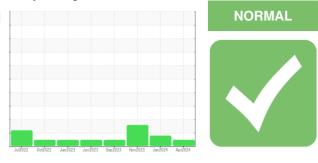


OIL ANALYSIS REPORT

Sample Rating Trend



Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

SAMPLE INFORMATION method

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Machine Id 729076

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

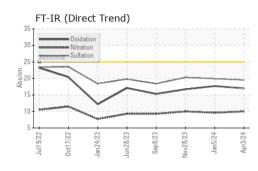
Fluid Condition

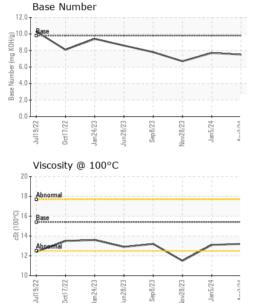
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMIFLE INFOR		methou	iiiiii/base	current	nistory i	TIISTOLAS
Sample Number		Client Info		GFL0116035	GFL0097483	GFL0097475
Sample Date		Client Info		03 Apr 2024	05 Jan 2024	28 Nov 2023
Machine Age	hrs	Client Info		13684	13138	12931
Oil Age	hrs	Client Info		129725	129725	129725
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	MARGINAL	ABNORMAL
		and the second	Page 14 // 2010 10		In the transmission	history O
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	2 .1	4 .7
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	>80	16	13	13
Chromium	ppm	ASTM D5185m		0	0	<1
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		<1	1	<1
Lead	ppm	ASTM D5185m	>30	0	<1	0
Copper	ppm	ASTM D5185m		<1	<1	6
Tin	ppm		>5	0	0	0
Vanadium	ppm	ASTM D5185m	20	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ррпп			Ū		-
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	ASTM D5185m	0	0	4	5
	ppm ppm	ASTM D5185m	0	0 0	4 0	5
Boron		ASTM D5185m	0	0	4 0 55	5 0 63
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	0 0	4 0 55 0	5 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 63 0 973	4 0 55 0 886	5 0 63
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 63 0	4 0 55 0	5 0 63 0 983 1163
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 0 63 0 973	4 0 55 0 886 1019 878	5 0 63 0 983
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	0 0 63 0 973 1184	4 0 55 0 886 1019	5 0 63 0 983 1163
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	0 0 60 0 1010 1070 1150	0 0 63 0 973 1184 1076	4 0 55 0 886 1019 878	5 0 63 0 983 1163 1046
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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 1270	0 0 63 0 973 1184 1076 1271	4 0 55 0 886 1019 878 1229	5 0 63 0 983 1163 1046 1332
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	0 0 60 1010 1070 1150 1270 2060	0 0 63 0 973 1184 1076 1271 3486	4 0 55 0 886 1019 878 1229 2673 history1	5 0 63 0 983 1163 1046 1332 3038 history2
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	0 0 60 1010 1070 1150 1270 2060	0 0 63 0 973 1184 1076 1271 3486 current	4 0 55 0 886 1019 878 1229 2673	5 0 63 0 983 1163 1046 1332 3038
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 60 1010 1070 1150 1270 2060	0 0 63 0 973 1184 1076 1271 3486 current 6	4 0 55 0 886 1019 878 1229 2673 history1 3	5 0 63 0 983 1163 1046 1332 3038 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Jimit/base >20	0 0 63 0 973 1184 1076 1271 3486 current 6 5	4 0 55 0 886 1019 878 1229 2673 history1 3 6	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 200 200 200	0 0 63 0 973 1184 1076 1271 3486 current 6 5 <1	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20 20 limit/base	0 0 63 0 973 1184 1076 1271 3486 <i>current</i> 6 5 <1 <i>current</i> 0.5	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1 0.4	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 history2 0.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >20	0 0 63 0 973 1184 1076 1271 3486 <i>current</i> 6 5 <1 <i>current</i> 0.5 10.0	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1 0.4 9.6	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 Vistory2 0.2 10.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	0 0 63 0 973 1184 1076 1271 3486 <i>current</i> 6 5 <1 <i>current</i> 0.5	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1 0.4	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 history2 0.2 0.2 10.0 20.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >20	0 0 63 0 973 1184 1076 1271 3486 <i>current</i> 6 5 <1 <i>current</i> 0.5 10.0	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1 0.4 9.6	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 Vistory2 0.2 10.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3	0 0 63 0 973 1184 1076 1271 3486 <u>current</u> 6 5 <1 <1 <u>current</u> 0.5 10.0 19.5	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1 0.4 9.6 19.9	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 history2 0.2 0.2 10.0 20.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	0 0 0 1010 1070 1150 1270 2060 2060 2060 200 200 200 200 200 200	0 0 63 0 973 1184 1076 1271 3486 <i>current</i> 6 5 <1 <i>current</i> 0.5 10.0 19.5 <i>current</i>	4 0 55 0 886 1019 878 1229 2673 history1 3 6 2 2 history1 0.4 9.6 19.9 history1	5 0 63 0 983 1163 1046 1332 3038 history2 3 5 0 0 history2 0.2 10.0 20.3



OIL ANALYSIS REPORT





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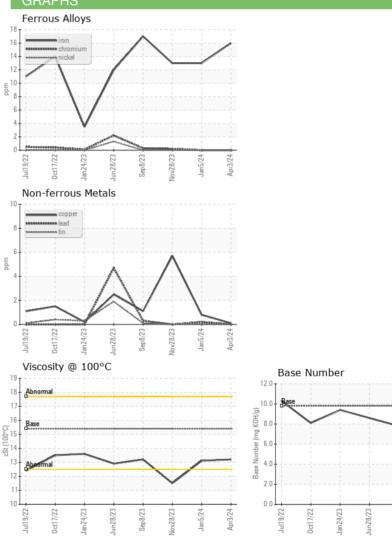
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lan24/23

1028/23

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	🔺 MODER
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	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.1	1 1.5
GRAPHS						



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 641 - Alpena Sample No. : GFL0116035 Received : 12 Apr 2024 1241 KING SETTLEMENT RD Lab Number : 06146957 Tested : 15 Apr 2024 ALPENA, MI Unique Number : 10977035 Diagnosed : 15 Apr 2024 - Wes Davis US 49707 Test Package : FLEET Contact: DYLAN TOLAN Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dylan.tolan@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (989)854-7203 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Report Id: GFL641 [WUSCAR] 06146957 (Generated: 04/15/2024 06:14:29) Rev: 1

Submitted By: GFL463 and GFL641 - DYLAN TOLAN

Sep8/23

Nov28/23

Jan5/24

Apr3/24