

DATE: 9/02/2020

BID NO.: 50-00131970

INVITATION TO BID  
THIS IS NOT AN ORDER

Page: 1

## JEFFERSON PARISH

PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETNA, LA. 70054-0009  
504-364-2678

BUYER: MOVALLE@jeffparish.net

**BIDS WILL BE RECEIVED IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053 UNTIL 2:00 PM, 9/22/2020 AND PUBLICLY OPENED THEREAFTER.**

For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only. All bids will be publicly opened at the West Bank location.

At no charge, bidders may also submit via Jefferson Parish's electronic procurement page by visiting [www.jeffparishbids.net](http://www.jeffparishbids.net) to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

### LATE BIDS WILL NOT BE ACCEPTED

Unless submitting via online (see Page 3), each bid must be submitted in a sealed envelope bearing on the outside; the name of the Bidder, his address, and the name of the project for which the bid is submitted and the bid number.

**NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION.**

### INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

#### THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647.

Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission, warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the buyer's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

Visit our website at [HTTP://PURCHASING.JEFFPARISH.NET](http://PURCHASING.JEFFPARISH.NET)

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document.

### INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA - R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and Parish taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

**IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS**

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at [www.jeffparishbids.net](http://www.jeffparishbids.net) to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 dated 12/09/09. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at <http://purchasing.jeffparish.net> and clicking on Online Forms.

**ADDITIONAL REQUIREMENTS FOR THIS BID**

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

**10,12,13,15**

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

**INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS**

7. PUBLIC WORKS BIDS: All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise stated in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Failure to comply with this instruction will result in bid rejection.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies) If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA - RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.
17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment"). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owned on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session - Louisiana Revised Statute 47:301(8)(c). Owner will furnish contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission; and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to JPCO 2-155.10(19). By signing this document, every corporation, partnership, or person contracting with PARISH, whether by cooperative endeavor, intergovernmental agreement, bid, proposal, application or solicitation for a parish contract, and every application for certification of eligibility for a parish contract or program, attests that it understands and will abide by all provisions of JPCO 2-155.10.

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES \_\_\_\_\_ NO

MAXIMUM ESCALATION PERCENTAGE REQUESTED 0 %

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF 2 years from award

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed, for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

1 week from order for supplies  
48 hrs for reports  
or 18 hrs if  
"rush"

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) N/A

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: Tribologix Corporation

ADDRESS: 1212 172<sup>nd</sup> street

CITY, STATE: Hammond, IN ZIP: 46324

TELEPHONE: (312) 800-2888 FAX: (219) 544-5044

EMAIL ADDRESS: reich@tribologix.com

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: 1

NUMBER: \_\_\_\_\_

NUMBER: \_\_\_\_\_

NUMBER: \_\_\_\_\_

TOTAL PRICE OF ALL BID ITEMS: \$ 14,799.28

AUTHORIZED SIGNATURE: [Signature]

Aezki Ould-Amer  
Printed Name

TITLE: VP OPS

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00131970

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	1,813.00	EA	<p>TWO (2) YEAR CONTRACT FOR LUBE OIL ANALYSIS FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - DRAINAGE PUMPING STATION OPERATIONS AND ALL JEFFERSON PARISH AGENCIES</p> <p>0010 - Sample oil analysis for existing in-service diesel engines consisting of the following:                      1) Viscosity SSU @ 210 Degrees F                      2) Fuel Dilution - Value derived from physical characteristics and confirmed by flash point or gas chromatography                      3) Total Solids (ASTM D893 or D4055)                      4) Water                      5) SAE Weight                      6) T.B.N. (By ASTM D2896)                      7) Spectrochemical Analysis 20 Elements</p>	7.94	14395.22
2	45.00	EA	<p>0020 - Sample lube oil analysis for existing gear drives and/or existing bearings consisting of the following:                      1) Viscosity SSU @ 100 Degrees F                      2) Viscosity SSU @ 210 Degrees F                      3) Water - Parts per million                      4) Total Solids (ASTM D893 or D4055)                      5) T.A.N. (By ASTM D664)                      6) Spectrochemical Analysis 20 Elements</p>	7.94	357.30
3	4.00	EA	<p>0030 - Sample lube oil analysis for stock oil consisting of the following:                      1) Viscosity @ 100 Degrees F                      2) Viscosity @ 210 Degrees F                      3) Viscosity Index                      4) Flash Point (ASTM D92)                      5) Pour Point (ASTM D97)                      6) Sulphated Ash (Comparable to ASTM D874)                      7) Spectrochemical Analysis 20 Element                      8) Appearance</p>	7.94	31.76
4	1.00	EA	<p>0040 - Sample fuel oil analysis consisting of the following:                      1) API Gravity                      2) Distillation Test                      3) Cetane Index                      4) Sulphur Index                      5) Water and Sediment                      6) Appearance</p>	15.00	15.00

**CORPORATE RESOLUTION**

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF  
Tribologix  
INCORPORATED.

AT THE MEETING OF DIRECTORS OF Tribologix  
INCORPORATED, DULY NOTICED AND HELD ON 09-21-2020,  
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT  
WAS:

RESOLVED THAT Acezi Ould-Amer, BE AND IS HEREBY  
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-  
FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON  
BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS  
AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES,  
DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE  
EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES,  
CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES  
ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS  
CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING  
EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-  
FACT.

I HEREBY CERTIFY THE FOREGOING TO BE  
A TRUE AND CORRECT COPY OF AN  
EXCERPT OF THE MINUTES OF THE ABOVE  
DATED MEETING OF THE BOARD OF  
DIRECTORS OF SAID CORPORATION, AND  
THE SAME HAS NOT BEEN REVOKED OR  
RESCINDED.



\_\_\_\_\_  
SECRETARY-TREASURER

09-21-2020

\_\_\_\_\_  
DATE

## **Non-Public Works Bid Affidavit Instructions**

- Affidavit is supplied as a courtesy to Affiants, but it is the responsibility of the affiant to insure the affidavit they submit to Jefferson Parish complies, in both form and content, with federal, state and parish laws.
- Affidavit must be signed by an authorized representative of the entity or the affidavit will not be accepted.
- Affidavit must be notarized or the affidavit will not be accepted.
- Notary must sign name, print name, and include bar/notary number, or the affidavit will not be accepted.
- Affiant **MUST** select either A or B when required or the affidavit will not be accepted.
- Affiants who select choice A must include an attachment or the affidavit will not be accepted.
- If both choice A and B are selected, the affidavit will not be accepted.
- Affidavit marked N/A will not be accepted.
- It is the responsibility of the Affiant to submit a new affidavit if any additional campaign contributions are made after the affidavit is executed but prior to the time the council acts on the matter.

*Instruction sheet may be omitted when submitting the affidavit*

**Non-Public Works Bid**

**AFFIDAVIT**

STATE OF Quebec

PARISH/COUNTY OF Montreal

BEFORE ME, the undersigned authority, personally came and appeared: Arezki Ould-Amer  
\_\_\_\_\_, (Affiant) who after being by me duly sworn, deposed and said that  
he/she is the fully authorized VP ops of Tribologix (Entity),  
the party who submitted a bid in response to Bid Number 50-00131970, to the Parish of  
Jefferson.

Affiant further said:

Campaign Contribution Disclosures

**(Choose A or B, if option A is indicated please include the required attachment):**

**Choice A** \_\_\_\_\_ Attached hereto is a list of all campaign contributions, including the date and amount of each contribution, made to current or former elected officials of the Parish of Jefferson by Entity, Affiant, and/or officers, directors and owners, including employees, owning 25% or more of the Entity during the two-year period immediately preceding the date of this affidavit or the current term of the elected official, whichever is greater. Further, Entity, Affiant, and/or Entity Owners have not made any contributions to or in support of current or former members of the Jefferson Parish Council or the Jefferson Parish President through or in the name of another person or legal entity, either directly or indirectly.

**Choice B**  there are **NO** campaign contributions made which would require disclosure under Choice A of this section.

Debt Disclosures

**(Choose A or B, if option A is indicated please include the required attachment):**

Choice A  Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

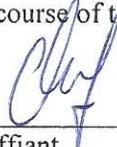
Choice B  There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

*[The remainder of this page is intentionally left blank.]*

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.



\_\_\_\_\_  
Signature of Affiant

Arezki Ould-Amer

\_\_\_\_\_  
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME  
ON THE 21 DAY OF Sept, 2020.



\_\_\_\_\_  
Notary Public

Nicholas Reich

\_\_\_\_\_  
Printed Name of Notary

223849

\_\_\_\_\_  
Notary/Bar Roll Number



My commission expires 03-Sep-21.

**Insurance Declaration Affidavit  
Worker's Compensation**

AFFIDAVIT

STATE OF Quebec

PARISH/COUNTY OF Montreal

BEFORE ME, the undersigned authority, personally came and appeared, Arezki Ould-Amer, (Affiant) who after being duly sworn, deposed and said that he/she is the fully authorized Up ops of Tribologix (Entity), the party who submitted a Proposal/Contract/Bid/RFP/SOQ No. 50-00131970, to Jefferson Parish.

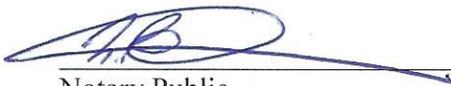
Affiant further said:

- (1) That affiant has no employees in which Worker's Compensation Insurance is required pursuant to state law.
- (2) That if affiant hires employees such that they would be required under state law to obtain Worker's Compensation Insurance, affiant will notify Jefferson Parish and obtain the proper coverage.

  
\_\_\_\_\_  
Signature of Affiant

Arezki Ould-Amer  
\_\_\_\_\_  
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME  
ON THE 21 DAY OF Sept, 2020.

  
\_\_\_\_\_  
Notary Public

Nicholas Reich  
\_\_\_\_\_  
Printed Name of Notary

223849  
\_\_\_\_\_  
Notary/Bar Roll Number

My commission expires 03-sep-21





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
**09/21/20**

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

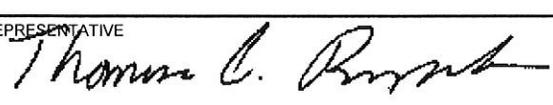
<b>PRODUCER</b> <b>PAMPALONE INSURANCE AGENCY INC</b> <b>6695 Broadway</b> <b>Merrillville, IN 46410-3549</b>		<b>CONTACT NAME:</b> PHONE (A/C, No, Ext): <b>(219) 736-6000</b> FAX (A/C, No): <b>(219) 769-6357</b> E-MAIL ADDRESS: <b>bfavia@pampaloneinsurance.com</b>	
		<b>INSURER(S) AFFORDING COVERAGE</b>	<b>NAIC#</b>
<b>INSURED</b> <b>Tribologik Corporation</b> <b>1212 172nd Street</b> <b>Hammond, IN 46324</b>		<b>INSURER A:</b> <b>The Cincinnati Insurance Company</b>	
		<b>INSURER B:</b> <b>Evanston Insurance Company</b>	
		<b>INSURER C:</b>	
		<b>INSURER D:</b>	
		<b>INSURER E:</b>	
		<b>INSURER F:</b>	

**COVERAGES**      **CERTIFICATE NUMBER:**      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			EPP 0241840	04/01/20	04/01/21	EACH OCCURRENCE \$ <b>1,000,000</b> DAMAGE TO RENTED PREMISES (Ea occurrence) \$ <b>500,000</b> MED EXP (Any one person) \$ <b>10,000</b> PERSONAL & ADV INJURY \$ <b>1,000,000</b> GENERAL AGGREGATE \$ <b>2,000,000</b> PRODUCTS - COMP/OP AGG \$ <b>2,000,000</b> \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANYAUTO ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS			EBA 0241840	04/01/20	04/01/21	COMBINED SINGLE LIMIT (Ea accident) \$ <b>1,000,000</b> BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED    RETENTION \$			EPP 0241840	04/01/20	04/01/21	EACH OCCURRENCE \$ <b>2,000,000</b> AGGREGATE \$ \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y/N    N/A <input checked="" type="checkbox"/> N			EWC 0241842 (Indiana)	04/01/20	04/01/21	<input checked="" type="checkbox"/> PER STATUTE    OTH-ER E.L. EACH ACCIDENT \$ <b>500,000</b> E.L. DISEASE - EA EMPLOYEE \$ <b>500,000</b> E.L. DISEASE - POLICY LIMIT \$ <b>500,000</b>
B	Contractors Pollution Liability			CPLMOL102405	03/06/20	03/06/21	\$ <b>1,000,000</b>

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
**Additional Insured When Required by Written Contract: Jefferson Parish**

<b>CERTIFICATE HOLDER</b>  <b>Jefferson Parish</b> <b>200 Derbigny Street</b> <b>General Government Building Suite 4400</b> <b>Gretna, LA 70053</b>	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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# Laboratory Information

## TRIBOLOGIK CORPORATION

### Fluid Analysis

Sept 21, 2020

Dear Procurement,

It is our pleasure to submit our response to your RFP for Fluid Analysis Services. Tribologik Corporation, with its US head office located less than 30 miles from downtown Chicago, is in an excellent location to service the needs of all the Country's fluid analysis programs. Since inception in 1984, Tribologik has always been committed to excellence in customer service, rapid response to client inquires and high levels of customization that tailor our fluid analysis services to the unique needs of our clients. Many of our clients have been working with us for decades because of our high level of quality service offered. Our offerings to you will be no less than our very best for each and every sample that comes through our doors. From the sample pickup, to the reception, to the testing to the reporting and finally to the after report interpretation and consulting; we will commit to you the very best possible service and support.

Furthermore, we understand the criticality of FULL TRANSPARANCY when it comes to the methodology, tests, equipment, and staff used in the execution of the program for the fluid analysis program. Tribologik is committed to being fully open to how tests are run and will never promise deliverables that are not achievable.

We very much look forward to the opportunity to working with you and should any member have questions for us please feel free to reach out to the undersigned,

Sincerely,



--

Nicholas Reich | MLA II |  
VP Sales & Marketing  
(312) 800-2888 Ext. 40  
[nreich@tribologik.com](mailto:nreich@tribologik.com)

## Laboratory Background

Founded in 1984, Tribologik Corporation has accumulated over 35 years of experience in used oil analysis and figures amongst the most experienced fluid testing laboratories in North America. We employ only qualified personnel to manage and deliver testing results in a timely manner to provide the full service capabilities required by our thousands of clients. Over the years, we have processed millions of tests on various oils, fuels coolants and greases. Our capacity and ability to process all of the fluid samples listed within the timeframe as stated in the contract is more than available as we currently have the ability to process close to 1,000 additional samples/day with our existing infrastructure and equipment.

Beyond our ISO 17025:2017 certification (see attached certificate and scope), we also actively participate in various round robin & laboratory studies including Alberta Research, ASTM, US Navy studies etc. Tribologik has a dedicated research department which is actively conducting research on new topics including: how new formulations of devolatilized fuel affects results on Gas Chromatograph in modern diesel engine oils.

At Tribologik, we believe in advancing the knowledge and education of our staff. Not only do we build on the college and other degrees that our technicians, managers and other staff already have through practical experience in all departments; we provide several opportunities for our staff to obtain their Machinery Lubricant Analyst designations (MLA). This certification from the ICML has multiple levels and anyone who has this designation is technically qualified on the functions of oil, applications and other technical areas that relate to several industries. In order to obtain the designation, one must have practical field experience for at least 2 years, complete a 40 hour course and pass a written exam with at least 75%. This means that when you speak with a certified MLA Tribologik staff member, you are getting a person with the technical knowledge and experience to properly assist with your equipment fluid concerns.

**Wholly independent owned small business:** Tribologik is not owned or controlled by any other corporation and has no other businesses activities besides fluid analysis, therefore there are no potential conflicts of interest. Clients can rest assured that as a small business, Tribologik remains solidly committed to customer service and tailoring our services to the needs of our individual clients. Tribologik has all of the resources to service our clients throughout the country and beyond our borders, yet is able to react quicker than a large company would due to less “red tape”.

## Lab Testing

Tribologik Corporation utilizes the most modern and advanced production (mass volume) testing methodology and equipment available for fluid analysis. Almost all of our equipment is less than 5 years old and we invite your staff to tour our laboratory to review our capabilities if desired.

As part of Tribologik’s standard commitment to clients, fluid samples are being turn around within ~24 hours of receipt and fuels within ~48 hours. Tribologik is able to accomplish this turn around for all of its clients through its very organized sample flow structure and through its modern testing equipment and well trained staff.

**EXPERT LUBRICANT ANALYSIS TO MONITOR EQUIPMENT HEALTH**

Detailed in our SOP (available upon request), Tribologik demonstrates the well-organized and automated LIMS which enables efficient logging of samples, test by test tracking, report generation and release. Our LIMS system was fully developed in house and customized by our full time IT department for our exclusive use. This enables us to tailor the system to our unique requirements and modify aspects of the system that could cause slowdowns in production. Other labs, who may use pre-packaged LIMS systems, do not have this ability.

In addition to our sophisticated LIMS system, Tribologik employees well qualified personnel to manage and test samples. All employees receive a rigorous training and re-evaluation every 6 months. Our employees all monitor their “work lists” daily and are very aware of when samples came in. This is accomplished through out “late test” screen\*:



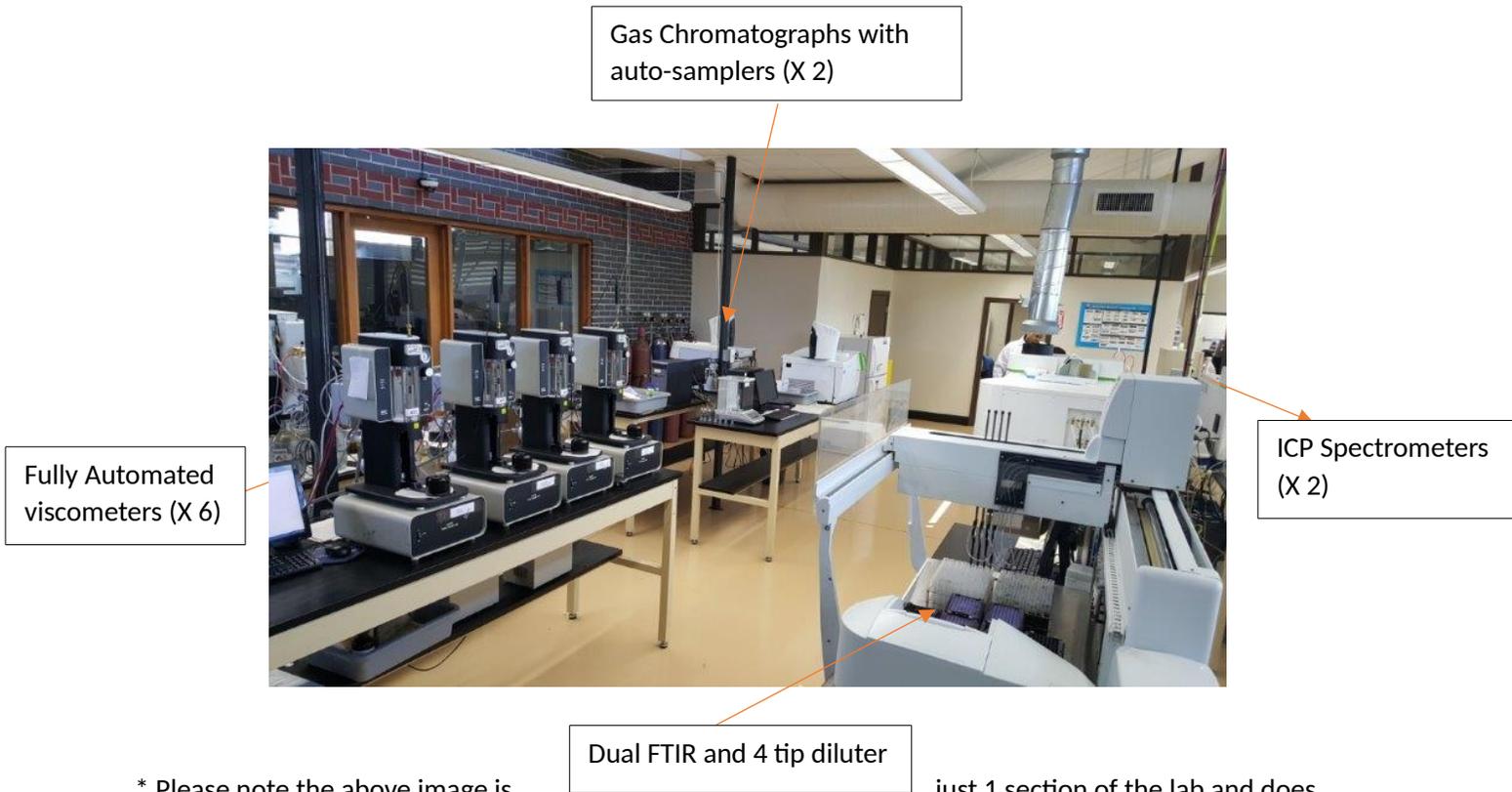
TEST	NAME	< 24	24	48	72	96	120	> 120	TOTAL
	<b>TOTAL</b>	1315	274	7	3	1	9	0	1609
01	DIRECT READING	0	0	0	0	0	0	0	0
02	AF	0	0	0	0	0	0	0	0
03	VIS 40	197	26	0	0	0	0	0	223
04	SPECTRO	229	169	5	2	1	0	0	406
06	INFRARED	227	67	0	0	0	0	0	294
07	PARTICLE COUNT	86	0	1	0	0	0	0	87
08	VIS 100	52	0	0	1	0	8	0	61
10	FATTY ACID METHYL ESTER	0	0	0	0	0	0	0	0
14	TBN	68	0	0	0	0	0	0	68
15	TAN	119	0	0	0	0	0	0	119
17	PATCH TEST	0	0	0	0	0	0	0	0

The technicians and lab director ensure that all samples are completed by the 24-hour column which allows enough time for data analyst review and possible retests if required.

\* Please note that the above screenshot is merely an example of what the late test screen looks like and does not represent our actual production. Any tests above the 24-hour column may be due to special client requests or special samples.

Further to the late test screen, the laboratory director receives a daily e-mail with all samples by client that are past the 24-hour test window that have not yet been released to the clients. This allows for rapid follow-up and correction if necessary. Fuel samples have their own late test screen and have a 48-hour threshold.

Further adding to our capabilities is our continuous improvements to the laboratory assets. We are constantly upgrading and acquiring new modern equipment in order to better serve our clients. An example of this is our purchase last month of a Perkin Elmer Dual FTIR system. This allows two samples at a time to be scanned instead of one effectively doubling the speed and capacity of our instrument. Below is a picture of one section of our lab demonstrating what our equipment looks like\*:



\* Please note the above image is just 1 section of the lab and does not show all of our instrumentation. It is intended as an informational demonstration only.

## Delivery of Results

Tribologik Corporation will offer to your agency various option for speedy results delivery. Each individual can choose from amongst these methods:

- A) Client portal: The Tribologik customer portal can be found on our website at [www.tribologik.com](http://www.tribologik.com). The portal offers several ways to query reports in the portal (report date, machine and / or lubricant condition, component type, bus ID, garage etc.). Clients can also archive reports that they want to keep in a special section of the portal, perform their own graphing of specific elements, retrieve a raw data file in Excel, see KPI reports, print labels if desired and much more.

\*

The client portal is secured by a user id and password per client. Should you wish, Tribologik can create various levels of access to the portal. These levels of access can be by garage, read only or other structures desire.

Simply enter the following demo user id on any page of the website under "Client Login";  
USERNAME: one PASSWORD: one. This will allow you to view different tabs and see some of the features the portal offers.

\* Please see Tribologik Web Portal User Guide for more information on the portal.

- B) E-mailed reports: Clients have the ability to modify on an individual basis the e-mail distribution list through the client portal or through their Tribologik representative. Reports can be e-mailed by garage to specific individuals or they may be e-mailed by component or fluid type (i.e. fuels can be e-mailed to specific individuals, engine oils to another etc).

Reports can further be filtered by individuals who only want to see flagged reports. For example, if a manager only wants to receive "CRITICAL" results and he wants his assistant to receive all of the results this can easily be accomplished by selecting the specific e-mail address and choosing the option from the portal. Alternatively, these individuals can contact their Tribologik representative who will filter the e-mails through the system.

- C) Mobile application: Tribologik also offers a free mobile application through the Google Play Store or the Apple App Store. Simply type in "Tribologik" and our app will be downloadable on any smart mobile device. The user id and passwords used in the client portal are the same credentials used for the mobile devices.

Clients who use the mobile application will have the option to receive notifications as soon as reports are available (i.e. they were released by our data analysts). They can also retrieve current mobile versions of reports through the app. The mobile versions of the reports feature the "Recommendations" and "Logic" as well as the machine information. Through the mobile report, clients can access the full PDF reports as well if they require more information on their asset.

Another other optional feature of the mobile app features the ability for clients to scan bar code labels that could be provided (free of charge) by Tribologik for machine identification in lieu of printed or hand written labels. \*

\* Please see Tribologik Mobile App Presentation for more information on the app.

- D) Auto data transmission: Tribologik can send raw data in any TXT, Excel, XML or other custom format required. This can be automatically transmitted via VPN or other means. The Tribologik IT department can work with your agency IT to establish a data transmission procedure upon request. Files can be sent on a daily, weekly or other interval as required.

## Customer References

As mentioned above, Tribologik has several large clients in many industries. These clients have similarly large structures as you agency. Should any specific reference contacts be require please contact Mr. Nicholas Reich (312) 800-2888 Ext 40 or by e-mail [nreich@tribologik.com](mailto:nreich@tribologik.com)

## Tribologik Full Service On-Site Laboratory

Tribologik has been in Hammond, IN (located less than 30 miles from downtown Chicago) since 2010. Our laboratory features ALL of the testing capabilities required to service The City of Houston's fluid analysis program as proposed. The laboratory is housed at 1212, 172<sup>nd</sup> Steet, Hammond, IN 46324 and is the only user of the 10,500 sqft. building. We invite any member of your agency to visit our laboratory during normal business hours (Monday-Friday 7:30 AM – 8:00 PM) for a full laboratory tour & demonstrations of testing.



## Fluid Analysis Project Management & Key Personnel

Tribologik will assign a dedicated central point of contact who will serve as the program manager. The dedicated point of contact will be Mr. Nicholas Reich, MLA II. Mr. Reich will act as a liaison to all departments of the laboratory and will be able to respond to most questions posed by agency members. Mr. Reich is currently an MLA II certified member and has been with Tribologik since 2004. Mr. Reich will be able to answer most technical questions about testing, interpretation sampling, web support etc. If questions are outside Mr. Reich's scope, he will refer and coordinate with the correct department for a speedy resolution.

Agency members will also be provided a customer service contact phone number for any other questions that can be filled during normal business hours immediately. Tribologik customer service is very responsive and usually answers any messages the same day or early AM the following day if a message is left.

All samples will arrive at the reception and supply orders will pass through the reception department. There are currently four (4) individuals in the reception department who will fill orders to authorized members of the agency. The easiest method of ordering supplies will be to send an e-mail (addresses to be provided upon award) to the reception department. A confirmation will be sent along with a tracking number from FedEx or UPS (if applicable) for supplies.

Agency staff will also have the contact information of our laboratory director, Dr. Zidoune, for any high level technical questions including flagging limits, oil compatibility or comparison studies etc. Our laboratory director is also very responsive and usually answer all technical questions the same day or early AM the next day.

The director of US operations in Hammond, Mr. Frederick Moore, MLAll, he will be available to agency staff for any production questions or in the event that Mr. Reich is unavailable. He is present in the lab daily and monitors the day to day operations of the facility.

## Shipping Samples to Lab

Tribologik will provide the agency with pre-paid and printed return waybills from FedEx/UPS and / or its account number as well as the ability to order express boxes. Since fluid samples are considered non-hazardous, they can be shipped unregulated. There will be no additional forms or procedures to follow besides properly packing and sealing the boxes. All shipping concerns can be handled by the main point of contact or any other staff contact from Tribologik.

## Training Program

Tribologik has on staff several MLA II staff who all have several years and thousands of hours of training / teaching experience. Tribologik has a well refined training program that includes theoretical and practical aspects of fluid analysis. Topics include:

- Oil 101 (what are the different types of additives, oil applications, mineral versus synthetic etc.)
- Best practices storage and handling
- How to properly extract samples
- Benefits of testing
- What are the tests run and why do we run them and what do they mean (oil, coolant, grease and gas and diesel fuels)
- Web portal and mobile device application
- Evaluating reports and applying recommendations

The training program is also customizable and Tribologik can and can coordinate with the project manager from the agency if required. For pricing please contact Nicholas (info below).

**For any additional laboratory information please contact Nicholas Reich, 312-800-2888 Ext 40 or [nreich@tribologik.com](mailto:nreich@tribologik.com)**



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

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

***Tribologik Corporation***  
***1212 172<sup>nd</sup> Street, Hammond, IN 46324***

*(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 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:

Tracy Szerszen  
President/Operations Manager

*Initial Accreditation Date:*

May 14, 2012

*Issue Date:*

June 24, 2019

*Expiration Date:*

August 31, 2021

*Accreditation No.:*

73353

*Certificate No.:*

L19-310-2

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.pjilabs.com](http://www.pjilabs.com)*



# Certificate of Accreditation: Supplement

## Tribologik Corporation

1212 172<sup>nd</sup> Street, Hammond, IN 46324

Contact Name: Marvin Ostin Phone: 514-383-6330 Ext. 24

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

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT	
Chemical <sup>F</sup>	Lubricant, Cooling Liquids and Other Relevant Liquid	Additive Elements and Contamination	ASTM D5185 ASTM D6130 Inductively Coupled Plasma Atomic Emission	D.L. = 1 ppm	
		Chloride, Fluoride, Nitrite, Nitrate, Bromide, Phosphate, Sulfate, Formate, Glycolate, and Other Inions by Ion Chromatography	ASTM D5827 ASTM D3634	Chloride: D.L.= 2 mg/L Fluoride: D.L. = 5 mg/L Nitrite: D.L. = 4 mg/L Nitrate: D.L. = 7 mg/L Bromide: D.L. = 20 mg/L Phosphate: D.L. = 8 mg/L Sulfate: D.L. = 2 mg/L Formate: D.L. = 2 mg/L Glycolate: D.L. = 10 mg/L	
		pH	ASTM D1287	1 pH to 14 pH	
		Freeze Protection	ASTM D3321	-65 °C to 0 °C	
		Ethylene Glycol %	In-House Method	0 % to 100 %	
		Glycol Detection In Oil	ASTM D2982	Per Method	
		Total Base Number	ASTM D4739 ASTM D2896		
		Total Acid Number	ASTM D664 ASTM D974		
		Viscosity Index	ASTM D2270		
		Kinematic Viscosity	ASTM D445		
		Infra-Red	JOAP		FTIR: 0 in absorbency
		TDS	In-House SOP		N/A
		Conductivity	In-House SOP	N/A	
		% Water Crackle	In-House Method	Visual	
		Flash Point	ASTM D3828	Per Method	
		Fire Point	ASTM D92		
		Density	ASTM D1298 ASTM D4052	D.L. = 0.000 05 g/cm <sup>3</sup> T = 0.03 °C	
		Particle Count/Direct Reading Ferrography	NAS 1638 ISO 4406 In-House Method	Per Method	
		Cloud Point	ASTM D2500		
		Pour Point	ASTM D97		
Water by Karl Fisher	ASTM D6304 ASTM D4928				
Particle Quantifier	In-House Method				
Analytical Ferrography	In-House Method	Qualitative/Visual			
Vapor Pressure	ASTM D5191	2 psi to 15 psi			



# Certificate of Accreditation: Supplement

## Tribologik Corporation

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Chemical <sup>F</sup>	Lubricant, Cooling Liquids and Other Relevant Liquid	Sulfur by XRF	ASTM D4294 ASTM D5453 ISO 1302	1 mg/kg to 3 000 mg/kg 0.000 1 % to 0.35 %
		Lubricity	ASTM D6079	10 µm to 1 000 µm
	Lubricant, Cooling Liquids, and Fuel	Flash point Closed Cup	ASTM D93 ASTM D56 ASTM D6450	UL: 42.7 °C LL: 40.4 °C
		Distillation Petroleum	ASTM D86	Initial BP: UL: 160 °C LL: 154 °C
		Cetane Index	ASTM D4737 ASTM D976	UL: 45.7 °C LL: 42.68 °C
		Copper Corrosion	ASTM D130	Range 1a to 4c
		Research Octane Number	ASTM D2699	75 to 98
		Motor Octane Number	ASTM D2700	75 to 98
		Anti-Cknock Number	(R+M)/2 ASTM D4814	75 to 98
		Cetane Number	ASTM D613	38 to 69
		Water and Sediment	ASTM D2709	0 % to 90 %
		Oxygenate Content	ASTM D4815	D.L. = 0.000 01 %
		Vapor Liquid Ratio Temperature of Fuel	ASTM D5188	0 °C to 1 °C
		Carbon Residue	ASTM D4530	0.001 % to 10 %
		Oxidation Stability	ASTM D2274	0 hours to 72 hours
	Lubricant and Grease	Remaining Useful Life (RUL) and Routine Useful Life Evaluation Routine (RULER <sup>TM</sup> ) Number by Linear Sweep Voltammetry (LSV)	ASTM D6971 ASTM D6810 ASTM D7590	Amine: UL: 68.5 % LL: 62.3 % Phenol: UL: 44.5 % LL: 40.11 %
	Cooling Liquids	Boiling Point (coolant)	ASTM D1120	UL: 112.4 °C LL: 106.12 °C
		Reserve Alkalinity	ASTM D1121	UL: 2.67 mL LL: 2.02 mL
	Oil	Diesel Fuel in Used Engine Oils (Fuel %)	ASTM D3524/D7593	D.L. = 1 %



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Chemical <sup>F</sup>	Fuel	Hydrocarbon	ASTM D1319	D.L. = 1 %
		Gum	ASTM D381	
		Anti-icing Additive Concentration	ASTM D5006	
		Aviation Particle Contamination	ASTM D5452	
		Emulsification	ASTM D3948	D.L. = 1 s
		Water Separation	ASTM D1401	
		Foaming Point	ASTM D892	
		Smoke Point	ASTM D1322	D.L. = 1 mm
		Napthalene	ASTM D1840	D.L. = 0.1 %
		Water Reaction Vessel	ASTM D1094	Aqueous layer: D.L= 0.5 mL  Appearance: 1 to 3  Interface: 1 to 4
		Cold Filter Plugging Point	ASTM D6371	D.L. = 1 °C
		Freezing Point	ASTM D2386	
		Doctor Test	ASTM D4952	
	Electrical Conductivity	ASTM D2624		
Oil/Fuel	Heat of Combustion	ASTM D4809	D.L. = 1 °C	

- The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer <sup>F</sup> would mean that the laboratory performs this testing at its fixed location.

<b>CUSTOMER:</b>	<b>JEFFERSON NEW BAYOU SEGNETTE</b>	<b>Machine Condition</b>
<b>PLANT:</b>	<b>NEW BAYOU SEGNETTE</b>	
<b>MACHINE NAME:</b>	<b>PUMP MAIN GEAR 8 S/N 151850</b>	<b>NORMAL</b>
<b>LOCATION:</b>		
<b>MACHINE TYPE:</b>	<b>GEARBOX</b>	
<b>LUBE TYPE:</b>	<b>ESS TERESSTIC 220</b>	
<b>MACH MFR:</b>	<b>PHILADELPHIA GEAR</b>	<b>Lubricant Condition</b>
<b>MACH MOD:</b>		
<b>RECEIVED:</b>	<b>03-SEP-20</b>	
<b>CONTACT 1:</b>	<b>VUONG NGUEN</b>	
<b>REPORT:</b>	<b>11-SEP-20 16:55:51</b>	
<b>SAMPLE NO:</b>	<b>1722-1-4-106</b>	
<b>PO NUMBER:</b>	<b>5000118021</b>	<b>NORMAL</b>

**RECOMMENDATIONS**

- Continue normal operation and regular sampling.

**MISCELLANEOUS**

- Lubricant refers to oil, fuel, biofuel, grease, coolant or varnish.
- The hours on lube: calculated based on 168 hr/wk.
- Our database indicates no site contaminant for this unit.
- Tank capacity 45 gallon(s).

**SAMPLING HISTORY**

LabNo	SAMPLE DATE MM-DD-YYYY	TIME ON OIL / TSN	TIME SINCE OVER- HAUL / TSO	OIL CHANGED (Y/N)	PREVIOUS CONDI- TION MACH/OIL
2651123	08-28-2020	34446	34446	N	(n/a)
2644822	07-23-2020	33582	33582	N	N/N
2632848	06-23-2020	32862	32862	N	N/N
2624544	05-26-2020	32190	32190	N	N/N
2617173	04-22-2020	31374	31374	N	N/N
2608545	03-23-2020	30654	30654	N	N/C
2601595	02-27-2020	30054	30054	N	N/N
2556806	09-26-2019	26358	26358	N	N/N
2517549	05-28-2019	23454	23454	N	N/N
2506975	04-24-2019	22638	22638	N	N/N

**(SP) SPECTROSCOPIC ANALYSIS [ASTM D5185] (elements seen in ppm)**

 TESTED ELEMENTS ARE: Fe, Cu, Pb, Sn, Cr, Al, Ni, Ti, Ag, V, Mg, Si, B, Na, Ba, Ca, P, Mn, Zn, Mo, Cd, K \*  
 \* elements below detection limit are not displayed on table

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
Fe-IRON	22	15	19	20	18	19	20	9.0	-
Cu-COPPER	2.0	2.0	2.0	2.0	2.0	2.0	2.0	29	-
Pb-LEAD	-	-	-	-	-	-	-	10	-
Sn-TIN	1.0	-	-	-	-	-	-	6.0	2.0
Al-ALUMINUM	2.0	-	2.0	2.0	-	-	2.0	2.0	-
Mo-MOLYBDENUM	-	-	-	-	-	-	2.0	10	-
Si-SILICON	3.0	6.0	4.0	3.0	3.0	3.0	30	4.0	1.0
Mg-MAGNESIUM	5.0	6.0	5.0	6.0	10	4.0	4.0	7.0	3.0
B-BORON	1.0	1.0	1.0	-	2.0	-	1.0	-	-
Na-SODIUM	11	9.0	11	12	10	10	8.0	3.0	-
Ca-CALCIUM	2.0	5.0	4.0	5.0	18	16	4.0	3243	5.0
P-PHOSPHORUS	99	89	84	91	94	84	79	13	4.0
Mn-MANGANESE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-
Zn-ZINC	150	135	135	148	131	129	129	1.0	3.0

**(FTIR) FOURIER TRANSFORM INFRARED ANALYSIS (Absorbance)**

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
AW/EP	9	9	9	9	10	10	9	12	9
OXIDATION	4	4	4	4	4	4	4	17	3
SULFATE	12	12	12	12	12	12	12	23	11
NITRATION	4	4	4	4	4	4	4	11	3
GLYCOL	1	1	1	1	1	1	1	1	1
WATER	5	5	5	5	6	5	5	22	5

**VISCOSITY/40 [ASTM D445]**

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
in cSt 40°C	230.00		231.00	230.00	231.00		230.00		213.95

**VISCOSITY/100 [ASTM D445]**

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
in cSt 100°C	19.71	19.65	19.84	19.99	19.74	19.78	19.67	14.90	19.65

**TAN [ASTM D974 OR D664] (mg KOH/g)**

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
TOTAL ACID NO	0.43	0.43	0.43	0.47	0.41		0.45		0.05

**HOT PLATE (%)**

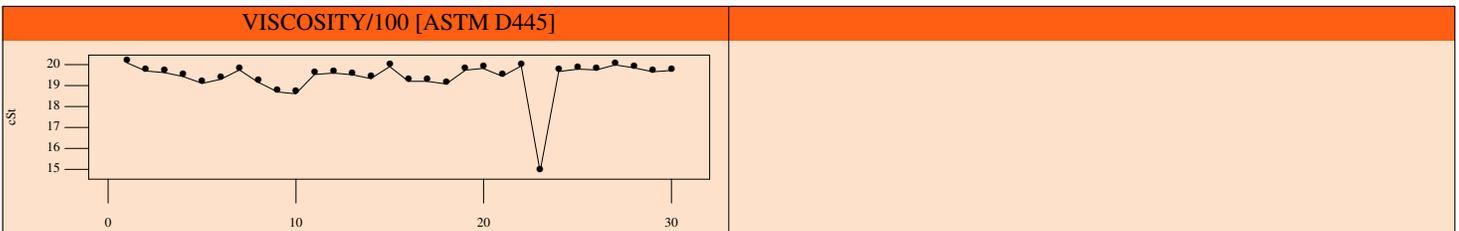
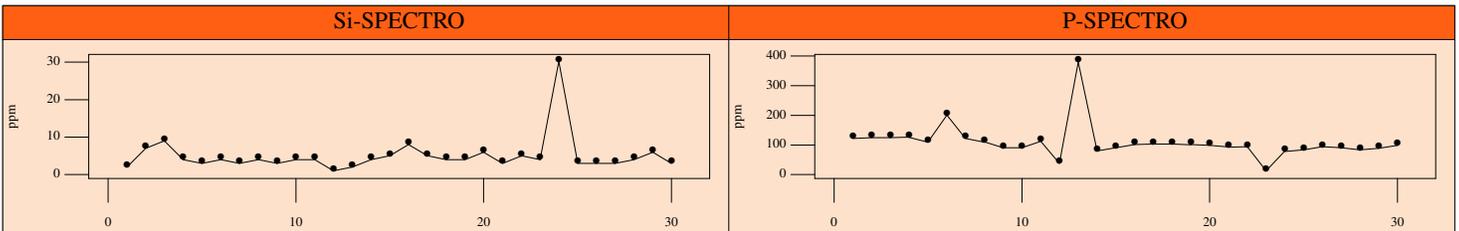
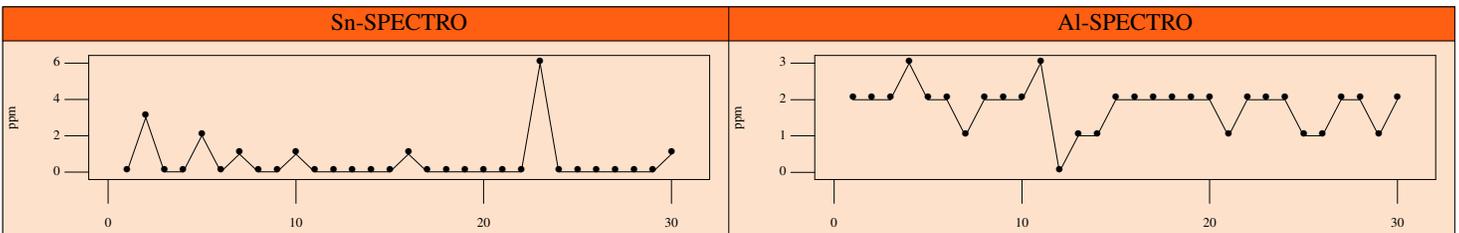
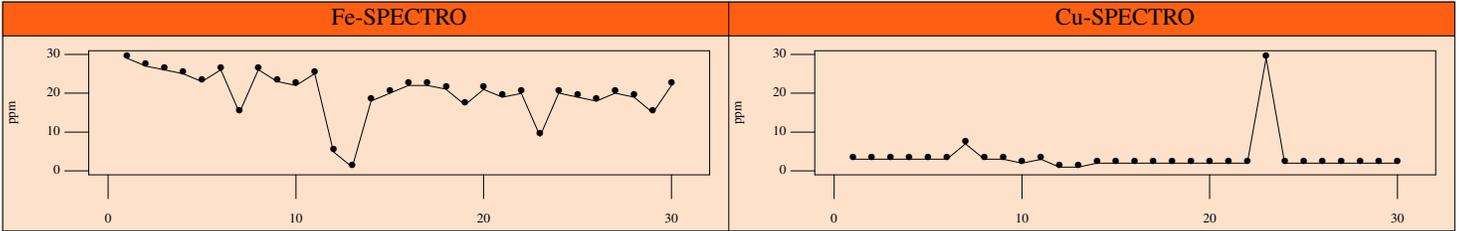
Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
WATER	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

**VISCOSITY INDEX [ASTM D2270]**

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
VISCOSITY INDEX	98.00		99.00	100.00	98.00		98.00		105.00

**TOTAL SOLIDS [ASTM D4055]**

Date(MM/DD/YY)	08-28-20	07-23-20	06-23-20	05-26-20	04-22-20	03-23-20	02-27-20	09-26-19	REF
Labno	2651123	2644822	2632848	2624544	2617173	2608545	2601595	2556806	2602979
Solids (%)	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2



**JEFFERSON NEW BAYOU SEGNETTE** assumes sole responsibility for the total copy, reproduction, application of and reliance upon results and recommendations reported by Predictive Maintenance Corporation, whose obligation is limited to good faith performance. Fixed limits programmed according to laboratory or client specifications. Report approved and released under the authority of chemist number 1026.

<b>CUSTOMER:</b>	<b>JEFFERSON ELMWOOD P/STATION 3</b>	<b>Machine Condition</b>
<b>PLANT:</b>	<b>ELMWOOD P/STATION 3</b>	
<b>MACHINE NAME:</b>	<b>7 PUMP</b>	<b>NORMAL</b>
<b>LOCATION:</b>		
<b>MACHINE TYPE:</b>	<b>DIESEL ENGINE</b>	
<b>LUBE TYPE:</b>	<b>MOB DELV 1300 S 15W40</b>	
<b>MACH MFGR:</b>	<b>WAUKESHA</b>	
<b>MACH MOD:</b>	<b>12 CYL - 793HP</b>	<b>Lubricant Condition</b>
<b>RECEIVED:</b>	<b>14-SEP-20</b>	
<b>CONTACT 1:</b>	<b>VUONG NGUEN</b>	
<b>REPORT:</b>	<b>16-SEP-20 09:11:12</b>	
<b>SAMPLE NO:</b>	<b>1738-1-7-108</b>	
<b>PO NUMBER:</b>	<b>5000118021</b>	<b>NORMAL</b>

**RECOMMENDATIONS**

- Continue normal operation and regular sampling.

**MISCELLANEOUS**

- Lubricant refers to oil, fuel, biofuel, grease, coolant or varnish.
- The hours on lube: calculated based on 168 hr/wk.
- Our database indicates no site contaminant for this unit.

**SAMPLING HISTORY**

LabNo	SAMPLE DATE MM-DD-YYYY	TIME ON OIL / TSN	TIME SINCE OVER- HAUL / TSO	OIL CHANGED (Y/N)	PREVIOUS CONDI- TION MACH/OIL
2653666	09-08-2020	1239	432	N	(n/a)
2643336	08-03-2020	375	375	N	N/N
2635641	07-06-2020	1047	275	N	N/N
2624841	06-01-2020	207	207	N	N/N
2618658	05-04-2020	248	248	N	N/N
2611249	04-06-2020	95	95	N	N/N
2602912	03-01-2020	723	76	N	N/N
2594043	02-03-2020	75	746	N	N/N
2584942	01-06-2020	2257	74	N	N/N
2575845	12-02-2019	1417	2088	N	N/N

**(SP) SPECTROSCOPIC ANALYSIS [ASTM D5185] (elements seen in ppm)**

 TESTED ELEMENTS ARE: Fe, Cu, Pb, Sn, Cr, Al, Ni, Ti, Ag, V, Mg, Si, B, Na, Ba, Ca, P, Mn, Zn, Mo, Cd, K \*  
 \* elements below detection limit are not displayed on table

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
Fe-IRON	14	13	10	10	8.0	8.0	8.0	9.0	1.0
Cu-COPPER	11	12	9.0	9.0	7.0	8.0	7.0	6.0	-
Pb-LEAD	-	-	-	2.0	-	-	2.0	-	-
Sn-TIN	2.0	1.0	-	-	-	-	3.0	-	-
Al-ALUMINIUM	2.0	-	2.0	-	2.0	-	-	-	-
Cr-CHROMIUM	-	-	-	-	-	1.0	-	-	-
Ni-NICKEL	1.0	-	-	-	-	1.0	1.0	-	-
Mo-MOLYBDENUM	7.0	6.0	4.0	6.0	6.0	31	6.0	8.0	46
Ag-SILVER	-	-	2.0	-	-	2.0	1.0	-	-
Si-SILICON	3.0	4.0	5.0	5.0	3.0	3.0	4.0	4.0	3.0
Mg-MAGNESIUM	313	309	281	308	266	449	299	309	764
B-BORON	8.0	10	8.0	10	11	51	10	11	65
Na-SODIUM	-	2.0	-	4.0	5.0	-	-	-	-
Ba-BARIUM	2.0	2.0	2.0	2.0	2.0	-	2.0	2.0	-
Ca-CALCIUM	2508	2389	2172	2338	2005	1443	2260	2378	1176
P-PHOSPHORUS	1171	1137	1059	1138	1005	687	1102	1194	870
Mn-MANGANESE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-
Zn-ZINC	1361	1341	1244	1304	1165	826	1270	1358	1047

**(FTIR) FOURIER TRANSFORM INFRARED ANALYSIS (Absorbance)**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
SOOT	40	39	35	30	28	30	25	25	27
AW/EP	18	19	17	18	19	16	18	18	16
OXIDATION	16	16	14	15	15	21	14	14	15
SULFATE	18	19	17	18	18	22	17	17	16
NITRATION	7	7	6	6	6	6	5	5	6
GLYCOL	0	0	0	0	0	0	0	0	0
FUEL/DILUTION	226	226	224	226	226	216	226	226	227
WATER	15	15	15	15	15	14	17	16	29

**SOOT (%)**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
SOOT (%)	0.63	0.62	0.57	0.50	0.47	0.50	0.43	0.43	0.45

**VISCOSITY/100 [ASTM D445]**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
in cSt 100°C	15.01	14.89	14.84	14.76	14.57	13.21	14.69	14.72	13.70

**TBN [ASTM D4739] (mg KOH/g)**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
TOTAL BASE NO	9.13	9.66	8.28	8.76	8.43	7.51	7.93	8.96	8.95

**HOT PLATE (%)**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
WATER	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-

**FUEL(%)**

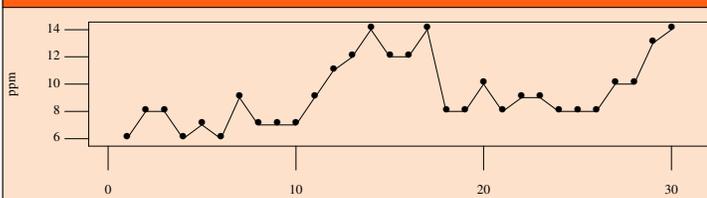
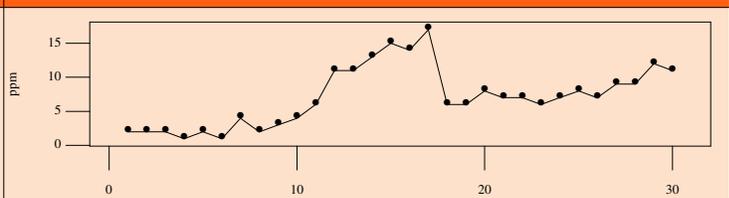
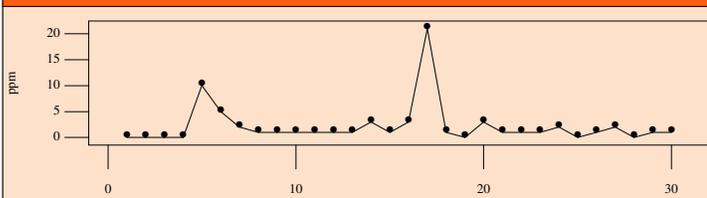
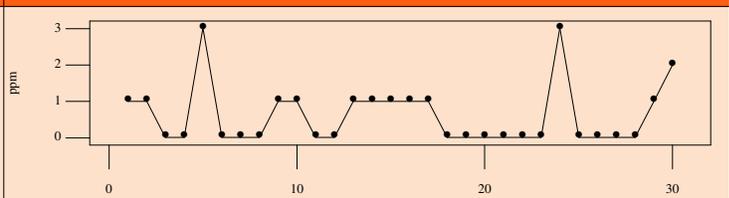
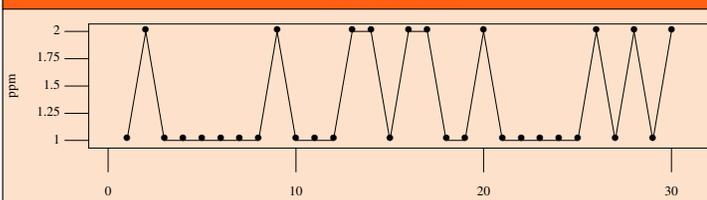
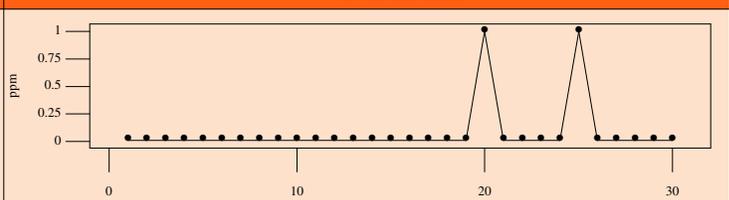
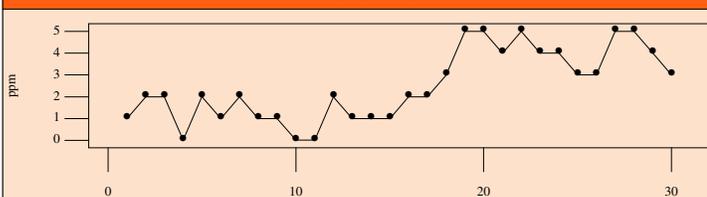
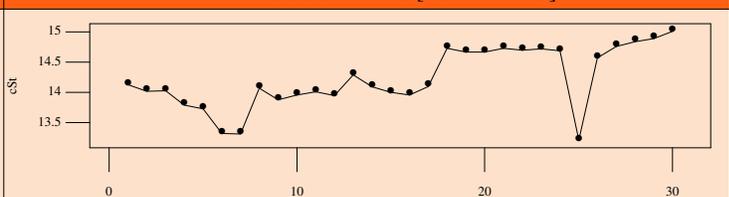
Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
FUEL	N	N	N	N	N	N	N	N	-

**SAE VISCOSITY GRADE**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
SAE viscosity grade	40	40	40	40	40	40	40	40	-

**TOTAL SOLIDS [ASTM D4055]**

Date(MM/DD/YY)	09-08-20	08-03-20	07-06-20	06-01-20	05-04-20	04-06-20	03-01-20	02-03-20	REF
Labno	2653666	2643336	2635641	2624841	2618658	2611249	2602912	2594043	2633674
Solids (%)	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-

**Fe-SPECTRO**

**Cu-SPECTRO**

**Pb-SPECTRO**

**Sn-SPECTRO**

**Al-SPECTRO**

**Cr-SPECTRO**

**Si-SPECTRO**

**VISCOSITY/100 [ASTM D445]**


**JEFFERSON ELMWOOD P/STATION 3** assumes sole responsibility for the total copy, reproduction, application of and reliance upon results and recommendations reported by Predictive Maintenance Corporation, whose obligation is limited to good faith performance. Fixed limits programmed according to laboratory or client specifications. Report approved and released under the authority of chemist number 1026.

<b>CUSTOMER:</b>	<b>JEFFERSON DUNCAN P/STATION 4</b>	<b>Machine Condition</b>
<b>PLANT:</b>	<b>DUNCAN P/STATION 4</b>	
<b>MACHINE NAME:</b>	<b>6 GEARBOX</b>	<b>NORMAL</b>
<b>LOCATION:</b>		
<b>MACHINE TYPE:</b>	<b>GEARBOX</b>	
<b>LUBE TYPE:</b>	<b>SHE TURBO 220</b>	
<b>MACH MFR:</b>	<b>Missing information</b>	
<b>MACH MOD:</b>		<b>Lubricant Condition</b>
<b>RECEIVED:</b>	<b>28-OCT-19</b>	
<b>CONTACT 1:</b>	<b>VUONG NGUEN</b>	
<b>REPORT:</b>	<b>30-OCT-19 11:15:59</b>	
<b>SAMPLE NO:</b>	<b>1739-1-11-1</b>	
<b>PO NUMBER:</b>	<b>5000118021</b>	<b>NORMAL</b>

**RECOMMENDATIONS**

- Continue normal operation and regular sampling.

**MISCELLANEOUS**

- Lubricant refers to oil, fuel, biofuel, grease, coolant or varnish.
- FOR GREATER DIAGNOSTIC, PLEASE SUPPLY A CURRENT REFERENCE LUBRICANT TO COMPARE WITH SAMPLE.
- The lube or machine time was not indicated. We are using an arbitrary starting point for unknown time. Please advise correct time estimates if possible.
- We do not know who is the manufacturer of this equipment. Kindly provide this information as it would allow comparison with data from similar units.
- Trend analysis could not be performed. (Min. 4 tests required)
- Our database indicates no site contaminant for this unit. Please advise laboratory if this is not the case.

**SAMPLING HISTORY**

LabNo	SAMPLE DATE MM-DD-YYYY	TIME ON OIL / TSN	TIME SINCE OVER- HAUL / TSO	OIL CHANGED (Y/N)	PREVIOUS CONDI- TION MACH/OIL
2563844	10-07-2019	999	999	N	(n/a)

**(SP) SPECTROSCOPIC ANALYSIS [ASTM D5185] (elements seen in ppm)**

TESTED ELEMENTS ARE: Fe, Cu, Pb, Sn, Cr, Al, Ni, Ti, Ag, V, Mg, Si, B, Na, Ba, Ca, P, Mn, Zn, Mo, Cd, K \*  
 \* elements below detection limit are not displayed on table

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
Fe-IRON	34								-
Cu-COPPER	15								-
Sn-TIN	4.0								-
Al-ALUMINIUM	2.0								-
Cr-CHROMIUM	1.0								-
Mo-MOLYBDENUM	5.0								-
Si-SILICON	5.0								-
Mg-MAGNESIUM	8.0								-
B-BORON	1.0								-
Na-SODIUM	9.0								-
Ba-BARIUM	5.0								-
Ca-CALCIUM	272								-
P-PHOSPHORUS	22								-
Mn-MANGANESE	1.0								-
Zn-ZINC	39								-

**(FTIR) FOURIER TRANSFORM INFRARED ANALYSIS (Absorbance)**

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
AW/EP	11								-
OXIDATION	7								-
SULFATE	13								-
NITRATION	5								-
GLYCOL	1								-
WATER	9								-

**VISCOSITY/40 [ASTM D445]**

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
in cSt 40°C	172.00								-

**VISCOSITY/100 [ASTM D445]**

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
in cSt 100°C	15.74								-

**TAN [ASTM D974 OR D664] (mg KOH/g)**

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
TOTAL ACID NO	0.54								-

**HOT PLATE (%)**

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
WATER	< 0.1								-

**VISCOSITY INDEX [ASTM D2270]**

Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
VISCOSITY INDEX	93.00								-

<b>TOTAL SOLIDS [ASTM D4055]</b>									
Date(MM/DD/YY)	10-07-19	(n/a)	REF						
Labno	2563844								
Solids (%)	< 0.2								-

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<b>CUSTOMER:</b>	<b>JEFFERSON NEW BAYOU SEGNETTE</b>
<b>PLANT:</b>	<b>NEW BAYOU SEGNETTE</b>
<b>MACHINE NAME:</b>	TERESSTIC 220(M)
<b>LOCATION:</b>	
<b>MACHINE TYPE:</b>	REFERENCE LUBRICANT
<b>LUBE TYPE:</b>	ESS TERESSTIC 220
<b>MACH MFGR:</b>	N/A
<b>MACH MOD:</b>	NOT APPLICABLE (N/A)
<b>RECEIVED:</b>	09-MAR-20
<b>CONTACT 1:</b>	VUONG NGUEN
<b>REPORT:</b>	11-MAR-20 10:46:47
<b>SAMPLE NO:</b>	1722-1-17-1
<b>PO NUMBER:</b>	5000118021

REFERENCE LUBRICANT.

SAMPLING HISTORY					
LabNo	SAMPLE DATE MM-DD-YYYY	TIME ON OIL / TSN	TIME SINCE OVER- HAUL / TSO	OIL CHANGED (Y/N)	PREVIOUS CONDI- TION MACH/OIL
2602979	02-27-2020	0	0	N	(n/a)

(SP) SPECTROSCOPIC ANALYSIS [ASTM D5185] (elements seen in ppm)									
TESTED ELEMENTS ARE: Fe, Cu, Pb, Sn, Cr, Al, Ni, Ti, Ag, V, Mg, Si, B, Na, Ba, Ca, P, Mn, Zn, Mo, Cd, K *									
* elements below detection limit are not displayed on table									
Date(MM/DD/YY)	02-27-20	(n/a)	-						
Labno	2602979								
Sn-TIN	2.0								-
Si-SILICON	1.0								-
Mg-MAGNESIUM	3.0								-
Ba-BARIUM	1.0								-
Ca-CALCIUM	5.0								-
P-PHOSPHORUS	4.0								-
Zn-ZINC	3.0								-

(FTIR) FOURIER TRANSFORM INFRARED ANALYSIS (Absorbance)									
Date(MM/DD/YY)	02-27-20	(n/a)	-						
Labno	2602979								
SOOT	23								-
AW/EP	9								-
OXIDATION	3								-
SULFATE	11								-
NITRATION	3								-
GLYCOL	1								-
WATER	5								-

SOOT (%)									
Date(MM/DD/YY)	02-27-20	(n/a)	-						
Labno	2602979								
SOOT (%)	0.40								-

**VISCOSITY/40 [ASTM D445]**

Date(MM/DD/YY)	02-27-20	(n/a)							
Labno	2602979								
in cSt 40°C	214.00								

**VISCOSITY/100 [ASTM D445]**

Date(MM/DD/YY)	02-27-20	(n/a)							
Labno	2602979								
in cSt 100°C	19.65								

**TAN [ASTM D974 OR D664] (mg KOH/g)**

Date(MM/DD/YY)	02-27-20	(n/a)							
Labno	2602979								
TOTAL ACID NO	0.05								

**HOT PLATE (%)**

Date(MM/DD/YY)	02-27-20	(n/a)							
Labno	2602979								
WATER	< 0.1								

**VISCOSITY INDEX [ASTM D2270]**

Date(MM/DD/YY)	02-27-20	(n/a)							
Labno	2602979								
VISCOSITY INDEX	105.00								

**TOTAL SOLIDS [ASTM D4055]**

Date(MM/DD/YY)	02-27-20	(n/a)							
Labno	2602979								
Solids (%)	< 0.2								

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<b>CUSTOMER:</b>	<b>UNIVERSAL FUEL SERVICES</b>
<b>PLANT:</b>	<b>UFS</b>
<b>FUEL</b>	<b>HOF4C</b>
<b>LOCATION</b>	<b>DAVENPORT FL</b>
<b>FUEL TYPE:</b>	<b>ULS #2 DIESEL FUEL</b>
<b>MANUFACTURER:</b>	<b>Missing information</b>
<b>RECEIVED:</b>	<b>14-JUL-20</b>
<b>CONTACT 1:</b>	<b>ERNIE GEORGE</b>
<b>REPORT:</b>	<b>16-JUL-20 13:00:40</b>
<b>SAMPLE NO:</b>	<b>2732-1-3150-1</b>
<b>PO NUMBER:</b>	<b>VISA</b>

Spec Compliance

**COMPLIANT**

**NOTE**

- All limits derived from ASTM/CGSB specifications.

Date(DD/MM/YY)	07-07-20	SPEC.
Labno	2636237	
VISCOSITY /40 [ASTM D445] in cSt 40 °C	2.23	1.9-4.1
WATER KARL FISHER (%)	0.008	0.02 MAX
FLASH POINT CLOSED CUP [ASTM D93]	65	52 °C MIN
DENSITY [ASTM D4052]	0.839	-
DISTILLATION		
Initial Boiling Point (°C)	164	-
10% Recovered (°C)	202	-
50% Recovered (°C)	256	266 TYPICAL
90% Recovered (°C)	312	282-338
Final Boiling Point (°C)		-
Total Recovered (°C)		-
Residue (%)		-
API GRAVITY [ASTM D287]	37.49	34-38 TYPICAL
SULFUR in ppm	11	15 MAX
CETANE INDEX	48	40 MIN
POUR POINT [ASTM D97] , °C	-29	-
CLOUD POINT [ASTM D2500] , °C	-12	-
COPPER CORROSION [ASTM D130]	1a	3
ASH (%) [ASTM D482]	0.006	0.01 MAX
WATER AND SEDIMENT (%) [ASTM D2709]	0.01	0.05 MAX
TOTAL BACTERIA/MOLD KIT TEST	-	0 MAX
BIODIESEL CONTENT (%)	-	-
CETANE NUMBER [D 613]	-	40 MIN
OXIDATION STABILITY [ASTM D7545]	-	-

**VISUAL INSPECTION (PMC)**

Labno	SAMPLE DATE MM-DD-YY	COLOR	ODOR	CLARITY	PRECIPITATE
2636237	07-07-20	Red	Fuel	Clear	None

**(SP) SPECTROSCOPIC ANALYSIS [ASTM D5185] (elements seen in ppm)**

TESTED ELEMENTS ARE: Fe, Cu, Pb, Sn, Cr, Al, Ni, Ti, Ag, V, Mg, Si, B, Na, Ba, Ca, P, Mn, Zn, Mo, Cd, K \*

\* elements below detection limit are not displayed on table

Date(MM/DD/YY)	07-07-20	(n/a)	REF						
Labno	2636237								

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