WEAR CONTAMINATION **FLUID CONDITION**

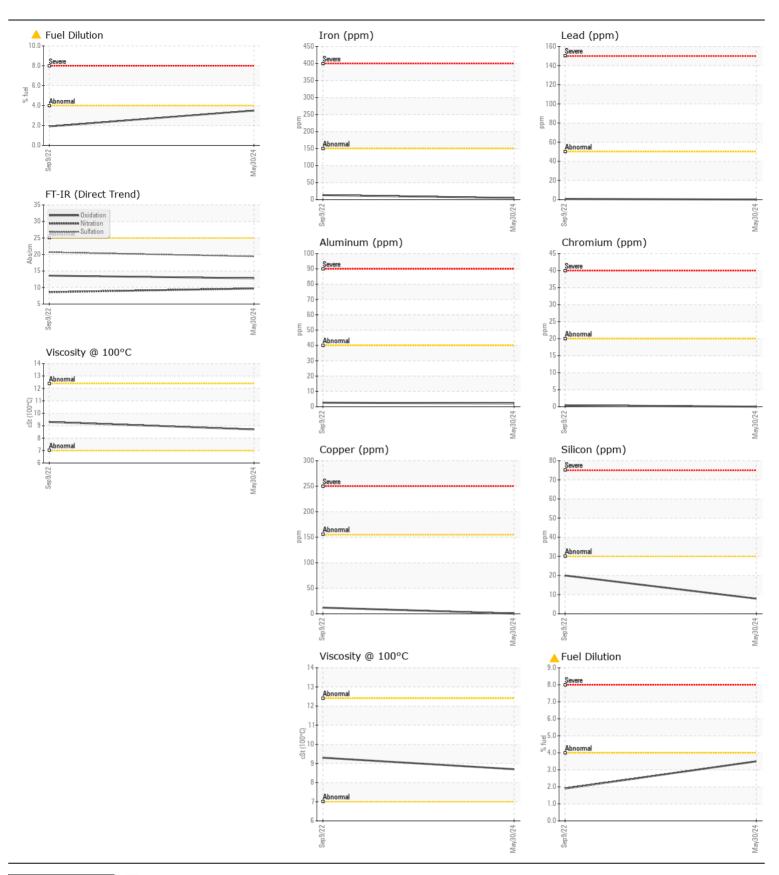
NORMAL MARGINAL ATTENTION

Machine Id

351271

Gasoline Engine

| IRVING 5W30 (7 LTR) | | | | | | | |
|--|------------------|----------|------------------------------|--------------|----------------|-------------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. | Sample Number | | Client Info | | GFL0105881 | GFL0054509 | |
| | Sample Date | | Client Info | | 30 May 2024 | 09 Sep 2022 | |
| | Machine Age | kms | Client Info | | 0 | 10037 | |
| | Oil Age | kms | Client Info | | 0 | 5212 | |
| | Filter Age | kms | Client Info | | 0 | 5212 | |
| | Oil Changed | | Client Info | | Changed | Changed | |
| | Filter Changed | | Client Info | | N/A | Changed | |
| | Sample Status | | | | ATTENTION | NORMAL | |
| WEAR | Iron | ppm | ASTM D5185(m) | >150 | 5 | 13 | |
| All component wear rates are normal. | Chromium | ppm | ASTM D5185(m) | | 0 | <1 | |
| | Nickel | ppm | ASTM D5185(m) | | 0 | <1 | |
| | Titanium | ppm | ASTM D5185(m) | | 0 | 0 | |
| | Silver | ppm | ASTM D5185(m) | >2 | 0 | 0 | |
| | Aluminum | ppm | ASTM D5185(m) | >40 | 2 | 3 | |
| | Lead | ppm | ASTM D5185(m) | >50 | 0 | <1 | |
| | Copper | ppm | ASTM D5185(m) | >155 | <1 | 12 | |
| | Tin | ppm | ASTM D5185(m) | >10 | 0 | 0 | |
| | Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | |
| CONTAMINATION | Silicon | nnm | ACTM DE10E/m) | - 20 | | 20 | |
| Light fuel dilution occurring. No other contaminants were detected in the oil. | Potassium | ppm | ASTM D5185(m) | | 8 | 20 3 | |
| | Fuel | ppm % | ASTM D5185(m) ASTM D7593* | >20 | <1 <u> </u> | 1.9 | |
| | Water | 70 | WC Method | | NEG | NEG | |
| | Glycol | | WC Method | 70. L | NEG | NEG | |
| | Soot % | % | ASTM D7844* | | 0 | 0 | |
| | Nitration | Abs/cm | ASTM D7624* | >20 | 9.7 | 8.6 | |
| | Sulfation | Abs/.1mm | | >30 | 19.4 | 20.7 | |
| | Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185(m) | >400 | 2 | 7 | |
| Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service. | Boron | ppm | ASTM D5185(m) | 7 100 | 128 | 85 | |
| | Barium | ppm | ASTM D5185(m) | | 0 | <1 | |
| | Molybdenum | ppm | ASTM D5185(m) | | 7 1 | 81 | |
| | Manganese | ppm | ASTM D5185(m) | | <1 | 11 | |
| | Magnesium | ppm | ASTM D5185(m) | | 511 | 447 | |
| | Calcium | ppm | ASTM D5185(m) | | 1246 | 1194 | |
| | Phosphorus | ppm | ASTM D5185(m) | | 639 | 698 | |
| | Zinc | ppm | ASTM D5185(m) | | 744 | 691 | |
| | Sulfur | ppm | ASTM D5185(m) | | <u>2413</u> | 2317 | |
| | Oxidation | Abs/.1mm | ASTM D7414* | >25 | 12.8 | 13.6 | |
| | Visc @ 100°C | cSt | ASTM D7279(m) | | 8.7 | 9.3 | |





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: GFL0105881 Lab Number : 02639060

Unique Number : 5788222

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 31 May 2024 **Tested** : 04 Jun 2024

: 04 Jun 2024 - Wes Davis Diagnosed Test Package: MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

GFL Environmental - 348 1027 Kirk Lline East Bracebridge, ON

CA P1L 0A1 Contact: Royce Reid

roycereid@gflenv.com T:

F: