



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
J12
 Component
Diesel Engine
 Fluid
SAE 5W20 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

No visible metal present. All component wear rates are normal.

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 | | WC0782394 | --- | --- |
| Sample Date | Client Info | | 03 Feb 2023 | --- | --- |
| Machine Age | mls | Client Info | 100848 | --- | --- |
| Oil Age | mls | Client Info | 0 | --- | --- |
| Oil Changed | Client Info | | Changed | --- | --- |
| 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 | 27 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m >4 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | <1 | --- | --- |
| Silver | ppm | ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m >20 | 3 | --- | --- |
| Lead | ppm | ASTM D5185m >40 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m >330 | 1 | --- | --- |
| Tin | ppm | ASTM D5185m >15 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | <1 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 54 | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 204 | --- | --- |
| Manganese | ppm | ASTM D5185m | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 428 | --- | --- |
| Calcium | ppm | ASTM D5185m | 1038 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 570 | --- | --- |
| Zinc | ppm | ASTM D5185m | 593 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2263 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|-------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | ▲ 28 | --- | --- |
| Sodium | ppm | ASTM D5185m | 3 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 2 | --- | --- |

INFRA-RED

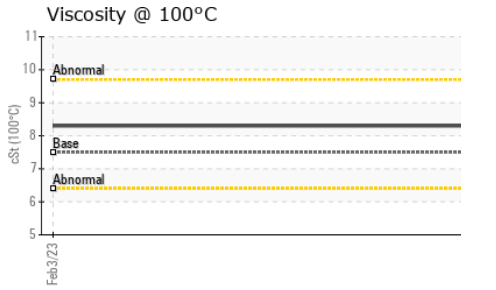
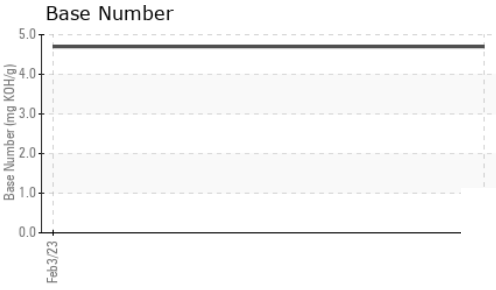
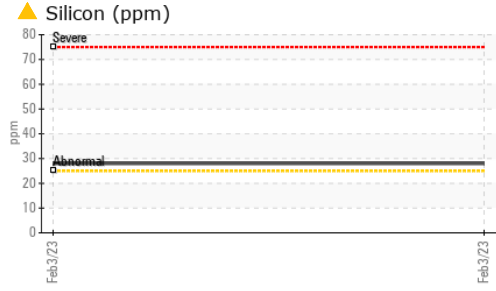
| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 8.3 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 17.7 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 11.9 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 4.7 | --- | --- |



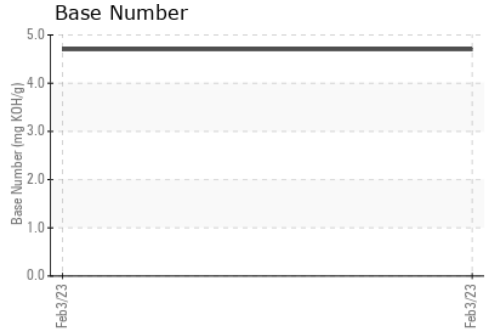
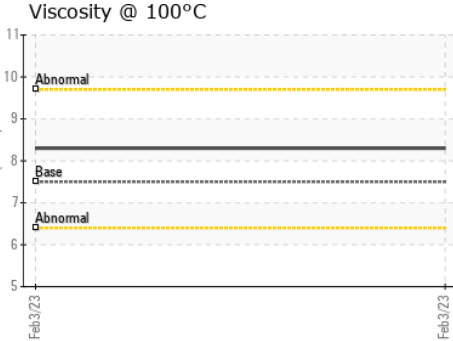
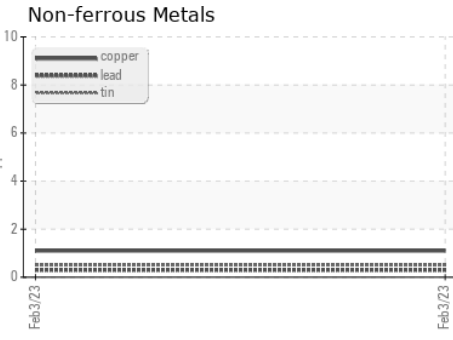
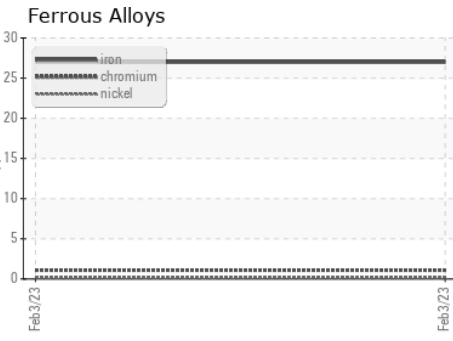
OIL ANALYSIS REPORT



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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|------------|----------|-----|
| Visc @ 100°C | cSt | ASTM D445 | 7.5 | 8.3 | --- | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0782394 **Received** : 06 Feb 2023
Lab Number : **05759939** **Diagnosed** : 08 Feb 2023
Unique Number : 10324546 **Diagnostician** : Doug Bogart
Test Package : FLEET

MOSBYs TOWING & TRANSPORT LLC
 3119 DIXIE HIGHWAY
 LOUISVILLE, KY
 US 40216
 Contact: BRIAN JOHNS
 brian@mosbystow.com
 T: (502)447-1234
 F: (502)242-9286

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)