



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id
TIGERCAT 630H 6306097
 Component
Diesel Engine
 Fluid
SHELL ROTELLA T SB 0W40 (15 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | TR02634272 | --- | --- |
| Sample Date | | Client Info | | 03 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 4600 | --- | --- |
| Oil Age | hrs | Client Info | | 128 | --- | --- |
| Filter Age | hrs | Client Info | | 128 | --- | --- |
| Oil Changed | | Client Info | | Not Chngd | --- | --- |
| Filter Changed | | Client Info | | Not Chngd | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|----|-----|-----|
| Iron | ppm | ASTM D5185(m) | >125 | 7 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >8 | 0 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >5 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >15 | 1 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >30 | 0 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >125 | <1 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >5 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |

CONTAMINATION

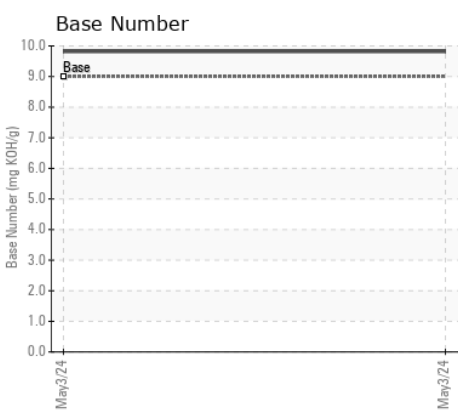
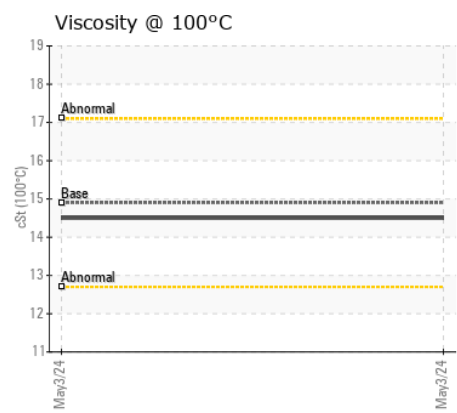
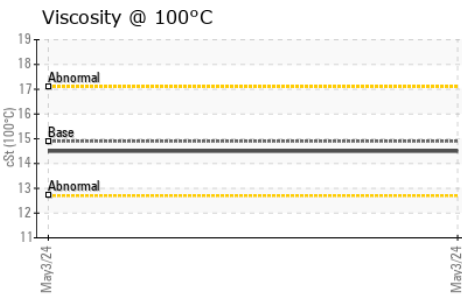
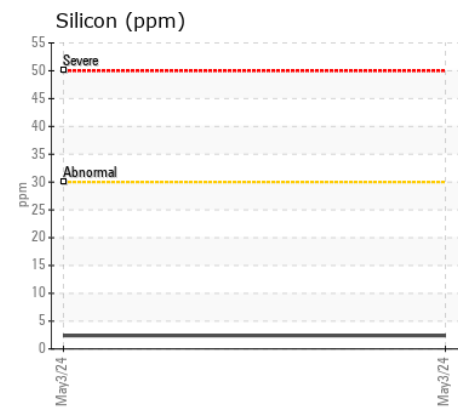
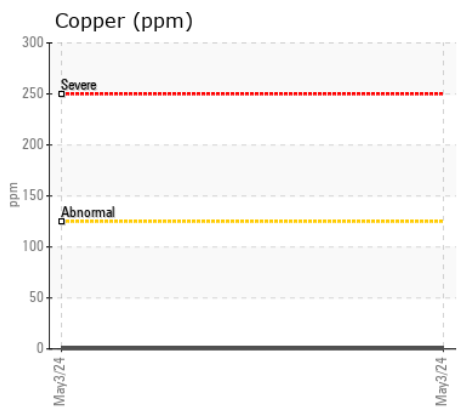
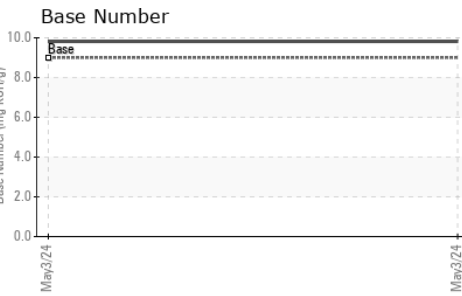
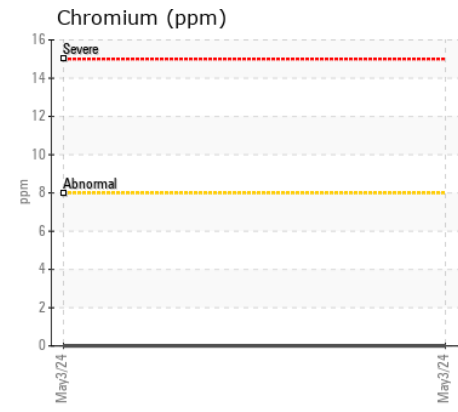
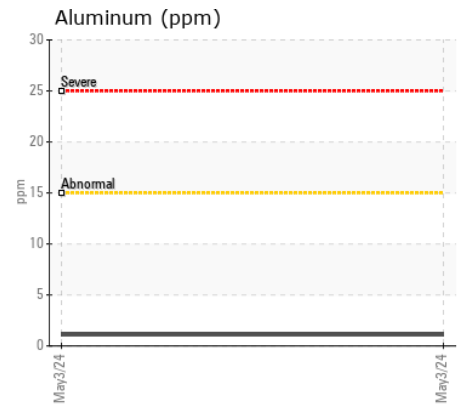
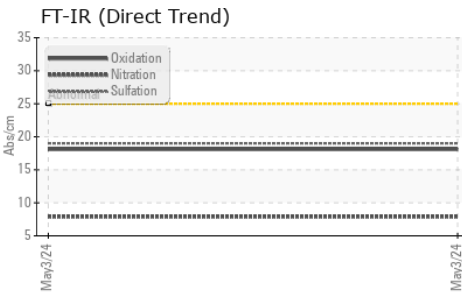
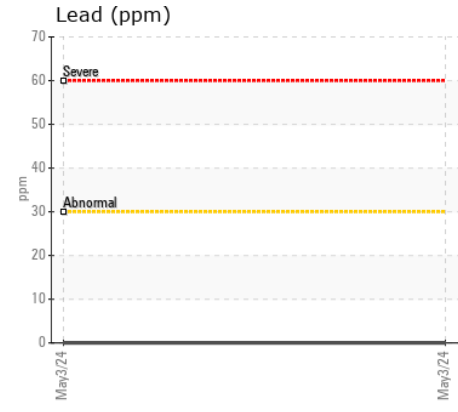
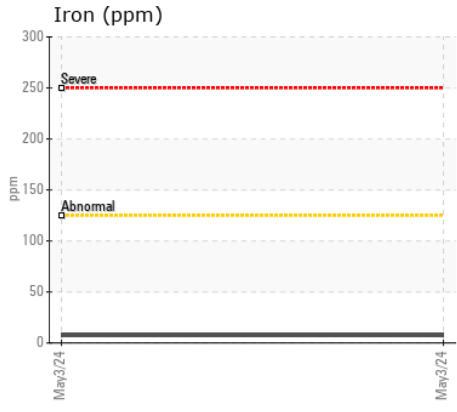
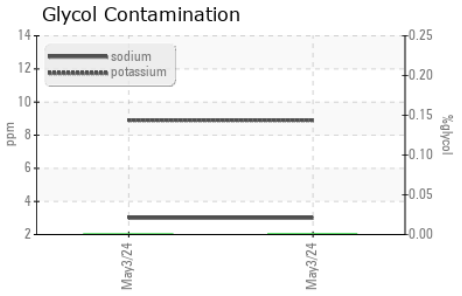
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >30 | 2 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 9 | --- | --- |
| Fuel | | WC Method | >5 | <1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | % | ASTM D7922* | | 0.0 | --- | --- |
| Soot % | % | ASTM D7844* | >3 | 0 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.9 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 19.0 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | 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) | | 3 | --- | --- |
| Boron | ppm | ASTM D5185(m) | | 37 | --- | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | 14 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | 2297 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 986 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | 1159 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | 3445 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 18.1 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 9.0 | 9.82 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.9 | 14.5 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02634272 **Received** : 09 May 2024
Lab Number : **02634272** **Tested** : 10 May 2024
Unique Number : 5775425 **Diagnosed** : 10 May 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: Glycol)

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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)