



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
INTERNATIONAL 3434-20
 Component
Diesel Engine
 Fluid
TRC PRO-SPEC V SYN BLEND 10W30 (40 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | TR02637648 | TR02602223 | TR02567948 |
| Sample Date | | Client Info | | 08 May 2024 | 09 Sep 2023 | 02 Jun 2023 |
| Machine Age | kms | Client Info | | 213550 | 188501 | 162169 |
| Oil Age | kms | Client Info | | 75269 | 50220 | 23888 |
| Filter Age | kms | Client Info | | 25049 | 26332 | 23888 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|----|----|----|
| Iron | ppm | ASTM D5185(m) | >100 | 78 | 48 | 31 |
| Chromium | ppm | ASTM D5185(m) | >20 | 2 | 2 | 1 |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 7 | 5 | 4 |
| Lead | ppm | ASTM D5185(m) | >40 | 10 | 5 | 2 |
| Copper | ppm | ASTM D5185(m) | >330 | 18 | 16 | 12 |
| Tin | ppm | ASTM D5185(m) | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

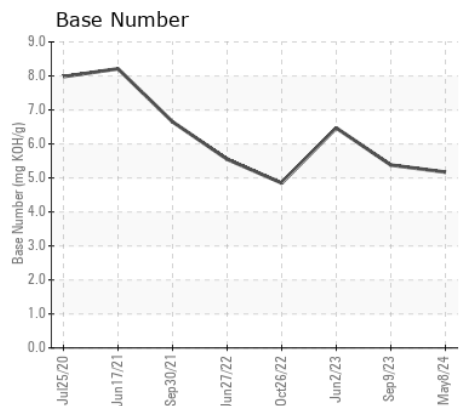
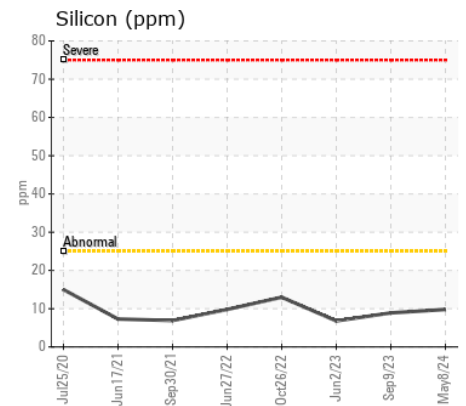
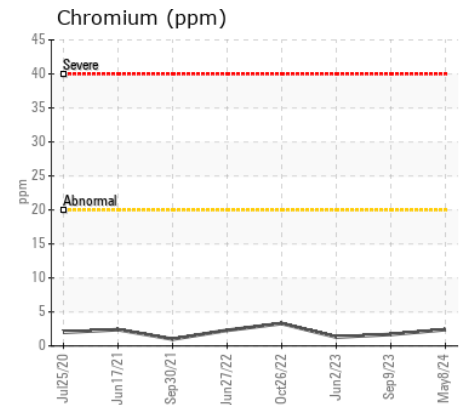
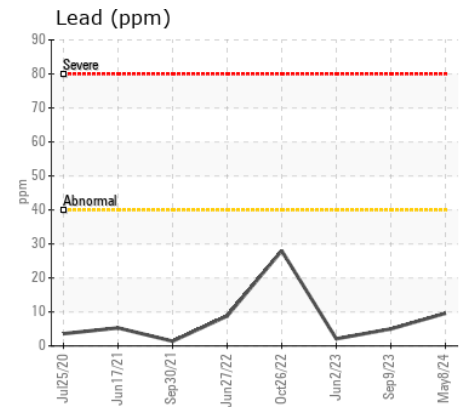
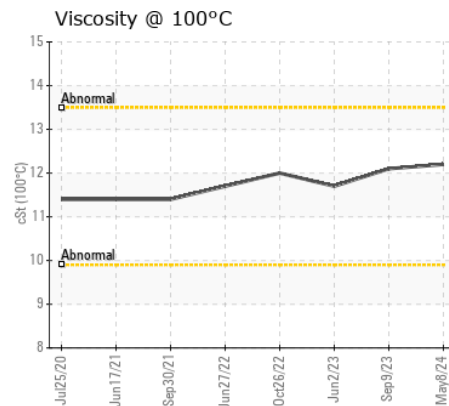
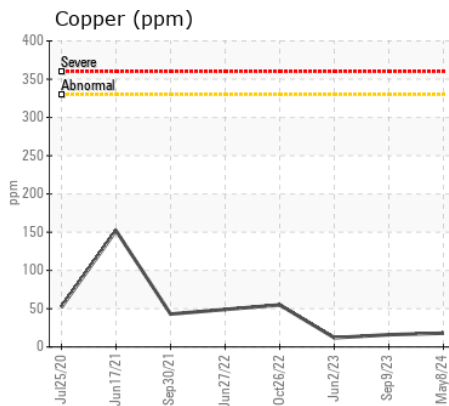
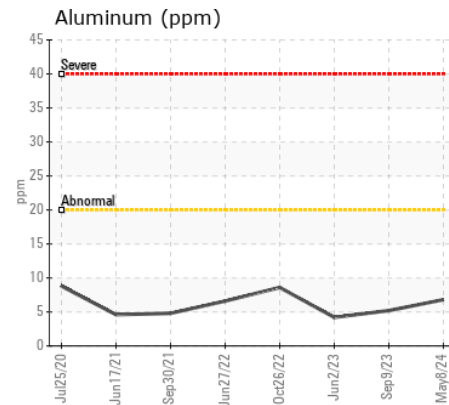
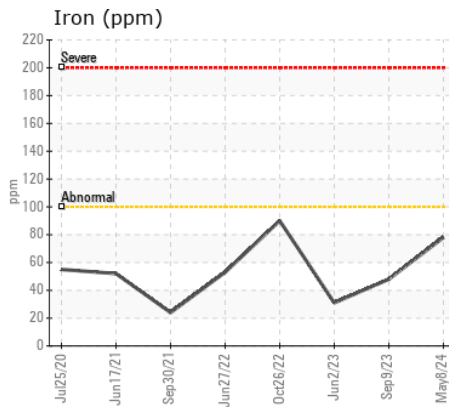
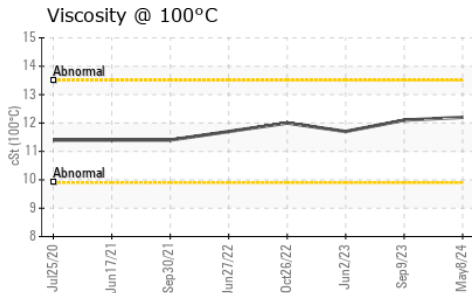
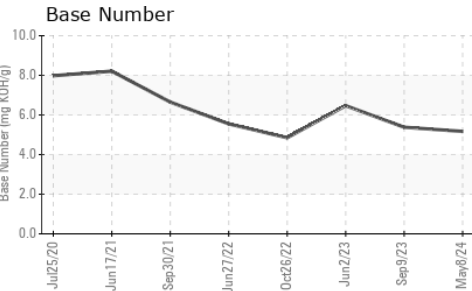
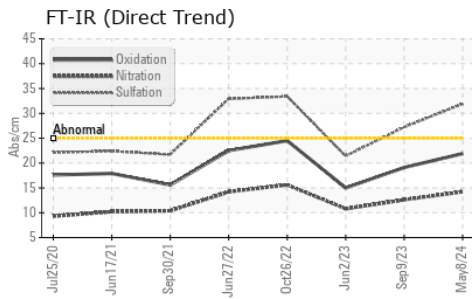
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|------|------|------|
| Silicon | ppm | ASTM D5185(m) | >25 | 10 | 9 | 7 |
| Potassium | ppm | ASTM D5185(m) | >20 | 11 | 8 | 5 |
| Fuel | | WC Method | >2.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >3 | 2.5 | 1.8 | 1 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 14.2 | 12.6 | 10.8 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 31.9 | 27.2 | 21.4 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|---------------|-----|------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 6 | 5 | 4 |
| Boron | ppm | ASTM D5185(m) | | 10 | 7 | 24 |
| Barium | ppm | ASTM D5185(m) | | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 96 | 95 | 92 |
| Manganese | ppm | ASTM D5185(m) | | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | 68 | 68 | 26 |
| Calcium | ppm | ASTM D5185(m) | | 2283 | 2244 | 2268 |
| Phosphorus | ppm | ASTM D5185(m) | | 986 | 994 | 1106 |
| Zinc | ppm | ASTM D5185(m) | | 1210 | 1170 | 1221 |
| Sulfur | ppm | ASTM D5185(m) | | 2966 | 3030 | 3252 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 21.9 | 19.1 | 15.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896* | | 5.17 | 5.38 | 6.47 |
| Visc @ 100°C | cSt | ASTM D7279(m) | | 12.2 | 12.1 | 11.7 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02637648
Lab Number : 02637648
Unique Number : 5786810
Test Package : MOB 2
Received : 27 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - Kevin Marson

WILCO CONTRACTORS
 3031 ARTHUR ST
 ROSSLYN, ON
 CA P7K 0P2
 Contact: David Cramer

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: (807)475-5951
 F: (807)475-8619