

## **OIL ANALYSIS REPORT**

### Sample Rating Trend





# KEMP QUARRIES / PRYOR STONE [64200] Machine Id WL133

Component Rear Differential

Fluid

PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Pm2 performed. All oil samples taken. Engine oil, transmission oil, and all filters changed.)

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the

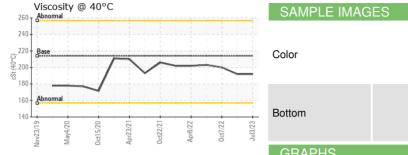
#### **Fluid Condition**

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

| RO TO-4 SAE 50   | ( GAL)  | Nov2019 Ma  | ny2020 Oct2020 Apr202 | 1 Oct2021 Apr2022 Oct20 | 22 Jul2023  |             |
|------------------|---------|-------------|-----------------------|-------------------------|-------------|-------------|
| SAMPLE INFOR     | RMATION | method      | limit/base            | current                 | history1    | history2    |
| Sample Number    |         | Client Info |                       | PCA0084037              | PCA0083917  | PCA0048978  |
| Sample Date      |         | Client Info |                       | 03 Jul 2023             | 27 Mar 2023 | 07 Oct 2022 |
| Machine Age      | hrs     | Client Info |                       | 36414                   | 35969       | 35349       |
| Oil Age          | hrs     | Client Info |                       | 1065                    | 620         | 2094        |
| Oil Changed      |         | Client Info |                       | Oil Added               | Oil Added   | Changed     |
| Sample Status    |         |             |                       | NORMAL                  | NORMAL      | NORMAL      |
| WEAR METAI       | LS      | method      | limit/base            | current                 | history1    | history2    |
| Iron             | ppm     | ASTM D5185m | >500                  | 14                      | 13          | 11          |
| Chromium         | ppm     | ASTM D5185m | >3                    | <1                      | <1          | 0           |
| Nickel           | ppm     | ASTM D5185m | >3                    | 0                       | <1          | 0           |
| Titanium         | ppm     | ASTM D5185m | >2                    | 0                       | 0           | 0           |
| Silver           | ppm     | ASTM D5185m | >2                    | 0                       | 0           | 0           |
| Aluminum         | ppm     | ASTM D5185m | >30                   | 2                       | 1           | 1           |
| Lead             | ppm     | ASTM D5185m | >13                   | 0                       | 0           | 0           |
| Copper           | ppm     | ASTM D5185m |                       | 0                       | <1          | 2           |
| Tin              | ppm     | ASTM D5185m | >5                    | 0                       | 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                     | 0                       | 1           | 0           |
| Barium           | ppm     | ASTM D5185m |                       | 0                       | 0           | <1          |
| Molybdenum       | ppm     | ASTM D5185m | 0                     | 0                       | <1          | <1          |
| Manganese        | ppm     | ASTM D5185m |                       | <1                      | <1          | <1          |
| Magnesium        | ppm     | ASTM D5185m | 9                     | 18                      | 17          | 17          |
| Calcium          | ppm     | ASTM D5185m | 3114                  | 3195                    | 3135        | 2978        |
| Phosphorus       | ppm     | ASTM D5185m | 1099                  | 943                     | 960         | 1068        |
| Zinc             | ppm     | ASTM D5185m | 1245                  | 1163                    | 1192        | 1317        |
| Sulfur           | ppm     | ASTM D5185m | 7086                  | 6880                    | 7980        | 6059        |
| CONTAMINA        |         | method      | limit/base            | current                 | history1    | history2    |
| Silicon          | ppm     | ASTM D5185m | >100                  | 13                      | 13          | 9           |
| Sodium           | ppm     | ASTM D5185m |                       | 1                       | 1           | 0           |
| Potassium        | ppm     | ASTM D5185m | >20                   | 0                       | <1          | 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     | >.2                   | NEG                     | NEG         | NEG         |
| Free Water       | scalar  | *Visual     |                       | NEG                     | NEG         | NEG         |
| FLUID PROPI      | ERTIES  | method      | limit/base            | current                 | history1    | history2    |
| Visc @ 40°C      | cSt     | ASTM D445   | 213.9                 | 192                     | 192         | 200         |
| - C              |         | 10          |                       | -                       | -           | 0 1 10 15   |



## **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** Iron (ppm) Lead (ppm) 20 600 200 Chromium (ppm) Aluminum (ppm) 50 Silicon (ppm) Copper (ppm) 150 150 50 Viscosity @ 40°C Additives 4000 3500 220 (-0.00) 200 200 180 3000 E 2500 2000 1500 160 1000 140 500





Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: 05926890

: PCA0084037 : 10606837 Test Package : MOB 1

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Aug 2023 Diagnosed Diagnostician : Don Baldridge

: 18 Aug 2023

Kemp Quarries - Pryor Stone - Pryor

1050 E 520 Rd Pryor, OK US 74361 Contact:

pryor@pryorstone.com

T: F:

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)

Report Id: KEMPRY [WUSCAR] 05926890 (Generated: 08/18/2023 10:58:18) Rev: 1