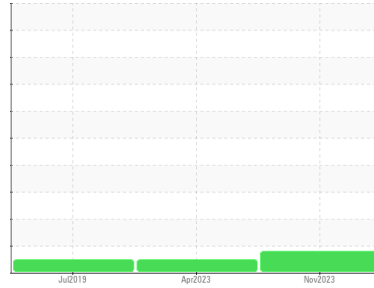


OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
G.LOPES CONSTRUCTION INC./Off-Road
 Machine Id
HP4
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	PCA0083387	PCA0090770	PCA19311002
Sample Date	Client Info	15 Nov 2023	19 Apr 2023	27 Jul 2019
Machine Age	hrs	2236	1625	1382
Oil Age	hrs	2236	1625	---
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		MARGINAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	0.0

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	11	8	29
Chromium	ppm ASTM D5185m >20	1	<1	4
Nickel	ppm ASTM D5185m >4	0	0	0
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m >3	0	0	1
Aluminum	ppm ASTM D5185m >20	3	1	6
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	<1	4	1
Tin	ppm ASTM D5185m >15	0	0	1
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	<1	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	24	38	53
Barium	ppm ASTM D5185m 0	<1	0	0
Molybdenum	ppm ASTM D5185m 60	50	48	44
Manganese	ppm ASTM D5185m 0	0	<1	---
Magnesium	ppm ASTM D5185m 1010	772	702	689
Calcium	ppm ASTM D5185m 1070	896	1359	1736
Phosphorus	ppm ASTM D5185m 1150	829	825	860
Zinc	ppm ASTM D5185m 1270	994	1053	1055
Sulfur	ppm ASTM D5185m 2060	2611	3101	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	9	11	11
Sodium	ppm ASTM D5185m	1	<1	7
Potassium	ppm ASTM D5185m >20	2	0	1
Fuel	% ASTM D3524 >5	▲ 4.1	<1.0	<1.0

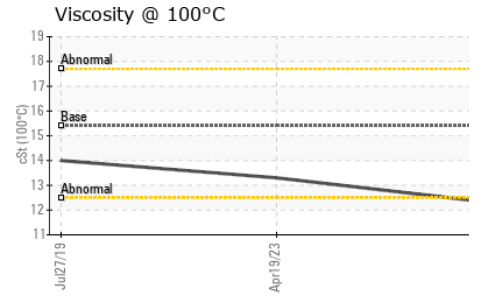
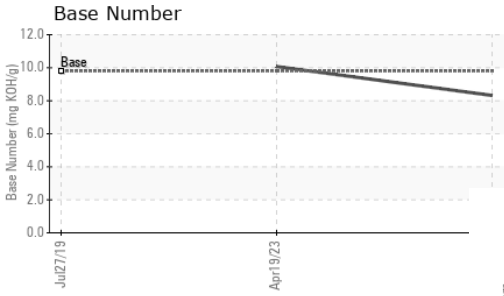
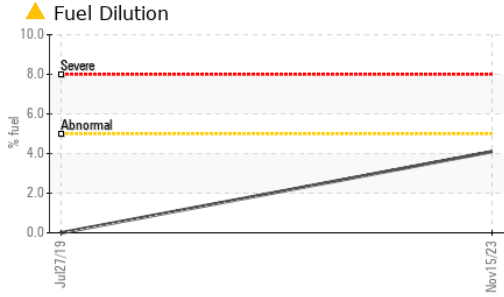
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.1	0.38
Nitration	Abs/cm *ASTM D7624 >20	10.0	5.4	---
Sulfation	Abs/.1mm *ASTM D7415 >30	19.3	17.2	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	21.3	15.4	7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.32	10.07	---

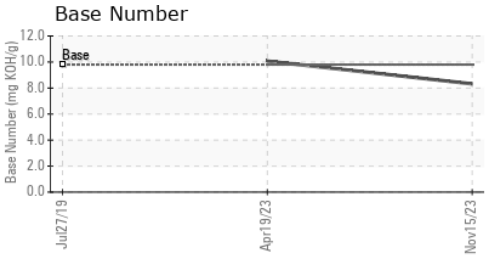
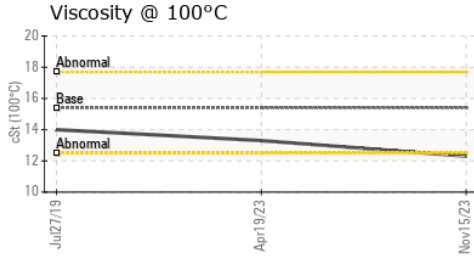
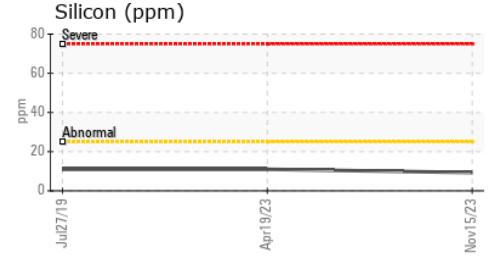
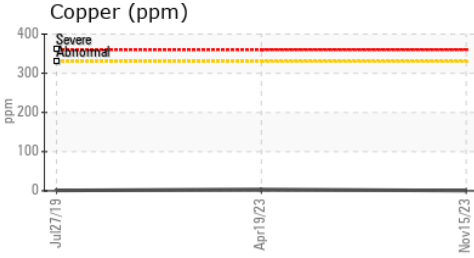
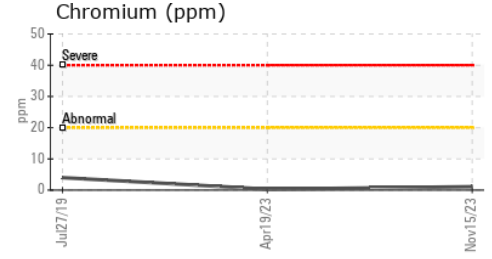
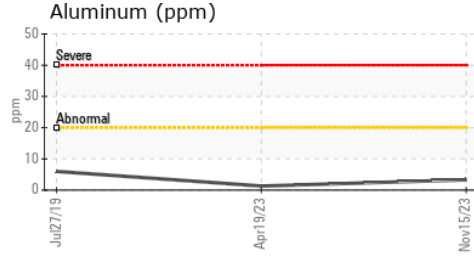
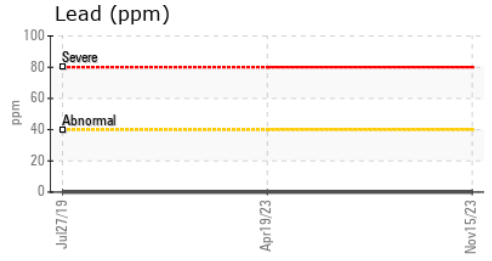
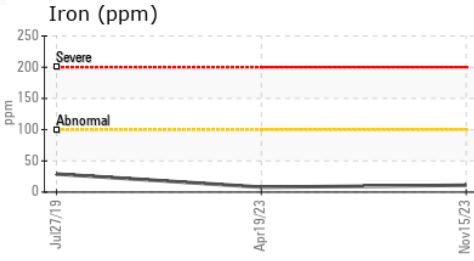
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
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	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	12.3	13.3	14

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0083387 **Received** : 17 Nov 2023
Lab Number : **06011095** **Diagnosed** : 21 Nov 2023
Unique Number : 10750239 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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)