



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
OTTAWA
Machine Id
0829
Component
Diesel Engine
Fluid
DELO 100 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0810969	---	---
Sample Date		Client Info		20 Jun 2023	---	---
Machine Age	hrs	Client Info		9834	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	27	---	---
Chromium	ppm	ASTM D5185m	>20	1	---	---
Nickel	ppm	ASTM D5185m	>4	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	2	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	3	---	---
Tin	ppm	ASTM D5185m	>15	5	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

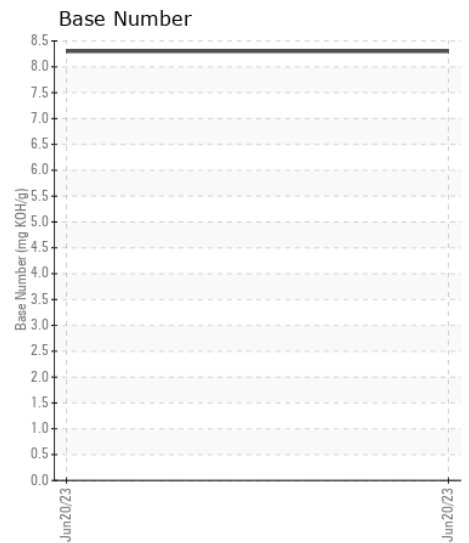
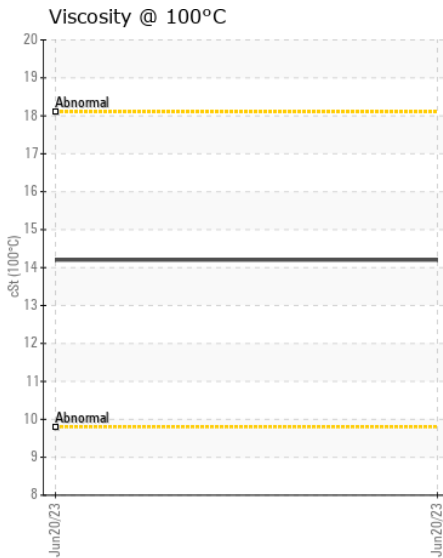
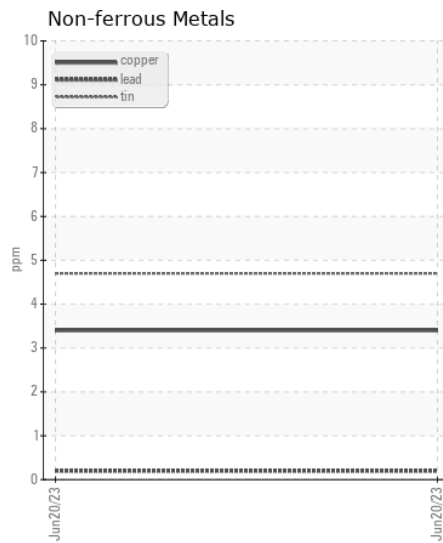
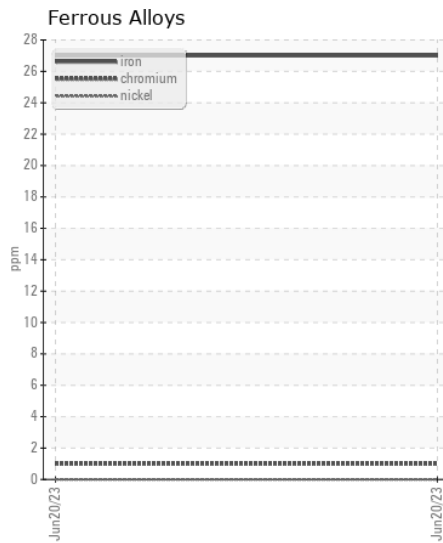
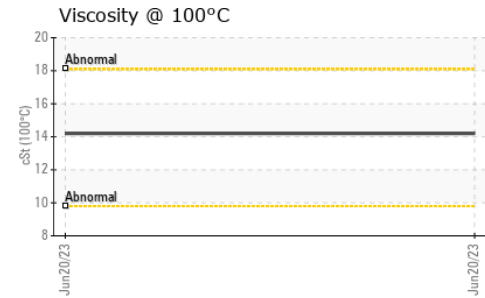
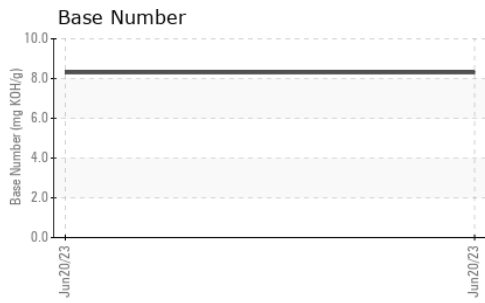
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.7	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	---	---
Boron	ppm	ASTM D5185m		114	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		93	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		984	---	---
Calcium	ppm	ASTM D5185m		730	---	---
Phosphorus	ppm	ASTM D5185m		992	---	---
Zinc	ppm	ASTM D5185m		1207	---	---
Sulfur	ppm	ASTM D5185m		3878	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		8.3	---	---
Visc @ 100°C	cSt	ASTM D445		14.2	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0810969 **Received** : 07 Jul 2023
Lab Number : 05892052 **Tested** : 09 Jul 2023
Unique Number : 10547862 **Diagnosed** : 09 Jul 2023 - Doug Bogart
Test Package : CONST (Additional Tests: TBN)

METRO METALS NORTHWEST INC
 2202 EAST RIVER ST
 TACOMA, WA
 US 98421

Contact: MICHELE MARTINEZ
 mmartinez@metrometalswa.com
 T: (800)562-8464

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: