

**RULES
OF
TENNESSEE DEPARTMENT OF AGRICULTURE
DIVISION OF MARKETS**

**CHAPTER 0080-05-12
KEROSENE AND MOTOR FUELS QUALITY INSPECTION REGULATIONS**

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0080-05-12-.01 DEFINITIONS.

- (1) "ASTM" (Formerly The American Society for Testing and Materials) means ASTM International, the international voluntary consensus standards organization formed for the development of standards on characteristics and performance of materials, products, systems, and services and the promotion of related knowledge.
- (2) "Antiknock Index (AKI)" means the arithmetic average of the Research Octane Number (RON) and Motor octane number (MON): $AKI = (RON+MON)/2$. This value is called by a variety of names, in addition to antiknock index, including: Octane rating, Posted octane, $(R+M)/2$ octane.
- (3) "Automotive Fuel Rating" or "fuel rating" means the automotive fuel rating required under the amended Octane Certification and Posting Rule (or as amended, the Fuel Rating Rule), 16 CFR Part 306. Under this Rule, sellers of liquid automotive fuels, including alternative fuels, must determine, certify, and post an appropriate automotive fuel rating. The automotive fuel rating for gasoline and gasoline blending stock is the antiknock index (octane rating). The automotive fuel rating for alternative liquid fuels consists of the common name of the fuel along with a disclosure of the amount, expressed as a minimum percentage by volume, of the principal component of the fuel. For alternative liquid automotive fuels, a disclosure of other components, expressed as a minimum percentage by volume, may be included, if desired. For non-liquid alternative fuels not covered under 16 CFR Part 306, those covered under 16 CFR Part 309 shall be covered under this fuel rating definition.
- (4) "Automotive Gasoline, Automotive Gasoline-Oxygenate Blend" means a type of fuel suitable for use in spark-ignition automobile engines generally containing small amounts of fuel additives and also commonly used in marine and nonautomotive applications.
- (5) "Aviation Gasoline" means a type of gasoline suitable for use as a fuel in an aviation spark-ignition internal combustion engine.
- (6) "Aviation Turbine Fuel" means a refined middle distillate suitable for use as a fuel in an aviation gas turbine internal combustion engine.
- (7) "Biodiesel" (Biodiesel Fuel Blend Stock) means a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats.
- (8) "Biodiesel Blend" means a fuel comprised of a blend of more than five percent by volume or more biodiesel with petroleum-based diesel fuel, that may contain fuel additives.

(Rule 0080-05-12-.01, continued)

- (9) "Butanol" means butyl alcohol, the chemical compound C₄H₉OH, a colorless substance existing in four isomeric forms.
- (10) "CBOB" means Conventional Blendstock for Oxygenate Blending, gasoline blendstock which could become a conventional gasoline-oxygenate blend solely upon the addition of an oxygenate.
- (11) "Cetane Number" means a numerical measure of the ignition performance of a diesel fuel obtained by comparing it to reference fuels in a standardized engine test.
- (12) "Commissioner" means the Commissioner of the Tennessee Department of Agriculture or a departmental employee designated by the Commissioner to act as his representative for purposes of these rules.
- (13) "Compressed Natural Gas (CNG)" means natural gas which has been compressed and dispensed into fuel storage containers and is suitable for use as an engine fuel.
- (14) "Conventional-Fuel Vehicle" means a vehicle designed to operate on spark-ignition engine fuel that complies with ASTM D4814 standards.

Note: This definition is for the purpose of these regulations. Diesel vehicles may operate on conventional compression-ignition engine fuel. Diesel fuel and diesel engines are outside the scope of this definition.

- (15) "Denatured Fuel Ethanol", means an ethanol blend component for use in gasoline-ethanol blends, Mid-Level Ethanol Blends and Ethanol Flex Fuel for use in spark-ignition internal combustion engines. The ethanol is rendered unfit for beverage use by the addition of denaturants under formulas approved by the Alcohol and Tobacco Tax and Trade Bureau. ASTM D4806 describes the acceptable denaturants for denatured fuel ethanol to be blended into engine fuels.
- (16) "Department" means the Tennessee Department of Agriculture.
- (17) "Diesel Fuel" means a refined middle distillate suitable for use as a fuel in a compression-ignition (diesel) internal combustion engine that may contain fuel additives.
- (18) "Ethanol Flex Fuels" means a blend of ethanol and hydrocarbons restricted for use as fuel in ground vehicles equipped with ethanol flexible-fuel spark-ignition engines.
- (19) "Engine Fuel" means any liquid or gaseous matter used for the generation of power in an internal combustion engine that meets the applicable product specification.
- (20) "EPA" means the United States Environmental Protection Agency.
- (21) "Ethanol" also known as denatured fuel ethanol and ethyl alcohol, means an ethanol blend component for use in gasoline-ethanol blends, Mid-Level Ethanol Blends and Ethanol Flex Fuel for use in spark-ignition internal combustion engines. The ethanol is rendered unfit for beverage use by the addition of denaturants under formulas approved by the Alcohol and Tobacco Tax and Trade Bureau. ASTM D4806 describes the acceptable denaturants for denatured fuel ethanol to be blended into engine fuels.
- (22) "Flexible-Fuel Vehicle" means a vehicle designed to operate on either unleaded gasoline or ethanol flex fuel blends or mixtures or both. Flexible-Fuel Vehicles may also be designed to run on M85 Fuel Methanol.

(Rule 0080-05-12-.01, continued)

- (23) "Fuel Additive" means a material added to a fuel in small amounts not to exceed 1.0 percent by volume to impart or enhance desirable properties or to suppress undesirable properties.
- (24) "Fuel Oil" means refined oil middle distillates, heavy distillates, or residues of refining, or blends of these, suitable for use as a fuel for heating or power generation that may contain fuel additives.
- (25) "Gasoline" means a volatile mixture of liquid hydrocarbons generally containing small amounts of fuel additives suitable for use as a fuel in a spark-ignition internal combustion engine.
- (26) "Gasoline-Oxygenate Blend" means a fuel consisting primarily of gasoline along with a substantial amount (more than 0.35 mass percent oxygen, or more than 0.15 mass percent oxygen if methanol is the oxygenate) of one or more oxygenates not to exceed the total oxygen content permitted by applicable laws and regulations.
- (27) "Hydrogen Fuel" means a fuel composed of the molecular hydrogen intended for consumption in a surface vehicle or electricity production device with an internal combustion engine or fuel cell.
- (28) "Internal Combustion Engine" means a device used to generate power by converting chemical energy bound in the fuel via spark-ignition or compression ignition engine combustion into mechanical work to power a vehicle or other device.
- (29) "Kerosene (or Kerosine)" means refined oil intended for heating or illuminating use.
- (30) "Lead Substitute" means an EPA-registered gasoline additive suitable, when added in small amounts to fuel, to reduce or prevent exhaust valve recession (or seat wear) in automotive spark-ignition internal combustion engines designed to operate on leaded fuel.
- (31) "Lead Substitute Engine Fuel" means, for labeling purposes, a gasoline or gasoline-oxygenate blend that contains a "lead substitute."
- (32) "Leaded" means, for labeling purposes, any gasoline or gasoline-oxygenate blend which contains more than 0.013 gram lead per liter (0.05 g lead per U.S. gal).
- NOTE: EPA defines leaded fuel as one which contains more than 0.0013 gram phosphorus per liter (0.005 g per U.S. gal), or any fuel to which lead or phosphorus is intentionally added.
- (33) "Liquefied Natural Gas (LNG)" means natural gas that has been liquefied at -162°C (-260°F) and stored in insulated cryogenic tanks for use as an engine fuel.
- (34) "Liquefied Petroleum Gas (LPG)" means a mixture of normally gaseous hydrocarbons, predominantly propane, that has been liquefied by compression or cooling, or both to facilitate storage, transport, and handling for use as a motor fuel.
- (35) "Low Temperature Operability" means a condition which allows the uninterrupted operation of a diesel engine through the continuous flow of fuel throughout its fuel delivery system at low temperatures. Fuels with adequate low temperature operability characteristics have the ability to avoid wax precipitation and clogging in fuel filters.
- (36) "Lubricity" means a qualitative term describing the ability of a fluid to affect friction between, and wear to, surfaces in relative motion under load.

(Rule 0080-05-12-.01, continued)

- (37) "M85 Fuel Methanol" means automotive spark-ignition engine fuel blends of methanol and hydrocarbons, for use in ground vehicles equipped with M85 flexible-fuel spark-ignition engines.
- (38) "Motor Octane Number" means a numerical indication of a spark-ignition engine fuel's resistance to knock obtained by comparison with reference fuels in a standardized ASTM D2700 Motor Method engine test.
- (39) "Oxygen Content of Gasoline" means the percentage of oxygen by mass contained in a gasoline.
- (40) "Oxygenate" means an oxygen-containing, ashless, organic compound, such as an alcohol or ether, which can be used as a fuel or fuel supplement.
- (41) "Person" means an individual, partnership, corporation, company, firm, association, or other business entity.
- (42) "Racing Gasoline" means a specialty product similar in nature to automotive gasoline except that it is typically of lower volatility, has a narrower boiling range and a higher antiknock index, and is generally free of significant amounts of oxygenates. It is designed for use in vehicles with high compression engines, generally for racing purposes.
- (43) "Refinery" means any facility, including but not limited to, a plant, tanker truck, or vessel where gasoline or diesel fuel is produced, including any facility at which blendstocks are combined to produce gasoline or diesel fuel, or at which blendstock is added to gasoline or diesel fuel.
- (44) "Research Octane Number" means a numerical indication of a spark-ignition engine fuel's resistance to knock obtained by comparison with reference fuels in a standardized ASTM D2699 Research Method engine test
- (45) "Thermal Stability" means the ability of a fuel to resist the thermal stress which is experienced by the fuel when exposed to high temperatures in a fuel delivery system. Such stress can lead to formation of insoluble gums or organic particulates. Insolubles (gums or organic particulates) can clog fuel filters and contribute to injector deposits.
- (46) "Total Oxygenate" means the aggregate total in volume percent of all oxygenates contained in any fuel defined in this Chapter.
- (47) "Unleaded" in conjunction with "engine fuel" or "gasoline" means any gasoline or gasoline-oxygenate blend to which no lead or phosphorus compounds have been intentionally added and which contains not more than 0.013 gram lead per liter (0.05 g lead per U.S. gal) and not more than 0.0013 gram phosphorus per liter phosphorus per U.S. gal.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Amendment filed August 31, 2000; effective December 29, 2000. Amendments filed June 22, 2005; effective October 28, 2005. Emergency rule filed April 27, 2006; expired on October 9, 2006. On October 10, 2006, rule reverted to status in effect October 28, 2005. Amendment filed February 6, 2007; effective June 28, 2007. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.02 STANDARD SPECIFICATIONS.

- (1) Gasoline and Gasoline-Oxygenate Blends (as set forth in this regulation) shall meet the following requirements:

(Rule 0080-05-12-.02, continued)

- (a) The most recent version of ASTM D4814, "Standard Specification for Automotive Spark Ignition Engine Fuel" except for the permissible offsets for ethanol blends as provided in section 0080-05-12-.02(1)(b).
- (b) Gasoline-Ethanol Blends - When gasoline is blended with ethanol, the ethanol shall meet the latest version of ASTM D4806, "Standard Specification for Denatured Fuel Ethanol for Blending with Gasoline for Use as Automotive Spark-Ignition Fuel" and the final blend shall meet the latest version of ASTM D4814 "Standard Specification for Automotive Spark-Ignition Engine Fuel" with the following permissible exceptions. The maximum vapor pressure shall not exceed the ASTM D4814 limits by more than:
 - 1. 1.0 psi for blends containing 9 to 10 volume percent ethanol from June 1 through September 15, in accordance with 40 CFR Part 80.27(d);
 - 2. 1.0 psi for blends containing one or more volume percent ethanol for volatility Classes A, B, C and D from September 16 through May 31;
 - 3. 0.5 psi for blends containing one or more volume percent ethanol for volatility Class E from September 16 through May 31.
 - 4. Notwithstanding vapor pressure exemptions authorized under this rule, the department adopts as a substitute standard any provision of federal law that is in conflict with an ASTM standard.
- (c) The maximum concentration of oxygenates contained in gasoline-oxygenate blends shall be those permitted by the EPA under Section 211 of the Clean Air Act and applicable waivers. All conditions stipulated in the EPA waivers also apply. Gasoline oxygenate content specifications based on vehicle performance and operability that are stipulated within ASTM D4814 will govern when those limits are more restrictive than those established by the EPA for purposes of controlling emissions and the durability of emissions related equipment.
- (d) Minimum Antiknock Index (AKI) - 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.
- (e) Minimum Motor Octane Number - the minimum motor octane number shall not be less than 82 for gasoline or gasoline-oxygenate blends .
- (f) Minimum Lead Content to Be Termed (Leaded) - gasoline and gasoline-oxygenate blends sold as "leaded" shall contain a minimum of 0.013 gram of lead per liter (0.05 g per U.S. gal).
- (g) Lead Substitute Gasoline - gasoline and gasoline-oxygenate blends sold as "lead substitute" gasoline shall contain a lead substitute which provides protection against exhaust valve seat recession equivalent to at least 0.026 gram of lead per liter (0.10 g per U.S. gal).
 - 1. Documentation of Exhaust Valve Seat Protection - upon the request of the Commissioner, the lead substitute additive manufacturer shall provide documentation to the Commissioner that demonstrates that the treatment level recommended by the additive manufacturer provides protection against exhaust valve seat recession equivalent to or better than 0.026 gram per liter (0.1 g/gal) lead.

(Rule 0080-05-12-.02, continued)

2. The Commissioner may review the documentation and approve the lead substitute additive before such additive is blended into gasoline. This documentation shall consist of:
 - (i) Test results as published in the Federal Register by the EPA Administrator as required in Section 211(f)(2) of the Clean Air Act, or;
 - (ii) Until such a time as the EPA Administrator develops and publishes a test procedure to determine the additive's effectiveness in reducing valve seat wear, test results and description of the test procedures used in comparing the effectiveness of 0.026 gram per liter lead and the recommended treatment level of the lead substitute additive shall be provided.
- (h) Blending - Leaded, lead substitute, and unleaded gasoline-oxygenate blends shall be blended according to the EPA "substantially similar" rule or an EPA waiver for unleaded fuel.
- (2) Diesel Fuel shall meet the most recent version of ASTM D975, "Standard Specification for Diesel Fuel Oils."
 - (a) Diesel shall have a maximum haze rating of 2 per ASTM D4176 "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)" at 25°C (77°F). This requirement will not apply to any bulk fuel storage tank whereby the product contained therein is being reconditioned and withheld from sale. At such time any reconditioned product is offered for sale, the haze rating standard stipulated in this section shall apply.
 - (b) Premium Diesel Fuel - All diesel fuels identified on retail dispensers, bills of lading, invoices, shipping papers, or other documentation with terms such as premium, super, supreme, plus, or premier must conform to the following requirements:
 1. Cetane Number - A minimum cetane number of 47.0 as determined by ASTM Standard Test Method D613.
 2. Low Temperature Operability - A cold flow performance measurement which meets the ASTM D975 tenth percentile minimum ambient air temperature charts and maps by either ASTM Standard Test Method D2500 (Cloud Point) or ASTM Standard Test Method D4539 (Low Temperature Flow Test, LTFT). Low temperature operability is only applicable October 1 - March 31 of each year.
 3. Thermal Stability - A minimum reflectance measurement of 80 percent as determined by ASTM Standard Test Method D6468 (180 minutes, 150°C [302°F]).
 4. Lubricity - A maximum wear scar diameter of 520 microns as determined by ASTM D6079. If an enforcement jurisdiction's single test of more than 560 microns is determined, a second test shall be conducted. If the average of the two tests is more than 560 microns, the sample does not conform to the requirements of this part.
- (3) Aviation Turbine Fuels shall meet the most recent version of the following standards, as applicable:
 - (a) ASTM D1655, "Standard Specification for Aviation Turbine Fuels".
 - (b) ASTM D7223, "Standard Specification for Aviation Certification Turbine Fuel".

(Rule 0080-05-12-.02, continued)

- (c) ASTM D7566, "Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons".
 - (d) ASTM D6615, "Standard Specification for Jet B Wide-Cut Aviation Turbine Fuel".
- (4) Aviation Gasoline shall meet the most recent version of the following standards, as applicable:
- (a) ASTM D910, "Standard Specification for Aviation Gasoline".
 - (b) ASTM D6227, "Standard Specification for Grades UL 82 and UL87 Unleaded Aviation Gasoline".
 - (c) ASTM D7547, "Standard Specification for Unleaded Only Aviation Gasoline".
- (5) Fuel Oils shall meet the most recent version of ASTM D396, "Standard Specification for Fuel Oils".
- (6) Kerosene (Kerosine) shall meet the most recent version of ASTM D3699, "Standard Specification for Kerosine".
- (7) Ethanol intended for blending with gasoline shall meet the most recent version of ASTM D4806, "Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel".
- (8) Liquefied Petroleum (LP) Gases Intended for Use as Motor Fuel shall meet ASTM D1835, "Standard Specification for Liquefied Petroleum (LP) Gases".
- (9) Ethanol Flex Fuel blends are covered by one of two ASTM standards based upon the ethanol concentration of the blend:
- (a) Ethanol Flex Fuel blends containing 51 to 83 volume percent ethanol shall meet the latest version of ASTM D5798, "Standard Specification for Ethanol Fuel Blends for Flexible-Fuel Automotive Spark-Ignition Engines"; and
 - (b) Ethanol Flex Fuel Blends containing 16 to 50 volume percent ethanol shall be blended, stored and conveyed for consumption in accordance with the recommendations and requirements included in the latest version of ASTM D7794, "Standard Practice for Blending Mid-Level Ethanol Fuel Blends for Flexible-Fuel Vehicles with Automotive Spark-Ignition Engines". ASTM D4814 does not apply to this classification of fuel.
- (10) M85 Fuel Methanol shall meet the most recent version of ASTM D5797, "Standard Specification for Fuel Methanol M70-M85 for Automotive Spark-Ignition Engines."
- (11) Racing Gasoline shall meet the following requirement:
- (a) "Minimum Antiknock Index (AKI)" 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.
 - (b) The minimum product specifications shall be those as declared by the manufacturer's product specifications. Upon the request of the Commissioner, each conveyor of racing gasoline shall provide the Department with a copy of the manufacturer's product specifications.

(Rule 0080-05-12-.02, continued)

- (12) Biodiesel (Biodiesel Fuel Blend Stock) intended for blending with diesel fuel shall meet the most recent version of ASTM D6751, "Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels." All biodiesel blend stock shall be at least 99% biodiesel (no more than 1% diesel fuel). Any blend stock less than 99% biodiesel shall not be used as a commercial blend stock for biodiesel blends without the permission of the Commissioner.
- (13) Biodiesel Blends and Diesel Fuel Containing Biodiesel - All blends of biodiesel and diesel fuels shall be blended with biodiesel blend stock that meets the requirement of 0080-05-12-.02(12), and also shall meet the following requirements:
 - (a) Blends that contain less than or equal to 5% by volume biodiesel must meet the latest version of ASTM D975, "Standard Specification for Diesel Fuel Oils" and shall be sold as diesel fuel. In addition, the fuel shall have a maximum haze rating of 2 per ASTM D4176 "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)" at 25°C (77°F). This requirement will not apply to any bulk fuel storage tank whereby the product contained therein is being reconditioned and withheld from sale. At such time any reconditioned product is offered for sale, the haze rating standard stipulated in this section shall apply;
 - (b) Blends greater than 5% by volume biodiesel and less than or equal to 20% by volume biodiesel shall meet the most recent edition of ASTM D7467 "Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20)". In addition, the fuel shall have a maximum haze rating of 2 per ASTM D4176 "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)" at 25°C (77°F). This requirement will not apply to any bulk fuel storage tank whereby the product contained therein is being reconditioned and withheld from sale. At such time any reconditioned product is offered for sale, the haze rating standard stipulated in this section shall apply;
 - (c) Biodiesel Conveyed at Public Retail Sale Points - Biodiesel conveyed at retail sale points that are available to the general consuming public shall not exceed 20% by volume.
- (14) Hydrogen Fuel for Fuel Cell Vehicles shall meet the most recent edition of SAE J2719 "Hydrogen Fuel Quality for Fuel Cell Vehicles". At such time that ASTM establishes a standard for Hydrogen fuel, the most recent edition of the ASTM standard specification(s) shall replace SAE J2219 as the Standard Specification for Hydrogen Fuel Quality.
- (15) Compressed Natural Gas (CNG) shall meet the most recent edition of SAE J1616, "Recommended Practice for Compressed Natural Gas Vehicle Fuel". At such time that ASTM develops applicable standards for natural gas, those standards shall prevail as rule.
- (16) Liquefied Natural Gas (LNG) Vehicle Fuel shall meet the most recent edition of SAE J2699 "Liquified Natural Gas (LNG) Vehicle Fuel". At such time that ASTM develops applicable standards for natural gas, those standards shall prevail as rule.
- (17) Butanol for Blending with Gasoline shall meet the most recent edition of ASTM D7862, "Standard Specification for Butanol Blending with Gasoline for Use as Automotive Spark-Ignition Engine Fuel".
- (18) Dimethyl Ether for Fuel Purposes shall meet the most recent edition of ASTM D7901 "Standard Specification for Dimethyl Ether for Fuel Purposes."
- (19) Fuel Additives applied to products included in these regulations must be used in accordance with the definition of a fuel additive as stated in section 0080-05-12-.01 Definitions.

(Rule 0080-05-12-.02, continued)

Authority: T.C.A. §§ 4-3-203, 47-18-1304, and 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Amendment filed August 31, 2000; effective December 29, 2000. Amendments filed June 22, 2005; effective October 28, 2005. Emergency rule filed April 27, 2006; expired on October 9, 2006. On October 10, 2006, rule reverted to status in effect October 28, 2005. Amendment filed February 6, 2007; effective June 28, 2007. Public necessity rule filed September 5, 2007; effective through February 17, 2008. Amendments filed November 30, 2007; effective February 13, 2008. Repeal and new rule filed September 4, 2014; effective December 3, 2014. Amendment filed March 5, 2020; effective June 3, 2020.

0080-05-12-.03 CLASSIFICATION AND METHOD OF SALE.

(1) General Considerations

- (a) Documentation - when products regulated by this rule are sold, product transfer documents such as an invoice, bill of lading, shipping paper or other documentation, must accompany each delivery other than a retail sale. This document must identify the quantity, the name of the product, the particular grade of the product, the automotive fuel rating (fuel rating), as applicable, the manganese or MMT content when applicable, the oxygenate type and content when applicable, the name and address of the seller and buyer, and the date and time of the sale. Documentation must be retained at the retail establishment for a period not less than 30 days.
- (b) Retail Dispenser Labeling - all retail gasoline and gasoline oxygenate blend dispensing devices must be labeled or otherwise decaled in such a manner that the type of product being offered is clear and conspicuous to the potential customer and must be labeled with the particular grade of the product, and the applicable automotive fuel rating. All retail dispensing devices of other products covered by this regulation must be labeled with the name of the product (e.g., diesel), the particular grade of the product (with exceptions noted within these rules), and the automotive fuel rating (fuel rating), as applicable.
- (c) Grade Name - the sale of any product under any grade name that indicates to the purchaser that it is of a certain automotive fuel rating or ASTM grade shall not be permitted unless the automotive fuel rating or grade indicated in the grade name is consistent with the value and meets the requirements of 0080-05-12-.02, Standard Fuel Specifications.
- (d) Each retail dispenser must be identified by a number, other than or in addition to a serial number, permanently affixed to the dispenser.
- (e) Dispenser Nozzle Grip Guard Colors - all retail ethanol flex-fuel dispensers shall be equipped with yellow grip guards; no other product nozzles shall be equipped with yellow grip guards. All dispensers must be compliant with this requirement by May 1, 2016.
- (f) Nozzle Requirements for Fuel Dispensers - each retail dispensing device from which fuel products are sold shall be equipped with a nozzle spout having with a diameter that conforms to the latest version of SAE J285, "Dispenser Nozzle Spouts for Liquid Fuels Intended for Use with Spark-Ignition and Compression Ignition Engines." All dispensers must be compliant with this requirement by May 1, 2016.

(2) Automotive Gasoline, Automotive Gasoline-Oxygenate Blends, and Racing Gasoline

- (a) Posting of Antiknock Index Required - all dispensing devices of automotive gasoline and automotive gasoline-oxygenate blends shall post the antiknock index in

(Rule 0080-05-12-.03, continued)

accordance with applicable regulations, 16 CFR Part 306 issued pursuant to the Petroleum Marketing Practices Act, as amended.

- (b) When the Term (Leaded) May be Used - the term "leaded" shall only be used when the fuel meets specification requirements of 0080-05-12-.02(f).
- (c) Use of Lead Substitute Must Be Disclosed - each dispensing device from which gasoline or gasoline oxygenate blend containing a lead substitute is dispensed shall display the following legend: "Contains Lead Substitute." The lettering of this legend shall not be less than 12.7 millimeters (1/2 in) in height and 1.5 millimeter (1/16 in) stroke (width of type). The color of the lettering shall be in definite contrast to the background color to which it is applied.
- (d) Gasoline and Gasoline-Oxygenate Blend Grade Terms:
 - 1. It is prohibited to use the following terms to describe a grade of gasoline or gasoline-oxygenate blend unless it meets the following minimum antiknock index requirement:
 - (i) Premium, Super, Supreme, High Test, Premier, Ultra, Ultimate must be a minimum of 91 AKI;
 - (ii) Midgrade, Plus, Extra, or other approved terms, must be a minimum of 89 AKI;
 - (iii) Regular, Leaded, must be a minimum of 89 AKI;
 - (iv) Regular, Unleaded must be a minimum of 87 AKI;
 - (v) Unleaded Subgrade - CBOB - AKI as applicable pursuant to 16 CFR Part 306;
 - (vi) Premium Subgrade - CBOB - AKI as applicable pursuant to 16 CFR Part 306;
 - 2. The use of any other term not listed above in (2)(d) to describe a grade of gasoline must be approved by the Commissioner.
 - 3. Additional Unleaded Subgrade - CBOB Requirements: The grade terms "Unleaded Subgrade - CBOB", and "Premium Subgrade - CBOB" are grades that are approved for conveying from supplier terminal level to wholesalers. These fuel grades are not approved as grade terms and fuel ratings for retail sales.
 - 4. In addition to the requirements of 0080-05-12-.03(2)(d)1.(v)–(vi), each of the subgrades/CBOBs must declare the minimum AKI that the fuel will provide after the addition of a specified volume ethanol. Other oxygenates and octane extender declarations may supplement the ethanol AKI declaration. The requirements of 0080-05-12-.03(2)(d)1.(v)–(vi) are applicable when conveying from the supplier terminal to wholesalers or from wholesaler to another wholesaler. Such reporting is not subject to enforcement under these rules for conveyances from pipelines to supplier terminals.
 - 5. When fuels containing greater than 10% by volume ethanol for use in conventional-fuel vehicles are offered for sale, the grade terms listed above or otherwise approved by the Commissioner must be followed by the term "EXX". For example, "Regular E15"; "Plus E15"; "Premium E15".

(Rule 0080-05-12-.03, continued)

6. When gasoline or gasoline-oxygenate blends are conveyed through a fuel dispenser, the grade terms must be posted accurately on both the fuel dispenser and street pricing signs, where applicable. This includes the grade extension of EXX where applicable.
 7. When gasoline or gasoline-oxygenate blends are conveyed through wholesale bulk metering systems, each grade and associated automotive fuel rating at each fuel loading facility shall be posted or otherwise accurately certified to potential customers and to the Commissioner when performing inspections and sampling.
- (e) Method of Retail Sale-Type of Oxygenate Must be Disclosed - all automotive gasoline or automotive gasoline-oxygenate blends kept, offered, or exposed for sale, or sold, at retail containing at least 1.5 mass percent oxygen shall be identified as "with" or "containing" (or similar wording) the predominant oxygenate in the engine fuel. For example, the label may read "contains ethanol" or "with MTBE." The oxygenate contributing the largest mass percent oxygen to the blend shall be considered the predominant oxygenate. Where mixtures of only ethers are present, the retailer may post the predominant oxygenate followed by the phrase "or other ethers" or alternatively post the phrase "contains MTBE or other ethers." In addition, gasoline methanol blend fuels containing more than 0.15 mass percent oxygen from methanol shall be identified as "with" or "containing" methanol along with the statement "CHECK OWNER'S MANUAL". This information shall be posted on the upper 50 percent of the dispenser front panel in a position clear and conspicuous from the driver's position in a type at least 12.7 millimeters ($\frac{1}{2}$ in) in height, 1.5 millimeter ($\frac{1}{16}$ in) stroke (width of type). Racing gasoline being kept, offered, or exposed for sale, or sold at retail containing any amount of oxygenates shall be identified as "with" or "containing" (or similar wording) the particular oxygenate or oxygenates in the engine fuel, along with the volume percent of the oxygenate. Where mixtures of only ethers are present, the retailer may post the volume percent of the predominant oxygenate followed by the phrase "or other ethers".
- (f) Documentation for Dispenser Labeling Purposes - the retailer shall be provided, at the time of delivery of the fuel, on product transfer documents such as an invoice, bill of lading, shipping paper, or other documentation:
1. Information that complies with 40 CFR § 80.1503 when the fuel contains ethanol.
 2. For fuels that do not contain ethanol, information that complies with 40 CFR § 80.1503 and a declaration of the predominant oxygenate or combination of oxygenates present in concentrations sufficient to yield an oxygen content of at least 1.5 mass percent in the fuel. Where mixtures of only ethers are present, the fuel supplier may identify either the predominant oxygenate in the fuel (i.e., the oxygenate contributing the largest mass percent oxygen) or, alternatively, use the phrase "contains MTBE or other ethers."
 3. Gasoline containing more than 0.15 mass percent oxygen from methanol shall be identified as "with" or "containing" methanol.
 4. For Racing Gasoline, the retailer shall be provided, at the time of delivery of the fuel, on an invoice, bill of lading, shipping paper, or other documentation, a declaration of the concentration of the oxygenate or oxygenates present in the fuel to allow for accurate dispenser labeling.

(Rule 0080-05-12-.03, continued)

- (g) EPA Labeling Requirements also Apply - Retailers of gasoline shall comply with the EPA pump labeling requirements for gasoline containing greater than 10% by volume and up to 15% by volume under CFR § 80.1501.

- (h) Method of Retail Sale: Posting of Manganese Additives Must be Disclosed - all gasoline or gasoline-oxygenate blends kept, offered, or exposed for sale, or sold at retail that contain any Manganese or any compound containing Manganese, including, without limitation, MMT, shall be labeled as follows:
 - 1. WARNING: Read Label Before Dispensing Fuel. This Fuel Contains Manganese, Manganese Compound, or MMT. Recommend Vehicle Operator Consult Owner's Manual Before Using This Fuel.

 - 2. This label shall:
 - (i) Be legible and conspicuous, placed on the upper 50 percent of the dispenser front panel in a position clear and conspicuous from the driver's position.

 - (ii) Consist of black lettering on a white background.

 - (iii) Be written in font at least 8 millimeters (5/16 in) in height, 1.5 millimeter (1/16 in) stroke (width of type).

 - (iv) Be affixed to the applicable pump or other device for dispensing gasoline or gasoline-oxygenate blends (1) at the time gasoline or gasoline-oxygenate blends containing manganese or any compound containing manganese, including, without limitation, MMT, is loaded into or otherwise placed in a storage tank from which the dispenser or other device for dispensing gasoline or automotive gasoline-oxygenate blends draws its supply of fuel; (2) before the dispenser or other device for dispensing motor vehicle fuel may be used to dispense such fuel; (3) for 6 months immediately after the time the intentional addition of manganese or any compound containing manganese, including, without limitation, MMT is discontinued.

 - 3. As used in these rules, MMT means methylcyclopentadienyl manganese tircarbonyl.

- (i) Documentation for Dispenser Labeling Purposes - Notification to Fuel Distributors and Retailers
 - 1. Each fuel supplier that offers product containing manganese or any compound containing manganese, including, without limitation, MMT, must notify all customers that are approved to receive product documented as destination Tennessee that the product will contain manganese or any compound containing manganese, including, without limitation, MMT at least thirty days in advance of providing such fuel for distribution.

 - 2. The retailer shall be provided, at the time of delivery of the fuel, on product transfer documents such as an invoice, bill of lading, shipping paper, or other documentation a declaration of Manganese or any compound containing Manganese, including, without limitation, MMT.

 - 3. Each fuel supplier that offers product containing manganese or any compound containing manganese, including, without limitation, MMT, must notify all

(Rule 0080-05-12-.03, continued)

customers that are approved to receive product documented as destination Tennessee that the product will no longer contain manganese or any compound containing manganese, including, without limitation, MMT at least thirty days in advance of providing such fuel for distribution.

(3) Diesel Fuel

- (a) Labeling of Grade Required - Diesel Fuel shall be identified by grades No. 1-D, No. 2-D, or No. 4-D. For grades other than No. 2-D, each retail dispenser of diesel fuel shall be labeled according to the grade being dispensed.
- (b) Location of Label - these labels shall be located on the upper 50 percent of the dispenser front panel in a position clear and conspicuous from the driver's position, in a type at least 12.7 millimeters (1/2 in) in height, 1.5 millimeter (1/16 in) stroke (width of type).
- (c) All conveyors of diesel fuel shall also comply with the US EPA grade disclosure requirements for sulfur under 40 CFR § 80.572.

(4) Aviation Turbine Fuel

- (a) How to Identify Aviation Turbine Fuels - aviation turbine fuels shall be identified by the grade terms contained within the applicable ASTM Standard Specifications.
- (b) Labeling of Grade Required - each dispenser or airport fuel truck dispensing aviation turbine fuels shall be labeled conspicuously as to identify the product being sold as classified above.

(5) Aviation Gasoline

- (a) How to Identify Aviation Gasoline - aviation gasoline shall be identified by the grade terms contained within the applicable ASTM Standard Specifications.
- (b) Labeling of Grade Required - each dispenser or airport fuel truck dispensing aviation gasoline shall be labeled conspicuously as to identify the product being sold as classified above.

(6) Fuel Oils

- (a) How to Identify Fuel Oils - fuel oil shall be identified by the term Fuel Oil along with the grades of No. 1 S500, No. 1 S5000, No. 2 S500, No. 2 S5000, No. 4 (Light), No. 4, No. 5 (Light), No. 5 (Heavy), or No. 6.
- (b) Labeling of Grade Required - each retail dispenser or delivery truck dispensing fuel oil shall be labeled conspicuously as to identify the product being sold as classified above. In addition, retail Fuel Oil dispensers shall display the following legend:

"Warning - Not Suitable For Use In Unvented Heaters Requiring No. 1-K Kerosene."
The lettering of this legend shall not be less than 12.7 millimeters (1/2 in) in height by 1.5 millimeters (1/16 in) strokes (width of type); block style letters and the color of lettering shall be in definite contrast to the background color to which it is applied.

(7) Kerosene (Kerosine)

- (a) How to Identify Kerosene - kerosene shall be identified by the grades No. 1-K or No. 2-K.

(Rule 0080-05-12-.03, continued)

- (b) Labeling Requirements- each retail dispenser of kerosene shall be labeled as 1-K Kerosene or 2-K. In addition, No. 2-K dispensers shall display the following legend:

“Warning - Not Suitable For Use In Unvented Heaters Requiring No. 1-K.” The lettering of this legend shall not be less than 12.7 millimeters (1/2 in) in height by 1.5 millimeter (1/16 in) strokes; block style letters and the color of lettering shall be in definite contrast to the background color to which it is applied.

(8) Ethanol Flex Fuel

- (a) How to Identify Ethanol Flex Fuel - ethanol flex fuel shall be identified by the term Ethanol Flex-Fuel or EXX Ethanol Flex Fuel.

- (b) Retail Dispenser Labeling - each retail dispenser of ethanol flex fuel shall be labeled under the following alternatives:

1. Ethanol Flex Fuel blends with an ethanol concentration no less than 51 and no greater than 83 percent by volume shall be labeled “Ethanol Flex Fuel, minimum 51% ethanol” or “EXX Ethanol Flex Fuel”, where XX is the target ethanol concentration in volume percent and the actual ethanol concentration of the blend shall be XX volume percent plus or minus 5 percent by volume;
2. Ethanol Flex Fuel blends with an ethanol concentration less than or equal to 50 volume percent shall be labeled “EXX Flex Ethanol Fuel”, where the XX is the target ethanol concentration in volume percent. The actual ethanol concentration of the blend shall be XX volume percent plus or minus 5 percent by volume;
3. A label shall be posted which states “For Use in Flexible Fuel Vehicles (FFV) Only”. This information shall be clearly and conspicuously posed on the upper 50% of the dispenser front panel in a type at least 12.7 millimeters (1/2 in) in height, 1.5 millimeter (1/16 in) stroke (width of type). The label shall also state, “CHECK OWNER’S MANUAL” in a type at least 6.5 millimeters (1/4 in) in height and 1 millimeter (3/64 in) stroke. The color of the wording shall be in definite contrast to the background color to which it is applied.

(9) Fuel Methanol

- (a) How to Identify Fuel Methanol - fuel methanol shall be identified by the capital letter M followed by the numerical value volume percentage of methanol. (Example: M85).

- (b) Retail Dispenser Labeling - each retail dispenser of fuel methanol shall be labeled by the capital letter M followed by the numerical value volume percent and ending with the word “methanol” (Example: M85 Methanol).

- (c) Additional Labeling Requirements - Fuel Methanol shall be labeled with its automotive fuel rating in accordance with 16 CFR Part 306. Additionally, a label shall be posted which states “CHECK OWNER’S MANUAL - For Use in Methanol Variable Fuel Vehicles (VFV) Only”. This label shall be posted on the upper 50 percent of the dispenser front panel in a position clear and conspicuous from the driver’s position in a type at least 12.7 millimeters (1/2 in) in height, 1.5 millimeters (1/16 in) stroke (width of type).

(10) Liquefied Petroleum (LP) Gas

(Rule 0080-05-12-.03, continued)

- (a) How to Identify Liquefied Petroleum Gas - liquefied petroleum gases intended for use as a motor fuel shall be identified by grades Commercial Propane or Special-Duty Propane (HD5).
- (b) Retail Dispenser Labeling - each retail dispenser of liquefied petroleum gases intended for use as a motor fuel shall be labeled as "Commercial Propane" or "Special-Duty Propane (HD5)".
- (c) Additional Labeling Requirements - liquefied Petroleum Gas intended for use as a motor fuel shall be labeled with its automotive fuel rating in accordance with 16 CFR Part 306.

(11) Racing Gasoline

- (a) How to Identify Racing Gasoline - racing gasoline shall be identified as Racing Gasoline.
- (b) Posting of Antiknock Index Required - all dispensing devices of racing gasoline shall post the Antiknock Index in accordance with applicable regulations, 16 CFR Part 306 issued pursuant to the Petroleum Marketing Practices Act, as amended.
- (c) Method of Retail Sale - Type of Oxygenate Must be Disclosed - all racing gasoline kept, offered, or exposed for sale, or sold, at retail containing at least 0.15 percent by mass oxygen shall be identified by a label that lists all oxygenates contained in the fuel. The information shall be posted on the upper 50% of the dispenser front panel in a position clear and conspicuous from the driver's position in a type at least 12.7 millimeters (1/2 in.) in height and 1.5 millimeters (1/6") stroke (width of type).
- (d) Documentation for Dispenser Labeling Purposes - the retailer shall be provided, at the time of delivery of the fuel, on an invoice, bill of lading, shipping paper, or other documentation, a declaration of all oxygenates present in concentration sufficient to yield an oxygenate content of at least 0.15 mass percent in the fuel.

(12) Biodiesel and Biodiesel Blends

- (a) How to Identify Biodiesel - Biodiesel shall be identified by the term "Biodiesel" with the designation "B100" or "B99". Biodiesel blends containing more than 5 percent by volume shall be identified by the term "Biodiesel Blend".
- (b) Labeling of Dispensers Containing more than Five Percent (5%) and Up to Twenty Percent (20%) Biodiesel
 1. Each dispenser of biodiesel blends containing more than 5% and up to and including 20% by volume shall be identified with either the capital letter B followed by the numerical value representing the volume percentage of biodiesel fuel and ending with "Biodiesel Blend". (Examples: B10 Biodiesel Blend; B20 Biodiesel Blend, or the phrase "Biodiesel Blend between 5% and 20%" or similar words.)
 2. Labeling of Grade Required
 - (i) Biodiesel shall be identified by the grade terms specified in ASTM D6751.
 - (ii) Biodiesel Blends shall be identified by the grade terms contained within ASTM D7467. Additionally, the diesel grade component as contained within ASTM D975 for grades other than No. 2-D shall also be identified

(Rule 0080-05-12-.03, continued)

except the sulfur extension designations are not required (sulfur declarations are required under 0080-05-12-.03(12)(c).

3. Each dispenser of biodiesel blends containing more than 5% and up to and including 20% by volume biodiesel shall display a label that reads "CHECK OWNER'S MANUAL". This label shall be posted on the upper 50 percent of the dispenser front panel in a position clear and conspicuous from the driver's position in a type at 6.5 millimeters (1/4 in) in height and 1 millimeter (3/64 in) stroke.

- (c) All conveyors of biodiesel blends fuel shall also comply with the EPA grade disclosure requirements for sulfur under 40 CFR § 80.572.
- (d) Automotive Fuel Rating - Biodiesel and biodiesel blends shall be certified and labeled with its automotive fuel rating in accordance with 16 CFR Part 306.
- (e) Documentation of Biodiesel Content on Product Transfer Documents - When biodiesel blends contain more that 5% by volume biodiesel, the retailer shall be provided, at the time of delivery of the fuel, with a declaration of the volume percent biodiesel on product transfer documents such as an invoice, bill of lading, shipping paper, or other document.

(13) Compressed Natural Gas

- (a) How to Identify Compressed Natural Gas - Compressed natural gas shall be identified by the term "Compressed Natural Gas" or "CNG".
- (b) Retail Dispenser Labeling
 - 1. Each retail dispenser of CNG shall be labeled as "Compressed Natural Gas".
 - 2. Each retail dispenser of CNG shall be labeled with its fuel rating in accordance with 16 CFR Part 309.

(14) Liquefied Natural Gas

- (a) How to Identify Liquefied Natural Gas - Liquefied natural gas shall be identified by the term "Liquefied Natural Gas" or "LNG".
- (b) Retail Dispenser Labeling
 - 1. Each retail dispenser of LNG shall be labeled as "Liquefied Natural Gas".
 - 2. Each retail dispenser of LNG shall be labeled with its fuel rating in accordance with 16 CFR Part 309.

(15) Dimethyl Ether

- (a) How to Identify Dimethyl Ether - dimethyl ether intended for use as a motor fuel in engines specifically designed or modified for DME and for blending with liquefied petroleum gas (LPG) shall be identified Dimethyl Ether (DME).
- (b) Retail Dispenser Labeling - each retail dispenser of DME intended for use as a motor fuel shall be labeled as "Dimethyl Ether" or "DME"

(Rule 0080-05-12-.03, continued)

- (c) Additional Labeling Requirements - Dimethyl Ether intended for use as a motor fuel shall be labeled with its automotive fuel rating in accordance with 16 CFR Part 306.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Amendment filed August 31, 2000; effective December 29, 2000. Amendment filed June 22, 2005; effective October 28, 2005. Emergency rule filed April 27, 2006; expired on October 9, 2006. On October 10, 2006, rule reverted to status in effect October 28, 2005. Amendment Filed February 6, 2007; effective June 28, 2007. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.04 WATER IN RETAIL TANKS AND DISENSER FILTERS.

- (1) Water in Retail Storage Tanks containing Gasoline-Alcohol Blends, Biodiesel, Biodiesel Blends, Ethanol Flex Fuel, Aviation Gas, and Aviation Turbine Fuel - no water phase greater than 6 millimeters (1/4 in) as determined by an appropriate detection paste, is allowed to accumulate in any tank utilized in the storage of gasoline-alcohol blend, biodiesel, biodiesel blends, ethanol-flex fuel, aviation gasoline, and aviation turbine fuel.
- (2) Water in Retail Storage Tanks Containing Gasoline, Diesel, and Other Fuels - water shall not exceed 38 millimeters (1.5 in) in depth when measured with water indicating paste in any tank utilized in the storage of diesel, gasoline, gasoline-ether blends, fuel oils, and kerosene sold at retail.
- (3) Dispenser Filters
 - (a) All gasoline, gasoline-oxygenate blends, Ethanol Flex Fuel, and M85 methanol dispensers shall have a 10 micron or smaller nominal pore-sized filter. All dispensers must be compliant with this requirement by July 1, 2015.
 - (b) All kerosene, diesel, biodiesel, and biodiesel blend dispensers shall have a 30 micron or smaller nominal pore-sized filter. All dispensers must be compliant with this requirement by July 1, 2015.
 - (c) Fuel delivery of aviation turbine fuel and aviation gasoline into aircraft shall be filtered through a fuel filter/separator conforming to API 1581, "Specification and Qualification Procedures for Aviation Jet Fuel Filter/Separators" and ATA Specification 103 "Standard for Jet Fuel Quality Control at Airports", as applicable.
 - (d) All Aviation Gasoline dispensing systems shall be equipped as follows:
 1. At inlets to storage and on fueller loading racks (and hydrant delivery lines), a 5 micron (nominal) or finer Microfilter meeting EI 1590, or a filter water separator.
 2. Where receipts are by gravity into underground tankage, a 100 micron mesh strainer.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Amendment filed August 31, 2000; effective December 29, 2000. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.05 RETAIL PRODUCT STORAGE IDENTIFICATION.

- (1) Fill Connection Labeling - the fill connection for any petroleum product storage tank or vessel supplying engine-fuel devices shall be permanently, plainly, and visibly marked as to the product contained by means of:

(Chapter 0080-05-12-.05, continued)

- (a) A permanently attached tag or label and;
 - (b) American Petroleum Institute color codes as specified and published in "API Recommended Practice 1637".
- (2) Volume of Product Information - each retail location shall maintain on file a calibration chart or other means of determining the volume of each regulated product in each storage tank and the total capacity of such storage tank(s). This information shall be supplied immediately to the inspector upon request.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Amendment filed August 31, 2000; effective December 29, 2000. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.06 CONDEMNED PRODUCT.

Stop Sale Order - a stop sale order may be issued as a Class One stop sale order or a Class Two stop sale order. When a stop sale order is placed on a terminal or bulk storage plant, the terminal or bulk storage plant operators shall immediately notify all customers that received those product(s) and make any arrangements necessary to replace or adjust to specifications those product(s). A list of all parties contacted by the supplier must be provided to the Commissioner. A release from a stop sale order will be awarded only after final disposition has been agreed upon by the Commissioner. Confirmation of disposition of products shall be made available in writing to the Commissioner.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Amendment filed August 31, 2000; effective December 29, 2000. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.07 REPEALED.

Authority: T.C.A. § 47-18-1309. **Administrative History:** Original rule filed April 6, 1990; effective May 21, 1990. Repeal filed August 31, 2000; effective December 29, 2000.

0080-05-12-.08 TEST METHODS, REPRODUCIBILITY AND CONFORMANCE TO SPECIFICATIONS.

- (1) The test methods referenced for use within the applicable Standard Specification shall be used to determine the specification values for enforcement purposes. When no ASTM methods exist, accepted industry test methods specified in rule shall be used to determine compliance.
- (2) Premium Diesel - The following test methods shall be used to determine compliance with the applicable premium diesel parameters:
 - (a) Lubricity - ASTM D6079;
 - (b) Cetane Number - ASTM D613;
 - (c) Low Temperature Operability - ASTM D4539 or ASTM D2500 (according to marketing claim);
 - (d) Thermal Stability - ASTM D6468 (180 minutes, 150°C [302°F]).
- (3) Conformance to Specifications:

(Rule 0080-05-12-.08, continued)

- (a) Conformance to Specifications - The most recent version of ASTM D3244 "Standard Practice for Utilization of Test Data to Determine Conformance with Specifications" shall be used in determining the compliance of a test value to the specification limits except that no allowance shall be made for the precision of test methods for aviation gasoline and aviation turbine fuels or other product specifications whereby the limit has been determined to be a critical specification limit.
- (b) AKI Limits - when determining the antiknock index (AKI) acceptance or rejection of a gasoline sample, the AKI reproducibility limits as outlined in ASTM D4814 Appendix X1 shall be acknowledged when determining conformance to the specification using ASTM D3244.
- (c) Tests Other Than AKI - the reproducibility limits of the ASTM or other accepted standard test method used for each test performed shall be acknowledged for determining conformance to the specification using ASTM D3244 , except as indicated in 0080-05-12-.08(2)(a) and in 0080-05-12-.02(2)(b)4.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed August 31, 2000; effective December 29, 2000. Amendments filed June 22, 2005; effective October 28, 2005. Emergency rule filed April 27, 2006; expired on October 9, 2006. On October 10, 2006, rule reverted to status in effect October 28, 2005. Amendment filed February 6, 2007; effective June 28, 2007. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.09 SAMPLING OF PETROLEUM PRODUCTS.

Samples of petroleum products collected for testing shall be pumped, pulled, drawn, or otherwise procured in accordance with the most recent version of any of the following standard procedures:

- (1) ASTM D4057, "Standard Practice for Manual Sampling of Petroleum and Petroleum Products".
- (2) 40 CFR Part 80, Appendix D or subsequent US EPA sampling instructions;
- (3) ASTM D5842, "Standard Practice for Sampling and Handling of Fuels for Volatility Measurement".
- (4) NCWM Publication 21, "Petroleum Products Sampling Procedures and Safety Manual".

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed August 31, 2000; effective December 29, 2000. Repeal and new rule filed September 4, 2014; effective December 3, 2014.

0080-05-12-.10 DISPOSITION OF SAMPLE RETAINS.

All unused portions of samples remaining after testing shall be disposed of either by use in official state vehicles or through proper disposal procedures. If the unused portions of samples are used in official state vehicles, the state or contract laboratory shall be responsible for storing and dispensing product to authorized vehicles. A log of all product transfers shall be maintained by the state or contract laboratory.

Authority: T.C.A. §§ 4-3-203 and 47-18-1309. **Administrative History:** Original rule filed August 31, 2000; effective December 29, 2000. Amendment filed June 22, 2005; effective October 28, 2005. Repeal and new rule filed September 4, 2014; effective December 3, 2014.