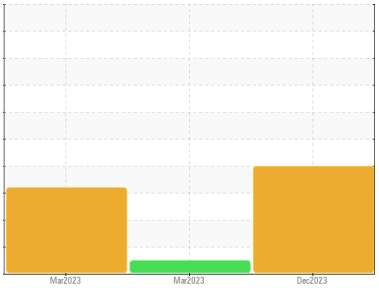
OIL ANALYSIS REPORT

Area
ORIN CONTRACTORS
Machine Id
165
Component
Left Final Drive
Fluid
PETRO CANADA 30W (--- GAL)

Sample Rating Trend



DIRT

DIAGNOSIS

Recommendation
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
Chromium and iron ppm levels are abnormal. Aluminum ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0888490**	LH0182523	LH0228960
Sample Date		Client Info		**22 Dec 2023**	10 Mar 2023	01 Mar 2023
Machine Age	hrs	Client Info		**0**	2000	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Changed
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>500	**151**	---	---
Iron	ppm	ASTM D5185(m)	>800	▲ **910**	206	444
Chromium	ppm	ASTM D5185(m)	>10	▲ **20**	6	▲ 19
Nickel	ppm	ASTM D5185(m)	>5	**2**	<1	2
Titanium	ppm	ASTM D5185(m)	>15	**8**	4	2
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>75	▲ **166**	58	▲ 29
Lead	ppm	ASTM D5185(m)	>10	**<1**	0	<1
Copper	ppm	ASTM D5185(m)	>75	**4**	1	2
Tin	ppm	ASTM D5185(m)	>8	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>50	**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	<1	<1
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)		**10**	5	28
Barium	ppm	ASTM D5185(m)		**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)		**2**	1	2
Manganese	ppm	ASTM D5185(m)		**11**	3	5
Magnesium	ppm	ASTM D5185(m)		**692**	666	20
Calcium	ppm	ASTM D5185(m)		**1595**	1376	2975
Phosphorus	ppm	ASTM D5185(m)		**1164**	1329	1091
Zinc	ppm	ASTM D5185(m)		**1121**	1066	1123
Sulfur	ppm	ASTM D5185(m)		**5960**	6521	10623
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>400	▲ **606**	201	▲ 134
Sodium	ppm	ASTM D5185(m)		**28**	9	10
Potassium	ppm	ASTM D5185(m)	>20	**64**	22	11

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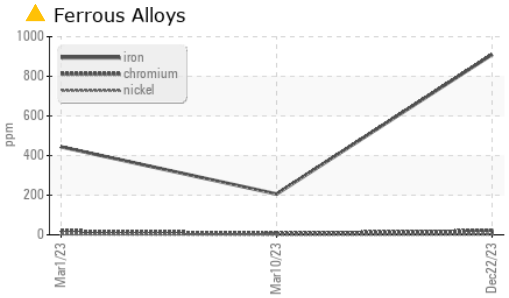
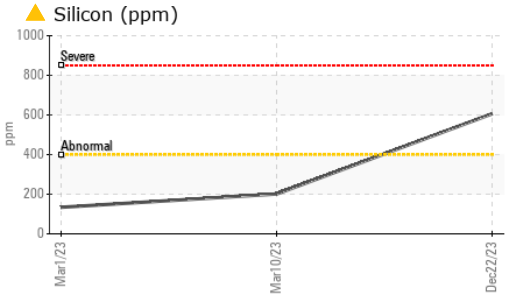
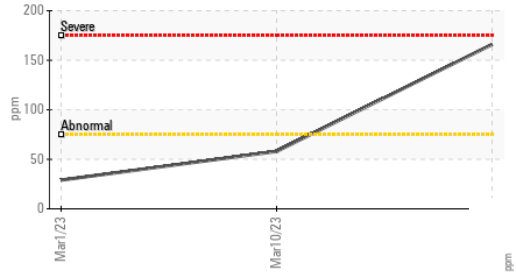
Ferrous Alloys



