

OIL ANALYSIS REPORT

Sample Rating Trend



No UNIT WC0877963

Natural Gas Engine Fluid NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. 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 oil.

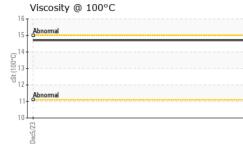
Fluid Condition

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

| | | | | Dec2023 | | |
|---------------|---------------|---------------|------------|-------------|----------|----------|
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | WC0877963 | | |
| Sample Date | | Client Info | | 05 Dec 2023 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| CONTAMINATIO | N | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.1 | NEG | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >50 | 7 | | |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | | |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | | |
| Titanium | ppm | ASTM D5185(m) | | 0 | | |
| Silver | ppm | ASTM D5185(m) | >3 | <1 | | |
| Aluminum | ppm | ASTM D5185(m) | >9 | 1 | | |
| Lead | ppm | ASTM D5185(m) | >30 | <1 | | |
| Copper | ppm | ASTM D5185(m) | >35 | 1 | | |
| Tin | ppm | ASTM D5185(m) | >4 | <1 | | |
| Antimony | ppm | ASTM D5185(m) | | 0 | | |
| Vanadium | ppm | ASTM D5185(m) | | 0 | | |
| Beryllium | ppm | ASTM D5185(m) | | 0 | | |
| Cadmium | ppm | ASTM D5185(m) | | 0 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185(m) | | 15 | | |
| Barium | ppm | ASTM D5185(m) | | <1 | | |
| Molybdenum | ppm | ASTM D5185(m) | | 52 | | |
| Manganese | ppm | ASTM D5185(m) | | 0 | | |
| Magnesium | ppm | ASTM D5185(m) | | 784 | | |
| Calcium | ppm | ASTM D5185(m) | | 1210 | | |
| Phosphorus | ppm | ASTM D5185(m) | | 646 | | |
| Zinc | ppm | ASTM D5185(m) | | 871 | | |
| Sulfur | ppm | ASTM D5185(m) | | 1951 | | |
| Lithium | ppm | ASTM D5185(m) | | <1 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185(m) | >+100 | 4 | | |
| Sodium | ppm | ASTM D5185(m) | | 3 | | |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | | |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | ASTM D7844* | | 0 | | |
| Nitration | Abs/cm | ASTM D7624* | >20 | 11.1 | | |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 22.3 | | |
| FLUID DEGRADA | | method | limit/base | current | history1 | history2 |
| | | | | | , | |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 19.5 | | |



OIL ANALYSIS REPORT



| 0°C | | | VISUAL | | method | limit/base | current | history1 | history2 |
|-----|---------|----------------------------------|--------------------|--|---|---------------------------------------|---------------|---------------------------------------|---|
| | | ٧ | Vhite Metal | scalar | Visual* | NONE | NONE | | |
| | | Y | ellow Metal | scalar | Visual* | NONE | NONE | | |
| | | F | Precipitate | scalar | Visual* | NONE | NONE | | |
| | | S | Silt | scalar | Visual* | NONE | NONE | | |
| | | D | Debris | scalar | Visual* | NONE | NONE | | |
| | | S | Sand/Dirt | scalar | Visual* | NONE | NONE | | |
| | Dec5/23 | A | Appearance | scalar | Visual* | NORML | NORML | | |
| | De | C | Odor | scalar | Visual* | NORML | NORML | | |
| | | E | Emulsified Water | scalar | Visual* | >0.1 | NEG | | |
| | | F | Free Water | scalar | Visual* | | NEG | | |
| | | | FLUID PROPERT | TIES | method | limit/base | current | history1 | history2 |
| | | ٧ | /isc @ 100°C | cSt | ASTM D7279(m) | | 14.7 | | |
| | | | GRAPHS | | | | | | |
| | | | Iron (ppm) | | | | Lead (ppm) | | |
| | | 100. | Severe | | | 60 | 0 | | |
| | | 80. | • | | | 40 | i i | | |
| | | E 60. | Abnormal | | | <u> </u> | | | |
| | | 40. | • ; | | | 20 | | | |
| | | 20. | | | | 10 | | | |
| | | 0. | Dec5/23 | | | Dec5/23 | Dec5/23 | | Dec5/23 - |
| | | | | | | De | | | De |
| | | 20- | Aluminum (ppm) | | | | Chromium (pp | om) | |
| | | 15. | Severe | | | | Severe | | |
| | | ۳ 4 10 | Abnormal | | | E.4 | Abnormal | | |
| | | a | | | | | | | |
| | | 5. | | | | | 2 + | | |
| | | 0. | 23 | | | 23 | | | 23 |
| | | | Dec5/23 | | | Dec5/23 | Dec5/23 | | Dec5/23 |
| | | | Copper (ppm) | | | | Silicon (ppm) | | |
| | | 80. | Severe | | | 200 | Severe | | |
| | | 60- | | | | | | | |
| | | 튭 40 · | Abnormal | | | 톱 100 | Abnormal | | |
| | | 20. | | | | | | | |
| | | 20. | | | | 50 | 1 | | |
| | | 0. | 53 | | | 53 | | | 23 |
| | | | Dec5/23 | | | Dec5/23 | Dec5/23 | | Dec5/23 |
| | | | Viscosity @ 100°C | | | | Additives | | |
| | | 16· 15· | Abnormal | | | 1400 | calcium | 1 | |
| | | | | | | 1200 | | ŝ | |
| | | () 14. () 00 13. 12. | | | | 틆1000 | | | |
| | | ₹ <u>3</u> 12• | Abnormal | | | 800 | | | |
| | | 11- | | | | 600 | | | |
| | | 10 | Dec5/23 - | | | Dec5/23 | Dec5/23 | | Dec5/23 - |
| | | | Dec | | | Dec | Dec | | Dec |
| | | : \ : (: t : N coni | 02601208 | Received Diagnose Diagnose Tests: Vis ice at 1-8 | d : 06 ed : 06 tician : We sual) 800-268-213 | Dec 2023 Dec 2023 s Davis 1. | 2200 UPPE | R JAMES,, MOUNTAIN T MOL Contae | DF HAMILTON RANSIT STOREROOM NT HOPE, ON CA LOR 1W0 ct: Ron Skinner er@hamilton.ca T: |
| | | | n are based on the | | | | | F: | (905)679-4502 |

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