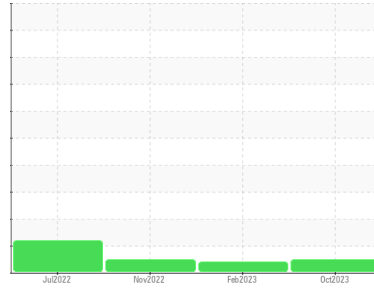




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[41666859]

Machine Id
9691

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | WC0853408 | WC0737646 | WC0737868 |
| Sample Date | Client Info | | | 07 Oct 2023 | 26 Feb 2023 | 11 Nov 2022 |
| Machine Age | kms | Client Info | | 241661 | 157450 | 108228 |
| Oil Age | kms | Client Info | | 0 | 0 | 0 |
| Oil Changed | Client Info | | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|----------------|----------|----------|
| Fuel | WC Method | | >3.0 | <1.0 | 1.7 | <1.0 |
| Glycol | WC Method | | | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) | >90 | 20 | 28 | 33 |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | 1 | 2 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 5 | 8 | 14 |
| Lead | ppm | ASTM D5185(m) | >40 | 3 | 4 | 7 |
| Copper | ppm | ASTM D5185(m) | >330 | 2 | 3 | 8 |
| Tin | ppm | ASTM D5185(m) | >15 | <1 | 1 | 2 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|---------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) | 250 | 23 | 32 | 26 |
| Barium | ppm | ASTM D5185(m) | 10 | <1 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 100 | <1 | 6 | 20 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 1 | 2 |
| Magnesium | ppm | ASTM D5185(m) | 450 | 749 | 756 | 713 |
| Calcium | ppm | ASTM D5185(m) | 3000 | 1363 | 1455 | 1482 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 681 | 771 | 792 |
| Zinc | ppm | ASTM D5185(m) | 1350 | 791 | 789 | 863 |
| Sulfur | ppm | ASTM D5185(m) | 4250 | 2434 | 2537 | 2479 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

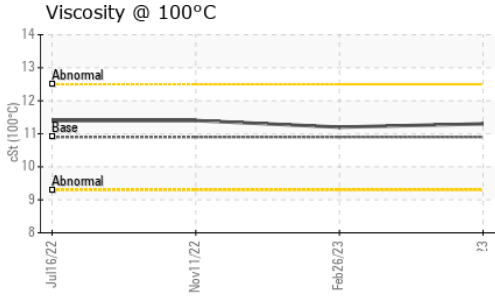
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|---------------|------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185(m) | >25 | 6 | 8 | 13 |
| Sodium | ppm | ASTM D5185(m) | | 3 | 3 | 4 |
| Potassium | ppm | ASTM D5185(m) | >20 | 10 | 22 | 38 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot % | % | ASTM D7844* | >6 | 0.1 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 9.8 | 10.3 | 10.2 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 23.0 | 26.1 | 24.3 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 18.8 | 19.8 | 20.7 |



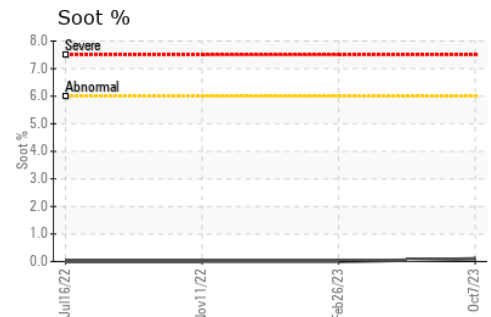
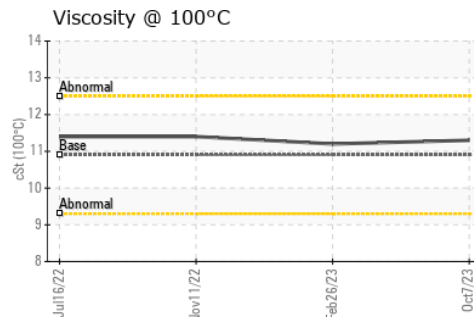
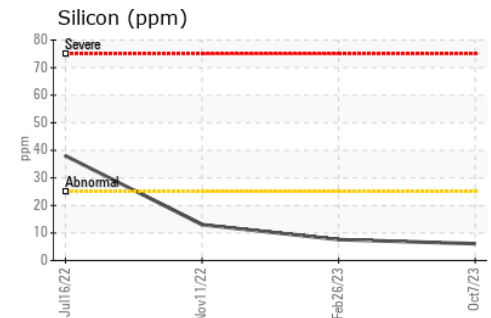
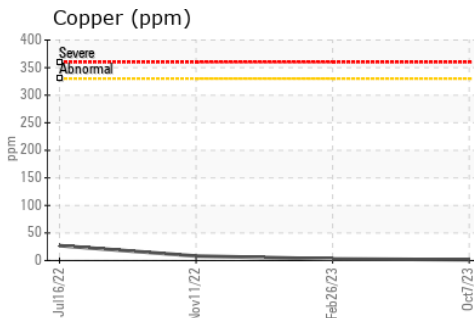
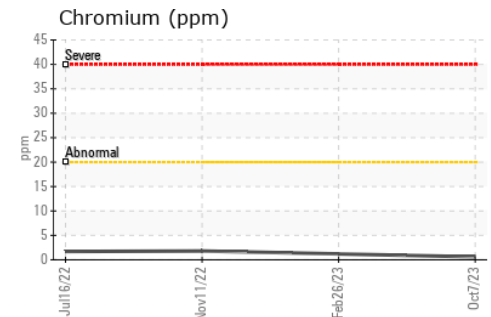
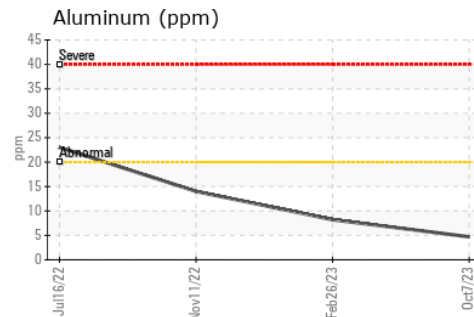
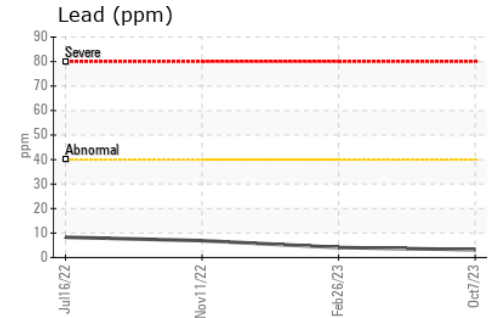
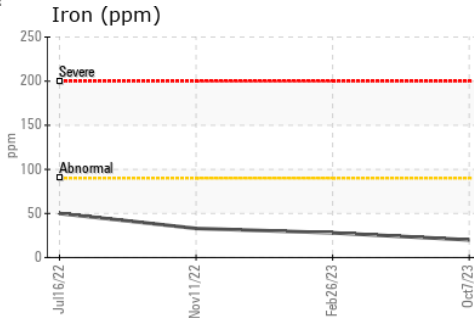
OIL ANALYSIS REPORT



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|---------------|---------|----------|----------|------|
| Visc @ 100°C | cSt | ASTM D7279(m) | 10.9 | 11.3 | ▲ 11.2 | 11.4 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853408 **Received** : 17 Oct 2023
Lab Number : 02589518 **Diagnosed** : 17 Oct 2023
Unique Number : 5658584 **Diagnostician** : Wes Davis
Test Package : MOB 1

Rush Truck Centres
 7450 Torbram Rd.
 Mississauga, ON
 CA L4T 1G9
 Contact: Serdar Okur
 sokur@rushtruckcentres.ca
 T: (905)671-7600
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.