

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC	C TEST	RESULTS			
Sample Status			ATTENTION	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m	🔺 254	2	5

Customer Id: GFL073 Sample No.: GFL0068721 Lab Number: 05883010 Test Package: FLEET



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To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 <u>dougb@wearcheckusa.com</u>

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

05 Jun 2023 Diag: Wes Davis



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

22 May 2023 Diag: Sean Felton



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

10 May 2023 Diag: Wes Davis

NORMAL



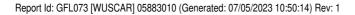
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view report





OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id 913024 Component

Diesel Engine

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

N SHP 15W40 (-	,	NOVZUZZ	1602023			
SAMPLE INFOR		method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0068721	GFL0068942	GFL0068770
Sample Date		Client Info		19 Jun 2023	05 Jun 2023	22 May 2023
Machine Age	hrs	Client Info		2644	2525	2403
Oil Age	hrs	Client Info		241	122	564
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
CONTAMINAT	TION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>120	29	4	15
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	3
Titanium	ppm	ASTM D5185m	>2	<1	<1	2
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	<1	<1
Lead	ppm	ASTM D5185m	>40	1	0	<1
Copper	ppm	ASTM D5185m	>330	49	<1	3
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	10	6	12
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	69	65	62
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	837	958	899
Calcium						
	ppm	ASTM D5185m	1070	1038	1131	1217
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	1070 1150	1038 944	1131 989	1217 974
Zinc	ppm	ASTM D5185m	1150 1270	944	989	974
Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m	1150 1270	944 1151	989 1231	974 1230
Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base	944 1151 3557	989 1231 3678	974 1230 3142
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060 limit/base	944 1151 3557 current	989 1231 3678 history 1	974 1230 3142 history 2
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm VTS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1150 1270 2060 limit/base >25	944 1151 3557 current 11	989 1231 3678 history 1 4	974 1230 3142 history 2 5
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm vTS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base >25	944 1151 3557 <u>current</u> 11 ▲ 254	989 1231 3678 history 1 4 2	974 1230 3142 history 2 5 5
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm vTS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base >25	944 1151 3557 <u>current</u> 11 ▲ 254 4	989 1231 3678 history 1 4 2 <1	974 1230 3142 history 2 5 5 5 4
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm vTS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982	1150 1270 2060 limit/base >25 >20	944 1151 3557 current 11 ▲ 254 4 0.0	989 1231 3678 history 1 4 2 <1 NEG	974 1230 3142 history 2 5 5 4 NEG
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm VTS ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method	1150 1270 2060 limit/base >25 >20 limit/base >4	944 1151 3557 current 11 ▲ 254 4 0.0 current	989 1231 3678 history 1 4 2 <1 NEG history 1	974 1230 3142 history 2 5 5 4 NEG history 2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm VTS ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7824	1150 1270 2060 limit/base >25 >20 limit/base >4	944 1151 3557 <u>current</u> 11 ▲ 254 4 0.0 <u>current</u> 0.3	989 1231 3678 history 1 4 2 <1 NEG history 1 0.2	974 1230 3142 history 2 5 5 4 NEG history 2 0.6
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm VTS ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624	1150 1270 2060 limit/base >25 >20 limit/base >4 >20	944 1151 3557 <u>current</u> 11 ▲ 254 4 0.0 <u>current</u> 0.3 9.4	989 1231 3678 history 1 4 2 <1 NEG history 1 0.2 6.0	974 1230 3142 history 2 5 5 4 NEG history 2 0.6 9.2
Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm VTS ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624	1150 1270 2060 >25 >20 >20 limit/base >4 >20 >4 >20	944 1151 3557 <u>current</u> 11 ▲ 254 4 0.0 <u>current</u> 0.3 9.4 20.8	989 1231 3678 history 1 4 2 <1 NEG history 1 0.2 6.0 18.8	974 1230 3142 history 2 5 5 4 NEG history 2 0.6 9.2 21.4
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm ppm vTS ppm ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415	1150 1270 2060 >25 >20 >20 Iimit/base >20 >30 Iimit/base >25	944 1151 3557 current 11 ▲ 254 4 0.0 current 0.3 9.4 20.8 current	989 1231 3678 history 1 4 2 <1 NEG history 1 0.2 6.0 18.8 history 1	974 1230 3142 5 5 5 4 NEG history 2 0.6 9.2 21.4 history 2

DIAGNOSIS

A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

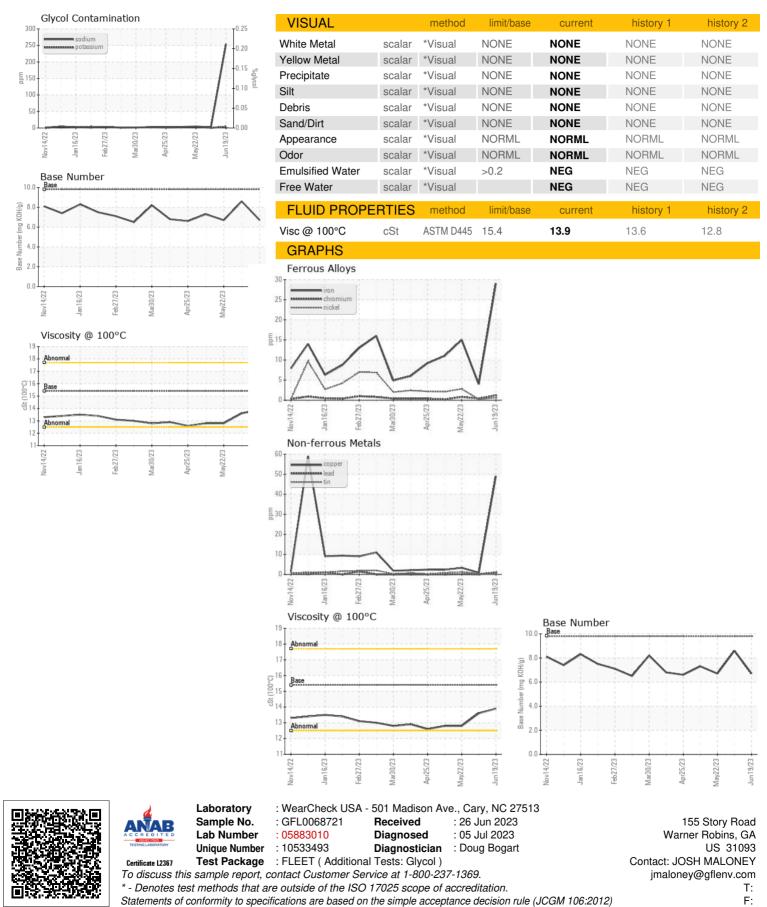
Sodium and/or potassium levels are high. Test for glycol is negative. No other contaminants were detected in the oil.

Fluid Condition

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



OIL ANALYSIS REPORT



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