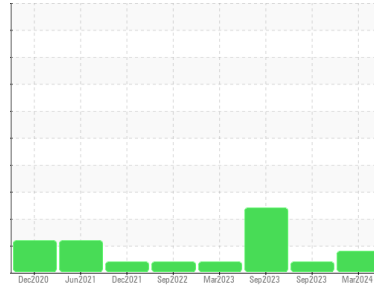


Area
G.LOPES CONSTRUCTION INC./Off-Road
Machine Id
PS 36
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

- Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**
All component wear rates are normal.
- Contamination**
Moderate concentration of visible dirt/debris present in the oil.
- Fluid Condition**
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0109929	PCA0104661	PCA0104661
Sample Date	Client Info	12 Mar 2024	05 Sep 2023	05 Sep 2023
Machine Age	hrs	2434	2007	2007
Oil Age	hrs	1162	1023	1023
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ATTENTION	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	▲ 3.0
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	17	19	9
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >4	<1	<1	0
Titanium	ppm ASTM D5185m	2	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	9	5	3
Lead	ppm ASTM D5185m >40	<1	0	0
Copper	ppm ASTM D5185m >330	3	6	2
Tin	ppm ASTM D5185m >15	<1	<1	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	8	4	10
Barium	ppm ASTM D5185m 0	0	2	2
Molybdenum	ppm ASTM D5185m 60	63	64	● 2
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	916	970	● 28
Calcium	ppm ASTM D5185m 1070	1138	1135	● 2871
Phosphorus	ppm ASTM D5185m 1150	1035	1066	1027
Zinc	ppm ASTM D5185m 1270	1243	1271	1221
Sulfur	ppm ASTM D5185m 2060	3166	3248	4628

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	5	4
Sodium	ppm ASTM D5185m	0	<1	1
Potassium	ppm ASTM D5185m >20	3	<1	2

INFRA-RED

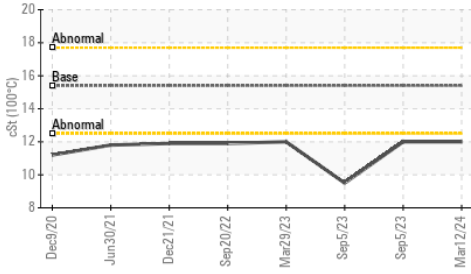
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.1	0
Nitration	Abs/cm *ASTM D7624 >20	8.4	7.6	3.4
Sulfation	Abs/.1mm *ASTM D7415 >30	18.5	18.8	23.7

FLUID DEGRADATION

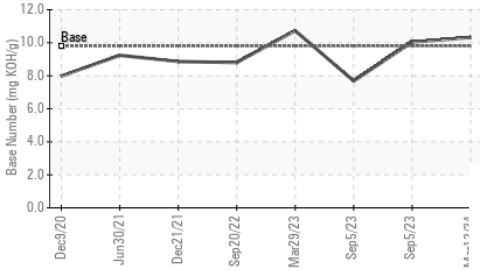
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.7	15.1	11.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	10.32	10.04	7.68

OIL ANALYSIS REPORT

● Viscosity @ 100°C



Base Number

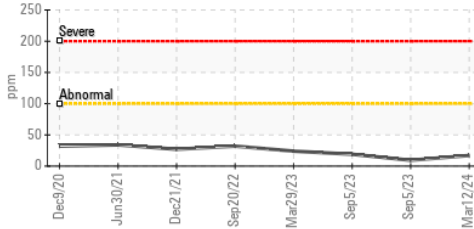


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	▲ MODER	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

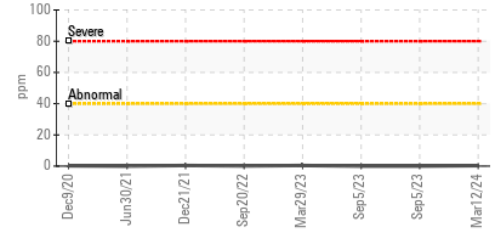
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4 ● 12.0	12.0	▲ 9.5

GRAPHS

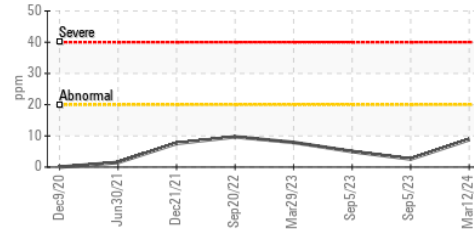
Iron (ppm)



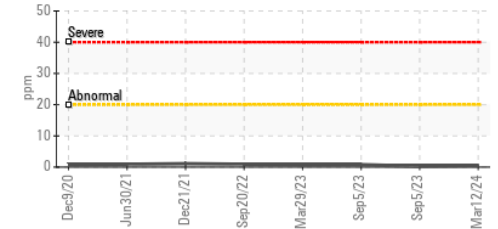
Lead (ppm)



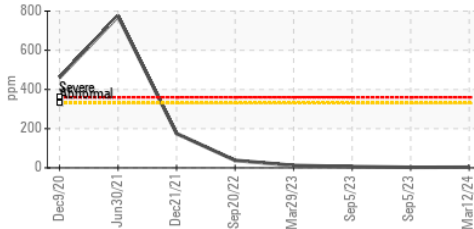
Aluminum (ppm)



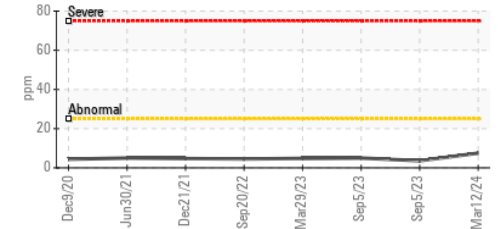
Chromium (ppm)



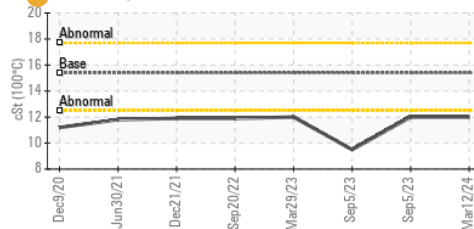
Copper (ppm)



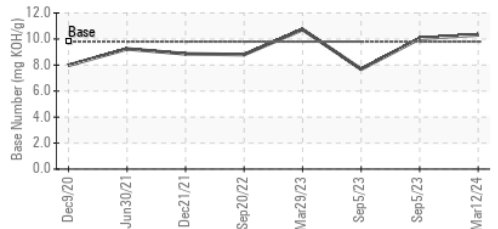
Silicon (ppm)



● Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109929 **Received** : 14 Mar 2024
Lab Number : 06118470 **Tested** : 15 Mar 2024
Unique Number : 10927303 **Diagnosed** : 18 Mar 2024 - Sean Felton
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: