

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Texas Oiltech Laboratories, Inc.

10630 Fallstone Road, Houston, TX 77099

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2017

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Chemical, Environmental and Mechanical Testing (As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

President

Initial Accreditation Date:

Issue Date:

Expiration Date:

November 18, 2011

March 06, 2024

March 31, 2026

Accreditation No.:

Certificate No.:

72003

L24-180

Perry Johnson Laboratory Accreditation, Inc. (PJLA) 755 W. Big Beaver, Suite 1325 Troy, Michigan 48084 The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com



Issue: 03/2024

Certificate of Accreditation: Supplement

Texas Oiltech Laboratories, Inc.

10630 Fallstone Road, Houston, TX 77099 Contact Name: Ms. Jeanine Malapaya Phone: 281-495-2400

Accreditation is granted to the facility to perform the following testing:

| FLEX CODE | FIELD OF TEST | ITEMS, MATERIALS, OR PRODUCTS TESTED | COMPONENT, CHARACTERISTIC, PARAMETER TESTED | SPECIFICATION OR STANDARD METHOD | TECHNOLOGY OR TECHNIQUE USED |
|-----------|------------------|--|--|-------------------------------------|---|
| F1, F2 | Chemical F | Petroleum | Viscosity at 40°C | ASTM D445 | Viscometer |
| F1, F2 | - | Hydrocarbon Oils, Fuels | Density @ 15°C | ASTM D4052 | Densimeter |
| F1, F2 | | | | ASTM D1298 | Hydrometer |
| F1, F2 | | | Cetane Index | ASTM D976 ASTM D86 ASTM D2887 | Distillation GC |
| F1, F2 | | | Sulfur | ASTM D2622 | Sulfur, X-Ray Spectrometry |
| F1, F2 | | | | ASTM D4294 | Sulfur by X-Ray Fluorescence Spectroscopy |
| F1, F2 | | | Flash Point | ASTM D93 D92 | Closed Cup Apparatus |
| F1, F2 | | | Acid Number | ASTM D664 | Manual Titration |
| F1, F2 |] | | Total Sediment by Hot Filtration | ASTM D4870 | Filtration Apparatus |
| F1, F2 | | | Oxidation Stability | ASTM D2274 | Oxidation Cell, Filtration Assembly, |
| F1, F2 | | | Carbon Residue: Micro Method on the 10 % Volume Distillation | ASTM D4530 ASTM D524 | Carbon residue tester |
| F1, F2 | | | Cloud Point | ASTM D2500 | DSl instrument |
| F1, F2 | | | Pour Point | ASTM D97 | |
| F1, F2 | | | Appearance | ASTM D4176 | Visual check |
| F1, F2 | | | Water | ASTM D95 | Distillation |
| F1, F2 | | | ASH | ASTM D482 | Muffle Furnace |
| F1, F2 | | | Lubricity, Corrected Wear Scar Diameter | ASTM D6079 | HFRR instrument |
| F1, F2 | | | Hydrogen Sulfide | ASTM D7621 | Instrument |
| F1, F2 | | Petroleum Products | BTU | ASTM 240 | calorimeter |
| F1, F2 | 1 | | | ASTM 4809 | |
| F1, F2 | | Petroleum Products - Fuel, Lubricant | Water Determinatio | ASTM D6304 | Karl Fischer Titration |
| F1, F2 | | Petroleum Products -Fuel, Lubricant | Foaming Tendencies of Engine Coolants | ASTM D1881 | Foaming glassware |
| F1, F2 | | | Density of crude oils | ASTM D5002 | Densimeter |
| F1, F2 | | | Vapor pressure of petroleum products (mini method) | ASTM D5191 | mini Reid |
| F1, F2 | | | Determination of Vapor Pressure of Crude Oil | ASTM D6377 | Vapor pressure apparatus |



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|---------------|------------------|---|--|----------------------------------|--|
| F1, F2 | Chemical F | Petroleum | Asphaltenes (Heptane | ASTM D6560 | Reflux Extractor |
| | | Products, Crude | Insolubles) | | distillation |
| F1, F2 | | | Sulfur Compounds in Light | ASTM D5623 | Gas |
| F1, F2 | _ | | Petroleum Liquids Boiling Point Distribution of Crude Oils and Vacuum Residues b | ASTM D7169 | Chromatography |
| F1, F2 | | Gas Component | Sulfur Compounds | ASTM D5504 | Siever Gas Chromatography |
| F1, F2 | Chemical and | Petroleum | Metals: Sodium & Vanadium | ASTM D5708 | ICP-OES |
| F1, F2 | Mechanical F | | Aluminum & Silicon | ASTM D5184 |] |
| F1, F2 | | | Zinc, Phosphorus & Calcium | ASTM D5185 | 1 |
| F1, F2 | | | Calcium, Lead, Vanadium, Silicon, Iron, Magnesium, Sodium, Nickel | ASTM D7111 | |
| F1, F2 | | | FAME (Fatty Acid Methyl Esters) | ASTM D737 | FTIR |
| F1, F2 | | | Oxidation Stability | ASTM D5304 | Filtration System |
| F1, F2 | | | Dielectric Breakdown Voltage & Disc Electrodes | ASTM D877 ASTM D1816 | Dielectric Apparatus |
| F1, F2 | | | Calc Carbon Aromaticity Index (CCAI) | Calculation | Calculation |
| F1, F2 | Chemical and | Gas Components | Gas | ASTM D1945 | Gas |
| F1, F2 | Environmental FO | | | ASTM D1946 | Chromatography |
| F1, F2 | | | | ASTM D4888 | Length-of-Stain Detector Tubes |
| F1, F2 | 1 | | 9 | ASTM D5504 | Siever Gas |
| F1, F2 | 1 / | | | ASTM D5623 | Chromatography |
| F1, F2 | | | | ASTM D6667 | Sulfur analyzer |
| F1, F2 | | | | GPA 2261 | Gas Chromatography |
| F1, F2 | | | | GPA 2286 | Gas Chromatography |
| F1, F2, F3 | | Metals by ICP AES | Metals | ASTM D1976 | ICP AES |
| F1, F2, F3 | | Fuels, oils, Petroleum | Metals | ASTM D6595 | Rotating disc electrode atomic emission spectroscopy (RDE- AES) |
| F1, F2 | | Cleaner linen | Particle Size | NAS 1638 and ISO 4406 | Particle counter |





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|---------------|----------------------------|---|---|----------------------------------|---------------------------------|
| F1, F2 | Chemical and | Fuels, Oils, | Anions Inorganic | ASTM D4327 | Dionex instrument |
| F1, F2 | Environmental ^F | Petroleum, Aqueous and Non Aqueous | Anions Inorganic Organic acids | TOL – 6055 (ASTM 5560M) | |
| F1, F2, F3 | | Water, wastewater | Metals | EPA 200.7 | ICP AES |

- 1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location.
- 2. The presence of a superscript O means that the laboratory performs testing of the indicated parameter onsite at customer locations.
- 3. Flex Code:
 - F1-Introduction of the testing of a new item, material, matrix, or product for an accredited test method
 - F2-Introduction of a new version of an accredited standard method (with no modifications)
 - F3-Introduction of a new parameter/component/analyte to an accredited test method
 - F4- Introduction of a new version or modifications of an accredited non-standard method
 - F5-Introduction of a new method that is equivalent to an accredited method (using same technology or technique)