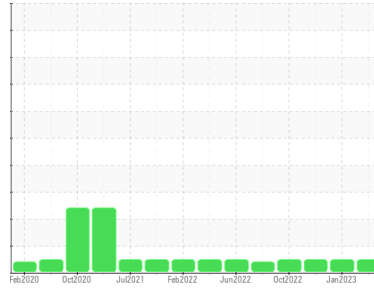


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
KEMP QUARRIES / RIVER VALLEY BACKBONE
Machine Id
WL135
Component
Rear Left Final Drive
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | PCA0084836 | PCA0037139 | PCA0037200 |
| Sample Date | Client Info | 12 Aug 2023 | 13 Jan 2023 | 01 Dec 2022 |
| Machine Age | hrs | 52602 | 52005 | 51722 |
| Oil Age | hrs | 900 | 900 | 600 |
| Oil Changed | Client Info | Not Chngd | Not Chngd | Not Chngd |
| Sample Status | | NORMAL | NORMAL | NORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|------------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >800 | 104 | 69 | 19 |
| Chromium | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >15 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >75 | 2 | 3 | 1 |
| Lead | ppm | ASTM D5185m >10 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m >75 | 2 | 2 | <1 |
| Tin | ppm | ASTM D5185m >8 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|------------------|--------------|----------|------|
| Boron | ppm | ASTM D5185m 2 | <1 | <1 | 1 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 1 | 2 | 2 |
| Manganese | ppm | ASTM D5185m 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 9 | 31 | 28 | 28 |
| Calcium | ppm | ASTM D5185m 3114 | 2988 | 3036 | 2924 |
| Phosphorus | ppm | ASTM D5185m 1099 | 946 | 1010 | 937 |
| Zinc | ppm | ASTM D5185m 1245 | 1193 | 1217 | 1154 |
| Sulfur | ppm | ASTM D5185m 7086 | 7512 | 7999 | 7859 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|----|
| Silicon | ppm | ASTM D5185m >400 | 28 | 21 | 12 |
| Sodium | ppm | ASTM D5185m | <1 | 0 | 1 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 2 | 0 |

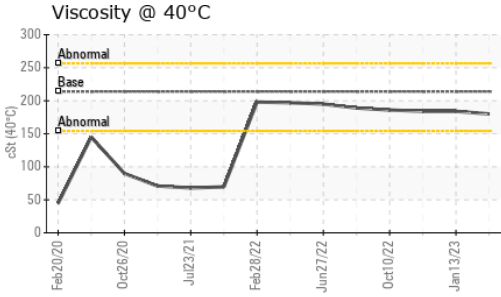
VISUAL

| method | limit/base | current | history1 | history2 | |
|------------------|------------|---------------|--------------|----------|-------|
| White Metal | scalar | *Visual NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual >0.2 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | NEG | NEG | NEG |

FLUID PROPERTIES

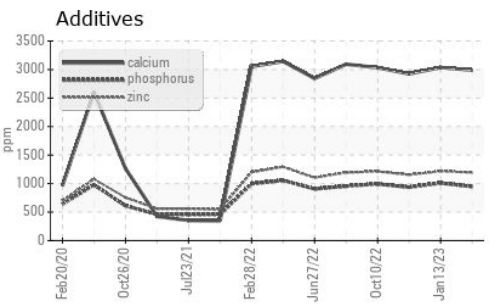
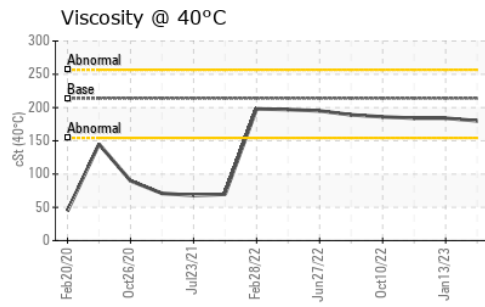
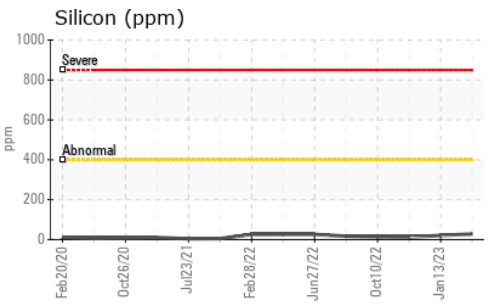
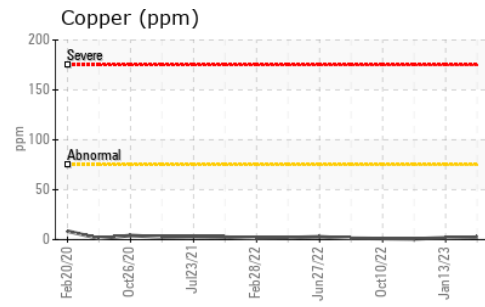
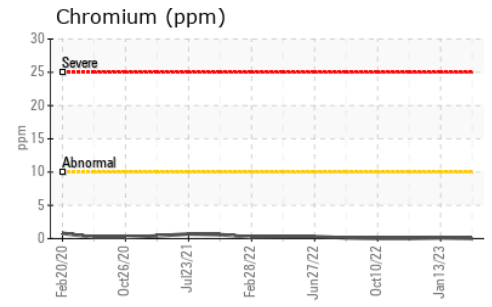
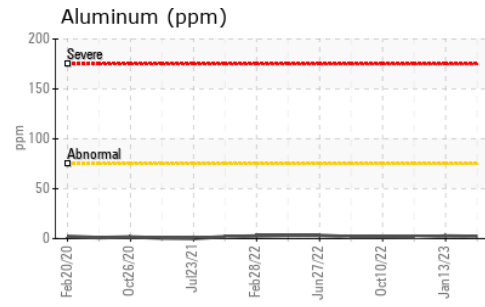
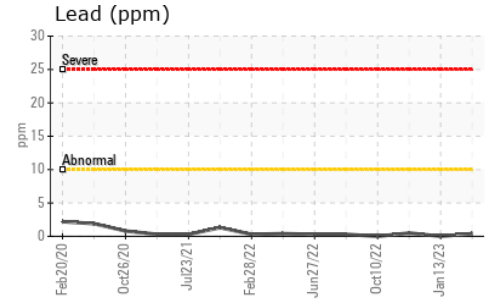
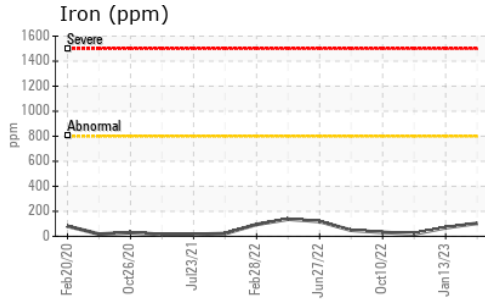
| method | limit/base | current | history1 | history2 | |
|-------------|------------|-----------------|------------|----------|-----|
| Visc @ 40°C | cSt | ASTM D445 213.9 | 180 | 184 | 184 |

OIL ANALYSIS REPORT



| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|----------|----------|----------|
| Color | | | no image | no image | no image |
| Bottom | | | no image | no image | no image |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0084836 **Received** : 18 Aug 2023
Lab Number : 05928994 **Diagnosed** : 20 Aug 2023
Unique Number : 10608941 **Diagnostician** : Wes Davis
Test Package : MOB 1

Kemp Quarries - River Valley - Backbone
 5600 S Hwy 253
 Huntington, AR
 US 72940

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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)

backbone@rivervalleyquarries.com

T:
F: