

ANNUAL BOOK OF ASTM STANDARDS

2004

SECTION FIVE

Petroleum Products, Lubricants, and Fossil Fuels



VOLUME 05.05

**Test Methods for Rating Motor,
Diesel, and Aviation Fuels; Catalysts;
Manufactured Carbon and Graphite Products**

Revision Issued Annually





Contents

2004 ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 05.01, 05.02, 05.03, 05.04 AND 05.05
STANDARDS RELATING TO PETROLEUM PRODUCTS AND LUBRICANTS AND CATALYSTS

A complete Subject Index appears at the end of this volume.

Listed below are those standards included in this volume(s) and those standards that have appeared previously which have been discontinued within the past three years.

In the serial designations prefixed to the following titles, the number following the dash indicates the year of original adoption as standard or, in the case of revision, the year of last revision. Thus, standards adopted or revised during the year 2004 have as their final number, 04. A letter following this number indicates more than one revision during that year, that is, 04a indicates the second revision in 2004, 04b, the third revision, etc. Standards that have been reapproved without change are indicated by the year of last reapproval in parentheses as part of the designation number, for example, (2004). A superscript epsilon indicates an editorial change since the last revision or reapproval—^{ε1} for the first change, ^{ε2} for the second change, etc.

VOLUME 05.01

§*D 56 – 02a	Test Method for Flash Point by Tag Closed Cup Tester
*D 61 – 75(1999)	Test Method for Softening Point of Pitches (Cube-in-Water Method)
§D 71 – 94(1999)	Test Method for Relative Density of Solid Pitch and Asphalt (Displacement Method)
§*D 86 – 03	Test Method for Distillation of Petroleum Products at Atmospheric Pressure
*D 87 – 87(1999)	Test Method for Melting Point of Petroleum Wax (Cooling Curve)
§*D 91 – 02	Test Method for Precipitation Number of Lubricating Oils
§*D 92 – 02b	Test Method for Flash and Fire Points by Cleveland Open Cup Tester
§*D 93 – 02a	Test Methods for Flash Point by Pensky-Martens Closed Cup Tester
§*D 94 – 02	Test Methods for Saponification Number of Petroleum Products
§*D 95 – 99 ^{ε1}	Test Method for Water in Petroleum Products and Bituminous Materials by Distillation
§*D 97 – 02	Test Method for Pour Point of Petroleum Products
*D 127 – 87(1999)	Test Method for Drop Melting Point of Petroleum Wax Including Petrolatum
§*D 128 – 98(2003) ^{ε1}	Test Methods for Analysis of Lubricating Grease
*D 129 – 00	Test Method for Sulfur in Petroleum Products (General Bomb Method)
§*D 130 – 94(2000) ^{ε1}	Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test
§*D 156 – 02	Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)
§*D 187 – 94(2003) ^{ε1}	Test Method for Burning Quality of Kerosine
§*D 189 – 01	Test Method for Conradson Carbon Residue of Petroleum Products
§*D 217 – 02	Test Methods for Cone Penetration of Lubricating Grease
§*D 240 – 02	Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter
§*D 287 – 92(2000) ^{ε1}	Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)
§*D 322 – 97(2002) ^{ε1}	Test Method for Gasoline Diluent in Used Gasoline Engine Oils by Distillation
*D 323 – 99a	Test Method for Vapor Pressure of Petroleum Products (Reid Method)
*D 341 – 93(1998)	Viscosity-Temperature Charts for Liquid Petroleum Products
§*D 381 – 03	Test Method for Gum Content in Fuels by Jet Evaporation
§*D 396 – 02a	Specification for Fuel Oils
§*D 445 – 03	Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)
*D 446 – 00	Specifications and Operating Instructions for Glass Capillary Kinematic Viscometers
§*D 473 – 02	Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method
§*D 482 – 03	Test Method for Ash from Petroleum Products

§Approved for use by agencies of the Department of Defense and, if indicated on the standard, replaces corresponding Federal or Military document. Consult the DoD Index of Specifications and Standards for the specific year of issue which has been adopted by the Department of Defense.

*Adopted by American National Standards Institute.

†Although this standard has been officially withdrawn from Society approval, a brief description is included for information only.

CONTENTS

*D 483 – 00	Test Method for Un sulfonated Residue of Petroleum Plant Spray Oils
§*D 524 – 03	Test Method for Ramsbottom Carbon Residue of Petroleum Products
§*D 525 – 01	Test Method for Oxidation Stability of Gasoline (Induction Period Method)
§*D 565 – 99	Test Method for Carbonizable Substances in White Mineral Oil
§*D 566 – 02	Test Method for Dropping Point of Lubricating Grease
§*D 611 – 01b	Test Methods for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon Solvents
*D 612 – 88(1999)	Test Method for Carbonizable Substances in Paraffin Wax
§*D 664 – 01	Test Method for Acid Number of Petroleum Products by Potentiometric Titration
§*D 665 – 02	Test Method for Rust-Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water
§*D 721 – 02a	Test Method for Oil Content of Petroleum Waxes
*D 808 – 00	Test Method for Chlorine in New and Used Petroleum Products (Bomb Method)
§*D 873 – 02	Test Method for Oxidation Stability of Aviation Fuels (Potential Residue Method)
*D 874 – 00	Test Method for Sulfated Ash from Lubricating Oils and Additives
§*D 892 – 03	Test Method for Foaming Characteristics of Lubricating Oils
§*D 893 – 97(2002) ^{e1}	Test Method for Insolubles In Used Lubricating Oils
§*D 910 – 03	Specification for Aviation Gasolines
§*D 937 – 97(2002)	Test Method for Cone Penetration of Petrolatum
§*D 938 – 92(1998) ^{e1}	Test Method for Congealing Point of Petroleum Waxes, Including Petrolatum
§*D 942 – 02	Test Method for Oxidation Stability of Lubricating Greases by the Oxygen Pressure Vessel Method
§*D 943 – 02	Test Method for Oxidation Characteristics of Inhibited Mineral Oils
§*D 972 – 02	Test Method for Evaporation Loss of Lubricating Greases and Oils
§*D 974 – 02 ^{e1}	Test Method for Acid and Base Number by Color-Indicator Titration
§*D 975 – 03	Specification for Diesel Fuel Oils
*D 976 – 91(2000) ^{e1}	Test Methods for Calculated Cetane Index of Distillate Fuels
*D 1015 – 99	Test Method for Freezing Points of High-Purity Hydrocarbons
*D 1016 – 99	Test Method for Purity of Hydrocarbons from Freezing Points
*D 1018 – 00	Test Method for Hydrogen In Petroleum Fractions
*D 1025 – 00	Test Method for Nonvolatile Residue of Polymerization Grade Butadiene
*D 1091 – 00	Test Methods for Phosphorus in Lubricating Oils and Additives
*D 1092 – 99	Test Method for Measuring Apparent Viscosity of Lubricating Greases
*D 1093 – 98	Test Method for Acidity of Hydrocarbon Liquids and Their Distillation Residues
§*D 1094 – 00	Test Method for Water Reaction of Aviation Fuels
*D 1157 – 91(2000) ^{e1}	Test Method for Total Inhibitor Content (TBC) of Light Hydrocarbons
§*D 1159 – 01	Test Method for Bromine Numbers of Petroleum Distillates and Commercial Aliphatic Olefins by Electrometric Titration
§*D 1160 – 03	Test Method for Distillation of Petroleum Products at Reduced Pressure
§*D 1217 – 93(2003) ^{e1}	Test Method for Density and Relative Density (Specific Gravity) of Liquids by Bingham Pycnometer
§*D 1218 – 02	Test Method for Refractive Index and Refractive Dispersion of Hydrocarbon Liquids
§*D 1250 – 80(2002)	Guide for Petroleum Measurement Tables
*D 1263 – 94(1999)	Test Method for Leakage Tendencies of Automotive Wheel Bearing Greases
§*D 1264 – 03 ^{e1}	Test Method for Determining the Water Washout Characteristics of Lubricating Greases
*D 1265 – 97	Practice for Sampling Liquefied Petroleum (LP) Gases (Manual Method)
§*D 1266 – 98(2003) ^{e1}	Test Method for Sulfur in Petroleum Products (Lamp Method)
*D 1267 – 02	Test Method for Gage Vapor Pressure of Liquefied Petroleum (LP) Gases (LP-Gas Method)
§*D 1298 – 99 ^{e2}	Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method
*D 1318 – 00	Test Method for Sodium in Residual Fuel Oil (Flame Photometric Method)
§*D 1319 – 02a	Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption
§*D 1321 – 02a	Test Method for Needle Penetration of Petroleum Waxes
§*D 1322 – 97(2002) ^{e1}	Test Method for Smoke Point of Kerosine and Aviation Turbine Fuel
*D 1367 – 96(2001)	Test Method for Lubricating Qualities of Graphites
§*D 1401 – 02	Test Method for Water Separability of Petroleum Oils and Synthetic Fluids
§*D 1403 – 02	Test Methods for Cone Penetration of Lubricating Grease Using One-Quarter and One-Half Scale Cone Equipment
*D 1404 / D 1404M – 99(2003)	Test Method for Estimation of Deleterious Particles in Lubricating Grease
*D 1405 – 01	Test Method for Estimation of Net Heat of Combustion of Aviation Fuels
*D 1465 – 90(2000)	Test Method for Blocking and Picking Points of Petroleum Wax
§*D 1478 – 02	Test Method for Low-Temperature Torque of Ball Bearing Grease
*D 1480 – 02	Test Method for Density and Relative Density (Specific Gravity) of Viscous Materials by Bingham Pycnometer

CONTENTS

- *D 1481 – 02 Test Method for Density and Relative Density (Specific Gravity) of Viscous Materials by Lipkin Bicapillary Pycnometer
- §*D 1500 – 02 Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)
- *D 1550 – 94(2000) ASTM Butadiene Measurement Tables
- §*D 1552 – 03 Test Method for Sulfur in Petroleum Products (High-Temperature Method)
- §*D 1655 – 03 Specification for Aviation Turbine Fuels
- *D 1657 – 02 Test Method for Density or Relative Density of Light Hydrocarbons by Pressure Hydrometer
- *D 1662 – 92(2002) Test Method for Active Sulfur in Cutting Oils
- §*D 1740 – 01 Test Method for Luminometer Numbers of Aviation Turbine Fuels
- *D 1742 – 94(2000)^{e1} Test Method for Oil Separation from Lubricating Grease During Storage
- *D 1743 – 01 Test Method for Determining Corrosion Preventive Properties of Lubricating Greases
- *D 1747 – 99 Test Method for Refractive Index of Viscous Materials
- §*D 1748 – 02 Test Method for Rust Protection by Metal Preservatives in the Humidity Cabinet
- §*D 1796 – 97(2002) Test Method for Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure)
- §*D 1831 – 00^{e1} Test Method for Roll Stability of Lubricating Grease
- *D 1832 – 87(1999) Test Method for Peroxide Number of Petroleum Wax
- *D 1833 – 87(1999) Test Method for Odor of Petroleum Wax
- *D 1834 – 90(2000) Test Method for 20° Specular Gloss of Waxed Paper
- *D 1835 – 03 Specification for Liquefied Petroleum (LP) Gases
- *D 1837 – 02a Test Method for Volatility of Liquefied Petroleum (LP) Gases
- *D 1838 – 03 Test Method for Copper Strip Corrosion by Liquefied Petroleum (LP) Gases
- *D 1839 – 91(2000)^{e1} Test Method for Amyl Nitrate in Diesel Fuels
- §*D 1840 – 02 Test Method for Naphthalene Hydrocarbons in Aviation Turbine Fuels by Ultraviolet Spectrophotometry
- *D 2001 – 92(2002) Test Method for Depentanization of Gasoline and Naphthas
- *D 2007 – 03 Test Method for Characteristic Groups in Rubber Extender and Processing Oils and Other Petroleum-Derived Oils by the Clay-Gel Absorption Chromatographic Method
- *D 2008 – 91(2001) Test Method for Ultraviolet Absorbance and Absorptivity of Petroleum Products
- *D 2068 – 97(2003) Test Method for Filter Plugging Tendency of Distillate Fuel Oils
- §*D 2069 Specification for Marine Fuels (Discontinued 2003†)
- *D 2070 – 91(2001) Test Method for Thermal Stability of Hydraulic Oils
- §*D 2156 – 94(2003) Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels
- *D 2157 – 94(2003) Test Method for Effect of Air Supply on Smoke Density in Flue Gases from Burning Distillate Fuels
- *D 2158 – 02 Test Method for Residues in Liquefied Petroleum (LP) Gases
- *D 2161 – 93(1999)^{e2} Practice for Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity
- §*D 2162 – 99^{e1} Test Method for Basic Calibration of Master Viscometers and Viscosity Oil Standards
- *D 2163 – 91(1996) Test Method for Analysis of Liquefied Petroleum (LP) Gases and Propene Concentrates by Gas Chromatography
- *D 2265 – 00 Test Method for Dropping Point of Lubricating Grease Over Wide Temperature Range
- §*D 2266 – 01 Test Method for Wear Preventive Characteristics of Lubricating Grease (Four-Ball Method)
- §*D 2268 – 93(2003)^{e1} Test Method for Analysis of High-Purity *n*-Heptane and *Isooctane* by Capillary Gas Chromatography
- *D 2269 – 99 Test Method for Evaluation of White Mineral Oils by Ultraviolet Absorption
- *D 2270 – 93(1998) Practice for Calculating Viscosity Index From Kinematic Viscosity at 40 and 100°C
- *D 2271 – 94(1999)^{e1} Test Method for Preliminary Examination of Hydraulic Fluids (Wear Test)
- §*D 2272 – 02 Test Method for Oxidation Stability of Steam Turbine Oils by Rotating Pressure Vessel
- §*D 2273 – 97(2002)^{e1} Test Method for Trace Sediment in Lubricating Oils
- §*D 2274 – 03 Test Method for Oxidation Stability of Distillate Fuel Oil (Accelerated Method)
- §*D 2276 – 00 Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling
- *D 2318 – 98(2003) Test Method for Quinoline-Insoluble (QI) Content of Tar and Pitch
- *D 2319 – 98(2003) Test Method for Softening Point of Pitch (Cube-in-Air Method)
- *D 2320 – 98(2003) Test Method for Density (Relative Density) of Solid Pitch (Pycnometer Method)
- *D 2384 – 83(2000)^{e1} Test Methods for Traces of Volatile Chlorides in Butane-Butene Mixtures
- §*D 2386 – 03 Test Method for Freezing Point of Aviation Fuels
- §*D 2392 – 96(2001)^{e1} Test Method for Color Of Dyed Aviation Gasolines
- *D 2415 – 98(2003) Test Method for Ash in Coal Tar and Pitch
- *D 2416 – 84(1999) Test Method for Coking Value of Tar and Pitch (Modified Conradson)
- *D 2420 – 91(2001) Test Method for Hydrogen Sulfide In Liquefied Petroleum (LP) Gases (Lead Acetate Method)
- *D 2421 – 02 Practice for Interconversion of Analysis of C₅ and Lighter Hydrocarbons to Gas-Volume, Liquid-Volume, or Mass Basis
- *D 2422 – 97(2002) Classification of Industrial Fluid Lubricants by Viscosity System
- *D 2423 – 90(2002) Test Method for Surface Wax on Waxed Paper or Paperboard
- *D 2425 – 99 Test Method for Hydrocarbon Types in Middle Distillates by Mass Spectrometry

CONTENTS

- *D 2426 – 93(1998) Test Method for Butadiene Dimer and Styrene in Butadiene Concentrates by Gas Chromatography
- *D 2427 – 92(2001) Test Method for Determination of C₂ through C₅ Hydrocarbons in Gasolines by Gas Chromatography
- §*D 2500 – 02 Test Method for Cloud Point of Petroleum Products
- *D 2501 – 91(2000) Test Method for Calculation of Viscosity-Gravity Constant (VGC) of Petroleum Oils
- *D 2502 – 92(2002) Test Method for Estimation of Molecular Weight (Relative Molecular Mass) of Petroleum Oils From Viscosity Measurements
- §*D 2503 – 92(2002)^{e1} Test Method for Relative Molecular Mass (Molecular Weight) of Hydrocarbons by Thermoelectric Measurement of Vapor Pressure
- *D 2504 – 88(1998) Test Method for Noncondensable Gases in C₂ and Lighter Hydrocarbon Products by Gas Chromatography
- *D 2505 – 88(1998) Test Method for Ethylene, Other Hydrocarbons, and Carbon Dioxide in High-Purity Ethylene by Gas Chromatography
- *D 2509 – 03 Test Method for Measurement of Load-Carrying Capacity of Lubricating Grease (Timken Method)
- *D 2510 – 94(1998) Test Method for Adhesion of Solid Film Lubricants
- §*D 2511 – 93(2003) Test Method for Thermal Shock Sensitivity of Solid Film Lubricants
- *D 2532 – 93(1998) Test Method for Viscosity and Viscosity Change After Standing at Low Temperature of Aircraft Turbine Lubricants
- *D 2533 – 99 Test Method for Vapor-Liquid Ratio of Spark-Ignition Engine Fuels
- *D 2534 – 88(1999) Test Method for Coefficient of Kinetic Friction for Wax Coatings
- *D 2549 – 02 Test Method for Separation of Representative Aromatics and Nonaromatics Fractions of High-Boiling Oils by Elution Chromatography
- *D 2569 – 97(2002) Test Method for Distillation of Pitch
- *D 2593 – 93(1998) Test Method for Butadiene Purity and Hydrocarbon Impurities by Gas Chromatography
- §*D 2595 – 96(2002)^{e1} Test Method for Evaporation Loss of Lubricating Greases Over Wide-Temperature Range
- §*D 2596 – 97(2002)^{e1} Test Method for Measurement of Extreme-Pressure Properties of Lubricating Grease (Four-Ball Method)
- *D 2597 – 94(1999) Test Method for Analysis of Demethanized Hydrocarbon Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography
- *D 2598 – 02 Practice for Calculation of Certain Physical Properties of Liquefied Petroleum (LP) Gases from Compositional Analysis
- §*D 2603 – 01 Test Method for Sonic Shear Stability of Polymer-Containing Oils
- *D 2619 – 95(2002)^{e1} Test Method for Hydrolytic Stability of Hydraulic Fluids (Beverage Bottle Method)
- §*D 2622 – 03 Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry
- §*D 2624 – 02 Test Methods for Electrical Conductivity of Aviation and Distillate Fuels
- §*D 2625 – 94(2003) Test Method for Endurance (Wear) Life and Load-Carrying Capacity of Solid Film Lubricants (Falex Pin and Vee Method)
- *D 2638 – 91(2002) Test Method for Real Density of Calcined Petroleum Coke by Helium Pycnometer
- *D 2649 – 99^{e1} Test Method for Corrosion Characteristics of Solid Film Lubricants
- *D 2650 – 99 Test Method for Chemical Composition of Gases By Mass Spectrometry
- *D 2669 – 87(1999) Test Method for Apparent Viscosity of Petroleum Waxes Compounded with Additives (Hot Melts)
- *D 2670 – 95(1999) Test Method for Measuring Wear Properties of Fluid Lubricants (Falex Pin and Vee Block Method)
- §*D 2709 – 96(2001)^{e1} Test Method for Water and Sediment in Middle Distillate Fuels by Centrifuge
- *D 2710 – 99 Test Method for Bromine Index of Petroleum Hydrocarbons by Electrometric Titration
- *D 2711 – 01a Test Method for Demulsibility Characteristics of Lubricating Oils
- *D 2712 – 91(2003)^{e1} Test Method for Hydrocarbon Traces in Propylene Concentrates by Gas Chromatography
- *D 2713 – 91(2001) Test Method for Dryness of Propane (Valve Freeze Method)
- §*D 2714 – 94(2003) Test Method for Calibration and Operation of the Falex Block-on-Ring Friction and Wear Testing Machine
- *D 2715 – 92(2002) Test Method for Volatilization Rates of Lubricants in Vacuum
- *D 2717 – 95(2000) Test Method for Thermal Conductivity of Liquids
- *D 2764 – 99 Test Method for Dimethylformamide-Insoluble (DMF-I) Content of Tar and Pitch
- *D 2766 – 95(2000) Test Method for Specific Heat of Liquids and Solids
- *D 2779 – 92(2002) Test Method for Estimation of Solubility of Gases in Petroleum Liquids
- *D 2780 – 92(2002)^{e1} Test Method for Solubility of Fixed Gases in Liquids
- *D 2782 – 02 Test Method for Measurement of Extreme-Pressure Properties of Lubricating Fluids (Timken Method)
- *D 2783 – 03 Test Method for Measurement of Extreme-Pressure Properties of Lubricating Fluids (Four-Ball Method)
- *D 2784 – 98(2003)^{e1} Test Method for Sulfur in Liquefied Petroleum Gases (Oxy-Hydrogen Burner or Lamp)

CONTENTS

- *D 2786 – 91(2001)^{e1} Test Method for Hydrocarbon Types Analysis of Gas-Oil Saturates Fractions by High Ionizing Voltage Mass Spectrometry
- *D 2789 – 95(2000)^{e1} Test Method for Hydrocarbon Types in Low Olefinic Gasoline by Mass Spectrometry
- *D 2878 – 95(2000)^{e1} Test Method for Estimating Apparent Vapor Pressures and Molecular Weights of Lubricating Oils
- *D 2879 – 97(2002)^{e1} Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope
- §*D 2880 – 03 Specification for Gas Turbine Fuel Oils
- *D 2881 – 03 Classification for Metal Working Fluids and Related Materials
- *D 2882 Test Method for Indicating Wear Characteristics of Petroleum and Non-Petroleum Hydraulic Fluids in Constant Volume Vane Pump (Discontinued 2003†)
- *D 2883 – 95(2000)^{e1} Test Method for Reaction Threshold Temperature of Liquid and Solid Materials
- *D 2884 – 93(2002) Test Method for Yield Stress of Heterogeneous Propellants by Cone Penetration Method
- §*D 2887 – 02 Test Method for Boiling Range Distribution of Petroleum Fractions by Gas Chromatography
- *D 2889 – 95(2000) Test Method for Calculation of True Vapor Pressures of Petroleum Distillate Fuels
- *D 2890 – 92(2003) Test Method for Calculation of Liquid Heat Capacity of Petroleum Distillate Fuels
- *D 2892 – 03 Test Method for Distillation of Crude Petroleum (15-Theoretical Plate Column)
- *D 2893 – 03 Test Methods for Oxidation Characteristics of Extreme-Pressure Lubrication Oils
- *D 2895 – 88(1999) Test Method for Gloss Retention of Waxed Paper and Paperboard After Storage at 40°C (104°F)
- §*D 2896 – 01^{e1} Test Method for Base Number of Petroleum Products by Potentiometric Perchloric Acid Titration
- *D 2962 – 97(2002) Test Method for Calculating Volume-Temperature Correction For Coal-Tar Pitches
- *D 2981 – 94(2003) Test Method for Wear Life of Solid Film Lubricants in Oscillating Motion
- *D 2982 – 98^{e1} Test Methods for Detecting Glycol-Base Antifreeze in Used Lubricating Oils
- §*D 2983 – 03 Test Method for Low-Temperature Viscosity of Lubricants Measured by Brookfield Viscometer
- *D 3104 – 99 Test Method for Softening Point of Pitches (Mettler Softening Point Method)
- *D 3115 – 95(2000) Test Method for Explosive Reactivity of Lubricants with Aerospace Alloys Under High Shear
- *D 3117 – 03 Test Method for Wax Appearance Point of Distillate Fuels
- §*D 3120 – 03a Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry
- §*D 3227 – 02a Test Method for (Thiol Mercaptan) Sulfur in Gasoline, Kerosene, Aviation Turbine, and Distillate Fuels (Potentiometric Method)
- §*D 3228 – 01 Test Method for Total Nitrogen In Lubricating Oils and Fuel Oils By Modified Kjeldahl Method
- *D 3230 – 99 Test Method for Salts in Crude Oil (Electrometric Method)

VOLUME 05.02

- §*D 3231 – 02 Test Method for Phosphorus in Gasoline
- *D 3233 – 93(2003) Test Methods for Measurement of Extreme Pressure Properties of Fluid Lubricants (Falex Pin and Vee Block Methods)
- *D 3234 – 88(1999) Test Method for Abrasion Resistance of Petroleum Wax Coatings
- *D 3235 – 02 Test Method for Solvent Extractables in Petroleum Waxes
- *D 3236 – 88(1999) Test Method for Apparent Viscosity of Hot Melt Adhesives and Coating Materials
- §*D 3237 – 02 Test Method for Lead In Gasoline By Atomic Absorption Spectroscopy
- *D 3238 – 95(2000)^{e1} Test Method for Calculation of Carbon Distribution and Structural Group Analysis of Petroleum Oils by the n-d-M Method
- *D 3239 – 91(2001) Test Method for Aromatic Types Analysis of Gas-Oil Aromatic Fractions by High Ionizing Voltage Mass Spectrometry
- §*D 3240 – 91(2001) Test Method for Undissolved Water In Aviation Turbine Fuels
- §*D 3241 – 02a^{e1} Test Method for Thermal Oxidation Stability of Aviation Turbine Fuels (JFTOT Procedure)
- §*D 3242 – 01 Test Method for Acidity in Aviation Turbine Fuel
- *D 3244 – 97(2002) Practice for Utilization of Test Data to Determine Conformance with Specifications
- *D 3245 – 03 Test Method for Pumpability of Industrial Fuel Oils
- *D 3246 – 96 Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry
- §*D 3336 – 97(2002)^{e1} Test Method for Life of Lubricating Greases in Ball Bearings at Elevated Temperatures
- *D 3338 – 00 Test Method for Estimation of Net Heat of Combustion of Aviation Fuels
- *D 3339 – 02 Test Method for Acid Number of Petroleum Products by Semi-Micro Color Indicator Titration
- *D 3340 – 98(2003) Test Method for Lithium and Sodium in Lubricating Greases by Flame Photometer
- *D 3341 – 00 Test Method for Lead in Gasoline—Iodine Monochloride Method
- *D 3342 – 90(2000)^{e1} Test Method for Dispersion Stability of New (Unused) Rolling Oil Dispersions in Water
- *D 3343 – 95(2000) Test Method for Estimation of Hydrogen Content of Aviation Fuels
- *D 3344 – 90(2000)^{e1} Test Method for Total Wax Content of Corrugated Paperboard
- *D 3348 – 98(2003)^{e1} Test Method for Rapid Field Test for Trace Lead in Unleaded Gasoline (Colorimetric Method)
- *D 3427 – 02 Test Method for Air Release Properties of Petroleum Oils
- *D 3429 – 93(2002)^{e1} Test Method for Solubility of Fixed Gases in Low-Boiling Liquids
- *D 3461 – 97(2002) Test Method for Softening Point of Asphalt and Pitch (Mettler Cup-and-Ball Method)

CONTENTS

- *D 3519 – 88(2002) Test Method for Foam in Aqueous Media (Blender Test)
 *D 3520 Test Method for Quenching Time of Heat-Treating Fluids (Magnetic Quenchometer Method) (Discontinued 2003†)
- *D 3521 – 86(2002) Test Method for Surface Wax Coating On Corrugated Board
 *D 3522 – 86(2002)^{e1} Test Method for Applied Coating Wax and Impregnating (Saturating) Wax in Corrugated Board Facing
- *D 3523 – 92(2002) Test Method for Spontaneous Heating Values of Liquids and Solids (Differential Mackey Test)
 *D 3524 – 90(1999) Test Method for Diesel Fuel Diluent in Used Diesel Engine Oils by Gas Chromatography
 *D 3525 – 93(2002)^{e1} Test Method for Gasoline Diluent in Used Gasoline Engine Oils by Gas Chromatography
 *D 3527 – 02 Test Method for Life Performance of Automotive Wheel Bearing Grease
 *D 3601 – 88(2002)^{e1} Test Method for Foam In Aqueous Media (Bottle Test)
 *D 3603 – 93(2002) Test Method for Rust-Preventing Characteristics of Steam Turbine Oil in the Presence of Water (Horizontal Disk Method)
- *D 3605 – 00 Test Method for Trace Metals in Gas Turbine Fuels by Atomic Absorption and Flame Emission Spectroscopy
- *D 3606 – 99 Test Method for Determination of Benzene and Toluene in Finished Motor and Aviation Gasoline by Gas Chromatography
- *D 3607 – 97(2002)^{e1} Test Method for Removing Volatile Contaminants from Used Engine Oils by Stripping
- §*D 3699 – 03 Specification for Kerosine
 *D 3700 – 01 Practice for Obtaining LPG Samples Using a Floating Piston Cylinder
 §*D 3701 – 01 Test Method for Hydrogen Content of Aviation Turbine Fuels by Low Resolution Nuclear Magnetic Resonance Spectrometry
- *D 3702 – 94(1999) Test Method for Wear Rate and Coefficient of Friction of Materials in Self-Lubricated Rubbing Contact Using a Thrust Washer Testing Machine
- *D 3703 – 99 Test Method for Peroxide Number of Aviation Turbine Fuels
 *D 3704 – 96(2001) Test Method for Wear Preventive Properties of Lubricating Greases Using the (Falex) Block on Ring Test Machine in Oscillating Motion
- *D 3705 – 86(2003)^{e1} Test Method for Misting Properties of Lubricating Fluids
 *D 3706 – 88(2000) Test Method for Hot Tack of Wax-Polymer Blends by the Flat Spring Test
 *D 3707 – 89(1999) Test Method for Storage Stability of Water-in-Oil Emulsions by the Oven Test Method
 *D 3708 – 88(2000) Test Method for Weight of Wax Applied During Curtain Coating Operation
 *D 3709 – 89(1999) Test Method for Stability of Water-in-Oil Emulsions Under Low to Ambient Temperature Cycling Conditions
- *D 3710 – 95(1999)^{e1} Test Method for Boiling Range Distribution of Gasoline and Gasoline Fractions by Gas Chromatography
- *D 3711 – 95(2000)^{e1} Test Method for Deposition Tendencies of Liquids in Thin Films and Vapors
 *D 3712 – 91(2000)^{e1} Test Method of Analysis of Oil-Soluble Petroleum Sulfonates by Liquid Chromatography
 *D 3764 – 01 Practice for Validation of Process Stream Analyzer Systems
 *D 3825 – 90(2000) Test Method for Dynamic Surface Tension by the Fast-Bubble Technique
 *D 3827 – 92(2002) Test Method for Estimation of Solubility of Gases in Petroleum and Other Organic Liquids
- §*D 3828 – 02 Test Methods for Flash Point by Small Scale Closed Cup Tester
 *D 3829 – 02 Test Method for Predicting the Borderline Pumping Temperature of Engine Oil
 *D 3831 – 01 Test Method for Manganese in Gasoline By Atomic Absorption Spectroscopy
 *D 3944 – 88(2000) Test Method for Solidification Point of Petroleum Wax
 §*D 3948 – 99a Test Method for Determining Water Separation Characteristics of Aviation Turbine Fuels by Portable Separometer
- *D 4006 – 81(2000)^{e1} Test Method for Water in Crude Oil by Distillation
 *D 4007 – 02 Test Method for Water and Sediment in Crude Oil by the Centrifuge Method (Laboratory Procedure)
- *D 4042 – 93(2003)^{e1} Test Method for Sampling and Testing for Ash and Total Iron in Steel Mill Dispersions of Rolling Oils
- *D 4045 – 99 Test Method for Sulfur in Petroleum Products by Hydrogenolysis and Rateometric Colorimetry
 *D 4046 – 91(2000)^{e1} Test Method for Alkyl Nitrate in Diesel Fuels by Spectrophotometry
 *D 4047 – 00 Test Method for Phosphorus in Lubricating Oils and Additives by Quinoline Phosphomolybdate Method
- §*D 4048 – 02 Test Method for Detection of Copper Corrosion from Lubricating Grease
 *D 4049 – 99 Test Method for Determining the Resistance of Lubricating Grease to Water Spray
 *D 4051 – 99 Practice for Preparation of Low-Pressure Gas Blends
 §*D 4052 – 96(2002)^{e1} Test Method for Density and Relative Density of Liquids by Digital Density Meter
 *D 4053 – 98(2003) Test Method for Benzene in Motor and Aviation Gasoline by Infrared Spectroscopy
 *D 4054 – 93(2003) Practice for Evaluating the Compatibility of Additives with Aviation-Turbine Fuels and Aircraft Fuel System Materials
- *D 4055 – 02 Test Method for Pentane Insolubles by Membrane Filtration
 *D 4056 – 01 Test Method for Estimation of Solubility of Water in Hydrocarbon and Aliphatic Ester Lubricants

CONTENTS

*D 4057 – 95(2000)	Practice for Manual Sampling of Petroleum and Petroleum Products
*D 4072 – 98(2003) ^{e1}	Test Method for Toluene-Insoluble (TI) Content of Tar and Pitch
*D 4170 – 97(2002) ^{e1}	Test Method for Fretting Wear Protection by Lubricating Greases
*D 4171 – 98	Specification for Fuel System Icing Inhibitors
*D 4172 – 94(1999)	Test Method for Wear Preventive Characteristics of Lubricating Fluid (Four-Ball Method)
*D 4174 – 89(1999)	Practice for Cleaning, Flushing, and Purification of Petroleum Fluid Hydraulic Systems
§*D 4175 – 02a ^{e1}	Terminology Relating to Petroleum, Petroleum Products, and Lubricants
§*D 4176 – 02	Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)
*D 4177 – 95(2000)	Practice for Automatic Sampling of Petroleum and Petroleum Products
*D 4178 – 82(1999)	Practice for Calibrating Moisture Analyzers
*D 4241 – 98(2003)	Practice for Design of Gas Turbine Generator Lubricating Oil Systems
*D 4248 – 98(2003)	Practice for Design of Steam Turbine Generator Oil Systems
§*D 4289 – 03	Test Method for Elastomer Compatibility of Lubricating Greases and Fluids
*D 4290 – 02	Test Method for Determining the Leakage Tendencies of Automotive Wheel Bearing Grease Under Accelerated Conditions
*D 4291 – 93(1998)	Test Method for Trace Ethylene Glycol in Used Engine Oil
*D 4292 – 92(2002) ^{e1}	Test Method for Determination of Vibrated Bulk Density of Calcined Petroleum Coke
*D 4293 – 83(2003)	Specification for Phosphate Ester Based Fluids for Turbine Lubrication
§*D 4294 – 02	Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-ray Fluorescence Spectrometry
*D 4296 – 83(1999)	Practice for Sampling Pitch
*D 4304 – 00	Specification for Mineral Lubricating Oil Used in Steam or Gas Turbines
*D 4305 – 98a	Test Method for Filter Flow of Aviation Fuels at Low Temperatures
§*D 4306 – 01	Practice for Aviation Fuel Sample Containers for Tests Affected by Trace Contamination
*D 4307 – 99	Practice for Preparation of Liquid Blends for Use as Analytical Standards
§*D 4308 – 95(2000) ^{e1}	Test Method for Electrical Conductivity of Liquid Hydrocarbons by Precision Meter
*D 4310 – 03	Test Method for Determination of the Sludging and Corrosion Tendencies of Inhibited Mineral Oils
*D 4312 – 95a(2000) ^{e1}	Test Method for Toluene-Insoluble (TI) Content of Tar and Pitch (Short Method)
§*D 4377 – 00 ^{e1}	Test Method for Water in Crude Oils by Potentiometric Karl Fischer Titration
*D 4378 – 03	Practice for In-Service Monitoring of Mineral Turbine Oils for Steam and Gas Turbines
*D 4418 – 00	Practice for Receipt, Storage, and Handling of Fuels for Gas Turbines
*D 4419 – 90(2000)	Test Method for Measurement of Transition Temperatures of Petroleum Waxes by Differential Scanning Calorimetry (DSC)
*D 4420 – 94(1999) ^{e1}	Test Method for Determination of Aromatics in Finished Gasoline by Gas Chromatography
*D 4421 – 94(1999)	Test Method for Volatile Matter in Petroleum Coke
*D 4422 – 94(1998)	Test Method for Ash In Analysis of Petroleum Coke
*D 4423 – 00	Test Method for Determination of Carbonyls In C ₄ Hydrocarbons
*D 4424 – 90(2001) ^{e1}	Test Method for Butylene Analysis by Gas Chromatography
*D 4425 – 97(2002)	Test Method for Oil Separation from Lubricating Grease by Centrifuging (Koppers Method)
*D 4485 – 03	Specification for Performance of Engine Oils
*D 4486 – 91(2001)	Test Method for Kinematic Viscosity of Volatile and Reactive Liquids
*D 4529 – 01	Test Method for Estimation of Net Heat of Combustion of Aviation Fuels
§*D 4530 – 03	Test Method for Determination of Carbon Residue (Micro Method)
*D 4539 – 03	Test Method for Filterability of Diesel Fuels by Low-Temperature Flow Test (LTFT)
*D 4616 – 95(2000)	Test Method for Microscopical Analysis by Reflected Light and Determination of Mesophase in a Pitch
*D 4624 – 93(1998)	Test Method for Measuring Apparent Viscosity by Capillary Viscometer at High-Temperature and High-Shear Rates
*D 4625 – 92(1998)	Test Method for Distillate Fuel Storage Stability at 43°C (110°F)
*D 4626 – 95(2000)	Practice for Calculation of Gas Chromatographic Response Factors
*D 4627 – 92(2002)	Test Method for Iron Chip Corrosion for Water-Dilutable Metalworking Fluids
§*D 4628 – 02	Test Method for Analysis of Barium, Calcium, Magnesium, and Zinc in Unused Lubricating Oils by Atomic Absorption Spectrometry
§*D 4629 – 02	Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection
*D 4636 – 99	Test Method for Corrosiveness and Oxidation Stability of Hydraulic Oils, Aircraft Turbine Engine Lubricants, and Other Highly Refined Oils
*D 4682 – 87(2002)	Specification for Miscibility with Gasoline and Fluidity of Two-Stroke-Cycle Gasoline Engine Lubricants
*D 4683 – 96	Test Method for Measuring Viscosity at High Shear Rate and High Temperature by Tapered Bearing Simulator
§*D 4684 – 02a	Test Method for Determination of Yield Stress and Apparent Viscosity of Engine Oils at Low Temperature

CONTENTS

- *D 4693 – 97(2002)^{ε1} Test Method for Low-Temperature Torque of Grease-Lubricated Wheel Bearings
- *D 4715 – 98(2003) Test Method for Coking Value of Tar and Pitch (Alcan)
- *D 4737 – 03 Test Method for Calculated Cetane Index by Four Variable Equation
- *D 4739 – 02 Test Method for Base Number Determination by Potentiometric Titration
- *D 4740 – 02 Test Method for Cleanliness and Compatibility of Residual Fuels by Spot Test
- *D 4741 – 00 Test Method for Measuring Viscosity at High Temperature and High Shear Rate by Tapered-Plug Viscometer
- *D 4742 – 02a Test Method for Oxidation Stability of Gasoline Automotive Engine Oils by Thin-Film Oxygen Uptake (TFOUT)
- *D 4746 – 98(2003)^{ε1} Test Method for Determination of Quinoline Insolubles (QI) in Tar and Pitch by Pressure Filtration
- *D 4806 – 03 Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel
- *D 4807 – 88(1999) Test Method for Sediment in Crude Oil by Membrane Filtration
- §*D 4808 – 01 Test Methods for Hydrogen Content of Light Distillates, Middle Distillates, Gas Oils, and Residua by Low-Resolution Nuclear Magnetic Resonance Spectroscopy
- *D 4809 – 00 Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)
- §*D 4814 – 03 Specification for Automotive Spark-Ignition Engine Fuel
- §*D 4815 – 03 Test Method for Determination of MTBE, ETBE, TAME, DIPE, tertiary-Amyl Alcohol and C₁ to C₄ Alcohols in Gasoline by Gas Chromatography
- §*D 4857 – 02 Test Method for Determination of the Ability of Lubricants to Minimize Ring Sticking and Piston Deposits in Two-Stroke-Cycle Gasoline Engines Other Than Outboards
- §*D 4858 – 02 Test Method for Determination of the Tendency of Lubricants to Promote Preignition in Two-Stroke-Cycle Gasoline Engines
- §*D 4859 – 97(2003) Specification for Lubricants for Two-Stroke-Cycle Spark-Ignition Gasoline Engines-TC
- *D 4860 – 91(2000)^{ε1} Test Method for Free Water and Particulate Contamination in Mid-Distillate Fuels (Clear and Bright Numerical Rating)
- §*D 4863 – 02 Test Method for Determination of Lubricity of Two-Stroke-Cycle Gasoline Engine Lubricants
- *D 4864 – 90(2000)^{ε1} Test Method for Determination of Traces of Methanol in Propylene Concentrates by Gas Chromatography
- *D 4865 – 98(2003)^{ε1} Guide for Generation and Dissipation of Static Electricity in Petroleum Fuel Systems
- *D 4868 – 00 Test Method for Estimation of Net and Gross Heat of Combustion of Burner and Diesel Fuels
- *D 4870 – 99 Test Method for Determination of Total Sediment in Residual Fuels
- *D 4871 – 00 Guide for Universal Oxidation/Thermal Stability Test Apparatus
- §*D 4892 – 89(1999)^{ε1} Test Method for Density of Solid Pitch (Helium Pycnometer Method)
- *D 4893 – 94(1999) Test Method for Determination of Pitch Volatility
- *D 4898 – 90(2000)^{ε1} Test Method for Insoluble Contamination of Hydraulic Fluids by Gravimetric Analysis
- §*D 4927 – 02 Test Methods for Elemental Analysis of Lubricant and Additive Components—Barium, Calcium, Phosphorus, Sulfur, and Zinc by Wavelength-Dispersive X-Ray Fluorescence Spectroscopy
- §*D 4928 – 00^{ε1} Test Methods for Water in Crude Oils by Coulometric Karl Fischer Titration
- *D 4929 – 99 Test Methods for Determination of Organic Chloride Content in Crude Oil
- *D 4930 – 94(1999) Test Method for Dust Control Material on Calcined Petroleum Coke
- *D 4931 – 92(2002) Test Method for Gross Moisture in Green Petroleum Coke
- *D 4950 – 01 Classification and Specification for Automotive Service Greases
- §*D 4951 – 02 Test Method for Determination of Additive Elements in Lubricating Oils by Inductively Coupled Plasma Atomic Emission Spectrometry
- §*D 4952 – 02 Test Method for Qualitative Analysis for Active Sulfur Species in Fuels and Solvents (Doctor Test)
- *D 4953 – 99a Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method)
- *D 4998 – 95(2003)^{ε1} Test Method for Evaluating Wear Characteristics of Tractor Hydraulic Fluids
- *D 5000 – 89(2000) Practice for Evaluating Activity of Clay Elements Using a Side-Stream Sensor
- *D 5001 – 90a(2000)^{ε1} Test Method for Measurement of Lubricity of Aviation Turbine Fuels by the Ball-on-Cylinder Lubricity Evaluator (BOCLE)
- *D 5002 – 99 Test Method for Density and Relative Density of Crude Oils by Digital Density Analyzer
- *D 5003 – 95(2000)^{ε1} Test Method for The Hardgrove Grindability Index (HGI) of Petroleum Coke
- *D 5004 – 89(1999) Test Method for Real Density of Calcined Petroleum Coke by Xylene Displacement
- §*D 5006 – 02 Test Method for Measurement of Fuel System Icing Inhibitors (Ether Type) in Aviation Fuels
- *D 5018 – 89(1999)^{ε1} Test Method for Shear Viscosity of Coal-Tar and Petroleum Pitches
- *D 5056 – 02 Test Method for Trace Metals in Petroleum Coke by Atomic Absorption
- *D 5059 – 98(2003)^{ε1} Test Methods for Lead in Gasoline by X-Ray Spectroscopy
- §*D 5119 Test Method for Evaluation of Automotive Engine Oils in the CRC L-38 Spark-Ignition Engine (Discontinued 2003†)
- *D 5133 – 01 Test Method for Low Temperature, Low Shear Rate, Viscosity/Temperature Dependence of Lubricating Oils Using a Temperature-Scanning Technique

CONTENTS

- *D 5134 – 98(2003) Test Method for Detailed Analysis of Petroleum Naphthas through n-Nonane by Capillary Gas Chromatography
- *D 5182 – 97(2002)^{e1} Test Method for Evaluating the Scuffing Load Capacity of Oils (FZG Visual Method)
- *D 5183 – 95(1999)^{e1} Test Method for Determination of the Coefficient of Friction of Lubricants Using the Four-Ball Wear Test Machine
- *D 5184 – 01 Test Methods for Determination of Aluminum and Silicon in Fuel Oils by Ashing, Fusion, Inductively Coupled Plasma Atomic Emission Spectrometry, and Atomic Absorption Spectrometry
- §*D 5185 – 02^{e1} Test Method for Determination of Additive Elements, Wear Metals, and Contaminants in Used Lubricating Oils and Determination of Selected Elements in Base Oils by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)
- *D 5186 – 03 Test Method for Determination of the Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels By Supercritical Fluid Chromatography
- *D 5187 – 91(2002) Test Method for Determination of Crystallite Size (L_c of Calcined Petroleum Coke by X-Ray Diffraction
- *D 5188 – 99 Test Method for Vapor-Liquid Ratio Temperature Determination of Fuels (Evacuated Chamber Method)
- *D 5190 – 01 Test Method for Vapor Pressure of Petroleum Products (Automatic Method)
- §*D 5191 – 02 Test Method for Vapor Pressure of Petroleum Products (Mini Method)
- *D 5234 – 92(2002) Guide for Analysis of Ethylene Product
- *D 5236 – 03 Test Method for Distillation of Heavy Hydrocarbon Mixtures (Vacuum Potstill Method)
- *D 5273 – 92(2002) Guide for Analysis of Propylene Concentrates
- *D 5274 – 00 Guide for Analysis of 1,3-Butadiene Product
- *D 5275 – 92(1998)^{e1} Test Method for Fuel Injector Shear Stability Test (FISST) for Polymer Containing Fluids
- *D 5291 – 02 Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants
- *D 5292 – 99 Test Method for Aromatic Carbon Contents of Hydrocarbon Oils by High Resolution Nuclear Magnetic Resonance Spectroscopy
- *D 5293 – 02 Test Method for Apparent Viscosity of Engine Oils Between –5 and –35°C Using the Cold-Cranking Simulator
- *D 5302 Test Method for Evaluation of Automotive Engine Oils for Inhibition of Deposit Formation and Wear in a Spark-Ignition Internal Combustion Engine Fueled with Gasoline and Operated Under Low-Temperature, Light-Duty Conditions (Discontinued 2003†)

VOLUME 05.03

- *D 5303 – 92(2002)^{e1} Test Method for Trace Carbonyl Sulfide in Propylene by Gas Chromatography
- §*D 5304 – 03 Test Method for Assessing Middle Distillate Fuel Storage Stability by Oxygen Overpressure
- *D 5305 – 97(2002) Test Method for Determination of Ethyl Mercaptan in LP-Gas Vapor
- *D 5306 – 92(2002)^{e1} Test Method for Linear Flame Propagation Rate of Lubricating Oils and Hydraulic Fluids
- *D 5307 – 97(2002)^{e1} Test Method for Determination of Boiling Range Distribution of Crude Petroleum by Gas Chromatography
- *D 5372 – 93(1998) Guide for Evaluation of Hydrocarbon Heat Transfer Fluids
- *D 5384 – 95(2000)^{e1} Test Methods for Chlorine in Used Petroleum Products (Field Test Kit Method)
- *D 5441 – 98(2003)^{e1} Test Method for Analysis of Methyl Tert-Butyl Ether (MTBE) by Gas Chromatography
- *D 5442 – 93(2003)^{e1} Test Method for Analysis of Petroleum Waxes by Gas Chromatography
- *D 5443 – 93(2003)^{e1} Test Method for Paraffin, Naphthene, and Aromatic Hydrocarbon Type Analysis in Petroleum Distillates Through 200°C by Multi-Dimensional Gas Chromatography
- §*D 5452 – 00 Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration
- *D 5453 – 03a Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Motor Oils by Ultraviolet Fluorescence
- *D 5480 Test Method for Engine Oil Volatility by Gas Chromatography (Discontinued 2003†)
- *D 5481 – 96(2001) Test Method for Measuring Apparent Viscosity at High-Temperature and High-Shear Rate by Multicell Capillary Viscometer
- *D 5482 – 01 Test Method for Vapor Pressure of Petroleum Products (Mini Method—Atmospheric)
- *D 5483 – 02 Test Method for Oxidation Induction Time of Lubricating Greases by Pressure Differential Scanning Calorimetry
- *D 5500 – 98(2003)^{e1} Test Method for Vehicle Evaluation of Unleaded Automotive Spark-Ignition Engine Fuel for Intake Valve Deposit Formation
- *D 5501 – 94(1998)^{e1} Test Method for Determination of Ethanol Content of Denatured Fuel Ethanol by Gas Chromatography
- *D 5502 – 00 Test Method for Apparent Density by Physical Measurements of Manufactured Anode and Cathode Carbon Used by the Aluminum Industry

CONTENTS

- *D 5533 Test Method for Evaluation of Automotive Engine Oils in the Sequence IIIE, Spark-Ignition Engine (Discontinued 2003†)
- *D 5534 – 94(1999) Test Method for Vapor-Phase Rust-Preventing Characteristics of Hydraulic Fluids
- *D 5579 – 03 Test Method for Evaluating the Thermal Stability of Manual Transmission Lubricants in a Cyclic Durability Test
- *D 5580 – 02 Test Method for Determination of Benzene, Toluene, Ethylbenzene, *p/m*-Xylene, *o*-Xylene, C₉ and Heavier Aromatics, and Total Aromatics in Finished Gasoline by Gas Chromatography
- *D 5598 – 01 Test Method for Evaluating Unleaded Automotive Spark-Ignition Engine Fuel for Electronic Port Fuel Injector Fouling
- *D 5599 – 00 Test Method for Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detection
- *D 5600 – 98(2003) Test Method for Trace Metals in Petroleum Coke by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)
- *D 5619 – 00 Test Method for Comparing Metal Removal Fluids Using the Tapping Torque Test Machine
- *D 5620 – 94(1999) Test Method for Evaluating Thin Film Fluid Lubricants in a Drain and Dry Mode Using a Pin and Vee Block Test Machine
- *D 5621 – 01 Test Method for Sonic Shear Stability of Hydraulic Fluids
- *D 5622 – 95(2000) Test Methods for Determination of Total Oxygen in Gasoline and Methanol Fuels by Reductive Pyrolysis
- *D 5623 – 94(1999)^{e1} Test Method for Sulfur Compounds in Light Petroleum Liquids by Gas Chromatography and Sulfur Selective Detection
- *D 5662 – 99 Test Method for Determining Automotive Gear Oil Compatibility with Typical Oil Seal Elastomers
- *D 5704 – 03 Test Method for Evaluation of the Thermal and Oxidative Stability of Lubricating Oils Used for Manual Transmissions and Final Drive Axles
- *D 5705 – 95(2000)^{e1} Test Method for Measurement of Hydrogen Sulfide in the Vapor Phase Above Residual Fuel Oils
- *D 5706 – 97(2002)^{e1} Test Method for Determining Extreme Pressure Properties of Lubricating Greases Using A High-Frequency, Linear-Oscillation (SRV) Test Machine
- *D 5707 – 98(2003)^{e1} Test Method for Measuring Friction and Wear Properties of Lubricating Grease Using a High-Frequency, Linear-Oscillation (SRV) Test Machine
- *D 5708 – 02 Test Methods for Determination of Nickel, Vanadium, and Iron in Crude Oils and Residual Fuels by Inductively Coupled Plasma (ICP) Atomic Emission Spectrometry
- *D 5709 – 95(2000)^{e1} Test Method for Sieve Analysis of Petroleum Coke
- *D 5760 – 95^{e1} Specification for Performance of Manual Transmission Gear Lubricants
- *D 5761 – 96(2001) Practice for Emulsification/Suspension of Multiphase Fluid Waste Materials
- *D 5762 – 02 Test Method for Nitrogen in Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence
- *D 5763 – 95(2001) Test Method for Oxidation and Thermal Stability Characteristics of Gear Oils Using Universal Glassware
- *D 5769 – 98 Test Method for Determination of Benzene, Toluene, and Total Aromatics in Finished Gasolines by Gas Chromatography/Mass Spectrometry
- *D 5770 – 02 Test Method for Semiquantitative Micro Determination of Acid Number of Lubricating Oils During Oxidation Testing
- *D 5771 – 03 Test Method for Cloud Point of Petroleum Products (Optical Detection Stepped Cooling Method)
- *D 5772 – 03 Test Method for Cloud Point of Petroleum Products (Linear Cooling Rate Method)
- *D 5773 – 03 Test Method for Cloud Point of Petroleum Products (Constant Cooling Rate Method)
- *D 5797 – 96(2001) Specification for Fuel Methanol (M70-M85) for Automotive Spark-Ignition Engines
- *D 5798 – 99 Specification for Fuel Ethanol (Ed75-Ed85) for Automotive Spark-Ignition Engines
- *D 5799 – 95(2000)^{e1} Test Method for Determination of Peroxides in Butadiene
- *D 5800 – 03 Test Method for Evaporation Loss of Lubricating Oils by the Noack Method
- *D 5842 – 95(2000) Practice for Sampling and Handling of Fuels for Volatility Measurement
- *D 5844 Test Method for Evaluation of Automotive Engine Oils for Inhibition of Rusting (Sequence IID) (Discontinued 2003†)
- *D 5845 – 01 Test Method for Determination of MTBE, ETBE, TAME, DIPE, Methanol, Ethanol and *tert*-Butanol in Gasoline by Infrared Spectroscopy
- *D 5846 – 02 Test Method for Universal Oxidation Test for Hydraulic and Turbine Oils Using the Universal Oxidation Test Apparatus
- *D 5853 – 95(2000)^{e1} Test Method for Pour Point of Crude Oils
- *D 5854 – 96(2000) Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products
- *D 5862 – 99a Test Method for Evaluation of Engine Oils in Two-Stroke Cycle Turbo-Supercharged 6V92TA Diesel Engine

CONTENTS

- *D 5863 – 00a Test Methods for Determination of Nickel, Vanadium, Iron, and Sodium in Crude Oils and Residual Fuels by Flame Atomic Absorption Spectrometry
- *D 5864 – 00 Test Method for Determining Aerobic Aquatic Biodegradation of Lubricants or Their Components
- *D 5901 – 03 Test Method for Freezing Point of Aviation Fuels (Automated Optical Method)
- *D 5949 – 01 Test Method for Pour Point of Petroleum Products (Automatic Pressure Pulsing Method)
- *D 5950 – 02 Test Method for Pour Point of Petroleum Products (Automatic Tilt Method)
- *D 5966 – 02 Test Method for Evaluation of Engine Oils for Roller Follower Wear in Light-Duty Diesel Engine
- *D 5967 – 03 Test Method for Evaluation of Diesel Engine Oils in T-8 Diesel Engine
- *D 5968 – 01 Test Method for Evaluation of Corrosiveness of Diesel Engine Oil at 121°C
- *D 5969 – 02 Test Method for Corrosion-Preventive Properties of Lubricating Greases in Presence of Dilute Synthetic Sea Water Environments
- *D 5972 – 02 Test Method for Freezing Point of Aviation Fuels (Automatic Phase Transition Method)
- *D 5983 – 97(2002) Specification for Methyl Tertiary-Butyl Ether (MTBE) for Downstream Blending for Use in Automotive Spark-Ignition Engine Fuel
- *D 5984 – 97(2002)^{e1} Test Method for Semi-Quantitative Field Test Method for Base Number in New and Used Lubricants by Color-Indicator Titration
- *D 5985 – 02 Test Method for Pour Point of Petroleum Products (Rotational Method)
- *D 5986 – 96(2001) Test Method for Determination of Oxygenates, Benzene, Toluene, C₈-C₁₂ Aromatics and Total Aromatics in Finished Gasoline by Gas Chromatography/Fourier Transform Infrared Spectroscopy
- *D 6006 – 97a(2003) Guide for Assessing Biodegradability of Hydraulic Fluids
- *D 6021 – 96(2001)^{e1} Test Method for Measurement of Total Hydrogen Sulfide in Residual Fuels by Multiple Headspace Extraction and Sulfur Specific Detection
- *D 6022 – 01 Practice for Calculation of Permanent Shear Stability Index
- *D 6045 – 02 Test Method for Color of Petroleum Products by the Automatic Tristimulus Method
- *D 6046 – 02 Classification of Hydraulic Fluids for Environmental Impact
- *D 6074 – 99 Guide for Characterizing Hydrocarbon Lubricant Base Oils
- *D 6078 – 99 Test Method for Evaluating Lubricity of Diesel Fuels by the Scuffing Load Ball-on-Cylinder Lubricity Evaluator (SLBOCLE)
- *D 6079 – 02 Test Method for Evaluating Lubricity of Diesel Fuels by the High-Frequency Reciprocating Rig (HFRR)
- *D 6080 – 97(2002) Practice for Defining the Viscosity Characteristics of Hydraulic Fluids
- *D 6081 – 98 Practice for Aquatic Toxicity Testing of Lubricants: Sample Preparation and Results Interpretation
- *D 6082 – 01 Test Method for High Temperature Foaming Characteristics of Lubricating Oils
- *D 6120 – 97(2002) Test Method for Electrical Resistivity of Anode and Cathode Carbon Material at Room Temperature
- *D 6121 – 03 Test Method for Evaluation of the Load Carrying Capacity of Lubricants Under Conditions of Low Speed and High Torque Used for Final Hypoid Drive Axles
- *D 6122 – 01 Practice for Validation of Multivariate Process Infrared Spectrophotometers
- *D 6138 – 03 Test Method for Determination of Corrosion-Preventive Properties of Lubricating Greases Under Dynamic Wet Conditions (Emcor Test)
- *D 6139 – 00 Test Method for Determining the Aerobic Aquatic Biodegradation of Lubricants or Their Components Using the Gledhill Shake Flask
- *D 6158 – 99 Specification for Mineral Hydraulic Oils
- *D 6159 – 97(2002) Test Method for Determination of Hydrocarbon Impurities in Ethylene by Gas Chromatography
- *D 6160 – 98(2003)^{e1} Test Method for Determination of Polychlorinated Biphenyls (PCBs) in Waste Materials by Gas Chromatography
- *D 6184 – 98 Test Method for Oil Separation from Lubricating Grease (Conical Sieve Method)
- *D 6185 – 97(2002)^{e1} Practice for Evaluating Compatibility of Binary Mixtures of Lubricating Greases
- *D 6186 – 98(2003)^{e1} Test Method for Oxidation Induction Time of Lubricating Oils by Pressure Differential Scanning Calorimetry (PDSC)
- *D 6200 – 01 Test Method for Determination of Cooling Characteristics of Quench Oils by Cooling Curve Analysis
- *D 6201 – 03 Test Method for Dynamometer Evaluation of Unleaded Spark-Ignition Engine Fuel for Intake Valve Deposit Formation
- *D 6202 – 02 Test Method for Automotive Engine Oils on the Fuel Economy of Passenger Cars and Light-Duty Trucks in the Sequence VIA Spark Ignition Engine
- *D 6203 – 97(2001) Test Method for Thermal Stability of Way Lubricants
- *D 6217 – 98(2003)^{e1} Test Method for Particulate Contamination in Middle Distillate Fuels by Laboratory Filtration
- *D 6224 – 02 Practice for In-Service Monitoring of Lubricating Oil for Auxiliary Power Plant Equipment
- *D 6227 – 00 Specification for Grade 82 Unleaded Aviation Gasoline
- *D 6258 – 98(2003)^{e1} Test Method for Determination of Solvent Red 164 Dye Concentration in Diesel Fuels

CONTENTS

- *D 6259 – 98 Practice for Determination of a Pooled Limit of Quantitation
- *D 6277 – 01 Test Method for Determination of Benzene in Spark-Ignition Engine Fuels Using Mid Infrared Spectroscopy
- *D 6278 – 02 Test Method for Shear Stability of Polymer Containing Fluids Using a European Diesel Injector Apparatus
- *D 6293 – 98(2003)^{e1} Test Method for Oxygenates and Paraffin, Olefin, Naphthene, Aromatic(O-PONA) Hydrocarbon Types in Low-Olefin Spark Ignition Engine Fuels by Gas Chromatography
- *D 6296 – 98(2003)^{e1} Test Method for Total Olefins in Spark-ignition Engine Fuels by Multi-dimensional Gas Chromatography
- *D 6299 – 02 Practice for Applying Statistical Quality Assurance Techniques to Evaluate Analytical Measurement System Performance
- *D 6300 – 03 Practice for Determination of Precision and Bias Data for Use in Test Methods for Petroleum Products and Lubricants
- *D 6304 – 03 Test Method for Determination of Water in Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration
- *D 6334 – 98(2003)^{e1} Test Method for Sulfur in Gasoline by Wavelength Dispersive X-Ray Fluorescence

VOLUME 05.04

- *D 6335 – 03b Test Method for Determination of High Temperature Deposits by Thermo-Oxidation Engine Oil Simulation Test
- *D 6351 – 99 Test Method for Determination of Low Temperature Fluidity and Appearance of Hydraulic Fluids
- *D 6352 – 02 Test Method for Boiling Range Distribution of Petroleum Distillates in Boiling Range from 174 to 700°C by Gas Chromatography
- *D 6353 – 98(2003) Guide for Sampling Plan and Core Sampling for Prebaked Anodes Used in Aluminum Production
- *D 6354 – 98(2003) Guide for Sampling Plan and Core Sampling of Carbon Cathode Blocks Used in Aluminum Production
- *D 6371 – 99 Test Method for Cold Filter Plugging Point of Diesel and Heating Fuels
- *D 6374 – 99 Test Method for Volatile Matter in Green Petroleum Coke Quartz Crucible Procedure
- *D 6375 – 99a Test Method for Evaporation Loss of Lubricating Oils by Thermogravimetric Analyzer (TGA) Noack Method
- *D 6376 – 99 Test Method for Determination of Trace Metals in Petroleum Coke by Wavelength Dispersive X-ray Fluorescence Spectroscopy
- *D 6377 – 99 Test Method for Determination of Vapor Pressure of Crude Oil VPCR_x (Expansion Method)
- *D 6378 – 99^{e1} Test Method for Determination of Vapor Pressure (VPX) of Petroleum Products, Hydrocarbons, and Hydrocarbon-Oxygenate Mixtures (Triple Expansion Method)
- *D 6379 – 99 Test Method for Determination of Aromatic Hydrocarbon Types in Aviation Fuels and Petroleum Distillates – High Performance Liquid Chromatography Method with Refractive Index Detection
- *D 6384 – 99a^{e1} Terminology Relating to Biodegradability and Ecotoxicity of Lubricants
- *D 6417 – 03 Test Method for Estimation of Engine Oil Volatility by Capillary Gas Chromatography
- *D 6421 – 99a Test Method for Evaluating Automotive Spark-Ignition Engine Fuel for Electronic Port Fuel Injector Fouling by Bench Procedure
- *D 6422 – 99 Test Method for Water Tolerance (Phase Separation) of Gasoline-Alcohol Blends
- *D 6423 – 99 Test Method for Determination of pHe of Ethanol, Denatured Fuel Ethanol, and Fuel Ethanol (Ed75-Ed85)
- *D 6424 – 99 Practice for Octane Rating Naturally Aspirated Spark Ignition Aircraft Engines
- *D 6425 – 02 Test Method for Measuring Friction and Wear Properties of Extreme Pressure (EP) Lubricating Oils Using SRV Test Machine
- *D 6426 – 02a Test Method for Determining Filterability of Middle Distillate Fuel Oils
- *D 6439 – 99 Guide for Cleaning, Flushing, and Purification of Steam, Gas, and Hydroelectric Turbine Lubrication Systems
- *D 6443 – 99 Test Method for Determination of Calcium, Chlorine, Copper, Magnesium, Phosphorus, Sulfur, and Zinc in Unused Lubricating Oils and Additives by Wavelength Dispersive X-ray Fluorescence Spectrometry (Mathematical Correction Procedure)
- *D 6445 – 99 Test Method for Sulfur in Gasoline by Energy-Dispersive X-ray Fluorescence Spectrometry
- *D 6446 – 01 Test Method for Estimation of Net Heat of Combustion (Specific Energy) of Aviation Fuels
- *D 6447 – 99 Test Method for Hydroperoxide Number of Aviation Turbine Fuels by Voltammetric Analysis
- *D 6448 – 99 Specification for Industrial Burner Fuels from Used Lubricating Oils
- *D 6450 – 99 Test Method for Flash Point by Continuously Closed Cup (CCCFP) Tester
- *D 6468 – 99 Test Method for High Temperature Stability of Distillate Fuels
- *D 6469 – 99 Guide for Microbial Contamination in Fuels and Fuel Systems

CONTENTS

*D 6470 – 99	Test Method for Salt in Crude Oils (Potentiometric Method)
*D 6481 – 99	Test Method for Determination of Phosphorus, Sulfur, Calcium, and Zinc in Lubrication Oil: Energy Dispersive X-ray Fluorescence Spectroscopy
*D 6482 – 01	Test Method for Determination of Cooling Characteristics of Aqueous Polymer Quenchants I: Cooling Curve Analysis with Agitation (Tensi Method)
*D 6483 – 03	Test Method for Evaluation of Diesel Engine Oils in T-9 Diesel Engine
*D 6514 – 03	Test Method for High Temperature Universal Oxidation Test for Turbine Oils
*D 6546 – 00	Test Methods for and Suggested Limits for Determining Compatibility of Elastomer Seals for Industrial Hydraulic Fluid Applications
*D 6547 – 00	Test Method for Corrosiveness of Lubricating Fluid to Bimetallic Couple
*D 6549 – 01	Test Method for Determination of Cooling Characteristics of Quenchants by Cooling Curve Analysis with Agitation (Drayton Unit)
*D 6550 – 00	Test Method for Determination of Olefin Content of Gasolines by Supercritical-Fluid Chromatography
*D 6553 – 00	Test Method for Coolant Compatibility of Way Lubricants
*D 6557 – 00	Test Method for Evaluation of Rust Preventive Characteristics of Automotive Engine Oils
*D 6558 – 00a	Test Method for Determination of TGA CO ₂ Reactivity of Baked Carbon Anodes and Cathode Blocks
*D 6559 – 00a	Test Method for Determination of TGA Air Reactivity of Baked Carbon Anodes and Cathode Blocks
*D 6560 – 00	Test Method for Determination of Asphaltenes (Heptane Insolubles) in Crude Petroleum and Petroleum Products
*D 6584 – 00	Test Method for Determination of Free and Total Glycerine in B-100 Biodiesel Methyl Esters By Gas Chromatography
*D 6591 – 00	Test Method for Determination of Aromatic Hydrocarbon Types in Middle Distillates—High Performance Liquid Chromatography Method with Refractive Index Detection
*D 6593 – 03	Test Method for Evaluation of Automotive Engine Oils for Inhibition of Deposit Formation in a Spark-Ignition Internal Combustion Engine Fueled with Gasoline and Operated Under Low-Temperature, Light-Duty Conditions
*D 6594 – 01	Test Method for Evaluation of Corrosiveness of Diesel Engine Oil at 135°C
*D 6595 – 00	Test Method for Determination of Wear Metals and Contaminants in Used Lubricating Oils or Used Hydraulic Fluids by Rotating Disc Electrode Atomic Emission Spectrometry
*D 6596 – 00	Practice for Ampulization and Storage of Gasoline and Related Hydrocarbon Materials
*D 6615 – 02	Specification for Jet B Wide-Cut Aviation Turbine Fuel
*D 6616 – 01a	Test Method for Measuring Viscosity at High Shear Rate by Tapered Bearing Simulator Viscometer At 100°C
*D 6617 – 00	Practice for Laboratory Bias Detection Using Single Test Result from Standard Material
*D 6618 – 00	Test Method for Evaluation of Engine Oils in Diesel Four-Stroke Cycle Supercharged 1M-PC Single Cylinder Oil Test Engine
*D 6623	Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by High Resolution Gas Chromatography (Discontinued 2002†)
*D 6624 – 01	Practice for Determining a Flow-Proportioned Average Property Value (FPAPV) for a Collected Batch of Process Stream Material Using Stream Analyzer Data
*D 6666 – 01a	Guide for Evaluation of Aqueous Polymer Quenchants
*D 6667 – 01	Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence
*D 6668 – 01	Test Method for Discrimination Between Flammability Ratings of F = 0 and F = 1
*D 6681 – 01	Test Method for Evaluation of Engine Oils in a High Speed, Single-Cylinder Diesel Engine—Caterpillar 1P Test Procedure
*D 6708 – 01 ^{e1}	Practice for Statistical Assessment and Improvement of the Expected Agreement Between Two Test Methods that Purport to Measure the Same Property of a Material
*D 6709 – 03	Test Method for Evaluation of Automotive Engine Oils in the Sequence VIII Spark-Ignition Engine (CLR Oil Test Engine)
*D 6710 – 02	Guide for Evaluation of Hydrocarbon-Based Quench Oil
*D 6728 – 01	Test Method for Determination of Contaminants in Gas Turbine and Diesel Engine Fuel by Rotating Disc Electrode Atomic Emission Spectrometry
*D 6729 – 01	Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 100 Meter Capillary High Resolution Gas Chromatography
*D 6730 – 01	Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 100-Metre Capillary (with Precolumn) High-Resolution Gas Chromatography
*D 6731 – 01	Test Method for Determining the Aerobic, Aquatic Biodegradability of Lubricants or Lubricant Components in a Closed Respirometer
*D 6732 – 02	Test Method for Determination of Copper in Jet Fuels by Graphite Furnace Atomic Absorption Spectrometry

CONTENTS

- *D 6733 – 01 Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 50-Meter Capillary High Resolution Gas Chromatography
- *D 6743 – 01^{e1} Test Method for Thermal Stability of Organic Heat Transfer Fluids
- *D 6744 – 01 Test Method for Determination of the Thermal Conductivity of Anode Carbons by the Guarded Heat Flow Meter Technique
- *D 6745 – 01 Test Method for Linear Thermal Expansion of Electrode Carbons
- *D 6748 – 02a Test Method for Determination of Potential Instability of Middle Distillate Fuels Caused by the Presence of Phenalenes and Phenalenones (Rapid Method by Portable Spectrophotometer),
- *D 6749 – 02 Test Method for Pour Point of Petroleum Products (Automatic Air Pressure Method)
- *D 6750 – 02 Test Methods for Evaluation of Engine Oils in A High-Speed, Single-Cylinder Diesel Engine —1K Procedure (0.4 % Fuel Sulfur) and 1N Procedure (0.04 % Fuel Sulfur)
- *D 6751 – 03 Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels
- *D 6756 – 02 Test Method for Determination of the Red Dye Concentration and Estimation of the ASTM Color of Diesel Fuel and Heating Oil Using a Portable Visible Spectrophotometer
- *D 6791 – 02 Test Method for Determination of Grain Stability of Calcined Petroleum Coke
- *D 6792 – 03 Guide for Quality System in Petroleum Products and Lubricants Testing Laboratories
- *D 6793 – 02 Test Method for Determination of Isothermal Secant and Tangent Bulk Modulus
- *D 6794 – 02 Test Method for Measuring the Effect on Filterability of Engine Oils After Treatment with Various Amounts of Water and a Long (6-h) Heating Time
- *D 6795 – 02 Test Method for Measuring the Effect on Filterability of Engine Oils After Treatment with Water and Dry Ice and a Short (30 min) Heating Time
- *D 6810 – 02 Test Method for Measurement of Hindered Phenolic Antioxidant Content in HL Turbine Oils by Linear Sweep Voltammetry
- *D 6811 – 02 Test Method for Measurement of Thermal Stability of Aviation Turbine Fuels under Turbulent Flow Conditions (HiReTS Method)
- *D 6812 – 02 Practice for Ground-Based Octane Rating Procedures for Turbocharged/Supercharged Spark Ignition Aircraft Engines
- *D 6813 – 02a Guide for Performance Evaluation of Hydraulic Fluids for Piston Pumps
- *D 6821 – 02 Test Method for Low Temperature Viscosity of Drive Line Lubricants in a Constant Shear Stress Viscometer
- *D 6822 – 02 Test Method for Density, Relative Density, and API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermohydrometer Method
- *D 6823 – 02 Specification for Commercial Boiler Fuels With Used Lubricating Oils
- *D 6824 – 03 Test Method for Determining Filterability of Aviation Turbine Fuel
- *D 6837 – 02 Test Method for Measurement of the Effects of Automotive Engine Oils on the Fuel Economy of Passenger Cars and Light-Duty Trucks in the Sequence VIB Spark Ignition Engine,
- *D 6838 – 02 Test Method for Cummins M11 High Soot Test
- *D 6839 – 02 Test Method for Hydrocarbon Types, Oxygenated Compounds and Benzene in Spark Ignition Engine Fuels by Gas Chromatography
- *D 6849 – 02 Practice for Storage and Use of Liquefied Petroleum Gases (LPG) in Sample Cylinders for LPG Test Methods
- *D 6892 – 03 Test Method for Pour Point of Petroleum Products (Robotic Tilt Method)
- *D 6894 – 03 Test Method for Evaluation of Aeration Resistance of Engine Oils in Direct-Injected Turbocharged Automotive Diesel Engine
- *D 6895 – 03 Test Method for Rotational Viscosity of Heavy Duty Diesel Drain Oils at 100°C
- *D 6896 – 03 Test Method for Determination of Yield Stress and Apparent Viscosity of Used Engine Oils at Low Temperature
- *D 6897 – 03 Test Method for Vapor Pressure of Liquefied Petroleum Gases (LPG) (Expansion Method)
- *D 6898 – 03 Test Method for Evaluating Diesel Fuel Lubricity by an Injection Pump Rig
- *D 6920 – 03 Test Method for Total Sulfur in Naphthas, Distillates, Reformulated Gasolines, Diesels, Biodiesels, and Motor Fuels by Oxidative Combustion and Electrochemical Detection
- *D 6922 – 03 Test Method for Determination of Homogeneity and Miscibility in Automotive Engine Oils
- *D 6923 – 03 Test Method for Evaluation of Engine Oils in a High Speed, Single-Cylinder Diesel Engine—Caterpillar IR Test Procedure

VOLUME 05.05

Combustion Characteristics

- §*D 613 – 03b Test Method for Cetane Number of Diesel Fuel Oil
- §*D 909 – 01 Test Method for Knock Characteristics of Aviation Gasolines by the Supercharge Method
- §*D 2699 – 03a Test Method for Research Octane Number of Spark-Ignition Engine Fuel
- §*D 2700 – 03a Test Method for Motor Octane Number of Spark-Ignition Engine Fuel

CONTENTS

- §*D 2885 – 03 Test Method for Determination of Octane Number of Spark-Ignition Engine Fuels by On-Line Direct Comparison Technique
- *D 6890 – 03a Test Method for Determination of Ignition Delay and Derived Cetane Number (DCN) of Diesel Fuel Oils by Combustion in a Constant Volume Chamber

Manufactured Carbon and Graphite Products

- *C 559 – 90(2000) Test Method for Bulk Density by Physical Measurements of Manufactured Carbon and Graphite Articles
- C 560 – 88(1998) Test Methods for Chemical Analysis of Graphite
- §*C 561 – 91(2000) Test Method for Ash in a Graphite Sample
- §*C 562 – 91(2000) Test Method for Moisture in a Graphite Sample
- C 565 – 93(1998) Test Methods for Tension Testing of Carbon and Graphite Mechanical Materials
- C 611 – 98 Test Method for Electrical Resistivity of Manufactured Carbon and Graphite Articles at Room Temperature
- *C 625 – 95(2000) Practice for Reporting Irradiation Results on Graphite
- §*C 651 – 91(2000) Test Method for Flexural Strength of Manufactured Carbon and Graphite Articles Using Four-Point Loading at Room Temperature
- C 662 – 70(1998) Specification for Impervious Graphite Pipe and Threading
- §*C 695 – 91(2000) Test Method for Compressive Strength of Carbon and Graphite
- C 709 – 03a Terminology Relating to Manufactured Carbon and Graphite
- *C 714 – 85(2000) Test Method for Thermal Diffusivity of Carbon and Graphite by a Thermal Pulse Method
- C 747 – 93(1998) Test Method for Moduli of Elasticity and Fundamental Frequencies of Carbon and Graphite Materials by Sonic Resonance
- C 748 – 98 Test Method for Rockwell Hardness of Graphite Materials
- C 749 – 92(2002) Test Method for Tensile Stress-Strain of Carbon and Graphite
- C 769 – 98 Test Method for Sonic Velocity in Manufactured Carbon and Graphite Materials for Use in Obtaining an Approximate Young's Modulus
- C 781 – 02 Practice for Testing Graphite and Boronated Graphite Components for High-Temperature Gas-Cooled Nuclear Reactors
- *C 783 – 85(2000) Practice for Core Sampling of Graphite Electrodes
- *C 808 – 75(2000) Guideline for Reporting Friction and Wear Test Results of Manufactured Carbon and Graphite Bearing and Seal Materials
- §C 816 – 85(1998)^{e1} Test Method for Sulfur in Graphite by Combustion-Iodometric Titration Method
- C 838 – 96(2001) Test Method for Bulk Density of As-Manufactured Carbon and Graphite Shapes
- C 886 – 98 Test Method for Scleroscope Hardness Testing of Carbon and Graphite Materials
- *C 1025 – 91(2000) Test Method for Modulus of Rupture in Bending of Electrode Graphite
- *C 1039 – 85(2000) Test Methods for Apparent Porosity, Apparent Specific Gravity, and Bulk Density of Graphite Electrodes
- *C 1179 – 91(2000) Test Method for Oxidation Mass Loss of Manufactured Carbon and Graphite Materials in Air

Catalysts

- D 1977 – 03 Test Method for Nickel and Vanadium in FCC Equilibrium Catalysts by Hydrofluoric/Sulfuric Acid Decomposition and Atomic Spectroscopic Analysis
- D 3610 – 00 Test Method for Total Cobalt In Alumina-Base Cobalt-Molybdenum Catalyst by Potentiometric Titration Method
- D 3663 – 03 Test Method for Surface Area of Catalysts and Catalyst Carriers
- D 3766 – 86(2002) Terminology Relating to Catalysts and Catalysis
- D 3906 – 03 Test Method for Determination of Relative X-ray Diffraction Intensities of Faujasite-Type Zeolite-Containing Materials
- D 3907 – 03 Test Method for Testing Fluid Catalytic Cracking (FCC) Catalysts by Microactivity Test
- D 3908 – 03 Test Method for Hydrogen Chemisorption on Supported Platinum Catalysts by Volumetric Vacuum Method
- D 3942 – 03 Test Method for Determination of the Unit Cell Dimension of a Faujasite-Type Zeolite
- D 3943 – 00 Test Method for Total Molybdenum in Fresh Alumina-Base Catalysts
- D 4058 – 96(2001) Test Method for Attrition and Abrasion of Catalysts and Catalyst Carriers
- D 4164 – 03 Test Method for Mechanically Tapped Packing Density of Formed Catalyst and Catalyst Carriers
- D 4179 – 01 Test Method for Single Pellet Crush Strength of Formed Catalyst Shapes
- D 4180 – 03 Test Method for Vibratory Packing Density of Formed Catalyst Particles and Catalyst Carriers
- D 4222 – 03 Test Method for Determination of Nitrogen Adsorption and Desorption Isotherms of Catalysts and Catalyst Carriers by Static Volumetric Measurements
- D 4284 – 03 Test Method for Determining Pore Volume Distribution of Catalysts by Mercury Intrusion Porosimetry
- D 4365 – 95(2001) Test Method for Determining Micropore Volume and Zeolite Area of a Catalyst

CONTENTS

- D 4438 – 85(2001)^{e1} Test Method for Particle Size Distribution of Catalytic Material by Electronic Counting
D 4463 – 96(2001) Guide for Metals Free Steam Deactivation of Fresh Fluid Cracking Catalysts
D 4464 – 00 Test Method for Particle Size Distribution of Catalytic Material by Laser Light Scattering
D 4481 – 97 Test Method for Total Nickel in Fresh Alumina-Base Catalysts
D 4512 – 03 Test Method for Vibrated Apparent Packing Density of Fine Catalyst and Catalyst Carrier Particles and Powder
D 4513 – 97(2001)^{e1} Test Method for Particle Size Distribution of Catalytic Materials by Sieving
D 4567 – 03 Test Method for Single-Point Determination of Specific Surface Area of Catalysts and Catalyst Carriers Using Nitrogen Adsorption by Continuous Flow Method
D 4641 – 94(1999)^{e1} Practice for Calculation of Pore Size Distributions of Catalysts from Nitrogen Desorption Isotherms
D 4642 – 92(1998) Test Method for Platinum in Reforming Catalysts by Wet Chemistry
D 4699 – 03 Test Method for Vibratory Packing Density of Large Formed Catalyst and Catalyst Carrier Particles
D 4780 – 95(2001) Test Method for Determination of Low Surface Area of Catalysts by Multipoint Krypton Adsorption
D 4781 – 03 Test Method for Mechanically Tapped Packing Density of Fine Catalyst Particles and Catalyst Carrier Particles
D 4782 – 91(1997) Test Method for Palladium in Molecular Sieve Catalyst by Wet Chemistry
D 4824 – 03 Test Method for Determination of Catalyst Acidity by Ammonia Chemisorption
D 4926 – 89(2001) Test Method for Gamma Alumina Content in Catalysts Containing Silica and Alumina by X-Ray Powder Diffraction
D 5153 – 91(1997) Test Method for Palladium in Molecular Sieve Catalyst by Atomic Absorption
D 5154 – 03 Test Method for Determining Activity and Selectivity of Fluid Catalytic Cracking (FCC) Catalysts by Microactivity Test
D 5357 – 03 Test Method for Determination of Relative Crystallinity of Zeolite Sodium A by X-ray Diffraction
D 5757 – 00 Test Method for Determination of Attrition and Abrasion of Powdered Catalysts by Air Jets
D 5758 – 01 Test Method for Determination of Relative Crystallinity of Zeolite ZSM-5 by X-Ray Diffraction
D 6175 – 03 Test Method for Radial Crush Strength of Extruded Catalyst and Catalyst Carrier Particles
D 6761 – 02 Test Method for Determination of the Total Pore Volume of Catalysts and Catalyst Carriers

RELATED MATERIAL