



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
096750-1204
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (30 LTR)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0291290	LH0285142	LH0274880
Sample Date		Client Info		07 Jun 2024	05 Feb 2024	31 Oct 2023
Machine Age	hrs	Client Info		11518	10945	10469
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	27	27	30
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	7	11	9
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>125	3	2	2
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

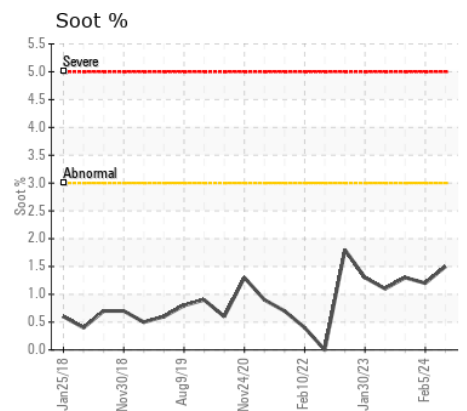
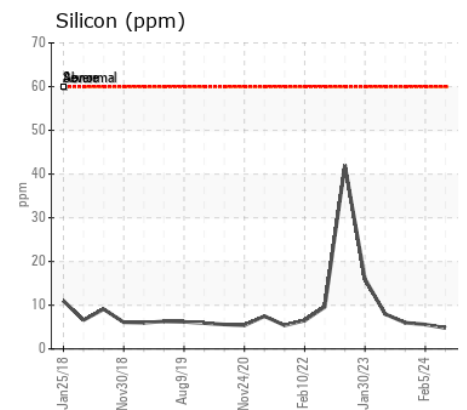
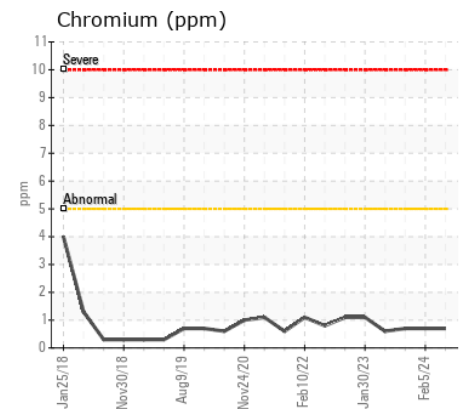
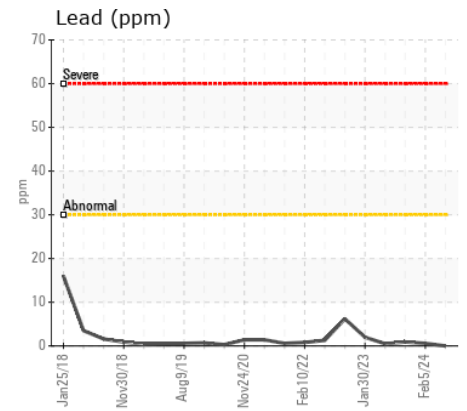
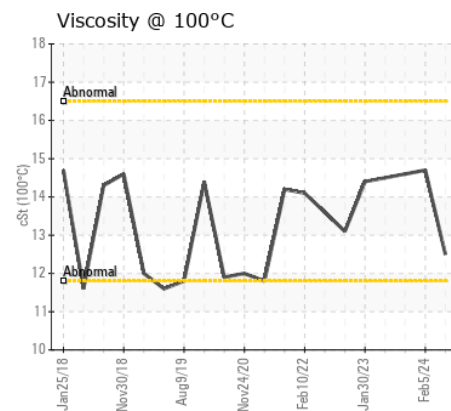
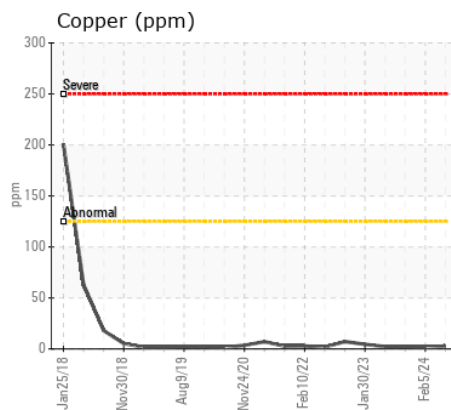
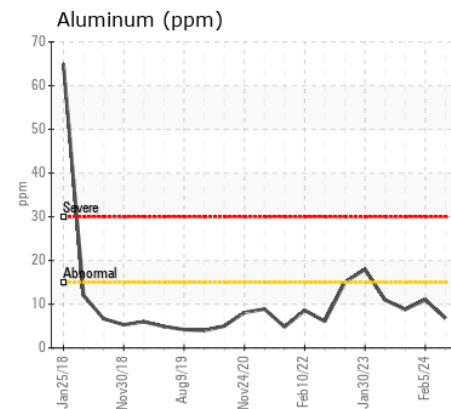
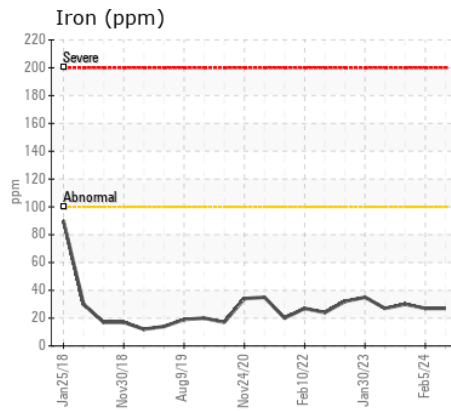
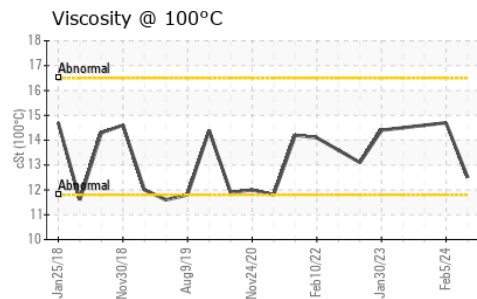
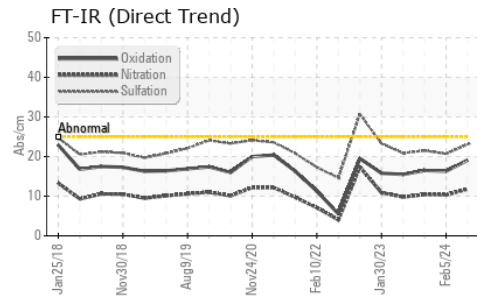
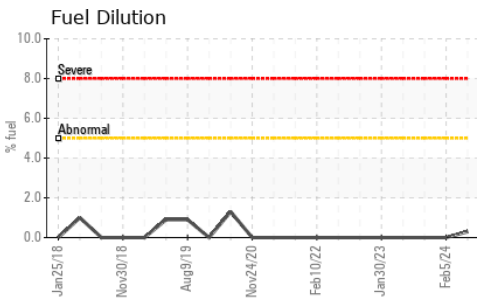
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	5	6	6
Potassium	ppm	ASTM D5185(m)	>20	4	9	21
Fuel	%	ASTM D7593*	>5	0.3	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>3	1.5	1.2	1.3
Nitration	Abs/cm	ASTM D7624*	>20	11.8	10.3	10.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.1	20.7	21.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	10	16	37
Boron	ppm	ASTM D5185(m)		13	<1	1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		57	62	68
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)		1073	985	1060
Calcium	ppm	ASTM D5185(m)		845	1108	1159
Phosphorus	ppm	ASTM D5185(m)		950	1035	1101
Zinc	ppm	ASTM D5185(m)		1168	1217	1340
Sulfur	ppm	ASTM D5185(m)		2536	2704	2732
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.1	16.3	16.5
Visc @ 100°C	cSt	ASTM D7279(m)		12.5	14.7	14.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0291290 **Received** : 12 Jun 2024
Lab Number : 02641341 **Tested** : 14 Jun 2024
Unique Number : 5798880 **Diagnosed** : 14 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

American Iron and Metal
 120 Bentley Avenue
 Ottawa, ON
 CA K2E 6T9
 Contact: Yvon Lalonde

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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