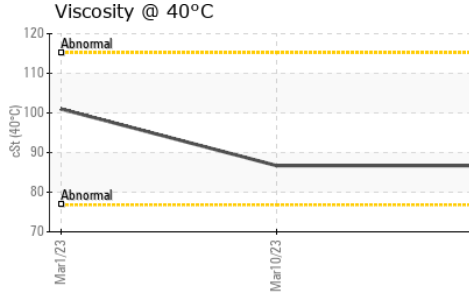
Silicon (ppm)



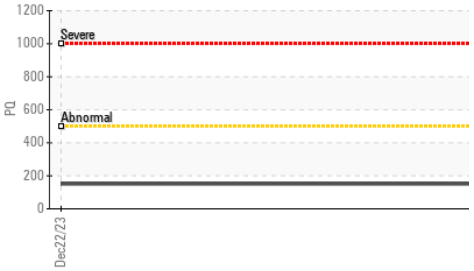
Aluminum (ppm)



Viscosity @ 40°C

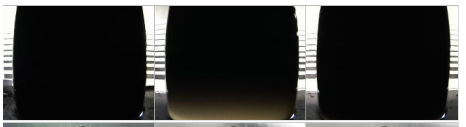


PQ



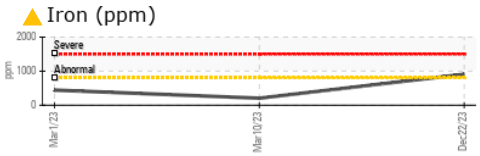
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**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)		**86.7**	86.7	101

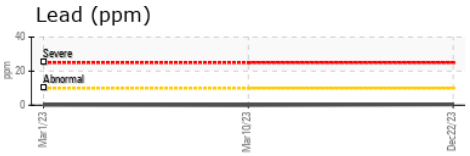
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

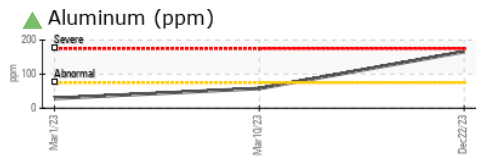
Iron (ppm)



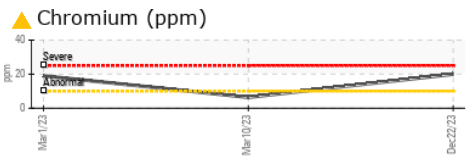
Lead (ppm)



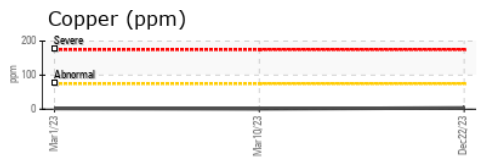
Aluminum (ppm)



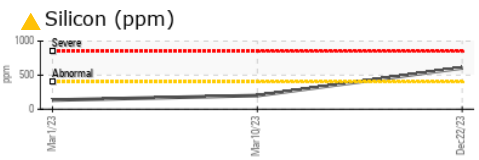
Chromium (ppm)



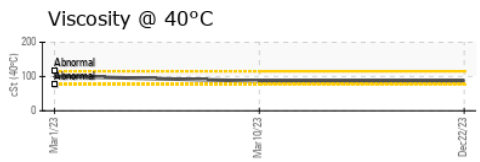
Copper (ppm)



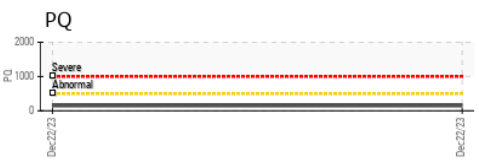
Silicon (ppm)



Viscosity @ 40°C



PQ



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **RONI/IRON SHORE EXCAVATING LTD.**
Sample No. : WC0888490 **Recieved** : 08 Jan 2024 100 MACINTOSH BLVD
Lab Number : 02607213 **Diagnosed** : 09 Jan 2024 VAUGHAN, ON
Unique Number : 5708299 **Diagnostician** : Kevin Marson CA L4K 4P3
Test Package : MOBCE (Additional Tests: PQ, Visual) Contact: Service Team

To discuss this sample report, contact Customer Service at 1-800-268-2131. service.team@roni.ca
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:
Validity of results and interpretation are based on the sample and information as supplied. F: