Laws and Regulations (L&R) Committee
2013 Interim Agenda

Judy Cardin, Chair
Wisconsin Weights and Measures

200 INTRODUCTION

The L&R Committee will address the items in Table A during the Interim Meeting. Table A identifies the agenda items by reference key, title of item, page number and the appendices by appendix designations. The headings and subjects apply to NIST Handbook 130 Uniform Laws and Regulations In the Areas of Legal Metrology an Engine Fuel Quality, 2011 Edition, and NIST Handbook 133 Checking the Net Contents of Packaged Goods, 2011 Edition. The first three digits of an item’s reference key are assigned from the Subject Series List. The acronyms for organizations and technical terms used throughout the agenda are identified in Table B. In some cases, background information will be provided for an item. The fact that an item appears on the agenda does not mean it will be presented to National Conference on Weights and Measures (NCWM) for a vote. The Committee will review its agenda and may withdraw some items, present some items for information meant for additional study, issue interpretations, or make specific recommendations for change to the publications identified which will be presented for a vote at the Annual Meeting. The Committee may also take up routine or miscellaneous items brought to its attention after the preparation of this document. The Committee may decide to accept items for discussion that are not listed in this document, providing they meet the criteria for exceptions as presented in Section H of the introductions to NIST Handbook 44 and NIST Handbook 130. The Committee has not determined whether the items presented will be Voting or Informational in nature; these determinations will result from their deliberations at the Interim Meeting.

An “Item Under Consideration” is a statement of proposal and not necessarily a recommendation of the Committee. Suggested revisions are shown in bold face print by striking-out information to be deleted and underlining information to be added. Requirements that are proposed to be nonretroactive are printed in bold faced italics.

All sessions are open to registered attendees of the conference. If the Committee must discuss any issue that involves proprietary information or other confidential material; that portion of the session dealing with the special issue may be closed provided that (1) the Chairman or, in his absence, the Chairman-Elect approves; (2) the Executive Director is notified; and (3) an announcement of the closed meeting is posted on or near the door to the meeting session and at the registration desk. If at all possible, the posting will be done at least a day prior to the planned closed session.

Note: The policy is to use metric units of measurement in all of its publications; however, recommendations received by NCWM technical committees and regional weights and measures associations have been printed in this publication as submitted. Therefore, the report may contain references to inch-pound units.
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231 NIST HANDBOOK 130 – UNIFORM PACKAGING AND LABELING REGULATION


Source:
Central Weights and Measures Association (2011)

Purpose:
Provide clearer language to guide industry and state officials when federal agencies are inconsistent in their interpretations.

Item Under Consideration:
Amend NIST Handbook 130, Uniform Packaging and Labeling Regulation as follows:

6.12. Supplementary Quantity Declarations. – The required quantity declaration may be supplemented by one or more declarations of weight, measure, or count, such declaration appearing other than on a principal display panel. Such supplemental statement of quantity of contents shall not include any term qualifying a unit of weight, measure, or count that tends to exaggerate the amount of commodity contained in the package (e.g., “giant” quart, “larger” liter, “full” gallon, “when packed,” “minimum,” “equivalent,” “lasts the same as,” or words of similar import).

6.14. Qualification of Declaration Prohibited. – In no case shall any declaration of quantity be qualified by the addition of the words “when packed,” “minimum,” or “not less than “equivalent,” or “lasts the same as” or any words of similar import (e.g., “approximately”), nor shall any unit of weight, measure, or count be qualified by any term (such as “jumbo “giant,” “full,” or the like) that tends to exaggerate the amount of commodity.

(Amended 1998, Amended 20XX)

Background / Discussion:
Manufacturers are using the terms such as “equivalent” or “lasts the same as” to qualify net weight statements. Clearer language is needed to provide consumers with better information. Industries and state officials need better guidance for product labeling. The Federal Trade Commission (FTC) does not consider the terms “equivalent,” or “lasts the same as” to be exaggerated or misleading.

2010 CWMA Interim Meeting: An official presented an example of a label (below) that was perceived as mislabeled. It was agreed that no conflicting information regarding the net weight statement should be in the lower one-third of the principal display panel. CWMA forwarded the item to NCWM, recommending it as a voting Item.
2011 NCWM Interim Meeting: It was reported that this language was lifted straight out of the FPLA and regulators might encounter problems with their investigations if the language is modified. The NIST Technical Advisor commented that the language “lasts the same as” or “equivalent” is in the marketplace, which may be misleading to consumers. The Committee was reminded that the lower 30% of the principal display panel should be free of supplementary quantity declarations as specified in the Uniform Packaging and Labeling Regulation (UPLR) Section 6.12. Supplementary Quantity Declarations.

The NIST Technical Advisor remarked that the section was amended in 1998 to include the term “approximately” (which is not included in the FPLA) as a prohibited term. There has been no indication that the differences between the UPLR and FPLA are being challenged. It was also recommended that FTC be notified that this is an issue before the conference. The Committee received a letter from a manufacturer stating that the company will voluntarily remove “lasts the same as” from their package label. The 2011 L&R Committee designated this item as an Informational Item to allow for review and comment by all regions.

2011 NEWMA Annual Meeting: There was a recommendation to obtain additional data from the submitter of the proposal along with clarification from the FTC on their letter dated November 4, 2010 (refer to the Report of the 96th Annual NCWM Conference [SP1125, 2012], Appendix A). No additional comments were heard on this item. The NEWMA L&R Committee recommended that this item be Informational.

2011 CWMA Annual Meeting: The submitter of the proposal commented that the terms “last the same as” and “equivalent to” are not quantity statements and should not be in the net quantity of the principle display panel area. The CWMA L&R Committee finds that this will be helpful for enforcement issues and recommended that this item be Informational.

2011 NCWM Annual Meeting: There were no comments heard on this item. The Committee received a letter (refer to Appendix A) from Clorox, stating the term “lasts the same as” is being removed from their packaging. The Committee would like to receive additional input from the fall 2011 regional meetings on this item.

2011 CWMA Interim Meeting: Several officials voiced support of the item and wanted clear cut guidelines for enforcement. Additionally, officials would like to see the FTC follow suit in federal law. One official recommended that the item be referred to the Package and Labeling Subcommittee (PALS). The Committee supported this item. CWMA recommended that the item be a Voting Item.

2011 WWMA Annual Meeting: There were no comments. The Committee concurs with the FTC findings that the terms are not misleading. The added terms are deemed a quality statement rather than a quantity statement. WWMA recommended that the item be Withdrawn.

2011 NEWMA Interim Meeting: No comments were made and the Committee maintained a neutral position. NEWMA recommended that the item remain as an Informational Item.

2011 SWMA Annual Meeting: There were no comments heard from the floor. The Committee supported the proposal as written. SWMA recommended that the item be a Voting Item.

2012 NCWM Interim Meeting: An industry representative commented that exaggerated and misleading terms need to be addressed. He contends that in the marketplace it is becoming commonplace to see supplemental information appearing on the front of the principal display panel. Mr. Guay, PALS Chair, recommended that PALS develop this item to provide additional guidance. The 2012 L&R Committee designated this item as an Informational Item and assigned its development to PALS.

2012 NEWMA Annual Meeting: No comments were received. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: CWMA supported the development of this item through PALS and recommended that the item remain as an Informational Item.
2012 NCWM Annual Meeting: Chris Guay, PALS Chairperson, reported that his Subcommittee has reviewed this item. PALS plans to provide the Committee with governing principles regarding claims on packages. PALS also plan to develop a series of recommendations regarding best practices for these types of label statements.

2012 CWMA Interim Meeting: The NCWM L&R Committee from the CWMA explained that PALS was assigned development of this item by the NCWM L&R Committee. A regulatory official asked the Committee to press forward with this item because problems were growing and PALS should specifically address them. CWMA supported this item and recommended that the item remain as an Informational Item and that PALS should address the proposal since compliance issues have been identified.

2012 WWMA Annual Meeting: A regulatory official commented that some terms are “performance” based, but to a quantity statement. PALS Chairman Chris Guay recommended that the item be renamed and reworded. The Committee believed the intent of the item is valid; however, after hearing Mr. Guay’s comments it agrees the item needs to be rewritten. The Committee concurs with FTC findings that the terms are not misleading. The Committee recommends that PALS continue to work on such issues and once developed they should submit a new proposal. WWMA recommended that the item be Withdrawn.

2012 SWMA Annual Meeting: SWMA withheld comment until the Packaging and Labeling Subcommittee has had time to review and make a recommendation. SMWA recommended that the item be an Informational Item.

2012 NEWMA Interim Meeting: NEWMA recommended that the item be an Informational Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

231-2  

**Section 10.3. Aerosols and Similar Pressurized Containers**

**Source:**
Commonwealth of Massachusetts Division of Standards (2012)

**Purpose:**
To allow the quantity statement in terms of weight for packages utilizing the Bag on Valve (BOV) technology, where the propellant is not expelled when the valve is activated. *NIST Handbook 130*, Section 10.3. Aerosols and Similar Pressurized Containers require aerosols and similar pressurized containers that expel the propellant along with the product to disclose the net quantity in terms of weight.

**Item Under Consideration:**
Amend *NIST Handbook 130*, Uniform Packaging and Labeling Regulation as follows:

**10.3. Aerosols and Similar Pressurized Containers.** – The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed.

**10.3.1. Products labeled non Aerosols in Similar Pressurized Containers (Bag on Valve [BOV] - Does not expel propellant with product.)** The declaration of quantity shall disclose the net quantity of the commodity in terms of fluid measure.

**Background / Discussion:**
There are a number of products in the marketplace bearing quantity statements in terms of fluid measure that utilize the BOV technology. Packages using BOV technology are non-aerosol by definition because the propellant is not dispensed with the product. Consumers cannot do price and quantity comparison between product packaged using
BOV technology and similar product in aerosol packaging because the aerosol packaged product includes the propellant in the net weight and the propellant is dispensed with the product. In the example below, two similar products are pictured, however the one on the right is labeled by net weight and the one on the left is labeled by liquid measure.

BOV technology is environmentally friendlier because the propellant is not dispensed with the product. Products utilizing the BOV technology only expel the product as the product is contained in a bag which is surrounded by the propellant inside the container. In April 2011, NIST, OWM received a letter supporting labeling of certain products such as the “Pure Citrus” product pictured above by liquid measure.

2011 CWMA Interim Meeting: The Committee agreed that the proposal did not include a specific recommendation for the language for the amendment to *NIST Handbook 130*, Section 10.3. Aerosols and Similar Pressurized Containers. The Committee did not forward the item to NCWM and recommended that the item be returned to the submitter for development.

2011 WWMA Annual Meeting: A comment from industry stated there are products in the marketplace that are similar but delivered in a different fashion. This should be looked at to account for new technology in the marketplace. The NIST Technical Advisor read from the *NEWMA 2011 Annual Meeting Report* that recommends the words “non-aerosol” be printed on the label so that inspectors know to test by fluid measure. The Committee believes there may be some confusion to the different unit pricing units but that consumers will be able to determine that there is new technology to expel the product. BOV technology exists in the marketplace and a proper method of sale is needed. The Committee originally recommended forwarding the item to NCWM as a Voting Item with the modifications reflected below:

10.3. Aerosols and Similar Pressurized Containers. – The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed.

10.3.1. Products labeled non Aerosols in Similar Pressurized Containers (Bag on Valve [BOV] - Does not expel propellant with product.) The declaration of quantity shall disclose the net quantity of the commodity in terms of fluid measure.

After the recommendation, additional comments were accepted. An official was troubled with the wording “non-aerosol” and thought the intent of the proposal was to allow people to comparison shop between aerosols and non-aerosols. An official stated that the product could be measured by the liquid. A retired NIST, OWM employee questioned how it was measured. An official wanted to know whether the entire product was expelled when empty. An official stated that this was not ready for status as a Voting Item. The Committee met briefly and changed its recommendation. WWMA forwarded the item to NCWM, recommending it as a Developing Item.

2011 NEWMA Interim Meeting: It was stated that testing for content could be problematic and that marking on the package should be net weight of product only, not including propellant which is not part of product. The Committee believes there is better comparison of net contents of product being sold if words “NON-AEROSOL PRODUCT”
are added to product label. NEWMA forwarded the item to NCWM, recommending it as a Voting Item with the following revision: Add to the container language “A NON-AEROSOL PRODUCT.”

2011 SWMA Annual Meeting: Concern was expressed by an industry weights and measures consultant over an acceptable test procedure that would be used if volume was permitted. The NIST Technical Advisor noted that no specific language has been proposed. The NIST Technical Advisor noted that UPLR Section 6.4, Terms: Weight, Measures, Volume or Count states “any net content statement that does not permit price and quantity comparison is forbidden”. It was further noted that NIST Handbook 130, Section 10.3. Aerosols and Similar Pressurized Containers apply to aerosols and similar pressurized containers. One manufacturer has provided input to this proposal. The National Aerosol Association (NAA) has been contacted for input into this proposal. Preliminary comment by NAA is that BOV technology or versions of it has been around since the 1990s. The NAA Board of Directors member believes BOV technology is considered an aerosol, basing his opinion on a California Air Resources Board Regulation.

The SWMA Committee requested that specific language be developed for this item and a complete response from the NAA. They also noted that test procedures will need to be discussed if a volume statement is to be considered. SWMA forwarded the item to NCWM, recommending it as a Developing Item.

2012 NCWM Interim Meeting: The Committee reviewed several letters from different manufacturers that use BOV technology recommending liquid volume as the appropriate method of sale for products in BOV style packaging. Concern was expressed that consumers would not be able to make value comparisons if similar items had different units of measure.

Mr. Van Slyke, Lock Lord Bissell & Liddell LLP/Blue Magic, Inc., provided a presentation indicating that they believe BOV does not fall under the aerosol guidelines. Their reasoning is that a BOV container does not expel propellant with the product and therefore it inherently has less net weight. They believe that consumers do not have sufficient information to know differences between aerosols and BOV products. Mr. Van Slyke recommended two solutions amending the UPLR language as follows:

10.3. Aerosols and Similar Pressurized Containers. – The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed, provided however that containers that separate propellant from the expelled product so that propellant is not expelled (such as containers using bag-on-valve technology) may be labeled either with weight or volume of the quantity of the commodity that will be expelled.

or

10.3. Aerosols and Similar Pressurized Containers. – The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed.

10.3.1. Containers that separate propellant from the expelled product so that the propellant is not expelled (such as containers using bag-on-valve technology) shall be prominently labeled NON-AEROSOL. The declaration of quantity shall disclose the net quantity of the commodity in terms of fluid measure.

Mr. Raymond, National Aerosol Association, gave a presentation reporting the association’s position that a container using BOV technology is an aerosol and its net quantity needs to be declared in terms of net weight. He remarked that BOV has been around for twenty plus years and is not new to the marketplace. Various products are packaged using the BOV technology (e.g., sunscreen, wound washes, shaving cream, and car products). Different aerosol forms use liquid gas, compressed gases and in barrier forms using Sepro, bladder, and BOV. Mr. Raymond also stated that BOV and non-BOV products are designed to expel their products equally. He stated that classifying a BOV container as a non-aerosol is misleading and a safety concern since this product is pressurized.
A regulatory official agreed that BOV containers should be labeled and tested by net weight. He remarked that test procedures need to be clarified for BOV containers. For example; should the bag be removed from the canister to recover the product?

Concern was also expressed that consumers would be confused if they encountered similar products with different unit pricing, if the products contents are labeled differently. The BOV proposal that was represented during the 2012 NCWM Interim Meeting was based upon the views of the room air fresheners industry only.

The Committee would like to have a better understanding of the variety and type of products in the marketplace and what is under current development. Clarification is needed for the term “similar products” i.e., what products meet this classification as defined in *NIST Handbook 130*, UPLR, Section 10.3. Aerosols and Similar Pressurized Containers. The Committee is also requesting from NIST, OWM clarification on the definition of aerosol and a review for any updates to *NIST Handbook 130*, Interpretations and Guidelines, Section 2.2.7. Aerosol Packaged Products. The 2012 L&R Committee designated this item as an Informational Item.

2012 NEWMA Annual Meeting: There was discussion that conflict between the declaration of content labels in the marketplace between aerosols and bag on valve (BOV) products. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: A NIST Technical Advisor stated that the Food and Drug Administration (FDA) compliance department is reviewing to see if there is a conflict with their regulations. NIST has been in contact with the National Aerosol Association and they will have a representative at the 2012 NCWM Annual Meeting. The CWMA recommended that the item remain as an Informational Item.

2012 NCWM Annual Meeting: Mr. Douglas Raymond representing the National Aerosol Association reported that the association is working with marketers, companies and other trade associations and NAA will provide an update on their position on this item at the 2013 NCWM Interim Meeting. The Committee reviewed five letters that were received.

2012 CWMA Interim Meeting: The NCWM L&R Committee Member from the CWMA provided an update. The Committee supported the work of the National Aerosol Association to recommend consensus language for a definition of aerosol containers and a recommendation for BOV method of sale for the NCWM L&R to consider. CWMA was neutral and recommended that the item remain as an Informational Item.

2012 WWMA Annual Meeting: Industry and regulatory attendees agreed that there are similar items being sold. Inspectors may have difficulty identifying and testing BOV items if they are not clearly marked and “BOV” on the label. The Committee is unsure how BOV is defined and believes a test procedure may be needed for BOV packages. The Committee is interested to hear the updated position from NAA at the 2013 NCWM Interim Meeting. WWMA recommended that the item be an Informational Item.

2012 SWMA Annual Meeting: SWMA withheld comment until NAA presents proposed language with a recommendation at the 2013 NCWM Interim Meeting. SWMA recommended that the item be an Informational Item.

2012 NEWMA Interim Meeting: NEWMA recommended that the item be an Informational Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.
232 NIST HANDBOOK 130 – UNIFORM REGULATION FOR THE METHOD OF SALE COMMODITIES

232-1 Section 2.27. Retail Sales of Natural Gas Sold as a Vehicle Fuel

Source: Clean Vehicle Education Foundation (2013)

Purpose: Enable consumers to make cost and fuel economy comparisons between diesel fuel and natural gas.

Item Under Consideration: Amend NIST Handbook 130, Uniform Regulation for the Method of Sale of Commodities as follows:

2.27. Retail Sales of Natural Gas Sold as a Vehicle Fuel.

2.27.1. Definitions.

2.27.1.1. Natural gas. – A gaseous fuel composed primarily of methane that is suitable for compression and dispensing into a fuel storage container(s) for use as an engine fuel.

2.27.1.2. Gasoline liter equivalent (GLE). – Gasoline liter equivalent (GLE) means 0.678 kg of natural gas.

2.27.1.3. Gasoline gallon equivalent (GGE). – Gasoline gallon equivalent (GGE) means 2.567 kg (5.660 lb) of natural gas.

2.27.1.4. Diesel liter equivalent (DLE). – means 0.756 kg of natural gas.

2.27.1.5. Diesel gallon equivalent (DGE). – means 2.863 kg (6.312 lb) of natural gas.

(Amended 20XX)

2.27.2. Method of Retail Sale and Dispenser Labeling.

2.27.2.1. Method of retail sale. – All natural gas kept, offered, or exposed for sale and sold at retail as a vehicle fuel shall be in terms of the gasoline liter equivalent (GLE) or gasoline gallon equivalent (GGE).

(a) the gasoline liter equivalent (GLE) or gasoline gallon equivalent (GGE), or

(b) the diesel liter equivalent (DLE) or diesel gallon equivalent (DGE).

2.27.2.2. Dispenser labeling. – All retail natural gas dispensers shall be labeled with the conversion factor in terms of kilograms or pounds. The label shall be permanently and conspicuously displayed on the face of the dispenser and shall have either the statement “1 Gasoline Liter Equivalent (GLE) is equal to 0.678 kg of Natural Gas” or “1 Gasoline Gallon Equivalent (GGE) is equal to 5.660 lb of Natural Gas” consistent with the method of sale used.
(a) either the statement "1 Gasoline Liter Equivalent (GLE) is equal to 0.678 Kg of Natural Gas" or "1 Gasoline Gallon Equivalent (GGE) is equal to 5.660 lb of "Natural Gas" consistent with the method of sale used.

(b) either the statement "1 Diesel Liter Equivalent (DLE) is equal to 0.756 Kg of Natural Gas" or "1 Diesel Gallon Equivalent (DGE) is equal to 6.312 lb of “Natural Gas” consistent with the method of sale used.

(Amended 20XX)

Background / Discussion:
The gasoline gallon equivalent (GGE) unit was defined by NIST/NCWM in 1994 (See Appendix A) to allow users of natural gas vehicles to readily compare costs and fuel economy of light-duty natural gas vehicles with equivalent gasoline powered vehicles. For the medium and heavy duty natural gas vehicles in widespread use today, there is a need to officially define a unit (already in widespread use) allowing a comparison of cost and fuel economy with diesel powered vehicles. Also natural gas is sold as a vehicle fuel as either Compressed Natural Gas (CNG) or Liquified Natural Gas (LNG) and each method of sale in measure in mass. Therefore the generic term natural gas is proposed to be used in Handbooks 44 and 130 with out the existing term "compressed".

The mathematics justifying the specific quantity (mass) of natural gas in a DLE and DGE is included in Appendix A.

The official definition of a DLE and a DGE will likely provide justification for California, Wisconsin and any other state to permit retail sales of LNG for heavy-duty vehicles in these convenient units.

Additional Contacts:  Clean Energy, Seal Beach, CA, NGV America, Washington, DC, Clean Vehicle Education Foundation, Acworth, GA

2012 CWMA Interim Meeting:  A regulatory official commented that there is no standard for Diesel Gallon Equivalent, and LNG and CNG are being sold in Wisconsin and other states as DGE in order to compete with diesel sales. As a result, a standard is urgently needed. DGE sales are occurring in the marketplace without a standard. The Committee recommended that FALS review the conversion factors for DGE and LGE for accuracy. CWMA supported this item and forwarded the item to NCWM, recommending it as a Voting Item.

2012 WWMA Annual Meeting: The Committee worked in tandem with the S&T Committee since it had a related item. Ms. Kristin Macey (CA) opposed the item because it would cause complications in the marketplace. The Committee believed the item had merit, but would like to know whether the values accurately represent the actual value of various types of natural gas products. It acknowledged there are different compositions and sources; for example, LNG has a higher methane composition. Is there also a possibility of additional conversion factors based on British Thermal Units (BTUs) from different sources? WWMA forwarded the item to NCWM, recommending it as an Informational Item.

2012 SWMA Annual Meeting: An industry representative recommended the item be designated as Developing. A regulatory official questioned why industry is not installing the right equipment rather than putting a label on a nozzle. The Committee recommended that this item be reviewed by the Fuels and Lubricants Subcommittee, in part to check the accuracy of the diesel conversion. The Committee also suggested that the 1994 standard for the gasoline gallon equivalent be reviewed. SWMA forwarded the item to NCWM, recommending it as an Informational Item.

2012 NEWMA Interim Meeting: NEWMA reviewed the CWMA comments. A General Motors representative indicated that there is a lot of discussion on a point of reference. There was comment that both methods of labeling may be required on a dispenser. The labeling issue may create more confusion for the consumer. NEWMA recommended review by the Fuels and Lubricants Subcommittee. NEWMA forwarded the item to NCWM, recommending it as an Informational Item.
Section 2.33. Oil, 2.33.1.4.1. Inactive or Obsolete Service Categories

Source: Automotive Oil Change Association (AOCA) (2013)

Purpose: Prevent consumer confusion and government-sponsored product bias regarding legitimate, manufacturer-recommended products, and to prevent installers and retailers from being held responsible for labeling requirements with respect to packaged goods.

Item Under Consideration: Amend NIST Handbook 130, Uniform Regulation for the Method of Sale of Commodities as follows:

2.33. Oil.

2.33.1. Labeling of Vehicle Engine (Motor) Oil.

Vehicle engine (motor) oil shall be labeled.

2.33.1.1. Viscosity. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank, and any invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank, shall contain the viscosity grade classification preceded by the letters “SAE” in accordance with the SAE International’s latest version of SAE J300, “Engine Oil Viscosity Classification.”

2.33.1.2. Intended Use. – The label on any vehicle engine (motor) oil container shall contain a statement of its intended use in accordance with the latest version of SAE J183, “Engine Oil Performance and Engine Service Classification (Other than ‘Energy Conserving’”).

2.33.1.3. Brand. – The label on any vehicle engine (motor) oil container and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the name, brand, trademark, or trade name of the vehicle engine (motor) oil.

2.33.1.4. Engine Service Category. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the engine service category, or categories, met in letters not less than 3.18 mm (1/8 in) in height, as defined by the latest version of SAE J183, “Engine Oil Performance and Engine Service Classification (Other than ‘Energy Conserving’)” or American Petroleum Institute (API) Publication 1509, “Engine Oil Licensing and Certification System.”

2.33.1.4.1. Inactive or Obsolete Service Categories. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall bear a plainly visible cautionary statement in compliance with SAE J183, Appendix A, whenever the vehicle engine (motor) oil in the container or in bulk does not meet an active API service category as defined by the latest version of SAE J183, “Engine Oil Performance and Engine Service Classification (Other than ‘Energy Conserving’”). With regard to invoices or receipts from service on an engine, installers may also include the
following language: The inactive and obsolete designations do not override or in any way alter the legitimacy of automobile manufacturers’ engine oil recommendations. In addition, installers and retailers shall be exempt from any labeling requirements with regard to packaged containers of engine oil.”

2.33.1.4.5. Tank Trucks or Rail Cars. – Tank trucks, rail cars, \( \neq \) and other types of delivery trucks that are used to deliver vehicle engine (motor) oil are not required to display the SAE viscosity grade and service category or categories as long as the bill of lading or other documentation provides that information

All references to invoice or receipt will be enforceable effective on July 1, 2013.

(Added 20XX)

Background / Discussion:
The vast majority of engine oil used at professional fast lube facilities is the most current category of API-licensed oil. However, older, specialty, and some non-American vehicles take engine oil not listed as active under API’s private regulatory scheme; some are former API licensed oils now considered “obsolete” or “inactive” and some are simply licensed by another organization like the European Automobile Manufacturers Association (ACEA). However, if OEMs recommend those engine oils for their vehicles, consumers have a right to use them regardless of API’s blessing, and installers and retailers should be able to sell them without obstruction.

AOCA’s amendment is necessary because a cautionary statement appearing on service receipts without explanation will inappropriately mislead consumers with older and uncommon model vehicles into believing they shouldn’t use OEM-recommended engine oil. The average fast lube customer doesn’t recognize API or SAE to mean anything in particular but “CAUTION” and “OBSOLETE” in big capital letters could only be understood as negative. Scaring consumers in this way will not only push them to buy more expensive engine oil they don’t need, but also engender distrust in their installer service providers for recommending and/or using OEM-recommended engine oil.

The average age of cars in the current fleet is nearly 11 years old and it is not unusual for fast lubes to have customers with vehicles twice that age; i.e., there are millions of opportunities for consumers to be misled into rejecting proper engine oil. The fact is American consumers are hanging onto their vehicles longer than API is hanging onto its service categories. When API designates a motor oil category as inactive, that doesn’t mean consumers with vehicles designed to use that category turn in their cars or otherwise want to buy a more expensive grade of motor oil going forward. Therefore, a category of motor oil designed to work for particular makes and models of vehicles should not be burdened with the chilling effect of a cautionary statement absent a specific clarification acknowledging the preeminence of the OEM’s recommendations.

The new standard phase-in factor must be considered as well. When API publishes a new edition of 1509 and/or creates a new service category, a reasonable phase-in period for bulk oil stock is necessary to accommodate older vehicle owners’ needs; i.e., it may be in those customers’ best interests—both functionally and economically—to use motor oil developed in accordance with an earlier edition or service category so long as the automobile manufacturer originally recommended it and its continued use has no impact on any remaining warranty coverage. Although it is common for API to retain a couple of the most recent service categories as “active,” API could choose to make all but the most recent service category “obsolete.” For fast lube operators to automatically upgrade bulk oil stock at API-determined intervals would be tantamount to giving API control over the price of oil change services regardless of what the market can bear.

And what about packaged engine oil products already on the shelf or in the distribution chain when API makes a unilateral decision to deactivate an engine oil category? As a practical matter, tens of thousands of retailers and installers cannot re-mark millions of packages to coincide with API’s timing or take the financial hit for sending it all back in violation of purchase agreements. Attempting to enforce the labeling requirement at this level would be a nightmare for everyone involved. The way to avoid this problem is to adopt AOCA’s amendment so that the requirement for proper labeling of packaged containers of engine oil rest with the party in control of the packaging: the manufacturers.
Without the amendment, the labeling requirement will be very difficult to enforce given the inventory of packaged goods remaining after an active engine oil category has been declared inactive or obsolete.

Fast lubes would experience catastrophic business loss if customers with older and uncommon model vehicles were alienated. Maintenance costs for consumers with older model cars could easily double if they are confused into believing they need the latest category of engine oil.

AOCA contends that the proposed amendment will accomplish three important goals: (1) prevent unintended consumer confusion and product stigma from using a cautionary statement by reestablishing the connection to OEM recommendations; and (2) provide the necessary exemption to protect retailers and installers for selling lawful packaged inventory, which leads to (3) an increase in practical enforcement prospects.

The most analogous regulatory situation to the one at issue in AOCA’s proposed amendment is found in FTC’s Test Procedures and Labeling Standards for Recycled Oil (16 CFR 311). In that rulemaking process, FTC specifically rejected requiring recycled engine oil to be labeled “recycled” because of the stigma associated with the term at that time (see 72 FR 14410 – 14413 & FN11 (1 H.R. Rep. No. 96–1415, 96th Cong. 2d Sess. 6 (1980), reproduced at 1980 U.S. Code Cong. & Ad. News 4354, 4356. ‘‘Oil should be labeled on the basis of performance characteristics and fitness for its intended use, and not on the basis of the origin of the oil.’’)). The National Automobile Dealers Association (NADA) also commented in favor of this approach: “NADA further stated that by not requiring that ‘‘substantially equivalent’’ recycled oils be labeled ‘‘recycled’’ or ‘‘re-refined,’’ used oil processors are able to market their products effectively.” (72 FR at 14411) No “recycled” or other potentially derogatory designation is required so long as the finished product meets the appropriate API standard.

2012 CWMA Interim Meeting: The Automotive Oil Change Association (AOCA) stated that oil change businesses are small businesses without legal staff so they need clear guidance that is easy to understand. They follow the OEM recommendations, and OEMs recommend oils that do not follow API or SAE standards. The language should acknowledge that some manufacturers approve and recommend their own oil. Examples include General Motors (GM) and Audi-Volkswagen. AOCA thought that the current language required all OEM oils that did not meet a specific API performance standard to be labeled as obsolete. A GM representative confirmed that GM produces their own oil, Dexos, which does not have an API certification. A FALS member shared the API motor oil guide, (see Appendix B) which labels specific categories of oil as obsolete. If a manufacturer does not label the oil with an API obsolete category, the product is not considered to be obsolete. OEM manufacturers that were named do not label their oil with an obsolete category, and so oil changers do not need to worry about the obsolete label being used on OEM motor oils. AOCA also asked if there would be a grace period to sell product purchased prior to January 2013. States regulators clarified that nothing is written in the regulation, and that grace periods would be determined on a state by state basis. AOCA reiterated that the language should clearly state that OEM oils that do not have API certification are not obsolete. She asked that the Committee recommend this clarifying language. AOCA also stated that installers should not be responsible for labeling on packaged products received. A regulatory official stated that retailers in other industries are responsible for labeling on packages received, and that it would be an unfair market advantage to allow some retailers to use products that were illegally labeled. Since the current language is not clear about exactly what oils are obsolete, the Committee recommended that FALS produce language for the NCWM Interim Meeting clearly stating that OEM recommended oils that are not API certified are not obsolete. CWMA forwarded the item to NCWM, recommending it as a Voting Item with the stipulation that FALS develop the clarifying language.

2012 WWMA Annual Meeting: Ms. Kristin Macey (CA) opposed the item because it removes retailer accountability. Mr. Kevin Ferrick (API) also opposed the additional language. He provided a presentation for WWMA and written comments to the Committee. Mr. Kurt Floren (LA County, CA) also opposed the item for reasons stated by Ms. Macey. WWMA did not forward the item to NCWM.

2012 SWMA Annual Meeting: An API Representative voiced API’s opposition to the item and provided the following testimony in dispute of the comments and claims made by the submitter:
API supports the current language in Handbook 130 paragraphs 2.33.1.4.1 and 3.13.1.4.1 approved at the July 2012 National Conference on Weights and Measures meeting. In response to the comments received in support of new items 232-2 and 237-4, we offer the following comments for consideration:

- **“Older, specialty, and some non-American vehicles take engine oil not listed as active under API’s private regulatory scheme”**
  - API’s Engine Oil Licensing and Certification System is a voluntary program based on consensus-based industry standards; it’s not a private regulatory scheme.
  - API publishes engine oil performance standards in API 1509, which is available for download for free from API’s website.
  - API and International Lubricants Standardization and Approval Committee (ILSAC) standards are developed in cooperation with OEMs, oil marketers, additive companies, test labs, and other interested parties. This includes AOCA.
  - API declares categories obsolete when the tests used to verify those levels of performance no longer exist.
    - For example, API Specific Gravity (SG) was in use through 1993, but the engine tests used to measure SG performance are no longer available. The engine manufacturers stopped making the engines and parts required for the tests.
    - Without SG engine tests, oil marketers might be able to refer to old SG data to confirm an SG oil’s ability to protect against wear and prevent sludge and varnish. Marketers seeking to develop new SG formulations don’t have SG engine tests to verify performance.
- **“If OEMs recommend those engine oils for their vehicles, consumers have a right to use them regardless of API’s blessing, and installers and retailers should be able to sell them without obstruction”**
  - API doesn’t recommend engine oils for vehicles—OEMs do.
  - Most US, Japanese and South Korean OEMs recommend oils licensed to use the API Starburst.
    - The Starburst identifies oils meeting the most recent ILSAC performance standard. Today, that’s GF-5. If the Starburst appears in an owner’s manual, the OEM is recommending the vehicle owner use GF-5.
    - The Starburst system is possible because oils meeting ILSAC standards are backward compatible: the latest ILSAC standard meets or exceeds the previous standard. If an owner’s manual for a 1998 model year vehicle includes the Starburst, the OEM is recommending the owner use the latest ILSAC standard (in this case GF-5).
    - If an installer stocks in bulk an oil meeting an older API performance standard (for example API SF), how would the installer ensure this older oil is not installed in a newer engine unless the installer follows the requirements in the approved National Conference language?
    - OEM’s have recommended the API Starburst since 1994. This represents the majority of the vehicles on the road today.
- **“The average fast lube customer doesn’t recognize API or SAE to mean anything in particular”**
  - We agree—that’s why API launched a new program to educate marketers, distributors, installers and consumers on the importance of oil quality.
  - This includes educating everyone on the meaning of the API Starburst and Donut.
- **“When API publishes a new edition of 1509 and/or creates a new service category, a reasonable phase-in period for bulk oil stock is necessary to accommodate older vehicle owners’ needs”**
  - API provides a phase-in for all new API Starburst and Donut performance standards.
    - We start with a six- to nine-month waiting period before API begins licensing oils against the standard.
• This is followed by a one-year period when the previous and new standards co-exist.
• Then, according to OEM recommendations, consumers with a Starburst in their owner’s manual are recommended to start using oils meeting the new standard.
  – API does maintain older standards where possible. Currently, three older “S” categories (SJ, SL, and SM) can still be licensed. This is possible because the engine tests for these categories are still available.
• “Although it is common for API to retain a couple of the most recent service categories as “active,” API could choose to make all but the most recent service category “obsolete”
  – API declares service categories obsolete when the tests used to verify their performance are no longer available.
  – If API were to consider making a category obsolete while the engine tests were still available, API would need to ballot the change through our consensus-based standards-setting process.
• “And what about packaged engine oil products already on the shelf or in the distribution chain when API makes a unilateral decision to deactivate an engine oil category?”
  – API-licensed products packaged before category obsolescence are considered licensed after the obsolescence date. We can verify date of manufacture through the oil bottle’s traceability code. All packaged API-licensed oils are required to include traceability codes. Nothing in API 1509 indicates otherwise.
  – Unilateral decision? No tests available results in category obsolescence.

The oil change industry had provided numerous letters of support for the item. An automobile industry representative did not support the item as written, commenting that the wording is vague and allows a loophole for oil change places to use old oil. Current wording allows for an older classification of oil to be used. It was suggested that the item be reworded. The Committee believed there was lack of support for the item and that the oil change industry has a poor understanding of the API standards. SWMA did not forward the item to NCWM.

2012 NEWMA Interim Meeting: API stated that it opposes the item and that specifics have been submitted in writing. API suggested that this proposal and 237-4 be Withdrawn. General Motors indicated the proposal appears to allow older formulations of engine oil, but newer formulations give better performance, even in older vehicles. GM prefers current formulation of engine oil. NEWMA did not forward the item to NCWM.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

232-3  Section 2.33. Oil, 2.33.1.4.5. Tank Trucks or Rail Cars

Source:
Automotive Oil Change Association (2013)

Purpose:
Make compliance and enforcement practical, efficient, and fair.

Item Under Consideration:
Amend NIST Handbook 130, Uniform Regulation for the Method of Sale of Commodities as follows:

2.33. Oil

2.33.1. Labeling of Vehicle Engine (Motor) Oil.

Vehicle engine (motor) oil shall be labeled.
2.33.1. Viscosity. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank, and any invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank, shall contain the viscosity grade classification preceded by the letters “SAE” in accordance with the SAE International’s latest version of SAE J300, “Engine Oil Viscosity Classification.”

2.33.1.2. Intended Use. – The label on any vehicle engine (motor) oil container shall contain a statement of its intended use in accordance with the latest version of SAE J183, “Engine Oil Performance and Engine Service Classification (Other than ‘Energy Conserving’).”

2.33.1.3. Brand. – The label on any vehicle engine (motor) oil container and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the name, brand, trademark, or trade name of the vehicle engine (motor) oil.

2.33.1.4. Engine Service Category. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the engine service category, or categories, met in letters not less than 3.18 mm (1/8 in) in height, as defined by the latest version of SAE J183, “Engine Oil Performance and Engine Service Classification (Other than ‘Energy Conserving’)” or API Publication 1509, “Engine Oil Licensing and Certification System.”

2.33.1.4.1. Inactive or Obsolete Service Categories. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall bear a plainly visible cautionary statement in compliance with SAE J183, Appendix A, whenever the vehicle engine (motor) oil in the container or in bulk does not meet an active API service category as defined by the latest version of SAE J183, “Engine Oil Performance and Engine Service Classification (Other than ‘Energy Conserving’).”

2.33.1.5. Tank Trucks or Rail Cars. – Tank trucks, rail cars, and other types of delivery trucks that are used to deliver vehicle engine (motor) oil are not required to display the SAE viscosity grade and service category or categories as long as the bill of lading or other documentation provides that information. Nothing in this section shall be construed as making optional the presentation by distributors to installers at the time of delivery detailed bills of lading or other documentation including SAE viscosity grade, service category or categories, and brand. All distributors, whether or not displaying the SAE viscosity grade and service category or categories on tank trucks, rails cars, or other types of delivery trucks, are required to present to installers at the time of delivery detailed bills of lading or other documentation including SAE viscosity grade, service category or categories, and brand.

All references to invoice or receipt will be enforceable effective on July 1, 2013.

(Added 20XX)

Background / Discussion:
There is a chain of engine oil purchasers involved in the sale of bulk engine oil, all of whom need accurate and adequate information about the commodity so that they can make price and quantity comparisons. The engine oil distributor is a purchaser with respect to engine oil manufacturers, the installer is a purchaser with respect to engine oil distributors, and the consumer is a purchaser with respect to installers. Installers like fast lube operators can only provide accurate and adequate information about bulk engine oil to consumers if their distributors provide it at the point of delivery. It would be manifestly unfair to expect installers to legally vouch in writing for the quality of distributors’ engine oil products absent a corresponding written verification requirement.
The recent amendments (July 2012) creating paragraphs 2.33.1.4.2 and 3.13.1.4.2 inadvertently created a loophole for distributors to avoid providing necessary product documentation at the time of delivery.

Whether or not NCWM waives tank truck labeling is not the issue. The problem lies in the converse this provision allows: if a distributor displays the SAE viscosity grade and service category on a tank truck, then he/she doesn’t have to provide a bill of lading. This poses a serious risk to installers like fast lubes because the regulation requires them to vouch for viscosity grade, service category, and brand on customer receipts but doesn’t guarantee that they’ll receive that same information in writing from their distributors—the parties with actual control over product quality/identity.

There is also no practical way for fast lubes or NCWM to enforce this “either/or” regulatory scenario. If a distributor arrives at an installer’s facility without documentation, how can the installer hold the distributor to it under NIST Handbook 130? The distributor can simply claim his/her truck is adequately marked. Installers are not professional truck inspectors; they cannot be expected to act as enforcement agents in this scenario. Meanwhile, in order for local Weights & Measures officials to hold a distributor accountable, they would have to arrive on the scene at the time of delivery, which coincidence is unlikely at best. Any subsequent official inquiry would take place after the distributor had had the opportunity to subsequently mark any unmarked truck at issue. Moreover, risk of distributor failure in providing necessary documentation is high because most do not and never have been willing to provide bills of lading or other documentation to fast lubes at the time of delivery.

Additionally, the imperative for any installer labeling and/or receipt information requirements to be matched by corresponding requirements for engine oil distributors includes “brand.” Installers cannot purport to verify via any form of documentation information that distributors have not documented at delivery. New sections 2.33 and 3.13 require installers to verify brand in writing and, therefore, distributors should be required to verify it, too. For NCWM to require otherwise would be manifestly unfair to installers by subjecting them to liability for the bad acts of distributors without any paperwork trail to rely upon in their own defense.

No one has more at stake than installers. Should a product quality problem occur with packaged goods, it’s relatively easy to trace the goods back to the manufacturer. However, this is not the case with motor oil transported in bulk; it all looks alike, it may have “changed hands” numerous times before reaching the fast lube facility, and even with testing can be impossible for a fast lube to verify because oil companies use chemical markers that only they can identify. Since motor oil specifications have become so precise—and so expensive—fast lube operators stand to lose thousands of dollars every time a distributor delivers a lesser product.

Moreover, when a distributor delivers the wrong product, it’s the fast lube operator who gets stuck holding the bag for consumer claims, which can be excessive if the “wrong” product did or could cause engine damage. It takes weeks before a bad load is detected and by then anywhere from 500 to 700 customers have been serviced. The remedy? All of the customers must be called back and re-serviced for free before any damage has the opportunity to occur. Requiring distributors to provide the same documentation required of installers represents the minimum necessary step to at least protect installers from misrepresentation claims when a distributor “mis-delivers” bulk oil.

API and Independent Lubricant Manufacturers Association (ILMA) have been publicly quoted as supporting the requirement that distributors provide documentation at delivery as if the new paragraphs at issue already mandate it under all circumstances. See Lube Report (8/1/12) http://www.imakenews.com/lng/e_article002489327.cfm?x=b11.0.w

The Environmental Protection Agency’s (EPA) Federal Used Oil Management Standards require detailed transporter chain of custody documentation (40 CFR Part 279). See also EPA’s Chain-of-Custody Procedures for Samples and Data (www.epa.gov/apti/coc/), which makes clear that failure to maintain a proper chain of custody regarding samples and/or data will destroy any ability to defend oneself if challenged.

According to the USDA, segregation and documentation for specialty (bulk) crops continue from the elevator to the final producer or consumer. See attached study, Traceability in the U.S. Food Supply: Economic Theory and Industry Studies (USDA Economic Research Service 2004).

Under the FDA Food Modernization Act (Public Law 111-353), documenting the production and distribution chain of food products is required so that “in case of a problem, a product can be traced back to the source.”
The Department of Transportation (DOT) overlaps with EPA regarding the Federal Hazardous Waste Manifest System (40 CFR Part 262), which mandates detailed documentation of hazardous waste from cradle to grave; i.e., from generator to transporter to end user/disposal.

The submitter provided the following websites as evidence that “Misdelivery of liquid products must happen with some recognized frequency because the subject is big business for the insurance industry”:

http://www.johannesagency.com/petroleum,
http://canalinsurance.com/coverage/truckers-general-liability,
http://www.marianagency.com/programs/transportation,
http://falcigno.com/products-a-services/environmentalchemical,
http://www.safapeoria.com/data/uploadDirectory/applications/commercialauto/EMPIRE%20FIRE%20AND%20M ARINE/Motor%20Carrier/motor%20carrier.pdf,

2012 CWMA Interim Meeting: The Automotive Oil Change Association (AOCA) stated that the current language would allow the distributor to either label the truck or tank car or the bill of lading. The language should clearly state that distributor needs to provide the retailer with a bill of lading or other documentation that includes product identity information. A FALS member acknowledged that the current language could be construed to say that the distributor does not need to provide this documentation, and that was not the intent. The Committee recommends that FALS provide concise language that states that a bill of lading or other documentation with appropriate product information must be provided to the retailer. FALS should submit proposed language to the NCWM L&R Committee for the Interim meeting. CWMA forwarded the item to NCWM, recommending it as a Voting Item with the stipulation that FALS develop the clarifying language as requested.

2012 WWMA Annual Meeting: Mr. Ferrick (API) provided a presentation to the WWMA and written comments to the Committee. Mr. Ferrick remarked that the submitted proposal was rather wordy however; he does not disagree with the language. Ms. Kristin Macey (CA) supported the submitted proposal. The Committee agreed that the submitted proposal is too lengthy and presented alternative language for consideration. The Committee regretted that the submitter was not present to answer questions and concerns. WWMA forwarded the item to NCWM, recommending it as an Informational Item as modified and presented below:

2.33.1.5. Tank Trucks or Rail Cars. – Tank trucks, rail cars, and other types of delivery trucks that are used to deliver vehicle engine (motor) oil are not required to display the SAE viscosity grade and service category or categories, however as long as the bill of lading or other documentation shall provide that information.

2012 SWMA Annual Meeting: An API representative stated the proposal is consistent with API goals for distributor and installers to disclose what they are installing. The Committee agreed that adequate documentation should be provided. SWMA forwarded the item to NCWM, recommending it as a Voting Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

232-4 Section 2.XX. Printer Ink and Toner Cartridges Labeling

Source: Southern Weights and Measures Association (2010)
Purpose:
Clarify the labeling requirements for industry, consumers and weights and measures officials.

Item Under Consideration:
Amend *NIST Handbook 130*, Method of Sale Regulation as follows:

2.XX. Printer Ink and Toner Cartridges Labeling.

2.XX.1. Definitions.

(a) 2.XX.1.1. Printer ink cartridges – Any cartridge or module that contains ink or a similar substance in liquid form employed in the printing and/or copying of documents, papers, pictures, etc., that is used in a printing device and designed to be replaced when no longer able to supply its contents in printing and/or copying.

(b) 2.XX.1.2. Toner cartridges – Any cartridge or module that contains toner, powder, or similar non-liquid substance employed in the copying or printing of documents, papers, pictures, etc. that is used in a printing and/or copying device and designed to be replaced when no longer able to supply its contents in printing and/or copying.


(a) 2.XX.2.1. Method of sale, printer ink cartridges. – All printer ink cartridges kept, offered, or exposed for sale or sold shall be sold in terms of the count of such cartridges and the fluid volume of ink in each cartridge stated in terms of milliliters or fluid ounces.

(b) 2.XX.2.2. Method of Sale, toner cartridges. – All toner cartridges kept, offered, or exposed for sale or sold shall be sold in terms of the count of such cartridges and the net weight of toner substance.

(Added 20XX)

Background / Discussion:
Over the past several years, there has been a change in the marketplace on inkjet and toner cartridges net content statements. There is little uniformity, and the Committee has seen some labels with a net content or with only a page yield count (e.g., prints 1000 pages). The NIST, OWM pointed out that, according to guidelines printed in *NIST Handbook 130*, Weights and Measures Law, Section 19 “information required on packages,” these products are required to have the net contents of the ink (and toner) labeled, but manufacturers have resisted, claiming an exemption under the FPLA. The purpose of this proposal is to specifically clarify the requirements for industry, consumers, and weights and measures officials.

2009 SWMA Annual Meeting: A Lexmark representative commented that they do not believe that a net content statement should be required, and that a page yield is sufficient. He read the main points of a letter from Lexmark to Mr. Gray, Florida Department of Agriculture and Consumer Services, dated March 17, 2009. The main points within the letter were: 1) the ink associated with a cartridge is a small fraction of the total cost of the print cartridge mechanism; 2) a page yield can provide a meaningful comparison to a consumer if all manufacturers employ the same estimating assumptions and techniques; and 3) International Organization for Standardization (ISO) studied this issue for years and has rejected reliance on ink volume or quantity; instead ISO has developed a yield estimating and claiming methodology that permits cartridges to be compared using a consistent yardstick. Unlike ink volume measurements, page yield measurements provide a consumer with a reliable way to compare the amount of printing that can be expected. Lexmark also stated that ink is expressly exempt from labeling as provided by the FPLA, 16 Code of Federal Regulations (CFR) 503.2(a).

An industry representative said this issue does need to be discussed and reviewed further. However, many officials believe that consumers should know what they are getting. If it is determined that page count is the quantity
statement, then the page print standard should be reviewed and have tighter standards. Mr. Gray, Florida Department of Agriculture and Consumer Services, said that more data is needed from manufacturers on this issue. SWMA forwarded the item to NCWM, recommending it as a Developing Item.

2010 NCWM Interim Meeting: Mr. Barkley, Hewlett Packard Co., commented that the FPLA creates an exemption for ink which extends to toner and ink cartridges. A declaration of weight and volume are not the best way for consumers to make value comparisons. Customers benefit from page count/yield. Mr. Barkley urged that this issue be Withdrawn. If this issue is to proceed, it should be Informational to allow for a review of the FPLA exemption. He suggested that page yield is widely accepted and has repeatability measures.

Mr. Pociask, Hewlett Packard Co., submitted a white paper from the Information Technology Industry Council. This white paper included manufacturers from Epson, Hewlett Packard, Kodak, and Lexmark. Mr. Pociask explained that his background is with ink and toner measurement. For the same volume of ink, two different systems of the same model cartridge from two different vendors can print a different number of pages. In order to determine the page yield, they are using the ISO/IEC methodology. ISO is working on a photo yield standard.

An official expressed concerns with page yield being the standard page print for quantity. Variation exists based on the type of cartridge, printer, and font and if graphics/photos are being printed. There is also a concern with what ink cartridge refillers are doing. The Florida official reviewed the current practice of refillers, and said they are stating the amount of ink on labels. There are many manufactured packages in the marketplace, so value comparison to the Original Equipment Manufacturer (OEM) is critical. This is an expensive commodity and clarifications of the requirements are needed. An official recommended that this item not be Withdrawn, but made Informational to allow time for research. Regulatory officials firmly believe that there needs to be a consistency with the declaration statement on these types of items. A consumer stated that the net content needs to be stated with voluntary supplemental information for page yield. Some voiced their opinion that consumers need to know page yield in order to make a value comparison. The NIST Technical Advisor stated that under the FTC regulations ink and toner cartridges were not part of the CFR. NIST, OWM met with the FTC on February 26, 2010, to request clarification of the exemption. According to the Committee, there needs to be a test procedure for verification of net content developed for ink and toner cartridges. The 2010 L&R Committee designated this item as an Informational Item until they receive clarification from FTC, review ISO standards, and determine what refillers’ current practices are.

2010 NEWMA and CWMA Annual Meetings: Both associations received a presentation from Mr. Pociask, American Consumer Institute, regarding a lack of consumer information when purchasing computer printers and cartridges. Both associations expressed that there are still many unanswered questions and would like to hear from manufacturers of ink and toner cartridges. Both associations recommended that the item remain as an Informational Item.

2010 NCWM Annual Meeting: Mr. Pociask, American Consumer Institute, presented a 2007 study done by his organization with funding by a telemarketing research company. An official expressed concern that the presentation was not clear and asked if page count is based on certain fill levels or declaring the weight on the cartridge itself. Mr. Pociask responded that Quality Logic uses the ISO standards. He concluded that net weight is easy to enforce. Mr. Pociask stressed that his focus is to provide information that gives consumers useful information in purchasing printers and the life cost of the printer, including printer ink cost.

Another official stated that the study was interesting, but would like to hear from manufacturers. There are several issues; cartridges are only for specific printers, when comparing price per page you suggest that price is static, and ink cartridge refillers need to be addressed.

Mr. Rosenberg, Information Technology Industry Council, agreed that providing consumers with information is meaningful, however; relevant to the consumer is the number of pages that can print. The ISO standards are a good tool, but will lead to customer confusion. Mr. Rosenberg said that much more discussion is necessary on this issue.

2010 Annual Meeting: The Board of Directors established a Task Group on Printer Ink and Toner Cartridges to review and obtain additional information from all stakeholders. Ms. Dempsey, Montgomery County Weights and Measures, Ohio was appointed as chair and Ms. Warfield was designated as the NIST Technical Advisor.
2010 CWMA Interim Meeting: Ms. Dempsey, Task Group on Printer Ink and Toner Cartridges Chair announced her resignation to the association. Ms. Dempsey gave a briefing on this issue, in particular whether this particular form of ink is included in the exemption of the FPLA. It was indicated that Food and Drug Administration believes this exemption only applies to ink in pens, not in printer cartridges. Regulators commented that “yield” is more important for cost comparison for consumers; however, other regulators believed that “yield” is not a weights and measures issue. Another concern was that the ISO yields are based upon approximations. Discussion also included whether regulators would have to purchase printers in order to verify yield. It was generally agreed that this is a very complicated matter, and the method of sale needs to be measurable. An official said he asked a manufacturer how the packages are filled. The response indicated that packages are filled by volume. The CWMA Committee supported the efforts of the Task Group on Printer Ink and Toner Cartridges to gather more information for development of this proposal. CWMA recommended that the item remain as an Informational Item.

2010 WWMA Annual Meeting and the 2010 NEWMA Interim Meeting: It was announced that NCWM is seeking a chair for the Task Group on Printer Ink and Toner Cartridges. WWMA recommended that the item remain as an Informational Item.

2010 SWMA Annual Meeting: It was announced that a chair is needed for the Task Group on Printer Ink and Toner Cartridges. The Committee did not endorse the formation of the Task Group on Printer Ink and Toner Cartridges to resolve this issue. Only within the past couple years have manufacturers changed their declaration statement to read “yield.” Allowing the declaration by yield will open the door for other commodities to change their labeling (e.g., loads of laundry). The SWMA Committee recommended that these commodities be sold by volume and weight; however, they are not opposed to yield being a supplementary statement. This will allow for inspectors to verify the net contents, and also provide information for consumers to make value comparisons. The Committee would like to seek additional information from industry and ink refillers. SWMA recommended that the item be a Voting Item.

2011 NCWM Interim Meeting: The Task Group on Printer Ink and Toner Cartridges held its first work session, chaired by Ms. Maureen Henzler, Kansas Department of Agriculture. There was discussion on the current forms and types of printer ink. Industry also explained that they are able to deliver less ink with a better print quality. As a result they refrain from using the net content statement but believe that a page yield is more useful information for a consumer in making comparisons. Industry was informed that yield is not acceptable and they cannot use words like “approximate” and “estimated.” It was agreed that yield could be a supplementary statement on the package. The 2011 L&R Committee designated this item as an Informational Item.

The Task Group on Printer Ink and Toner Cartridges requested the following additional information from industry:

1. How does the ISO standard work, and how this standard would fit into the weights and measures test procedure.
2. How is print darkness measured?
3. Why have manufacturers removed the net weight declaration from packages and replaced it with a page yield?
4. When changing formulas, is the toner receptacle resubmitted back through the ISO standards to validate the page print accuracy?

2011 NEWMA Annual Meeting: There were no comments heard on this item. The Committee Chair reminded members that the Printer and Toner work group will be meeting on the Sunday prior to the start of the NCWM Annual Meeting, and that industry will be giving a presentation. The NEWMA L&R Committee recommended that this item move forward as an Informational Item.

2011 CWMA Annual Meeting: There were several comments heard on this item. Concern was expressed that ink cartridges used to have quantity on the label, but now, in the marketplace, only yield is used for labeling. A state director expressed concern that ink refillers are not being addressed under this proposal. The CWMA L&R Committee recommended that this item move forward as an Informational Item.

2011 NCWM Annual Meeting: The Printer Ink and Toner Cartridge Task Group held a Sunday work session. Several state, county, and city weights and measures officials and members of industry attended. Mr. Josh Rosenberg, Information Technology Industry Council (ITI), and other printer industry representatives gave a
presentation outlining why they believe yield is the appropriate method of sale for their products. They responded to questions regarding the quantity control they have when manufacturing the cartridges. All industry representatives acknowledged in response to questions that their companies have very good quantity control systems in place for filling cartridges. A stakeholder stated that packages must have the weight, measure, or count; no other type of labeling is acceptable. Participants commented that “yield” is not an acceptable means of labeling for any product. The Task Group agreed to meet again at the 2012 NCWM Interim Meeting. The group requested that industry representatives make another presentation at that time that would be limited just to the labeling issue. The Task Group plans to submit a method of sale proposal to the NCWM L&R Committee for a method of sale for packaged printer ink and toner cartridges.

During the Committee open hearings, Mr. Rosenberg, ITI (also representing Lexmark, HP, Kodak, Epson and Brother), submitted the industry presentation from the Sunday session for the record (refer to Appendix C in the Report of the 96th NCWM [SP 1125, 2011]). Mr. Rosenberg remarked that quantity declarations by volume or weight do not meet the objectives of his organization nor consumers’ preference. He said that yield is the best way to enable consumers to make informed purchase decisions. He believes the ISO standard for yield can be applied to create that data. Mr. Rosenberg stated that industry representatives will attend upcoming regional meetings to address any issues or concerns. A stakeholder noted that he does not believe the ISO yield standard is acceptable, because each manufacturer’s default system is different. He also pointed out that NCWM is not a performance based evaluation agency, and encouraged the Task Group to propose the use of weight or volume as the method of sale. The 2011 L&R Committee requested that the Printer Ink and Toner Cartridge Task Group continue developing this item.

2011 CWMA Interim Meeting: An official supported the item and asked the Committee to forward it as a Voting Item. Two other officials would rather see a weight statement because the amount of ink would be too small to measure the density. An official opposing a weight statement and supporting measuring by yield stated that one cannot measure when the cartridge retains some portion of ink and measuring by volume does not help inform the consumer. An official questioned how yield could be measured. Several officials stated that yield could be a supplemental declaration and lawsuits could deal with issues related to yield. NCWM may want to consider having the products labeled by weight and not volume. In addition, supplemental information such as yield may be displayed, but not in the net weight area. CWMA recommended that the item remain as an Informational Item.

2011 WWMA Annual Meeting: A consumer stated that no comments have been heard and therefore the item is ready to move forward for a vote. An official did not believe that this item was ready to move forward as a Voting Item because of the lack of testing procedure and a recommendation from the Task Group. He then made a motion that this item be made Informational; this motion did not receive a second. In a split vote WWMA recommended that the item be a Voting Item.

2011 NEWMA Interim Meeting: No comments were recorded. NEWMA recommended that the item remain as an Informational Item.

2011 SWMA Annual Meeting: No comments were recorded. The Committee supported the item as written. SWMA recommended that the item be a Voting Item.

2012 NCWM Interim Meeting: Ms. Henzler, Task Group on Printer Ink and Toner Cartridges Chair, informed the Committee that the Task Group did not have a recommendation on a method of sale for either the ink or toner. They did suggest minor editorial changes to add the word “copying” after the word “printing” or vice versa, throughout the definitions.

Several members of the ink and toner industry recommended that this item be Withdrawn and they have reflected this in letters written to the Committee since this item first appeared. They remarked that the current proposal would confuse and mislead consumers. They believe that consumers are not concerned with the net quantity of ink they are getting, but how many pages they can print. They agreed that the definitions do need additional work. They added that there are other ink technologies in the marketplace such as, wax sticks and oils. Currently wax sticks/crayons are sold by count.
A contractor commented that the Method of Sale Regulation states that items must be sold on the basis of weight, measure or count. The regulation should be the starting point with the possibility of adding supplementary information.

The Committee believes test procedures need to be developed to test these commodities. In addition, destructive testing of these products can be costly. The Committee wants to look at the possibility for both toner and ink to be sold by weight. Ms. Cardin, Committee Chair will request that the NCWM Board of Directors appoint a new work group to develop test procedures and to disband the current Task Group on Printer Ink and Toner Cartridges. Anyone interested in participating in the Printer Ink and Toner Test Procedure Work Group should contact Ms. Cardin, Wisconsin Weights and Measures at judy.cardin@wisconsin.gov or Ms. Lisa Warfield, NIST Technical Advisor at lisa.warfield@nist.gov. The 2012 L&R Committee designated this item as an Informational Item.

2012 NCWM Interim Meeting: An industry representative commented that they had submitted previous background and documentation on this item. They will continue to work with the Printer Ink and Toner Cartridge workgroup.

2012 NEWMA Annual Meeting: Mr. Floren, Los Angeles County Agricultural Commissioner / Weights and Measures, indicated that there is an impasse on Method of Sale and test procedures on these items. The work group is not planning to meet at this time to resolve the issues. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: Ms. Judy Cardin (WI) provided an overview of this item. The current method of sale of ink cartridges is by volume and for toner is by weight. Industry began to make ISO page yield statements on these packages. Some companies removed the weight and volume statements from their packages. Regulators do not think the ISO average page yield is an acceptable quantity statement and believe these packages need a quantity statement of weight, volume or count. She announced that a new Printer Ink and Toner Cartridge Gravimetric Package Testing Task Group is being formed to develop test procedures cartridges labeled by weight and welcomed any volunteers. An attendee commented that ISO yield varies by company and he was glad an acceptable method of sale was determined. He suggested that an effort be made to contact industry to generate interest in participation on the work group. CWMA recommended that the item remain as an Informational Item.

2012 NCWM Annual Meeting: The new Printer Ink and Toner Cartridge Gravimetric Package Testing Task Group met to discuss a test method that would require industry to label cartridges with a tare (packaged materials) weight. This Task Group, chaired by Judy Cardin, judy.cardin@wi.gov, will continue developing gravimetric test methods for printer ink and toner cartridges, and will report again at the 2013 NCWM Interim meeting. The Committee is placing an item in the 260 Series (Handbook 133) of the next agenda to report the work of the Printer Ink and Toner Gravimetric Package Testing Task Group. The L&R Committee will delay further development of this Method of Sale item until the Task Group has completed its recommendations.

2012 CWMA Interim Meeting: The NCWM L&R Committee from the CWMA reported that the Task Group is developing test methods for printer ink and toner. CWMA is neutral and recommended that the item remain as an Informational Item.

2012 WWMA Annual Meeting: The Committee noted that the NCWM L&R Committee will not develop this item further until it receives recommendations for gravimetric testing from the Printer Ink and Toner Cartridge Task Group. WWMA recommended that the item be Withdrawn.

2012 SWMA Annual Meeting: An industry representative serving on the Task Group commented that it is a new group established to develop a test procedure for checking net contents without regard for the method of sale. SWMA supported the Method of Sale proposal as written recommended that the item be a Voting Item.

2012 NEWMA Interim Meeting: NEWMA recommended that the item be an Informational Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.
237  NIST HANDBOOK 130 – UNIFORM ENGINE FUELS AND AUTOMOTIVE LUBRICANTS REGULATION

237-1  Section 1.15. Diesel Liter Equivalent (DLE) and Section 1.16 Diesel Gallon Equivalent (DGE)

Source: Clean Vehicle Education Foundation (2013)

Purpose: Enable consumers to make cost and fuel economy comparisons between diesel fuel and natural gas.

Item Under Consideration: Amend NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

Section 1. Definitions

1.15. Diesel Liter Equivalent (DLE). - means 0.756 kg of natural gas. (Added 20XX)


(Renumber remaining paragraphs as necessary)

Background / Discussion:
The gasoline gallon equivalent (GGE) unit was defined by NIST/NCWM in 1994 (See Appendix A) to allow users of natural gas vehicles to readily compare costs and fuel economy of light-duty natural gas vehicles with equivalent gasoline powered vehicles. For the medium and heavy duty natural gas vehicles in widespread use today, there is a need to officially define a unit (already in widespread use) allowing a comparison of cost and fuel economy with diesel powered vehicles. Also natural gas is sold as a vehicle fuel as either Compressed Natural Gas (CNG) or Liquified Natural Gas (LNG) and each method of sale in measure in mass. Therefore the generic term natural gas is proposed to be used in Handbook s 44 and 130 with out the existing term "compressed".

The mathematics justifying the specific quantity (mass) of natural gas in a DLE and DGE is included in Appendix A.

The official definition of a DLE and a DGE will likely provide justification for California, Wisconsin and any other state to permit retail sales of LNG for heavy-duty vehicles in these convenient units.

2012 CWMA Interim Meeting: A regulatory official commented that there is no standard for Diesel Gallon Equivalent, and LNG and CNG are being sold in Wisconsin and other states as DGE in order to compete with diesel sales. As a result, a standard is urgently needed. DGE sales are occurring in the marketplace without a standard. The Committee recommended that FALS review the conversion factors for DGE and LGE for accuracy. CWMA supported this item and forwarded the item to NCWM, recommending it as a Voting Item.

2012 WWMA Annual Meeting: The Committee worked in tandem with the S&T Committee since it had a related item. Ms. Kristin Macey (CA) opposed the item because it would cause complications in the marketplace. The Committee believed the item had merit, but would like to know whether the values accurately represent the actual value of various types of natural gas products. It acknowledged there are different compositions and sources; for example, LNG has a higher methane composition. Is there also a possibility of additional conversion factors based...
on BTU’s from different sources? The Committee requested outreach by NCWM to other stakeholders to get their involvement on these items. WWMA forwarded the item to NCWM, recommending it as an Informational Item.

2012 SWMA Annual Meeting: SWMA recommends review by the Fuels and Lubricants Subcommittee and forwarded the item to NCWM, recommending it as an Informational Item.

2012 NEWMA Interim Meeting: NEWMA reviewed the CWMA comments. A General Motors representative indicated that there is a lot of discussion on a point of reference. There was comment that both methods of labeling may be required on a dispenser. The labeling issue may create more confusion for the consumer. NEWMA recommended review by the Fuels and Lubricants Subcommittee. NEWMA forwarded the item to NCWM, recommending it as an Informational Item.

Additional Contacts: Clean Energy, Seal Beach, CA, NGVAmerica, Washington, DC, Clean Vehicle Education Foundation, Acworth, GA

Section 2.1.4. Minimum Antiknock Index (AKI), Section 2.1.5. Minimum Motor Octane Number, and Table 1. Minimum Antiknock Index Requirements

Source:
General Motors (2013)

Purpose:
Remove obsolete Altitude De-rating of Octane practice, establish a National Octane Baseline, and harmonize Octane Labeling from state to state.

Item Under Consideration:
Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

2.1.4. Minimum Antiknock Index (AKI). – The AKI of gasoline and gasoline-oxygenate blends shall not be less than 87. The AKI shall not be less than the AKI posted on the product dispenser or as certified on the invoice, bill of lading, shipping paper, or other documentation.

2.1.5. Minimum Motor Octane Number. – The minimum motor octane number shall not be less than 82.

for gasoline with an AKI of 87 or greater;

<table>
<thead>
<tr>
<th>Term</th>
<th>Minimum Antiknock Index</th>
<th>Minimum Antiknock Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ASTM-D4814-Altitude-Reduction Areas IV and V</td>
<td>All Other ASTM-D4814 Areas</td>
</tr>
<tr>
<td>Premium, Super, Supreme, High Test</td>
<td>90</td>
<td>91</td>
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<tr>
<td>Midgrade, Plus</td>
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<td>89</td>
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<td>Regular-Leaded</td>
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<tr>
<td>Regular, Unleaded (alone)</td>
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<td>87</td>
</tr>
<tr>
<td>Economy</td>
<td>--</td>
<td>86</td>
</tr>
</tbody>
</table>

Background / Discussion:
These HB 130 Octane Changes will harmonize with an effort underway in the ASTM International (ASTM) Gasoline and Oxygenates Subcommittee to include a minimum motor octane number (MON) performance limit in gasoline. The naming of the various octanes is a function for weights and measures.
Nominally, vehicles manufactured after 1984 include engine computer controls maintaining optimal performance while using gasoline octane of 87 AKI or higher. The practice of altitude de-rating of octane, resulting in octanes below 87 AKI, reduces a vehicle’s efficiency and fuel economy. Increasingly, more vehicles are boosted (turbocharged / supercharged) eliminating altitude intake air effects. Additionally, consumers using gasoline with an octane AKI below 87 will void their vehicle owner’s warranty. The Coordinating Research Council (CRC) Report No. 660, “Fuel Anti-knock Quality – Engine Response to RON (Research Octane Number) versus MON”, May 2011 demonstrates the continued need for gasoline MON octane for the large bored, naturally aspirated U.S. engines. Setting an 82 MON minimum maintains the current MON level for today’s 87 AKI Regular Unleaded gasoline. A common U.S. octave specification between ASTM, NCWM and Vehicle Owners Manuals will give States clear direction on how best to enforce proper fuel pump octane labeling and quality levels on behalf of vehicle consumers.

Leaded gasoline is not available at retail and therefore labeling guidance is not needed.

2012 CWMA Interim Meeting: A General Motors representative made a presentation on this item. He stated there is no minimum AKI specification in HB 130. NCWM wants to align D4814 with HB 130, but there is no minimum in D4814 and ASTM is looking at this. Less than 1% of vehicles on the road today are 1984 or prior. All vehicle owner’s manuals stipulate 87 octane or higher. Using 85 octane in these vehicles causes slight reductions in efficiency and fuel economy. There should be harmonization between vehicles owner’s manuals, NCWM and ASTM. Both RON and MON octane numbers are important and both must be specified to protect different vehicles. The minimum AKI should be 87 and the minimum MON should be 82. An oil company representative stated the push back with ASTM will be from the Rocky Mountain refineries that are producing this fuel which is the dominant fuel in that region. He further stated consumers have been voting with their wallets. Minimum octane of 87 is really an ASTM issue. Diesel is 40 minimum cetane. ASTM does not define premium and will likely look to NCWM to do so. A regulatory official stated that she did not know if consumers were voting with their wallets, but that in some cases industry was influencing the octane grade that was available. She believed that if we adopted this language it would provide states with appropriate octave levels, and supports the item. Another official also recommended moving it forward as an Informational Item. Another stated that the pool for octane is small, but currently OEMs are manufacturing all vehicles to tolerate this fuel. A Renewable Fuels Association representative commented that state regulators who are with NCWM regulate octane, and NCWM should have the standards and not wait for ASTM. CWMA supports this item and forwarded the item to NCWM, recommending it as a Voting Item.

2012 WWMA Annual Meeting: Mr. Bill Studzinski (GM) provided a presentation. The Committee would like to have ASTM and FALS work in tandem to develop a proposal that provides a phase out period. Currently there is not an effect on the marketplace. The Committee recommended a modification to the proposal to allow for the Table 1 chart to remain with Section 3.2.5. WWMA forwarded the item to NCWM, recommending it as an Informational Item as modified and presented below:
2.1.4. Minimum Antiknock Index (AKI). – The AKI of gasoline and gasoline-oxygenate blends shall not be less than 87. The AKI shall not be less than the AKI posted on the product dispenser or as certified on the invoice, bill of lading, shipping paper, or other documentation.

2.1.5. Minimum Motor Octane Number. – The minimum motor octane number shall not be less than 82 for gasoline with an AKI of 87 or greater;

3.2.5. Prohibition of Terms. – It is prohibited to use specific terms to describe a grade of gasoline or gasoline-oxygenate blend unless it meets the minimum antiknock index requirement shown in Table 1. Minimum Antiknock Index Requirements.

<table>
<thead>
<tr>
<th>Term</th>
<th>Minimum Antiknock Index</th>
</tr>
</thead>
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<tr>
<td></td>
<td>ASTM D4814 Altitude Reduction Areas IV and V</td>
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<tr>
<td>Premium, Super, Supreme, High Test</td>
<td>90</td>
</tr>
<tr>
<td>Midgrade, Plus</td>
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</tr>
<tr>
<td>Regular-Leaded</td>
<td>86</td>
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<tr>
<td>Regular, Unleaded (alone)</td>
<td>85</td>
</tr>
<tr>
<td>Economy</td>
<td>--</td>
</tr>
</tbody>
</table>

2012 SWMA Annual Meeting: Mr. Bill Studzinski representing General Motors and chair of the Task Groups under the Fuels and Lubricants Subcommittee and ASTM provided a presentation supporting the item. He will give a progress report at the 2013 NCWM Interim Meeting. The Committee acknowledged strong support from the region. SWMA forwarded the item to NCWM, recommending it as a Voting Item.

2012 NEWMA Interim Meeting: GM provided a presentation and summarized the positions of other regions. It was also stated that a vehicle can operate at higher octane but is less efficient at lower octane. The GM Presentation is available on the NEWMA website. NEWMA forwarded the item to NCWM, recommending it as a Voting Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

237-3 Section 2.1.5. Minimum Motor Octane Number

Source: BP Global Fuels Technology – West Coast (2011)

Purpose: Remove obsolete language from the regulation.

Item Under Consideration: Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation, Section 2.1.5. Minimum Motor Octane Number as follows:

2.1.5. Minimum Motor Octane Number. – The minimum motor octane number shall not be less than 82 for gasoline with an AKI of 87 or greater;

Background/Discussion: In the early 90s, the Table titled “Automotive Spark-Ignition Engine Fuel Antiknock Indexes in Current Practice” was removed from the body of ASTM D4814 and placed into an Appendix in ASTM D4814. This Appendix is non-mandatory information and is not part of the specification. It is inappropriate for NIST Handbook 130 to continue with the 82 motor octane number minimum for the following reasons: 1) 82 motor octane number minimum is not an ASTM D4814 specification; 2) FTC regulates octane posting and has no motor octane number minimum; 3)
neither the Kinder Morgan Pipeline nor the Olympic Pipeline requires a minimum motor octane number specification; and 4) the Colonial Pipeline has no motor octane number minimum for either Reformulated Blendstock for Oxygenate Blending or Conventional Blendstock for Oxygenate Blending.

Recent data shows a low motor octane number is actually preferable for the current fleet of vehicles. Motor and Research octane numbers are equally important to the performance of the motor vehicle engine. A minimum motor octane number requirement offers no more protection to the consumer than the road octane number which is the average of the Motor and Research octane numbers.

2010 SWMA and WWMA Annual Meetings and the 2010 CWMA and NEWMA Interim Meetings: All four associations forwarded the item to NCWM, recommending it as an Informational Item. SWMA, CWMA, and NEWMA recommended that the item to be developed by FALS.

2011 NCWM Interim Meeting: Mr. Hayes, FALS Chair, reported that the Subcommittee recommended this item be Informational to allow more time for data to be reviewed. Historical data exists and a CRC study is being done that will clarify issues and provide data that will assist with making a decision. There were no comments heard from the floor during Open Hearings. The 2011 L&R Committee designated this item as an Informational Item.

2011 NEWMA Annual Meeting: There were no comments heard on this item. The NEWMA L&R Committee recommended that this item move forward as an Informational Item.

2011 CWMA Annual Meeting: the FALS Chair indicated that they are waiting for results from the CRC study and recommends this remain Informational because it is not fully developed. The CWMA L&R Committee recommends that this item move forward as an Informational Item.

2011 NCWM Annual Meeting: It was noted that the FALS was continuing to monitor and develop this item and the CRC was reviewing and analyzing the data from the CRC 660 study and additional industry data.

2011 CWMA Interim Meeting: Mr. Hayes, FALS Chair, said most new cars respond better to the research octane number rather than to the anti-knock index, however this was still being studied by the CRC and research was ongoing. CWMA recommended that the item remain as an Informational Item.

2011 WWMA and SWMA Annual Meetings and the NEWMA Interim Meeting: All three associations recommended that the item remain as an Informational Item.

2012 NCWM Interim Meeting: FALS held a work session and heard no objections to recommending this item as Informational. Mr. Hayes, FALS Chair, reported to the Committee that a FALS Task Group continues to work on this item and recommended that the item be Informational. Mr. Albuquerque, CDLE-Oil and Public Safety, Task Group Chair reported that information is still being gathered and recommended that it be an Informational Item. The 2012 L&R Committee designated this item as an Informational Item.

2012 NEWMA Annual Meeting: One person remarked that this is a non-issue. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: No comments were received. CWMA recommended that the item remain as an Informational Item.

2012 NCWM Annual Meeting: Two industry representatives supported further development of this item by the Task Group. Mr. Bill Studzinski, General Motors, will be leading the discussion on this item for the FALS. A stakeholder remarked that we do not need a task force for this item and that we should refer to ASTM.

2012 CWMA Interim Meeting: An oil company representative commented that ASTM does not have a minimum MON (Motor Octane Number), but recommends waiting for data from CRC. He recommended that the item remain informational until CRC data is available. General Motors commented that the available CRC data is still important.
That data says that MON is still important. CWMA was neutral on the item and recommended that the item remain as an Informational Item until CRC octane data is available and reviewed by FALS.

2012 WWMA Annual Meeting: There were no comments. The Committee recommended that ASTM and FALS work in tandem to develop a proposal that provides a phase-out period. WWMA recommended that the item be an Informational Item.

2012 SWMA Annual Meeting: An industry member commented that this item which was submitted several years ago would be in conflict with the new item received this year, so if the new item goes forward, this item would be Withdrawn. SWMA supports the new item received this year. SWMA recommended that the item be Withdrawn.

2012 NEWMA Interim Meeting: General Motors commented that CRC is working to produce data on this topic. Discussions indicated that this is contradictory to previous agenda item and should be Withdrawn. The Committee recommended that, if this item goes forward to NCWM, it should be assigned to the Fuels and Lubricants Subcommittee. NEWMA recommended that the item be Withdrawn.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

237-4 Section 3.13. Oil, 3.13.1.4.1. Inactive or Obsolete Service Categories

Source: Automotive Oil Change Association (2013)

Purpose: Prevent consumer confusion and government-sponsored product bias regarding legitimate, manufacturer-recommended products, and to prevent installers and retailers from being held responsible for labeling requirements with respect to packaged goods.

Item Under Consideration:
Amend NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

3.13. Oil.

3.13.1. Labeling of Vehicle Engine (Motor) Oil Required

3.13.1.1. Viscosity. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle motor oil dispensed from a receptacle, dispenser, or storage tank shall contain the viscosity grade classification preceded by the letters “SAE” in accordance with the SAE International’s latest version of SAE J300 Engine Oil Viscosity Classification.

3.13.1.2. Intended Use. – The label on any vehicle engine (motor) oil container shall contain a statement of its intended use in accordance with the latest version of SAE J183 Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”).

3.13.1.3. Brand – The label on any vehicle engine (motor) oil container and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the name, brand, trademark, or trade name of the vehicle engine (motor) oil.

3.13.1.4. Engine Service Category. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that
includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the engine service category, or categories, met in letters not less than 3.18 mm (1/8 in) in height, as defined by the latest version of SAE J183, Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”) or API Publication 1509, “Engine Oil Licensing and Certification System.”

3.13.1.4.1. Inactive or Obsolete Service Categories. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall bear a plainly visible cautionary statement in compliance with SAE J183, Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”) Appendix A, whenever the vehicle engine (motor) oil in the container or in bulk does not meet an active API service category as defined by the latest version of SAE J183, Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”). With regard to invoices or receipts from service on an engine, installers may also include the following language: The inactive and obsolete designations do not override or in any way alter the legitimacy of automobile manufacturers’ engine oil recommendations. In addition, installers and retailers shall be exempt from any labeling requirements with regard to packaged containers of engine oil.”

3.13.1.5. Tank Trucks or Rail Cars. – Tank trucks, rail cars, and types of delivery trucks that are used to deliver vehicle engine (motor) oil are not required to display the SAE viscosity grade and service category or categories as long as the bill of lading other documentation provides that information.

All references to invoice or receipt will be enforceable effective on July 1, 2013.

(Amended 20XX)

Background / Discussion:
The vast majority of engine oil used at professional fast lube facilities is the most current category of API-licensed oil. However, older, specialty, and some non-American vehicles take engine oil not listed as active under API’s private regulatory scheme; some are former API licensed oils now considered “obsolete” or “inactive” and some are simply licensed by another organization like ACEA. However, if OEMs recommend those engine oils for their vehicles, consumers have a right to use them regardless of API’s blessing, and installers and retailers should be able to sell them without obstruction.

AOCA’s amendment is necessary because a cautionary statement appearing on service receipts without explanation will inappropriately mislead consumers with older and uncommon model vehicles into believing they shouldn’t use OEM-recommended engine oil. The average fast lube customer doesn’t recognize API or SAE to mean anything in particular but “CAUTION” and “OBSOLETE” in big capital letters could only be understood as negative. Searing consumers in this way will not only push them to buy more expensive engine oil they don’t need, but also engender distrust in their installer service providers for recommending and/or using OEM-recommended engine oil.

The average age of cars in the current fleet is nearly 11 years old and it is not unusual for fast lubes to have customers with vehicles twice that age; i.e., there are millions of opportunities for consumers to be misled into rejecting proper engine oil. The fact is American consumers are hanging onto their vehicles longer than API is hanging onto its service categories. When API designates a motor oil category as inactive, that doesn’t mean consumers with vehicles designed to use that category turn in their cars or otherwise want to buy a more expensive grade of motor oil going forward. Therefore, a category of motor oil designed to work for particular makes and models of vehicles should not be burdened with the chilling effect of a cautionary statement absent a specific clarification acknowledging the preeminence of the OEM’s recommendations.

The new standard phase-in factor must be considered as well. When API publishes a new edition of 1509 and/or creates a new service category, a reasonable phase-in period for bulk oil stock is necessary to accommodate older
vehicle owners’ needs; i.e., it may be in those customers’ best interests—both functionally and economically—to use motor oil developed in accordance with an earlier edition or service category so long as the automobile manufacturer originally recommended it and its continued use has no impact on any remaining warranty coverage. Although it is common for API to retain a couple of the most recent service categories as “active,” API could choose to make all but the most recent service category “obsolete.” For fast lube operators to automatically upgrade bulk oil stock at API-determined intervals would be tantamount to giving API control over the price of oil change services regardless of what the market can bear.

And what about packaged engine oil products already on the shelf or in the distribution chain when API makes a unilateral decision to deactivate an engine oil category? As a practical matter, tens of thousands of retailers and installers cannot re-mark millions of packages to coincide with API’s timing or take the financial hit for sending it all back in violation of purchase agreements. Attempting to enforce the labeling requirement at this level would be a nightmare for everyone involved. The way to avoid this problem is to adopt AOCA’s amendment so that the requirement for proper labeling of packaged containers of engine oil rest with the party in control of the packaging: the manufacturers.

Without the amendment, the labeling requirement will be very difficult to enforce given the inventory of packaged goods remaining after an active engine oil category has been declared inactive or obsolete.

Fast lubes would experience catastrophic business loss if customers with older and uncommon model vehicles were alienated. Maintenance costs for consumers with older model cars could easily double if they are confused into believing they need the latest category of engine oil.

AOCA contends that the proposed amendment will accomplish three important goals: (1) prevent unintended consumer confusion and product stigma from using a cautionary statement by reestablishing the connection to OEM recommendations; and (2) provide the necessary exemption to protect retailers and installers for selling lawful packaged inventory, which leads to (3) an increase in practical enforcement prospects.

The most analogous regulatory situation to the one at issue in AOCA’s proposed amendment is found in FTC’s Test Procedures and Labeling Standards for Recycled Oil (16 CFR 311). In that rulemaking process, FTC specifically rejected requiring recycled engine oil to be labeled “recycled” because of the stigma associated with the term at that time (see 72 FR 14410 – 14413 & FN11 (1 H.R. Rep. No. 96–1415, 96th Cong. 2d Sess. 6 (1980), reproduced at 1980 U.S. Code Cong. & Ad. News 4354, 4356. “‘Oil should be labeled on the basis of performance characteristics and fitness for its intended use, and not on the basis of the origin of the oil.’”). The National Automobile Dealers Association also commented in favor of this approach: “NADA further stated that by not requiring that ‘substantially equivalent’ recycled oils be labeled ‘recycled’ or ‘re-refined,’ used oil processors are able to market their products effectively.” (72 FR at 14411) No “recycled” or other potentially derogatory designation is required so long as the finished product meets the appropriate API standard.

2012 CWMA Interim Meeting: The Automotive Oil Change Association (AOCA) stated that oil change businesses are small businesses without legal staff so they need clear guidance that is easy to understand. They follow the OEM recommendations, and OEMs recommend oils that do not follow API or SAE standards. The language should acknowledge that some manufacturers approve and recommend their own oil. Examples include General Motors (GM) and Audi-Volkswagen. AOCA thought that the current language required all OEM oils that did not meet a specific API performance standard to be labeled as obsolete. A GM representative confirmed that GM produces their own oil. Dexos, which does not have an API certification. A FALS member shared the API motor oil guide, (see Appendix B) which labels specific categories of oil as obsolete. If a manufacturer does not label the oil with an API obsolete category, the product is not considered to be obsolete. OEM manufacturers that were named do not label their oil with an obsolete category, and so oil changers do not need to worry about the obsolete label being used on OEM motor oils. AOCA also asked if there would be a grace period to sell product purchased prior to January 2013. States regulators clarified that nothing is written in the regulation, and that grace periods would be determined on a state by state basis. AOCA reiterated that the language should clearly state that OEM oils that do not have API certification are not obsolete. She asked that the Committee recommend this clarifying language. AOCA also stated that installers should not be responsible for labeling on packaged products received. A regulatory official stated that retailers in other industries are responsible for labeling on packages received, and that it would be an unfair market advantage to allow some retailers to use products that were illegally labeled. Since the current
language is not clear about exactly what oils are obsolete, the Committee recommended that FALS produce language for the NCWM Interim Meeting clearly stating that OEM recommended oils that are not API certified are not obsolete. CWMA forwarded the item to NCWM, recommending it as a Voting Item with the stipulation that FALS develop the clarifying language.

2012 WWMA Annual Meeting: Ms. Kristin Macey (CA) opposed this item because it removes the retailer’s accountability. Mr. Kevin Ferrick (API) opposed the additional language. Mr. Ferrick also provided a presentation to the WWMA and written comments to the Committee. Mr. Kurt Floren (LA County, CA) opposed the language for similar reasons as stated by Ms. Macey. WWMA did not forward the item to NCWM.

2012 SWMA Annual Meeting: An API Representative voiced API’s opposition to the item and provided the following testimony in dispute of the comments and claims made by the submitter:

API supports the current language in Handbook 130 paragraphs 2.33.1.4.1 and 3.13.1.4.1 approved at the July 2012 National Conference on Weights and Measures meeting. In response to the comments received in support of new items 232-2 and 237-4, we offer the following comments for consideration:

- **“Older, specialty, and some non-American vehicles take engine oil not listed as active under API’s private regulatory scheme”**
  - API’s Engine Oil Licensing and Certification System is a voluntary program based on consensus-based industry standards; it’s not a private regulatory scheme.
  - API publishes engine oil performance standards in API 1509, which is available for download for free from API’s website.
  - API and ILSAC standards are developed in cooperation with OEMs, oil marketers, additive companies, test labs, and other interested parties. This includes AOCA.
  - API declares categories obsolete when the tests used to verify those levels of performance no longer exist.
    - For example, API SG was in use through 1993, but the engine tests used to measure SG performance are no longer available. The engine manufacturers stopped making the engines and parts required for the tests.
    - Without SG engine tests, oil marketers might be able to refer to old SG data to confirm an SG oil’s ability to protect against wear and prevent sludge and varnish. Marketers seeking to develop new SG formulations don’t have SG engine tests to verify performance.
  - **“If OEMs recommend those engine oils for their vehicles, consumers have a right to use them regardless of API’s blessing, and installers and retailers should be able to sell them without obstruction”**
    - API doesn’t recommend engine oils for vehicles—OEMs do.
    - Most US, Japanese and South Korean OEMs recommend oils licensed to use the API Starburst.
      - The Starburst identifies oils meeting the most recent ILSAC performance standard. Today, that’s GF-5. If the Starburst appears in an owner’s manual, the OEM is recommending the vehicle owner use GF-5.
      - The Starburst system is possible because oils meeting ILSAC standards are backward compatible: the latest ILSAC standard meets or exceeds the previous standard. If an owner’s manual for a 1998 model year vehicle includes the Starburst, the OEM is recommending the owner use the latest ILSAC standard (in this case GF-5).
      - If an installer stocks in bulk an oil meeting an older API performance standard (for example API SF), how would the installer ensure this older oil is not installed in a newer engine unless the installer follows the requirements in the approved National Conference language?
− OEM’s have recommended the API Starburst since 1994. This represents the majority of the vehicles on the road today.

• “The average fast lube customer doesn’t recognize API or SAE to mean anything in particular”
  − We agree—that’s why API launched a new program to educate marketers, distributors, installers and consumers on the importance of oil quality.
  − This includes educating everyone on the meaning of the API Starburst and Donut.

• “When API publishes a new edition of 1509 and/or creates a new service category, a reasonable phase-in period for bulk oil stock is necessary to accommodate older vehicle owners’ needs”
  − API provides a phase-in for all new API Starburst and Donut performance standards.
    • We start with a six- to nine-month waiting period before API begins licensing oils against the standard.
    • This is followed by a one-year period when the previous and new standards co-exist.
    • Then, according to OEM recommendations, consumers with a Starburst in their owner’s manual are recommended to start using oils meeting the new standard.
  − API does maintain older standards where possible. Currently, three older “S” categories (SJ, SL, and SM) can still be licensed. This is possible because the engine tests for these categories are still available.

• “Although it is common for API to retain a couple of the most recent service categories as “active,” API could choose to make all but the most recent service category “obsolete’”
  − API declares service categories obsolete when the tests used to verify their performance are no longer available.
  − If API were to consider making a category obsolete while the engine tests were still available, API would need to ballot the change through our consensus-based standards-setting process.

• “And what about packaged engine oil products already on the shelf or in the distribution chain when API makes a unilateral decision to deactivate an engine oil category?”
  − API-licensed products packaged before category obsolescence are considered licensed after the obsolescence date. We can verify date of manufacture through the oil bottle’s traceability code. All packaged API-licensed oils are required to include traceability codes. Nothing in API 1509 indicates otherwise.
  − Unilateral decision? No tests available results in category obsolescence.

The SWMA Committee believed there was lack of support for the item and that the oil change industry has a poor understanding of the API standards. SWMA did not forward the item to NCWM.

2012 NEWMA Interim Meeting: API stated that it opposes the item and that specifics have been submitted in writing. API suggested that this proposal and 237-4 be Withdrawn. General Motors indicated the proposal appears to allow older formulations of engine oil, but newer formulations give better performance, even in older vehicles. GM prefers current formulation of engine oil. NEWMA did not forward the item to NCWM.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

237-5 Section 2.33. Oil, 3.13.1.4.5. Tank Trucks or Rail Cars

Source: Automotive Oil Change Association (2013)

Purpose: Make compliance and enforcement practical, efficient, and fair.
Item Under Consideration:
Amend NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

3.13. Oil.

3.13.1. Labeling of Vehicle Engine (Motor) Oil Required

3.13.1.1. Viscosity. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle motor oil dispensed from a receptacle, dispenser, or storage tank shall contain the viscosity grade classification preceded by the letters “SAE” in accordance with the SAE International’s latest version of SAE J300 Engine Oil Viscosity Classification.

3.13.1.2. Intended Use. – The label on any vehicle engine (motor) oil container shall contain a statement of its intended use in accordance with the latest version of SAE J183 Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”).

3.13.1.3. Brand – The label on any vehicle engine (motor) oil container and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the name, brand, trademark, or trade name of the vehicle engine (motor) oil.

3.13.1.4. Engine Service Category. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall contain the engine service category, or categories, met in letters not less than 3.18 mm (1/8 in) in height, as defined by the latest version of SAE J183, Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”) or API Publication 1509, “Engine Oil Licensing and Certification System.”

3.13.1.4.1. Inactive or Obsolete Service Categories. – The label on any vehicle engine (motor) oil container, receptacle, dispenser, or storage tank and the invoice or receipt from service on an engine that includes the installation of vehicle engine (motor) oil dispensed from a receptacle, dispenser, or storage tank shall bear a plainly visible cautionary statement in compliance with SAE J183, Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”) Appendix A, whenever the vehicle engine (motor) oil in the container or in bulk does not meet an active API service category as defined by the latest version of SAE J183, Engine Oil Performance and Engine Service Classification (Other than “Energy Conserving”).

3.13.1.4.5. Tank Trucks or Rail Cars. – Tank trucks, rail cars, and types of delivery trucks that are used to deliver vehicle engine (motor) oil are not required to display the SAE viscosity grade and service category or categories as long as the bill of lading other documentation provides that information. Nothing in this section shall be construed as making optional the presentation by distributors to installers at the time of delivery detailed bills of lading or other documentation including SAE viscosity grade, service category or categories, and brand. All distributors, whether or not displaying the SAE viscosity grade and service category or categories on tank trucks, rail cars, or other types of delivery trucks, are required to present to installers at the time of delivery detailed bills of lading or other documentation including SAE viscosity grade, service category or categories, and brand.

All references to invoice or receipt will be enforceable effective on July 1, 2013.

(Amended 20XX)
**Background / Discussion:**

There is a chain of engine oil purchasers involved in the sale of bulk engine oil, all of whom need accurate and adequate information about the commodity so that they can make price and quantity comparisons. The engine oil distributor is a purchaser with respect to engine oil manufacturers, the installer is a purchaser with respect to engine oil distributors, and the consumer is a purchaser with respect to installers. Installers like fast lube operators can only provide accurate and adequate information about bulk engine oil to consumers if their distributors provide it at the point of delivery. It would be manifestly unfair to expect installers to legally vouch in writing for the quality of distributors’ engine oil products absent a corresponding written verification requirement.

The recent amendments (July 2012) creating paragraphs 2.33.1.4.2 and 3.13.1.4.2 inadvertently created a loophole for distributors to avoid providing necessary product documentation at the time of delivery.

Whether or not NCWM waives tank truck labeling is not the issue. The problem lies in the converse this provision allows: if a distributor displays the SAE viscosity grade and service category on a tank truck, then he/she doesn’t have to provide a bill of lading. This poses a serious risk to installers like fast lubes because the regulation requires them to vouch for viscosity grade, service category, and brand on customer receipts but doesn’t guarantee that they’ll receive that same information in writing from their distributors—the parties with actual control over product quality/identity.

There is also no practical way for fast lubes or NCWM to enforce this “either/or” regulatory scenario. If a distributor arrives at an installer’s facility without documentation, how can the installer hold the distributor to it under NIST Handbook 130? The distributor can simply claim his/her truck is adequately marked. Installers are not professional truck inspectors; they cannot be expected to act as enforcement agents in this scenario. Meanwhile, in order for local Weights & Measures officials to hold a distributor accountable, they would have to arrive on the scene at the time of delivery, which coincidence is unlikely at best. Any subsequent official inquiry would take place after the distributor has had the opportunity to subsequently mark any unmarked truck at issue. Moreover, risk of distributor failure in providing necessary documentation is high because most do not and never have been willing to provide bills of lading or other documentation to fast lubes at the time of delivery.

Additionally, the imperative for any installer labeling and/or receipt information requirements to be matched by corresponding requirements for engine oil distributors includes “brand.” Installers cannot purport to verify via any form of documentation information that distributors have not documented at delivery. New sections 2.33 and 3.13 require installers to verify brand in writing and, therefore, distributors should be required to verify it, too. For NCWM to require otherwise would be manifestly unfair to installers by subjecting them to liability for the bad acts of distributors without any paperwork trail to rely upon in their own defense.

No one has more at stake than installers. Should a product quality problem occur with packaged goods, it’s relatively easy to trace the goods back to the manufacturer. However, this is not the case with motor oil transported in bulk; it all looks alike, it may have “changed hands” numerous times before reaching the fast lube facility, and even with testing can be impossible for a fast lube to verify because oil companies use chemical markers that only they can identify. Since motor oil specifications have become so precise—and so expensive—fast lube operators stand to lose thousands of dollars every time a distributor delivers a lesser product.

Moreover, when a distributor delivers the wrong product, it’s the fast lube operator who gets stuck holding the bag for consumer claims, which can be excessive if the “wrong” product did or could cause engine damage. It takes weeks before a bad load is detected and by then anywhere from 500 to 700 customers have been serviced. The remedy? All of the customers must be called back and re-serviced for free before any damage has the opportunity to occur. Requiring distributors to provide the same documentation required of installers represents the minimum necessary step to at least protect installers from misrepresentation claims when a distributor “mis-delivers” bulk oil.

API and ILMA have been publicly quoted as supporting the requirement that distributors provide documentation at delivery as if the new paragraphs at issue already mandate it under all circumstances. See Lube Report (8/1/12) http://www.imakenews.com/lng/e_article002489327.cfm?x=b11.0_w

EPA’s Federal Used Oil Management Standards require detailed transporter chain of custody documentation (40 CFR Part 279). See also EPA’s *Chain-of-Custody Procedures for Samples and Data* (www.epa.gov/apti/coc/).
which makes clear that failure to maintain a proper chain of custody regarding samples and/or data will destroy any ability to defend oneself if challenged.


Under the FDA Food Modernization Act (Public Law 111-353), documenting the production and distribution chain of food products is required so that “in case of a problem, a product can be traced back to the source.”

DOT overlaps with EPA regarding the Federal Hazardous Waste Manifest System (40 CFR Part 262), which mandates detailed documentation of hazardous waste from cradle to grave; i.e., from generator to transporter to end user/disposal.

The submitter provided the following websites as evidence that “Misdelivery of liquid products must happen with some recognized frequency because the subject is big business for the insurance industry”:

- http://www.johannesagency.com/petroleum
- http://canalinsurance.com/coverage/truckers-general-liability
- http://www.marianoagency.com/programs/transportation
- http://falcigno.com/products-a-services/environmentalchemical

2012 CWMA Interim Meeting: The Automotive Oil Change Association (AOCA) stated that the current language would allow the distributor to either label the truck or tank car or the bill of lading. The language should clearly state that distributor needs to provide the retailer with a bill of lading or other documentation that includes product identity information. A FALS member acknowledged that the current language could be construed to say that the distributor does not need to provide this documentation, and that was not the intent. The Committee recommends that FALS provide concise language that states that a bill of lading or other documentation with appropriate product information must be provided to the retailer. FALS should submit proposed language to the NCWM L&R Committee for the Interim meeting. CWMA forwarded the item to NCWM, recommending it as a Voting Item with the stipulation that FALS develop the clarifying language as requested.

2012 WWMA Annual Meeting: Mr. Ferrick (API) provided a presentation to the WWMA and written comments to the Committee. Mr. Ferrick remarked that the submitted proposal was rather wordy however; he does not disagree with the language. Ms. Kristin Macey (CA) supported the submitted proposal. The Committee agreed that the submitted proposal is too lengthy and presented alternative language for consideration. The Committee regretted that the submitter was not present to answer questions and concerns. WWMA forwarded the item to NCWM, recommending it as an Informational Item as modified and presented below:

3.13.1.4.5. **Tank Trucks or Rail Cars.** – Tank trucks, rail cars, and other types of delivery trucks that are used to deliver vehicle engine (motor) oil are not required to display the SAE viscosity grade and service category or categories, however as long as the bill of lading or other documentation shall provides that information.

2012 SWMA Annual Meeting: API supported the item. The Committee agreed that adequate documentation should be provided. SWMA forwarded the item to NCWM, recommending it as a Voting Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.
Section 3.15. Biodiesel and Biodiesel Blends

Source:
Southern Weights and Measures Association (2010)

Purpose:
Remove the exemption for declaration of biodiesel content on product transfer documents for biodiesel blends up to 5%.

Item Under Consideration:
Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

3.15. Biodiesel and Biodiesel Blends.

3.15.1. Identification of Product. – Biodiesel shall be identified by the term “biodiesel” with the designation “B100.” Biodiesel blends shall be identified by the term “Biodiesel Blend.”

3.15.2. Labeling of Retail Dispensers.

3.15.2.1. Labeling of Grade Required. – Biodiesel shall be identified by the grades S15 or S500. Biodiesel blends shall be identified by the grades No. 1 D, No. 2 D, or No. 4 D.

3.15.2.2. EPA Labeling Requirements Also Apply. – Retailers and wholesale purchaser-consumers of biodiesel blends shall comply with EPA pump labeling requirements for sulfur under 40 CFR § 80.570.

3.15.2.3. Automotive Fuel Rating. – Biodiesel and biodiesel blends shall be labeled with its automotive fuel rating in accordance with 16 CFR Part 306.

3.15.2.4. Biodiesel Blends. – When biodiesel blends greater than 20% by volume are offered for sale, each side of the dispenser where fuel can be delivered shall have a label conspicuously placed that states “Consult Vehicle Manufacturer Fuel Recommendations.” The lettering of this legend shall not be less than 6 mm (¼ in) in height by 0.8 mm (\(\frac{1}{32}\) in) stroke; block style letters and the color shall be in definite contrast to the background color to which it is applied.

3.15.3. Documentation for Dispenser Labeling Purposes Required on Transfer Documents. – The retailer shall be provided at the time of delivery of the fuel, a declaration of the volume percent biodiesel on an invoice, bill of lading, shipping paper, or other document. This documentation is for dispenser labeling purposes only; it is the responsibility of any potential blender to determine the amount of biodiesel in the diesel fuel prior to blending.

(Amended 20XX)

3.15.4. Exemption.

(a) Biodiesel blends that contain less than or equal to 5% biodiesel by volume are exempted from the requirements of Sections 3.15.1. Identification of Product, and 3.15.2. Labeling of Retail Dispensers, and 3.15.3. Automotive Fuel Rating when it is sold as “diesel fuel” as required in Section 3.3. Diesel Fuel.

(b) Diesel fuel containing less than 1% by volume biodiesel is exempted from the requirement of 3.15.3. Documentation for Dispenser Labeling Purposes.
(c) Diesel fuel containing 1% and not more than 5% by volume biodiesel fuel is exempt from disclosing the actual percent by volume of biodiesel as required in Section 3.15.3. Documentation for Dispenser Labeling Purposes. However, the term “Contains Biodiesel” or other similar terms shall be used.

(Added 2005) (Amended 2008 and 20XX)

Background / Discussion:
2009 SWMA Annual Meeting: A discussion over blending was presented by a FALS member. Biodiesel is being blended at many terminals across the country in concentrations up to 5%. Marketers downstream of the terminal are then attempting to blend additional biodiesel to target levels, and finding that their product is being over-blended because they were not aware that the fuel contained any biodiesel. According to Mr. Jennings, Tennessee Department of Agriculture, at least one major truck stop operator has already voiced concerns to the FALS chair. This amended proposal will remove the exemption declaration of biodiesel content on product transfer documents for biodiesel blends up to 5%. Biodiesel is blended at terminals in concentrations up to 5%. Mr. Jennings believed it was important to start this recommendation and have the FALS chair get the proposal out to all members of the FALS for their comments before NCWM Interim meeting in January 2010. SWMA forwarded the item to NCWM, recommending it as a Voting Item.

3.15. Biodiesel and Biodiesel Blends

3.15.1. Identification of Product. – Biodiesel shall be identified by the term “biodiesel” with the designation “B100.” Biodiesel blends shall be identified by the term “Biodiesel Blend.”

3.15.2. Labeling of Retail Dispensers.

3.15.2.1. Labeling of Grade Required. – Biodiesel shall be identified by the grades S15 or S500. Biodiesel blends shall be identified by the grades No. 1 D, No. 2 D, or No. 4 D.

3.15.2.2. EPA Labeling Requirements Also Apply. – Retailers and wholesale purchaser-consumers of biodiesel blends shall comply with EPA pump labeling requirements for sulfur under 40 CFR § 80.570.

3.15.2.3. Automotive Fuel Rating. – Biodiesel and biodiesel blends shall be labeled with its automotive fuel rating in accordance with 16 CFR Part 306.

3.15.2.4. Biodiesel Blends. – When biodiesel blends greater than 20% by volume are offered for sale, each side of the dispenser where fuel can be delivered shall have a label conspicuously placed that states “Consult Vehicle Manufacturer Fuel Recommendations.”

The lettering of this legend shall not be less that 6 mm (1/4 in) in height by 0.8 mm (1/32 in) stroke; block style letters and the color shall be in definite contrast to the background color to which it is applied.

3.15.3. Documentation for Dispenser Labeling Purposes. – The retailer shall be provided, at the time of delivery of the fuel, a declaration of the volume percent biodiesel on an invoice, bill of lading, shipping paper, or other document. This documentation is for dispenser labeling purposes only; it is the responsibility of any potential blender to determine the amount of biodiesel in the diesel fuel prior to blending.

3.15.4. Exemption. – Biodiesel blends that contain less than or equal to 5% biodiesel by volume are exempted from the requirements of Sections 3.15.1. Identification of Product, and 3.15.2. Labeling of Retail Dispensers, and 3.15.3. Automotive Fuel Rating when it is sold as “diesel fuel” as required in Section 3.3. Diesel Fuel.

(Added 2005) (Amended 2008 and 20XX)
A draft of substitute language was circulated among FALS members prior to the interim meeting. This substitute expanded the disclosure of biodiesel content on all transfer documents (not limited to ones to the retailer) and for levels greater than 1% biodiesel. The substitute was an attempt to find middle ground. FALS members were more agreeable to this substitute, but many still thought more work was needed.

The L&R and FALS received seven letters (refer to L&R Appendix D within the Report of the 95th NCWM Annual Meeting [SP 1115, 2010]) that do not support this proposal as stated. The Committee does support working on this issue and receiving feedback from industry. There is concern with the documentation and comingling of fuels. If fuel is comingled, it would need to be sampled every time, which could be quite costly.

An official requested that this item move forward as a Voting Item and meanwhile NEWMA and CWMA could review and further develop the language at their spring 2010 meetings. API stated there are many things to consider, such as preemption language, cost implications, commercial issue of declaring with each transaction. API has worked with marketers, but there continues to be a difference of opinion and no consensus. It was voiced by industry that all biodiesel needs to be documented on the paperwork. If not, it puts the wholesaler, retailer, and consumer at risk. There was a comment from a stakeholder that they do not agree with API’s comment and that this has been a two year battle on who gets to do the blending. Blenders are over-blending because they are not aware of what the current blend is. To prevent this situation, it would require disclosure on the transfer document. The 2010 L&R Committee designated this item as an Informational Item.

2010 NEWMA Annual Meeting: A stakeholder reported that FTC has not changed the existing posting rule. NEWMA recommended that the item remain as an Informational Item.

2010 CWMA Annual Meeting: Several commented that the exact percentage of an alternative fuel needs to be known. Without the percentage being known, mislabeling can occur, which is not good for consumers, marketers, and the environment and renewable fuels. What is the downside of providing this information? A representative of the National Biodiesel Board (NBB) does not support this proposal and would like to have further discussions to seek what is best for the entire industry. They also commented that FTC declined to modify requirements for disclosure on product transfer documents for fuels containing 5% or less biodiesel. An official disagreed that the exact percentage is necessary since it is the blender’s responsibility to test the product prior to blending. A representative of the Renewable Fuels Association would like to see the proposal expanded to include all additives and stated that the focus needs to be in broader terms instead of renewable fuels and recommended that the scope include all blending components. CWMA recommended that the item remain as an Informational Item and that FALS form a task force under their guidance to develop this proposal.

2010 NCWM Annual Meeting: The Committee received numerous letters (refer to Appendix D within the “Report of the 95th NCWM” [SP 1115, 2010]) and heard from fifteen stakeholders and industry representatives, supporting section 3.15.3. that requires disclosure. Several participants expressed concerns with sections of the proposal. FTC has the authority to protect consumers and they are considering requirements for product transfer documents. Several stakeholders indicated that they expect FTC to issue a proposed rule on biodiesel. The sections that are of concern to stakeholders are 3.15.4 (b) and (c), since they conflict with reporting of tax collections on biodiesel. The exact amount of the blend needs to be documented on the transfer document. The concern is when fuel is picked up from various locations and delivered; the actual amount of biodiesel is not documented. Currently blending at the terminal is not an issue.

The L&R Committee agreed to allow time for the FALS to receive additional information and further discuss this item.

2010 CWMA Interim Meeting: A representative from a Petroleum Marketers Association commented that disclosure sets the tone for a chain of events for biodiesel. It was important for disclosure to be provided all the way through the distribution process because of the potential for over-blending. He believes that it is not realistic for wholesale distributors to test for biodiesel due to the cost. He supports the proposal with exception of the exemptions provided in 3.15.4. exemptions (b) and (c). An official agreed with this testimony. Another official
commented that the current proposal follows the same format as the ethanol regulation. A petroleum dealer mentioned that, due to the expanded renewal fuels standard, disclosure is needed in order to meet the mandates for blending.

A representative with the NBB commented that this proposal needs further development by FALS. She believes that we have not heard from all segments of the industry regarding this proposal. She also expressed concern that there will be no benefit to consumers if the cost of the extra testing of fuel is being passed on to consumers. It was mentioned that there are quick testing methods available for determining biodiesel content in the field; although, some are more accurate than others. The NBB representative also stated that the FTC believes that it is the responsibility of the blender to determine biodiesel content prior to blending.

A producer mentioned that the disclosure proposal would require terminals to purchase equipment and to do additional testing. The producer is concerned about tank stratification and the need to change bills of lading as the content varies. Cost and manpower are major concerns for producers. A marketer provided testimony that it is more efficient for terminals to purchase testing equipment as opposed to requiring all downstream blenders to purchase testing equipment. He stated that changing bills of lading is only a software change. He believes that it is the blenders’ obligation to meet the law for labeling, and it is difficult if the biodiesel content is not disclosed. The NBB representative questioned how often marketers test. A marketer responded that they do not routinely test; since they rely on transfer documents to accurately disclose biodiesel content. Another marketer stated that producers can control what goes into their tanks and questioned if producers know how much biodiesel is in each batch. A producer responded that for barrels received by water in Savannah, Georgia, the biodiesel content is only disclosed on Plantation pipeline shipments if it is more than 5%. CWMA recommended that the item remain as an Informational Item to be further developed by FALS.

2010 WWMA and SWMA Annual Meetings: An industry representative spoke in support of keeping this item Informational and allowing FALS to further develop the requirements in light of the comments received. An industry representative stated that all shipping documents should show the exact blend of biodiesel. WWMA and SWMA recommended that the item remain as an Informational Item.

2010 NEWMA Interim Meeting: The Committee received written comments from API. NEWMA recommended that the item remain as an Informational Item.

2011 NCWM Interim Meeting: A member of both the FALS and L&R Committee reported that this item was debated during the FALS work sessions and a consensus could not be reached. It was agreed upon that a Biodiesel Disclosure Task Group be formed to further study this item. Mr. Howell, MARC-IV, and Mr. Bell, Echols Oil Company, Inc. will co-chair this Task Group. The Committee received five letters yet no additional comments were received in Open Hearings. The 2011 L&R Committee designated this item as an Informational Item.

FALS reported that a smaller work group of its members plan to complete a report containing possible solutions and present it to FALS at the 2012 NCWM Interim Meeting in January.

2011 CWMA Interim Meeting: The NBB representative stated that a work group is developing compromise language for the 2012 NCWM Interim Meeting. The Petroleum Marketers and Convenience Store of Iowa (PMCI) representative stated there were 137 biodiesel blenders in Iowa and the current proposed language is a real concern to blenders, especially the 5% blenders. The marketers do not support an exemption for blends of 5% or less on the product transfer documents. One official agreed and suggested removing the exemption for 5% blends stating that if percentage is known it reduces the need for downstream testing. The NBB representative countered that testing adds a lot of cost before the product reaches the consumer and that 5% biodiesel or less meets the ASTM D975 diesel fuel specification and there is no performance difference. She also stated the current proposed language may be the best compromise that can be achieved. The official reported that terminals in her state already certify how much biodiesel leaves the terminal. The NBB representative countered that biodiesel was developed as a fungible product and is a drop-in fuel. Further, fungibility issues dictate that we do not disclose the exact biodiesel content. The PMCI representative stated that gallons of biofuel must be reported, and the language in Item 237-3 is a compromise because his constituents did not have input into the exemption language. An energy company representative stated that Plantation Pipeline is saying diesel fuel may contain up to 5% biodiesel. Therefore, batch certification would be required to determine content. Stratification is also a concern because even batch testing may not be indicative of
the true content. The PMCI representative stated this issue is really about the Renewable Identification Number credit and how they are bought and sold. The NBB representative stated that weights and measures is most concerned with making sure there is equity in the marketplace and that profitability in the marketplace is left up to the market. An official questioned where the burden of analysis lies and if the blender is making a profit then it is reasonable to expect the blender to bear the cost. FALS is currently gathering information on this item. CWMA recommended that the item remain as an Informational Item.

2011 WWMA Annual Meeting: There were no comments heard. The Committee would like to get a recommendation from FALS before taking further action. WWMA recommended that the item remain as an Informational Item.

2011 NEWMA Interim Meeting: It was agreed that any action taken should be consistent with other federal agency labeling. NEWMA recommended that the item remain as an Informational Item.

2011 SWMA Annual Meeting: A representative of the National Biodiesel Board conveyed a message on behalf of the chair of FALS, that it will meet before the NCWM Interim Meeting and provide a report to FALS for the L&R Committee. SWMA recommended that the item remain as an Informational Item.

FALS met at the 2012 NCWM Interim Meeting. Mr. Bell and Mr. Howell, Task Group Co-Chairs provided a presentation on the updated data and study. They presented a written report to FALS on January 17, 2012. A plan was submitted for the activities of this Task Group for the next eighteen months. FALS recommended that this item remain as an Informational Item. The 2012 L&R Committee designated this item as an Informational Item.

2012 NEWMA Annual Meeting: There were no comments on this item. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: Mr. Ron Hayes, FALS Chairperson remarked that Steve Howell and Sam Bell have written a white paper on this item. The paper will be posted on the NCWM website prior to the 2012 NCWM Annual Meeting. CWMA recommended that the item remain as an Informational Item.

2012 NCWM Annual Meeting: Mr. Ron Hayes, FALS Chairperson, reported that Sam Bell and Steve Howell gave a presentation to the Subcommittee, however the Subcommittee did not reach consensus on this item.

2012 CWMA Interim Meeting: The FALS Chairman reported that the FALS workgroup did not reach a consensus and recommended withdrawing the item. A regulatory official asked if withdrawing the item would cause harm. Another stated that biodiesel marketers needed to know biodiesel content, and that the item should move forward as a Voting Item. The Iowa Petroleum Marketers representative said this is a state enforcement issue and the item should be Withdrawn. He said that 16-CFR 306 does not address diesel. Iowa had already passed regulations for this and the language in this item would not work in Iowa. Another official recommended moving forward as a voting item. A National Biodiesel Board representative said while NBB tries to remain neutral, that this language could have unintended consequences for states where biodiesel is not produced or marketed, resulting in unnecessary testing for biodiesel content. A regulatory official stated that biodiesel is present in states that don’t produce or market it. She also stated that some consumers don’t want biodiesel content. HB 130 is currently consistent with FTC regulations, and NBB recommends withdrawing this item. FTC reviewed this issue, and did not support further disclosure of biodiesel content. Many states don’t produce biodiesel, and many states that do produce biodiesel already have state regulations in place that would pre-empt NCWM standards. The work group has attempted for several years to reach consensus, and was unable to do so. For these reasons, CWMA recommended that the item be Withdrawn.

2012 WWMA Annual Meeting: Ms. Rebecca Richardson (NBB) remarked that she heard Mr. Ron Hayes, FALS Chairperson inform CWMA this fall that FALS could not be agree on alternate language and recommended this item be Withdrawn. The Committee would like to get an update from FALS at the 2013 NCWM Interim Meeting. WWMA recommended that the item be an Informational Item.

2012 SWMA Annual Meeting: An industry representative from the National Biodiesel Board commented that since this item was introduced in 2010, both the NCWM L&R Committee and the Fuels and Lubricants Subcommittee
assigned this issue to a smaller work group co-chaired by the Technical Director of the National Biodiesel Board, Mr. Steve Howell and Mr. Sam Bell, owner of Echols Oil and a petroleum marketer. There have been several concerns expressed during the vetting of this proposal, and ultimately the industry could not come to a consensus on the proposed language or any alternative. In fact, considering oral testimony and comments from the work group, the proposed language, which was a compromise from the original submission, was less desirable among fuel producers, marketers and pipeline representatives. Since the proposed language was introduced, technology for the rapid analysis of biodiesel blends has become more sophisticated, and there are more tools to determine accurate biodiesel blends in real time; so anyone who wishes to blend biodiesel has the ability to determine the blend they are starting with before they add more. Since the NBB has concerns about negative unintended consequences from this proposed new disclosure requirement and considering the industry could not come to consensus on national model language, NBB’s recommendation is that states need to determine individually whether or not local conditions and regulations make it necessary to further disclose biodiesel blends below 5% within their own markets. Therefore, the National Biodiesel Board recommends that this proposal be Withdrawn. A letter to FALS on the task force recommendation will be provided before the Interim. The letter will include a recommendation that the Task Group be disbanded. A state official recommended the item be either Withdrawn or made a Voting Item, since the item has been on the agenda since 2010. The Committee recommended that the item be retained as informational until a recommendation is received from the Fuels and Lubricants Subcommittee. SWMA recommended that the item be an Informational Item.

2012 NEWMA Interim Meeting: The National Biodiesel Board gave an update. There is no consensus on the issue. NBB recommended that item be Withdrawn consistent with FALS position. NEWMA recommended that the item be Withdrawn.

If you would like to participate in this Biodiesel Disclosure Task Group Subcommittee, contact Mr. Steve Howell, MARC IV (816) 903-6272, email showell@marciv.com or Mr. Samuel Bell, Echols Oil Company, Inc., at (864) 233-6205, email info@scpma.com.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

237-7     Engine Fuels and Automotive Lubricants Regulation, Sections 3.2., 3.8., and 3.9.

Source:
Missouri Department of Agriculture (2013)

Purpose:
Reduce the potential for misfueling consumer vehicles.

Item Under Consideration:
Amend NIST Handbook 130 Engine Fuels and Automotive Lubricants Regulation as follows:


3.2.1. Posting of Product Name Required. -- Dispenser nozzle(s) shall conspicuously display the product name, i.e. “Gasoline”, or “E15 Gasoline”.

3.2.12. Posting of Antiknock Index Required. …

(Renumber remaining paragraphs accordingly)

And
3.8. **E85 Fuel Ethanol.**

   3.8.1. **Posting of Product Name Required.** – Dispenser nozzle(s) shall conspicuously display the product name, i.e. “E85” or “Ethanol Flex-Fuel”.

   3.8.12. **How to Identify E85 Fuel Ethanol.** …
   (Renumber remaining paragraphs accordingly)

   And

3.9. **M85 Fuel Methanol.**

   3.9.1. **Posting of Product Name Required.** – Dispenser nozzle(s) shall conspicuously display the product name, i.e. “M85”.

   3.9.12. **How to Identify M85 Fuel Methanol.** …
   (Renumber remaining paragraphs accordingly)

**Background / Discussion:**
The level of confusion for consumers fueling vehicles continues to grow with the introduction of new fuels in the marketplace. This amendment would ensure proper delivery of the selected product and to reduce the potential of misfueling vehicles. Missouri and other states have received complaints from consumers who have fueled their vehicles with inappropriate products. At this time practically all gasoline dispensers nationwide do not comply with section HB 44 UR.3.2 or S.1.6.4.2 (a) as they do not display the product identity, i.e.: gasoline.

2012 CWMA Interim Meeting: One official supported the item, but recommended that FALS review the language so that stakeholders on that Subcommittee have an opportunity to review the language. An ethanol industry representative also supported the item, stating that the language should be reviewed by industry stakeholders. CWMA supported the item, recommending FALS review. CWMA forwarded the item to NCWM, recommending it as an Informational Item.
2012 SWMA Annual Meeting: The Committee heard opposition from an industry member and support from a regulatory official. SWMA forwarded the item to NCWM, recommending it as an Informational Item.

2012 NEWMA Interim Meeting: Members expressed concern for additional clutter on retail dispensers. There was also concern that nozzles could end up on products which do NOT match what is being dispensed. One member indicated that the consumer has some responsibility for making the proper product choice when at the dispenser. NEWMA forwarded the item to NCWM, recommending it as an Informational Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

237-8 Section 4.3. Dispenser Filters

Source: Missouri Department of Agriculture (2012)

Purpose: Recognize the need for 10-micron or smaller nominal pore-sized filters for today’s diesel engines.

Item Under Consideration: Amend NIST Handbook 130 as follows:

4.3. Dispenser Filters.

4.3.1. Engine Fuel Dispensers.

(a) All gasoline, gasoline-alcohol blends, gasoline-ether blends, biodiesel, biodiesel blends, diesel, E85 fuel ethanol and M85 methanol dispensers shall have a 10 micron or smaller nominal pore-sized filter.

(b) All biodiesel, biodiesel blends, diesel, and kerosene dispensers shall have a 30 micron or smaller nominal pore-sized filter.

Background / Discussion: Thirty (30) micron filters provide virtually no protection to current diesel vehicles on the road today. The high pressure common rail diesel engines require 10 to 3 micron filters on board. Dispensers with 30 micron filters are similar to having no filters according to engine manufacturers.

In 2007, the FALS recommended that all diesel fuel, biodiesel, and biodiesel blend dispensers be equipped with a 10 micron or smaller nominal pore-sized filter. During the Voting Session, an oil company representative stated that his company’s stations were equipped with 30 micron filters and suggested this be amended to this size. The L&R Committee decided to amend this section to ensure passage of the entire item as many urgent changes were being considered in the Engine Fuels and Automotive Lubricants Regulation.

Abnormal dispenser filter plugging at retail will alert the retailer of potential storage tank problems. Requiring 10 micron filters for all products will reduce the inventory and the potential of installing the wrong filter for all products at the same site.

2011 CWMA Interim Meeting: An official commented that a smaller porosity filter may be acceptable but for now this is a reasonable start. CWMA forwarded the item to NCWM, recommending it as a Voting Item.

2011 WWMA Annual Meeting: Need was expressed for more technical information and there were concerns that the flow rate would be diminished, the size of the filter may need to increase, and coupled with biodiesel it would tend to clog the filter in colder climates. Because of these reasons the Committee did not believe there was
sufficient data to justify addressing this issue. WWMA did not forward the item to NCWM and recommended that the submitter provide additional studies and technical documents to support this proposal.

2011 NEWMA Interim Meeting: Questions were raised as to whether or not “measurement” of filter content was within the ability of weights and measures officials. It was noted that better filters may enhance fuel quality. The Committee believes that the proposal has potential, given input from industry and NCWM members. NEWMA forwarded the item to NCWM, recommending it as a Developing Item.

2011 SWMA Annual Meeting: An industry representative stated that standard retailer dispensers use a 10 micron filter, and high capacity dispensers use 30 micron filters (i.e. diesel dispensed at truck stops). The company’s engineers have determined that reducing a 30 micron filter to a 10 micron filter will drastically reduce flow rate to trucks. Another industry representative agreed and re-iterated that truck stops would see a tremendous reduction in flow. The Committee believed this proposal was not practical and would have a negative impact and undue burden on the trucking industry. SWMA did not forward the item to NCWM.

2012 NCWM Interim Meeting: It was apparent to the Committee that there are many unresolved issues related to passenger vehicles. The Committee encourages the FALS to continue developing this item.

2012 NEWMA and CWMA Annual Meetings: Both regions supported this item and recommended that the item be a Voting Item.

2012 NCWM Annual Meeting: Several stakeholders spoke in opposition on this item. Ron Hayes, FALS Chairperson remarked that the FALS worked on this item in 2007 and believes FALS needs to continue to work on this item. The NCWM L&R Committee agreed that this item is not ready and supports the continued development by FALS.

2012 CWMA Interim Meeting: General Motors supported the item for passenger vehicles, as these vehicles now have 4 micron filters. A state official commented that the CWMA had recommended modifying the language in this item to state that the 10 micron filter requirement would only apply to passenger type vehicles, and would specifically exempt high flow rate meters such as truck stop meters. CWMA supported this item provided that the earlier proposal be presented to limit the 10 micron filters to passenger vehicle meters, and to specifically exempt high flow rate meters and recommended that a version of the item be a Voting Item.

2012 WWMA Annual Meeting: Mr. Gordon Johnson (Gilbarco) opposed the item because reducing a 30 micron filter to a 10 micron filter would drastically reduce flow rate to large capacity over the road trucks. The Committee did not believe that this issue falls within the scope of Weights and Measures and therefore would be unenforceable. No comments were received to support the item. WWMA recommended that the item be Withdrawn.

2012 SWMA Annual Meeting: An industry representative commented that the current technology to put a 10 micron filter on diesel at a truck stop will prohibit fuel from being dispensed in a timely manner and therefore opposes this. The Committee recommended that use of 10 micron filters be limited to passenger vehicles meters, and to specifically exempt high flow rate meters. SWMA recommended that the item be a Voting Item, but with the changes as described by the Committee.

2012 NEWMA Interim Meeting: NEWMA reviewed comments from the CWMA meeting. NEWMA recommends review by the Fuels and Lubricants Subcommittee. NEWMA recommended that the item be an Informational Item.
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Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

237-9 Section X.X. Flex Fuel Vehicles

Source:
Fuels and Lubricants Subcommittee Task Group (2012)

Purpose:
Update regulations related to flex fuels.

Item Under Consideration:
Proposal to be developed by a Task Group within FALS.

Background / Discussion:
The current wording in *NIST Handbook 130* related to fuels restricted to use in Flex Fuel Vehicles should be reviewed. Input gathered from the regional meetings and other stakeholders will be utilized by FALS to develop recommended modifications to *NIST Handbook 130*.

2011 CWMA and NEWMA Interim Meeting: There were no comments. CWMA and NEWMA forwarded the item to NCWM, recommending it as a Developing Item while FALS continues its work.

2011 WWMA Annual Meeting: WWMA forwarded the item to NCWM, recommending it as an Informational Item while FALS continues its work.

2011 SWMA Annual Meeting: Mr. Chuck Corr, Archer Daniels Midland Company, gave a presentation on the topic. FALS task force identified several areas where stakeholder input is needed to propose updates to *NIST Handbook 130* and to reflect new language in ASTM D5798. No comments were made during the hearing. FALS is expected to have a recommendation for the Interim Meeting. SWMA forwarded the item to NCWM, recommending it as a Developing Item.

2012 NCWM Interim Meeting: The Committee received updates on the Task Group’s progress. Mr. Corr, Archer Daniels Midland Company, will lead an effort to get regional input on a transition and implementation date. The 2012 L&R Committee designated this item as an Informational Item.

2012 NEWMA Annual Meeting: There were no comments. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: Mr. Chuck Corr, Archer Daniels Midland gave a presentation on “Flex Fuel Task Force Update.” This presentation noted that ASTM standards D7794-12 and D5798-11 cover the standard for a full range of ethanol concentrations. Several commented that the 51 % to 83 % range is too broad. A regulatory official was concerned with blends at the pumps they can blend and percentage they choose. A stakeholder remarked that consumers are concerned with price and miles per gallon (MPG) and may not have enough knowledge in regards to blends. Another stakeholder remarked that ASTM 5798 is at the terminal and the conference needs to address this issue. CWMA recommended that the item remain as an Informational Item and that FALS continues its development.

2012 NCWM Annual Meeting: Mr. Chuck Corr, Archer Daniels Midland, reported on behalf of FALS work group that approximately 18 areas of *Handbook 130* have been identified where modifications may be needed. A stakeholder voiced full support of the work group efforts. Mr. Corr’s group will report again at the 2013 NCWM Interim Meeting.
2012 CWMA Interim Meeting: The FALS Task Group chair gave a presentation, and would like to present an item to the NCWM L&R that would be ready for voting status at the January 2013 Interim meeting. He asked for input from regulators on a generic name for flex fuel vehicle fuel, names for individual blends, and labels for blends. The CWMA supports this item and recommends that it remain an Information Item for further development by the FALS Task Group.

2012 WWMA Annual Meeting: Mr. Chuck Corr (Archer Daniels Midland) provided an update on behalf of FALS. Mr. Corr stated that information will be fully developed and released prior to the January 2013 NCWM Interim meeting. The Committee would like to review that information. WWMA recommended that the item be an Informational Item.

2012 SWMA Annual Meeting: Mr. Chuck Corr commented as chair of the Fuels and Lubricants Subcommittee Task Force that the group is working on language to reflect to reflect the new (D7794) and recently modified (D5798) ASTM standards for fuels restricted to flex fuel vehicles. It should be available for review at the Interim. Russ Lewis (Marathon Petroleum) gave a presentation in support of the proposal, taking into account the recently modified D5798 “Specifications for Ethanol Fuel Blends for Flexible Fuel Automotive Spark Ignition Engines”. Russ provided a copy of newly proposed language to the task force for consideration. SWMA recommended that the item be an Informational Item.

2012 NEWMA Interim Meeting: NEWMA recommended that the item be an Informational Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

260 NIST HANDBOOK 133

260-1 Section 2.3.8. Moisture Allowance – Pasta Products

Source:
Southern Weights and Measures Association (2010)

Purpose:
Establish a moisture allowance for macaroni, noodle, and like products (pasta products).

Item Under Consideration:
Amend NIST Handbook 133, Section 1.2.(5)a. Package Requirements as follows:

a. Why and when do we allow for moisture loss or gain?

This handbook provides “moisture allowances” for some meat and poultry products, flour, pasta products, and dry pet food. (See Chapter 2, Table 2-3. “Moisture Allowances”) These allowances are based on the premise that when the average net weight of a sample is found to be less than the labeled weight, but not by an amount that exceeds the allowable limit, either the lot is declared to be within the moisture allowance or more information must be collected before deciding lot compliance or noncompliance.

Test procedures for flour, pasta products, some meat, and poultry are based on the concept of a “moisture allowance” also known as a “gray area” or “no decision” area (see Section 2.3.9. “Calculations”). When the average net weight of a sample is found to be less than the labeled weight, but not more than the boundary of the “gray area,” the lot is said to be in the “gray” or “no decision” area. The gray area is not a tolerance. More information must be collected before lot compliance or noncompliance can be decided.
Appropriate enforcement should be taken on packages found short weight and outside of the “moisture allowance” or “gray area.”

(Amended 2002XX)

Amend *NIST Handbook 133*, Section 2.3.8.b. Moisture Allowances, as follows:

**b. What are the moisture allowances for flour, dry pet food, pasta products, and other products? (See Table 2-3. “Moisture Allowances”)**

<table>
<thead>
<tr>
<th>Verifying the labeled net weight of package of:</th>
<th>Moisture Allowance is:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour</td>
<td>3 %</td>
<td></td>
</tr>
<tr>
<td>Dry pet food</td>
<td>3 %</td>
<td>Dry pet food means all extruded dog and cat foods and baked treats packaged in Kraft paper bags and/or cardboard boxes with a moisture content of 13 % or less at time of pack.</td>
</tr>
<tr>
<td>Pasta Products</td>
<td>3 %</td>
<td><em>Pasta products means all macaroni, noodle, and like products packaged in Kraft paper bags, paperboard cartons, and/or flexible plastic bags with a moisture content of 13 % or less at the time of pack.</em></td>
</tr>
<tr>
<td>Borax</td>
<td>See Section 2.4.</td>
<td></td>
</tr>
</tbody>
</table>

**Wet Tare Only**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh poultry</td>
<td>3 %</td>
<td>Fresh poultry is defined as poultry above a temperature of −3 °C (26 °F) that yields or gives when pushed with the thumb.</td>
</tr>
<tr>
<td>Franks or hot dogs</td>
<td>2.5 %</td>
<td>For packages of bacon, fresh sausage, and luncheon meats, there is no moisture allowance if there is no free-flowing liquid or absorbent material in contact with the product and the package is cleaned of clinging material. Luncheon meats are any cooked sausage product, loaves, jellied products, cured products, and any sliced sandwich-style meat. This does not include whole hams, briskets, roasts, turkeys, or chickens requiring further preparation to be made into ready-to-eat sliced product. When there is no free-flowing liquid inside the package and there are no absorbent materials in contact with the product, Wet Tare and Used Dried Tare are equivalent.</td>
</tr>
<tr>
<td>Bacon, fresh sausage, and luncheon meats</td>
<td>0 %</td>
<td></td>
</tr>
</tbody>
</table>

¹Wet tare procedures must not be used to verify the labeled net weight of packages of meat and poultry packed at an official United States Department of Agriculture (USDA) facility and bearing a USDA seal of inspection. The Food Safety and Inspection Service (FSIS) adopted specific sections of the 2005 4th Edition of NIST HB 133 by reference in 2008 but not the “wet tare” method for determining net weight compliance. FSIS considers the free-flowing liquids in packages of meat and poultry products, including single-ingredient, raw poultry products, to be integral components of these products (see Federal Register, September 9, 2008 [Volume 73, Number 175] [Final Rule – pages 52189-52193]).

(Amended 2010, and 20XX)

Amend *NIST Handbook 133*, Sections 2.3.9.b. and d. as follows:

**b. How is a Moisture Allowance made prior to determining package errors?**

If the Moisture Allowance is known in advance (e.g., flour, *pasta products*, and dry pet food), it can be applied by adjusting the Nominal Gross Weight (NGW) used to determine the sample package errors. The
Moisture Allowance (MA) in Box 13a is subtracted from the NGW to obtain an Adjusted Nominal Gross Weight (ANGW) which is entered in Box 14. The NGW is the sum of the Labeled Net Quantity of Contents (LNQC e.g., 907 g) and the Average Tare Weight (ATW) from Box 13.

(Amended 20XX)

d. What should you do when a sample is in the moisture allowance (gray) area?

This handbook provides “moisture allowances” for some meat and poultry products, flour, pasta products, and dry pet food. These allowances are based on the premise that when the average net weight of a sample is found to be less than the labeled weight, but not by an amount that exceeds the allowable limit, either the lot is declared to be within the moisture allowance or further investigation can be conducted.

Reasonable variations from net quantity of contents caused by the loss or gain of moisture from the package are permitted when caused by ordinary and customary exposure to conditions that occur under good distribution practices. If evidence is obtained and documented to prove that the lot was shipped from the packaging plant in a short-weight condition or was distributed under inappropriate or damaging distribution practices, appropriate enforcement action should be taken.

(Amended 2010 and 20XX)

Background / Discussion:
Studies indicate that moisture loss for pasta products is reasonably predictable over time. Pasta exhibits consistent moisture loss in all environments and packaging, which can vary more than 4% due to environmental and geographic conditions. Although it eventually reaches equilibrium with the surrounding atmosphere because it is hygroscopic, this balance does not occur until long after packaging and shipping.

2010 Interim Meeting: The Committee heard support for this item from industry and stakeholders. This item would amend the Moisture Allowance Table in NIST Handbook 133 giving pasta a 3% moisture allowance. The Committee reviewed the submitted study (refer to the Report of the 95th NCWM [SP 1115, 2010]). The 2010 L&R Committee designated this item as a Voting Item.

2010 NEWMA Annual Meeting: A representative of the pasta industry gave the group an explanation of the item and expressed support for this item as written. NEWMA also supported this item.

2010 CWMA Annual Meeting: A representative from the National Pasta Association stated the data supports the 3% moisture allowance. An official commented that testing in their state does not support the proposal. An industry representative stated that guidance is needed for an established moisture allowance and currently there are no guidelines to establish the moisture loss percentage.

2010 NCWM Annual Meeting: A representative for the National Pasta Association spoke on behalf of the proposal. This item would allow for a specific moisture loss percentage to be taken. Inspectors would have a specific number that they can apply to the pasta product. Representatives of several pasta companies spoke in support of this item stating that it is consistent with numerous studies that have been done. An official opposed this item since pasta is known to have moisture loss due to the type of product it is. He further explained that applying a blanket 3% moisture loss does not make sense, what may be good in Florida may not be good in New Mexico. Another official stated that applying the 3% does not stop an inspector from going into a distribution or point of pack to inspect; especially if the inspectors believe the packer is under filling packages. He urged that this proposal be supported to provide a tool. Another official voiced support because it is important to recognize guidelines for consideration. A pasta association representative also agreed that this work goes back a couple of decades and that several studies were provided for consideration. Another representative explained that they pack to net weight. Pasta contains 10% to 13% moisture; if the moisture standard is lowered the product falls apart along with the product quality. There was a split vote on this item at the 2010 Annual Meeting and it was returned to the Committee.
2010 CWMA Interim Meeting: An official provided information regarding informal testing of pasta products in their state. The concern is that pasta can gain moisture as well as lose moisture; therefore, they oppose a national moisture allowance for pasta products. It was further explained that moisture loss/gain seems to be dependent upon the type of packaging used. This official also commented that product is no longer warehoused for long periods of time, and that it is mostly in climate controlled stores, which would prevent the need for a moisture allowance. Another official agreed that a national standard may not be appropriate due to humidity differences from state to state. CWMA recommended that the item be Withdrawn.

2010 WWMA Annual Meeting: An official expressed support for adopting a 3% moisture allowance for pasta citing the significant work done and data provided by the National Pasta Association. The Committee recommended that any additional data from studies be provided for review. WWMA recommended that the item remain as a Voting Item.

2010 SWMA Annual Meeting: There were no comments on this item. SWMA recommended that the item be Withdrawn. However, if further studies are developed, then this should be taken into consideration.

2010 NEWMA Interim Meeting: Attendees expressed strong reservations about this proposal. Comments were heard regarding industry practices in regards to moisture loss when packing and if there is a need to codify the moisture loss allowance at all. A member commented that if this proposal passed, other industries would now approach the conference and ask for specific moisture allowances for their products. NEWMA recommended that the item be Withdrawn.

2011 NCWM Interim Meeting: An overview was presented by the National Pasta Association regarding history and studies that have been performed in regard to moisture loss of pasta. Pasta is a hygroscopic product and changes in moisture content in the product may occur in the package due to atmospheric changes (refer to Appendix I). Hot, dry and air conditioned store environments have less humidity and will pull moisture from the product. Conversely, in tropical, wet and high humidity environments (seldom seen in U.S. stores) the product will pull moisture in. According to Ms. Hoover, American Italian Pasta Company, companies do pack to the law and have documented weight control programs. The 2011 L&R Committee designated this item as a Voting Item.

2011 NCWM Annual Meeting: The National Pasta Association (NPA) gave a presentation with background information and a brief legal overview on moisture loss. NPA also distributed a page with frequently asked questions and a follow-up study (refer to Appendix I in the Report of the 96th NCWM [SP 1125, 2011]) that occurred in 2006 - 2007 that shows a 2.5% to 5% moisture loss. Pasta consists of flour and water. Handbook 133 stipulates a 3% moisture allowance for flour. Pasta is packaged in either breathable film or paperboard cartons. This allows for the pasta to breathe and not mold. The industry is requesting that this proposal be adopted by the Conference to give officials the guidance that is needed when performing inspections. On a split vote this item was returned to the Committee.

2011 CWMA Interim Meeting: An industry representative stated that a uniform procedure for moisture loss is needed. Although difficult we can develop a surrogate that can be easily done by manufacturers and easily verified by weights and measures and recommended this item be Withdrawn. The Committee disagreed and believes that moisture loss is a legitimate issue and deserves consideration by NCWM. CWMA recommended that the item remain as a Voting Item.

2011 WWMA Annual Meeting: A state official requested additional information concerning good manufacturing and distribution processes. The Committee firmly believed that enough data had been established by industry to address questions regarding moisture allowances with pasta and pasta products. WWMA recommended that the item remain as a Voting Item.

2011 NEWMA Interim Meeting: NEWMA continued to oppose this item. NEWMA recommended that the item be Withdrawn.
2011 SWMA Annual Meeting: No comments were heard. The Committee noted that it appears as if proper protocol has been followed by the pasta industry. If states do not support the item, SWMA recommends that they provide the reasons so their issue(s) can be addressed. SWMA recommended that the item remain as a Voting Item.

2012 NCWM Interim Meeting: The Committee reviewed documents received from the National Pasta Association. A representative with the American Italian Pasta Company supported the language as presented. An official who has an active package inspection program remarked that a significant amount of data has been provided by the National Pasta Association. The 2012 L&R Committee designated this item as a Voting Item.

2012 NEWMA Annual Meeting: Ms. Jayne Hoover, American Italian Pasta Company, gave a presentation on the development of this topic and the extensive national testing and data collection which was done. One member indicated that it was a good objective and did not see a reason to oppose it. Several others voiced their historical opposition to moisture allowance. On a split vote, NEWMA recommended that the item remain as a Voting Item.

2012 CWMA Annual Meeting: A representative from the National Pasta Association (NPA) and American Italian Pasta Company addressed the top five frequently asked questions which are: 1) 3% gray area (gray area is not a tolerance), 2) current data on product (2006 – 2007 study of over 700 samples), 3) why 3%, 4) what causes variability (there are over 500 shapes of pasta and 3000 SKUs), and 5) regulatory standardization. Three regulatory officials spoke in opposition to the item. Several others spoke in favor, commenting that officials are required to recognize reasonable moisture loss and pasta rehydrates during cooking so there is no loss to the consumer. One regulator asked for clarification on why moisture loss appears to level out at six months. The NPA representative explained that different pastas have different moisture loss due to their shapes and size. CWMA recommended that the item remain as a Voting Item.

2012 NCWM Annual Meeting: Ms. Jayne Hoover, National Pasta Association, provided an overview on gray area, current data, and variability. Ms. Hoover stressed the need for uniformity in the marketplace. Another pasta representative remarked that Congress established that it is important to keep in mind the gray area. The gray area is not a tolerance and moisture loss does not cause the product to be short weight. Several regulatory officials spoke in support of this item. Two spoke in opposition, noting that moisture loss should be dealt with on a case-by-case basis. On a split vote the item was returned to the Committee.

2012 CWMA Interim Meeting: A regulatory official recommended withdrawing the item. It has been voted on twice at NCWM, and both votes were split votes. Another recommended it be a Voting Item because some states did not realize that abstaining from the vote was tantamount to a no vote. No CWMA officials planned to change their vote. Another official recommended that it move forward as a Voting Item, stating that the industry had submitted a complete proposal that justified the moisture allowance. The item was fully developed with supporting data that justified the moisture allowance. Those states that abstained in the 2012 NCWM should be given an opportunity to vote on this item. CWMA supported the item and recommended that the item be a Voting Item.

2012 WWMA Annual Meeting: Five regulatory officials commented in support of the item. NPA has met all requests to provide documented data that supported initial studies on moisture loss. The data demonstrated that a 3% moisture allowance (MA) is appropriate. Under federal law moisture loss must be recognized and adoption of this item would provide a moisture allowance for inspectors when testing pasta products. Comments stressed that a moisture allowance should be adopted to provide guidance to the pasta industry and to regulatory officials regarding package content compliance testing and enforcement. No evidence or data has been presented to contradict NPA’s data presented at any of the regional associations and NCWM meetings. The Committee recognized the cooperation by the pasta industry members to comply with NCWM’s request to demonstrate the appropriateness of the proposed 3% moisture allowance. The Committee supported the item, but expressed concern that it has not advanced because of a split vote for several years. The Committee suggested that the NCWM L&R Committee make this a priority item for the Moisture Allowance Work Group. In addition to the NPA study data, the Committee would have preferred an independent study from outside sectors. The Committee recognizes that additional data and studies may be available. If there is other data available that contradicts or supports NPA’s data, individuals are urged to submit it to the NCWM for consideration. WWMA recommended that the item be a Voting Item.

2012 SWMA Annual Meeting: The Committee believed the pasta industry has presented the necessary data needed by the NCWM to make a decision. SWMA recommended that the item be a Voting Item.
2012 NEWMA Interim Meeting: NEWMA members stated that sufficient work has been done on this topic and that more than enough data has been submitted to support the proposal. NEWMA members who has previously opposed the item stated that it now has their support. NEWMA recommended that the item be a Voting Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

260-2   **Section 3.10. Animal Bedding**

**Source:**
Central Weights and Measures Association (2012)

**Purpose:**
This proposal is to clarify appropriate test procedures for animal bedding.

**Item Under Consideration:**
Amend *NIST Handbook 133, Test Procedures – For Packages Labeled by Volume* as follows:

**3.10. Mulch, and Soils, and Animal Bedding Labeled by Volume**

a. What products are defined as mulch and soil, and animal bedding?

- Mulch is defined as “any product or material except peat or peat moss that is advertised, offered for sale, or sold for primary use as a horticultural, above-ground dressing, for decoration, moisture control, weed control, erosion control, temperature control, or other similar purposes.”

- Soil is defined as “any product or material, except peat or peat moss that is advertised or offered for sale, or sold for primary use as a horticultural growing media, soil amendment, and/or soil replacement.”

- Animal bedding as “animal bedding of all kinds, except for baled straw.”

b. What type of measurement equipment is needed to test packages of mulch, and soil, and animal bedding?

- A test measure appropriate for the package size that meets the specifications for test measures in Table 3-4. “Specifications for Test Measures for Mulch, and Soils, and Animal Bedding”

- Drop cloth/polyethylene sheeting for catching overflow of material

- Level (at least 15 cm [6 in] in length)

---

<p>| Table 3-4. Specifications for Test Measures for Mulch, Soils and Animal Bedding |
|-------------------------------------------------|----------------|-------------------|-----------------|-----------------|-----------------|
| Nominal Capacity of Test Measure (^4) | Actual Volume of the Measure (^4) | Interior Wall Dimensions (^1) | Marked Intervals on Interior Wall (^2) | Volume Equivalent of Marked Intervals |
|---------------------------------|----------------|-------------------|-----------------|-----------------|-----------------|
| 30.2 L ((1.07 \text{ cu ft})) for testing | 31.9 L ((1.13 \text{ cu ft})) | 213.4 mm ((8.4 \text{ in})) | 203.2mm ((8 \text{ in})) | 736.6 mm ((29 \text{ in})) | 12.7 mm ((\frac{1}{2} \text{ in})) | 524.3 mL ((32 \text{ in}^3)) |</p>
<table>
<thead>
<tr>
<th>Packages that contain less than 28.3 L (1 cu ft or 25.7 dry qt)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28.3 L (1 cu ft)</td>
<td>28.3 L (1 cu ft)</td>
<td>304.8 mm (12 in)</td>
<td>304.8 mm (12 in)</td>
<td>304.8 mm (12 in)</td>
<td></td>
</tr>
<tr>
<td>56.6 L (2 cu ft)</td>
<td>63.7 L (2.25 cu ft)</td>
<td>304.8 mm (12 in)</td>
<td>304.8 mm (12 in)</td>
<td>685.8 mm (27 in)</td>
<td>1179.8 mL (72 in³)</td>
</tr>
<tr>
<td>84.9 L (3 cu ft)</td>
<td>92 L (3.25 cu ft)</td>
<td>304.8 mm (12 in)</td>
<td>304.8 mm (12 in)</td>
<td>990.6 mm (39 in)</td>
<td></td>
</tr>
</tbody>
</table>

Measures are typically constructed of 1.27 cm (1/2 in) marine plywood. A transparent sidewall is useful for determining the level of fill, but must be reinforced if it is not thick enough to resist distortion. If the measure has a clear front, place the level gage at the back (inside) of the measure so that the markings are read over the top of the mulch.

**Notes**

1. Other interior dimensions are acceptable if the test measure approximates the configuration of the package under test and does not exceed a base configuration of the package cross-section.

2. The height of the test measure may be reduced, but this will limit the volume of the package that can be tested.

3. When lines are marked in boxes, they should extend to all four sides of the measure if possible to improve readability. It is recommended that a line indicating the MAV level also be marked to reduce the possibility of reading errors when the level of the mulch is at or near the MAV.

4. The Nominal Capacity is given to identify the size of packages that can be tested in a single measurement using the dry measure with the listed dimensions. It is based on the most common package sizes of mulch in the marketplace. If the measures are built to the dimensions shown above the actual volume will be larger than the nominal volume so that plus errors (overfill) can be measured accurately.

(Amended 2010)

c. **How is it determined if the packages meet the package requirements?**

Use the following procedure:

**Steps:**

1. Follow the Section 2.3.1. “Define the Inspection Lot.” Use a “Category A” sampling plan in the inspection, and select a random sample, then use the following procedure to determine lot conformance.

2. Open each package in turn. Empty the contents of the package into a test measure and level the contents by hand. Do not rock, shake, drop, rotate, or tamp the test measure. Read the horizontal marks to determine package net volume.
Notes:

**Mulch:** Some types of mulch are susceptible to clumping and compacting. Take steps to ensure that the material is loose and free flowing when placed into the test measure. Gently roll the bag before opening to reduce the clumping and compaction of material.

**Compressed state animal bedding:** To measure the usable volume, first empty the contents of the package on a drop cloth. Using your hands, or a tool if necessary, loosen the material until it is free of all clumps and compaction. When the product is free flowing, place in test measure. To determine volume of the compressed state animal bedding, follow section 3.9. a. Peat Moss, procedures for testing the volume of compressed peat moss.

3. Exercise care in leveling the surface of the mulch/soil/animal bedding and determine the volume reading from a position that minimizes errors caused by parallax.

d. **How are package errors determined?**

Determine package errors by subtracting the labeled volume from the package net volume in the measure. Record each package error.

\[
\text{Package Error} = \text{Package Net Volume} - \text{Labeled Volume}
\]

**Evaluation of Results**

Follow the procedures in Section 2.3.7. “Evaluating Results” to determine lot conformance.

Note: In accordance with Appendix A, Table 2-10. Exceptions to the Maximum Allowable Variations for Textiles, Polyethylene Sheeting and Film, Mulch and Soil Labeled by Volume, Packaged Firewood and Packages Labeled by Count with 50 Items or Fewer, apply an MAV of 5 % of the declared quantity to mulch and soil sold by volume. When testing mulch, and soil, and animal bedding with a net quantity in terms of volume, one package out of every 12 in the sample may exceed the 5 % MAV (e.g., one in a sample of 12 packages; two in a sample of 24 packages; four in a sample of 48 packages). However, the sample must meet the average requirement of the “Category A” Sampling Plan.

**Background / Discussion:**

*NIST Handbook 130,* Uniform Regulation for the Method of Sale Section 2.23. Animal Bedding states:

2.23. **Animal Bedding.** – Packaged animal bedding of all kinds, except for baled straw, shall be sold by volume, that is, by the cubic meter, liter, or milliliter and by the cubic yard, cubic foot, or cubic inch. If the commodity is packaged in a compressed state, the quantity declaration shall include both the quantity in the compressed state and the usable quantity that can be recovered.

**Example:** 250 mL expands to 500 mL (500 in$^3$ expands to 1000 in$^3$).

(Added 1990)

However, *NIST Handbook 133* does not include specific procedures for testing animal bedding volume declarations, compressed state quantity declarations, or usable quantity declarations. This proposal is to clarify appropriate test procedures for animal bedding.

2011 CWMA Interim Meeting: CWMA received this proposal and forwarded the item to NCWM, recommending it as a Voting Item.

2012 NCWM Interim Meeting: The Committee made minor editorial changes to align the proposal with the format and language currently in *NIST Handbook 133*. The submitter had the word “uncompressed” added under the note section within “Evaluation of Results.” The Committee agreed and recommended to remove this word.
This proposal includes adopting both the mulch and soil test method and the evaluation of results for animal bedding. The method of evaluating results for mulch and soil testing includes an exception to the maximum allowable variation (MAV): the MAV is 5%, and one package out of a 12 item sample (2 packages in 24 item sample, 4 packages in a 48 item sample) is allowed to exceed the MAV. However, the sample must meet the average requirement of “Category A.” This MAV exception for mulch and soil was developed based on a study of mulch and soil test results. The Committee will ask industry to submit animal bedding product information and test data to determine if the MAV exception is appropriate for animal bedding.

An animal bedding industry representative was supportive of the 5% allowance and also recommended a 12 x 12 x 12 cu ft vessel. The submitter of the proposal has been using the mulch test procedure to test animal bedding and has not had issues using the procedure under the item for consideration. The 2012 L&R Committee designated this item as an Informational Item.

2012 NEWMA Annual Meeting: There were no comments. NEWMA recommended that the item remain as an Informational Item.

2012 CWMA Annual Meeting: Judy Cardin (WI) reported that there is no standard for animal bedding. Subsequently industry is using a variety of test methods which produce varying results. Wisconsin tested and found a wide variance in net quantity accuracy and found significant shortages in several instances. She encouraged other jurisdictions to test animal bedding and to share data with NIST, OWM. Missouri did a lot of testing at one facility and found a maximum of 36% shortage and an average of 23% shortage. Missouri’s analysis further showed that the chipper had a great impact of the “spring effect” of compression. An industry representative recommended developing a method of sale for this commodity when sold from bulk since a significant amount of horse bedding is purchased in bulk. CWMA recommended that the item remain as an Informational Item.

2012 NCWM Annual Meeting: The L&R Committee requested that regulators and industry conduct animal bedding package testing, and submit their test results to Ms. Cardin at judy.cardin@wi.gov or to Mr. David Sefcik at dsefcik@nist.gov. Preliminary analysis by NIST of available test data indicates that an exception for MAV is necessary for this product, but the Committee needs additional test data to determine the appropriate amount for that exception.

2012 CWMA Interim Meeting: There is no package testing standard in HB 133 for animal bedding, and industry is currently using a variety of test methods that is resulting in significant non-compliance on package weights. Ms. Judy Cardin, Wisconsin, announced that she is coordinating an animal bedding package testing survey to provide data to determine the appropriate exception to MAV for animal bedding. She asked CWMA states to participate in the October-November 2012 testing. A few states agreed to participate. CWMA recognized that many states may not be able to participate given limited resources. The CWMA supported this item and recommended that the item be a Voting Item based on an appropriate MAV as determined by the study or, if the data is insufficient, using the established MAV for mulch, a similar product.

2012 WWMA Annual Meeting: Mr. Kurt Floren (LA County, CA) remarked that this item is noteworthy but questioned whether it recognizes all types of animal bedding in the marketplace (e.g. ground corn cobs and shredded paper). Ms. Kristin Macey (CA) commented in support, but she would like to see additional data collected. The NIST Technical Advisor requested that states submit data on animal bedding inspections to NIST. The Committee agreed that more studies and data are needed and recommended that the results be submitted to the NCWM. The Committee believed that a better definition is needed to address various animal bedding products. WWMA recommended that the item be an Informational Item.

2012 SWMA Annual Meeting: A NIST technical advisor commented that the chair of the NCWM L&R is requesting states to participate in the package testing of animal bedding over the next two months in order to provide more data to help determine the appropriate MAV. SWMA recommended that the item be an Informational Item unless there is strong evidence from the survey for an appropriate MAV, in which case SWMA would recommend it as a Voting Item.

2012 NEWMA Annual Meeting: NEWMA would like to see results of the CWMA study before action is taken on the proposal. NEWMA recommended that the item be an Informational Item.
260-3  Gravimetric Testing of Printer Ink and Toner Cartridges

Source:
WWMA (2013)

Purpose:
Provide a test procedure in NIST Handbook 133 for gravimetric testing of printer ink and toner cartridges.

Item Under Consideration:
None

Background / Discussion:
The Laws and Regulations Committee received a proposal in 2010 to create a uniform method of sale for printer ink and toner cartridges. See the related item in the 232 Series of this report for more detail and background discussion.

A Task Group was formed to address the method of sale, but was unable to reach consensus. In 2012, the Task Group was replaced with a new one that was charged to develop Handbook 133 gravimetric test procedures to verify net contents of ink and toner cartridges. The Committee agreed to keep the original Method of Sale item as an Informational Item until the second Task Group completes its recommendations.

2012 WWMA Annual Meeting: Mr. Paul Jeran expressed concern with the concept of providing a tare weight on package labels because his company has over 30 million items and believes the test method under consideration may not be appropriate. In reviewing the background discussion of the 232 Series Method of Sale Item, the Committee recommends that NCWM give careful consideration to industry concerns. WWMA recommended that the item remain as a Developing Item.

Anyone interested in assisting the Printer Ink and Toner Cartridge Task Group should contact Ms. Judy Cardin, Task Group Chair at (608) 224-4945, judy.cardin@wisconsin.gov or Ms. Lisa Warfield, NIST Technical Advisor at (301) 975-3308 or lisa.warfield@nist.gov.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

260-4  Section 4.5. Paper Plates and Sanitary Paper Products

Source:
Georgia Pacific (2013)

Purpose:
Add a more accurate & reproducible test method for verifying dimensions of disposable plates, bowls, and platters.
Item Under Consideration:
Amend NIST Handbook 133 as follows:

4.5. Paper Plates and Sanitary Paper Products

a. How are the labeled dimensions of paper plates and sanitary paper products verified?

Follow Section 2.3.1. “Define the Inspection Lot.” Use a “Category A” sampling plan in the inspection; select a random sample; then use the following procedure to determine lot compliance.

The following procedures are used to verify the size of paper plates and other products. The following procedure may be used to verify the size declarations of other disposable dinnerware.

Note: Do not distort the item’s shape during measurement.

The count of sanitary paper products cannot be adequately determined by weighing. Variability in sheet weight and core weight requires that official tests be conducted by actual count. However, weighing can be a useful audit method. These products often declare total area as well as unit count and sheet size. If the actual sheet size measurements and the actual count comply with the average requirements, the total area declaration is assumed correct.

Test Equipment

• Steel tapes and rules. Determine measurements of length to the nearest division of the appropriate tape or rule.
  - Metric Units:
    For labeled dimensions 40 cm or less, linear measure: 30 cm in length, 1 mm divisions; or a 1 m rule with 0.1 mm divisions, overall length tolerance of 0.4 mm.
    For labeled dimensions greater than 40 cm, 30 m tape with 1 mm divisions.
  - Inch-pound Units:
    For labeled dimensions 25 in or less, use a 36 in rule with $\frac{1}{64}$ in or $\frac{1}{100}$ in divisions and an overall length tolerance of $\frac{1}{64}$ in.
    For dimensions greater than 25 in, use a 100 ft tape with in divisions and an overall length tolerance of 0.1 in.

• Measuring Base

Note: A measuring base may be made of any flat, sturdy material approximately 38 cm (15 in) square. Two vertical side pieces approximately 3 cm (1 in) high and the same length as the sides of the measuring base are attached along two adjoining edges of the measuring base to form a 90° corner. Trim all white borders from two or more sheets of graph paper (10 divisions per centimeter or 20 divisions per inch). Place one sheet on the measuring base and position it so that one corner of graph paper is snug in the corner of the measuring base and vertical sides. Tape the sheet to the measuring base. Overlap other sheets on the first sheet so that the lines of top and bottom sheet coincide, expanding the graph area to a size bigger than plates to be measured; tape these sheets to the measuring base. Number each line from the top and left side of base plates: 1, 2, 3, etc.

• Plate Dimension Tester
a. How are paper products inspected?

Steps:
1. Follow Section 2.3.1. “Define the Inspection Lot.” Use a “Category A” sampling plan in the inspection; select a random sample; then use the following test procedure to determine lot compliance.

2. Select an initial tare sample according to Section 2.3.5. “Tare Procedure.”

3. Open each package and select one item from each.

Note: Some packages of plates contain a combination of different-sized plates. In this instance, take a plate of each declared size from the package to represent all the plates of that size in the package. For example, if three sizes are declared, select three different plates from each package.

b. How are paper products measured?

Note: Occasionally, packages of plates declared to be one size contain plates that can be seen by inspection to be of different sizes in the same package. In this instance, select the smallest plate and use the methods below to determine the package error. If the smallest plate is not short measure by more than the MAV, measure each size of plate in the package and calculate the average dimensions.

Example: If 5 plates measure 21.41 cm (8.43 in) and 15 measure 21.74 cm (8.56 in), the average dimension for this package of 20 plates is 21.66 cm (8.53 in).

Steps:
1. For paper plates, bowls or platters: Place each item on the Plate Dimension Tester or measuring base plate (or use the linear measure) with the eating surface down so two sides of the plate touch the sides of the Plate Dimension Tester or measuring base. If using the Plate Dimension Tester, follow the test procedure for determining the plate, bowl, or platter size. For other products, use either the measuring base or a linear measure to determine actual labeled dimensions (e.g., packages of napkins, rolls of paper towels). If testing folded products, be sure that the folds are pressed flat so that the measurement is accurate.

2. If the measurements reveal that the dimensions of the individual items vary, select at least 10 items from each package. Measure and average these dimensions. Use the average dimensions to determine package error in step 3 below.

3. The package error equals the actual dimensions minus the labeled dimensions.
Evaluation of Results

Follow the procedures in Section 2.3.7. “Evaluating Results” to determine lot conformance.

Background:
Section 4.5 identifies “Metric” and/or “Inch Pound” steel tapes and rules or a “measuring Base” as acceptable equipment for doing dimensional evaluations of paper plates and sanitary paper products. This proposal would add another acceptable piece of equipment which we call the ‘Plate Dimension Tester’.

It is simpler, faster, and easier for an operator, technician, or regulator to use, and it is or more accurate and reproducible than the existing acceptable equipment listed in HB 133 section 4.5. For most of these types of products (11.8 inches or less) the current metric rule is identified as a 30 mm rule in 1 mm divisions (0.039 inches), or a 1 meter rule with 0.1 mm divisions (0.0039 inches), and the inch pound rule is a 36 inch rule with 1/64 or 1/100 divisions (0.015 inches or 0.01 inches). The acceptable divisions are somewhat different. The proposed tester uses a certified steel rule with divisions of 0.02 inches which falls within the range of acceptable rules already listed in section 4.5.

The measuring base described as acceptable uses graph paper with divisions of 0.05 inches. That measuring base is described and constructed as follows:

A measuring base may be made of any flat, sturdy material approximately 38 cm (15 in) square. Two vertical side pieces approximately 3 cm (1 in) high and the same length as the sides of the measuring base are attached along two adjoining edges of the measuring base to form a 90° corner. Trim all white borders from two or more sheets of graph paper (10 divisions per centimeter or 20 divisions per inch). Place one sheet on the measuring base and position it so that one corner of graph paper is snug in the corner of the measuring base and vertical sides. Tape the sheet to the measuring base. Overlap other sheets on the first sheet so that the lines of top and bottom sheet coincide, expanding the graph area to a size bigger than plates to be measured; tape these sheets to the measuring base. Number each line from the top and left side of base plates: 1, 2, 3, etc.

The submitter believes the accuracy of cutting the borders off the edges of graph paper, aligning the graph paper lines to match, and then taping them in place leaves a lot to be desired for accuracy when gathering data; especially when the expectations require the values to be read to such small increments. The plates need to touch the two sides of the measuring base which require holding the plate flat against the measuring base and changes in that pressure can alter the values. The process of using rules can also cause problems when the plate edge must be perfectly aligned with the edges of the rule and then to make sure you have measured both directions in a perfect 90 degree angle. We therefore developed the Plate Dimension Tester to solve all those problems. I have submitted separately pictures of the tester, a test procedure for using the tester, a video showing the use of the tester, some reproducibility data, and a letter from the Foodservice Packaging Industry (FPI), which represents 85% of the companies producing these types of products, indicating their industry Technical Committee supports this proposal. The submitter believes his method would be a positive addition to Handbook 133 without changing any of regulatory requirements; simply improving on the technical accuracy and reproducibility of the resulting data generated.

The Standard Test Method is contained in Appendix C as well as additional pictures, reproducibility data and a blueprint of a Plate Dimension Tester.

2012 SWMA Annual Meeting: Mr. Richard Davis (Georgia Pacific) commented that his company designed the tester being proposed and that their trade association, Foodservice Packaging Institute (FPI) fully supports its use as a national test device. A letter was submitted by FPI stating their support. This proposal would add a test method but would not change the current test procedures (steel rule or graph paper) in HB 133. In addition the proposal would facilitate more testing by regulators because it is easier, more repeatable, and a more accurate test than the current test methods in HB 133. Concern was expressed with imports not being compliant and fair competition to US manufacturers. One example showed that a 1/8 inch shortage in a paper plate can equate to over $100,000 unfair advantage. It was noted that this procedure would provide greater support if challenged in court. Industry has been active in “self-policing”. The device would likely cost around $3000 and would be available through a third party.
A video was shown describing how to operate and test. An industry official expressed concern on whether the equipment can be certified and calibrated by a state lab. A regulatory official questioned whether the weight of the discs would have to be calibrated as well. The Committee believed that the device would provide an additional option and improved test procedure for regulators and industry. SWMA forwarded the item to NCWM, recommending it as a Voting Item.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

270 OTHER ITEMS – DEVELOPING ITEMS

270-1 D Uniform Weights and Measures Law, Section 1. Definitions

Source:
National Institute of Standards and Technology, Office of Weights and Measures (OWM) (2012)

Purpose:
Bring the Uniform Weights and Measures Law into agreement with current international agreement on terminology on these metrology-related definitions.

Item Under Consideration:
Amend NIST Handbook 130, Uniform Weights and Measures Law as follows:

1.14. Calibration. – An A set of operations which establishes, operation that, under specified conditions, the in a first step, establishes a relation relationship between the quantity values indicated by a measuring instrument or measuring system, or values represented by a material measure, and the corresponding known values of a measurand, with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication.

(Added 2005) (Amended 20XX)

1.15. Metrological Traceability. – The property of the a measurement result of a measurement or the value of a standard whereby the result it can be related to a reference stated references, usually national or international standards, through a documented an unbroken chain of calibrations, each contributing to the measurement uncertainty, comparisons all having stated uncertainties.

(Added 2005) (Amended 20XX)

1.16. Measurement Uncertainty. – A non-negative parameter associated with the result of a measurement that characterizes the dispersion of the quantity values that could reasonably be attributed to a measurand, the measurand. based on the information used.

(Added 2005) (Amended 20XX)

1.19. Standard, Reference Measurement. – A measurement standard, generally of the highest metrological quality available at a given location, from which measurements made at that location are derived, designated for the calibration of other measurement standards for quantities of a given kind in a given organization or at a given location. The term “reference measurement standards” usually means the physical standards of the state that serve as the legal reference from which all other standards for weights and measures within that state are derived.

(Added 2005) (Amended 20XX)

1.20. Standard, Working Measurement. – A measurement standard that is usually calibrated against a reference standard, and is used routinely to calibrate or check material measures, measuring instruments
or reference materials, verify measuring instruments or measuring systems. The term “working measurement standards” means the physical standards that are traceable to the reference standards through comparisons, calibrations or verifications, using acceptable laboratory procedures, and used in the enforcement of weights and measures laws and regulations. (Added 2005) (Amended 20XX)

1.21. Metrological Traceability Chain. – Sequence of measurement standards and calibrations that is used to relate a measurement result to a reference. (Added 20XX)

1.22. Metrological Traceability to a Measurement Unit. – Metrological traceability where the reference is the definition of a measurement unit through its practical realization. (Added 20XX)

Background / Discussion:
The 1993 version of the International Vocabulary of Metrology (VIM) was updated in 2008 to reflect changes in international agreement about several of the key definitions it contains, in order to better align the definitions with the philosophy of the Guide to the Expression of Uncertainty in Measurement (GUM). The current definitions of five entries in the Uniform Weights and Measures Law (UWML) were taken from the 1993 version of the VIM, and so do not reflect the changes introduced in the 2008 version of the VIM. The changes proposed below are to update those five entries so that they reflect current international agreement on terminology. Two new definitions that are related to the other five definitions are also being proposed to be added.

By incorporating these seven definitions, the UWML will be brought into agreement with current international agreement on these metrology-related definitions. Since the GUM is referenced in ISO/IEC 17025 (General requirements for the competence of testing and calibration laboratories), which is used as the basis for accrediting State metrology laboratories, incorporating these updated definitions into the UWML will also underpin the long-term harmonization of vocabulary between the NCWM and the international standards used to regulate the testing and calibration laboratories upon which NCWM depends (such as for NTEP).

Harmonization of NCWM terminology with internationally accepted terminology helps promote global acceptance of U.S. products abroad. Proposed modifications could interfere with commonly used NCWM terminology / concepts, but the presenter of this proposal believes that is not the case here.

Previous Item Under Consideration:

1.14. Calibration. – A set of operations which establishes, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system, or values represented by a material measure, and the corresponding known values of a measurand, operation that, under specified conditions, in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication.

NOTE 1: A calibration may be expressed by a statement, calibration function, calibration diagram, calibration curve, or calibration table. In some cases, it may consist of an additive or multiplicative correction of the indication with associated measurement uncertainty.

NOTE 2: Calibration should not be confused with adjustment of a measuring system, often mistakenly called “self-calibration”, nor with verification of calibration.

NOTE 3: Often, the first step alone in the above definition is perceived as being calibration. (Added 2005, Amended 20XX)
1.15. **Metrological Traceability.** – The property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties, property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty.

**NOTE 1:** For this definition, a “reference” can be a definition of a measurement unit through its practical realization, or a measurement procedure including the measurement unit for a non-ordinal quantity, or a measurement standard.

**NOTE 2:** Metrological traceability requires an established calibration hierarchy.

**NOTE 3:** Specification of the reference must include the time at which this reference was used in establishing the calibration hierarchy, along with any other relevant metrological information about the reference, such as when the first calibration in the calibration hierarchy was performed.

**NOTE 4:** For measurements with more than one input quantity in the measurement model, each of the input quantity values should itself be metrologically traceable and the calibration hierarchy involved may form a branched structure or a network. The effort involved in establishing metrological traceability for each input quantity value should be commensurate with its relative contribution to the measurement result.

**NOTE 5:** Metrological traceability of a measurement result does not ensure that the measurement uncertainty is adequate for a given purpose or that there is an absence of mistakes.

**NOTE 6:** A comparison between two measurement standards may be viewed as a calibration if the comparison is used to check and, if necessary, correct the quantity value and measurement uncertainty attributed to one of the measurement standards.

**NOTE 7:** The ILAC considers the elements for confirming metrological traceability to be an unbroken metrological traceability chain to an international measurement standard or a national measurement standard, a documented measurement uncertainty, a documented measurement procedure, accredited technical competence, metrological traceability to the SI, and calibration intervals (see ILAC P 10:2002).

**NOTE 8:** The abbreviated term “traceability” is sometimes used to mean “metrological traceability” as well as other concepts, such as “sample traceability” or “document traceability” or “instrument traceability” or “material traceability”, where the history (“trace”) of an item is meant. Therefore, the full term of “metrological traceability” is preferred if there is any risk of confusion.

(Added 2005, Amended 20XX)

1.16. **Measurement Uncertainty.** – A parameter associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to the measurand, non-negative parameter characterizing the dispersion of the quantity values being attributed to a measurand, based on the information used.

**NOTE 1:** Measurement uncertainty includes components arising from systematic effects, such as components associated with corrections and the assigned quantity values of measurement standards, as well as the definitional uncertainty. Sometimes estimated systematic effects are not corrected for but, instead, associated measurement uncertainty components are incorporated.

**NOTE 2:** The parameter may be, for example, a standard deviation called standard measurement uncertainty (or a specified multiple of it), or the half-width of an interval, having a stated coverage probability.
NOTE 3: Measurement uncertainty comprises, in general, many components. Some of these may be evaluated by Type A evaluation of measurement uncertainty from the statistical distribution of the quantity values from series of measurements and can be characterized by standard deviations. The other components, which may be evaluated by Type B evaluation of measurement uncertainty, can also be characterized by standard deviations, evaluated from probability density functions based on experience or other information.

NOTE 4: In general, for a given set of information, it is understood that the measurement uncertainty is associated with a stated quantity value attributed to the measurand. A modification of this value results in a modification of the associated uncertainty.

(Added 2005, Amended 20XX)

1.19. Standard, Reference Measurement. – A standard, generally of the highest metrological quality available at a given location, from which measurements made at that location are derived. measurement standard designated for the calibration of other measurement standards for quantities of a given kind in a given organization or at a given location. The term “reference standards” means the physical standards of the state that serve as the legal reference from which all other standards for weights and measures within that state are derived.

(Added 2005, Amended 20XX)

1.20. Standard, Working Measurement. – A standard that is usually calibrated against a reference standard, and is used routinely to calibrate or check material measures, measuring instruments or reference materials. measurement standard that is used routinely to calibrate or verify measuring instruments or measuring systems. The term “working standards” means the physical standards that are traceable to the reference standards through comparisons, using acceptable laboratory procedures, and used in the enforcement of weights and measures laws and regulations.

NOTE 1: A working measurement standard is usually calibrated with respect to a reference measurement standard.

NOTE 2: In relation to verification, the terms “check standard” or “control standard” are also sometimes used.

(Added 2005, Amended 20XX)

1.21. Metrological Traceability Chain. – Sequence of measurement standards and calibrations that is used to relate a measurement result to a reference.

NOTE 1: A metrological traceability chain is defined through a calibration hierarchy.

NOTE 2: A metrological traceability chain is used to establish metrological traceability of a measurement result.

NOTE 3: A comparison between two measurement standards may be viewed as a calibration if the comparison is used to check and, if necessary, correct the quantity value and measurement uncertainty attributed to one of the measurement standards.

(Added 20XX)

1.22. Metrological Traceability to a Measurement Unit. – Metrological traceability where the reference is the definition of a measurement unit through its practical realization.

NOTE 1: The expression “traceability to the SI” means “metrological traceability to a measurement unit of the International System of Units”.

(Added 20XX)
2011 CWMA Interim Meeting: Four officials commented that they do not support this proposal and asked why the international vocabulary could not align with NCWM. An official asked that NIST, OWM provide examples of problems caused by the lack of alignment with these two publications. CWMA did not forward the item to NCWM.

2011 WWMA Annual Meeting: An official supported the efforts to harmonize the relationship with international counterparts and believes this item should be supported on those grounds. The Committee supported the idea of the proposal but would like to have staff review this item before proceeding. WWMA forwarded the item to NCWM, recommending it as an Informational Item.

2011 NEWMA Interim Meeting: The Committee recognized that uniformity of definitions in the international marketplace will result in less confusion. NEWMA forwarded the item to NCWM, recommending it as a Developing Item.

2011 SWMA Annual Meeting: No comments were heard. The Committee recommended allowing more time for internal review by members. SWMA forwarded the item to NCWM, recommending it as an Informational Item.

2012 NCWM Interim Meeting: The submitter explained that the proposal allows for alignment with the international definitions. There is concern that the international language does not conform to existing language in NIST Handbook 130. The language appears to be too complicated and could cause misinterpretation. The Committee recommended that this language be returned to the submitter for language review and formatting. They would like the submitter to share the revised document at the 2012 CWMA and NEWMA Annual meetings. The 2012 L&R Committee designated this item as a Developing Item.

2012 NEWMA Annual Meeting: NEWMA supported this item and recommended that the item remain as a Developing Item.

2012 CWMA Annual Meeting: A NIST Technical Advisor submitted modified definitions and provided additional background information as follows:

Background of each definition (May 2012)

1.14. **Calibration**: Justification to amend the definition:
This revision updates the current definition by clarifying that a calibration not only involves comparing indications of measuring instruments with corresponding values (and uncertainties) of measurement standards, but also involves using these comparisons in an “inverse” manner, in order to be able to assign a measured value and measurement uncertainty to an item being measured by the measuring instrument, based on the indication of the measuring instrument. By updating this definition, UWML will recognize that calibration involves a two-step process.

1.15. **Metrological Traceability**: Justification to amend the definition:
This revision will update the current definition in four significant ways. First, in the 2008 VIM, “measurement result” means a value and an uncertainty (not just a value, as it meant in the 1993 VIM), so that traceability now applies to both the value and the uncertainty. Second, it is recognized that any acceptable “reference” can be used, and it doesn’t have to be a national or international standard. Third, the unbroken chain has to be documented, which wasn’t specified in the 1993 definition. And fourth, the chain is a chain of calibrations, and not just comparisons. This is to recognize that a comparison alone is not sufficient for traceability, since a comparison does not result in values being transferred along the chain (as a calibration does). Also, the term “Metrological” is added in front of “Traceability” in order to distinguish this type of traceability from other types (e.g., document traceability). By updating this definition, UWML will be consistent with international practice, such as used in documents from the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) that pertain to accreditation requirements for (state) metrology laboratories (e.g., ISO/IEC 17025).

1.16. **Measurement Uncertainty**: Justification to amend the definition:
This revision updates the current definition by first clarifying that a measurement uncertainty cannot be negative, and also by removing “that could reasonably be attributed”, which some people found to be confusing.
The term “Measurement” was added in order to distinguish this type of uncertainty from other types. The advantage to updating this definition is that the revisions will bring it into agreement with the 2008 VIM definition.

1.19. Standard, Reference Measurement: Justification to amend the definition:
This revision will update the current definition in two ways. First, it would no longer be required that a reference measurement standard be of the highest quality available (for example, it could be lower in a metrological traceability chain). Second, it is specified that a reference measurement standard is intended to be used for calibration of other measurement standards (as opposed to being used to make routine measurements). The term “Measurement” was added to the term in order to distinguish this type of reference standard from other types. Updating this definition will reflect current international agreement about reference measurement standards that is consistent with the 2008 VIM.

1.20. Standard, Working Measurement: Justification to amend the definition
This revision will update the current definition in two ways. First, a working standard would no longer be required to be directly calibrated by a reference standard (it could, for example, be calibrated by another working standard). Also, this revision will clarify that a working standard can be used for both calibration and verification. The word “Measurement” was added in order to distinguish this type of standard from other types of working standards. By updating this definition, the UWML will reflect current international agreement about working measurement standards that is consistent with the 2008 VIM.

1.21. Metrological Traceability Chain: Justification to add the following definition to the UWML:
This is a new definition for that is intended to support the revision to the definition of “metrological traceability” by explaining what is meant in the definition by “chain.” By adding this definition, the UWML will reflect current international agreement on traceability that is consistent with ISO and IEC documents that pertain to accreditation requirements for (state) metrology laboratories.

1.22. Metrological Traceability to a Measurement Unit: Justification to add the following definition to the UWML:
This is a new definition that is intended to support the revision to the definition of “metrological traceability” by explaining what is meant by the expression “traceability to the SI”. For example, “(metrological) traceability to the SI” means metrological traceability to the definition of the measurement unit “kilogram” (kg) through the practical realization of the kg at NIST, obtained by calibration of a NIST mass artifact, having a mass of about 1 kg, against the international kg in Paris. By adding this definition to the UWML, it will reflect current international agreement on traceability that is consistent with ISO and IEC documents that pertain to accreditation requirements for (state) metrology laboratories.

CWMA requested that the submitter of the proposal provide a presentation at the 2012 NCWM Annual Meeting to brief the conference on the changes and effects to each definition to help provide clarity. CWMA recommended that the item remain as a Developing Item.

2012 NCWM Annual Meeting: Dr. Charles Ehrlich (NIST, OWM) clarified the purpose of this item. He will provide a presentation at the 2013 NCWM Interim meeting that will further explain each proposed definition. The Committee updated its report to include Dr. Ehrlich’s explanations for each definition as presented at the CWMA Annual Meeting and updated the Item under Consideration to reflect the most recent modifications by Dr. Ehrlich.

2012 WWMA Annual Meeting: There was concern that the proposed definitions are too technical / scientific. The Uniform Weights and Measures Law is for the commercial area. It would be difficult to explain the proposed definitions to a layman or lawyer. The Committee believed this proposal was fully developed. There was also concern that NCWM would be adapting to foreign language standards. Dr. Charles Ehrlich (NIST, OWM) will make a presentation at the NCWM 2013 Interim meeting and will perhaps respond to the concerns. The proposed language would greatly impact the laboratory. Most state laboratories have budgetary constraints and may not be able to conform without repercussions. It may also impact some laboratory accreditations/certifications. The Committee recommended that the states provide additional input to Mr. Raymond Johnson (NM) and Tim Lloyd (MT) prior to the January 2013 Interim Meeting. WWMA recommended that the item be an Informational Item.
2012 SWMA Annual Meeting: A weights and measures consultant commented that the current definitions are very well thought out and carefully worded definitions. Concern was expressed with the highly technical nature of the definitions and whether these definitions should be in weights and measures law. The average regulator may not be able to decipher the meaning of the definitions or properly interpret and apply them. It was suggested that the definitions may be more appropriate in metrology manuals. SWMA recommended that the item be a Developing Item.

Interested parties should contact Dr. Charles Ehrlich, NIST, OWM at (301) 975-4834 or charles.ehrlich@nist.gov, or contact Ms. Lisa Warfield, NIST, OWM at (301) 975-3308 or lisa.warfield@nist.gov.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

270-2 D Uniform Method of Sale Regulation, Section 2.XX. Retail Sale of Electricity/Vehicle

Source:  
National Institute of Standards and Technology, Office of Weights and Measures (2012)

Purpose:
Create a Developing Item to engage the weights and measures community in creating a method of sale to support uniformity in retail sales of electricity as vehicle fuel.

Item Under Consideration:
Proposal to be developed.

Background / Discussion:
Significant work is needed to gather and incorporate all available input from stakeholders including device manufacturers, public utility commissions, weights and measures officials, smart grid experts, and all others that are in a position to contribute to the development of a method of sale for electricity as vehicle fuel. Thus, it is recommended that this item be taken up as a Developing Item to encourage input from stakeholders and experts in the development of proposed definitions, method of sale requirements, retail equipment price posting and labeling requirements, and any other elements needed to advance the item for adoption.

While a specific proposal for consideration has yet to be developed, some preliminary examples and points to consider are offered below:

2.XX.1. Definitions.

(a) Electric Vehicle or Hybrid-Electric Vehicle. – A vehicle that employs electrical energy as a primary or secondary mode of propulsion.

(b) Plug-in Electric Vehicle (PEV). – An electric vehicle that has onboard electrical energy storage designed to be charged via a physical connection to an external source of electrical energy.

(c) Electricity as Vehicle Fuel. – Electrical energy transferred to and/or stored onboard an electric vehicle primarily for the purpose of propulsion.

(d) Electric Vehicle Supply Equipment (EVSE). – A device or system used to transfer electrical energy to an electric vehicle, either as charge transferred via physical or wireless connection, by loading a fully charged battery, or by other means.

2.XX.2. Method of Retail Sale and Supply Equipment Labeling. – Preliminary review suggests that the method of sale should be based on metered quantities to facilitate value comparison by consumers. The units
should be specified for all electrical energy kept, offered, or exposed for sale and sold at retail as vehicle fuel, such as electrical energy units in terms of kilowatt hours (kWh) and/or in the metric equivalent unit for electrical energy Joules (J).

2.XX.3. Retail Service Equipment Labeling. – The unit price on the basis of the method of sale will be important to consumers as a basis for a value comparison regardless of whether the electrical energy is delivered through a slow plug-in charging device, a fast charging device, or by battery replacement.

2.XX.4. Presentation of Price (Street Signs and Advertisements). – The unit price according to method of sale will be important to clearly represent on street signs and advertisements when a consumer must make a value comparison before pulling their vehicle into a station to purchase electrical energy.

Although many Plug-in Electric Vehicle (PEVs) are primarily charged in homes and at work, it is projected that there will be a growing need for public PEV charging stations in order to address public expectations and allow for successful adoption of PEV technology by the public. Several states have observed emergence of PEVs and made inquiries regarding direction of NCWM toward a method of sale for electricity as a vehicle fuel. One online resource for locating charging stations at www.mychargepoint.net/find-stations.php identifies nearly 1100 charging stations already deployed across the United States. Use of electric vehicles and hybrid-electric vehicles is increasing. Adoption of electric vehicles is being driven by a number of factors, including high traditional fuel prices, auto industry investment in PEV technology, government investment and subsidies, national fuel economy standards, and state and national zero-emission vehicle and greenhouse gas standards.

A single, consistent method of sale is needed to pave the way for accurate measurement and representation of quantities sold and to facilitate value comparison by consumers. The method of sale is a crucial element that must be in place before the suitability of measurement methods and device technologies can be assessed. A measurement that is accurate, consistent, and understandable will promote consumer confidence and will provide consumers with a fundamental tool to perform value comparisons and protect themselves from confusion and fraud. An electrical energy-based method of sale would accomplish this.

Other methods of publicly offering electrical energy for sale as vehicle fuel have appeared in the absence of a nationally standardized method of sale. These include time-based charges, subscriber access, and gratis (free of charge) access. The coexistence of multiple methods of sale for the same commodity frustrates consumers’ efforts to make informed value comparisons.

The actual value to a motorist of the electrical energy that is received during charging is in terms of the distance that they are able to travel. The increase in the distance they can travel after receiving a charge is dependent on the amount of electrical energy that was delivered during the charging event. The amount of charge that a vehicle receives during a charging event cannot be determined solely by measuring the time that it was connected to a charging system. The rate per time that charge is delivered will depend on many factors that cannot be controlled including, but not limited to, the starting charge level, the design of the vehicle battery, the type of charging equipment, and other environmental variables. For these reasons, a time based method of sale will not form a sound basis for a consistent value comparison and an electrical energy-based method of sale is strongly recommended.

The current equipment for vehicle charging that is available in the marketplace today represents a very wide range of charging speeds, further emphasizing the need for a single method of sale. Level 1 equipment charges vehicles with 110 VAC and can take 8 to 12 hours to fully charge a vehicle. In contrast, a fast DC type of Electric Vehicle Supply Equipment (EVSE) is capable of charging a vehicle from 20% to 80% of full charge in 10 minutes, closely approximating the time of a traditional liquid (e.g., gasoline) vehicle fueling cycle. Consumers place a high value on their time, and so it is reasonable to expect that the unit price for electrical energy from a device that is capable of very fast charging will be higher. This can also be anticipated because the equipment capable of faster charging represents a higher capital investment. Since stations may offer multiple options for charging speed, a uniform language for describing the type of charging equipment available at any provider should be developed so that this important aspect of consumer value can be presented consistently in conjunction with the unit price to aid in the value comparison.
Vehicle charging using types of EVSE that offer slower charging rates is often offered in conjunction with other paid services (e.g., parking, valet parking, routine vehicle maintenance, etc.). In these cases, the unit price for electrical energy offered should be presented separately from any price for the other paid service(s) to allow for a value comparison with the cost of electrical energy offered by other providers.

For reference, a typical PEV can hold a charge of 24 kWh in onboard storage, with some vehicles capable of holding as high as 75 kWh. The average price of electrical energy in the United States is $0.075 per kWh and the average price for residential electrical energy is $0.089 per kWh. Presuming that the price for electrical energy as a vehicle fuel might range from $0.10 to $0.50 per kWh (perhaps depending on the speed of the ESVE charger), then the cost to the consumer to fill a vehicle might range from $2.40 to as high as $37.50.

An additional issue that needs to be explored and developed is that of “battery exchanges.” Equipment already exists that allows consumers to swap a depleted storage device for a fully charged onboard storage device (i.e., battery). In this case, the amount of charge present in the fully charged device should be communicated to the consumer consistent with the method of sale to enable a value comparison between this method and plug-in ESVE charging. The issue of whether and how to credit a consumer for the amount of charge that exists in the battery that is to be removed should be considered as this item develops.

There are currently as many as eight manufacturers of EVSE that would benefit from clear direction on method of sale and device standards.

The National Association of Regulatory Utility Commissioners () and other local Public Utility Commissions (PUC) interests have identified PEV use, and particularly public re-charging use cases, as having potentially significant impact on Public Utility efficiency, infrastructure needs, and pricing structures. Collaboration with these organizations in the development of national legal metrology standards for electrical energy sold as vehicle fuel would offer an opportunity for the creation and implementation of standards that take into consideration the missions of both NARUC and NCWM.

There is a likelihood that stations owned and operated by public utilities will coexist with privately owned charging stations. There may be regulatory issues in some jurisdictions that effect price regulation and competitiveness between these two types of stations. This is another reason that NARUC and PUC input is critically needed on development of a method of sale.

In Comments of the Division of Ratepayer Advocates to the California PUC (see Section II.A www.dra.ca.gov/NR/rdonlyres/B2E02349-740A-4EA8-A4D0-69ED3C0D6523/0/R090809DRAComments_A1b.pdf), the question has also been raised as to whether PUC’s may require residential customers to install a separate electric sub-meter for PEV charging. If this occurs, it is most likely that consumers would be invoiced for charging their vehicles at home in the same kWh units that are used for their primary billing. If the method of sale at public charging stations matches the units that are billed for charging the same vehicle at the residence, this will further facilitate the value comparison by consumers.

In some states, electrical energy sub-metering already falls under the jurisdiction of state and local weights and measures authorities. These jurisdictions must now use established standards other than NIST Handbook 44 and NIST Handbook 130. National standards for the sale of electrical energy in NIST Handbook 44 and NIST Handbook 130 would promote greater uniformity on sub-metering applications.

2011 CWMA Interim Meeting: An official suggested referencing FTC for labeling on alternative fuels. CWMA did not forward the item to NCWM and recommended returning the item to the submitter for development.

2011 WWMA Annual Meeting: An official commented that such vehicles already exist and there is no need for this matter to be addressed by NCWM. The Committee acknowledged that new technology is in the marketplace and encouraged NCWM to develop a method of sale for electricity as a vehicle fuel. WWMA forwarded the item to NCWM, recommending it as a Developing Item.
2011 NEWMA Interim Meeting: An official questioned how consumers will be charged, how the effort will be monitored, and whether this would be considered a regulated utility. NEWMA forwarded the item to NCWM, recommending it as a Developing Item.

2011 SWMA Annual Meeting: An official asked for clarification regarding the definition of an electric or hybrid electric vehicle. A NIST Technical Advisor noted that there is an absence of a clearly defined method of sale. Inquiries regarding the correct method of sale have increased as growth in charging stations have grown. The Technical Advisor asked that this item be made Developing because much information needs to be gathered. A couple of officials responded that only their utility companies can sell electricity. It was recognized that public utilities need to be an integral part of the process. An official questioned whether a measuring device for electricity exists today and whether it was National Type Evaluation Program certified. There was also question to whether a test measure can be traceable and certifiable to a standard. An official expressed support for this item. SWMA forwarded the item to NCWM, recommending it as a Developing Item.

2012 NCWM Interim Meeting: Concern was expressed with the definitions for primary and secondary and that the item only deals with vehicle fuel. At this time there is no proposal under consideration and the language under the area “background/discussion” is to be considered. The NIST Technical Advisor remarked that NIST, OWM is gathering data and information from many resources. Eventually a work group will be formed to further develop this item. The Committee designated this item as a Developing Item.

2012 NEWMA Annual Meeting: An attendee commented that these devices are not utility meters; they are subsidiary meters that fall under weights and measures authority. Another attendee voiced support as a developing item because businesses are installing these sub-meters and a uniform method of sale is needed. NEWMA recommended that the item remain as a Developing Item.

2012 CWMA Annual Meeting: A regulatory official remarked that this is not a public utility and owners of these charging units make free market sales. States should be concerned that this is a rapidly growing market without any standard. Other states commented; one stating that charging stations are selling by time, not kilowatt hour and the other stating that the charging stations are a free service for now. A regulatory official remarked that there are quick and slow charging stations and recommended that consumers be charged on what the vehicle is capable of receiving rather than what the device is capable of delivering. CWMA recommended that the item remain as a Developing Item.

2012 NCWM Annual Meeting: NIST, OWM announced that a NIST workgroup has been formed to develop this item and there are two meetings schedule over the next several months. A preliminary draft code has been developed that closely follows the California standard. Two regulatory officials expressed urgency in developing this proposal.

2012 WWMA Annual Meeting: Ms. Kristin Macey (CA) supported the item, stating that regulations would provide clear authority in the marketplace. Ms. Macey also reminded the states to look at their signage laws to see if there is an impact. Ms. Juanal Williams, NIST Technical Advisor and Chair of the EVSE WG reported that they held their first web-based meeting on August 29, 2012. They covered the structure and goals of the Work Group and membership status (active or observer) of each attendee was established. The next meeting will be held in person at NIST in Gaithersburg, MD with an option to attend via webinar at a date to be determined in December 2012 or January 2013. The group will discuss technical issues for the first time at this next meeting. NIST has provided the work group with draft proposals for a new Handbook 44 code and a draft Handbook 130 method of sale. They will be starting points as the group fully develops these two items. WWMA recommended that the item remain as a Developing Item.

2012 SWMA Annual Meeting: SWMA recommended that the item be an Informational Item.

2012 NEWMA Interim Meeting: NEWMA members again expressed urgency for a final product on the topic. This should be given a higher priority by the Working Group as more charging stations are appearing without specific guidance on method of sale placing the consumer at a disadvantage.
Please contact Mr. Marc Buttler, NIST, OWM at (301) 975-4615 or marc.buttler@nist.gov, if you are interested in assisting with the development of this item. Juana Williams, NIST, OWM will be the Chairperson for the Electric Vehicle Supply Equipment Workgroup and can be reached at (301) 975-3989 or juana.williams@nist.gov.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

### 270-3  D  Fuels and Lubricants Subcommittee

**Source:**
The Fuels and Lubricants Subcommittee (2007)

**Purpose:**
Update the Uniform Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation in *NIST Handbook 130* including major revisions to fuel ethanol specifications. Another task will be to update the Basic Engine and Fuels, Petroleum Products, and Lubricants Laboratory Publication.

**Item Under Consideration:**
This item is under development. All comments should be directed the Mr. Ronald Hayes FALS Chair at (573) 751-4316, ron.hayes@mda.mo.gov, or Mr. David Sefcik, NIST Technical Advisor at (301) 975-4868, dsefcik@nist.gov.

**Background / Discussion:**
The Subcommittee met on January 24, 2007, at NCWM Interim Meeting to undertake a review of a number of significant issues related to fuel standards. Their first project was to undertake a major review and update of the Uniform Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation in *NIST Handbook 130*. The Subcommittee also met at the 2007 NCWM Annual Meeting and continued its work on a number of items in addition to preparing a major revision of the Fuel Ethanol Specifications.

An additional project will be to update and possibly expand the Basic Engine Fuels, Petroleum Products, and Lubricants Laboratory Publication. The Subcommittee will undertake other projects as time and resources permit.

2009 NCWM Interim and Annual Meetings:  Mr. Hayes, FALS Chair, informed the Committee that FALS is working toward getting changes made to the language within the document.

2009 CWMA Interim, and WWMA Annual, SWMA Annual, and NEWMA Interim Meetings: There were no comments heard. The associations recommended that the item remain a Developing Item.

2010 NCWM Interim Meeting:  Mr. Hayes, FALS Chair, informed the Committee that FALS is still working on this project. No comments were heard during the Open Hearings. The 2010 L&R Committee designated this item as a Developing Item.

2010 NEWMA Annual Meeting:  No comments were heard on this item. NEWMA recommended that the item remain a Developing Item.

2010 CWMA Annual Meeting:  The NIST Technical Advisor reported that their office begun development of a handbook for state fuel laboratories.

2010 NCWM Annual Meeting:  A petroleum representative stated that this item is premature and that action needs to be taken by the EPA.  Mr. Hayes, FALS Chair, clarified that this item is for a laboratory guide and that FALS supports NIST, OWM efforts to develop a handbook for state fuel laboratories.  The item mentioned by the petroleum representative is for a new proposal that is being submitted through the regions modifying *NIST Handbook 130* as a result of a potential EPA waiver for gasoline containing more than 10 volume percent ethanol.
2010 fall regional meetings: All of the associations recommended that the item remain as a Developing Item.

2011 NCWM Interim Meeting: The NIST Technical Advisor reported that a draft laboratory guide for state laboratories will be available for distribution and comment by March 2011. The 2011 L&R Committee designated this item as a Developing Item.

Mr. Hayes, FALS Chair, added that FALS is considering a number of new items including:

- Reference ASTM microbial contamination standards
- Reference ISO 22241.1 NOx Reduction Agent Part 1 – Quality Requirements (quality standard for Diesel Exhaust Fluid)
- Section 3.1.2. – Retail Dispenser Labeling – Review for potential clarification of “gasoline” identity on retail motor fuel dispensers
- Establish regulations to determine if OEM labeled claims for Automatic Transmission & Tractor Fluids are met

2011 CWMA and NEWMA Interim Meetings: There were no comments. CWMA and NEWMA recommended that the item remain as a Developing Item.

2011 WWMA Annual Meeting: The Committee continues to support the work of the FALS. WWMA recommended that the item be an Informational Item.

2012 Interim Meeting: The NIST Technical Advisor remarked that comments on the draft laboratory guide for state laboratories are due into NIST, OWM by February 1, 2012. The 2012 L&R Committee designated this item as a Developing Item and assigned its development to FALS.

2012 NEWMA Annual Meeting: There were no comments and NEWMA recommended that the item remain as a Developing Item.

2012 CWMA Annual Meeting: NIST, OWM reported that a draft laboratory guide for state laboratories was distributed for comment in January 2012 and very few comments were submitted. A second draft received numerous comments and NIST, OWM is compiling them to release a third draft. CWMA recommended that the item remain as a Developing Item.

2012 NCWM Annual Meeting: A NIST Technical Advisor reported that the laboratory guide for state laboratories will be published on October 1, 2012. Mr. Ron Hayes provided an update on items that FALS will be working on. Mr. Hayes will give the Committee a list of items accomplished and items to develop.

2012 SWMA Annual Meeting: A NIST technical advisor announced that NIST HB 156 “Program Handbook for Engine Fuels, Petroleum, and Lubricant Laboratories” has been published and is available on line. The Committee believes more work is needed for this item. SWMA recommended that the item be an Informational Item.

If you would like to participate in this Subcommittee, contact Mr. Ronald Hayes, Fuels and Lubricants Subcommittee Chair, at (573) 751-4316, ron.hayes@mda.mo.gov, or Mr. David Sefcik, NIST Technical Advisor at (301) 975-4868, dsefcik@nist.gov.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

270-4 D Packaging and Labeling Subcommittee

Source:
Packaging and Labeling Subcommittee (2011)
Purpose:
Provide notice of formation of a new Subcommittee reporting to the L&R Committee.

Item Under Consideration:
None

Background / Discussion:
2011 NCWM Interim Meeting: The PALS met for the first time to discuss ongoing issues and agenda items in regards to packaging and labeling regulations. There were 11 attendees that represented industry, state and county regulatory officials, and the NIST Technical Advisor.

The mission of PALS is to assist the L&R Committee in the development of agenda items related to packaging and labeling. The Subcommittee will also be called upon to provide important and much needed guidance to the regulatory and consumer packaging communities on difficult questions. PALS will report to NCWM L&R Committee. The NIST Technical Advisor reported that FTC will do a review of FPLA in 2013. The 2011 L&R Committee designated this item as a Developing Item and assigned its development to PALS.

2011 CWMA Interim Meeting: The PALS Chair stated the goal is to be active before the 2012 NCWM Interim meeting and stated there is a need to prioritize labeling issues. No action was needed. CWMA recommended that the item remain as a Developing Item.

2011 WWMA and NEWMA Interim Meetings: Both associations recommended that the item remain as a Developing Item.

2012 NCWM Interim Meeting: PALS met to discuss its formation and strategy. The NCWM Chairman will appoint eight voting members on the Committee to consist of four regulatory officials (one from each region) and four from industry (two retailers and two manufacturers). Mr. Christopher Guay, PALS Chair, reported that work will be done through webinar meetings to be held approximately four times a year. PALS members will be responsible to provide updates at their regional meetings and to seek input into issues. Mr. Guay added that PALS will be developing proposals and providing guidance and recommendations on existing proposals as assigned by the NCWM L&R Committee. Mr. Guay also stressed the need and importance of having key federal agencies (FDA, FTC, and USDA) participating. Mr. Guay gave a presentation on a number of packaging issues he has encountered over the last several years. The NIST Technical Advisor commented that FTC announced that they will review the FPLA in 2013. Mr. Floren, NCWM Chairman, stated he is committed to making final appointments to the Subcommittee, understanding the urgency and necessity for the work of this Subcommittee. The 2012 L&R Committee designated this item as a Developing Item and assigned its development to PALS.

2012 NEWMA and CWMA Annual Meetings: Both regions recommended that the item remain as a Developing Item.

2012 NCWM Annual Meeting: Mr. Guay, PALS Chair reported that the Subcommittee is considering further development of the following items:

- **Additional Net Content Declarations on the Principal Display Panel** - Package net contents are most commonly determined by the product form, for example – solid products are labeled by weight and liquid products are labeled by volume. Semi-solid products such as pastes, creams and viscous liquids are required to be labeled by weight in the US and by volume in Canada.

- **Icons in Lieu of Words in Packaged labeled by Count** – Clear and non-misleading icon take the place of the word “count” or “item name” in a net content statement? While existing Federal regulation requires regulatory label information to be in “English”, the increasing presence of multilingual labels and the growing diversity of the U.S. population suggest more consumers are served with a clear and misleading icon.

- **Multilingual Labels**
- **Multipacks and Bundle Packages** - The net content statements for multipacks and bundled packages of individually labeled products can be different based on the approach used to calculate them. The difference is the result of the degree of rounding for dual inch-pound and metric declarations. Using two apparently valid but different methods can yield one net content statement result, which provides more accuracy between the metric and inch-pound declarations and a different net content result which is consumer friendly.

2012 SWMA Annual Meeting: Chris Guay, PALS Chair, stated that Item 231-1 has been assigned to PALS for a recommendation. PALS is working on a series of principles and recommendations regarding claims and statements made on packages outside of quantity statement (i.e., supplemental, quality and performance claims), on what is appropriate and what is not. PALS will recommend that 231-1 be Withdrawn. PALS is also looking at whether icons are appropriate as part of a quantity statement and how labeling of products with multilingual labels can be simplified. SWMA recommended that the item remain as a Developing Item.

Anyone interested in assisting the PALS, should contact Mr. Guay at (513) 983-0530, guay.cb@pg.com or Mr. David Sefcik, NIST Technical Advisor at (301) 975-4868, dsefcik@nist.gov.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.

### 270-5 D Moisture Allowance

**Source:**
Moisture Allowance Task Group (2012)

**Purpose:**
Provide notice of formation of a new Task Group reporting to the Committee. This Task Group will provide additional guidance for making moisture allowances for products not listed in *NIST Handbook 133*.

**Item Under Consideration:**
None

**Background / Discussion:**
2012 NCWM Interim Meeting: Ms. Cardin, Committee Chair, will be requesting that the NCWM Board of Directors form a new Task Group to review moisture allowance. The 2012 L&R Committee designated this item as a Developing Item.

2012 NCWM Annual Meeting: Mr. Kurt Floren (LA County, CA) announced that he will Chair the Moisture Allowance Task Group.

2012 WWMA Annual Meeting: Mr. Kurt Floren, Chairman of the Moisture Allowance Task Group, remarked that he is actively seeking individuals with expertise in moisture allowance. WWMA recommended that the item remain as a Developing Item.

2012 SWMA Annual Meeting: The Committee supported the formation of the moisture loss work group. SWMA recommended that the item remain as a Developing Item.

Anyone interested in assisting with the work should contact Ms. Lisa Warfield, NIST Technical Advisor at (301) 975-3308 or lisa.warfield@nist.gov.

Additional letters, presentations and data may have been part of the Committee’s consideration. Please refer to www.ncwm.net/content/2012pub-16 to review these documents.
Ms. Judy Cardin, Wisconsin | Committee Chair
Mr. Raymond Johnson, New Mexico | Member
Mr. Tim Lloyd, Montana | Member
Mr. Richard Lewis, Georgia | Member
Mr. Louis Sakin, Towns of Hopkinton/Northbridge, Massachusetts | Member
Mr. Rob Underwood, Petroleum Marketers Association of America | Associate Membership Representative
Mr. Lance Robertson, Measurement Canada | Canadian Technical Advisor
Mr. David Sefcik, NIST, OWM | NIST Technical Advisor
Ms. Lisa Warfield, NIST, OWM | NIST Technical Advisor

Laws and Regulations Committee
Appendix A

Items 232-1 and 237-1: Background and Justification for Handbook 130 Definition of “Diesel Gallon Equivalent (DGE)” of Natural Gas as a Vehicular Fuel

Clean Vehicle Education Foundation

Development of the “Gasoline Gallon Equivalent” by NCWM*

In 1993, under the auspices of the National Conference on Weights and Measures (NCWM), a Compressed Natural Gas (CNG) Working Group came together to determine the way in which CNG would be sold to the public at retail as a motor fuel.

The working group focused on three issues:
1. How to provide the Natural Gas Vehicle (NGV) industry a method of sale that would be familiar and acceptable to consumers
2. How to provide weights and measures officials a verifiable and quantifiable means to determine the accuracy of natural gas dispensers; and
3. How to meet these requirements with a uniform, national standard.

NCWM considered three proposals for the method of sale of CNG:
1. joules, the unit of energy measurement in SI units
2. mass
3. the Gasoline Gallon Equivalent (GGE)

The Natural Gas Vehicle Coalition (now NGVAmerica) recommended that the Gasoline Gallon Equivalent be adopted as the method of sale for CNG, and that it be based on the energy equivalent of a gallon of gasoline. The use of the GGE was recommended primarily for the convenience of the retail customer comparing the cost and fuel economy of a natural gas vehicle to a comparable gasoline vehicle. During the discussion, a proposal was made to eliminate the reference to energy content of CNG and replace it with a fixed conversion factor based on mass, with the fixed mass of CNG being equal to a gallon of gasoline. Measurement of mass in the retail dispenser and verification by W&M officials is easier and less costly than measurement of energy content.

Since the energy content of a unit measure of CNG (standard cubic foot - scf) and gasoline (gallon) vary widely depending on the sample of fuel measured, the reference

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A gallon of gasoline was determined to be Indolene, the gasoline used by EPA to certify emissions and fuel economy, with an energy content (lower heating value) of 114,118 BTU/gal. Work conducted by the Institute of Gas Technology and the Gas Research Institute (now combined into the Gas Technology Institute) surveyed 6811 samples of natural gas nationwide and concluded that the “average” natural gas in the US had an energy content (lower heating value) of 923.7 BTU/scf, and a density of 0.0458172 lbs/cubic foot. This translates 20,160.551 BTU/lb. Dividing gasoline’s 114.118 BTU/gal by natural gas’s 20,160.551 BTU/lb gives 5.660 lbs of natural gas = 1 GGE. Similar calculations determined that a gasoline liter equivalent of natural gas equals 0.678 kg of natural gas.

At its 79th annual meeting in July of 1994, NCWM adopted resolutions that:

“All natural gas kept, offered or exposed for sale or sold at retail as a vehicle fuel shall be in terms of the gasoline liter equivalent (GLE) or gasoline gallon equivalent (GGE), and

All retail natural gas dispensers shall be labeled with the conversion factor in terms of kilograms or pounds. The label shall be permanently and conspicuously displayed on the face of the dispenser and shall have either the statement “1 Gasoline Liter Equivalent (GLE) is equal to 0.678 kg of Natural Gas” or “1 Gasoline Gallon Equivalent (GGE) is equal to 5.660 lbs of Natural Gas” according to the method of sale used.”

These statements can be found in NIST Handbook 130*, along with the definition of “natural gas” which seems to apply only to Compressed Natural Gas, not to Liquefied Natural Gas. Handbook 130, §§3.11 and 3.12 (Engine Fuels, Petroleum Products, and Automotive Lubricants Regulations) confirm that these requirements are for CNG, rather than LNG. Similar requirements and definitions are found in Handbook 44.

During the discussions it was recognized that, although diesel and gasoline are both sold in gallon units, a gallon of diesel fuel has substantially more energy content than a gallon of gasoline. While it is convenient to use the Gasoline Gallon Equivalent unit when comparing the cost and fuel economy of gasoline-powered light-duty vehicles to equivalent natural gas vehicles, a Diesel Gallon Equivalent unit would be more useful for operators of medium and heavy-duty (usually diesel powered) vehicles. However, in 1994, the NCWM working group “agreed to defer development of a “Diesel Gallon Equivalent” until the issues related to the ‘Gasoline Gallon Equivalent’ were decided by the NCWM and agreed to meet again if additional work is necessary.”** The issue of the formal definition a Diesel Gallon Equivalent (DGE) unit has not come before NCWM from that time until today, although the DGE is often used in the industry, defined as 6.31 lbs of natural gas.

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* “Method of Sale Regulation,” §2.27
Need for a Definition of a “Diesel Gallon Equivalent” Unit

Today there are an increasing number of commercial vehicles using natural gas as a fuel, to lower emissions and Greenhouse Gases, decrease America’s use of petroleum, and lower fuel costs (U.S. DOE Clean Cities Alternative Fuel Price Report for April 2012 shows in Table 2 ‘Overall Average Fuel Price on Energy-Equivalent Basis’ that diesel is priced at $4.12/gal and CNG at $2.32/gal http://www.afdc.energy.gov/afdc/pdfs/afpr_apr_12.pdf).

Since the NCWM’s working group deferred development of a DGE unit in 1994, there has been little call by the natural gas vehicle industry for the formalization of that unit in the sale of Compressed Natural Gas. However the use of Liquefied Natural Gas (LNG) as a motor fuel has been growing and there is significant interest in using the DGE as a unit for the sale of that fuel.

LNG as a motor fuel is used almost exclusively by commercial vehicles, most of which view diesel as the conventional alternative. Using the same logic as was used for the development of the GGE unit, the convenience of the retail customer comparing the cost and fuel economy of a natural gas vehicle to a comparable conventional vehicle, it makes sense for NCWM to now “officially” define the DGE.

Other than §3.12. Liquefied Natural Gas, in the Engine Fuels and Automotive Lubricants Regulation section of Handbook 130, we find no specific provisions in either Handbook 44 or Handbook 130 for the retail sale of LNG as a motor fuel. However LNG is sold in California and other states on a mass basis (by the pound), which allows for easy confirmation by weights and measures authorities. An “official” definition of the DGE as a specific mass of natural gas would allow states to easily move from retail sale by pound to retail sale by DGE, simplifying the sale process for the retail customer used to dealing with "gallons of diesel" as a fuel measure.

Therefore, at this time we are asking for a definition of the Diesel Gallon Equivalent (and Diesel Liter Equivalent) units by NCWM.

Justification of the Definition of a DGE as 6.312 Pounds of Natural Gas

Handbook 130 contains the following definitions of natural Gas as a vehicle fuel:

Gasoline liter equivalent (GLE). – Gasoline liter equivalent (GLE) means 0.678 kg of natural gas.
Gasoline gallon equivalent (GGE). – Gasoline gallon equivalent (GGE) means 2.567 kg (5.660 lb) of natural gas.

* NIST handbook 130, 2006, Method of State Regulation. §§2.27.1.2 and 2.227.1.3; also Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation, §§1.25 and 1.26.
As the NCWM working group recognized during its deliberations in 1993 on the Gasoline Gallon Equivalent unit, both gasoline and natural gas can vary in their BTU content from sample to sample. The working group determined the gasoline gallon (energy) equivalent based on a gallon of Indolene (114,118 BTU/gal – lower heating value) and a survey of 6811 natural gas samples nationwide with an average of 923.7 BTU/scf (lower heating value) and a density of 0.0458172 lbs/cubic foot. This equates to 20,160.551 BTU/lb. Dividing gasoline’s 114.118 BTU/gal by natural gas’s 20,160.551 BTU/lb gives 5.660 lbs of natural gas = 1 GGE. Similar calculations determined that a gasoline liter equivalent of natural gas equals 0.678 kg of natural gas.

Starting with 5.660 lbs of natural gas = 1 GGE and 0.678 kg of natural gas = 1 GLE, we can calculate the mass of natural gas necessary to make a DGE and a DLE by comparing the amount of energy in a gallon of diesel fuel to the amount of energy in a gallon of gasoline fuel and apply that ratio to scale up the masses of natural gas calculated for the GGE and GLE units.

Unfortunately it is no easier today than it was in 1993 to set one energy value as representative of a unit for all gasoline, (or diesel) fuel. EPA’s certification fuel has likely changed in energy content since 1993, as both gasoline and diesel fuels have been modified for improved emissions.

We recommend using the most recent Department of Energy Transportation Energy Data Book, as an authoritative reference for both gasoline and diesel fuel energy values. Taking further surveys or basing our calculations on today’s EPA certification fuel only delays our action, substantially increases costs, and, in the end, provides a limited potential increase in accuracy based on one point in time. Table B.4 of the Transportation Energy Data Book, on the heat content of fuels http://cta.ornl.gov/data/tedb30/Edition30_Full_Doc.pdf lists the net energy of gasoline as 115,400 BTU/Gal, and diesel as 128,700 BTU/Gal.

Therefore a Diesel Gallon Equivalent of natural gas is:

\[(128,700/115,400) \times 5.660 = 6.312 \text{ lb (2.863 kg)}\]

and a Diesel Liter Equivalent of natural gas is:

\[(128,700/115,400 \times 0.678 = 0.756 \text{ kg}\]

Prepared by:  
Clean Vehicle Education Foundation  
http://www.cleanvehicle.org

Appendix B

Items 232-2 and 237-4: API Motor Oil Guide

Automotive Oil Change Association
API'S CERTIFICATION MARK AND SERVICE SYMBOL

Identify quality motor oils for gasoline- and diesel-powered vehicles. Oils displaying these marks meet performance requirements set by U.S. and international vehicle and engine manufacturers and the lubricant industry. More than 500 companies worldwide participate in this voluntary program, which is backed by a marketplace sampling and testing program.

THE API CERTIFICATION MARK, ALSO KNOWN AS THE “STARBURST”

An oil displaying this mark meets the current engine protection standard and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), a joint effort of U.S. and Japanese automobile manufacturers. Automobile manufacturers recommend oils that carry the API Certification Mark. See the ILSAC STANDARD FOR PASSENGER CAR ENGINE OILS chart on the next page for descriptions of current and obsolete ILSAC standards.

THE API SERVICE SYMBOL, ALSO KNOWN AS THE “DONUT”

1. PERFORMANCE LEVEL

Gasoline engine oil categories for cars, vans, and light trucks with gasoline engines. Oils designed for gasoline engine service fall under API’s “S” (Service) categories. See inside for descriptions of current and obsolete API service categories. Diesel motor oil categories (for heavy-duty trucks and vehicles with diesel engines).

2. VISCOSITY GRADE

The measure of an oil’s ability to flow at certain temperatures. Vehicle requirements may vary. Follow your vehicle manufacturer’s recommendations on SAE oil viscosity.

3. RESOURCE CONSERVING or ENERGY CONSERVING

These designations apply to oils intended for gasoline-engine cars, vans, and light trucks. Widespread use of “Resource Conserving” or “Energy Conserving” oils may result in an overall savings of fuel in the vehicle fleet as a whole.

4. MULTIPLE PERFORMANCE LEVELS

Oils designed for diesel engine service might also meet gasoline engine service. For those oils the designation is “C” category first followed by the “S” category. “C” category oils have been formulated primarily for diesel engines and may not provide all of the performance requirements consistent with vehicle manufacturers’ recommendations for gasoline-powered engines.

5. THE API SERVICE SYMBOL WITH CI-4 PLUS

The “CI-4 PLUS” designation identifies oils formulated to provide a higher level of protection against carbon-related viscosity increase and viscosity loss due to shear in diesel engines. When originally introduced, CI-4 PLUS identified CI-4 oils meeting a higher level of performance. CI-4 oils include all CI-4 PLUS performance requirements. CI-4 PLUS appears in the lower portion of the API Service Symbol "Donut."
The current and previous ILSAC standards and API Service Categories are listed here. Vehicle owners should refer to their owner's manuals before consulting these charts. Oils may have more than one performance level.

For automotive gasoline engines, the latest ILSAC standard or API Service Category includes the performance properties of each earlier category and can be used to service older engines where earlier category oils were recommended.

### ILSAC STANDARD FOR PASSENGER CAR ENGINE OILS

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
<th>SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GF-5</td>
<td>CURRENT</td>
<td>Introduced in October 2010 for 2011 and older vehicles, designed to provide improved high temperature deposit protection for pistons and turbochargers, more stringent sludge control, improved fuel economy, enhanced emission control system compatibility, seal compatibility, and protection of engines operating on ethanol-containing fuels up to E85.</td>
</tr>
<tr>
<td>GF-4</td>
<td>OBSOLETE</td>
<td>Valid until September 30, 2011. Use GF-5 where GF-4 is recommended.</td>
</tr>
<tr>
<td>GF-3</td>
<td>OBSOLETE</td>
<td>Use GF-5 where GF-3 is recommended.</td>
</tr>
<tr>
<td>GF-2</td>
<td>OBSOLETE</td>
<td>Use GF-5 where GF-2 is recommended.</td>
</tr>
<tr>
<td>GF-1</td>
<td>OBSOLETE</td>
<td>Use GF-5 where GF-1 is recommended.</td>
</tr>
</tbody>
</table>

### GASOLINE ENGINES (FOLLOW YOUR VEHICLE MANUFACTURER'S RECOMMENDATIONS ON OIL PERFORMANCE LEVEL)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>STATUS</th>
<th>SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN</td>
<td>CURRENT</td>
<td>Introduced in October 2010 for 2011 and older vehicles, designed to provide improved high temperature deposit protection for pistons, more stringent sludge control, and seal compatibility. API SN with Resource Conserving matches ILSAC GF-5 by combining API SN performance with improved fuel economy, turbocharger protection, emission control system compatibility, and protection of engines operating on ethanol-containing fuels up to E85.</td>
</tr>
<tr>
<td>SM</td>
<td>CURRENT</td>
<td>For 2010 and older automotive engines.</td>
</tr>
<tr>
<td>SL</td>
<td>CURRENT</td>
<td>For 2004 and older automotive engines.</td>
</tr>
<tr>
<td>SJ</td>
<td>CURRENT</td>
<td>For 2001 and older automotive engines.</td>
</tr>
<tr>
<td>SH</td>
<td>OBSOLETE</td>
<td></td>
</tr>
<tr>
<td>SG</td>
<td>OBSOLETE</td>
<td></td>
</tr>
<tr>
<td>SF</td>
<td>OBSOLETE</td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>OBSOLETE</td>
<td><strong>CAUTION:</strong> Not suitable for use in gasoline-powered automotive engines built after 1979.</td>
</tr>
<tr>
<td>SD</td>
<td>OBSOLETE</td>
<td><strong>CAUTION:</strong> Not suitable for use in gasoline-powered automotive engines built after 1971. Use in more modern engines may cause unsatisfactory performance or equipment harm.</td>
</tr>
<tr>
<td>SC</td>
<td>OBSOLETE</td>
<td><strong>CAUTION:</strong> Not suitable for use in gasoline-powered automotive engines built after 1967. Use in more modern engines may cause unsatisfactory performance or equipment harm.</td>
</tr>
<tr>
<td>SB</td>
<td>OBSOLETE</td>
<td><strong>CAUTION:</strong> Not suitable for use in gasoline-powered automotive engines built after 1951. Use in more modern engines may cause unsatisfactory performance or equipment harm.</td>
</tr>
<tr>
<td>SA</td>
<td>OBSOLETE</td>
<td><strong>CAUTION:</strong> Contains no additives. Not suitable for use in gasoline-powered automotive engines built after 1930. Use in more modern engines may cause unsatisfactory performance or equipment harm.</td>
</tr>
</tbody>
</table>
### DIESEL ENGINES

**FOLLOW YOUR VEHICLE MANUFACTURER'S RECOMMENDATIONS ON OIL PERFORMANCE LEVEL**

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>STATUS</th>
<th>SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ-4</td>
<td>CURRENT</td>
<td>For high-speed four-stroke cycle diesel engines designed to meet 2010 model year on-highway and Tier 4 nonroad exhaust emission standards as well as for previous model year diesel engines. These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact emission aftertreatment system durability and/or drain interval. CJ-4 oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. Optimum protection is provided for control of catalyst poisoning, particulate filter blocking, engine wear, piston deposits, low- and high-temperature stability, soot handling properties, oxidative thickening, foaming, and viscosity loss due to shear. API CJ-4 oils exceed the performance criteria of API CI-4 with CI-4 PLUS, CH-4, CC-4 and CF-4 and can effectively lubricate engines calling for those API Service Categories. When using CJ-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval.</td>
</tr>
<tr>
<td>CH-4</td>
<td>CURRENT</td>
<td>Introduced in 1999. For high-speed, four-stroke engines designed to meet 1998 exhaust emission standards. CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, CE-4, and CH-4 oils.</td>
</tr>
<tr>
<td>CG-4</td>
<td>OBSOLETE</td>
<td>Introduced in 1995. For severe duty, high-speed, four-stroke engines using fuel with less than 0.5% weight sulfur. CG-4 oils are required for engines meeting 1994 emission standards. Can be used in place of CD, CE, and CF-4 oils.</td>
</tr>
<tr>
<td>CF-4</td>
<td>OBSOLETE</td>
<td>Introduced in 1990. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CD and CE oils.</td>
</tr>
<tr>
<td>CF-2</td>
<td>OBSOLETE</td>
<td>Introduced in 1994. For severe duty, two-stroke-cycle engines. Can be used in place of CD-II oils.</td>
</tr>
<tr>
<td>CF</td>
<td>OBSOLETE</td>
<td>Introduced in 1994. For off-road, indirect-injected and other diesel engines including those using fuel with over 0.5% weight sulfur. Can be used in place of CD oils.</td>
</tr>
<tr>
<td>CE</td>
<td>OBSOLETE</td>
<td>Introduced in 1985. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CC and CD oils.</td>
</tr>
<tr>
<td>CD-II</td>
<td>OBSOLETE</td>
<td>Introduced in 1985. For two-stroke cycle engines.</td>
</tr>
<tr>
<td>CD</td>
<td>OBSOLETE</td>
<td>Introduced in 1955. For certain naturally aspirated and turbocharged engines.</td>
</tr>
<tr>
<td>CC</td>
<td>OBSOLETE</td>
<td>CAUTION: Not suitable for use in diesel-powered engines built after 1990.</td>
</tr>
</tbody>
</table>

### GUIDE TO SAE VISCOSITY GRADES OF MOTOR OIL FOR PASSENGER CARS

Multigrade oils such as SAE 5W-30 and 10W-30 are widely used because, under all but extremely hot or cold conditions, they are thin enough to flow at low temperatures and thick enough to perform satisfactorily at high temperatures. Note that vehicle requirements may vary. **FOLLOW YOUR VEHICLE MANUFACTURER’S RECOMMENDATIONS ON SAE OIL VISCOSITY GRADE.**

<table>
<thead>
<tr>
<th>IF LOWEST EXPECTED OUTDOOR TEMPERATURE IS</th>
<th>TYPICAL SAE VISCOSITY GRADES FOR PASSENGER CARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°C (32°F)</td>
<td>0W-20, 0W-30, 5W-20, 5W-30, 10W-30, 10W-40, 20W-30</td>
</tr>
<tr>
<td>-18°C (0°F)</td>
<td>0W-20, 0W-30, 5W-20, 5W-30, 10W-30, 10W-40</td>
</tr>
<tr>
<td>Below -18°C (0°F)</td>
<td>0W-20, 0W-30, 5W-20, 5W-30</td>
</tr>
</tbody>
</table>
Appendix C

Handbook 133: Section 4.5. Paper Plates and Sanitary Paper Products

Georgia Pacific

Contents:

- Standard Test Method using a Plate Dimension Tester
- Pictures of a Plate Dimension Tester
- Reproducibility Data
- Blueprint of a Plate Dimension Tester
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STANDARD TEST METHOD

Title: Diameter of Plates and Bowls

Original: New

Effective: September 1, 2010

1 Purpose/Scope

1.1 This method is for determining the diameter of plates and bowls utilizing the National Institute of Standards and Technology (NIST) Handbook 133 Section 4.5 (Fourth Edition) and/or Section 5.5 (Third Edition) method.

2 Apparatus/Materials

2.1 Plate Diameter Gauge, accurate to 1/50\textsuperscript{th} (0.02) of an inch available from:
Research Dimensions
1720 Oakridge Road
Neenah, WI 54956
920-722-2289

2.2 Acrylic weights (4, 6 and 8-inch diameter), weighing each 225 +/- 10 grams available from Research Dimensions (2.1).

2.3 Magnifying glass

2.4 6-inch calibration gauge block available from:
McMaster-Carr
Part no. 19575A299
www.mcmaster.com
630-833-0300

2.5 9/64-inch Allen wrench
3 Training/Safety

3.1 The Primary Person Responsible (PPR) trains operators for this method.

![Figure 1: Plate diameter gauge.](image)

4 Specimen Preparation

4.1 Obtain samples, precondition and condition according to TAPPI procedures.

5 Maintenance/Calibration
5.1 The PPR maintains the apparatus for this method.

5.2 Perform a calibration check before the instrument is used.

5.2.1 Place the 6-inch gauge block over the vertical slot with one end against the stationary horizontal edge of the fixture. Move the vertical slide against the gauge block and read the measurement (Figure 2). The measurement should be 6.00 inches. If you encounter any problems contact the PPR for calibration.

![Vertical slide calibration check](image)

Figure 2: Vertical slide calibration check

5.2.2 Place the 6-inch gauge block over the horizontal slot with one end against the stationary vertical edge of the fixture. Move the large horizontal slide against the gauge block and read the measurement (Figure 3). The measurement should be 6.00 inches. If you encounter any problems contact the PPR for calibration.
Figure 3: Large horizontal slide calibration check

5.2.3 Remove the large horizontal slide from the tester and place the small horizontal slide on the tester. Move it against the gauge block and read the measurement (Figure 4). The measurement should be 6.00 inches. If you encounter any problems contact the PPR for calibration.

Figure 4: Small horizontal slide calibration check

6 Procedure

6.1 Mark the MD direction of the plate or bowl.
6.2 Place the plate or bowl to be measured on the measuring base plate, eating surface down, so that two sides of the plate or bowl touch both the stationary horizontal and vertical edge of the diameter gauge. The MD direction of the plate should be in the horizontal position (Figure 1).

6.3 Place the appropriate size Acrylic weight on top of the plate or bowl. The Acrylic weight should cover the entire base of the plate or bowl but not large enough to interfere with the diameter measurement.

6.4 Gently move the vertical and horizontal slides against the edge of the plate or bowl. Slide contact should be light so the sample is not deformed by the contact.

6.5 If the plate or bowl is smaller than 8 inches in diameter, replace the moving large horizontal guide with the small horizontal guide. If the plate or bowl is circular, record the smallest diameter measurement.

6.6 If the plate is oblong, use the Acrylic weight that is closest to the smaller dimension that does not interfere with its measurement. Record the plate diameter in both dimensions.

6.7 A magnifying glass can be used to aid in reading the measurements.

7 Report

7.1 For circular plates and bowls record the minimum diameter measurement to the nearest 0.02-inch.

7.2 For oblong plates record both the small and large dimension to the nearest 0.02-inch.

7.3 Clearly state any deviations from the standard procedure, and note any unusual features or characteristics of the sample.

8 References/Additional Information

Plate Dimension Tester Photos
Reproducibility Data

Descriptive Statistics Plate Dimension Tester

Based on the 60 data points available (10 plates, 3 operators, 2 repeats), the variation observed in the measurements is reflective of the resolution in the gage. The minimum gradient in the gage is 1/50\textsuperscript{th} of an inch (0.02 in), and the confident interval for both the 9 and 10 inch plates is well within this tolerance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Valid N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Confidence -95.000%</th>
<th>Confidence +95.000%</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-inch Plate Diameter</td>
<td>60</td>
<td>8.66</td>
<td>8.70</td>
<td>8.673</td>
<td>0.0109</td>
<td>8.670</td>
<td>8.676</td>
</tr>
<tr>
<td>10-inch Plate Diameter</td>
<td>60</td>
<td>10.12</td>
<td>10.18</td>
<td>10.143</td>
<td>0.0089</td>
<td>10.141</td>
<td>10.145</td>
</tr>
</tbody>
</table>

For the 9 inch plate, the expected average is 8.673 +/- 0.003 inches.
For the 10 inch plate, the expected average is 10.143 +/- 0.002 inches.
BLUEPRINT FOR PLATE DIMENSION TESTER