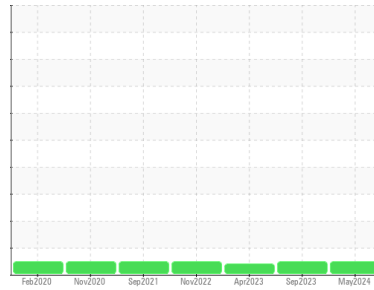


OIL ANALYSIS REPORT



Area
G.LOPES CONSTRUCTION INC./Off-Road
 Machine Id
E218
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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		PCA0110072	PCA0104756	PCA0083062
Sample Date	Client Info		22 May 2024	27 Sep 2023	05 Apr 2023
Machine Age	hrs	Client Info	11799	11067	11067
Oil Age	hrs	Client Info	9449	9147	9376
Oil Changed		Client Info	N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	0.5
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	7	18	15
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	1	0	0
Aluminum	ppm	ASTM D5185m >25	3	6	2
Lead	ppm	ASTM D5185m >40	<1	<1	<1
Copper	ppm	ASTM D5185m >330	2	1	<1
Tin	ppm	ASTM D5185m >15	1	0	0
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	2	4	6
Barium	ppm	ASTM D5185m 0	<1	0	0
Molybdenum	ppm	ASTM D5185m 60	58	67	61
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 1010	944	1061	928
Calcium	ppm	ASTM D5185m 1070	1067	1206	1095
Phosphorus	ppm	ASTM D5185m 1150	965	1123	987
Zinc	ppm	ASTM D5185m 1270	1248	1373	1174
Sulfur	ppm	ASTM D5185m 2060	3255	3271	3028

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	3	3
Sodium	ppm	ASTM D5185m	4	1	2
Potassium	ppm	ASTM D5185m >20	2	0	0

INFRA-RED

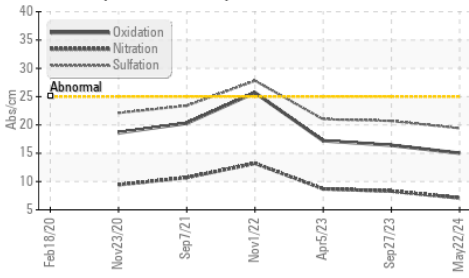
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.7	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.1	8.3	8.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.4	20.7	21.0

FLUID DEGRADATION

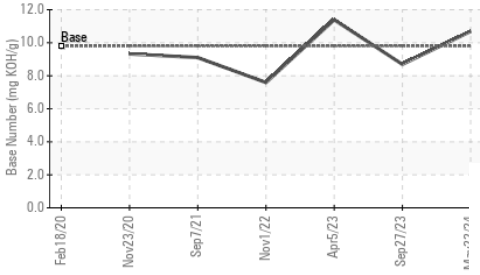
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.0	16.4	17.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	10.69	8.69	11.39

OIL ANALYSIS REPORT

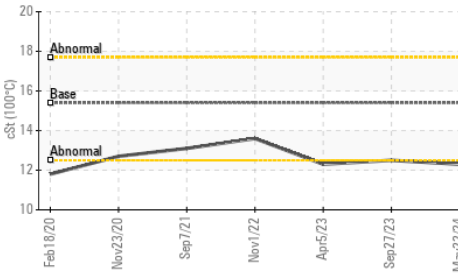
FT-IR (Direct Trend)



Base Number



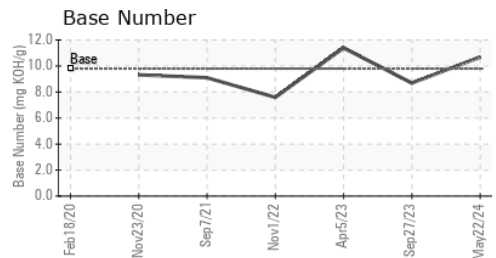
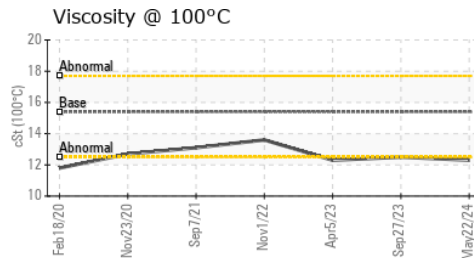
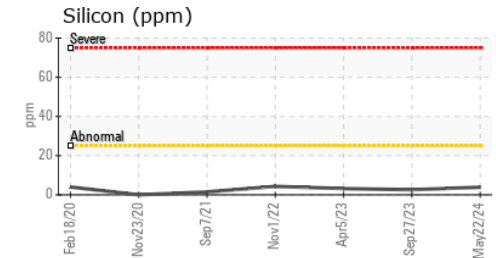
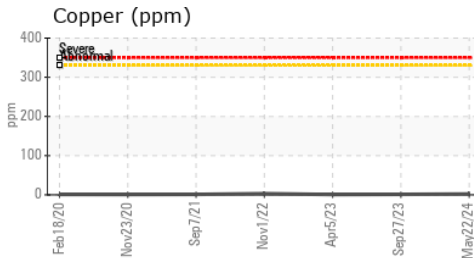
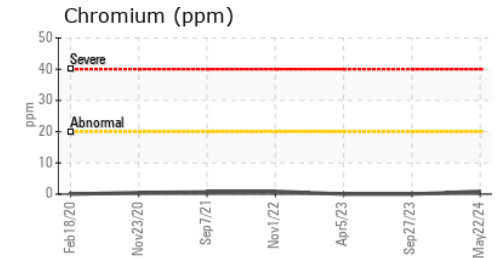
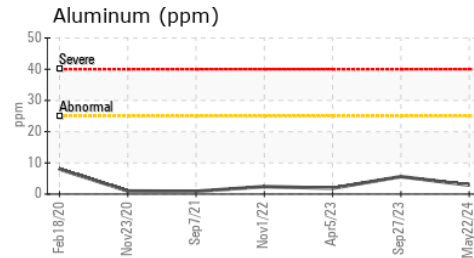
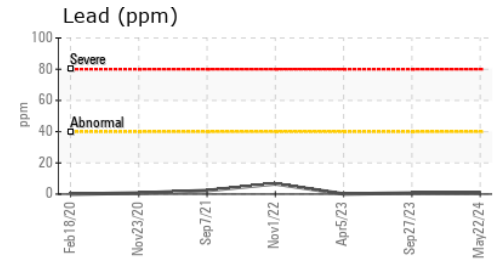
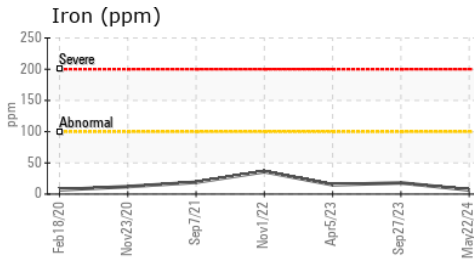
Viscosity @ 100°C



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	12.3	12.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0110072 **Received** : 24 May 2024
Lab Number : **06191237** **Tested** : 29 May 2024
Unique Number : 11047989 **Diagnosed** : 29 May 2024 - Wes Davis
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)