



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id

G1
Component
Diesel Engine
Fluid

DISEL ENGINE OIL SAE 15W40 (--- QTS)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

▲ Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info | | RW0005560 | --- | --- |
| Sample Date | Client Info | | 02 Apr 2024 | --- | --- |
| Machine Age | hrs | Client Info | 350 | --- | --- |
| Oil Age | hrs | Client Info | 46 | --- | --- |
| Oil Changed | Client Info | | N/A | --- | --- |
| Sample Status | | | ABNORMAL | --- | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | --- | --- |
| Water | WC Method | >0.2 | NEG | --- | --- |
| Glycol | WC Method | | NEG | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >100 | <1 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | 0 | --- | --- |
| Nickel | ppm | ASTM D5185m >4 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | <1 | --- | --- |
| Silver | ppm | ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m >20 | <1 | --- | --- |
| Lead | ppm | ASTM D5185m >40 | 0 | --- | --- |
| Copper | ppm | ASTM D5185m >330 | <1 | --- | --- |
| Tin | ppm | ASTM D5185m >15 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 250 | 26 | --- | --- |
| Barium | ppm | ASTM D5185m 10 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m 100 | 14 | --- | --- |
| Manganese | ppm | ASTM D5185m | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m 450 | 234 | --- | --- |
| Calcium | ppm | ASTM D5185m 3000 | 2058 | --- | --- |
| Phosphorus | ppm | ASTM D5185m 1150 | 957 | --- | --- |
| Zinc | ppm | ASTM D5185m 1350 | 1041 | --- | --- |
| Sulfur | ppm | ASTM D5185m 4250 | 3889 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | ▲ 113 | --- | --- |
| Sodium | ppm | ASTM D5185m >158 | 2 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 0 | --- | --- |

INFRA-RED

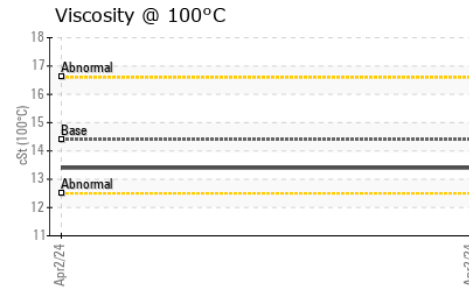
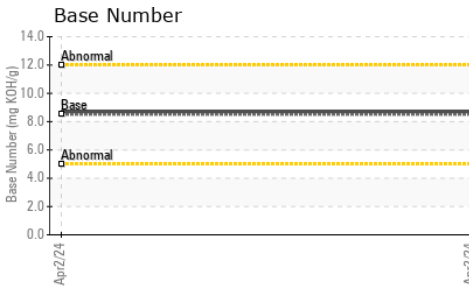
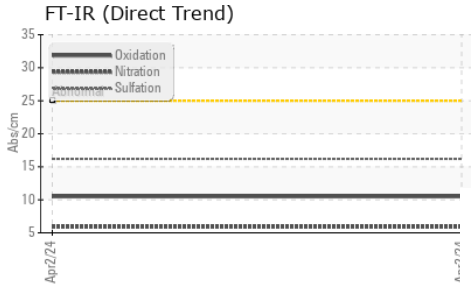
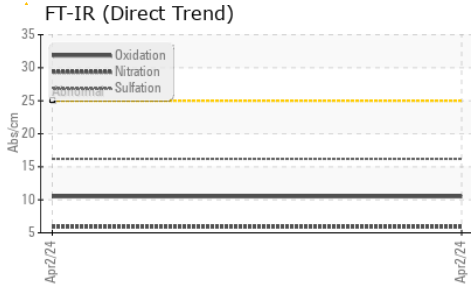
| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 5.9 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 16.2 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 10.5 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 8.5 | 8.71 | --- | --- |



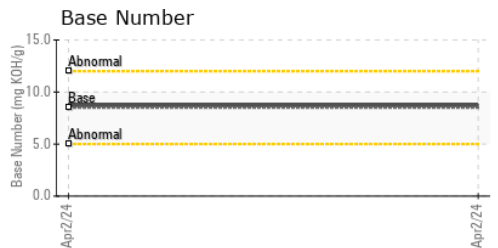
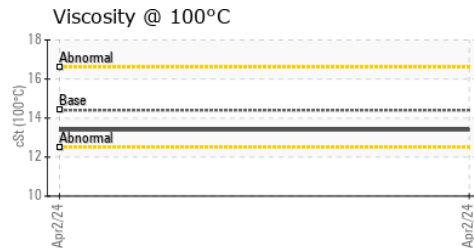
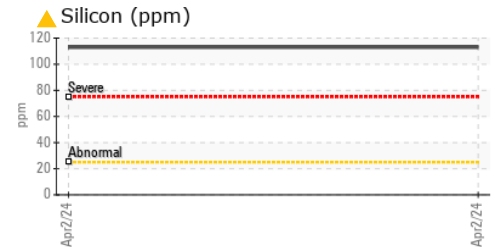
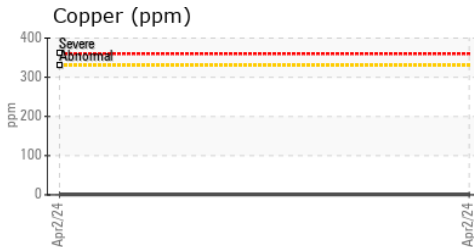
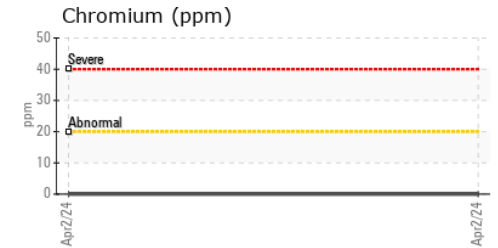
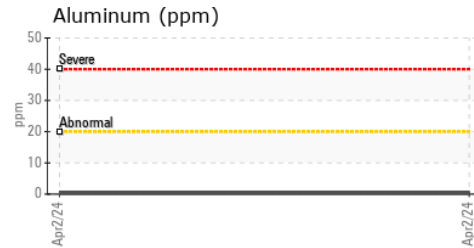
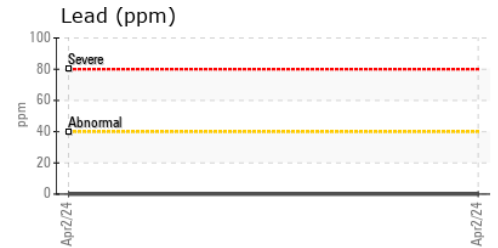
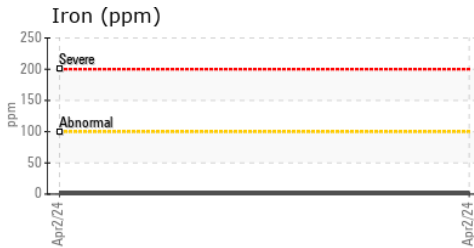
OIL ANALYSIS REPORT



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | --- | --- |
| Precipitate | scalar | *Visual | NONE | --- | --- |
| Silt | scalar | *Visual | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.2 | --- | --- |
| Free Water | scalar | *Visual | --- | --- | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.4 | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : RW0005560
 Lab Number : 06141539
 Unique Number : 10966347
 Test Package : MOB 2

Received : 08 Apr 2024
 Tested : 09 Apr 2024
 Diagnosed : 10 Apr 2024 - Sean Felton

CITY OF SAGINAW - WATER TREATMENT DIVISION
 522 EZRA RUST DR
 SAGINAW, MI
 US 48601
 Contact: Service Manager

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)

T:
F: