiosk equipment etc). When equipment is being tested at the place of manufacture or assembly or testing premises, it must be completely erected, temporarily installed and ready for use in a configuration and under conditions which are the same as those in which it is to be used, or complete with a set of representative parts, temporarily installed and ready for use (regulation 12). The ‘representative parts’ may include pump control devices and repeat indicating devices that simulate in all relevant respects those with which it will be installed. The latter option was introduced in order to accommodate manufacturers who made only some, but not all, of the parts described in the approval certificate or notice of examination, and who were therefore experiencing problems with having tests carried out in accordance with the principal Regulations, since they would need to obtain items of equipment from other manufacturers prior to testing.

2.5.12 Whilst simulation equipment used for testing at the place of manufacture or assembly, or testing premises would need to include representative repeat indicating and control devices, it would not need to replicate the appearance or physical configuration of the peripheral equipment with which the equipment under test will eventually be installed. The required devices may be defined as follows: a repeat indicating device is a device which, using the interface which will be used when permanently installed, displays the mandatory metrological indications; and a control device is a device in the kiosk, which using the interface which will be used when permanently installed, receives a call signal from the fuel dispenser and authorises delivery. Those carrying out testing will need to ensure that interfaces work correctly, and that control and metrological indications are conveyed correctly through the interfaces. The tester will also need to ensure that the kiosk pump control features are functional and that remote trade indicators work correctly. In order to ensure that the testing will be carried out in an appropriate way, the manufacturer would need to know prior to the testing being carried out what other parts the equipment will be installed with, on-site.

2.5.13 Testing with a representative set of parts is not permitted at the place at which the equipment will be installed, since testing the actual configuration of equipment after installation gives greater assurance that the test results relate to how the equipment will subsequently operate.

2.5.14 Where equipment of a modular design is under test at the place of manufacture, the manufacturer should have it tested when it is connected to equipment which represents those parts with which it will initially be installed.

Configurations

2.5.15 The configurations which occur most frequently are: pump only; pump with kiosk equipment; and pump with kiosk equipment and electronic point-of-sale equipment.

2.5.16 Pumps that can also be set to stand-alone mode should be tested in this mode of operation, as well as with a pump controller, providing that their certificate of approval indicates that this is appropriate.

Equipment fitted with a hose

2.5.17 If the equipment is a 'dry line' system, in other words if the output hose is emptied at the end of each delivery, any calibration can only be carried out after test liquid has been passed through the output hose, because otherwise a small quantity of the delivered fuel will remain on the wall of the hose and the delivery will be deficient (regulation 13(1)). However, modern equipment is mostly of the 'wet line' variety, in other words the system remains full up to the nozzle (as described in regulation 13(2)); and the inspector or approved verifier will not need to deliver any test liquid prior to carrying out the test itself. Virtually all petrol pumps are of this latter variety.

Conditions for testing of measuring equipment

2.5.18 When equipment is tested, even if it is not at the site of installation, it must be working to critical trade parameters and at an appropriate trade interface. See

section 5.10 for the actual tests to be carried out when passing equipment as fit for use for trade.

2.5.19 When carrying out testing, the inspector or approved verifier will need to be aware of any health and safety instructions, both for that particular site, as well as any that has been issued by his Local Authority (or by the approved verifier's business). Such instructions may typically address how the inspector or approved verifier should ensure his own health and safety during testing (by wearing high visibility clothing, suitable footwear, using barrier skin creams, working up-wind of pumps, traffic cones to cordon off testing area) and general health and safety advice, as relevant to the test being carried out (grounding of filled standards, where to return fuel after tests etc).

2.5.20 The provisions which allow for equipment to be tested at a place other than its intended place of use do not extend to equipment which is installed on site and is going to be moved to another site. In other words, if a petrol pump, for example, has been in use on a petrol retailer's forecourt, the provisions at 12(3) are not intended to make testing unnecessary if the pump is then removed and installed at a different petrol station - the initial installation cannot be regarded as a 'temporary' installation for the purposes of the Regulations.

Factory/ Testing Premises Records

2.5.21 In addition to the record required by the Weights and Measures Act 1985 Section 11(6), the inspector or approved verifier should attach a copy of the test record to the inside of the equipment so that this information is available to later inspectors or approved verifiers, or, if the equipment under test will be permanently fixed when it is installed, and is therefore being tested with the characteristics of a particular site of installation in mind, the test record should be sent to the inspector in whose area it will be installed. This record should include at least the following information:-

- Certification number
- Date
- Configuration / Dispenser only
- Address of site of installation (for permanently fixed equipment)
- Site-specific installation requirements (for permanently fixed equipment)
- The liquid(s) with which the equipment is intended to be used
- The liquid(s) with which the equipment was tested (including its viscosity, and whether any correction factor was used)
- Inspector's or approved verifier's number
- Dispenser serial number
- Dispenser make and model
- Remarks (as necessary but should include option/configuration information)

The record will confirm that the equipment passed the test, and provide details of the actual test results.

Sample equipment record form:-

<p>FACTORY STAMPING TEST RECORD SI 1995 No 1014 (please print clearly, in ink)</p>		
Certification No:		
Make:	Model:	Serial number:
Dispenser only/ Configuration (where a configuration has been tested, its constituent components should be described in full):		
<p>For permanently fixed equipment only: Address of site of installation:</p> <p>Site-specific installation requirements:</p>		
Liquid with which the equipment will be used:		
Test liquid(s)- note which liquid, its viscosity, and any correction factor used:		
Test Results:	Remarks:	
Inspector/approved verifier (print clearly your inspector/ approved verifier number, name and address):	Date:	

2.6 Passing as fit for use for trade

2.6.1 The phrase ‘Passing as fit for use for trade’ encompasses both factory or initial verification testing, and later re-verification, where equipment that has already been in service needs to be ‘passed as fit’ again, following an alteration etc. No equipment may be passed as fit for use for trade unless it meets the requirements of the Regulations (regulation 19(1)(a)). In general, the equipment must be able to deliver test liquid within the prescribed limits of error when operated at any reasonable uniform speed, if it is to be passed as fit for use for trade (regulation 19(1)(b)). In connection with this it should be noted that a ‘minimum flow rate’ would be a delivery that the inspector or approved verifier considers to be approximately 10% of the maximum flow rate, although this is not prescribed by the regulations.

2.6.2 Regulation 10A, which was introduced by the amendment Regulations, stipulates the tests to be carried out on equipment with a view to passing it as fit for use for trade. The introduction of prescribed tests ensures that testing is carried out on the same basis for all equipment. Approved verifiers, under the terms of their approvals, are required to use the same tests which regulation 10A prescribes for inspectors.

2.6.3 Regulation 10A stipulates that when testing equipment with a view to passing it as fit for use for trade, the inspector will carry out the tests in the following table (and approved verifiers will be required to carry out the same tests under the terms of their approvals):

Tests to be carried out by an inspector or approved verifier:	
Equipment	Test
‘fixed quantity’ measuring equipment	a delivery of that fixed quantity
‘fixed quantity’ measuring equipment constructed to deliver multiples of that fixed quantity	a delivery of that fixed quantity check accuracy of any indicator of number of deliveries
‘continuous delivery’ measuring equipment	a minimum delivery (or close to) and a delivery of both 10 and 20 litres
‘continuous delivery’ measuring equipment, with maximum delivery of up to 10 litres	a minimum delivery (or close to) and a delivery close to the 10 litre maximum
‘continuous delivery’ measuring equipment, with maximum delivery of above 10 litres and not in excess of 20 litres	a minimum delivery (or close to) and a delivery of 10 litres
all above tests to be carried out: at least twice; or for equipment that operates at more than one flow rate, once at the maximum and once at the minimum flow rate; and	

using local or working standards or (NMO approved) testing equipment

Note:

- 1) the highest or maximum flow rate is the fastest delivery that the equipment can make, but this is not prescribed by legislation;
- 2) the lowest, or minimum, flow rate is the flow rate that the inspector or approved verifier judges to be approximately 10% of the equipment's highest, or maximum, flow rate, but this is not prescribed by legislation;
- 2) 'local and working standards' refers in this case to the capacity measures which would be used for testing by an inspector of weights and measures, as prescribed by the Weights and Measures Act 1985 (or in the case of approved verifiers, their approval agreement will require them to use similar approved standards);
- 3) in the case of petrol dispensers where the 'minimum delivery' is 2 litres, inspectors or approved verifiers may choose to test at 2 litres or 5 litres for the 'minimum delivery' test;
- 4) it is not intended that these tests should be varied, as the intention of introducing them is to bring consistency to the testing of these instruments; and
- 5) where petrol pumps are fitted with a totaliser, the inspector or approved verifier may wish to take totaliser readings before and after testing, to confirm how much petrol has been drawn and returned.

2.6.4 When testing equipment with a view to passing it as fit for use for trade, the inspector or approved verifier should also:

- a) carry out the recommended tests specified in the certificate of approval or notice of examination, which will assist in determining conformity with the approved pattern. The inspector may choose to sample these where he is testing a batch of pumps all to the same build standard (approved verifiers will be required to follow the procedures detailed within their approved quality system). Approved options included or excluded should be noted;
- b) check on the accuracy of the price to pay indication (where fitted) using the current price of the product that the equipment will deliver and other prices likely to be current in the near future, and so determine the error in the price to pay indication for deliveries of various quantities. If the equipment being tested has a test indication this should be used in preference to the trade indication; and
- c) when carrying out initial verification on site, check that the equipment is being used for dispensing the same liquid (or one with similar properties) as that with which it was tested at the factory, as recorded on the Factory Stamping Test Record.

2.6.5 The inspector has the discretion to choose whichever in-service tests he believes to be appropriate for the purposes of section 79(1)(a) of the Weights and Measures Act 1985 when carrying out an in-service inspection.

2.7 Retesting

2.7.1 All equipment, whether permanently fixed in the position in which it is to be used or not, will require retesting if it has been dismantled and reinstalled after

it was passed as fit for use for trade, and this may have affected its accuracy, function or performance (regulation 12(4)).

2.7.2 If the inspector or approved verifier considers that any adjustment, alteration, addition, repair or replacement to equipment has affected its accuracy or function, then the equipment will require retesting as for initial verification. Approved verifiers will only be able to conduct the verification of equipment after such work has been completed if permitted to do so within the conditions of their approval.

2.7.3 Inspectors or approved verifiers may find it useful to refer to NMO's guidance WM1003, 'Actions to be taken when weighing and measuring instruments are repaired, adjusted, altered or added to' which can be found on NMO's website at: <http://www.bis.gov.uk/nmo/regulation/weights-and-measures-enforcement/guidance-for-local-weights-and-measures-authorities/wandm-bulletins>. This document is of particular use when inspecting modular equipment on site, since the guidance advises when such equipment will still comply with the Regulations, or when retesting may be necessary.

2.7.4 Any changes to the site configuration that could result in introducing air leaks in piping, or changes to the lift heights, must also be taken into account.

[Note that 2.7.2 and 2.7.4 relate to the provisions at regulation 23, but are not drawn directly from the Regulations.]

2.8 Measuring equipment imported from another member State or EEA State

2.8.1 Although section 75(1) of the Weights and Measures Act 1985 forbids an inspector to stamp equipment without duly testing it, where measuring equipment as defined above is imported into Great Britain from another member State or a contracting party to the European Economic Area Agreement, the inspector shall not test the equipment, providing that it has been tested on the same basis as nationally manufactured equipment to which the Regulations apply (regulation 18). This must be evidenced by relevant documents presented to the inspector, originating from an approved body which has the responsibility in that State for metrological control of measuring equipment, or is a laboratory which has been accredited in a member State or in an EEA State as being a body which conforms with the criteria set out in EN45001 (regulation 18 (2) and (3) and regulation 19 (2)). The following applies to the acceptance of such test results:

(a) tests may be regarded as having been carried out 'on the same basis' if they provide the requisite measurement data required by the Regulations or associated documentation of an appropriate test method; and if the test results fall within the prescribed limits of error (regulations 18 and 19).

(b) following testing on the same basis in another member State or an EEA state an inspector would normally presume that it will not be necessary to carry out testing in the UK. The following are questions that the inspector may need to consider:

(i) that they are current - that the metrological performance of the items concerned has not changed since the tests were performed, for example, due to drift or instability, or due to the equipment being dismantled such that the performance of the equipment may have been effected. Article 8(3) of Directive 71/316/EEC implies that initial verification tests are valid for a period of one year following the year in which they were conducted.

(ii) their relevance - for example that the results were obtained using a liquid with the same viscosity as the liquid the equipment will measure (see also 5.2);

(iii) their identity - that the test results are authentic and do apply to and clearly identify the items concerned, e.g. by the serial number on the test certificate; and

(iv) the ability of the laboratory or testing body concerned - that they have the technical and professional expertise and independence equivalent to that which would be required if the tests had been performed by the UK authorities. Equivalent levels of confidence are most readily assured by a system of third party accreditation against internationally accepted criteria, particularly where any agreement of mutual recognition exists between the accreditation authorities.

2.8.2 The inspector may choose to carry out testing of equipment if he is not fully satisfied that appropriate tests have been carried out elsewhere or if he has grounds for suspicion about the test results. The UK authorities may take any reasonable steps to satisfy themselves of the validity of any test results (regulation 18(4)). It should also be noted that an inspector cannot pass equipment as fit for trade unless it complies with all the relevant requirements of the Regulations.

2.8.3 It is not the Commission's intention that first-party results (i.e. those from a manufacturer's own test facilities) need be accepted for verification purposes in another member State.

2.9 Prescribed Limits of Error

2.9.1 The prescribed limits of error for delivered volumes are given in the Schedule to the Regulations at Tables 1 and 2. Table 2 specifically provides for the limits of error which are to be applied to deliveries of the minimum quantity that the equipment can deliver; and Table 2 does not therefore apply to equipment that delivers a fixed quantity only (regulation 17(1) and (2)).

