

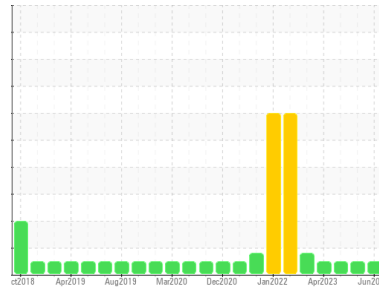


OIL ANALYSIS REPORT



Area
56000 series
 Machine Id
FREIGHTLINER 56150
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (40 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

- Recommendation**
 Resample at the next service interval to monitor.
- Wear**
 All component wear rates are normal.
- Contamination**
 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		WC0948249	WC0879079	WC0848021
Sample Date	Client Info		16 Jun 2024	19 Dec 2023	12 Sep 2023
Machine Age	mls	Client Info	649672	611974	585988
Oil Age	mls	Client Info	37698	27986	39790
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>65	56	63	39
Chromium	ppm	ASTM D5185(m)	>5	3	4	3
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	<1	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>35	31	32	23
Lead	ppm	ASTM D5185(m)	>10	0	0	<1
Copper	ppm	ASTM D5185(m)	>180	7	5	6
Tin	ppm	ASTM D5185(m)	>8	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	>35	0	0	0
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	3	1	2
Barium	ppm	ASTM D5185(m)	10	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	67	64	66
Manganese	ppm	ASTM D5185(m)		<1	<1	0
Magnesium	ppm	ASTM D5185(m)	450	1065	1054	1047
Calcium	ppm	ASTM D5185(m)	3000	1176	1146	1122
Phosphorus	ppm	ASTM D5185(m)	1150	1073	1074	1058
Zinc	ppm	ASTM D5185(m)	1350	1331	1273	1289
Sulfur	ppm	ASTM D5185(m)	4250	2215	2477	2189
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

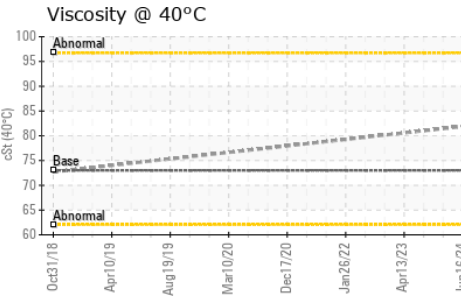
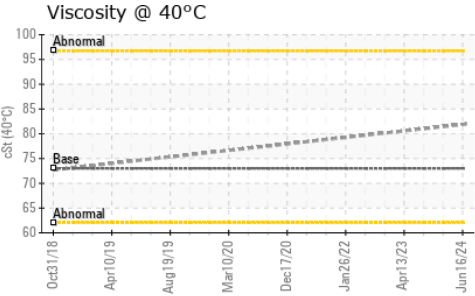
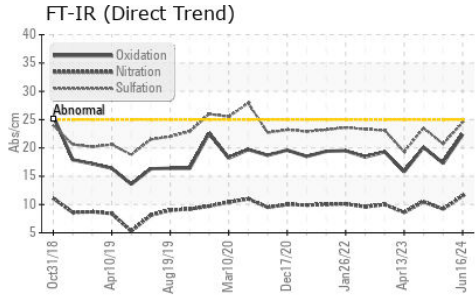
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	6	5	6
Sodium	ppm	ASTM D5185(m)		12	4	5
Potassium	ppm	ASTM D5185(m)	>20	4	3	4

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.7	0.4	0.6
Nitration	Abs/cm	ASTM D7624*	>20	11.5	9.2	10.5
Sulfation	Abs./1mm	ASTM D7415*	>30	24.5	20.7	23.5



