

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 725004

Component **Diesel Engine**

Fluic

PETRO CANADA DURON SHP 15W40 (12 QTS)

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.

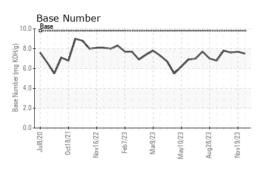
1							
1.1 1.1							1.1.1.1.1.1
							1.1.1
1.1.1							
1.1.1.1.1							
12.1.1							1.1.1
1.1.1							
1 1 1							
1.1.1							
1.111							
1.5 1.1							1.1.1
1.1 1.1							1.1.1
10101							
1.1.1							1 1 1
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1							
1.1.1							1.1.1
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11111							
			пп				
12020	0ct2021	Nov2022	Feb2023	Mar2023	May2023	Aug2023	Nov2023
m2020	002021	140 42022	1002023	141012023	may2023	Mug2023	140 42023

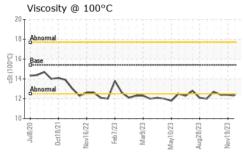


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112370	GFL0097941	GFL0097918
Sample Date		Client Info		08 Mar 2024	19 Nov 2023	12 Oct 2023
Machine Age	hrs	Client Info		10214	9983	9829
Oil Age	hrs	Client Info		137	431	277
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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	>90	5	16	9
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	3
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 6	history1 7	history2 6
	ppm ppm		0			
Boron		ASTM D5185m	0	6	7	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	6 0	7 0	6 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	6 0 54	7 0 61	6 0 51
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	6 0 54 <1	7 0 61 <1	6 0 51 <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	6 0 54 <1 789	7 0 61 <1 945	6 0 51 <1 765
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	6 0 54 <1 789 938	7 0 61 <1 945 1135	6 0 51 <1 765 921
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	6 0 54 <1 789 938 913	7 0 61 <1 945 1135 1053	6 0 51 <1 765 921 801
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	6 0 54 <1 789 938 913 1086	7 0 61 <1 945 1135 1053 1306	6 0 51 <1 765 921 801 1042
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	6 0 54 <1 789 938 913 1086 3058	7 0 61 <1 945 1135 1053 1306 3143	6 0 51 <1 765 921 801 1042 2434
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	6 0 54 <1 789 938 913 1086 3058 current	7 0 61 <1 945 1135 1053 1306 3143 history1	6 0 51 <1 765 921 801 1042 2434 history2
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	6 0 54 <1 789 938 913 1086 3058 current 2	7 0 61 <1 945 1135 1053 1306 3143 history1 6	6 0 51 <1 765 921 801 1042 2434 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base	6 0 54 <1 789 938 913 1086 3058 <u>current</u> 2 3	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4	6 0 51 <1 765 921 801 1042 2434 history2 6 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20	6 0 54 <1 789 938 913 1086 3058 <u>current</u> 2 3 3 <1	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4 4	6 0 51 <1 765 921 801 1042 2434 history2 6 5 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25	6 0 54 <1 789 938 913 1086 3058 current 2 3 <1 current	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4 4 4	6 0 51 <1 765 921 801 1042 2434 history2 6 5 4 4
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 limit/base >25 >20 limit/base	6 0 54 <1 789 938 913 1086 3058 <i>current</i> 2 3 <1 2 3 <1 <i>current</i>	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4 4 4 history1 0.4	6 0 51 <1 765 921 801 1042 2434 history2 6 5 4 history2 0.3
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 t ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 220 220 1imit/base >20	6 0 54 <1 789 938 913 1086 3058 <u>current</u> 2 3 <1 2 3 <1 0.2 6.3	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4 4 4 history1 0.4 8.4	6 0 51 <1 765 921 801 1042 2434 history2 6 5 4 history2 0.3 6.9
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 t ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 20 225 20 <u>imit/base</u> >6 >20 20	6 0 54 <1 789 938 913 1086 3058 current 2 3 <1 2 3 <1 0.2 6.3 16.9	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4 4 4 history1 0.4 8.4 19.0	6 0 51 <1 765 921 801 1042 2434 history2 6 5 4 history2 0.3 6.9 17.5
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 TS ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 20 20 20 20 30 20 30 25 20	6 0 54 <1 789 938 913 1086 3058 <i>current</i> 2 3 <1 2 3 <1 <i>current</i> 0.2 6.3 16.9	7 0 61 <1 945 1135 1053 1306 3143 history1 6 4 4 4 history1 0.4 8.4 19.0 history1	6 0 51 <1 765 921 801 1042 2434 history2 6 5 4 history2 0.3 6.9 17.5 history2

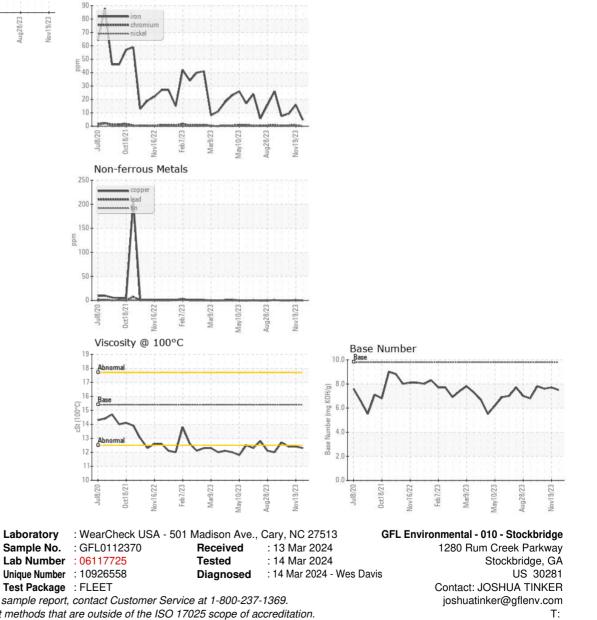


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	12.3	12.4	12.4
GRAPHS						
Ferrous Alloys						





Certificate L2367 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.

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