



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**INTERNATIONAL 52884**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SAE 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0930274</b>	WC0857694	WC0805670
Sample Date		Client Info		<b>26 Jun 2024</b>	23 Oct 2023	15 Jul 2023
Machine Age	mls	Client Info		<b>328297</b>	254811	220281
Oil Age	mls	Client Info		<b>34228</b>	34530	30423
Filter Age	mls	Client Info		<b>34228</b>	34530	30423
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>24</b>	22	20
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	1	2
Nickel	ppm	ASTM D5185(m)	>4	<b>1</b>	<1	1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b>	5	5
Lead	ppm	ASTM D5185(m)	>40	<b>4</b>	6	3
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	1	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

## CONTAMINATION

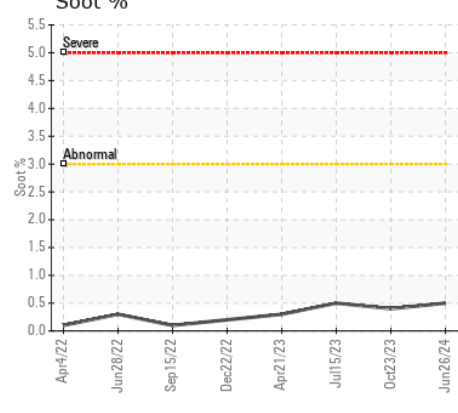
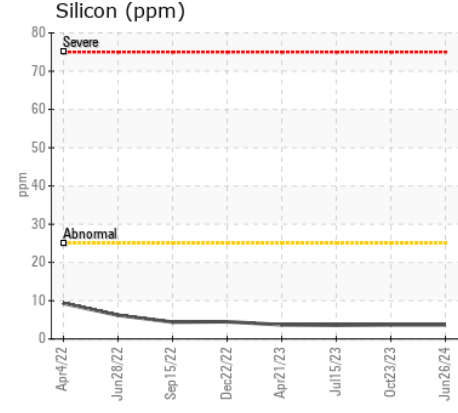
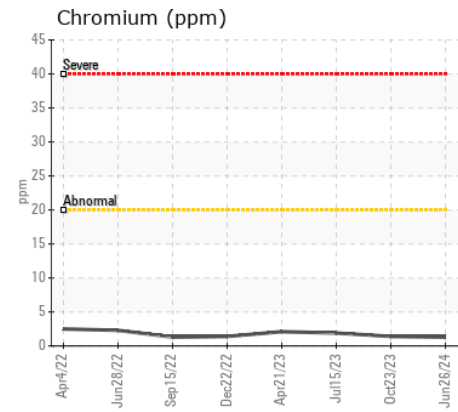
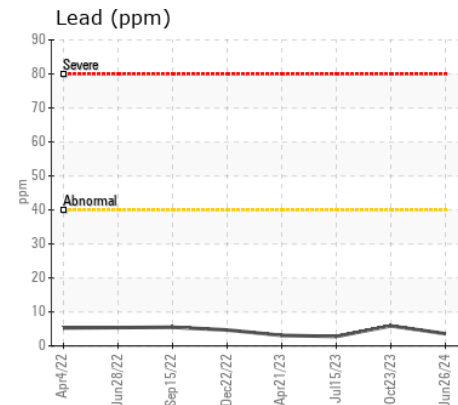
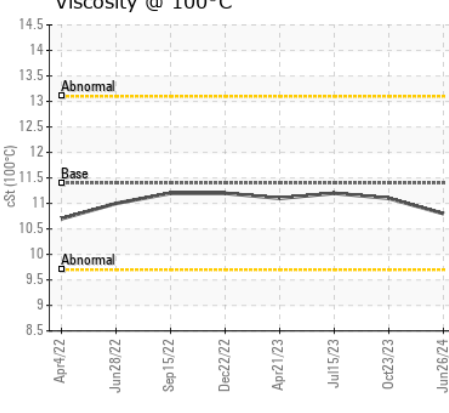
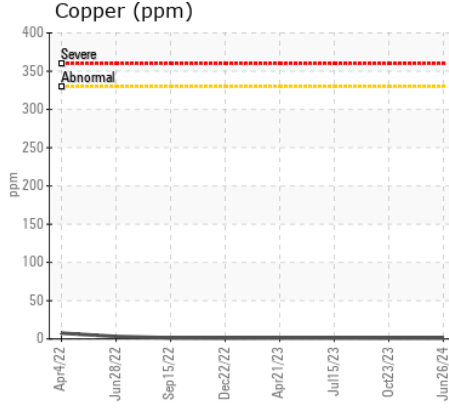
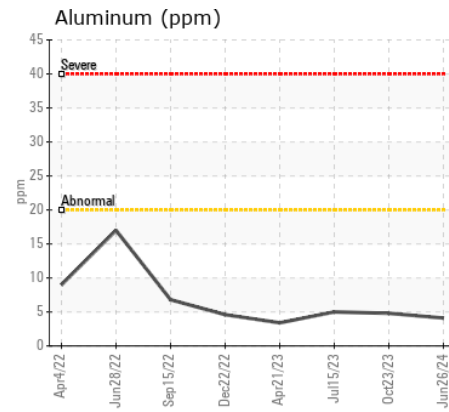
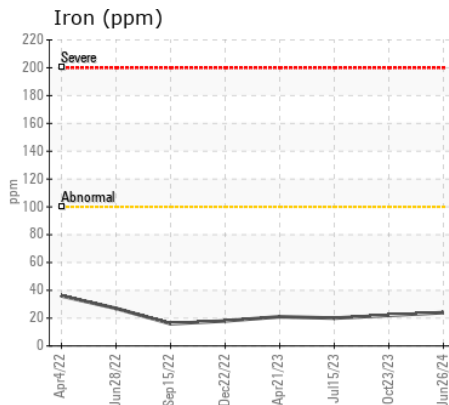
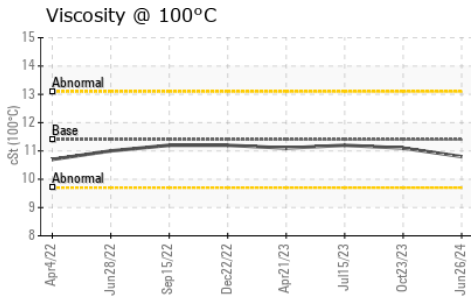
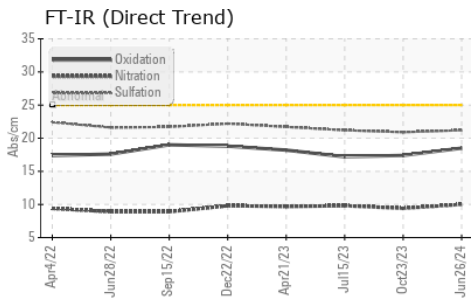
