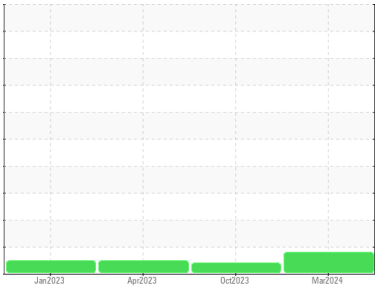
OIL ANALYSIS REPORT

Area
ORIN CONTRACTORS
Machine Id
195
Component
Diesel Engine
Fluid
PETRO CANADA 10W30 (--- GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
Copper ppm levels are abnormal. Bearing wear is indicated.

Contamination
There is no indication of any contamination in the oil.

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		**WC0899468**	LH0275134	LH0232045
Sample Date		Client Info		**06 Mar 2024**	07 Oct 2023	18 Apr 2023
Machine Age	hrs	Client Info		**0**	0	1500
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	**<1.0**	1.8	<1.0
Water		WC Method	>0.1	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**7**	8	8
Chromium	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	**1**	1	1
Lead	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>15	▲ **22**	3	5
Tin	ppm	ASTM D5185(m)	>10	**0**	0	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

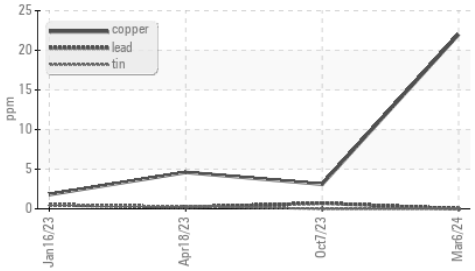
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**0**	3	24
Barium	ppm	ASTM D5185(m)		**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**58**	58	44
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**956**	938	724
Calcium	ppm	ASTM D5185(m)		**1045**	1072	1428
Phosphorus	ppm	ASTM D5185(m)		**972**	992	1086
Zinc	ppm	ASTM D5185(m)		**1148**	1188	1206
Sulfur	ppm	ASTM D5185(m)		**2450**	2530	2773
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**2**	4	5
Sodium	ppm	ASTM D5185(m)		**2**	2	1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	2

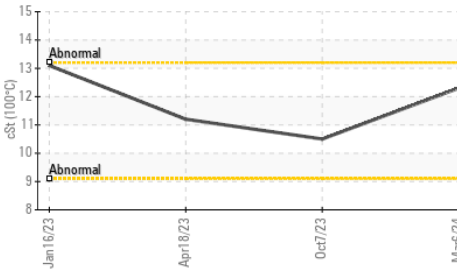
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**7.4**	7.7	8.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**18.9**	18.5	19.1

OIL ANALYSIS REPORT

▲ Non-ferrous Metals



Viscosity @ 100°C



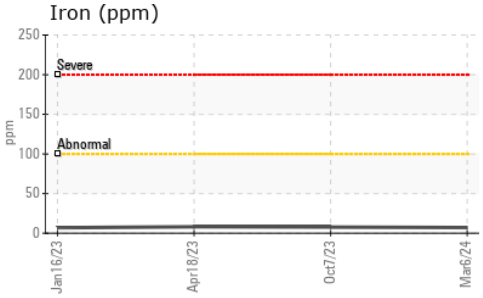
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**14.7**	14.7	15.3

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

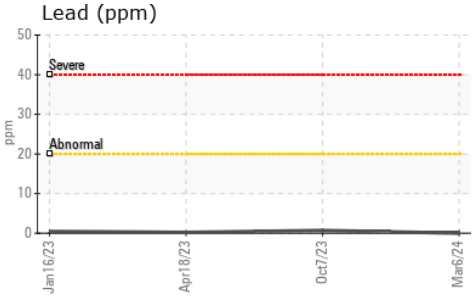
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)		**12.3**	▲ 10.5	11.2

GRAPHS

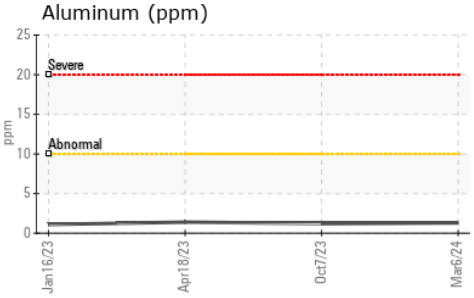
Iron (ppm)



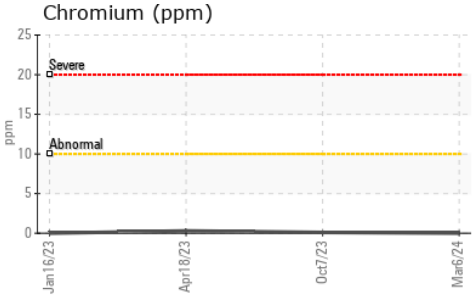
Lead (ppm)



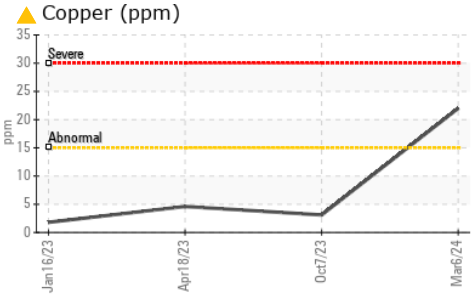
Aluminum (ppm)



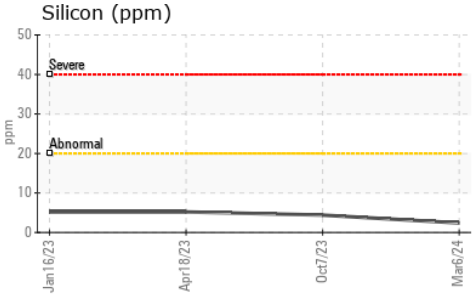
Chromium (ppm)



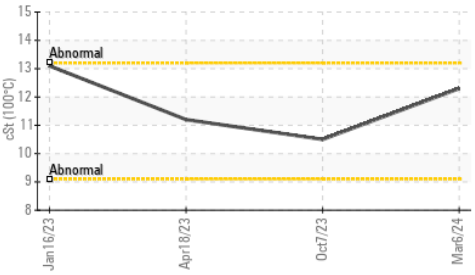
▲ Copper (ppm)



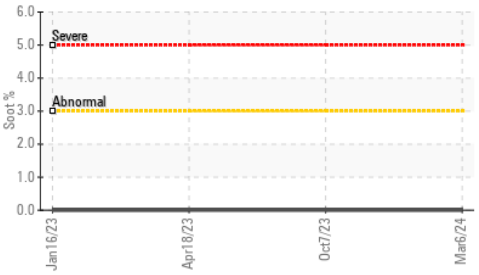
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0899468
Lab Number : 02624099
Unique Number : 5749218
Test Package : MOBCE

Received : 25 Mar 2024
Tested : 25 Mar 2024
Diagnosed : 25 Mar 2024 - Kevin Marson

RONI/IRON SHORE EXCAVATING LTD.
100 MACINTOSH BLVD
VAUGHAN, ON
CA L4K 4P3
Contact: Service Team
service.team@roni.ca
T:
F:

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.