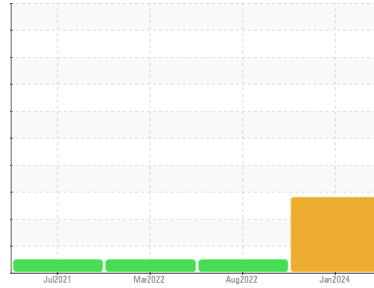


OIL ANALYSIS REPORT



Area
G.LOPES CONSTRUCTION INC./Off-Road
 Machine Id
E-0323
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a moderate amount of fuel present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
 Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0109745	PCA0066753	PCA0066455
Sample Date	Client Info	16 Jan 2024	10 Aug 2022	01 Mar 2022
Machine Age	hrs	10147	8289	8289
Oil Age	hrs	8653	7813	476
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	NORMAL	NORMAL

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	23	16	20
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	<1	3
Lead	ppm	ASTM D5185m	>40	<1	2	3
Copper	ppm	ASTM D5185m	>330	6	4	2
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Antimony	ppm	ASTM D5185m		---	---	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	6	9	9
Barium	ppm	ASTM D5185m	0	<1	<1	0
Molybdenum	ppm	ASTM D5185m	60	62	69	68
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1026	992	1148
Calcium	ppm	ASTM D5185m	1070	1115	1152	1274
Phosphorus	ppm	ASTM D5185m	1150	1059	1018	1184
Zinc	ppm	ASTM D5185m	1270	1290	1301	1519
Sulfur	ppm	ASTM D5185m	2060	3138	2845	2774

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	▲ 25	4	4
Sodium	ppm	ASTM D5185m		11	9	2
Potassium	ppm	ASTM D5185m	>20	<1	2	1
Fuel	%	ASTM D3524	>5	▲ 6.2	<1.0	<1.0

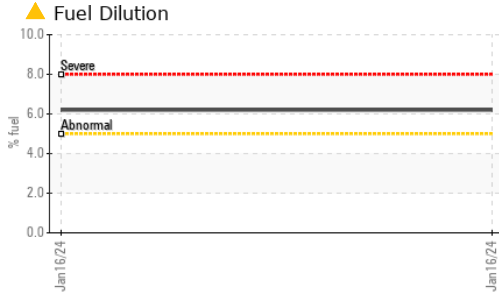
INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.4	10.9	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	24.7	23.0

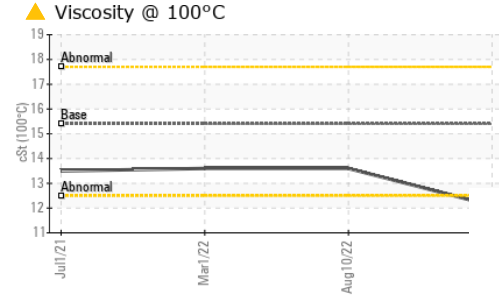
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	21.4	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.76	8.44	8.18

