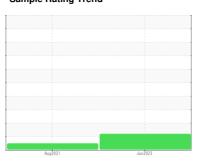


# **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id 7840 Component

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 40 (--- GAL)** 

## DIAGNOSIS

#### Recommendation

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

#### Contamination

Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil.

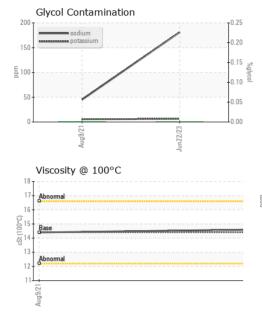
### ▲ Fluid Condition

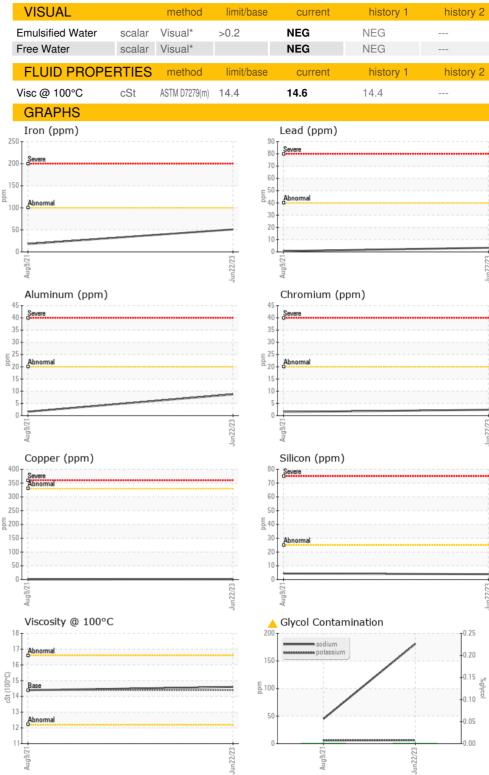
The condition of the oil is acceptable for the time in service (see recommendation).

			Aug2021	Jun2023		
SAMPLE INFORI	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0084237	GFL0020833	
Sample Date		Client Info		22 Jun 2023	09 Aug 2021	
Machine Age	kms	Client Info		296354	0	
Oil Age	kms	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				ATTENTION	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>100	51	18	
Chromium	ppm	ASTM D5185(m)	>20	2	2	
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	0	<1	
Aluminum	ppm	ASTM D5185(m)	>20	9	2	
Lead	ppm	ASTM D5185(m)	>40	3	<1	
Copper	ppm	ASTM D5185(m)	>330	1	<1	
Tin	ppm	ASTM D5185(m)	>15	0	<1	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
		\ /				
Cadmium	ppm	ASTM D5185(m)		0	0	
Cadmium ADDITIVES	ppm	ASTM D5185(m)  method	limit/base	0 current	0 history 1	history 2
	ppm	. ,	limit/base			
ADDITIVES		method		current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185(m)	250	current 3	history 1	history 2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	250 10	current 3 0	history 1 13 0	history 2
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10	current 3 0 69	history 1 13 0 60	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese	ppm ppm ppm	method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	250 10 100	current 3 0 69 <1	history 1 13 0 60 <1	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium	ppm ppm ppm ppm	method  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)	250 10 100 450	current 3 0 69 <1 1134	history 1  13  0  60  <1  994	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium	ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000	current 3 0 69 <1 1134 1189	history 1  13  0  60  <1  994  1057	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150	current  3  0 69 <1 1134 1189 1173	history 1  13  0 60 <1 994 1057 1117	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc	ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350	current  3  0 69 <1 1134 1189 1173 1362	history 1  13  0 60 <1 994 1057 1117 1213	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350	current  3 0 69 <1 1134 1189 1173 1362 2608	history 1  13  0  60  <1  994  1057  1117  1213  2815	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	current  3 0 69 <1 1134 1189 1173 1362 2608 <1	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1	history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current	history 1  13  0  60  <1  994  1057  1117  1213  2815  <1  history 1	history 2 history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINAN  Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 limit/base >25	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current 4	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1 4	history 2 history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINAN  Silicon  Sodium	ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250  limit/base >25 >216	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current 4 ▲ 181	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1  4 45	history 2 history 2 history 2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  Lithium  CONTAMINAN  Silicon  Sodium  Potassium	ppm	Method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250  limit/base >25 >216	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current 4 ▲ 181 6	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1  4 45 6	history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol	ppm	method  ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250  limit/base >25 >216 >20	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current 4  181 6 0.0	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1  4 45 6 0.0	history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m)  ASTM D7922*  method	250 10 100 450 3000 1150 1350 4250  limit/base >25 >216 >20	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current  4 ▲ 181 6 0.0 current	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1  4 45 6 0.0 history 1	history 2 history 2 history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium  CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m) ASTM D7922*  method  ASTM D7844*	250 10 100 450 3000 1150 1350 4250  limit/base >25 >216 >20  limit/base >3	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current 4 ▲ 181 6 0.0 current 0.3	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1  4 45 6 0.0 history 1 0.2	history 2 history 2 history 2 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185(m) ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624*	250 10 100 450 3000 1150 1350 4250  limit/base >25 >216 >20  limit/base >3 >20	current  3 0 69 <1 1134 1189 1173 1362 2608 <1 current 4 ▲ 181 6 0.0 current 0.3 10.7	history 1  13  0 60 <1 994 1057 1117 1213 2815 <1 history 1  4 45 6 0.0 history 1  0.2 8.0	history 2 history 2 history 2 history 2



## **OIL ANALYSIS REPORT**







CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number

: 02567216 : 5604262

: GFL0084237 Received

Diagnosed Diagnostician : Kevin Marson Test Package : MOB 1 (Additional Tests: Glycol)

: 29 Jun 2023 : 29 Jun 2023

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 252 - GTA Hauling 3668 Weston Road North York, ON CA M9L 1W2 Contact: Amanda Cipollone

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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F: