TRAAP
Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

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

Machine Id
## GYROTRAC GYROTRAC
Component
## Diesel Engine
Fluid
## TRC MOLY XL PROSPEC III 15W40 (14 LTR)

## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

## WEAR

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

## CONTAMINATION

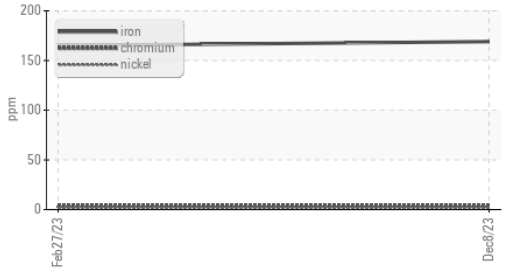
There is no indication of any contamination in the oil.

## FLUID CONDITION

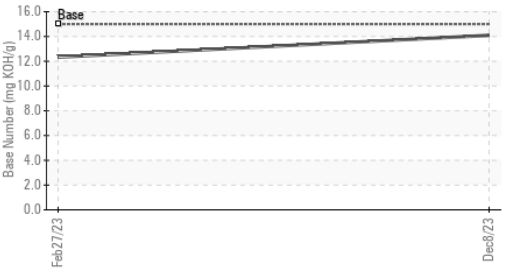
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | TR02606986 | TR02554021 | --- |
| Sample Date | | Client Info | | 08 Dec 2023 | 27 Feb 2023 | --- |
| Machine Age | hrs | Client Info | | 1714 | 1625 | --- |
| Oil Age | hrs | Client Info | | 635 | 450 | --- |
| Filter Age | hrs | Client Info | | 635 | 450 | --- |
| Oil Changed | | Client Info | | N/A | Not Changd | --- |
| Filter Changed | | Client Info | | N/A | Changed | --- |
| Sample Status | | | | ABNORMAL | ABNORMAL | --- |
| PQ | | ASTM D8184* | | 0 | 0 | --- |
| Iron | ppm | ASTM D5185(m) | >100 | ▲ 169 | ▲ 165 | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | 4 | 4 | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | 2 | 2 | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | <1 | --- |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 7 | 7 | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 3 | 3 | --- |
| Copper | ppm | ASTM D5185(m) | >330 | 10 | 11 | --- |
| Tin | ppm | ASTM D5185(m) | >15 | <1 | <1 | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | <1 | --- |
| Silicon | ppm | ASTM D5185(m) | >25 | 9 | 9 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | 2 | --- |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | ASTM D7844* | >3 | 1.9 | 1.9 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 16.1 | 15.9 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 27.8 | 27.8 | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | --- |
| Sodium | ppm | ASTM D5185(m) | | 4 | 4 | --- |
| Boron | ppm | ASTM D5185(m) | | 35 | 35 | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 139 | 123 | --- |
| Manganese | ppm | ASTM D5185(m) | | 1 | 2 | --- |
| Magnesium | ppm | ASTM D5185(m) | | 57 | 62 | --- |
| Calcium | ppm | ASTM D5185(m) | 4500 | 4669 | 4801 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 1108 | 1173 | --- |
| Zinc | ppm | ASTM D5185(m) | 1400 | 1313 | 1312 | --- |
| Sulfur | ppm | ASTM D5185(m) | | 3671 | 3423 | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 21.9 | 22.2 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 15 | 14.09 | 12.33 | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.5 | 16.1 | 16.1 | --- |

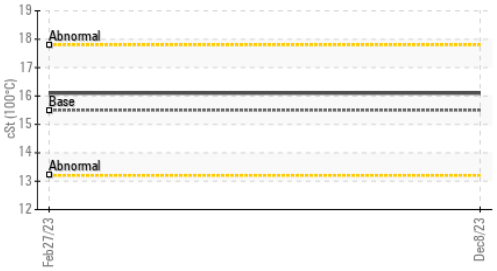
Ferrous Alloys



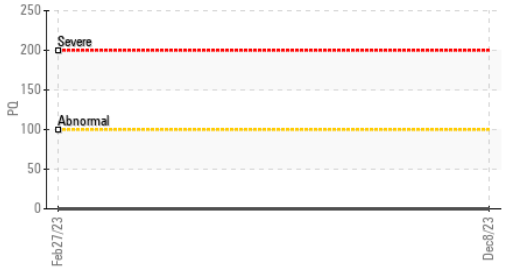

Base Number



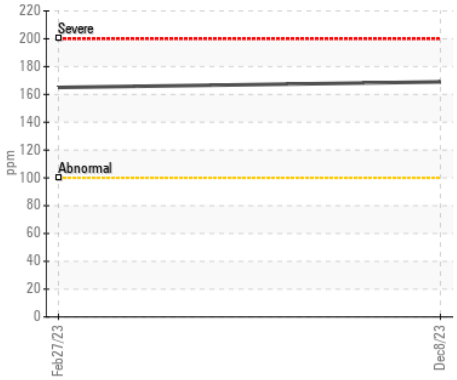

Viscosity @ 100°C



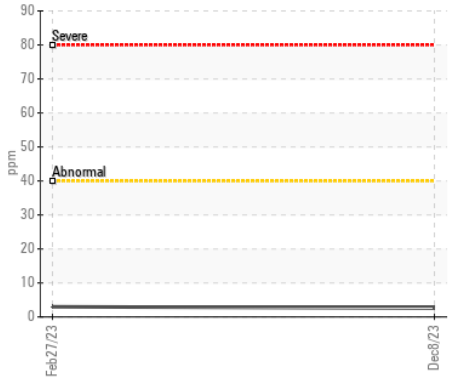

PQ



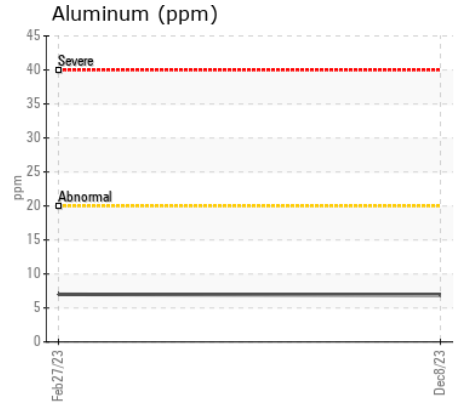

Iron (ppm)



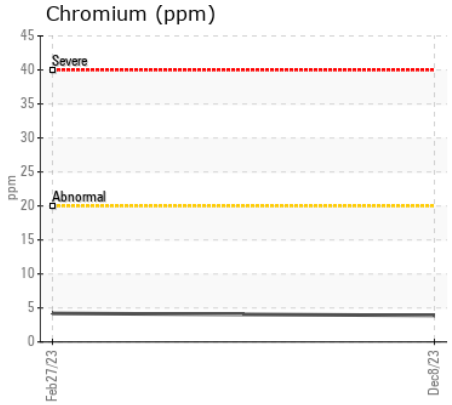

Lead (ppm)



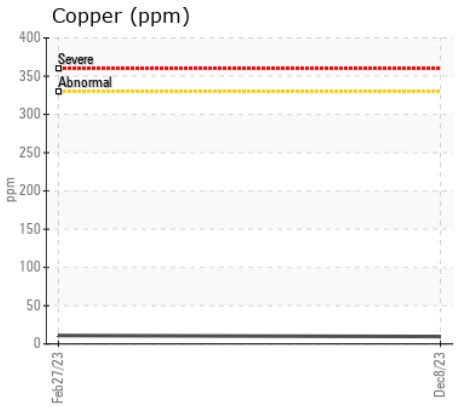

Aluminum (ppm)



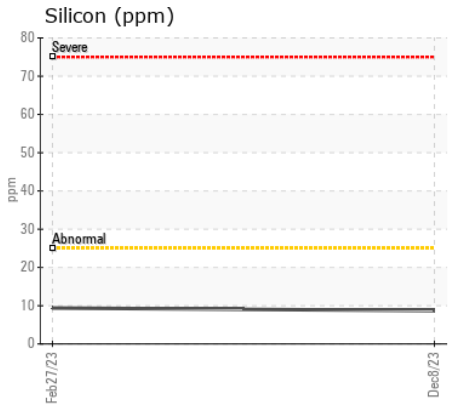

Chromium (ppm)



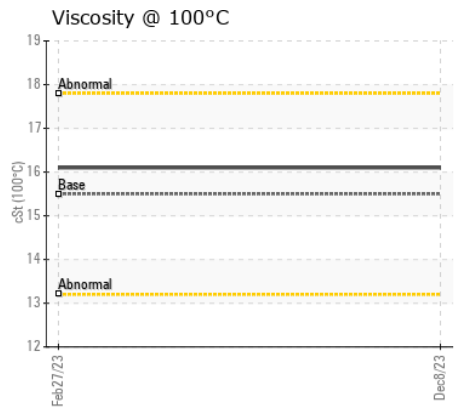

Copper (ppm)



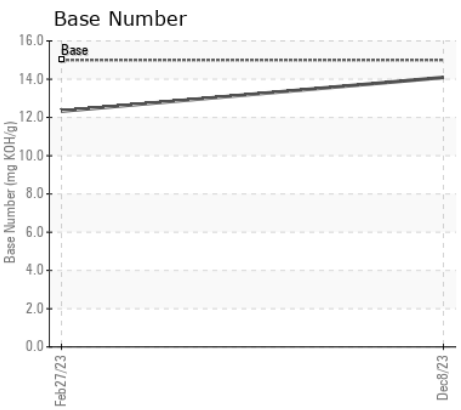

Silicon (ppm)




Viscosity @ 100°C




Base Number




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : TR02606986 **Recieved** : 08 Jan 2024
**Lab Number** : 02606986 **Diagnosed** : 09 Jan 2024
**Unique Number** : 5708072 **Diagnostician** : Kevin Marson
**Test Package** : MOB 2 ( Additional Tests: PQ )

*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)*

**POLAR ENTERPRISE**
BOX 36, GRP 8
HADASHVILLE, MB
CA R0E 0X0
Contact: Trevor Panych

T: (204)326-8683
F: