

OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

Machine Id

10432 KENWORTH T300

Diesel Engine

Fluid PETRO CANADA DURON SHP 15W40 (26 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

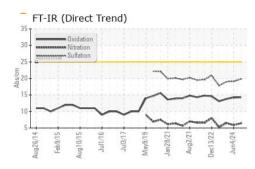
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0117414	GFL0117430	GFL0103239
Sample Date		Client Info		04 Jul 2024	04 Jun 2024	28 Dec 2023
Machine Age	hrs	Client Info		0	0	22765
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Sample Status				ATTENTION	ATTENTION	ATTENTION
CONTAMINATI	ON	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 METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	15	10	15
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	2	1
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	0	<1	2
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 10	history1 12	history2 4
	ppm ppm					
Boron		ASTM D5185m	0	10	12	4
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	10 0	12 <1	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	10 0 55	12 <1 59	4 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	10 0 55 <1	12 <1 59 <1	4 0 61 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	10 0 55 <1 917	12 <1 59 <1 880	4 0 61 <1 975
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	10 0 55 <1 917 1163	12 <1 59 <1 880 1168	4 0 61 <1 975 1140
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	10 0 55 <1 917 1163 1073	12 <1 59 <1 880 1168 1097	4 0 61 <1 975 1140 1011
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	10 0 55 <1 917 1163 1073 1254	12 <1 59 <1 880 1168 1097 1228	4 0 61 <1 975 1140 1011 1316
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 0 1010 1070 1150 1270 2060	10 0 55 <1 917 1163 1073 1254 3595	12 <1 59 <1 880 1168 1097 1228 3493	4 0 61 <1 975 1140 1011 1316 3098
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	10 0 55 <1 917 1163 1073 1254 3595 current	12 <1 59 <1 880 1168 1097 1228 3493 history1	4 0 61 <1 975 1140 1011 1316 3098 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	10 0 55 <1 917 1163 1073 1254 3595 current 3	12 <1 59 <1 880 1168 1097 1228 3493 history1 4	4 0 61 <1 975 1140 1011 1316 3098 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 imit/base >25	10 0 55 <1 917 1163 1073 1254 3595 current 3 2 2 <1	12 <1 59 <1 880 1168 1097 1228 3493 history1 4 3	4 0 61 <1 975 1140 1011 1316 3098 history2 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	10 0 55 <1 917 1163 1073 1254 3595 current 3 2 2 <1	12 <1 59 <1 880 1168 1097 1228 3493 history1 4 3 2	4 0 61 <1 975 1140 1011 1316 3098 history2 4 4 4 4
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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	10 0 55 <1 917 1163 1073 1254 3595 current 3 2 <1 current	12 <1 59 <1 880 1168 1097 1228 3493 history1 4 3 2 2 history1	4 0 61 <1 975 1140 1011 1316 3098 history2 4 4 4 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3	10 0 55 <1 917 1163 1073 1254 3595 current 3 2 <1 2 <1 0.9	12 <1 59 <1 880 1168 1097 1228 3493 history1 4 3 2 history1 0.7	4 0 61 <1 975 1140 1011 1316 3098 history2 4 4 4 <1 history2 0.8
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 limit/base >25 >20 limit/base >3 >20	10 0 55 <1 917 1163 1073 1254 3595 current 3 2 <1 2 <1 current 0.9 6.4 19.8	12 <1 59 <1 880 1168 1097 1228 3493 history1 4 3 2 history1 0.7 5.9	4 0 61 <1 975 1140 1011 1316 3098 history2 4 4 4 4 <1 history2 0.8 6.5
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 >25 S >20 Imit/base >3 >20 >3	10 0 55 <1 917 1163 1073 1254 3595 current 3 2 <1 2 <1 current 0.9 6.4 19.8	12 <1 59 <1 880 1168 1097 1228 3493 history1 4 3 2 history1 0.7 5.9 19.1	4 0 61 <1 975 1140 1011 1316 3098 history2 4 4 4 <1 history2 0.8 6.5 19.0

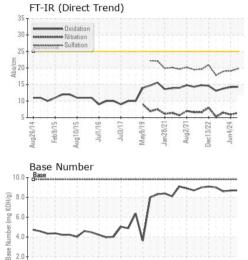


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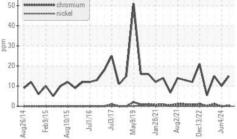
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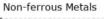
OIL ANALYSIS REPORT





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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	<mark> </mark> 12.1	12.2	12.2
GRAPHS						
Ferrous Alloys						
10 -	- 11-					





Jun4/24

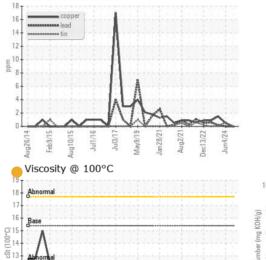
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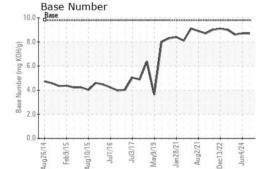
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an28/21 Aug2/21 Jec13/22





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 001 - Raleigh(CNG) Sample No. : GFL0117414 Received : 05 Jul 2024 3741 Conquest Drive Lab Number : 06228273 Tested : 08 Jul 2024 Garner, NC US 27529 Unique Number : 11111766 Diagnosed : 08 Jul 2024 - Don Baldridge Test Package : FLEET Contact: Ronald Gregory Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rgregory@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т: F: (919)662-1730

Dec13/22 Jun4/24

ug2/21

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Craig Johnson Page 2 of 2