

OIL ANALYSIS REPORT



Machine Id

727038

Component Diesel Engine

Fluid 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 INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0108468	GFL0066026	GFL0060497
Sample Date		Client Info		12 Apr 2024	29 Dec 2023	31 Aug 2023
Machine Age	hrs	Client Info		0	0	12977
Oil Age	hrs	Client Info		0	0	12977
Oil Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
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	>110	5	2	1
Chromium	ppm	ASTM D5185m	>4	0	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	1	1	2
Lead	ppm	ASTM D5185m	>45	<1	0	0
Copper	ppm	ASTM D5185m	>85	<1	0	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base	current 0	history1 2	history2 6
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0	2	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	0 0	2 0	6 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 61	2 0 59	6 0 60 <1 926
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	0 0 61 0	2 0 59 <1	6 0 60 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	0 0 61 0 983	2 0 59 <1 964	6 0 60 <1 926
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 61 0 983 1096	2 0 59 <1 964 1046	6 0 60 <1 926 1048 1028 1243
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 61 0 983 1096 1047	2 0 59 <1 964 1046 1112	6 0 60 <1 926 1048 1028
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 61 0 983 1096 1047 1206	2 0 59 <1 964 1046 1112 1294	6 0 60 <1 926 1048 1028 1243
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	0 0 61 0 983 1096 1047 1206 3573	2 0 59 <1 964 1046 1112 1294 3108	6 0 60 <1 926 1048 1028 1243 2986
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	0 0 60 1010 1070 1150 1270 2060	0 0 61 0 983 1096 1047 1206 3573 current	2 0 59 <1 964 1046 1112 1294 3108 history1	6 0 60 <1 926 1048 1028 1243 2986 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	0 0 61 0 983 1096 1047 1206 3573 current 3	2 0 59 <1 964 1046 1112 1294 3108 history1 2	6 0 60 <1 926 1048 1028 1243 2986 history2 3
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 1010 1070 1150 1270 2060 limit/base	0 0 61 0 983 1096 1047 1206 3573 current 3 1	2 0 59 <1 964 1046 1112 1294 3108 history1 2 <1	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30	0 0 61 0 983 1096 1047 1206 3573 current 3 1 0	2 0 59 <1 964 1046 1112 1294 3108 history1 2 2 <1 <1	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2 2 2
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 Imit/base >30 20	0 0 61 0 983 1096 1047 1206 3573 current 3 1 0 0	2 0 59 <1 964 1046 1112 1294 3108 history1 2 <1 <1 <1 history1	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 >20 imit/base >3 >20	0 0 61 0 983 1096 1047 1206 3573 <i>current</i> 3 1 0 <i>current</i>	2 0 59 <1 964 1046 1112 1294 3108 history1 2 <1 <1 <1 <1 history1 0.2	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2 2 2 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 ppm TS ppm ppm ppm ppm spm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 >20 imit/base >3 >20	0 0 61 0 983 1096 1047 1206 3573 <i>current</i> 3 1 0 <i>current</i> 0.3 7.3	2 0 59 <1 964 1046 1112 1294 3108 history1 2 <1 <1 <1 history1 0.2 7.4	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2 2 2 history2 0.2 7.4
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 spm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 >20 imit/base >3 >20	0 0 61 0 983 1096 1047 1206 3573 current 3 1 0 current 0.3 7.3 18.8	2 0 59 <1 964 1046 1112 1294 3108 history1 2 <1 <1 <1 0.2 7.4 18.6	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2 2 2 history2 0.2 7.4 19.0
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 TS ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 2060 2060 2060 200 200 200 200 200 200	0 0 61 0 983 1096 1047 1206 3573 <i>current</i> 3 1 0 <i>current</i> 0.3 7.3 18.8 <i>current</i>	2 0 59 <1 964 1046 1112 1294 3108 history1 2 <1 <1 <1 0.2 7.4 18.6 history1	6 0 60 <1 926 1048 1028 1243 2986 history2 3 2 2 8 0.2 7.4 19.0 history2

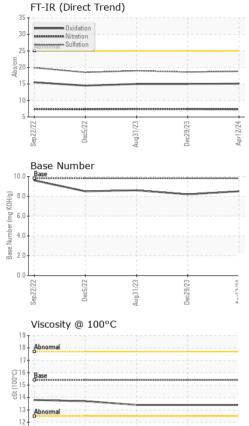
Contact/Location: See also GFL904,A,B,C, 927, 938 - Andy Kane - GFL927 Page 1 of 2



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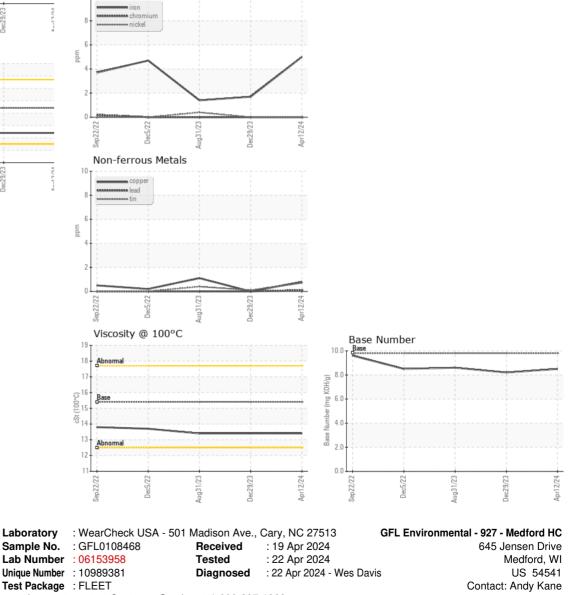


Aug31/23 -

Dec29/23

Dec5/22

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	13.4	13.4	13.4
GRAPHS						
Ferrous Alloys						



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) T: F:

Certificate 12367

Contact/Location: See also GFL904,A,B,C, 927, 938 - Andy Kane - GFL927