

OIL ANALYSIS REPORT

Area MIX ROOM A [98665943] Machine Id KR-GR-001552-SOUTH - 15000 LB MIXER (S/N MIX A - 11513053) Component

Gearbox

PETRO CANADA 220 (13 GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Resample at the next service interval to monitor. (Customer Sample Comment: 98665943)

Wear

All component wear rates are normal.

Contamination

Appearance is hazy. There is a moderate concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



| SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
|---|--|--|----------------------------------|---|---|--|
| Sample Number | | Client Info | | PCA0111172 | PCA0100846 | PCA0099341 |
| Sample Date | | Client Info | | 20 Dec 2023 | 22 Sep 2023 | 10 Jul 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | N/A | N/A |
| Sample Status | | | | ABNORMAL | ABNORMAL | SEVERE |
| WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >200 | 48 | 42 | 82 |
| Chromium | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | <1 | <1 | 3 |
| Lead | ppm | ASTM D5185m | >100 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >200 | <1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >25 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| ADDITIVES Boron | ppm | Method ASTM D5185m | limit/base | current 7 | history1 9 | history2 17 |
| | ppm ppm | | limit/base | | | |
| Boron | | ASTM D5185m | limit/base | 7 | 9 | 17 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | limit/base | 7 0 | 9 2 | 17 0 |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 0 19 1 0 | 9 2 19 | 17 0 52 |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 0 19 1 | 9 2 19 <1 | 17 0 52 1 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 0 19 1 0 | 9 2 19 <1 2 | 17 0 52 1 0 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 0 19 1 0 6 | 9 2 19 <1 2 27 | 17 0 52 1 0 42 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 0 19 1 0 6 446 | 9 2 19 <1 2 27 485 | 17 0 52 1 0 42 668 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 0 19 1 0 6 446 0 | 9 2 19 <1 2 27 485 21 | 17 0 52 1 0 42 668 24 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 7 0 19 1 0 6 446 0 1198 current 5 | 9 2 19 <1 2 27 485 21 1470 | 17 0 52 1 0 42 668 24 2758 history2 5 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base >50 | 7 0 19 1 0 6 446 0 1198 current | 9 2 19 <1 2 27 485 21 1470 history1 6 6 | 17 0 52 1 0 42 668 24 2758 history2 5 10 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm | ASTM D5185m ASTM D5185m | limit/base >50 >20 | 7 0 19 1 0 6 446 0 1198 current 5 8 3 | 9 2 19 <1 2 27 485 21 1470 history1 6 6 6 <1 | 17 0 52 1 0 42 668 24 2758 history2 5 10 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm TS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base >50 >20 | 7 0 19 1 0 6 446 0 1198 current 5 8 | 9 2 19 <1 2 27 485 21 1470 history1 6 6 | 17 0 52 1 0 42 668 24 2758 history2 5 10 <1 € 1.20 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm | ASTM D5185m ASTM D5185m | limit/base >50 >20 | 7 0 19 1 0 6 446 0 1198 current 5 8 3 | 9 2 19 <1 2 27 485 21 1470 history1 6 6 6 <1 | 17 0 52 1 0 42 668 24 2758 history2 5 10 <1 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Water | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | limit/base >50 >20 >0.2 | 7 0 19 1 0 6 446 0 1198 current 5 8 3 3 ↓ | 9 2 19 <1 2 27 485 21 1470 history1 6 6 6 6 <1 ▲ 0.304 | 17 0 52 1 0 42 668 24 2758 history2 5 10 <1 € 1.20 |



400

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150

Mar27/

OIL ANALYSIS REPORT

scalar

method

*Visual

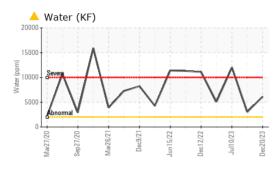
VISUAL

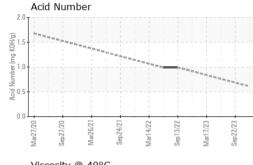
White Metal

Silt

Debris

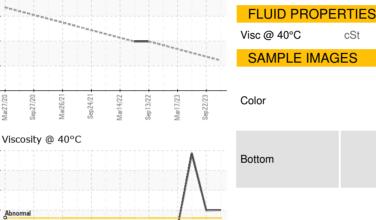
Odor

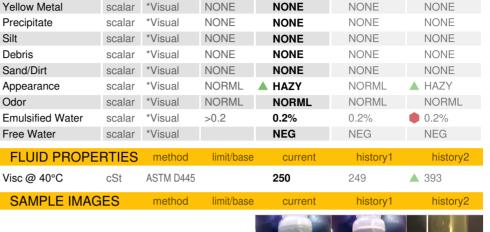




Sep24/21.

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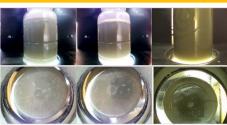


current

NONE

limit/base

NONE



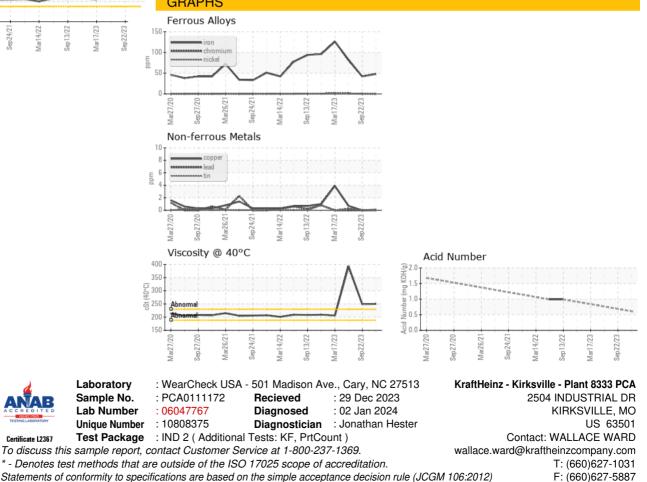
history1

NONE

history2

NONE





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Wilberto Pacheco Garcia