

## **OIL ANALYSIS REPORT**

Sample Rating Trend



### Area (EIB490) 2680 Component

### Diesel Engine

PETRO CANADA DURON SHP 15W40 (8 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.

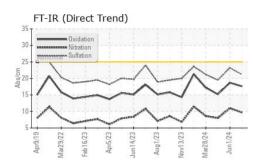
#### Fluid Condition

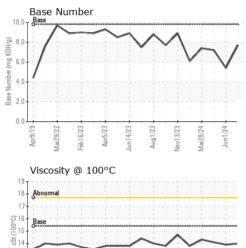
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0111533	GFL0083087	GFL0111566
Sample Date		Client Info		21 Jun 2024	01 Jun 2024	29 Apr 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
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	>165	10	34	4
Chromium	ppm	ASTM D5185m	>5	<1	1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	7	2
Lead	ppm	ASTM D5185m	>150	1	<1	0
Copper	ppm	ASTM D5185m	>90	<1	1	0
Tin	ppm	ASTM D5185m	>5	0	0	<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		history1 4	history2 2
	ppm ppm			current 8 0		
Boron Barium	ppm	ASTM D5185m	0	8	4	2
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	0	8 0	4 0	2 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	8 0 58	4 0 56	2 0 60
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	8 0 58 0	4 0 56 <1	2 0 60 <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	8 0 58 0 881	4 0 56 <1 708	2 0 60 <1 838
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	8 0 58 0 881 1136	4 0 56 <1 708 1319	2 0 60 <1 838 1185
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	0 0 60 0 1010 1070 1150	8 0 58 0 881 1136 989	4 0 56 <1 708 1319 807	2 0 60 <1 838 1185 943
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	8 0 58 0 881 1136 989 1189	4 0 56 <1 708 1319 807 1031	2 0 60 <1 838 1185 943 1135
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	8 0 58 0 881 1136 989 1189 2662 current 5	4 0 56 <1 708 1319 807 1031 2749 history1 8	2 0 60 <1 838 1185 943 1135 3219
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	8 0 58 0 881 1136 989 1189 2662 current	4 0 56 <1 708 1319 807 1031 2749 history1	2 0 60 <1 838 1185 943 1135 3219 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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 <b>limit/base</b>	8 0 58 0 881 1136 989 1189 2662 current 5	4 0 56 <1 708 1319 807 1031 2749 history1 8	2 0 60 <1 838 1185 943 1135 3219 history2 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	ASTM D5185m 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 <b>limit/base</b>	8 0 58 0 881 1136 989 1189 2662 <u>current</u> 5 4 2 2 2 2 <i>current</i>	4 0 56 <1 708 1319 807 1031 2749 history1 8 5 7 7	2 0 60 <1 838 1185 943 1135 3219 history2 4 3 0 history2
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 60 0 1010 1070 1150 1270 2060 <b>limit/base</b> >35	8 0 58 0 881 1136 989 1189 2662 <i>current</i> 5 4 2 2 2 <i>current</i> 0.6	4 0 56 <1 708 1319 807 1031 2749 history1 8 5 7 7 history1 0.8	2 0 60 <1 838 1185 943 1135 3219 history2 4 3 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 ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <b>Imit/base</b> >35	8 0 58 0 881 1136 989 1189 2662 <u>current</u> 5 4 2 2 2 2 <i>current</i>	4 0 56 <1 708 1319 807 1031 2749 history1 8 5 7 7	2 0 60 <1 838 1185 943 1135 3219 history2 4 3 0 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 TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >35 >20 limit/base >7.5	8 0 58 0 881 1136 989 1189 2662 <i>current</i> 5 4 2 2 2 <i>current</i> 0.6	4 0 56 <1 708 1319 807 1031 2749 history1 8 5 7 7 history1 0.8	2 0 60 <1 838 1185 943 1135 3219 history2 4 3 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >35 >20 imit/base >7.5 >20	8 0 58 0 881 1136 989 1189 2662 <i>current</i> 5 4 2 2 <i>current</i> 0.6 9.7	4 0 56 <1 708 1319 807 1031 2749 history1 8 5 7 history1 0.8 11.0	2 0 60 <1 838 1185 943 1135 3219 history2 4 3 0 history2 0.2 8.0
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 <b>Imit/base</b> >35 -20 <b>Imit/base</b> >7.5 >20 >30	8 0 58 0 881 1136 989 1189 2662 <u>current</u> 5 4 2 2 <u>current</u> 0.6 9.7 21.2	4 0 56 <1 708 1319 807 1031 2749 history1 8 5 7 history1 0.8 11.0 23.2	2 0 60 <1 838 1185 943 1135 3219 history2 4 3 0 bistory2 0.2 8.0 19.5



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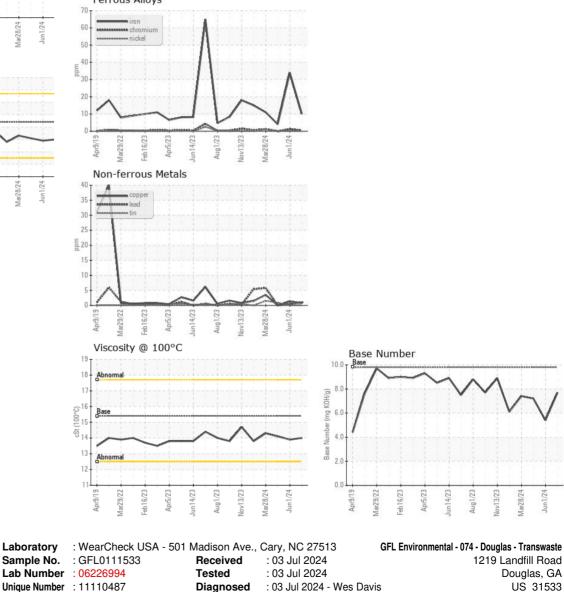
Aug 1/23

lov13/23 /ar28/24

Apr5/23 un14/23 Jun1/24 .

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	14.0	13.9	14.1
GRAPHS						

Ferrous Alloys





13 Abnormal 12

11 Apr9/19

Mar29/77 eb16/23

> Sample No. Lab Number : 06226994 Unique Number : 11110487 Diagnosed : 03 Jul 2024 - Wes Davis Contact: CURTIS JACOBS Test Package : FLEET Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. CURTIS.JACOBS@GFLENV.COM T: (912)384-6001 \* - 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: GFL074 [WUSCAR] 06226994 (Generated: 07/03/2024 16:41:49) Rev: 1

Submitted By: CURTIS JACOBS

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