



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



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

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	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
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

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.

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
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

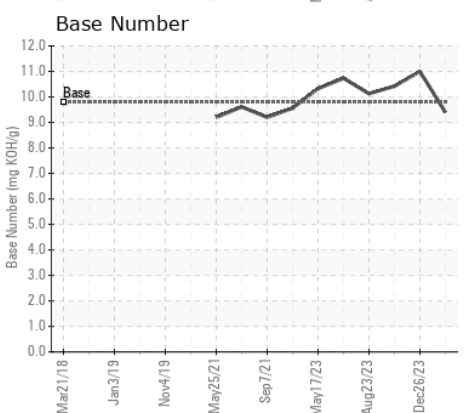
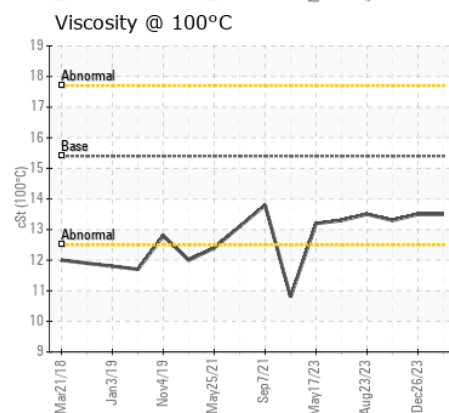
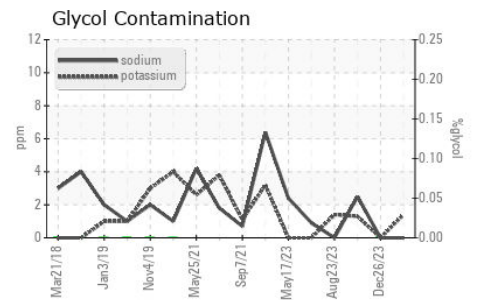
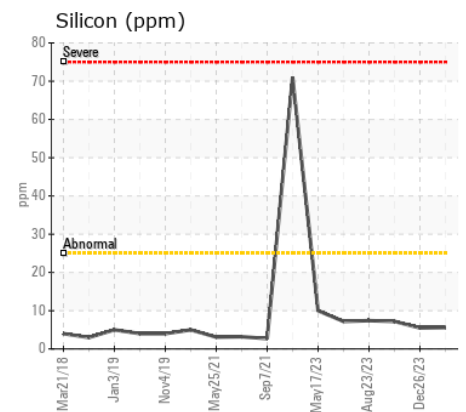
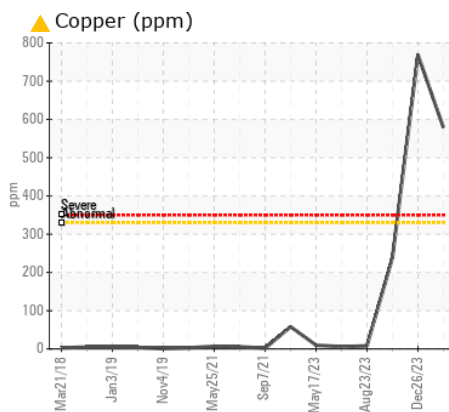
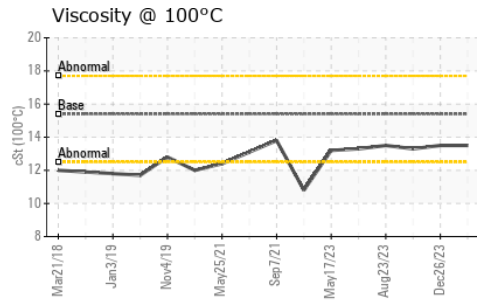
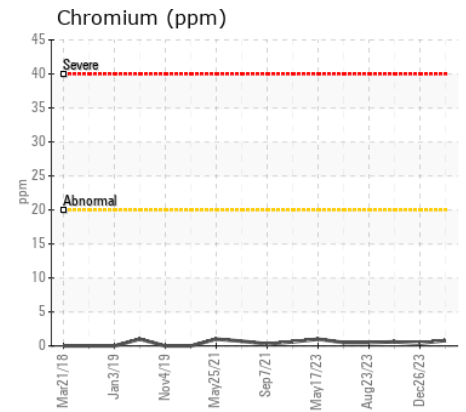
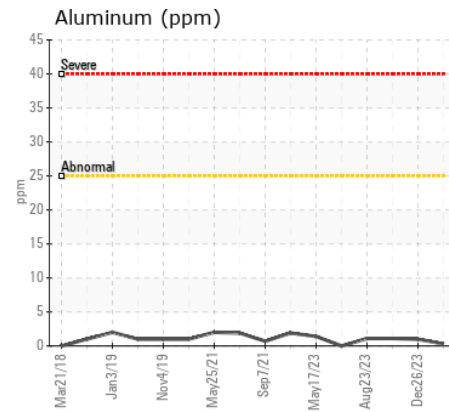
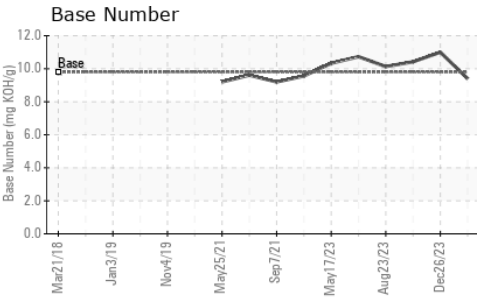
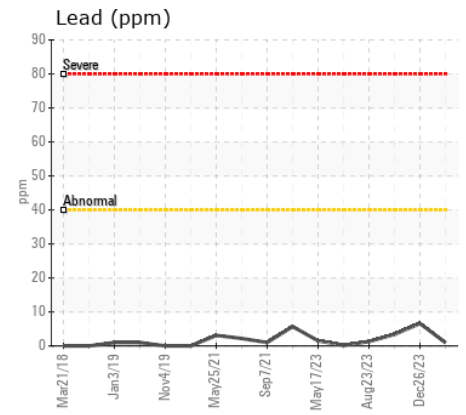
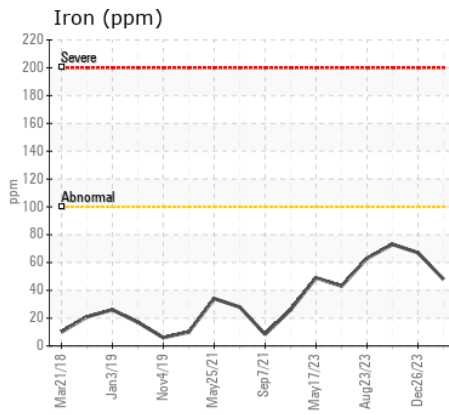
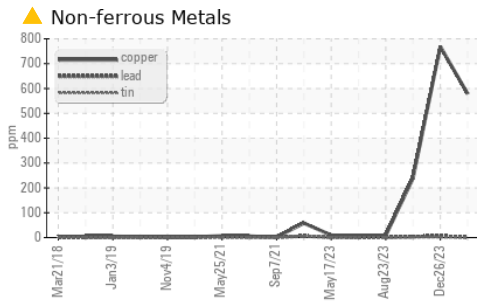
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	7
Potassium	ppm	ASTM D5185m	>20	1	0	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	0.0	NEG
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
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

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		0	0	2
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
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
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.5	13.3



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: