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NOTICE OF PROPOSED RULEMAKING
INCLUDING STATEMENT OF NEED & FISCAL IMPACT

CHAPTER 603
DEPARTMENT OF AGRICULTURE

FILED

09/24/2024 2:05 PM
ARCHIVES DIVISION
SECRETARY OF STATE

FILING CAPTION: Update motor fuel quality standards to the current 2024 ASTM revisions.

LAST DAY AND TIME TO OFFER COMMENT TO AGENCY: 11/18/2024 5:00 PM

The Agency requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing negative economic impact of the rule on business.

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Filed By:
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Rules Coordinator

HEARING(S)

Auxiliary aids for persons with disabilities are available upon advance request. Notify the contact listed above.

DATE: 11/12/2024

TIME: 10:00 AM - 11:00 AM

OFFICER: Sunny Summers

REMOTE HEARING DETAILS

MEETING URL: [Click here to join the meeting](#)

PHONE NUMBER: 503-446-4951

CONFERENCE ID: 790262646

SPECIAL INSTRUCTIONS:

Meeting ID: 230 399 805 733

Passcode: HH6MPR

+1 503-446-4951,,790262646#

NEED FOR THE RULE(S)

ORS 646.957 requires the ODA to adopt rules governing the specifications of motor fuels sold or offered for sale in Oregon which are consistent with those standards adopted by ASTM. This amendment updates the requirements from the 2023 standards to the current 2024 standards.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE

From <https://astm.org>

- ASTM Book of Standards Section 5 "Petroleum Products, Lubricants, and Fossil Fuels"

From: <https://www.oregonlegislature.gov>

- ORS 646

STATEMENT IDENTIFYING HOW ADOPTION OF RULE(S) WILL AFFECT RACIAL EQUITY IN THIS STATE

These rules continue to require uniform standards for motor fuels sold or offered for sale statewide. No impact is expected.

FISCAL AND ECONOMIC IMPACT:

The fiscal and economic impact of updating from the ASTM 2023 standard to the 2024 version is expected to be minimal, with negligible costs for compliance and no significant changes to governmental or industry operations.

COST OF COMPLIANCE:

(1) Identify any state agencies, units of local government, and members of the public likely to be economically affected by the rule(s). (2) Effect on Small Businesses: (a) Estimate the number and type of small businesses subject to the rule(s); (b) Describe the expected reporting, recordkeeping and administrative activities and cost required to comply with the rule(s); (c) Estimate the cost of professional services, equipment supplies, labor and increased administration required to comply with the rule(s).

(1) Identify any state agencies, units of local government, and members of the public likely to be economically affected by the rule(s):

None. These rules address the quality standards applied to fuels purchased by state agencies, local government, and members of the public and may be used in fuel procurement contracts. They are not expected to result in additional costs or operational changes.

(2) Effect on small businesses: (a) estimate the number and type of small businesses subject to the rule(s); (b) Describe the expected reporting, recordkeeping and administrative activities and cost required to comply with the rule(s); (c) Estimate the cost of professional services, equipment supplies, labor and increased administration required to comply with the rule(s).

(a) Small businesses impacted include bulk fuel distributors, truck stops, retail gas stations, cardlock gas stations, regional airports, marinas, mobile refuelers, and business operating fleets. Approximately 12,500 businesses are licensed by ODA to sell fuel subject to the quality standards addressed in this rule.

(b) No additional reporting, recordkeeping or administrative activities will occur as a result of this amendment.

(c) No additional professional services, equipment supplies, labor or increased administration will be required to comply with the rule.

DESCRIBE HOW SMALL BUSINESSES WERE INVOLVED IN THE DEVELOPMENT OF THESE RULE(S):

Small businesses were involved as members of agency's fuels advisory group. Members include: The Oregon Fuels Association (OFA), the Renewable Energy Group (REG), the Western States Petroleum Association (WSPA), the Oregon Trucking Association (OTA), Northwest Grocer's Association (NWGA), AAA of Oregon, Kinder Morgan. These members were all contacted via email and notified of the proposed rule change and given opportunities to offer input and advice.

WAS AN ADMINISTRATIVE RULE ADVISORY COMMITTEE CONSULTED? YES

AMEND: 603-027-0420

RULE SUMMARY: Update the ASTM motor fuel quality standards to the current 2024 revisions.

CHANGES TO RULE:

603-027-0420

Standard Fuel Specifications ¶

(1) Gasoline and Gasoline-Oxygenate Blends, as defined in this regulation, shall meet the following requirements:¶

(a) The ASTM D4814, "Standard Specification for Automotive Spark-Ignition Engine Fuel" (D4814) except that volatility standards for unleaded gasoline blended with ethanol shall not be more restrictive than those adopted under the rules, regulations, and Clean Air Act waivers of the U.S. Environmental Protection Agency (EPA) (which includes those promulgated by Oregon and Federally approved State Implementation Plans (SIP's)). Gasoline blended with ethanol shall be blended under any of the following three options:¶

(A) the base gasoline used in such blends shall meet the requirements of D4814; or¶

(B) the blend shall meet the requirements of D4814; or¶

(C) the base gasoline used in such blends shall meet all the requirements of D4814 except distillation, and the blend shall meet the distillation requirements of the D4814 specification.¶

(b) Blends of gasoline and ethanol shall not exceed the D4814 vapor pressure standard by more than 1.0 psi.¶

(c) Blends of gasoline and ethanol shall meet the volatility requirements of 40 CFR Part 1090.215.¶

(d) Minimum Motor Octane Number. The minimum motor octane number must not be less than 82 for gasoline with an AKI of 87 or greater.¶

(e) Lead Substitute Gasoline. Gasoline and gasoline-oxygenate blends sold as "lead substitute" gasoline shall contain a lead substitute additive which provides a level of protection against exhaust valve seat recession which is equivalent to the level of protection provided by a gasoline containing at least 0.026 gram of lead per liter (0.10 g per U.S. gal).¶

(2) Denatured Fuel Ethanol intended for blending with gasoline shall meet the requirements of ASTM D4806, "Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel." and the ethanol component shall be derived from agricultural products (including corn, sugar beets, sugar cane, cellulosic plant fibers from grasses and trees, etc.), woody waste, residues, municipal solid waste, or other biomass.¶

(3) Gasoline-Ethanol Blends Required¶

(a) Except as provided in OAR 603-027-0420(3)(b), all retail dealers, non-retail dealers, or wholesale dealers may only sell or offer for sale gasoline that contains at least 10 percent denatured fuel ethanol by volume. Gasoline containing at least 9.2 volume percent anhydrous ethanol is considered to meet this requirement.¶

(b) It is prohibited to blend E0 gasoline and E10 gasoline to produce a midgrade gasoline. The resulting blend violates 603-027-0420(3)(a).¶

(c) A retail dealer, non-retail dealer, or wholesale dealer may sell or offer for sale gasoline that is not blended with ethanol if the gasoline has an octane rating of 91 or above or if it is for use in;¶

(A) an aircraft;¶

(i) with a supplemental type certificate approved by the Federal Aviation Administration that allows the aircraft to use gasoline that is intended for use in motor vehicles; or¶

(ii) issued a type certificate by an aircraft engine manufacturer that allows the aircraft to use gasoline that is intended for use in motor vehicles; or¶

(B) an aircraft that has been issued an experimental certificate, described in 14 CFR 21.191, by the Federal Aviation Administration and that is required by the manufacturer's specifications to use gasoline that is intended for use in motor vehicles; or¶

(C) a light-sport aircraft, as defined in 14 CFR 1.1, that is required by the manufacturer's specifications to use gasoline that is intended for use in motor vehicles; or¶

(D) a vintage aircraft, as defined by the Oregon Department of Aviation by rule, that is required by the manufacturer's specifications to use gasoline that is intended for use in motor vehicles; or¶

(E) an antique vehicle, as defined in ORS 801.125; or¶

(F) a Class I all-terrain vehicle, as defined in ORS 801.190; or¶

(G) a Class III all-terrain vehicle, as defined in ORS 801.194; or¶

(H) a racing activity vehicle, as defined in ORS 801.404; or¶

(I) a snowmobile, as defined in ORS 801.490; or¶

(J) tools, including but not limited to lawn mowers, leaf blowers, and chain saws; or¶

(K) a watercraft.¶

(4) Gasoline Additive Restrictions.¶

(a) A wholesale dealer, retail dealer, or non-retail dealer may not sell or offer to sell any gasoline blended or mixed with:¶

