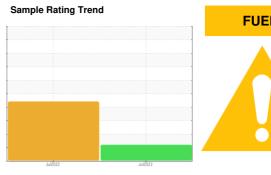


OIL ANALYSIS REPORT

G.LOPES CONSTRUCTION INC./ON-ROAD **PU248**

Component **Diesel Engine**

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





DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

GAL)			Jul2022	Jui2023		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0098470	PCA0066501	
Sample Date		Client Info		19 Jul 2023	05 Jul 2022	
Machine Age	hrs	Client Info		133738	117500	
Oil Age	hrs	Client Info		133738	117500	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	SEVERE	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	<u>▲</u> 162	
Chromium	ppm	ASTM D5185m	>20	2	5	
Nickel	ppm	ASTM D5185m	>4	<1	0	
Titanium	ppm	ASTM D5185m		0	1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	5	12	
Lead	ppm	ASTM D5185m	>40	<1	<1	
Copper	ppm	ASTM D5185m	>330	2	10	
Tin	ppm	ASTM D5185m	>15	0	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
- Caarriani	ρρ			•		
ADDITIVES		method	limit/hasa	current	history1	history2
ADDITIVES Boron	nnm	method ASTM D5185m	limit/base	current 23	history1	history2
Boron	ppm	ASTM D5185m	0	23	31	,
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	23 2	31	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	23 2 85	31 0 0	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	23 2 85 <1	31 0 0 2	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	23 2 85 <1 126	31 0 0 2 524	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	23 2 85 <1 126 2022	31 0 0 2 524 1113	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	23 2 85 <1 126 2022 969	31 0 0 2 524 1113 883	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	23 2 85 <1 126 2022 969 1136	31 0 0 2 524 1113 883 994	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	23 2 85 <1 126 2022 969 1136 3597	31 0 0 2 524 1113 883 994 3462	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	23 2 85 <1 126 2022 969 1136 3597 current	31 0 0 2 524 1113 883 994 3462 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	23 2 85 <1 126 2022 969 1136 3597 current 6	31 0 0 2 524 1113 883 994 3462 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	23 2 85 <1 126 2022 969 1136 3597 current 6 0	31 0 0 2 524 1113 883 994 3462 history1 13	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2	31 0 0 2 524 1113 883 994 3462 history1 13 3 6	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	23 2 85 <1 126 2022 969 1136 3597 current 6 0	31 0 0 2 524 1113 883 994 3462 history1 13	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2	31 0 0 2 524 1113 883 994 3462 history1 13 3 6	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2 7.0	31 0 0 2 524 1113 883 994 3462 history1 13 3 6	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2 7.0 current	31 0 0 2 524 1113 883 994 3462 history1 13 3 6	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2 ▲ 7.0 current 0.2	31 0 0 2 524 1113 883 994 3462 history1 13 3 6 13.1 history1 0.4	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2 7.0 current 0.2 12.5	31 0 0 2 524 1113 883 994 3462 history1 13 3 6 13.1 history1 0.4 16.1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5 limit/base >3 >20 >30	23 2 85 <1 126 2022 969 1136 3597 current 6 0 2 ▲ 7.0 current 0.2 12.5 23.9	31 0 0 2 524 1113 883 994 3462 history1 13 3 6 13.1 history1 0.4 16.1 27.2	



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0098470 : 05904522

Unique Number

: 10565878

Diagnostician : Wes Davis Test Package : MOB 2 (Additional Tests: PercentFuel) To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received

Diagnosed

: 21 Jul 2023

: 24 Jul 2023

* - 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)

G LOPES CONSTRUCTION

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F: