



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 51974
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0935009	WC0915519	WC0854808
Sample Date		Client Info		07 Jun 2024	07 Apr 2024	28 Dec 2023
Machine Age	kms	Client Info		207964	37913	217631
Oil Age	kms	Client Info		34822	37913	31933
Filter Age	kms	Client Info		34822	37913	31933
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>65	11	8	22
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	2
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>35	6	3	14
Lead	ppm	ASTM D5185(m)	>10	0	0	<1
Copper	ppm	ASTM D5185(m)	>180	9	7	28
Tin	ppm	ASTM D5185(m)	>8	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

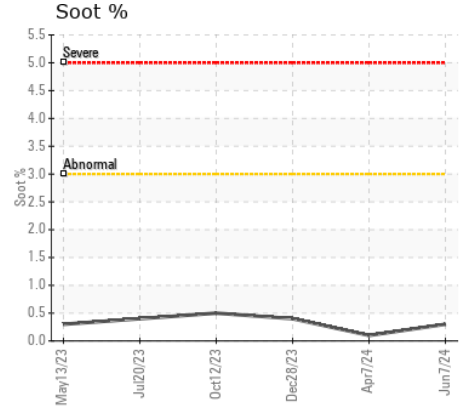
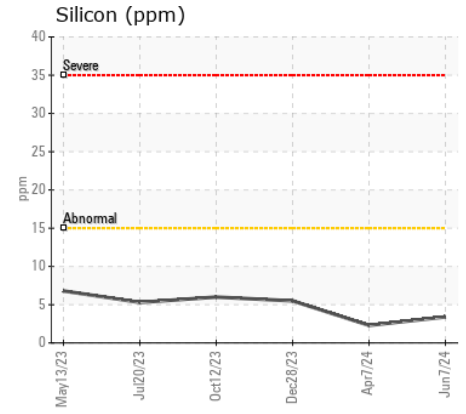
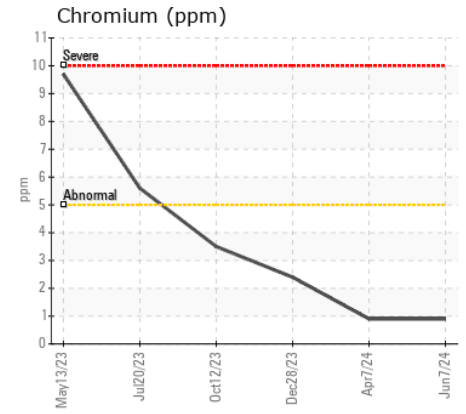
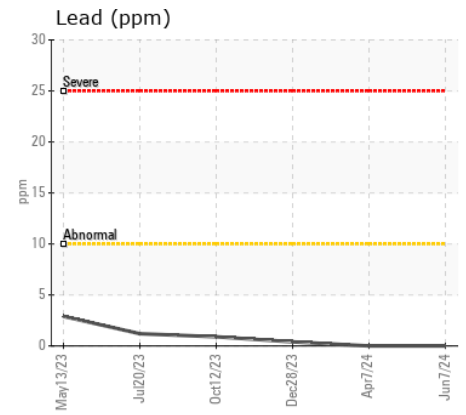
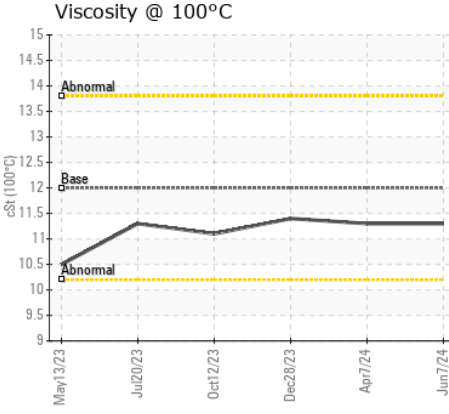
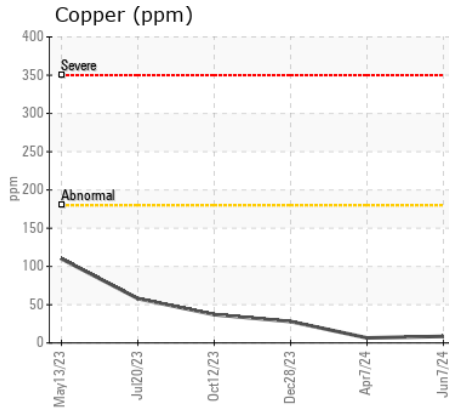
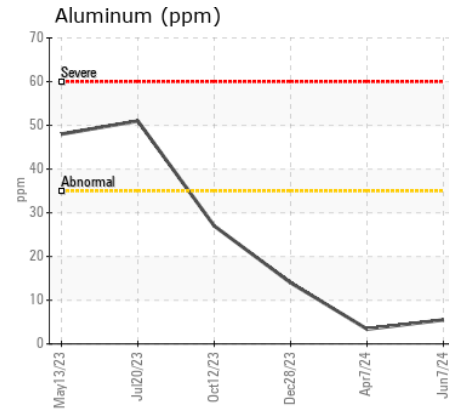
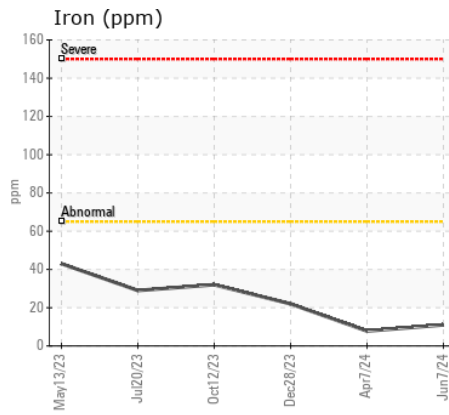
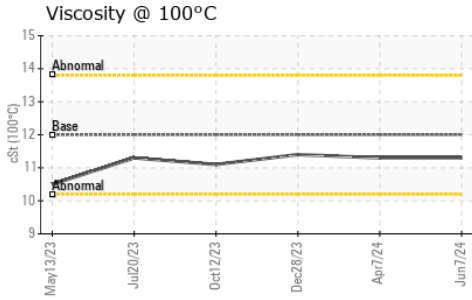
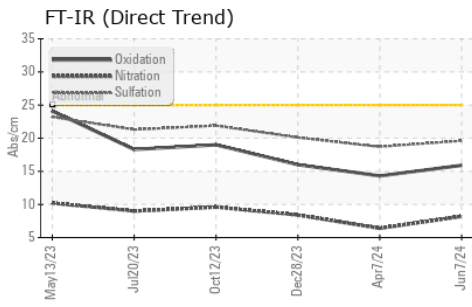
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	3	2	6
Potassium	ppm	ASTM D5185(m)	>20	8	3	27
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
Soot %	%	ASTM D7844*	>3	0.3	0.1	0.4
Nitration	Abs/cm	ASTM D7624*	>20	8.2	6.4	8.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	18.7	20.1
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	4	6	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	60	61	60
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	950	953	979	972
Calcium	ppm	ASTM D5185(m)	1050	1075	1041	1103
Phosphorus	ppm	ASTM D5185(m)	995	949	989	969
Zinc	ppm	ASTM D5185(m)	1180	1207	1200	1175
Sulfur	ppm	ASTM D5185(m)	2600	2265	2513	2174
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.9	14.3	16.0
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.3	11.3	11.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0935009 **Received** : 05 Jul 2024
Lab Number : 02645765 **Tested** : 05 Jul 2024
Unique Number : 5803304 **Diagnosed** : 05 Jul 2024 - Wes Davis
Test Package : MOB 1

MANITOU LIN TRANSPORT
 75 MUMFORD ROAD
 LIVELY, ON
 CA P3Y 1L1
 Contact: Mike Patey
 mpatey@manitoulintransport.com
 T: (705)692-5209
 F: (705)692-9303

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.