

OIL ANALYSIS REPORT

Sample Rating Trend







Area (1203953) 429073-26 Component

Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

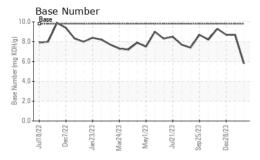
Fluid Condition

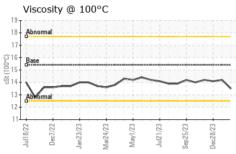
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current		history2
Sample Number		Client Info		GFL0110604	GFL0110616	GFL0100203
Sample Date		Client Info		11 Mar 2024	30 Jan 2024	28 Dec 2023
Machine Age	hrs	Client Info		12649	239871	235350
Oil Age	hrs	Client Info		1200	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	12	3	2
Chromium	ppm	ASTM D5185m		. <u>-</u> <1	0	0
Nickel	ppm	ASTM D5185m	>15	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m		2	<1	2
Lead	ppm	ASTM D5185m	>40	- <1	<1	0
Copper	ppm	ASTM D5185m		2	<1	2
Tin	ppm		>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	>10	0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES	P P T	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	60	65	57	
•	ppiii					60
	nnm		0			60
Manganese Magnesium	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m ASTM D5185m	1010	0 989	<1 949	<1 994
Magnesium Calcium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070	0 989 1082	<1 949 983	<1 994 1050
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150	0 989 1082 1021	<1 949 983 1040	<1 994 1050 1116
Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070	0 989 1082	<1 949 983	<1 994 1050
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270	0 989 1082 1021 1252	<1 949 983 1040 1227	<1 994 1050 1116 1339
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060	0 989 1082 1021 1252 2816	<1 949 983 1040 1227 3119	<1 994 1050 1116 1339 3303
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060	0 989 1082 1021 1252 2816	<1 949 983 1040 1227 3119 history1	<1 994 1050 1116 1339 3303 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	1010 1070 1150 1270 2060	0 989 1082 1021 1252 2816 current	<1 949 983 1040 1227 3119 history1	<1 994 1050 1116 1339 3303 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25	0 989 1082 1021 1252 2816 current 8	<1 949 983 1040 1227 3119 history1 5	<1 994 1050 1116 1339 3303 history2 4
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS	ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20	0 989 1082 1021 1252 2816 current 8 4	<1 949 983 1040 1227 3119 history1 5 2	<1 994 1050 1116 1339 3303 history2 4 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20	0 989 1082 1021 1252 2816 current 8 4 2 current	<1 949 983 1040 1227 3119 history1 5 2 2 history1 0.1	<1 994 1050 1116 1339 3303 history2 4 2 3 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 989 1082 1021 1252 2816 current 8 4 2	<1 949 983 1040 1227 3119 history1 5 2 2 history1	<1 994 1050 1116 1339 3303 history2 4 2 3 history2 0.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	0 989 1082 1021 1252 2816 current 8 4 2 current 0.3 9.7	<1 949 983 1040 1227 3119 history1 5 2 2 history1 0.1 6.0	<1 994 1050 1116 1339 3303 history2 4 2 3 history2 0.2 7.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	0 989 1082 1021 1252 2816 current 8 4 2 current 0.3 9.7 21.6	<1 949 983 1040 1227 3119 history1 5 2 2 history1 0.1 6.0 17.9 history1	<pre><1 994 1050 1116 1339 3303 history2 4 2 3 history2 0.2 7.2 18.5 history2</pre>
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m Method ASTM D5185m Method	1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	0 989 1082 1021 1252 2816 current 8 4 2 current 0.3 9.7 21.6	<1 949 983 1040 1227 3119 history1 5 2 2 history1 0.1 6.0 17.9	<pre><1 994 1050 1116 1339 3303 history2 4 2 3 history2 0.2 7.2 18.5</pre>



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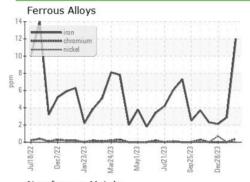


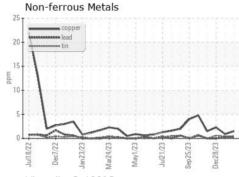


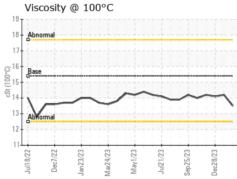
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

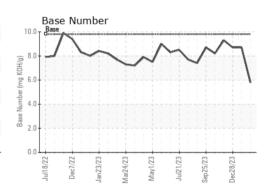
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	14.2	14.1

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number : 06119364 Unique Number: 10928197

Test Package : FLEET

: GFL0110604

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

: 15 Mar 2024 **Tested** : 15 Mar 2024 Diagnosed

: 15 Mar 2024 - Wes Davis

GFL Environmental - 166 - Phenix City

18 Old Brickyard Rd Phenix City, AL US 36869

Contact: DEAN PEACE JR dean.peace@gflenv.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)

Report Id: GFL166 [WUSCAR] 06119364 (Generated: 03/15/2024 19:58:42) Rev: 1

Submitted By: DARRIN WRIGHT

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