

OIL ANALYSIS REPORT

30090

Component **Diesel Engine**

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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

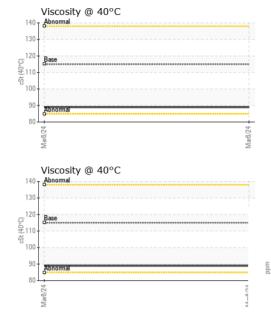
Fluid Condition

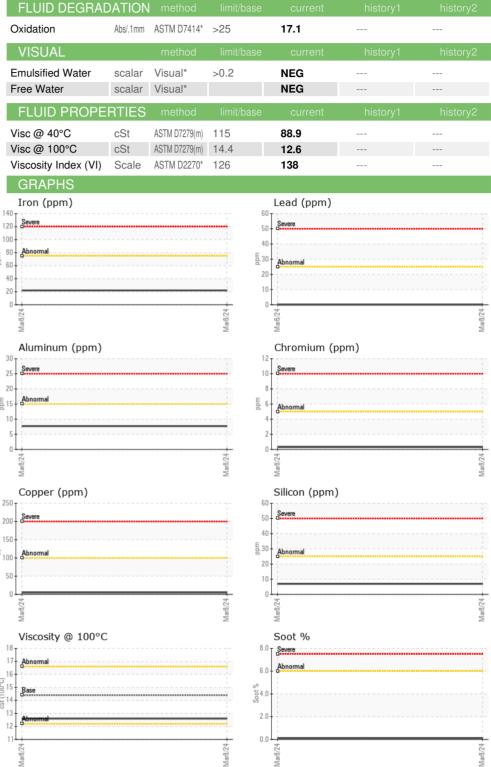
The condition of the oil is acceptable for the time in service.

| Water WC Method Solution WC Method WC Method | | | | | Mar2024 | | |
|--|--------------|---------|---------------|------------|---------|----------|----------|
| Company Comp | SAMPLE INFOR | RMATION | method | limit/base | current | history1 | history2 |
| Contact Cont | | | | | | | |
| Machine Age mths Client Info 0 . | • | | | | | | |
| Coli Age | • | mthe | | | | | |
| Contamped Client Info N/A NORMAL CONTAMINATION method limit/base current history1 history2 Mater WC Method 23.0 <1.0 Contamination Contaminati | • | | | | | | |
| CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 | - | 1111113 | | | - | | |
| CONTAMINATION | - | | Client inio | | | | |
| Water WC Method Solution Water WC Method WC Method NEG WC Method N | · | | | | | | |
| Water WC Method So.2 NEG So.2 NEG So.3 WC Method WC Method NEG So.3 S | CONTAMINAT | TION | method | limit/base | current | history1 | history2 |
| WEAR METALS | Fuel | | | | | | |
| WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >75 22 Chromium ppm ASTM D5185(m) >4 0 Nickel ppm ASTM D5185(m) >2 <1 | | | | >0.2 | _ | | |
| Chromium | Glycol | | WC Method | | NEG | | |
| Chromium | WEAR METAL | _S | method | limit/base | current | history1 | history2 |
| Nickel | Iron | ppm | ASTM D5185(m) | >75 | 22 | | |
| Titanium | Chromium | ppm | ASTM D5185(m) | >5 | <1 | | |
| Silver | Nickel | ppm | ASTM D5185(m) | >4 | 0 | | |
| Aluminum | Titanium | ppm | ASTM D5185(m) | >2 | <1 | | |
| Lead | Silver | ppm | ASTM D5185(m) | >2 | 0 | | |
| Copper | Aluminum | ppm | ASTM D5185(m) | >15 | 8 | | |
| Tin | Lead | ppm | ASTM D5185(m) | >25 | 0 | | |
| Antimony | Copper | | ASTM D5185(m) | >100 | 5 | | |
| Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 250 7 Barium ppm ASTM D5185(m) 10 <1 Molybdenum ppm ASTM D5185(m) 100 55 Manganese ppm ASTM D5185(m) 1 Magnesium ppm ASTM D5185(m) 3000 1167 Phosphorus ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) >25 7 | Tin | ppm | ASTM D5185(m) | >4 | 0 | | |
| Description | Antimony | ppm | ASTM D5185(m) | | 0 | | |
| ADDITIVES | Vanadium | ppm | ASTM D5185(m) | | 0 | | |
| ADDITIVES | Beryllium | ppm | ASTM D5185(m) | | 0 | | |
| Boron ppm ASTM D5185(m) 250 7 | Cadmium | ppm | ASTM D5185(m) | | 0 | | |
| Barium | ADDITIVES | | method | limit/base | current | history1 | history2 |
| Molybdenum ppm ASTM D5185(m) 100 55 Manganese ppm ASTM D5185(m) 450 836 Calcium ppm ASTM D5185(m) 3000 1167 Phosphorus ppm ASTM D5185(m) 1150 960 Zinc ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) 4250 2512 Lithium ppm ASTM D5185(m) <1 | Boron | ppm | ASTM D5185(m) | 250 | 7 | | |
| Manganese ppm ASTM D5185(m) 1 Magnesium ppm ASTM D5185(m) 450 836 Calcium ppm ASTM D5185(m) 3000 1167 Phosphorus ppm ASTM D5185(m) 1150 960 Zinc ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) 4250 2512 Lithium ppm ASTM D5185(m) <1 | Barium | ppm | ASTM D5185(m) | 10 | <1 | | |
| Magnesium ppm ASTM D5185(m) 450 836 Calcium ppm ASTM D5185(m) 3000 1167 Phosphorus ppm ASTM D5185(m) 1150 960 Zinc ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) 4250 2512 Lithium ppm ASTM D5185(m) <1 | Molybdenum | ppm | ASTM D5185(m) | 100 | 55 | | |
| Calcium ppm ASTM D5185(m) 3000 1167 Phosphorus ppm ASTM D5185(m) 1150 960 Zinc ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) 4250 2512 Lithium ppm ASTM D5185(m) <1 | Manganese | ppm | ASTM D5185(m) | | 1 | | |
| Phosphorus | Magnesium | ppm | ASTM D5185(m) | 450 | 836 | | |
| Zinc ppm ASTM D5185(m) 1350 1150 Sulfur ppm ASTM D5185(m) 4250 2512 | Calcium | ppm | ASTM D5185(m) | 3000 | 1167 | | |
| Sulfur ppm ASTM D5185(m) 4250 2512 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 7 Sodium ppm ASTM D5185(m) >158 2 Potassium ppm ASTM D5185(m) >20 29 INFRA-RED method limit/base current history1 history2 Soot % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | Phosphorus | ppm | ASTM D5185(m) | 1150 | 960 | | |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 7 Sodium ppm ASTM D5185(m) >158 2 Potassium ppm ASTM D5185(m) >20 29 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | Zinc | ppm | ASTM D5185(m) | 1350 | 1150 | | |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 7 Sodium ppm ASTM D5185(m) >158 2 Potassium ppm ASTM D5185(m) >20 29 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | Sulfur | ppm | ASTM D5185(m) | 4250 | 2512 | | |
| Silicon ppm ASTM D5185(m) >25 7 | Lithium | ppm | ASTM D5185(m) | | <1 | | |
| Sodium ppm ASTM D5185(m) >158 2 Potassium ppm ASTM D5185(m) >20 29 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | CONTAMINAN | NTS _ | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185(m) >20 29 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | Silicon | ppm | ASTM D5185(m) | >25 | 7 | | |
| INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | Sodium | ppm | ASTM D5185(m) | >158 | 2 | | |
| Soot % % ASTM D7844* >6 0.1 Nitration Abs/cm ASTM D7624* >20 8.3 | Potassium | ppm | ASTM D5185(m) | >20 | 29 | | |
| Nitration Abs/cm ASTM D7624* >20 8.3 | INFRA-RED | | method | limit/base | current | history1 | history2 |
| Nitration Abs/cm ASTM D7624* >20 8.3 | Soot % | % | ASTM D7844* | >6 | 0.1 | | |
| | Nitration | | | | | | |
| | Sulfation | | | | | | |



OIL ANALYSIS REPORT







CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

Lab Number

: 02624573 Unique Number : 5749692

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : PC0088429 Received **Tested**

Diagnosed

: 26 Mar 2024 : 26 Mar 2024 : 26 Mar 2024 - Wes Davis

Test Package : MOB 1 (Additional Tests: KV40, VI)

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.

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