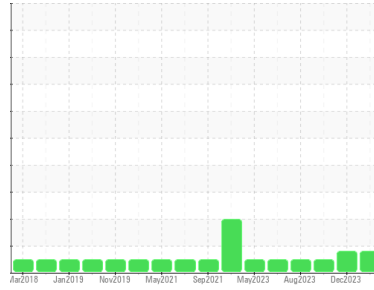


OIL ANALYSIS REPORT



Area
G.LOPES CONSTRUCTION INC./Off-Road
 Machine Id
L43
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



WEAR



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0109645	PCA0109784	PCA0109827
Sample Date	Client Info		21 Feb 2024	26 Dec 2023	24 Oct 2023
Machine Age	hrs	Client Info	24210	24210	24210
Oil Age	hrs	Client Info	18062	18062	18062
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	48	67	73
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	<1	0	0
Aluminum	ppm	ASTM D5185m >25	<1	1	1
Lead	ppm	ASTM D5185m >40	1	7	3
Copper	ppm	ASTM D5185m >330	▲ 579	▲ 769	239
Tin	ppm	ASTM D5185m >15	1	<1	1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	8	38	41
Barium	ppm	ASTM D5185m 0	5	0	0
Molybdenum	ppm	ASTM D5185m 60	60	61	59
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	869	844	833
Calcium	ppm	ASTM D5185m 1070	1001	1132	1048
Phosphorus	ppm	ASTM D5185m 1150	864	932	939
Zinc	ppm	ASTM D5185m 1270	1174	1145	1178
Sulfur	ppm	ASTM D5185m 2060	2657	2632	2881

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	6	7
Sodium	ppm	ASTM D5185m	0	0	2
Potassium	ppm	ASTM D5185m >20	1	0	1
Glycol	%	*ASTM D2982	NEG	0.0	NEG

INFRA-RED

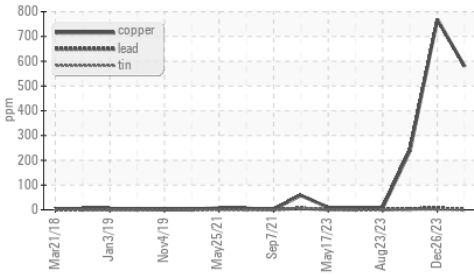
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.7	0.9	1
Nitration	Abs/cm	*ASTM D7624 >20	7.6	8.2	7.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.2	20.6	20.9

FLUID DEGRADATION

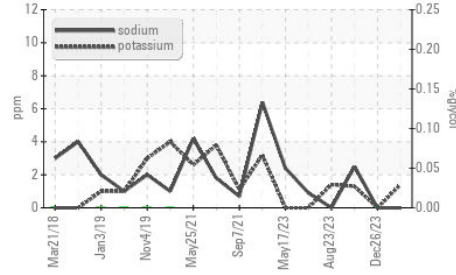
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.9	16.7	16.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.40	11.00	10.42

OIL ANALYSIS REPORT

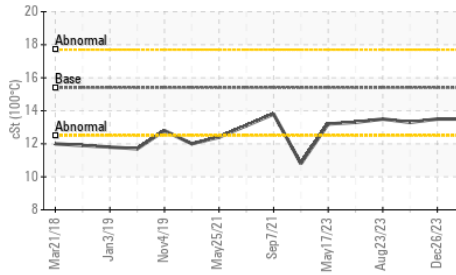
▲ Non-ferrous Metals



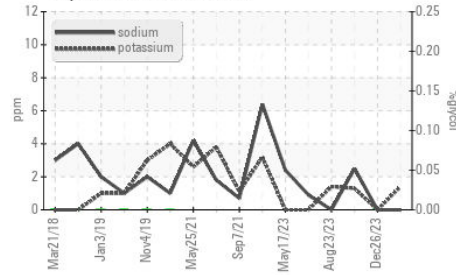
Glycol Contamination



Viscosity @ 100°C



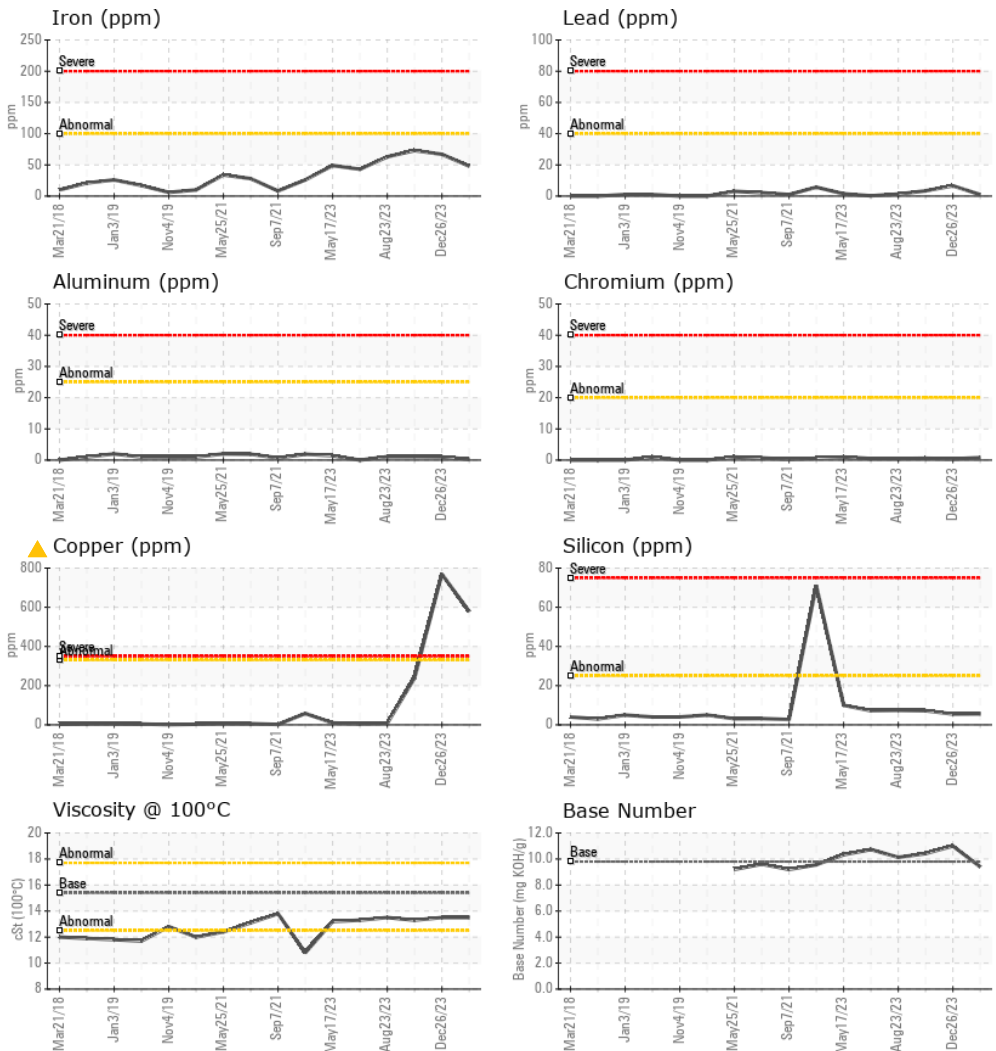
Glycol Contamination



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109645 **Received** : 23 Feb 2024
Lab Number : 06099316 **Tested** : 27 Feb 2024
Unique Number : 10897546 **Diagnosed** : 27 Feb 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: Glycol)

G LOPES CONSTRUCTION
 565 WINTHROP ST
 TAUNTON, MA
 US 02780
 Contact: BUTCH MCGRATH
 bmcgrath@glopes.com

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)

T:
F: