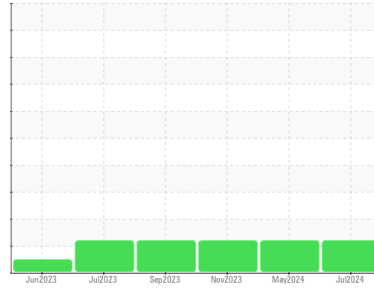


OIL ANALYSIS REPORT

Area
G. LOPES CONSTRUCTION INC./ON-ROAD
 Machine Id
365
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



FUEL



DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate amount of fuel present in the oil.

▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0123021	PCA0122735	PCA0109768
Sample Date	Client Info			02 Jul 2024	15 May 2024	15 Nov 2023
Machine Age	hrs	Client Info		121000	121000	121000
Oil Age	hrs	Client Info		121000	121000	121000
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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	18	10	17
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	1
Lead	ppm	ASTM D5185m	>40	7	3	2
Copper	ppm	ASTM D5185m	>330	10	7	5
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	3	5	17
Barium	ppm	ASTM D5185m	0	0	0	<1
Molybdenum	ppm	ASTM D5185m	60	53	55	47
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	848	873	702
Calcium	ppm	ASTM D5185m	1070	1058	1037	1230
Phosphorus	ppm	ASTM D5185m	1150	898	984	934
Zinc	ppm	ASTM D5185m	1270	1145	1153	1105
Sulfur	ppm	ASTM D5185m	2060	2822	3060	2602

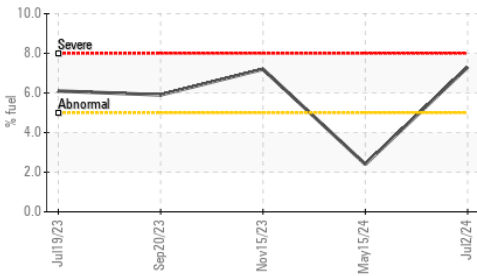
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	2	3
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	2	0	2
Fuel	%	ASTM D3524	>5	▲ 7.3	▲ 2.4	▲ 7.2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.6	7.0	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	20.3	19.8

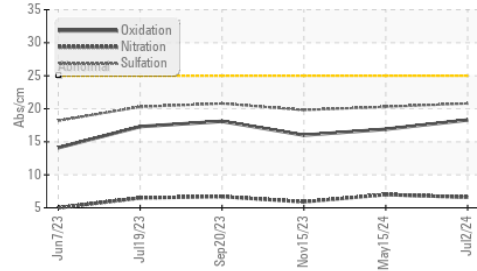
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	16.9	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.52	9.12	8.77

OIL ANALYSIS REPORT

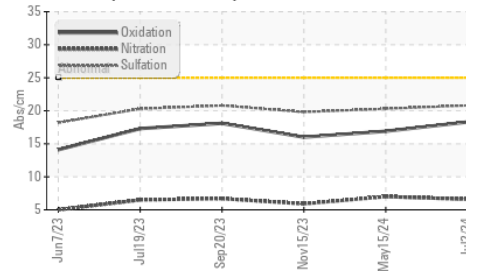
▲ Fuel Dilution



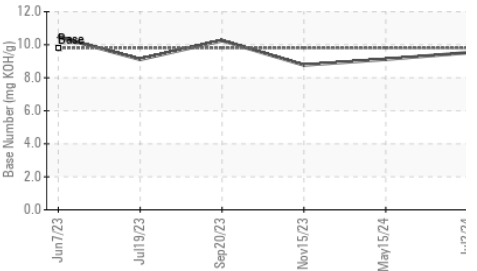
● FT-IR (Direct Trend)



● FT-IR (Direct Trend)



Base Number

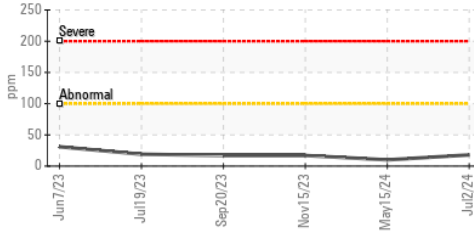


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

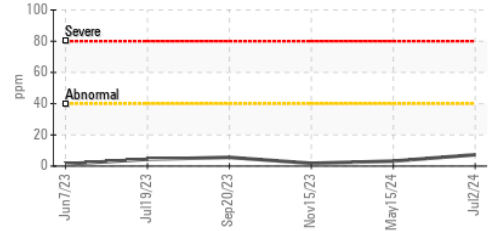
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.8	▲ 11.8

GRAPHS

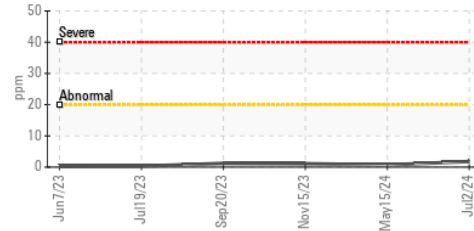
Iron (ppm)



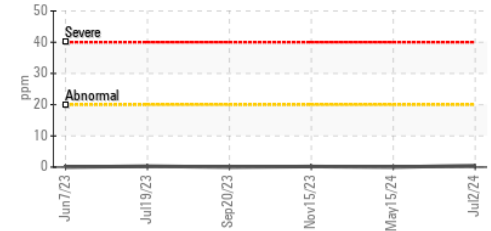
Lead (ppm)



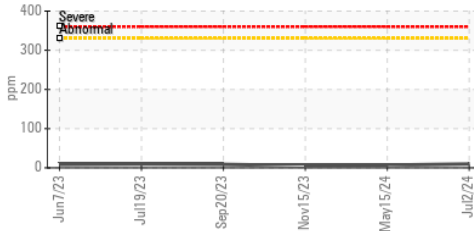
Aluminum (ppm)



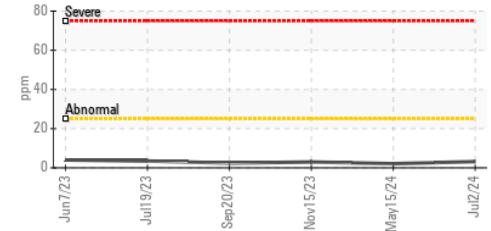
Chromium (ppm)



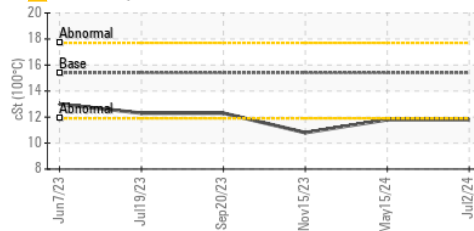
Copper (ppm)



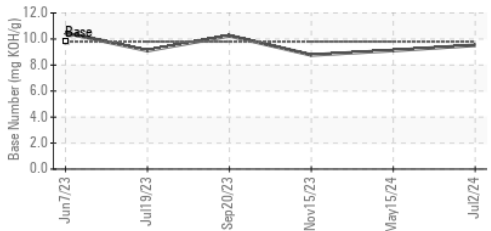
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0123021 **Received** : 08 Jul 2024
Lab Number : 06230393 **Tested** : 12 Jul 2024
Unique Number : 11113886 **Diagnosed** : 12 Jul 2024 - Sean Felton
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)

T:
F: