



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 56163
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935019	WC0892076	WC0879109
Sample Date		Client Info		28 May 2024	11 Mar 2024	20 Nov 2023
Machine Age	mls	Client Info		297864	433009	274159
Oil Age	mls	Client Info		28805	56256	31144
Filter Age	mls	Client Info		28805	56256	31144
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	26	42	24
Chromium	ppm	ASTM D5185(m)	>5	3	4	2
Nickel	ppm	ASTM D5185(m)	>2	<1	2	1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	2	4	4
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>150	4	6	2
Tin	ppm	ASTM D5185(m)	>5	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

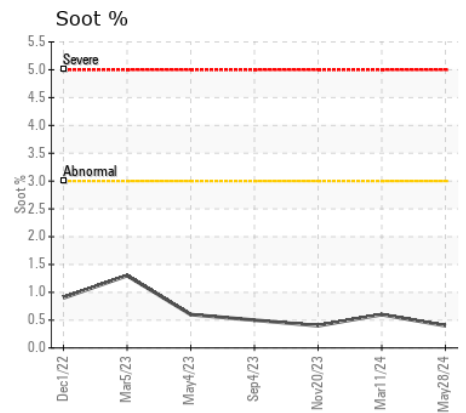
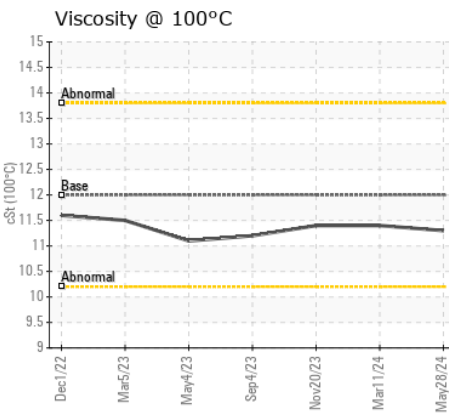
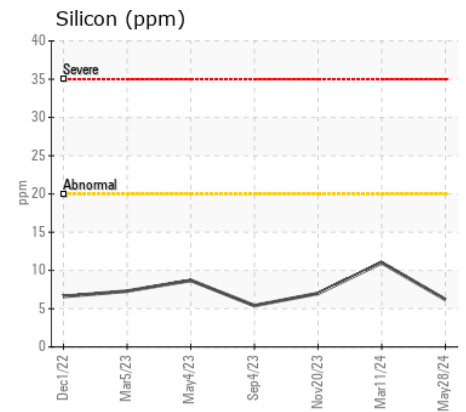
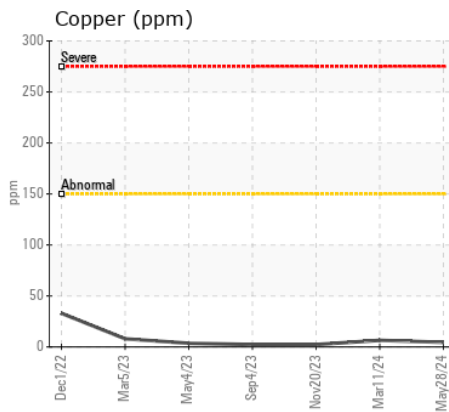
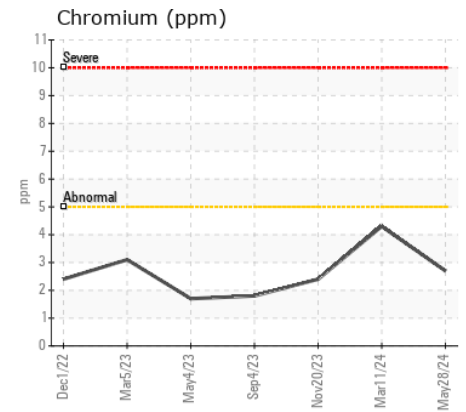
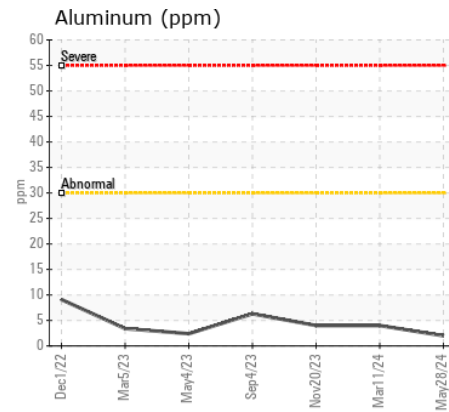
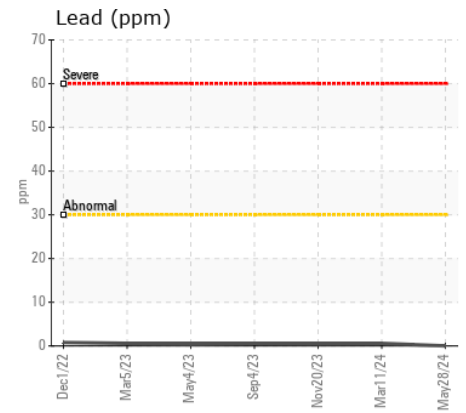
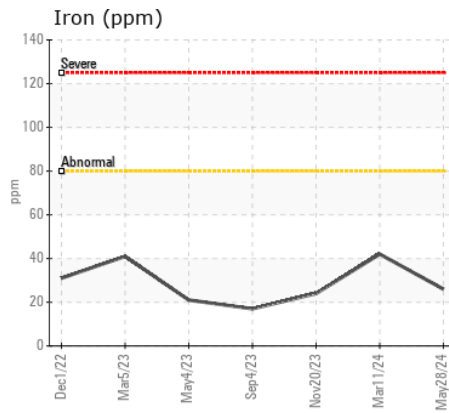
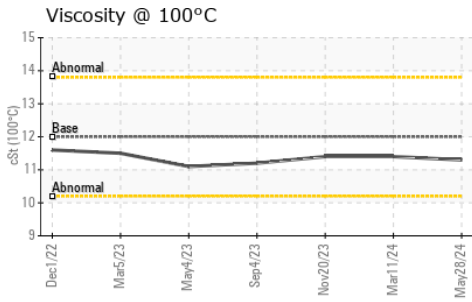
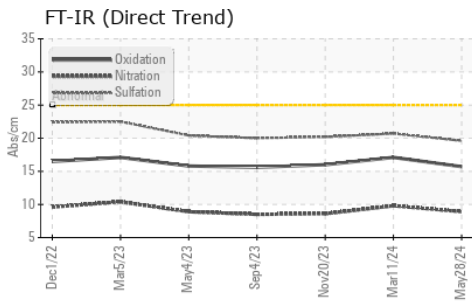
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	6	11	7
Potassium	ppm	ASTM D5185(m)	>20	2	5	8
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.4	0.6	0.4
Nitration	Abs/cm	ASTM D7624*	>20	8.9	9.8	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	20.7	20.2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		2	3	2
Boron	ppm	ASTM D5185(m)	2	3	4	1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	65	71	65
Manganese	ppm	ASTM D5185(m)	0	<1	<1	0
Magnesium	ppm	ASTM D5185(m)	950	1012	1057	1044
Calcium	ppm	ASTM D5185(m)	1050	1117	1170	1143
Phosphorus	ppm	ASTM D5185(m)	995	1031	1082	1067
Zinc	ppm	ASTM D5185(m)	1180	1229	1272	1275
Sulfur	ppm	ASTM D5185(m)	2600	2536	2713	2553
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.7	17.1	16.0
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.3	11.4	11.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0935019
Lab Number : 02640075
Unique Number : 5789237
Test Package : MOB 1
Received : 06 Jun 2024
Tested : 06 Jun 2024
Diagnosed : 06 Jun 2024 - Wes Davis

MANITOU LIN TRANSPORT
 75 MUMFORD ROAD
 LIVELY, ON
 CA P3Y 1L1
 Contact: Todd Smith
 tosmith@manitoulintransport.com
 T: (705)562-3302
 F: x:

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.