

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **2026838** Component **Transmission** Fluid

NOT GIVEN (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the fluid.

Fluid Condition

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

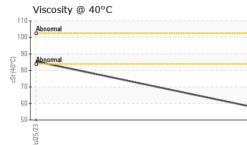
| SAMPLE INFOR | MATION | method | limit/base | current | history1 | history2 |
|--|---|--|--|--|--|--|
| Sample Number | | Client Info | | PCA0108045 | PCA0101093 | |
| Sample Date | | Client Info | | 21 Nov 2023 | 25 Jul 2023 | |
| Machine Age | mls | Client Info | | 396173 | 359796 | |
| Oil Age | mls | Client Info | | 37377 | 359796 | |
| Oil Changed | | Client Info | | Not Changd | Changed | |
| Sample Status | | | | NORMAL | NORMAL | |
| CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | NEG | |
| WEAR METAL | .S | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >200 | 18 | 31 | |
| Chromium | ppm | ASTM D5185m | >10 | <1 | <1 | |
| Nickel | ppm | ASTM D5185m | | <1 | 0 | |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | |
| Silver | ppm | ASTM D5185m | | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >50 | 1 | 4 | |
| Lead | ppm | ASTM D5185m | >50 | 0 | 0 | |
| Copper | ppm | ASTM D5185m | >200 | 56 | 59 | |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | <1 | 8 | |
| Barium | ppm | ASTM D5185m | | 0 | 0 | |
| | | | | | 0 | |
| Molybdenum | ppm | ASTM D5185m | | <1 | 1 | |
| | | ASTM D5185m ASTM D5185m | | <1 7 | | |
| Molybdenum | ppm | | | | 1 | |
| Molybdenum Manganese | ppm ppm | ASTM D5185m | | 7 | 1 6 | |
| Molybdenum Manganese Magnesium Calcium | ppm ppm ppm | ASTM D5185m ASTM D5185m | | 7 4 | 1 6 1 | |
| Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | | 7 4 832 | 1 6 1 668 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | | 7 4 832 733 | 1 6 1 668 592 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base | 7 4 832 733 5 | 1 6 1 668 592 68 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | limit/base >50 | 7 4 832 733 5 4552 | 1 6 1 668 592 68 3917 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method | | 7 4 832 733 5 4552 current | 1 6 1 668 592 68 3917 history1 | |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | >50 | 7 4 832 733 5 4552 current 13 | 1 6 1 668 592 68 3917 history1 51 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >50 | 7 4 832 733 5 4552 <u>current</u> 13 3 | 1 6 1 668 592 68 3917 history1 51 2 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | >50 >20 limit/base NONE | 7 4 832 733 5 4552 current 13 3 1 1 current NONE | 1 6 1 668 592 68 3917 history1 51 2 3 | history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium | 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 | >50 >20 limit/base | 7 4 832 733 5 4552 current 13 3 1 current | 1 6 1 668 592 68 3917 history1 51 2 3 history1 | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal | ppm ppm ppm ppm ppm ppm ppm tTS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual | >50 >20 limit/base NONE | 7 4 832 733 5 4552 current 13 3 1 1 current NONE | 1 6 1 668 592 68 3917 history1 51 2 3 history1 NONE | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal | ppm ppm ppm ppm ppm ppm ppm TTS | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Yisual | >50 >20 limit/base NONE NONE | 7 4 832 733 5 4552 current 13 3 1 1 current NONE NONE | 1 6 1 668 592 68 3917 history1 51 2 3 3 history1 NONE NONE | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate | ppm ppm ppm ppm ppm ppm ppm ypm ypm ppm p | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual | >50 >20 limit/base NONE NONE NONE | 7 4 832 733 5 4552 <i>current</i> 13 3 1 <i>current</i> NONE NONE NONE | 1 6 1 668 592 68 3917 history1 51 2 3 3 history1 NONE NONE NONE NONE | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt | ppm ppm ppm ppm ppm ppm ppm ppm ypm ppm p | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Visual *Visual *Visual | >50 >20 limit/base NONE NONE NONE NONE | 7 4 832 733 5 4552 current 13 3 1 current NONE NONE NONE NONE NONE | 1 6 1 668 592 68 3917 history1 51 2 3 history1 NONE NONE NONE NONE NONE NONE | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris | ppm ppm ppm ppm ppm ppm ppm ppm vrs ppm ppm ppm ppm scalar scalar scalar scalar scalar | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m XASTM D5185m Visual *Visual *Visual *Visual *Visual | >50 >20 limit/base NONE NONE NONE NONE NONE | 7 4 832 733 5 4552 current 13 3 1 current NONE NONE NONE NONE NONE NONE | 1 6 1 668 592 68 3917 history1 51 2 3 history1 NONE NONE NONE NONE NONE NONE NONE | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m XASTM D5185m Visual *Visual *Visual *Visual *Visual *Visual | >50 >20 limit/base NONE NONE NONE NONE NONE | 7 4 832 733 5 4552 <u>current</u> 13 3 1 <u>current</u> NONE NONE NONE NONE NONE NONE NONE | 1 6 1 668 592 68 3917 history1 51 2 3 history1 NONE NONE NONE NONE NONE NONE NONE NON | history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m XASTM D5185m Visual *Visual *Visual *Visual *Visual *Visual *Visual | >50 >20 Iimit/base NONE NONE NONE NONE NONE NONE NONE | 7 4 832 733 5 4552 <i>current</i> 13 3 1 <i>current</i> NONE NONE NONE NONE NONE NONE NONE NON | 1 6 1 668 592 68 3917 history1 51 2 3 history1 NONE NONE NONE NONE NONE NONE NONE NON | history2 history2 history2 |
| Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m XSTM D5185m Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual | >50 20 imit/base NONE NONE NONE NONE NONE NONE NONE NORML NORML | 7 4 832 733 5 4552 <i>current</i> 13 3 1 <i>current</i> NONE NONE NONE NONE NONE NONE NONE NON | 1 6 1 668 592 68 3917 history1 51 2 3 history1 NONE NONE NONE NONE NONE NONE NONE NON | history2 history2 |

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OIL ANALYSIS REPORT

FLUID PROPERTIES method limit/base



| | | Visc @ 40°C | cSt | ASTM D445 | IIIII/Dase | 58.0 | 85.4 | |
|---------------------|---|--|-------------------------------|--|---|----------|-------------------------------|---|
| | | SAMPLE IMA | GES | method | limit/base | current | history1 | history2 |
| | 23 | Color | | | | no image | no image | no image |
| | Nov21/23 | Bottom | | | | no image | no image | no image |
| | | GRAPHS | | | | | | |
| | wow | Ferrous Alloys | als | | Nov21/23 | | | |
| | uou | | | | Nov21/23 | | | |
| | | Viscosity @ 40°C | 2 | | | | | |
| | (2-0-0-) 1820 | 80 75 70 65 60 55 55 52 52 52 52 52 52 52 52 52 52 52 | | | Nov21/23 | | | |
| Sam Lab Uniqu | Package ble report, co nods that ar | e outside of the ISO | Receive Diagnos Diagnos | d : 24 N sed : 28 N stician : Sea 800-237-1369 ope of accred | lov 2023 lov 2023 n Felton <i>itation.</i> | | Contact: NELS nelson.wallace2 | QUARTER RD EWISTON, NC US 27849 ON WALLACE |