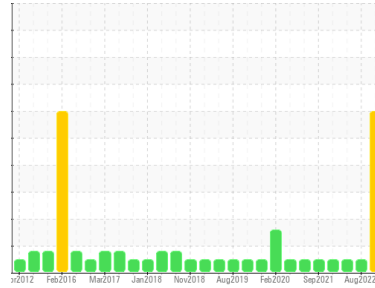


OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
G.LOPES CONSTRUCTION INC./Off-Road
 Machine Id
E83
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We recommend an early resample to monitor this condition.

Wear

The aluminum level is severe. Piston, ring and cylinder wear is indicated.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0109744	PCA0078142	PCA0072025
Sample Date	Client Info		16 Jan 2024	17 Aug 2022	19 Apr 2022
Machine Age	hrs	Client Info	11997	11997	11847
Oil Age	hrs	Client Info	10900	11050	11249
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	NORMAL	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
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	74	20	18
Chromium	ppm	ASTM D5185m >20	4	<1	1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >25	97	21	24
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	9	3	3
Tin	ppm	ASTM D5185m >15	0	<1	<1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	9	6	6
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	61	63	61
Manganese	ppm	ASTM D5185m 0	1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	1008	845	1013
Calcium	ppm	ASTM D5185m 1070	1090	1031	1148
Phosphorus	ppm	ASTM D5185m 1150	1064	952	1125
Zinc	ppm	ASTM D5185m 1270	1285	1108	1355
Sulfur	ppm	ASTM D5185m 2060	3214	2793	2747

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	4	5
Sodium	ppm	ASTM D5185m	2	43	<1
Potassium	ppm	ASTM D5185m >20	6	28	2

INFRA-RED

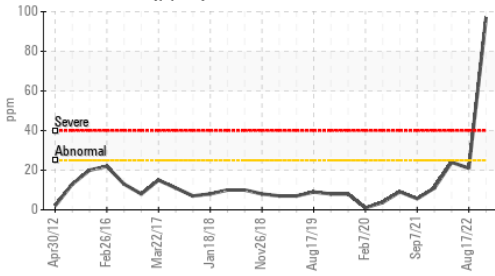
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.6	0.6
Nitration	Abs/cm	*ASTM D7624 >20	7.1	9.3	7.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.7	20.3	19.8

FLUID DEGRADATION

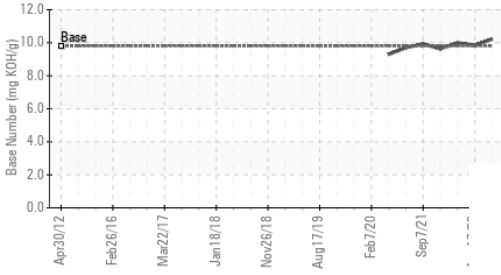
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.6	15.7	14.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	10.23	9.83	10.0

OIL ANALYSIS REPORT

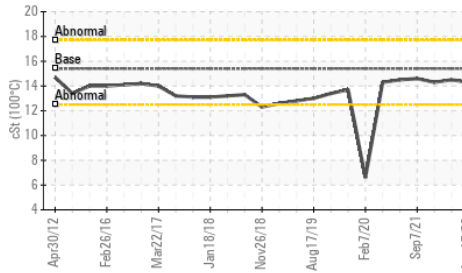
Aluminum (ppm)



Base Number



Viscosity @ 100°C

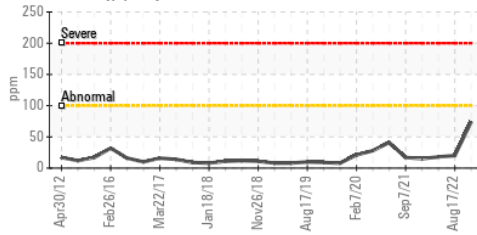


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

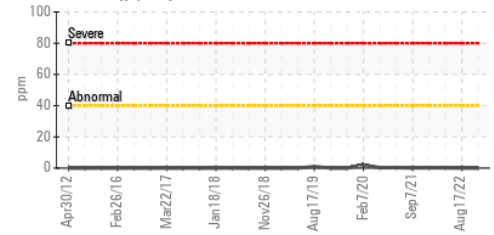
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	14.3

GRAPHS

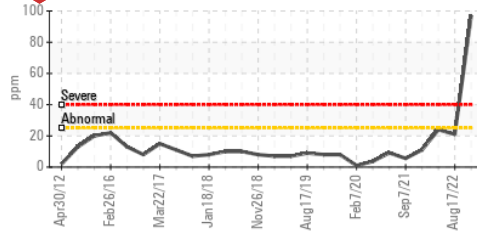
Iron (ppm)



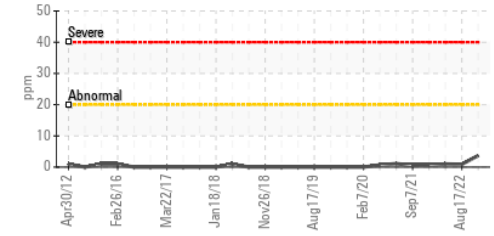
Lead (ppm)



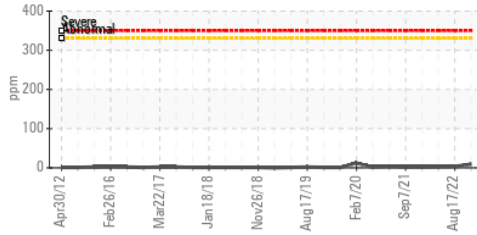
Aluminum (ppm)



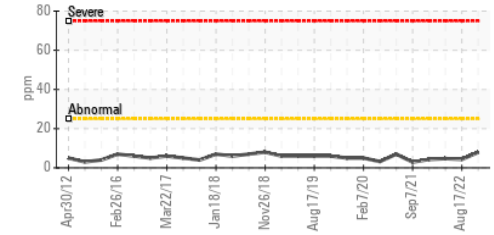
Chromium (ppm)



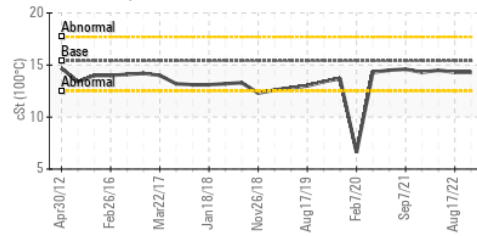
Copper (ppm)



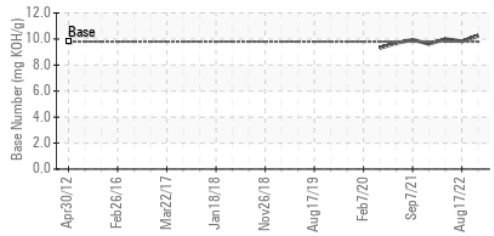
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109744 **Recieved** : 19 Jan 2024
Lab Number : 06065849 **Diagnosed** : 22 Jan 2024
Unique Number : 10842526 **Diagnostician** : Don Baldrige
Test Package : MOB 2

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: