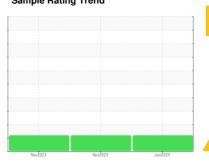


OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id 7503 Diesel Engine

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

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

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. Light fuel dilution occurring. No other contaminants were detected in the oil.

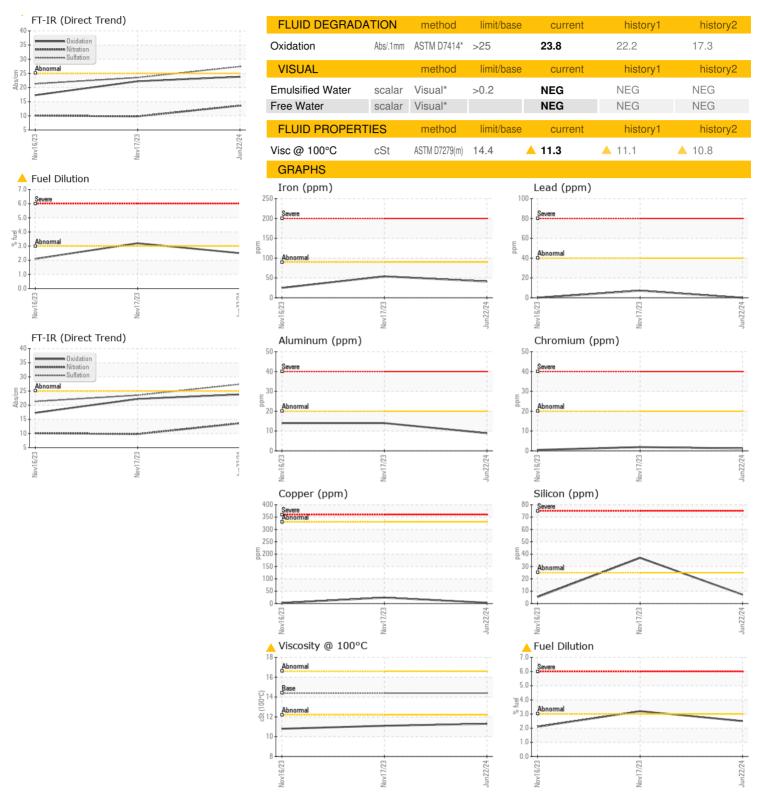
Fluid Condition

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

Sample Date Client Info 22 Jun 2024 17 Nov 2023 16 Nov 2023 17 Nov 2023			No	v2023	Nov2023 Jun20	24	
Sample Date Client Info 22 Jun 2024 17 Nov 2023 16 Nov 2023	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age kms	Sample Number		Client Info		WC0924246	WC0853083	WC0796585
Dit Changed ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 NEG N	Sample Date		Client Info		22 Jun 2024	17 Nov 2023	16 Nov 2023
Changed Changed Changed ABNORMAL	Machine Age	kms	Client Info		332430	41455	70706
ABNORMAL ABNORMAL	Oil Age	kms	Client Info		0	0	0
Valer	Oil Changed		Client Info		Changed	Changed	Changed
Vater WC Method >0.2 NEG Ned Litter Ned NEG NEG Ned NEG Ned NEG A	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
NEG Neg	CONTAMINATION	١	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 fon ppm ASTM D5185(m) >20 41 54 25 chromium ppm ASTM D5185(m) >20 1 2 <1 clickel ppm ASTM D5185(m) >2 <1 <1 <1 citanium ppm ASTM D5185(m) >2 <1 <1 0 distrer ppm ASTM D5185(m) >2 <1 <1 0 duminum ppm ASTM D5185(m) >20 9 14 14 ead ppm ASTM D5185(m) >40 0 7 <1 copper ppm ASTM D5185(m) >15 0 3 0 cin ppm ASTM D5185(m) >15 0 0 0 cin ppm ASTM D5185(m) 0 0 0 0 cardium ppm ASTM D5185(m) 0 0	Water		WC Method	>0.2	NEG	NEG	NEG
Description	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185(m) >20	WEAR METALS		method	limit/base	current	history1	history2
Astronomic As	Iron	ppm	ASTM D5185(m)	>90	41	54	25
Site in titin im ppm ASTM D5188(m) >2 0 0 0 Silver ppm ASTM D5188(m) >2 <1 <1 0 Muminum ppm ASTM D5188(m) >20 9 14 14 ead ppm ASTM D5188(m) >40 0 7 <1 Copper ppm ASTM D5188(m) >330 3 24 3 Zin ppm ASTM D5188(m) >15 0 3 0 Vanition ppm ASTM D5188(m) 0 0 0 Jame of third ppm ASTM D5188(m) 0 0 0 Jame of third ppm ASTM D5188(m) 0 0 0 Jame of third ppm ASTM D5188(m) 0 0 0 ADDITIVES method limit/base current history1 history2 history2 Boron ppm ASTM D5188(m) 0 0 0 0 Adaptesium ppm ASTM D5188(m) 100 3 62 2 2 Adanganese ppm ASTM D5188(m) 450 681 419 717 41 45 Zalidium ppm ASTM D5188(m) 450 681 419 717<	Chromium	ppm	ASTM D5185(m)	>20	1	2	<1
Silver	Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Astmorphisms	Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Dead	Silver	ppm	ASTM D5185(m)	>2	<1	<1	0
Description	Aluminum	ppm	ASTM D5185(m)	>20	9	14	14
Second	Lead	ppm	ASTM D5185(m)	>40	0	7	<1
Antimony ppm ASTM D5185(m) D	Copper	ppm	ASTM D5185(m)	>330	3	24	3
Anadium 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 27 41 45 Barium ppm ASTM D5185(m) 10 0 5 0 Molybdenum ppm ASTM D5185(m) 100 3 62 2 Magnesium ppm ASTM D5185(m) 450 681 419 717 Calcium ppm ASTM D5185(m) 450 681 419 717 Calcium ppm ASTM D5185(m) 3000 1233 1639 1322 Phosphorus ppm ASTM D5185(m) 1350 727 1122 730 Sulfur ppm ASTM D5185(m) 4250 2301 2446	Tin	ppm	ASTM D5185(m)	>15	0	3	0
Decadmium Dec	Antimony	ppm	ASTM D5185(m)		0	0	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 250 27 41 45 Barium ppm ASTM D5185(m) 10 0 5 0 Molybdenum ppm ASTM D5185(m) 100 3 62 2 Manganese ppm ASTM D5185(m) 100 3 62 2 Magnesium ppm ASTM D5185(m) 450 681 419 717 Balcium ppm ASTM D5185(m) 3000 1233 1639 1322 Phosphorus ppm ASTM D5185(m) 1150 619 928 652 Bulfur ppm ASTM D5185(m) 1350 727 1122 730 Bulfur ppm ASTM D5185(m) 4250 2301 2446 2566 Bulfur ppm ASTM D5185(m) >25 7 37 5 Bodium ppm ASTM D5185(m	Vanadium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES	Beryllium	ppm	ASTM D5185(m)		0	0	0
Soron ppm ASTM D5185(m) 250 27 41 45 45 45 45 45 45 45	Cadmium	ppm	ASTM D5185(m)		0	0	0
Starium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 100 3 62 2 Manganese ppm ASTM D5185(m) 450 681 419 717 Calcium ppm ASTM D5185(m) 3000 1233 1639 1322 Phosphorus ppm ASTM D5185(m) 1150 619 928 652 Zinc ppm ASTM D5185(m) 1350 727 1122 730 Sulfur ppm ASTM D5185(m) 4250 2301 2446 2566 Silicon ppm ASTM D5185(m) < 1	Boron	ppm	ASTM D5185(m)	250	27	41	45
Manganese ppm ASTM D5185(m) <1 5 0 Magnesium ppm ASTM D5185(m) 450 681 419 717 Calcium ppm ASTM D5185(m) 3000 1233 1639 1322 Phosphorus ppm ASTM D5185(m) 1150 619 928 652 Zinc ppm ASTM D5185(m) 1350 727 1122 730 Sulfur ppm ASTM D5185(m) 4250 2301 2446 2566 Lithium ppm ASTM D5185(m) 4250 2301 2446 2566 Lithium ppm ASTM D5185(m) >25 7 37 5 CONTAMINANTS method limit/base current history1 history2 Bilicon ppm ASTM D5185(m) >25 7 37 5 Godium ppm ASTM D5185(m) >20 14 43 18 Foreign ASTM D5185(m) >20	Barium	ppm	ASTM D5185(m)	10	0	5	0
Magnesium ppm ASTM D5185(m) 450 681 419 717 Calcium ppm ASTM D5185(m) 3000 1233 1639 1322 Phosphorus ppm ASTM D5185(m) 1150 619 928 652 Cinc ppm ASTM D5185(m) 1350 727 1122 730 Bulfur ppm ASTM D5185(m) 4250 2301 2446 2566 Sithium ppm ASTM D5185(m) 4250 2301 2446 2566 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 7 37 5 Godium ppm ASTM D5185(m) >20 14 43 18 Fuel % ASTM D7593* >3.0 2.5 3.2 2.1 INFRA-RED method limit/base current history1 history2 Boot % % ASTM	Molybdenum	ppm	ASTM D5185(m)	100	3	62	2
Calcium ppm ASTM D5185(m) 3000 1233 1639 1322 Phosphorus ppm ASTM D5185(m) 1150 619 928 652 Zinc ppm ASTM D5185(m) 1350 727 1122 730 Sulfur ppm ASTM D5185(m) 4250 2301 2446 2566 sithium ppm ASTM D5185(m) < 1	Manganese	ppm	ASTM D5185(m)		<1	5	0
Phosphorus ppm ASTM D5185(m) 1150 619 928 652 Zinc ppm ASTM D5185(m) 1350 727 1122 730 Bulfur ppm ASTM D5185(m) 4250 2301 2446 2566 Bulfur ppm ASTM D5185(m) 4250 2301 2446 2566 CONTAMINANTS method limit/base current history1 history2 Bilicon ppm ASTM D5185(m) >25 7 37 5 Bodium ppm ASTM D5185(m) >158 3 4 3 Potassium ppm ASTM D5185(m) >20 14 43 18 Fuel % ASTM D7593* >3.0 2.5 3.2 2.1 INFRA-RED method limit/base current history1 history2 Boot % % ASTM D7844* >6 1 0.2 0.1 Billion Abs/cm ASTM D7824*	Magnesium	ppm	ASTM D5185(m)	450	681	419	717
Fine ppm ASTM D5185(m) 1350 727 1122 730 Sulfur ppm ASTM D5185(m) 4250 2301 2446 2566 Lithium ppm ASTM D5185(m) < 1	Calcium	ppm	ASTM D5185(m)	3000	1233	1639	1322
Sulfur ppm ASTM D5185(m) 4250 2301 2446 2566 cithium ppm ASTM D5185(m) <1	Phosphorus	ppm	ASTM D5185(m)	1150	619	928	652
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 7 37 5 Sodium ppm ASTM D5185(m) >158 3 4 3 Potassium ppm ASTM D5185(m) >20 14 43 18 Fuel % ASTM D7593* >3.0 2.5 3.2 2.1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 1 0.2 0.1 Ultration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	Zinc	ppm	. ,	1350		1122	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 7 37 5 Sodium ppm ASTM D5185(m) >158 3 4 3 Potassium ppm ASTM D5185(m) >20 14 43 18 Fuel % ASTM D7593* >3.0 2.5 ▲ 3.2 ▲ 2.1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 1 0.2 0.1 Ultration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	Sulfur	ppm	ASTM D5185(m)	4250	2301	2446	2566
Solition ppm ASTM D5185(m) >25 7 37 5	Lithium	ppm	ASTM D5185(m)		<1	<1	<1
Bootium ppm ASTM D5185(m) >158 3 4 3 Potassium ppm ASTM D5185(m) >20 14 43 18 Fuel % ASTM D7593* >3.0 2.5 ▲ 3.2 ▲ 2.1 INFRA-RED method limit/base current history1 history2 Goot % % ASTM D7844* >6 1 0.2 0.1 Uitration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 14 43 18 Fuel % ASTM D7593* >3.0 ▲ 2.5 ▲ 3.2 ▲ 2.1 INFRA-RED method limit/base current history1 history2 Boot % % ASTM D7844* >6 1 0.2 0.1 Ultration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	Silicon	ppm	ASTM D5185(m)	>25	7	37	5
Fuel % ASTM D7593* >3.0 ▲ 2.5 ▲ 3.2 ▲ 2.1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 1 0.2 0.1 Jitration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	Sodium	ppm	ASTM D5185(m)	>158	3	4	3
INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 1 0.2 0.1 Ultration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	Potassium	ppm	ASTM D5185(m)	>20	14	43	18
Soot % % ASTM D7844* >6 1 0.2 0.1 Jitration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	Fuel	%	ASTM D7593*	>3.0	<u> </u>	▲ 3.2	▲ 2.1
litration Abs/cm ASTM D7624* >20 13.6 9.8 10.1	1 401						
litration Abs/cm ASTM D7624* >20 13.6 9.8 10.1			method	limit/base	current	history1	history2
		%					•
	INFRA-RED		ASTM D7844*	>6	1	0.2	0.1



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory

Sample No.

Lab Number : 02643891 Unique Number : 5801430

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : WC0924246 Received : 25 Jun 2024 **Tested** : 26 Jun 2024

: 26 Jun 2024 - Wes Davis

Diagnosed Test Package : MOB 1 (Additional Tests: PercentFuel)

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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