

OIL ANALYSIS REPORT

Area KEMP QUARRIES / NEOSHO [67516] Machine Id WL132

Component Hydraulic System Fluid PETRO CANADA DURATRAN (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: $\mathsf{PM-4}$ changed fluid and filters)

Wear

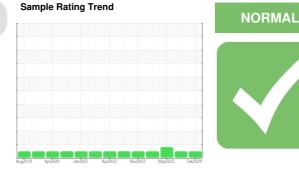
All component wear rates are normal.

Contamination

There is no indication of any contamination in the component.

Fluid Condition

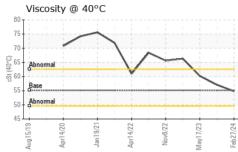
The condition of the fluid is acceptable for the time in service.



| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
|------------------|--------|-------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | PCA0086542 | PCA0086539 | PCA0085699 |
| Sample Date | | Client Info | | 27 Feb 2024 | 14 Sep 2023 | 17 May 2023 |
| Machine Age | hrs | Client Info | | 3743 | 3524 | 3354 |
| Oil Age | hrs | Client Info | | 3743 | 3524 | 3354 |
| Oil Changed | | Client Info | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | ATTENTION |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >20 | 2 | 1 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | <1 | 3 | <1 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >75 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | <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 | 110 | 83 | 97 | 59 |
| Barium | ppm | ASTM D5185m | 0.0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0.0 | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | 1 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 13 | 0 | 20 | 15 |
| Calcium | ppm | ASTM D5185m | 3610 | 2548 | 2934 | 2069 |
| Phosphorus | ppm | ASTM D5185m | 1192 | 846 | 979 | 794 |
| Zinc | ppm | ASTM D5185m | 1455 | 948 | 1239 | 1029 |
| Sulfur | ppm | ASTM D5185m | 2641 | 2478 | 3290 | 2691 |
| CONTAMINAN | ITS | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >20 | 8 | 9 | 6 |
| Sodium | ppm | ASTM D5185m | | 4 | <1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 2 | 1 |
| 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 | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| | | | | | | |



OIL ANALYSIS REPORT



| | FLUID PROP | ERTIES | method | limit/base | current | history1 | history2 |
|--|--|---------------|---------------------|--|---|-------------------------|----------------------------|
| | Visc @ 40°C | cSt | ASTM D445 | 55.14 | 54.8 | 57.1 | 60.2 |
| \sim | SAMPLE IMA | GES | method | limit/base | current | history1 | history2 |
| 22 | Color | | | | no image | no image | no image |
| Apri 7.42 Nov6/22 May/1/23 Feb27/24 | Bottom | | | | no image | no image | no image |
| | GRAPHS | | | | | | 1 |
| | Iron (ppm) | | | | Lead (ppm) | | |
| | 30 - | | | | 25 - Severe | | |
| | a 20 - Abnormal | | | mdd | 20- | | |
| | | | | | 10 - Abnormal | | |
| | | | | | 5 | | |
| | Aug15/19 Apr14/20 | Apr14/22 - | Nov8/22 - | Feb27/24 - | Aug15/19- | Jan 19/21 | May17/23 - |
| | aluminum (ppm) | | M ar | Fel | ک¶ Chromium (| | Mar Mar |
| | ³⁰ | | | | ³⁰ I | | |
| | 25 | | | | 25 - Sevele 20 - | | |
| | E 15- 10- Abnormal | | | Шdd | Abserval | | |
| | 10 | | | | 5 | | |
| | 321 20 12 12 | 122 | 122 | 724 | /19 | /22 | /23 |
| | Aug15/19 Apr14/20 Jan19/21 | Apr14/22 | Nov8/22 May17/23 | Feb27/24 | Aug15/19 Apr14/20 | Jan 19/21 Apr14/22 | May17/23 |
| | Copper (ppm) | | | | Silicon (ppm |) | |
| | 200 - Severe | _ | | | 50 - Severe | | |
| | 150 - | | | udd | 40 - 30 - | | |
| | Abnormal | | | | 20 - Abnormal | | |
| | | | | | | | |
| | Aug15/19 Apr14/20 | Apr14/22 | Nov8/22 May17/23 | Feb27/24 | Aug15/19 Apr14/20 | Jan 19/21 Apr14/22 | May17/23 |
| | ع ح ج Viscosity @ 40°C | | 2 ž | £ | a a Additives | Ϋ́ Ϋ́ | ž |
| | ⁸⁰ 75 | | | 30 | 00 calcium | | \wedge |
| | 70 | \sum | | 20 | zinc | us | / |
| | G 65 Abnormal 5 60 55 Base | \sim | / | 톨 15 10 | and the second se | | 10 |
| | 55 - Abnormal | | | and a second period of the second period of the second period of the second period per | 00- | | Jan |
| | 45 6 1/2 | 1/22 | 3/22 | 1/24 | 0 | 9/21 | 1/23 - |
| | Aug15/19 Apr14/20 Jan19/21 | Apr14/22 | Nov8/22 May17/23 | Feb27/24 | Aug15/19 Apr14/20 | Jan 19/21 Apr14/22 | May17/23 |
| Laboratory Sample No. Lab Number | | Rece Teste | eived :1 ed :1 | 1 Mar 2024 2 Mar 2024 | - | Quarries - Kemp 1914 | 8 Ingersol La Neosho, M |
| Unique Number 12367 Test Package | | Diagr | nosed :1 | 3 Mar 2024 - Do | n Baldridge | | US 648 Contac |
| | , contact Customer Ser | | | | | neosho@ | |