

OIL ANALYSIS REPORT

CONSTRUCTORS, INC 040651

Component **Gasoline Engine**

MOBIL 1 5W30 (--- GAL)

Sample Rating Trend



Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

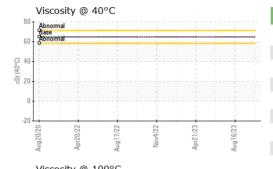
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | Aug2020 | Apr2022 Aug2022 | Nov2022 Apr2023 Ar | 192023 | |
|------------------|----------|-------------|-----------------|--------------------|-------------|-------------|
| SAMPLE INFORM | ATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | SBP0004949 | SBP0004736 | SBP0004516 |
| Sample Date | | Client Info | | 09 Nov 2023 | 16 Aug 2023 | 22 Jun 2023 |
| Machine Age | hrs | Client Info | | 5729 | 5409 | 5137 |
| Oil Age | hrs | Client Info | | 320 | 272 | 230 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| CONTAMINATION | l | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >150 | 2 | 5 | 7 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >40 | 2 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >155 | 0 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | 0 | <1 | 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 | 94 | 61 | 44 | 44 |
| Barium | ppm | ASTM D5185m | 0.0 | 0 | 0 | 4 |
| Molybdenum | ppm | ASTM D5185m | 0.0 | 70 | 73 | 67 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 1388 | 532 | 507 | 458 |
| Calcium | ppm | ASTM D5185m | 820 | 1240 | 1246 | 1110 |
| Phosphorus | ppm | ASTM D5185m | 720 | 709 | 673 | 601 |
| Zinc | ppm | ASTM D5185m | 780 | 825 | 816 | 731 |
| Sulfur | ppm | ASTM D5185m | 2240 | 2695 | 2934 | 2826 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >30 | 8 | 6 | 7 |
| Sodium | ppm | ASTM D5185m | >400 | 0 | 1 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 1 |
| INFRA-RED | | method | limit/base | current | history1 | history2 |
| Soot % | % | *ASTM D7844 | | 0 | 0 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.5 | 8.2 | 9.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.7 | 19.3 | 21.5 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.1 | 13.3 | 16.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | - | 4.9 | 4.8 | 3.9 |
| (2.1) | .59 | | | | | |



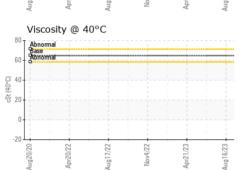
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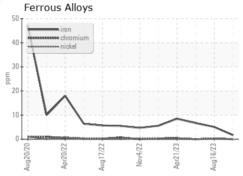


| VISUAL | | method | | | | history2 |
|-------------------------|--------|---------|-------|-------|-------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | 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 | >0.2 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| | | | | | | |

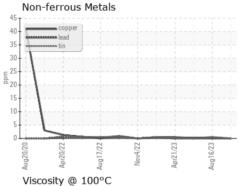
| Abnormal | 1 1 | | | |
|----------------------------------|---------|-------|---|---------|
| | | | | |
| Base | | **** | *************************************** | |
| | | | ^ | |
| Abnormal | | | | |
| 9 7 | | | | |
| Aug20/20 + Aug20/20 + Apr20/22 + | 22 - | 22 - | 23 - | 23 |
| Aug20/ Apr20/ | Aug17// | Nov4/ | Apr21/2 | Aug16/2 |

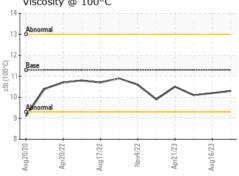


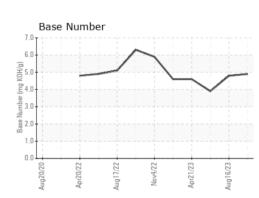




GRAPHS











Laboratory Sample No. Lab Number Unique Number

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : SBP0004949 : 06010087 : 10749231

Received Diagnosed

: 16 Nov 2023 : 20 Nov 2023 Diagnostician : Don Baldridge

Test Package : FLEET (Additional Tests: KV40)

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

Constructors Inc. - 603659

1815 Y Street Lincoln, NE US 68508

Contact: Jack Linhart jackl@constructorslincoln.com

T: (402)434-2157