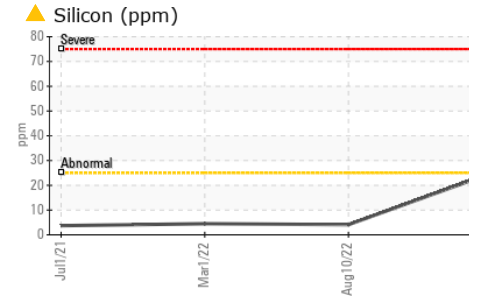
OIL ANALYSIS REPORT



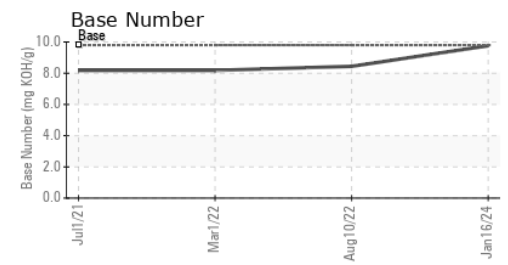
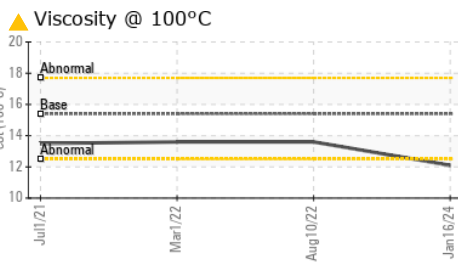
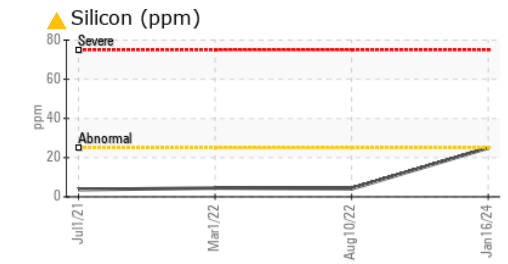
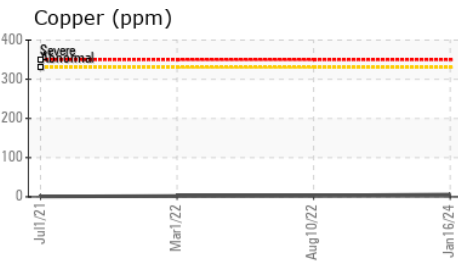
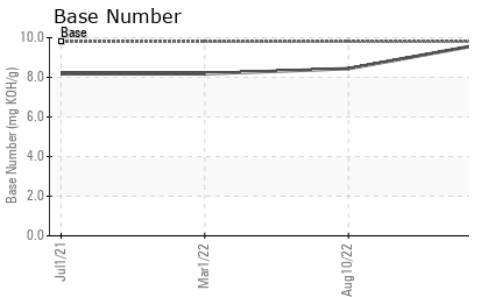
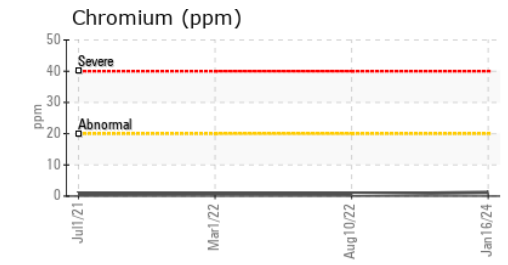
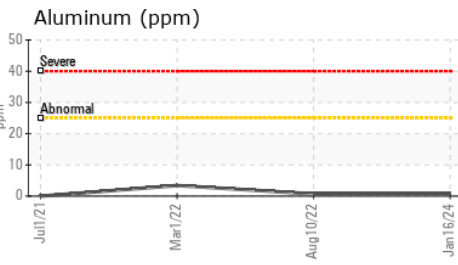
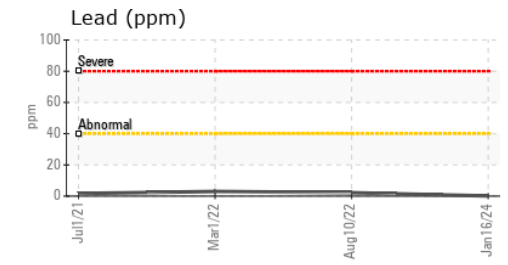
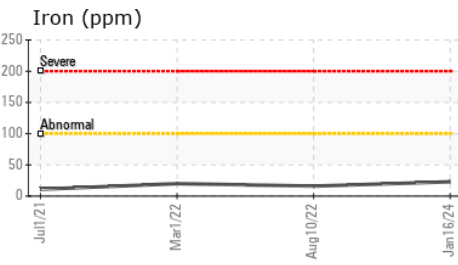
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	▲ 12.1	13.6



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109745 **Received** : 19 Jan 2024
Lab Number : 06065844 **Diagnosed** : 23 Jan 2024
Unique Number : 10842521 **Diagnostician** : 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)