



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
G.LOPES CONSTRUCTION INC./Off-Road
Machine Id
D688
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0122836	PCA0083104	PCA0078067
Sample Date		Client Info		09 Jul 2024	12 Apr 2023	04 Oct 2022
Machine Age	hrs	Client Info		10000000	10000000	14291
Oil Age	hrs	Client Info		10000000	10000000	14291
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				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	18	28
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	1	3
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	12	3	20
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	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.

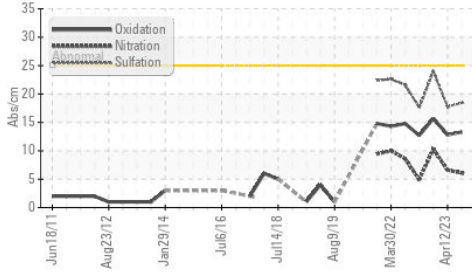
Silicon	ppm	ASTM D5185m	>25	3	5	8
Potassium	ppm	ASTM D5185m	>20	3	4	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	1.4	▲ 3.2
Nitration	Abs/cm	*ASTM D7624	>20	6.1	6.6	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	17.8	24.0
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

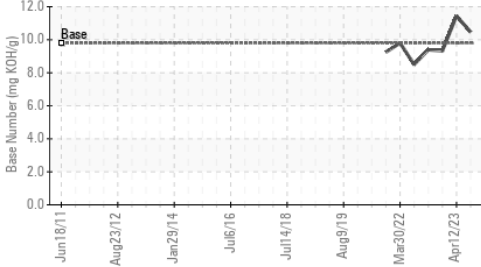
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	5	7
Boron	ppm	ASTM D5185m	0	6	4	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	59	61
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	1010	925	903	923
Calcium	ppm	ASTM D5185m	1070	1101	1065	1031
Phosphorus	ppm	ASTM D5185m	1150	1029	1014	1009
Zinc	ppm	ASTM D5185m	1270	1227	1199	1206
Sulfur	ppm	ASTM D5185m	2060	3001	3055	3207
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	12.8	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	10.47	11.44	9.33
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	14.1	14.9

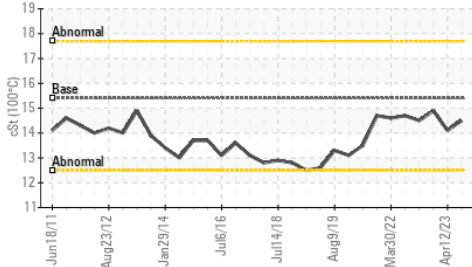
FT-IR (Direct Trend)



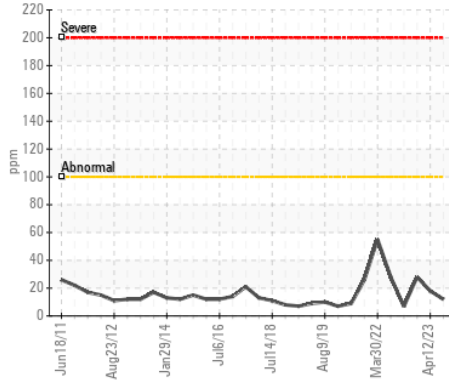
Base Number



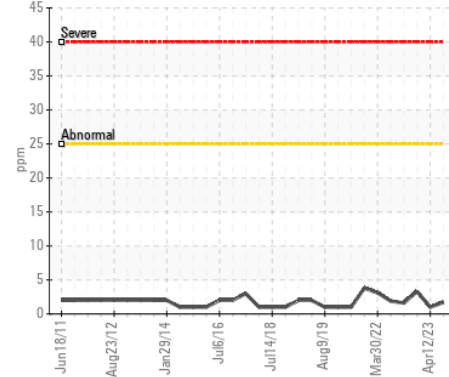
Viscosity @ 100°C



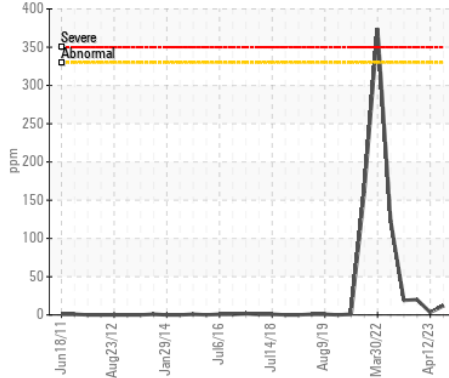
Iron (ppm)



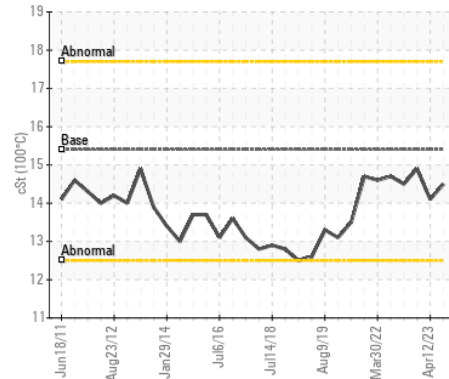
Aluminum (ppm)



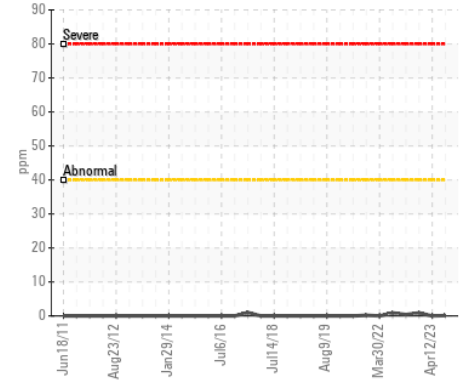
Copper (ppm)



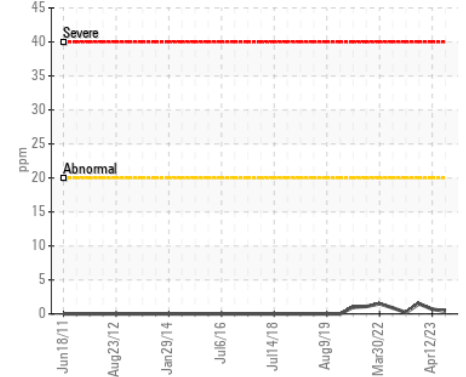
Viscosity @ 100°C



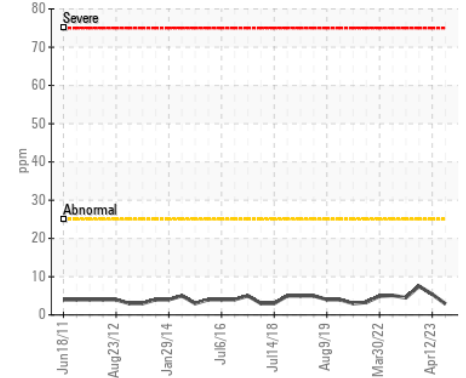
Lead (ppm)



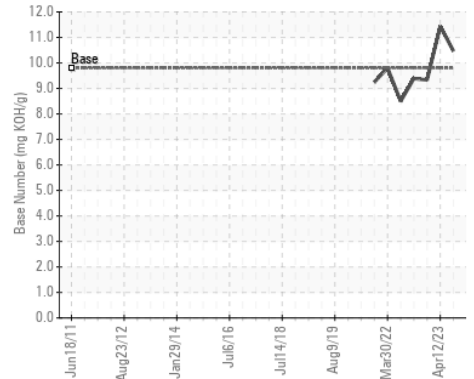
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

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

Sample No. : PCA0122836

Lab Number : 06233426

Unique Number : 11116919

Test Package : MOB 2

Received : 11 Jul 2024

Tested : 12 Jul 2024

Diagnosed : 12 Jul 2024 - Wes Davis

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)