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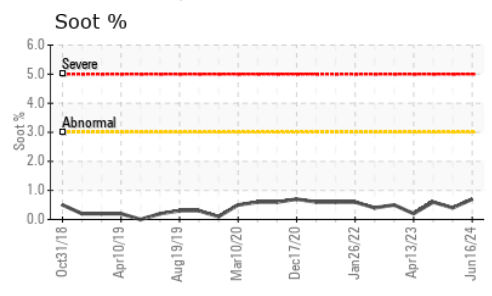
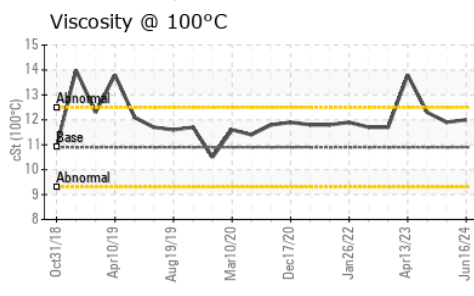
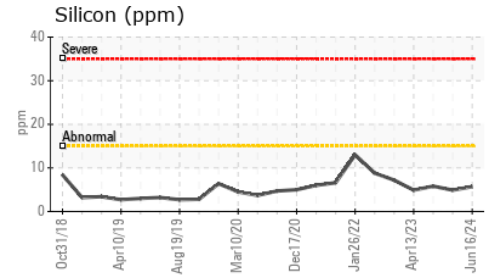
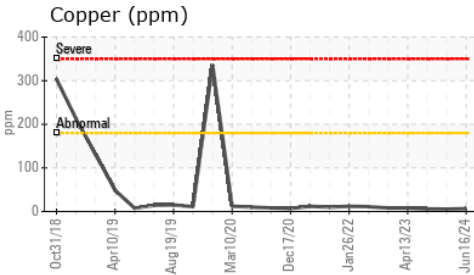
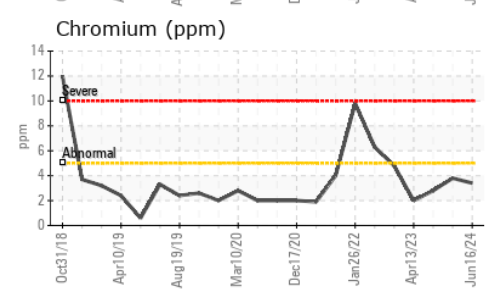
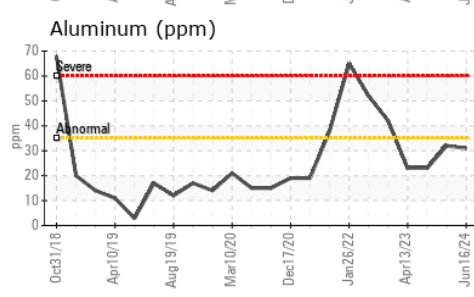
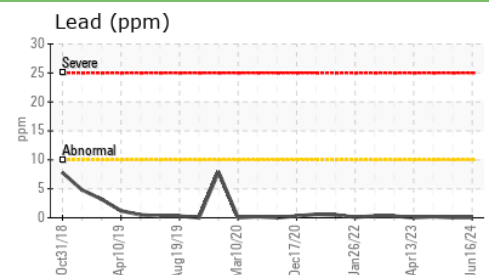
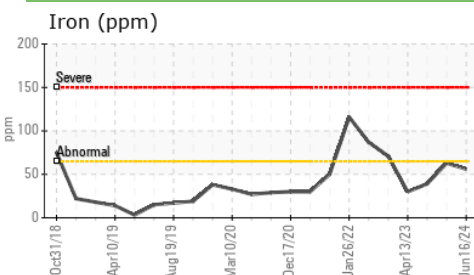


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	22.4	17.3	20.1

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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	73	81.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	12.0	11.9	12.3
Viscosity Index (VI)	Scale	ASTM D2270*	138	140	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0948249 **Received** : 18 Jun 2024
Lab Number : 02642530 **Tested** : 18 Jun 2024
Unique Number : 5800069 **Diagnosed** : 18 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

MANITOU LIN TRANSPORT (GARAGE)
 1335 SHAWSON DRIVE
 MISSISSAUGA, ON
 CA L4W 1C4
 Contact: Travis Spence
 tspence@manitoulintransport.com

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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