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	6	9
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.5</b>	0.4	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.0</b>	9.4	9.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.2</b>	20.9	21.2
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	2
Boron	ppm	ASTM D5185(m)	1	<b>3</b>	2	5
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	1	<b>61</b>	60	62
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	10	<b>987</b>	968	995
Calcium	ppm	ASTM D5185(m)	2942	<b>1101</b>	1107	1084
Phosphorus	ppm	ASTM D5185(m)	1102	<b>995</b>	1010	1076
Zinc	ppm	ASTM D5185(m)	1351	<b>1230</b>	1235	1216
Sulfur	ppm	ASTM D5185(m)	3903	<b>2508</b>	2503	2539
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.5</b>	17.4	17.2
Visc @ 100°C	cSt	ASTM D7279(m)	11.4	<b>10.8</b>	11.1	11.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0930274 **Received** : 03 Jul 2024  
**Lab Number** : 02645187 **Tested** : 03 Jul 2024  
**Unique Number** : 5802726 **Diagnosed** : 03 Jul 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**MANITOU LIN TRANSPORT**  
 161 MAIN STREET  
 THUNDER BAY, ON  
 CA P7B 6S5  
 Contact: Ivan Brady  
 ibrady@manitoulintransport.com  
 T: (807)345-6501  
 F: (807)345-6731

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.