(A) ethanol unless the blend or mixture meets the specifications or registration requirements established by the United States Environmental Protection Agency pursuant to section 211 of the Clean Air Act, 42 U.S.C. section 7545 and 40 CFR Part 79, and the ethanol combined with its denaturants complies with the requirements in 603-

027-0420(2);¶

(B) methyl tertiary butyl ether (MTBE) in concentrations that exceed 0.15 percent by volume; or¶

(C) a total of all of the following oxygenates that exceeds one-tenth of one percent, by weight, of¶

(i) diisopropyl ether (DIPE),¶

(ii) ethyl tert-butyl ether (ETBE),¶

(iii) propanol, including all structural isomers,¶

(iv) tert-amyl methyl ether (TAME),¶

(v) tert-amyl alcohol (TAA), and¶

(vi) any other additive that has not been approved by the California Air Resources Board or the United States Environmental Protection Agency.¶

(b) Nothing in this section shall prohibit transshipment through this state, or storage incident to the transshipment, of gasoline that contains methyl tertiary butyl ether in concentrations that exceed 0.15 percent by volume or any of the oxygenates listed in OAR 603-027-0420(4)(a)(C), provided,¶

(A) the gasoline is used or disposed of outside of this state; and¶

(B) the gasoline is segregated from gasoline intended for use within this state.¶

(c) Notwithstanding the additives in OAR 603-027-0420(4)(a), a person may sell, supply, or offer to sell or supply gasoline in this state that contains any oxygenate other than ethanol, if the California Air Resources Board (CARB), California Environmental Policy Council (CEPC), or the United States Protection Agency (U.S. EPA) allow use of the oxygenate.¶

(d) It is prohibited to blend gasoline and gasoline-oxygenate blends with casinghead gasoline, absorption gasoline, drip gasoline, or natural gasoline after the gasoline has been sold, transferred, or otherwise removed from a refinery or terminal.¶

(5) Diesel Fuel, Biomass-Based Diesel Fuel, or Renewable Diesel Fuel shall meet either the requirements of ASTM D975, "Standard Specification for Diesel Fuel Oils." when containing up to 5 volume percent biodiesel, or the requirements of ASTM D7467, "Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6-B20)" when containing not less than 5 and up to and including 20 volume percent biodiesel.¶

(6) Winter or Winterized Diesel Fuel shall meet the requirements of ASTM D975, "Standard Specification for Diesel Fuel Oils" (D975) and have a cold flow performance measurement which meets the D975 tenth percentile minimum ambient air temperature charts and maps by either ASTM D2500, "Standard Test Method for Cloud Point of Petroleum Products and Liquid Fuels" or ASTM D4539, "Standard Test Method for Filterability of Diesel Fuels by Low-Temperature Flow Test (LTFT)". Winter or winterized diesel (low temperature operability) is only applicable October 1 - March 31 of the following year.¶

(7) Premium Diesel Fuel - All diesel fuels identified on retail and non-retail dispensers, bills of lading, invoices, shipping papers, or other documentation with terms such as premium, super, supreme, plus, or premier shall meet the requirements of ASTM D975, "Standard Specification for Diesel Fuel Oils" (D975) and must conform to the following requirements:¶

(a) Cetane Number - A minimum cetane number of 47.0 as determined by ASTM D613, "Standard Test Method for Cetane Number of Diesel Fuel Oil";¶

(b) Low Temperature Operability - A cold flow performance measurement which meets the D975 tenth percentile minimum ambient air temperature charts and maps by either ASTM D2500, "Standard Test Method for Cloud Point of Petroleum Products and Liquid Fuels" or ASTM D4539, "Standard Test Method for Filterability of Diesel Fuels by Low-Temperature Flow Test (LTFT)". Low temperature operability is only applicable October 1 - March 31 of the next year;¶

(c) Thermal Stability - A minimum reflectance measurement of 80 percent as determined by ASTM D6468, "Standard Test Method for High Temperature Stability of Middle Distillate Fuels" (180 minutes, 150 OC);¶

(d) Lubricity - A maximum wear scar diameter of 520 microns as determined by ASTM D6079, "Standard Test Method for Evaluating Lubricity of Diesel Fuels by the High-Frequency Reciprocating Rig (HFRR)". If a 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.¶

(8) Biodiesel; B100 Biodiesel and Biodiesel intended for blending with diesel fuel must:¶

(a) Meet the requirements of ASTM D6751, "Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels";¶

(b) Be analyzed and issued a Certificate of Analysis for each batch or production lot produced in or imported into Oregon prior to blending, sale, or offer for sale in Oregon. The Certificates of Analysis expire 45 days following the date the biodiesel sample was obtained.¶

(c) Biodiesel must be analyzed for and comply with the visual appearance test (ASTM D4176, "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)") upon its first receipt at a wholesale facility and prior to commingling with existing product.¶

(d) Prior to blending, sale, or offer for sale in Oregon, biodiesel must be analyzed and the Certificate of Analysis

issued by:¶

(A) An accredited motor fuel laboratory, or¶

(B) A non-accredited motor fuel laboratory that meets all of the following requirements:¶

(i) The laboratory facilities must house and allow proper operation of all required equipment in accordance with the applicable test procedures,¶

(ii) The laboratory must use personnel trained to perform and analyze ASTM D6751, "Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels" biodiesel fuel tests and other required tests,¶

(iii) The laboratory must use testing equipment that has been calibrated or verified to meet the requirements of each ASTM International test procedure used,¶

(iv) The laboratory must participate in an ASTM International proficiency program or similar national proficiency program at least three times per year with appropriate results, and¶

(v) The laboratory must maintain current documentation of personnel qualifications, equipment verification, and proficiency results for at least one year. These records shall be available for inspection and reproduction upon request by the Director.¶

(9) Biodiesel Blends;¶

(a) For biodiesel blends up to and including 20 volume percent see OAR 603-027-0420(5).¶

(b) Blends of biodiesel and diesel fuels greater than B20 must meet the following requirements:¶

(A) the base diesel fuel, including petroleum diesel, biomass-based diesel, or renewable diesel must meet the requirements in OAR 603-027-0420(5), and ¶

(B) the biodiesel blend stock must meet the requirements in OAR 603-027-0420(8).¶

(10) Biomass-Based Diesel; for biomass-based diesel and renewable diesel see the requirements in OAR 603-027-0420(5).¶

NOTE: Biomass-Based Diesel (aka renewable diesel) is defined in ORS 646.905 (2019) as "a diesel fuel substitute, produced from non-fossil renewable resources, that has an established ASTM standard, is approved by the United States Environmental Protection Agency, meets specifications of the National Conference on Weights and Measures, and complies with standards promulgated under ORS 646.957."¶

The National Conference on Weight and Measures model regulations for motor fuels are published in National Institute of Standards and Technology (NIST) Handbook 130, Section G. Uniform Fuels and Automotive Lubricants Regulation. There is no explicit standard for biomass-based or renewable diesel in this document. Similarly, there is no ASTM standard which explicitly includes either biomass-based diesel or renewable diesel within its scope. However, biomass-based diesel is designed to be chemically similar to conventional petroleum diesel using D975 specifications as a guide for production. The principal difference between conventional petroleum-based diesel fuel and biomass-based or renewable diesel is whether the feedstock is pumped from the ground or sourced from lipids obtained from agricultural or waste products. The ASTM specifications for conventional petroleum diesel are thus appropriate and consistent with this statutory requirement.¶

The National Institute of Standards and Technology (NIST) Handbook 130 Section G. Uniform Fuels and Automotive Lubricants Regulation Sub-section 2.2(a) Diesel Fuel specifications also require conventional petroleum diesel fuel to meet D975 specifications hence requiring the fuel to meet these specifications is equivalent to requiring the fuel to meet specifications of the National Conference on Weights and Measures.¶

(11) Biomass-Based Diesel Blends; for biomass-based diesel blends see the requirements in OAR 603-027-0420(5).¶

(12) Biodiesel Blends, Biomass-Based Blends, or a Combination of Biodiesel and Biomass-Based Diesel Blends Required.¶

(a) Except as provided in subsection (d) of this section, a retail dealer, non-retail dealer, or wholesale dealer may only sell or offer for sale diesel fuel in Oregon containing:¶

(A) at least five percent biodiesel by volume, or¶

(B) biomass-based diesel with at least five percent renewable component by volume, or¶

(C) five percent or less biodiesel by volume and five percent or less biomass-based diesel by volume provided the combined total of biodiesel and biomass-based diesel is at least five percent by volume.¶

(b) Exemption. The minimum biodiesel fuel content requirements in OAR 603-027-0420(12)(a) do not apply to diesel fuel:¶

(A) sold or offered for sale for use by railroad locomotives, marine engines, or home heating, or facilities that store more than 50 gallons of diesel fuel for use in emergency power generation; or¶

(B) that otherwise meets the requirements in this section but to which there have been added substances to prevent congealing or gelling of diesel fuel containing biodiesel or biomass-based diesel. This exemption applies only to diesel fuel sold or offered for sale during the period from October 1 of any year to February 28 of the following year. This exception applies to blends of grade No. 1 diesel fuel and grade No. 2 diesel fuel as they are defined in ASTM D975, "Standard Specification for Diesel Fuel Oils" where the grade No. 1 component (commonly referred to as kerosene) provides enhanced cold weather performance and the grade No. 2 component meets the

blending requirement in OAR 603-027-0420(12)(a).¶

(13) Aviation Gasoline shall meet:¶

(a) ASTM D910, "Standard Specification for Leaded Aviation Gasolines", or¶

(b) ASTM D6227, "Standard Specification for Unleaded Aviation Gasoline Containing a Non-hydrocarbon Component", or¶

(c) ASTM 7547, "Standard Specification for Hydrocarbon Unleaded Aviation Gasoline".¶

(14) Ethanol Flex Fuel. - Ethanol flex fuel is covered by one of two ASTM standards based on the ethanol concentration of blend:¶

(a) Ethanol flex fuel containing 51 to 83 volume percent ethanol (commonly called E85) shall meet ASTM D5798, "Standard Specification for Ethanol Fuel Blends for Flexible Fuel Automotive Spark-Ignition Engines"; and¶

(b) Ethanol flex fuel containing 16 to 50 volume percent ethanol shall be blended, stored, delivered and offered for consumption in accordance with ASTM D7794, "Standard Practice for Blending Mid-Level Ethanol Fuel Blends for Flexible Fuel Vehicles with Automotive Spark-Ignition Engines."¶

(15) M85 Fuel Methanol shall meet the requirements of ASTM D 5797, "Standard Specification for Fuel Methanol (M70-M85) for Automotive Spark-Ignition Engines."¶

(16) All ASTM documents incorporated by reference in this rule are those versions found in the 2023~~4~~ Annual Book of ASTM Standards Section 5: Petroleum Products, Lubricants, and Fossil Fuels unless noted otherwise. Documents referenced are:¶

(a) ASTM D7547, "Standard Specification for Hydrocarbon Unleaded Aviation Gasoline",¶

(b) ASTM D5797, "Standard Specification for Fuel Methanol (M70-M85) for Automotive Spark-Ignition Engines",¶

(c) ASTM D2500, "Standard Test Method for Cloud Point of Petroleum Products and Liquid Fuels",¶

(d) ASTM D4176, "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)",¶

(e) ASTM D4539, "Standard Test Method for Filterability of Diesel Fuels by Low-Temperature Flow Test (LTFT)",¶

(f) ASTM D4806, "Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel",¶

(g) ASTM D4814, "Standard Specification for Automotive Spark-Ignition Engine Fuel",¶

(h) ASTM D5798, "Standard Specification for Ethanol Fuel Blends for Flexible Fuel Automotive Spark-Ignition Engines",¶

(i) ASTM D6079, "Standard Test Method for Evaluating Lubricity of Diesel Fuels by the High-Frequency Reciprocating Rig (HFRR)",¶

(j) ASTM D613, "Standard Test Method for Cetane Number of Diesel Fuel Oil",¶

(k) ASTM D6227, "Standard Specification for Unleaded Aviation Gasoline Containing a Non-hydrocarbon Component",¶

(l) ASTM D6468, "Standard Test Method for High Temperature Stability of Middle Distillate Fuels",¶

(m) ASTM D6751, "Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels",¶

(n) ASTM D7467, "Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6-B20)",¶

(o) ASTM D7794, "Standard Practice for Blending Mid-Level Ethanol Fuel Blends for Flexible Fuel Vehicles with Automotive Spark-Ignition Engines",¶

(p) ASTM D910, "Standard Specification for Leaded Aviation Gasolines", and¶

(q) ASTM D975, "Standard Specification for Diesel Fuel Oils".¶

[Publications: Publications referenced are available from the agency.]

Statutory/Other Authority: ORS 561.190, 646.905 - 646.990

Statutes/Other Implemented: 646.905 - 646.990, ORS 183