



WEAR

ABNORMAL

CONTAMINATION

NORMAL

FLUID CONDITION

NORMAL



Area
G.LOPES CONSTRUCTION INC./Off-Road
Machine Id
BH42
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0122963	PCA0090619	PCA0072087
Sample Date		Client Info		12 Jun 2024	01 Feb 2023	04 Apr 2022
Machine Age	hrs	Client Info		3887	3887	3669
Oil Age	hrs	Client Info		3333	3551	336
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ATTENTION

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	31	22	18
Chromium	ppm	ASTM D5185m	>20	2	2	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	▲ 28	▲ 28	6
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	2	1	3
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

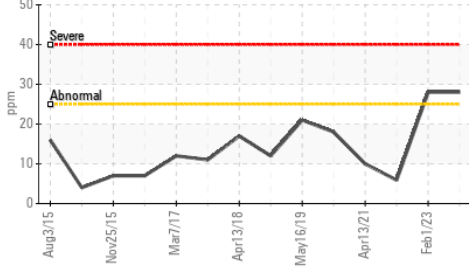
Silicon	ppm	ASTM D5185m	>25	8	5	5
Potassium	ppm	ASTM D5185m	>20	2	1	1
Fuel		WC Method	>5	<1.0	<1.0	0.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.7	6.8	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.2	18.0	17.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

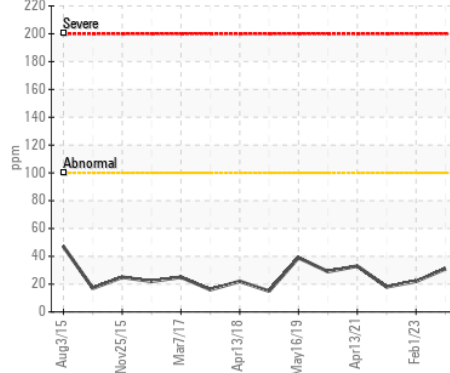
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	0	3
Boron	ppm	ASTM D5185m	0	5	7	19
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	62	58	45
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	990	862	732
Calcium	ppm	ASTM D5185m	1070	1111	1105	1817
Phosphorus	ppm	ASTM D5185m	1150	1040	1008	1148
Zinc	ppm	ASTM D5185m	1270	1271	1194	1429
Sulfur	ppm	ASTM D5185m	2060	3122	3017	3342
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	14.6	11.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.86	10.36	8.87
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.9	● 12.4

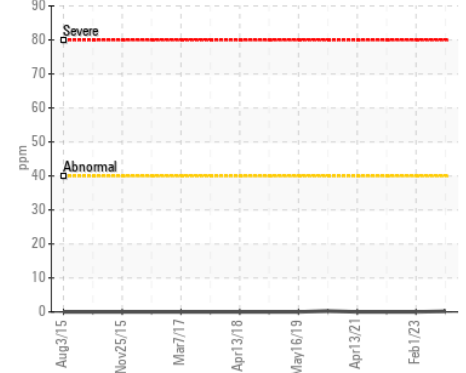
▲ Aluminum (ppm)



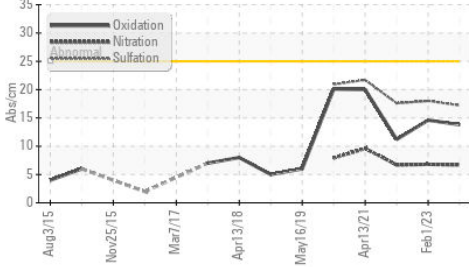
Iron (ppm)



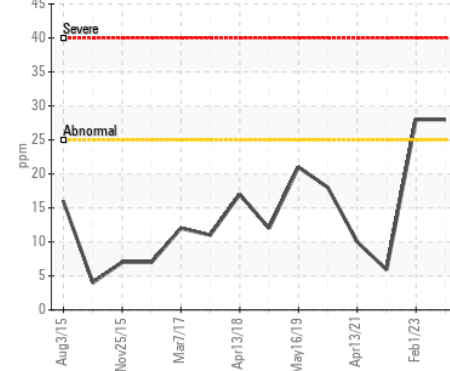
Lead (ppm)



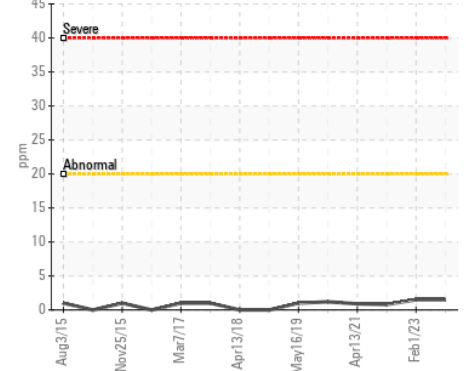
FT-IR (Direct Trend)



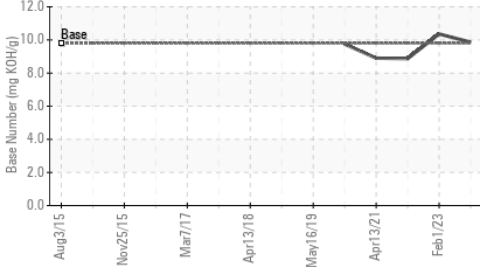
▲ Aluminum (ppm)



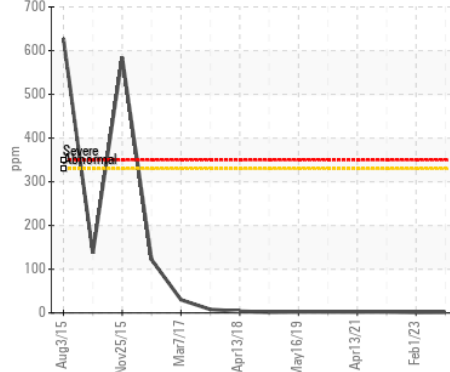
Chromium (ppm)



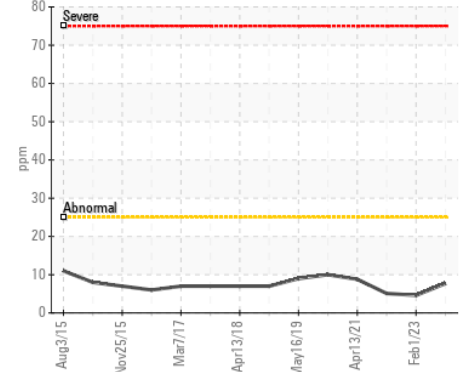
Base Number



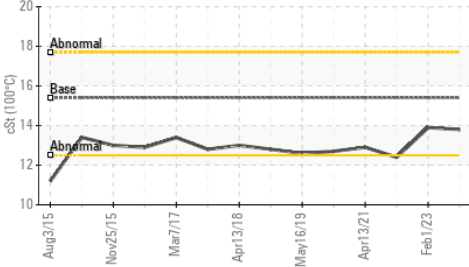
Copper (ppm)



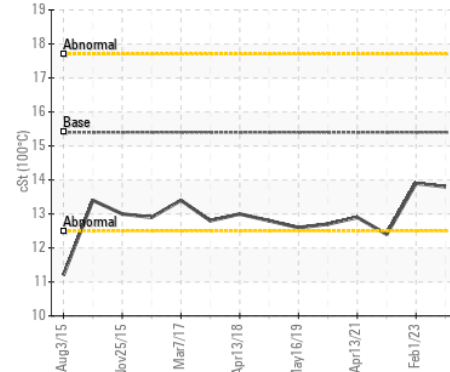
Silicon (ppm)



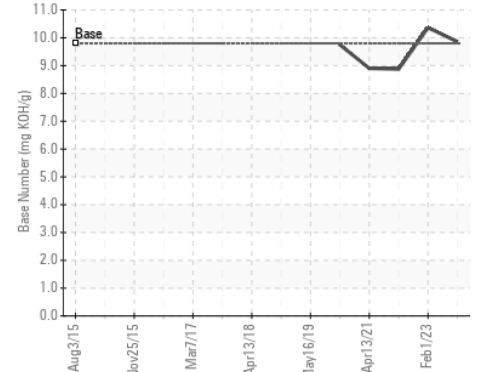
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0122963

Lab Number : 06210357

Unique Number : 11083221

Test Package : MOB 2

Received : 14 Jun 2024

Tested : 17 Jun 2024

Diagnosed : 18 Jun 2024 - Don Baldrige

G LOPES CONSTRUCTION

565 WINTHROP ST

TAUNTON, MA

US 02780

Contact: BUTCH MCGRATH

bmcgrath@glopes.com

T:

F:

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)