

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id MRC-296 Component Natural Gas Engine Fluid LO-ASH ENGINE OIL SAE 40 (--- 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 BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | May2023 | Jul2023 Jul2023 | Aug2023 Sep2023 Oct2023 | Nov2023 | |
|------------------|---------------|-------------|-----------------|-------------------------|-------------|-------------|
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | TO60001719 | TO60001665 | TO60001430 |
| Sample Date | | Client Info | | 04 Nov 2023 | 12 Oct 2023 | 05 Sep 2023 |
| Machine Age | hrs | Client Info | | 5854 | 5670 | 4369 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >50 | 3 | 4 | 5 |
| Chromium | ppm | ASTM D5185m | >4 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | <1 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >30 | 12 | 14 | 9 |
| Copper | ppm | ASTM D5185m | >35 | 2 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | <1 |
| 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 | 37 | 53 | 59 | 64 |
| Barium | ppm | ASTM D5185m | 12 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 200 | 0 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 5 | 10 | 8 | 13 |
| Calcium | ppm | ASTM D5185m | 1600 | 1302 | 1392 | 1440 |
| Phosphorus | ppm | ASTM D5185m | 300 | 211 | 288 | 292 |
| Zinc | ppm | ASTM D5185m | 400 | 325 | 340 | 343 |
| Sulfur | ppm | ASTM D5185m | 2600 | 1709 | 1627 | 2123 |
| CONTAMINANTS | ; | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >+100 | 1 | 1 | 2 |
| Sodium | ppm | ASTM D5185m | | 4 | 4 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 2 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | | 0 | 0 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.1 | 9.3 | 10.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.1 | 19.1 | 21.9 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.4 | 19.2 | 20.6 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.13 | 1.36 | 1.35 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 3.0 | 3.35 | 3.37 | 3.37 |
| · · / | - 0 | | | | | |



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NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

NEG

NEG

152

14.6

Acid Number

94

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

NEG

NEG

151

14.7

95

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

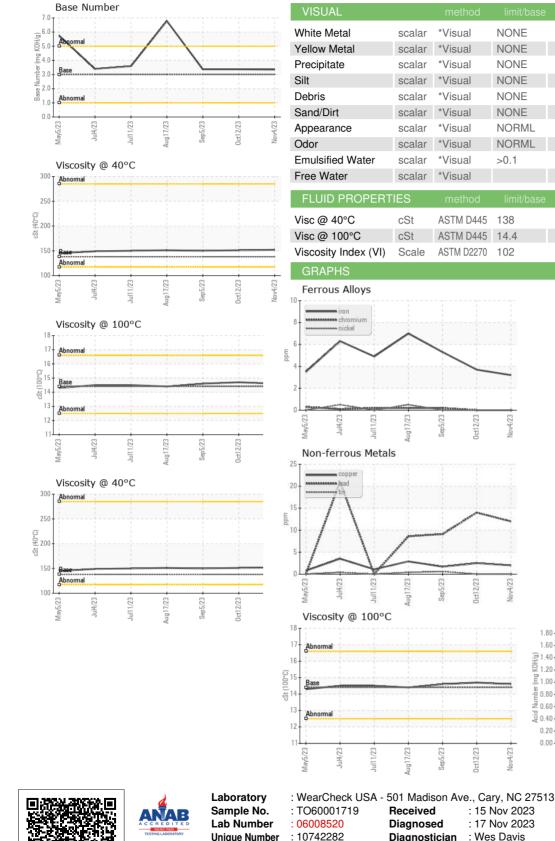
NEG

NEG

150

14.6

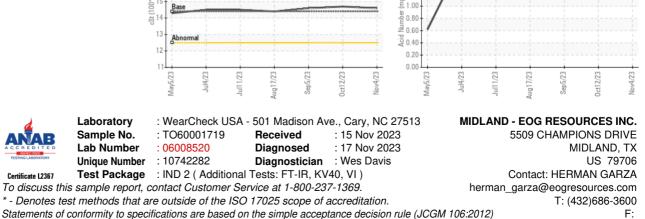
95



Test Package : IND 2 (Additional Tests: FT-IR, KV40, VI)

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.



Report Id: EOGMID [WUSCAR] 06008520 (Generated: 11/17/2023 18:07:20) Rev: 1

Certificate L2367

Contact/Location: HERMAN GARZA - EOGMID