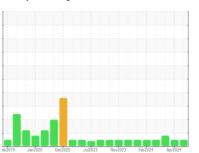


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL





Machine Id **725036-303004**

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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

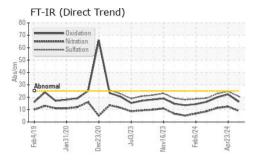
Fluid Condition

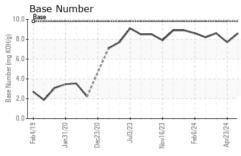
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

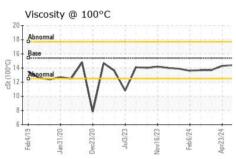
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0122901	GFL0118793	GFL0114139
Sample Date		Client Info		19 Jun 2024	23 Apr 2024	22 Mar 2024
Machine Age	hrs	Client Info		16546	16392	16253
Oil Age	hrs	Client Info		0	16392	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
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	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	29	66	55
Chromium	ppm	ASTM D5185m	>5	<1	2	3
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	_	<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	23	<u></u> 31
Lead	ppm	ASTM D5185m	>30	0	<1	1
Copper	ppm	ASTM D5185m	>150	<1	0	2
Tin	ppm		>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		history1	history2
	ppm	ASTM D5185m		current 9 0		-
Boron	ppm	ASTM D5185m	0	9	6	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	9	6 <1	2 <1
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	9 0 60	6 <1 66	2 <1 79
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	9 0 60 <1	6 <1 66 <1	2 <1 79 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	9 0 60 <1 993	6 <1 66 <1 977	2 <1 79 <1 1195
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	9 0 60 <1 993 1189	6 <1 66 <1 977 1080	2 <1 79 <1 1195 1374
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	9 0 60 <1 993 1189 1064	6 <1 66 <1 977 1080 1030	2 <1 79 <1 1195 1374 1292
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270	9 0 60 <1 993 1189 1064 1347	6 <1 66 <1 977 1080 1030 1287	2 <1 79 <1 1195 1374 1292 1587
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	0 0 60 0 1010 1070 1150 1270 2060	9 0 60 <1 993 1189 1064 1347 3573	6 <1 66 <1 977 1080 1030 1287 3203	2 <1 79 <1 1195 1374 1292 1587 3781
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	9 0 60 <1 993 1189 1064 1347 3573	6 <1 66 <1 977 1080 1030 1287 3203 history1	2 <1 79 <1 1195 1374 1292 1587 3781 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	9 0 60 <1 993 1189 1064 1347 3573 current	6 <1 66 <1 977 1080 1030 1287 3203 history1 9	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	9 0 60 <1 993 1189 1064 1347 3573 current 5 6	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20	9 0 60 <1 993 1189 1064 1347 3573 current 5 6 6	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6 28	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9 37
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20	9 0 60 <1 993 1189 1064 1347 3573 current 5 6 6 current 0.8	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6 28 history1	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9 37 history2 1.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 	9 0 60 <1 993 1189 1064 1347 3573 current 5 6 6	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6 28 history1 1.6	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9 37 history2
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 Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1150 1270 2060 limit/base >20 >20 limit/base	9 0 60 <1 993 1189 1064 1347 3573 current 5 6 6 0 0.8 8.9	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6 28 history1 1.6 12.4	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9 37 history2 1.5 11.4
Boron Barium Molybdenum Manganese 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 method *ASTM D7624 *ASTM D7624 *ASTM D7415 method	0 0 0 1010 1070 1150 1270 2060 limit/base >20 >20 limit/base >3 >20 >3 >3	9 0 60 <1 993 1189 1064 1347 3573 current 5 6 6 0 current 0.8 8.9 20.6 current	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6 28 history1 1.6 12.4 24.7 history1	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9 37 history2 1.5 11.4 22.9 history2
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 Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 0 1010 1070 1150 1270 2060 limit/base >20 >20 limit/base >3 >20 >3	9 0 60 <1 993 1189 1064 1347 3573	6 <1 66 <1 977 1080 1030 1287 3203 history1 9 6 28 history1 1.6 12.4 24.7	2 <1 79 <1 1195 1374 1292 1587 3781 history2 13 9 37 history2 1.5 11.4 22.9



OIL ANALYSIS REPORT



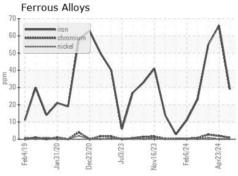


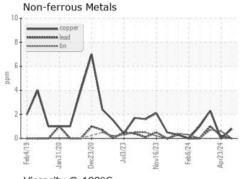


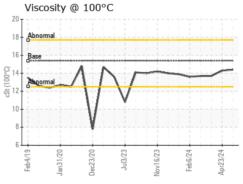
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

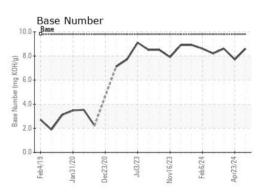
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.3	13.7

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0122901 Lab Number : 06219102

Unique Number : 11097299 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Jun 2024

Tested : 25 Jun 2024 Diagnosed

: 25 Jun 2024 - Wes Davis

GFL Environmental - 837 - Harrison TS

22820 S State Route 291 Harrisonville, MO

US 64701

Contact: SARA PATRICK spatrick@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: GFL837 [WUSCAR] 06219102 (Generated: 06/25/2024 17:35:55) Rev: 1

Submitted By: JEREMY BROWN

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