

# **OIL ANALYSIS REPORT**

## Area G.LOPES CONSTRUCTION INC./Off-Road SW9

Diesel Engine

Fluid MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

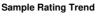
#### Contamination

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.

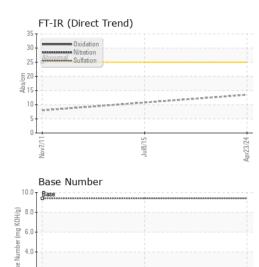
		Nor	2011		24	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0122635	PCA23423006	PCA48440018
Sample Date		Client Info		23 Apr 2024	08 Jul 2015	07 Nov 2011
Machine Age	hrs	Client Info		1459	1459	1240
Oil Age	hrs	Client Info		1459	350	350
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	SEVERE
CONTAMINAT	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	0.0	0.0
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	40	12	<b>1</b> 82
Chromium	ppm	ASTM D5185m	>20	2	1	<b>A</b> 27
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	2	<b>A</b> 30
Lead	ppm	ASTM D5185m	>40	0	0	1
Copper	ppm	ASTM D5185m	>330	1	0	6
Tin	ppm	ASTM D5185m	>15	0	0	<u> </u>
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	5	58	37
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	59	42	50
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m	0	984	712	499
Calcium						
	ppm	ASTM D5185m		1116	1355	2473
	ppm	ASTM D5185m		1041	960	2473 1244
Zinc	ppm ppm	ASTM D5185m ASTM D5185m		1041 1240	960 1072	2473 1244 1255
Zinc Sulfur	ppm ppm ppm	ASTM D5185m		1041	960	2473 1244 1255 
Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base	1041 1240	960 1072  history1	2473 1244 1255  history2
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	1041 1240 3685 current 4	960 1072  history1 7	2473 1244 1255  history2 ▲ 31
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25	1041 1240 3685 current 4 2	960 1072  history1 7 9	2473 1244 1255  history2 ▲ 31 27
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	1041 1240 3685 current 4	960 1072  history1 7 9 2	2473 1244 1255  history2 ▲ 31 27 22
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base	1041 1240 3685 current 4 2 0 current	960 1072  history1 7 9 2 2 history1	2473 1244 1255  history2 ▲ 31 27 22 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	>25 >20 limit/base >3	1041 1240 3685 current 4 2 0 current 0.1	960 1072  history1 7 9 2 history1 0.14	2473 1244 1255  history2 ▲ 31 27 22 history2 1.49
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m hethod *ASTM D7844 *ASTM D7624	>25 >20 limit/base >3 >20	1041 1240 3685 current 4 2 0 current 0.1 4.8	960 1072  history1 7 9 2 2 history1	2473 1244 1255  history2 ▲ 31 27 22 history2 1.49 
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7845	>25 >20 limit/base >3	1041 1240 3685 current 4 2 0 current 0.1	960 1072  history1 7 9 2 history1 0.14	2473 1244 1255  history2 ▲ 31 27 22 history2 1.49
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7845	>25 >20 limit/base >3 >20	1041 1240 3685 current 4 2 0 current 0.1 4.8	960 1072  history1 7 9 2 history1 0.14 	2473 1244 1255  history2 ▲ 31 27 22 history2 1.49    history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7845	>25 >20 limit/base >3 >20 >30	1041 1240 3685 current 4 2 0 current 0.1 4.8 17.3	960 1072  history1 7 9 2 history1 0.14 	2473 1244 1255  history2 ▲ 31 27 22 history2 1.49 

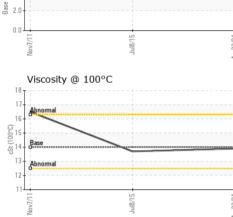






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VISUAL							
		method				history2	
White Metal	scalar	*Visual	NONE	NONE			
Yellow Metal	scalar	*Visual	NONE	NONE			
Precipitate	scalar	*Visual	NONE	NONE			
Silt	scalar	*Visual	NONE	NONE			
Debris	scalar	*Visual	NONE	NONE			
Sand/Dirt	scalar	*Visual	NONE	NONE			
Appearance	scalar	*Visual	NORML	NORML			
Odor	scalar	*Visual	NORML	NORML			
Emulsified Water	scalar	*Visual	>0.2	NEG			
Free Water	scalar	*Visual		NEG			
FLUID PROPER	RTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14	13.9	13.7	16.5	
GRAPHS							
Iron (ppm)				Lead (ppm)			
<sup>0</sup> T'			100	Τ			
0 - Severe			80	Severe			
0 - Abnormal			60 Ed 40	Abnormal			
			40				
	~		20	•			
	Jul8/15 +		0	11/2	Jul8/15 -	c.	
1/1/voN	Jul		Apr23/24	Nov7/1	Jul		
Aluminum (ppm)				Chromium (ppm)			
<sup>0</sup> T			50	Τ			
0 - Severe			40	Severe			
0 Abnomat			E 20	Abnonnal			
	-		10				
01 <del>1</del>	Jul8/15 -		3/24		Jul8/15 -	100	
Nov7/1	Jul		Apr23/24	Nov7/1	Jul	Υ. C. C. Υ. Υ.	
Copper (ppm)				Silicon (ppm)			
O Severe			80	Severe	1		
0 -			60				
0-			틆 40				
0-			20	Abnormal			
0			0				
Nov7/11	Jul8/15 -		Apr23/24 -	Nov7/11-	Jul8/15 -	NC CC- V	
No	ηr		Apri	No	Ju	C - V	
Viscosity @ 100°C			10.0	Base Number			
Abnormal			(b)(H0) 6.0 9.0 Pmper 9.2 8 8 8 9.2 9.2	<u>u</u>			
Base			y E 6.0				
4 - Abnormal	-		- ag 4.0				
2			N 2.0	-			
	Jul8/15		Apr23/24	L <u>.</u>	Jul8/15	1000-100	
LL//non			2	Nov7/1	_	5	

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)

Report Id: GLOTAU [WUSCAR] 06161704 (Generated: 04/29/2024 13:39:01) Rev: 1

Certificate L2367

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Laboratory Sample No. Lab Number **Unique Number** Test Package

> Submitted By: MATT MANOLI Page 2 of 2

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