

Area
G. LOPES CONSTRUCTION INC./ON-ROAD

Machine Id
PU309

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. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0123017	PCA0122760	PCA0109890
Sample Date		Client Info		02 Jul 2024	05 Jun 2024	10 Apr 2024
Machine Age	mls	Client Info		40000	38111	35700
Oil Age	mls	Client Info		6889	7411	8200
Filter Age	mls	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				MARGINAL	ABNORMAL	SEVERE

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	6	7	9
Chromium	ppm	ASTM D5185m	>20	1	<1	2
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	<1	0	2
Copper	ppm	ASTM D5185m	>330	1	<1	1
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

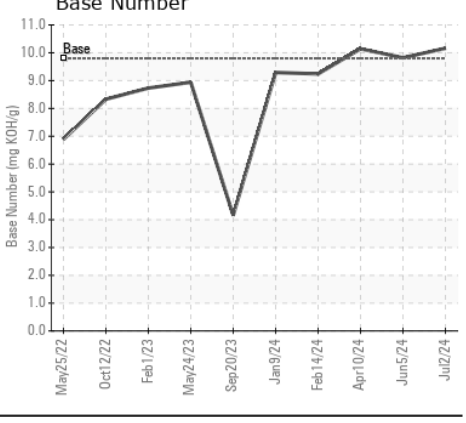
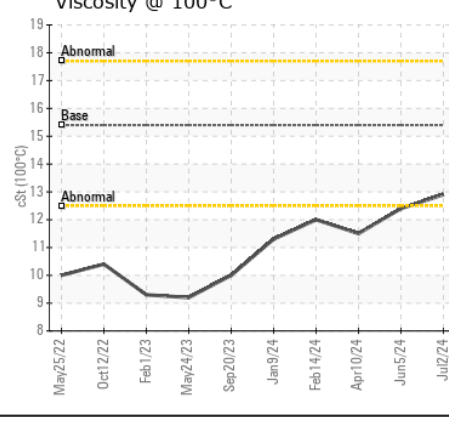
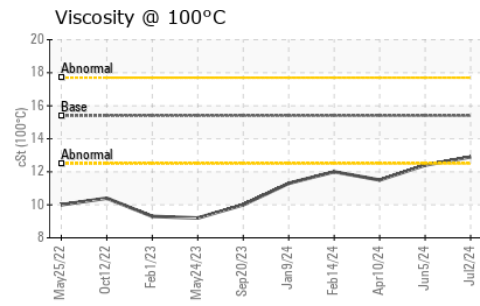
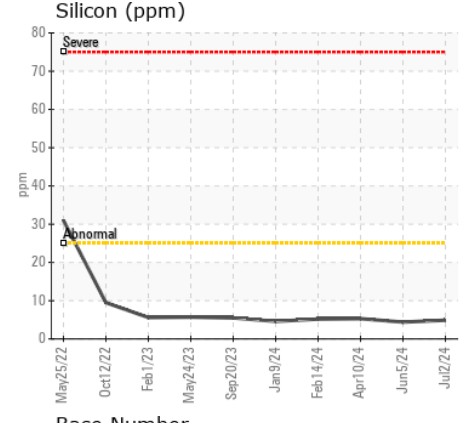
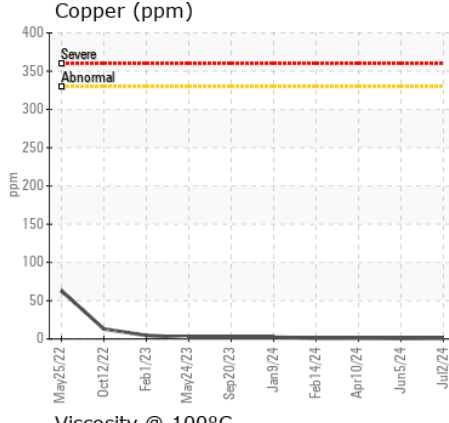
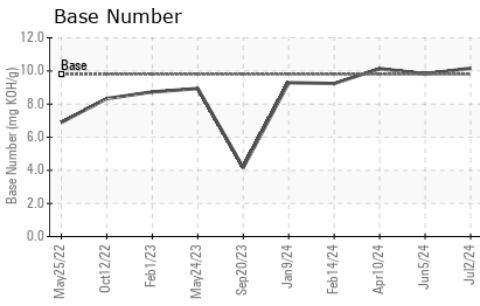
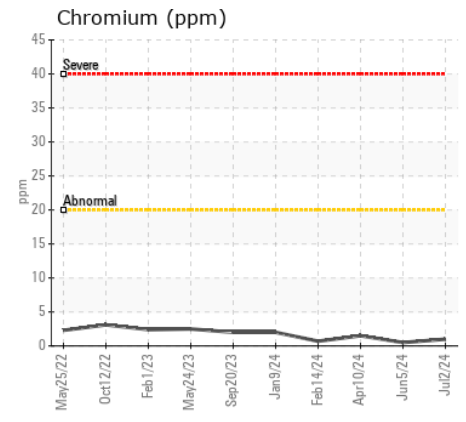
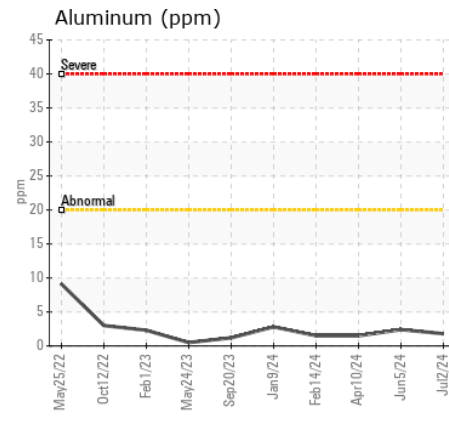
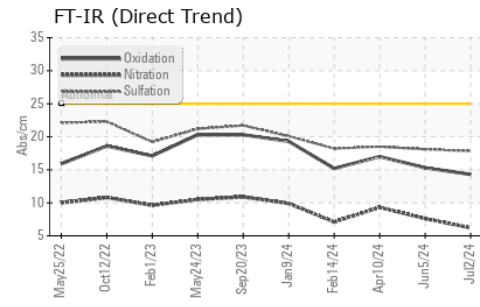
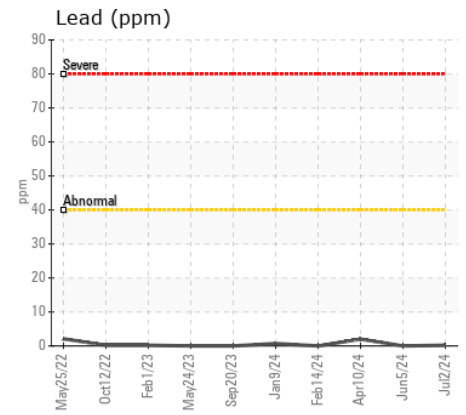
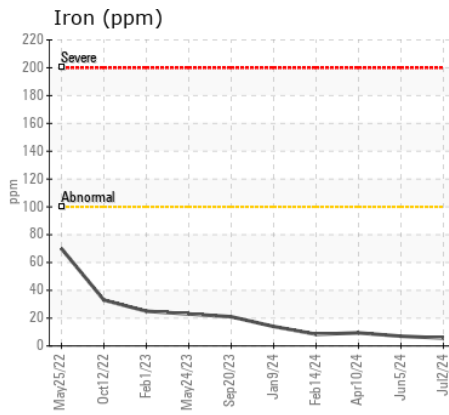
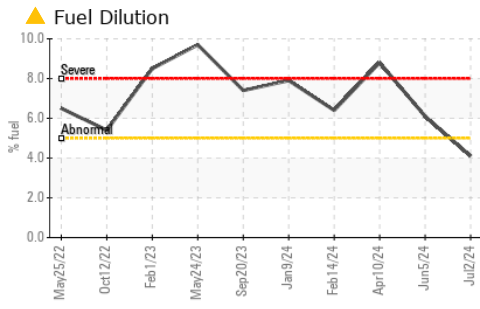
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	5
Potassium	ppm	ASTM D5185m	>20	2	1	2
Fuel	%	ASTM D3524	>5	▲ 4.1	▲ 6.1	▲ 8.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.2	7.6	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	18.1	18.5
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		0	<1	<1
Boron	ppm	ASTM D5185m	0	4	3	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	55	55	55
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	890	876	939
Calcium	ppm	ASTM D5185m	1070	1058	1084	1125
Phosphorus	ppm	ASTM D5185m	1150	960	967	1095
Zinc	ppm	ASTM D5185m	1270	1205	1186	1298
Sulfur	ppm	ASTM D5185m	2060	3038	3248	3656
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	15.3	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	10.16	9.82	10.14
Visc @ 100°C	cSt	ASTM D445	15.4	12.9	▲ 12.4	▲ 11.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0123017 **Received** : 08 Jul 2024
Lab Number : 06230367 **Tested** : 11 Jul 2024
Unique Number : 11113860 **Diagnosed** : 11 Jul 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: PercentFuel)

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Certificate L2367
 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)