

Area (P638403) Machine Id

## **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method

## NORMAL



#### 10811 Component Diesel Engine Fluid

PETRO CANADA DURON SHP 15W40 (11 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.

		method	IIIII/Dase	current	nistory i	mstoryz
Sample Number		Client Info		GFL0124436	GFL0096904	GFL0096942
Sample Date		Client Info		09 Jul 2024	16 May 2024	29 Jan 2024
Machine Age	hrs	Client Info		16169	15822	15119
Oil Age	hrs	Client Info		15600	14426	693
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
			Preside Manager		In the tax work	le la transio
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		>75	12	6	<1
Chromium	ppm	ASTM D5185m	>5	<1	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	1
Lead	ppm	ASTM D5185m	>25	0	<1	0
Copper	ppm	ASTM D5185m	>100	1	0	0
Tin	ppm	ASTM D5185m	>4	0	<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 3	history1 9	history2 10
	ppm ppm					
Boron		ASTM D5185m	0	3	9	10
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	3 0	9 0	10 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	3 0 66	9 0 66	10 <1 56
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	3 0 66 0	9 0 66 <1	10 <1 56 <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	3 0 66 0 918	9 0 66 <1 949	10 <1 56 <1 844
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	3 0 66 0 918 1118	9 0 66 <1 949 1029	10 <1 56 <1 844 950
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	3 0 66 0 918 1118 1072	9 0 66 <1 949 1029 1066	10 <1 56 <1 844 950 983
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	3 0 66 0 918 1118 1072 1251	9 0 66 <1 949 1029 1066 1228	10 <1 56 <1 844 950 983 1129
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	3 0 66 0 918 1118 1072 1251 2749 current	9 0 66 <1 949 1029 1066 1228 3529 history1	10 <1 56 <1 844 950 983 1129 2852 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 <b>method</b> ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	3 0 66 0 918 1118 1072 1251 2749 current 7	9 0 66 <1 949 1029 1066 1228 3529 history1 7	10 <1 56 <1 844 950 983 1129 2852 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	0 0 60 1010 1070 1150 1270 2060	3 0 66 0 918 1118 1072 1251 2749 current	9 0 66 <1 949 1029 1066 1228 3529 history1	10 <1 56 <1 844 950 983 1129 2852 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 0 1010 1070 1150 1270 2060 <b>limit/base</b> >25 >20	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 2 <1	10 <1 56 <1 844 950 983 1129 2852 history2 2 2 <1 <1
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	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2 2	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7	10 <1 56 <1 844 950 983 1129 2852 history2 2 <1 <1 <1 <1
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 >25 >20 limit/base	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2 2 current 0.4	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7 2 <1 history1 0.2	10 <1 56 <1 844 950 983 1129 2852 history2 2 2 2 <1 <1 <1 <1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >20 imit/base >20 imit/base >20	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2 2 current 0.4 9.1	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7 2 <1 history1 0.2 6.7	10 <1 56 <1 844 950 983 1129 2852 history2 2 2 <1 <1 <1 history2 0.1 5.0
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 limit/base >25 >20 limit/base	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2 2 current 0.4	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7 2 <1 history1 0.2	10 <1 56 <1 844 950 983 1129 2852 history2 2 2 2 <1 <1 <1 <1 history2 0.1
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 2060 225 >20 imit/base >20 imit/base >20	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2 2 current 0.4 9.1	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7 2 <1 history1 0.2 6.7	10 <1 56 <1 844 950 983 1129 2852 history2 2 2 <1 <1 <1 history2 0.1 5.0
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 2060 225 20 225 20 <b>imit/base</b> >6 >20 20	3 0 66 0 918 1118 1072 1251 2749 <u>current</u> 7 4 2 2 <u>current</u> 0.4 9.1 19.3	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7 2 <1 0.2 6.7 17.7	10 <1 56 <1 844 950 983 1129 2852 <b>history2</b> 2 2 <1 <1 <1 <b>history2</b> 0.1 5.0 17.2
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 D7844 *ASTM D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 220 20 20 20 20 20 20 20 20 20 2	3 0 66 0 918 1118 1072 1251 2749 current 7 4 2 2 current 0.4 9.1 19.3 current	9 0 66 <1 949 1029 1066 1228 3529 history1 7 2 <1 7 2 <1 0.2 6.7 17.7 history1	10 <1 56 <1 844 950 983 1129 2852 history2 2 2 <1 <1 <1 history2 0.1 5.0 17.2 history2

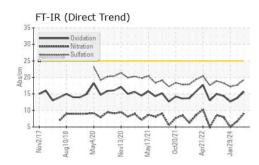


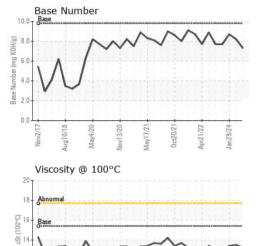
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# **OIL ANALYSIS REPORT**





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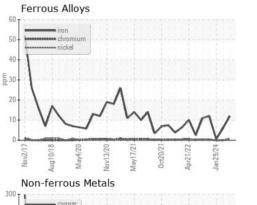
Apr21/22

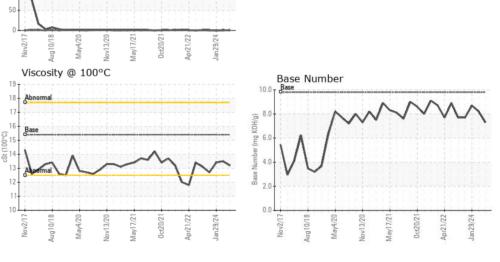
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250

lead

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	13.2	13.5	13.4
GRAPHS						





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 031 - Greenville/Spartanburg Sample No. : GFL0124436 Received : 12 Jul 2024 1635 Antioch Church Rd Lab Number : 06234687 Tested : 15 Jul 2024 Piedmont, SC US 29673 Unique Number : 11123521 Diagnosed : 15 Jul 2024 - Wes Davis Test Package : FLEET Contact: TECHNICIAN ACCOUNT Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. catherine.anastasio@wearcheck.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F:

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