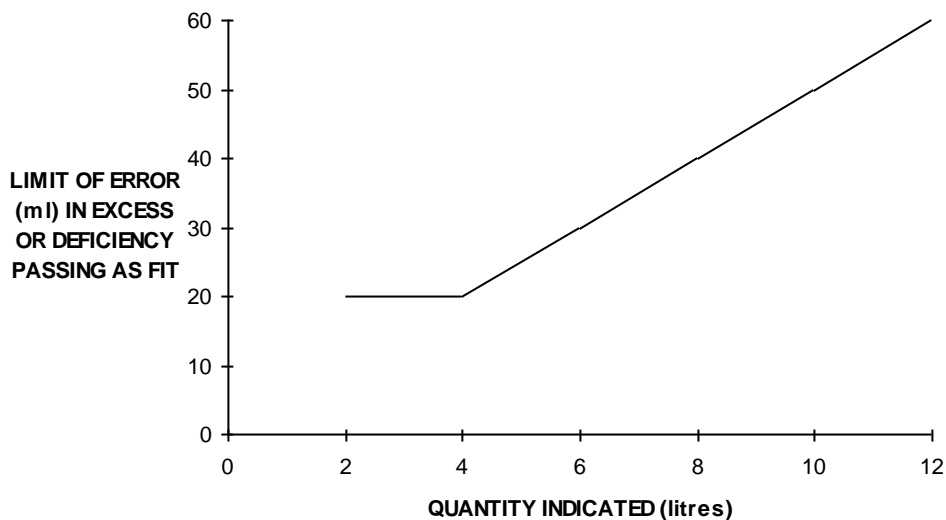
2.9.2 Even if an item of equipment falls within its limits of error, it shall not be passed as fit for use for trade when it is first put into service if:

a) in the case of continuously delivering equipment as described by 10A(2)(c), when it is tested, all of the errors are in excess or all are in deficiency, i.e. all above, or all below, the datum (the datum is the quantity of liquid to be measured by the equipment for the purpose of the test being carried out); or

b) in the case of equipment which delivers a fixed quantity or multiples thereof as described by 10A(2)(a) and (b), the equipment has not been calibrated sufficiently close to zero.

2.9.3 These requirements, which are provided for at regulation 19(1)(c) as amended, relate to a single piece of equipment, e.g. a petrol pump, and not, for example, to results obtained from testing several pumps at the same petrol station. The provision is designed to prevent an item of equipment being adjusted to be very close to either the maximum, or the minimum, prescribed limits of error, and hence favouring either the seller or the buyer. Note that these requirements only apply to testing with a view to passing as fit for use for trade, they do not apply to later inspections and in-service tests. The requirement that the equipment be operated at a ‘reasonable speed’ during testing (Regulation 19(1)(b)) means that if the inspector or approved verifier can only provide the required spread of test results by performing an excessively slow delivery, the equipment should not pass.

2.9.4 The graph below illustrates the application of the Tables for equipment having a minimum delivery of 2 litres of liquid with a viscosity of less-than-or-equal-to 1000 mPa.s, typical for a petrol dispenser:



2.9.5 If retesting of equipment is required because of a change of price which has necessitated an adjustment to the price computing device, and the equipment had prior to the adjustment been passed as fit for use for trade, the limits of error applicable are those set out in Tables 1 and 2, ‘In relation to the obliteration of the stamp’ (regulation 17(4)).

2.9.6 The difference between the indicated price and the price calculated from the unit price may not exceed the price of the error quantity specified in Table 2 to the Regulations for the minimum measured quantity (the smallest volume of liquid for which the measurement is metrologically accurate for that system). For example, for equipment having a minimum delivery of 2 litres (e.g. a petrol dispenser) the error allowance is the price of 20 ml of fuel, e.g. at 90 pence per litre this would be +/- 1.8 penny and at £1.20 pence per litre, +/- 2.2 penny. However, in the case of an analogue indicating device (the older drum type of display) the error allowance is not less than the price corresponding to 2 millimetres on the price indicator, or one fifth of the indicated price scale interval, whichever is greater. And in the case of a digital indicating device the error

allowance is not less than the lowest value coin in circulation in the country or territory in which the equipment is used or intended to be used (regulation 17(6))⁵.

2.9.7 When calculating the error in the indication of the price to pay on equipment having digital indicators, the unit price and the volume indicated in test mode should be used. This mode is sometimes described in notices or certificates of approval as a 'Weights and Measures' or 'calibrate' mode, and increases the resolution of the volume indication to at least 0.005 litre. In the case of dispensers not having such a mode, the normal indication of volume should be used (regulation 17(6)).

2.10 Stamping

2.10.1 Equipment should be submitted to an inspector, for passing as fit for use for trade, complete with the sealing arrangements specified in the certificate of approval (regulation 20(1)). Approved verifiers will be expected to seal equipment, which they have verified, in accordance with the sealing arrangements specified in the certificate of approval.

2.10.2 Some pieces of equipment are stamped in several places in order that each part that would be vulnerable to adjustments that could affect the accurate functioning of the equipment is safeguarded from unauthorised adjustment (regulation 20(2)).

2.10.3 Some manufacturers place their own seals on parts of equipment. These seals, and any other marks, should be distinctly different from the prescribed stamp, and the equipment should not be passed if it bears any marks which might be mistaken for an inspector's or approved verifier's stamp (regulation 21).

2.11 Obliteration of Stamps

2.11.1 The inspector shall obliterate the stamp on equipment which:

- (a) fails to fall within the prescribed limits of error in relation to obliteration of the stamp; or
- (b) does not comply with the details in the relevant approval; or
- (c) could not have been stamped initially; or
- (d) has been modified such that its accuracy or function may have been affected; or
- (e) fails to comply with any of the requirements of the Regulations.

2.11.2 However, if the inspector decides that the degree of non-compliance of the equipment is not sufficient to warrant immediate obliteration of the stamp, the inspector may allow a period of up to 28 days for the equipment to be corrected; but may then obliterate the stamp if the correction has not been made (regulation 23 (1) to (4)). Approved verifiers undertaking any adjustment, alteration, addition, repair or replacement to equipment (as permitted within the conditions of their approval) which has affected its accuracy or function, should obliterate the stamp before retesting as for initial verification.

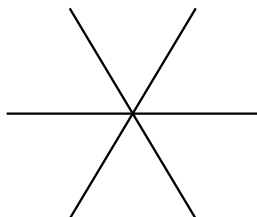
⁵ Updated to align with S.I. 2003 No 2110

2.11.3 Where part of the equipment or related ancillary equipment is removed altogether, the stamp should not be obliterated if this does not affect the accuracy and function of the equipment. Neither should the stamp be obliterated if part of the equipment is removed, but is replaced with virtually identical parts, and the replacement has not had an effect on the accuracy or primary function of the equipment (regulation 23(5)). For example, where a console, or receipt printer has been replaced with an identical one or an alternative given in the certificate of approval, the stamp should not be obliterated. However, if, for example, the number of nozzles on a piece of equipment has been reduced from eight to six, the inspector or approved verifier will need to consider whether this has had an effect on accuracy. If any modifications or repairs are carried out to the hydraulics of the equipment, then it should be retested. However, when the whole of a dispenser has been disconnected from the supply pipe or the site wiring in order, for example, to install a drip-tray or change the non-return valve, if the internal wiring or mechanisms of the dispenser are not touched and there is no modification to the pump or its components; then the dispenser can simply be reconnected afterwards without the need for retesting, although the pump may need to be re-primed. WM1001 and WM1003 give further guidance on changes to equipment of modular construction and can be found on NMO's website at: <http://www.bis.gov.uk/nmo/regulation/weights-and-measures-enforcement/guidance-for-local-weights-and-measures-authorities/wandm-bulletins>.

2.11.4 Inspectors or approved verifiers should consider whether the addition of any peripheral device could affect the accuracy or function of the equipment and therefore the continuing validity of the stamp. It may be advisable for those considering making such alterations to equipment to consult NMO or their local inspector before doing so. It is considered that the addition of forecourt payment terminals, kiosk control equipment and any pre-setting devices are particularly likely to have an effect. However, the stamp should not be obliterated merely because additions have been made to the equipment for the sole purpose of installing it at the place at which it is to be used (regulation 23(6)).

2.11.5 Equipment will often have more than one stamp applied to it, and only one of them needs to be obliterated to effectively obliterate them all. An exception to this would be the obliteration of a stamp due to the failure of one part of the equipment to comply with the Regulations, when this does not affect compliance of the other parts of the equipment. Where a stamp has been obliterated the inspector or approved verifier may attach a notice to the equipment indicating that the equipment, or part of it, is out of order (regulation 24)).

2.11.6 Stamps shall be obliterated using punches or pincers of suitable sizes to the form illustrated (regulation 22):



2.12 Lawful use for trade of equipment where stamps destroyed, obliterated or defaced

2.12.1 If a manufacturer, proprietor or repairer of measuring equipment destroys the stamp:

- (a) protecting the price computing device; or
- (b) on the indicator of the price-per-litre; or
- (c) protecting the calibration of the device

in order (in the case of a) or b)) to adjust that device or indicator or (in the case of (a), (b) or (c)) to adapt the equipment to measure in metric quantities; the equipment may still lawfully be used for trade for a period of 28 days (only 5 days in the case of c)), providing that the local chief inspector of weights and measures has been notified in writing, in advance and the stamp is destroyed by the proprietor of the equipment (or his duly authorised agent) or manufacturer or a regular repairer of such measuring equipment. Such notification would need to include: the location of the equipment, its particulars (e.g. identity number), the date that the stamp will be destroyed; and the names and addresses of both the person who will destroy the stamp and the person giving the notification (regulations 25(1) to (3), and 26). Note that the 'removal of the stamp' is effectively achieved by the breaking of the sealing wire, the stamp itself not being physically obliterated.

2.12.2 If the notification is sent by post, then the effective date of notification is the date that the notification would be received by the inspector in the normal course of first class post.

ANNEX 1

Reproduction of the Secretary of State's Opinions given in Memoranda for the Guidance of Inspectors of Weights and Measures (WMs)

WM 206, JUNE 1966

Measuring Instruments (Liquid Fuel and Lubricants) Regulations 1963, Regulation 18

During the testing of liquid flowmeters it has been found that a delivery having an error in excess of that permitted by the Regulations can occur when this delivery has been made immediately after a delivery which has been abruptly terminated by the sudden closure of the nozzle valve.

In the Board's opinion, an inspector of weights and measures would not be justified in refusing to accept for testing and passing as fit for use for trade a liquid measuring instrument in which an error in excess produced in the circumstances described above, does not exceed:

- (i) the appropriate allowance specified in Regulation 31(1)b, in respect of the quantity indication, and
- (ii) one penny, in respect of the computed-price indication, provided that in all other respects the instrument complies with the allowances prescribed by the Regulations on passing as fit for use for trade.

[The above opinion reproduces, with the amendment relating to the price indication, the substance of the similar note in WM No 122].

WM 291, JANUARY 1977

In the Department's opinion, the legally binding indications of quantity and price-to-pay for any monetary transaction are those on the instrument itself, except in cases where a pattern is approved with a remote transaction memory whilst the instrument is cleared for a second transaction, when the indications of quantity and price-to-pay on such a memory unit are those which are legally binding.

WM 343, February 1981

MEASURING INSTRUMENTS (LIQUID FUEL AND LUBRICANTS) REGULATIONS 1979

In connection with Regulation 35 (lawful use of unstamped equipment) the Department has been advised that the proprietor of a measuring instrument cannot obtain extensions of the 28-day period during which he may use unstamped equipment for trade, by saying he wishes to make a further alteration to the instrument. The relevant period is brought into operation by the notification. The notification is of the "occurrence", not of the adjustment. To make a further adjustment the stamp could not again be destroyed, obliterated or defaced since this is done in order to get at the part(s) requiring adjustment, and once the occurrence has taken place it cannot be repeated, it already being possible to get at the part(s) to be adjusted.

WM 345, APRIL 1981

MEASURING INSTRUMENTS (LIQUID FUEL AND LUBRICANTS) REGULATIONS 1979

Inspectors are advised that the tests in the following schedule are considered by the Department to be the minimum required on converting a liquid fuel measuring instrument from delivering in imperial quantities to delivering in metric quantities.

<u>Status</u>	<u>Metrological Test</u>	<u>Other tests</u>
Gearbox seal broken	5 litres fast, 10 litres fast, 20 litres fast.	Check computed price to pay at dispenser and kiosk (if self service).
Computing mechanism seal broken	10 litres fast, 20 litres fast	check computed price to pay at dispenser and kiosk (if self service),
meter seal broken	2 litres slow, 5 litres slow, 20 litres slow ⁶ 2 litres fast, 5 litres fast, 20 litres fast,	
New circuitry introduced or enabled in Electronic computer	5 litres fast, 10 litres fast, 20 litres fast,	check computed price to pay at dispenser and kiosk (if self service)

WM 346, MAY 1981

The Department is also of the opinion that if the 'Certification No' or 'Notice No' is changed then the next occasion that the instrument is submitted for testing and stamping should be regarded as the first submission for that particular instrument.

WM 417, NOVEMBER 1987

Liquid Fuel Measuring Equipment having more than One Delivery Nozzle

The Department would like to bring the following points to the attention of Inspectors with regard to this type of instrument:

1. Where a unit of equipment is capable of delivering fuel to two purchasers simultaneously, and has its displays dedicated to the relevant nozzles, then it is considered by the Department to be two separate instruments in one housing. This means that if one meter has its stamp obliterated then, by the provisions of Regulation 22 of S.I. 1983 No. 592 (as amended), the other meters that can have their delivery indicated on the same display are deemed to have their stamps obliterated. Meters associated with any other display can, therefore, continue in use. If a fault is found which is common to both sides of a dispensing unit, then a stamp on each side of the dispensing unit should be obliterated, thus all stamps would be deemed to be obliterated.

⁶ Measuring Equipment (Liquid Fuel and Lubricants) (Amendment) Regulations 2003, SI 2003 No 2110, from 3 November 2003, relaxed an earlier requirement to carry out a 20 L test at a slow flow rate.

2. Several designs of dispensing units have two meters supplied with fuel from the same pumping unit. The results obtained, during pattern examination of such systems, shows that the effect on the accuracy of one meter of a varying flowrate through the other meter, fed from the same pumping unit, is small compared to the error allowance given in the Regulations. Inspectors should therefore exercise discretion in applying any tests to ascertain whether excessive variation is present in any particular unit of equipment.

3. An additional test is required to check that only one nozzle on each side of a dispensing unit can deliver fuel at any one time.

WM 450, OCTOBER 1990

WEIGHTS AND MEASURES ACT 1985 - Section 12

The Department is of the opinion that subsection 12(11) of the Weights and Measures Act 1985 also applies to permanently installed equipment where the equipment has been moved to a new site subsequent to the expiry of the certificate.

Where the Inspector is satisfied that the following conditions have been met and the new installation satisfies the appropriate Regulations then the Department is of the opinion that the equipment may be accepted for testing and restamping.

Conditions

- 1 the installation was used for trade and stamped at the previous site
- 2 the capacity, where appropriate, remains the same as at the previous site
- 3 the equipment approval number remains the same as at the previous site
- 4 all the equipment is from a single installation
- 5 any foundations or other structures having an influence on the equipment are built to the same design and specification.

WM 482, JUNE 1993

MEASURING EQUIPMENT (LIQUID FUEL AND LUBRICANTS) REGULATIONS 1988

BP Oil (UK) Ltd, the owner of some 480 filling stations in Great Britain propose to fit to their fuel dispensers, for environmental reasons, a sealed drip tray and an under pump non-return valve.

The work involves disconnecting the dispenser from its island base, fitting the tray and valve and re-connecting the dispenser. The Department is of the opinion that this work will not affect the accuracy of the dispenser.

In the circumstances a dispensation under section 15(5) of the Weights and Measures Act 1985 has been issued to BP to dispense with the observance of regulation 12, subject to the condition that prior notification is sent to the appropriate local Chief Inspector of Weights and Measures.

The addresses of the sites affected have been sent to LACOTS.

WM 484, AUGUST 1993

MEASURING EQUIPMENT (LIQUID FUEL AND LUBRICANTS) REGULATIONS 1988

The Department would like to bring the following to the attention of Inspectors:

- 1 The opinion given some five years ago in WM 417 concerning the obliteration of stamps on liquid fuel dispensers having purchaser displays dedicated to more than one delivery nozzle is hereby amended.
- 2 Due to experience gained, technological development of dispensers and with a view to reducing the costs incurred, we are now of the opinion that stamps need not be deemed obliterated on all meters using the same display when one meter fails upon testing to meet the prescribed error limits.
- 3 Furthermore, the obliteration of the stamp protecting an individual pulser need not be deemed as obliteration of the stamps protecting other pulsers and meters that use the same display.
- 4 This means that for the purpose of regulation 23, only those meter systems (meter and pulser) which fail to meet the prescribed error limits should be considered for obliteration of the stamp.
- 5 In due course an amendment to the 1988 Regulations will be sought to promulgate this opinion.

WM 489, JANUARY 1994

MEASURING EQUIPMENT (LIQUID FUEL AND LUBRICANTS) REGULATIONS 1988

Shell UK Ltd are embarking on a programme of replacement check valves for some 950 filling station in Great Britain. The work involves removal of the check valve from the tank end and the replacement of a check valve at the pump end. The new valves are inserted at the pump end by squashing the flexi-coupling and inserting the valve, or in other cases by raising the pump, shortening the suction riser and re-installing.

The dispensation issued in WM 482 to BP Oil (UK) Ltd under section 15(5) of the Weights and Measures Act 1985 is now amended to include the Shell sites concerned with the above modification.

The addresses of the sites concerned have been sent to LACOTS.

WM 495, JULY 1994 - Advice To Inspectors On Advertisements

Weights and Measures Act 1985 - Sections 11, 12 and 14

This advice supersedes that given in WM 281 and reinforces the opinions given in WM 221 and 240 regarding advertising.

The Department wishes to revise its advice to inspectors with respect to advertising or sales promotional devices placed on or near, attached to, or interconnected with, weighing or measuring equipment.

The Department would have no objection to advertising or promotional devices which do not:

- 1 Involve an electrical or mechanical interconnection, other than simple mechanical attachment, to the measuring instrument unless approved in the certificate of approval.
- 2 Obscure, obstruct, or confuse indicators, instructions or any other feature required for the measurement activity. For example, the sight glass on a spirit measuring instrument.

- 3 Contradict or confuse colour coding. For example, green hoses used to indicate unleaded fuel, or colour coded put down areas on multi hose fuel dispensers.
- 4 Distract the operator or buyer such that mistakes in the measurement or transaction may occur. For example, electronically controlled displays used for operator instruction and advertising might be acceptable if:
 - (a) advertising and instruction did not occur at the same time
 - (b) the start of the measurement or transaction was delayed until after an advertising message was complete
 - (c) additional advertising only took place during the measurement if no intermediate operator action was required and the advertisement was likely to be completed before the end of the measurement.Similar requirements may be applied to audio messages.

WM 499, November 1994

MEASURING EQUIPMENT (LIQUID FUEL AND LUBRICANTS) REGULATIONS 1988, SI 1988/128

SITES WITH MIXED CERTIFICATION

Regulation 4 requires all measuring equipment to be made in accordance with a pattern in respect of which a certificate of approval is in force. The Department wishes to advise Inspectors of its opinion on sites with more than one certified measuring equipment installed. This practice falls into two categories:

- 1 A site installation with two or more separate measuring systems.
- 2 A site installation with two or more measuring systems with common peripheral equipment, for example kiosk control unit etc.

Category 1 sites (Figure 1)

Each measuring system is to be treated separately and stamped in accordance with its certification. The interlocks and security features, and recommended tests for each measuring system will be as described in the relevant certification for the individual system. There is to be no connection between the measuring systems. Each measuring system is to be stamped with the relevant certificate number.

Category 2 sites (Figure 2)

Each measuring system is to be treated separately and stamped in accordance with its certification. However, each measuring system will incorporate common peripheral equipment, as shown in Figure 2. Typically, this will mean that each system's dispensers will be controlled by the same kiosk control unit and have connected to that kiosk control unit a common point of sale terminal.

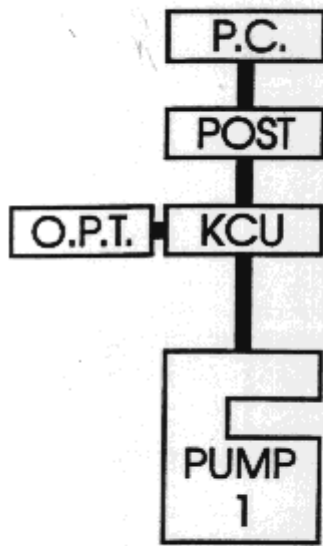
NOTE: The measuring systems may only incorporate common peripheral equipment where this equipment is approved for use in each individual system certification. That is, the relevant kiosk control unit, point of sale terminal etc, are separately approved for connection to each type of dispenser.

Peripheral equipment (for example Outdoor Payment Terminals) that are approved for connection to only one of the measuring systems, may be connected to that system as long as they have no influence on the other measuring systems on the site. An example is shown by the broken line in Figure 2.

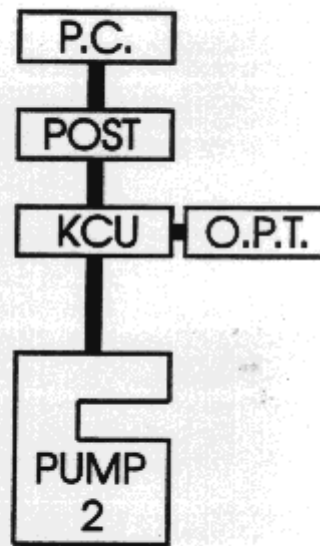
The interlocks and security features and recommended tests for each measuring system will be as described in the relevant certification for the individual system. Each measuring system is to be marked with the relevant certificate number.

Installations not fully meeting these requirements will require additional specific approval.

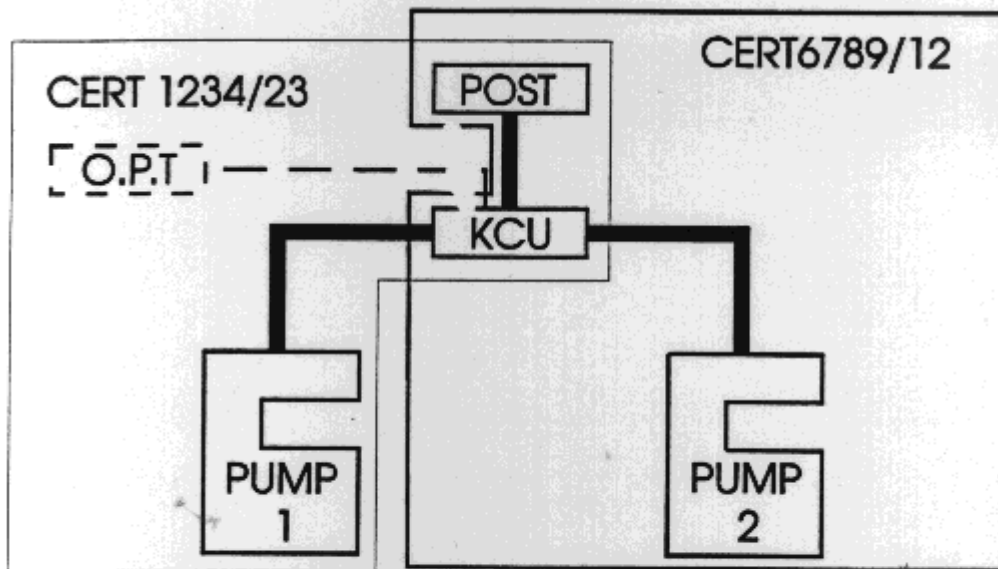
CERT 1234/10



CERT6789/8



CATEGORY 1 SITES - FIGURE 1



CATEGORY 2 SITES - FIGURE 2

The following WMs are both updated fairly frequently:

- WM1001
'Control of Modular Equipment during the MID Transition Period and Beyond'
- WM1003
'Actions to be taken when weighing and measuring instruments are repaired, adjusted, altered or added to'

For the latest version of either document, see NMO's website at:

<http://www.bis.gov.uk/nmo/regulation/weights-and-measures-enforcement/guidance-for-local-weights-and-measures-authorities/wandm-bulletins>



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