

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

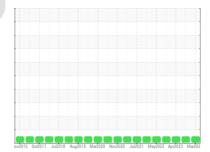


G.LOPES CONSTRUCTION INC./Off-Road Machine Id E346

Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

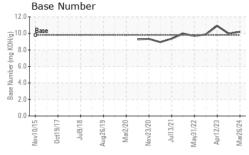
Fluid Condition

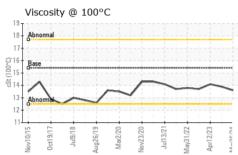
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0109946	PCA0104384	PCA0083107
Sample Date		Client Info		26 Mar 2024	24 Oct 2023	12 Apr 2023
Machine Age	hrs	Client Info		8296	8296	7899
Oil Age	hrs	Client Info		6895	7187	6895
Oil Changed	1113	Client Info		N/A	N/A	N/A
		Ciletit iiiio		NORMAL	NORMAL	NORMAL
Sample Status						
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	15	12	4
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	3	0
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	8	8	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	62	58
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm				- 1	
Calcium		ASTM D5185m	1010	1021	930	916
	ppm	ASTM D5185m ASTM D5185m	1010 1070	1021 1182		916 1070
	• • • • • • • • • • • • • • • • • • • •			-	930	
Phosphorus Zinc	ppm	ASTM D5185m	1070	1182	930 1044	1070
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	1070 1150	1182 1067	930 1044 917	1070 1013
Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270	1182 1067 1308	930 1044 917 1188	1070 1013 1199
Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base	1182 1067 1308 3886	930 1044 917 1188 2996	1070 1013 1199 3200
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1070 1150 1270 2060 limit/base	1182 1067 1308 3886 current	930 1044 917 1188 2996 history1	1070 1013 1199 3200 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1070 1150 1270 2060 limit/base >25	1182 1067 1308 3886 current	930 1044 917 1188 2996 history1	1070 1013 1199 3200 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >25	1182 1067 1308 3886 current 4	930 1044 917 1188 2996 history1 6	1070 1013 1199 3200 history2 4
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >25 >20	1182 1067 1308 3886 current 4 <1 0	930 1044 917 1188 2996 history1 6 2 2	1070 1013 1199 3200 history2 4 0 1
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844	1070 1150 1270 2060 limit/base >25 >20 limit/base	1182 1067 1308 3886 current 4 <1 0 current	930 1044 917 1188 2996 history1 6 2 2 history1 0.1	1070 1013 1199 3200 history2 4 0 1 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >25 >20 limit/base	1182 1067 1308 3886 current 4 <1 0	930 1044 917 1188 2996 history1 6 2 2	1070 1013 1199 3200 history2 4 0 1
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20	1182 1067 1308 3886 current 4 <1 0 current 0.2 6.6	930 1044 917 1188 2996 history1 6 2 2 history1 0.1 5.6	1070 1013 1199 3200 history2 4 0 1 history2 0.1 4.6 16.0
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm TS ppm ppm ppm ppm Abs/.tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415 method	1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	1182 1067 1308 3886 current 4 <1 0 current 0.2 6.6 18.2	930 1044 917 1188 2996 history1 6 2 2 history1 0.1 5.6 17.9	1070 1013 1199 3200 history2 4 0 1 history2 0.1 4.6 16.0
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	1182 1067 1308 3886 current 4 <1 0 current 0.2 6.6 18.2	930 1044 917 1188 2996 history1 6 2 2 history1 0.1 5.6 17.9	1070 1013 1199 3200 history2 4 0 1 history2 0.1 4.6 16.0



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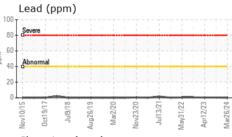


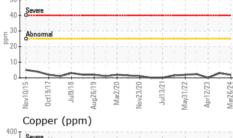


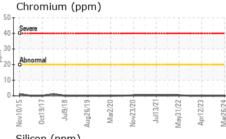
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

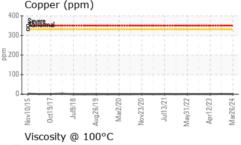
FLUID PROPE	RHES	method	ilmivbase		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.9	14.1

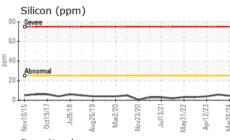
200 - Sev	ere	-							
150 - Abr	normal								
50-									
Nov10/15	0ct19/17	Jul9/18 -	Aug26/19	Mar2/20	Nov23/20 -	Jul13/21	May31/22	Apr12/23	Mar26.74
Δlı	ıminı	um (ppm))					

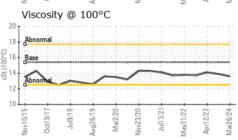


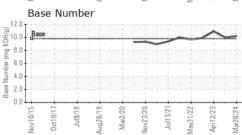
















Certificate L2367

Laboratory Sample No.

: PCA0109946 Lab Number : 06133550 Unique Number : 10953015 Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 29 Mar 2024 : 01 Apr 2024 Diagnosed

: 01 Apr 2024 - Wes Davis

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)

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F: