



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
162/164 CUMBERLAND
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0940152	WC0647819	WC0443152
Sample Date		Client Info		21 May 2024	14 Apr 2022	06 Apr 2020
Machine Age	hrs	Client Info		0	0	708
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

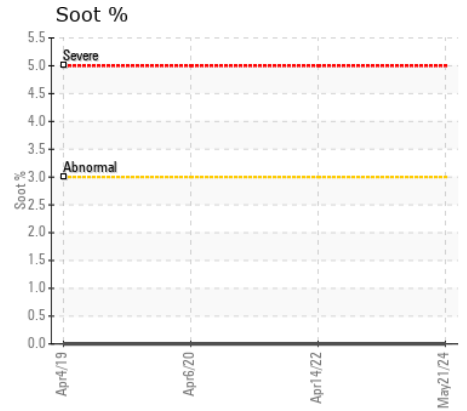
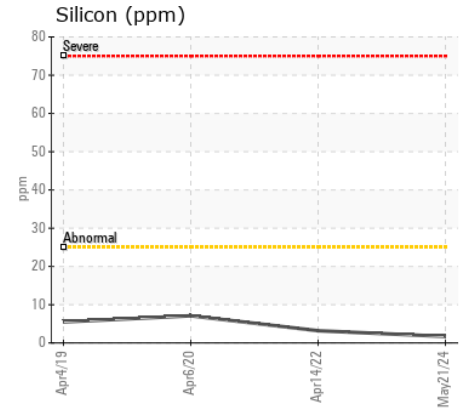
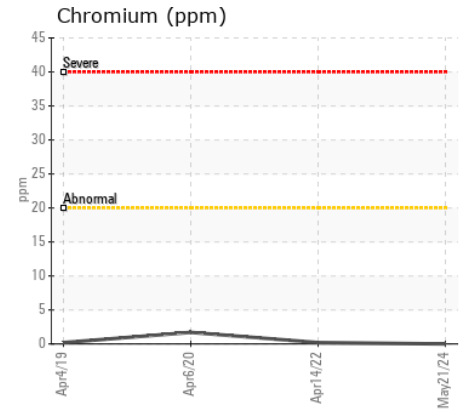
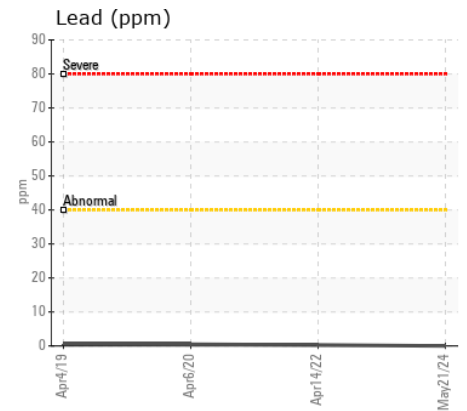
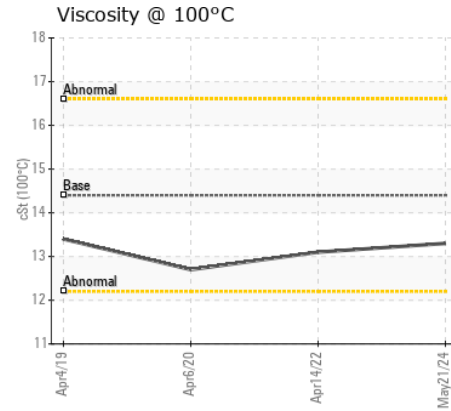
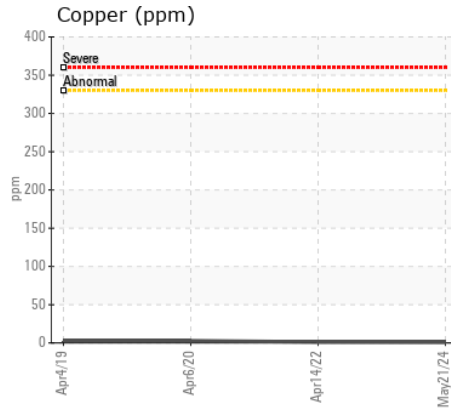
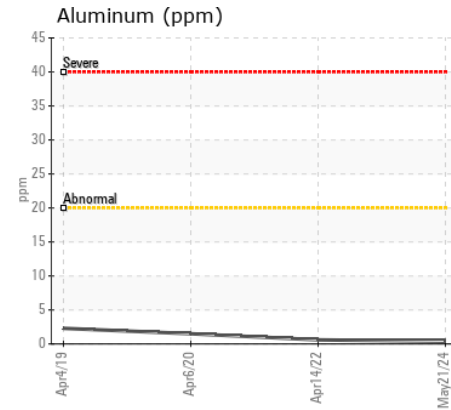
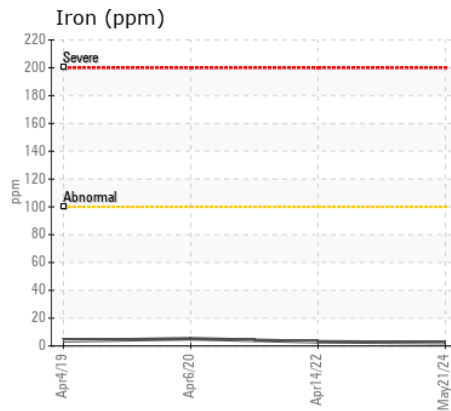
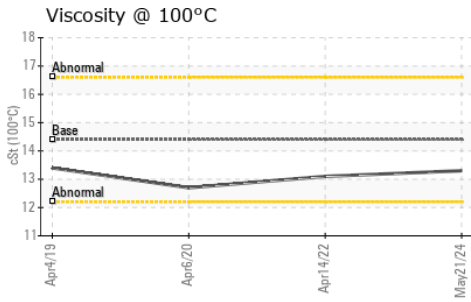
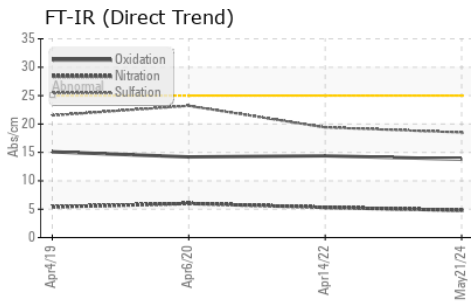
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	2	3	7
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Fuel		WC Method	>5	<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	0	0
Nitration	Abs/cm	ASTM D7624*	>20	4.8	5.3	6.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.5	19.4	23.2
Silt	scalar	Visual*	NONE	NONE	---	NONE
Debris	scalar	Visual*	NONE	NONE	---	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	---	NONE
Appearance	scalar	Visual*	NORML	NORML	---	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
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)	>216	1	2	<1
Boron	ppm	ASTM D5185(m)	250	3	3	80
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	58	60	76
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	952	988	921
Calcium	ppm	ASTM D5185(m)	3000	1051	1065	1174
Phosphorus	ppm	ASTM D5185(m)	1150	989	1099	1009
Zinc	ppm	ASTM D5185(m)	1350	1157	1207	1171
Sulfur	ppm	ASTM D5185(m)	4250	2738	2841	2783
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.8	14.4	14.2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.3	13.1	12.7



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0940152
Lab Number : 02643168
Unique Number : 5800707
Test Package : MOB 1 (Additional Tests: Visual)

NORTHERN GENERATOR CO. LTD.
 80 ASHBRIDGE CIRCLE., UNIT #1 & 2
 WOODBRIDGE, ON
 CA L4L 3R5
 Contact: Selome Afework
 selome@northerngenerator.com
 T: (905)264-9744
 F: (905)264-9714

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.