

OIL ANALYSIS REPORT



(PX306R) Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (33 QTS)



Sample Rating Trend



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

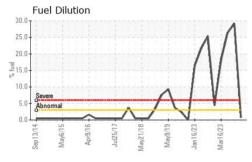
Fluid Condition

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

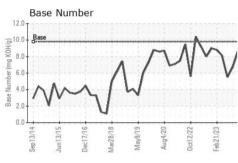
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0115700	GFL0068768	GFL0068948
Sample Date		Client Info		09 Apr 2024	30 May 2023	04 Apr 2023
Machine Age	hrs	Client Info		17626	17522	17396
Oil Age	hrs	Client Info		89	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	SEVERE	SEVERE
CONTAMINATION	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	3	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>130	5	44	25
Chromium	ppm	ASTM D5185m	>100	0	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	10	4
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>125	<1	<1	0
Tin		ASTM D5185m	>125	<1	0	0
Vanadium	ppm	ASTM D5185m	>4	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ppm	ASTIVI DOTOSITI		<u> </u>	0	0
ADDITIVES						history2
-ADDITIVEO		method	IIIIII/Dase	current	history1	
Boron	ppm	ASTM D5185m	0	21	5	5
	ppm ppm	ASTM D5185m			5	
Boron		ASTM D5185m	0	21	5	5
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	21 0	5	5
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	21 0 53	5 0 36	5 0 40
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	21 0 53 <1	5 0 36 <1	5 0 40 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	21 0 53 <1 742	5 0 36 <1 589	5 0 40 <1 616
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	21 0 53 <1 742 1041	5 0 36 <1 589 739	5 0 40 <1 616 769
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	21 0 53 <1 742 1041 867	5 0 36 <1 589 739 702	5 0 40 <1 616 769 676
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 ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	21 0 53 <1 742 1041 867 1044	5 0 36 <1 589 739 702 810	5 0 40 <1 616 769 676 858
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	21 0 53 <1 742 1041 867 1044 3126	5 0 36 <1 589 739 702 810 2435	5 0 40 <1 616 769 676 858 2375
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	21 0 53 <1 742 1041 867 1044 3126 current	5 0 36 <1 589 739 702 810 2435 history1	5 0 40 <1 616 769 676 858 2375 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	21 0 53 <1 742 1041 867 1044 3126 current 6	5 0 36 <1 589 739 702 810 2435 history1	5 0 40 <1 616 769 676 858 2375 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	21 0 53 <1 742 1041 867 1044 3126 current 6 <1	5 0 36 <1 589 739 702 810 2435 history1	5 0 40 <1 616 769 676 858 2375 history2 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	21 0 53 <1 742 1041 867 1044 3126 current 6 <1	5 0 36 <1 589 739 702 810 2435 history1 13 16 4	5 0 40 <1 616 769 676 858 2375 history2 8 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0	21 0 53 <1 742 1041 867 1044 3126 current 6 <1 2 0.7	5 0 36 <1 589 739 702 810 2435 history1 13 16 4	5 0 40 <1 616 769 676 858 2375 history2 8 8 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >3.0	21 0 53 <1 742 1041 867 1044 3126 current 6 <1 2 0.7	5 0 36 <1 589 739 702 810 2435 history1 13 16 4 ▲ 29.2 history1	5 0 40 <1 616 769 676 858 2375 history2 8 8 2 ▲ 26.4 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >3.0	21 0 53 <1 742 1041 867 1044 3126 current 6 <1 2 0.7 current 0.1	5 0 36 <1 589 739 702 810 2435 history1 13 16 4 ▲ 29.2 history1 1.7	5 0 40 <1 616 769 676 858 2375 history2 8 8 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base	21 0 53 <1 742 1041 867 1044 3126 current 6 <1 2 0.7 current 0.1 4.6	5 0 36 <1 589 739 702 810 2435 history1 13 16 4 ▲ 29.2 history1 1.7 12.3	5 0 40 <1 616 769 676 858 2375 history2 8 8 2 ▲ 26.4 history2 1.2 9.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m ASTM D78185m ASTM D7824 *ASTM D7844 *ASTM D7624 *ASTM D7415 method	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20 >30 limit/base	21 0 53 <1 742 1041 867 1044 3126 current 6 <1 2 0.7 current 0.1 4.6 16.2 current	5 0 36 <1 589 739 702 810 2435 history1 13 16 4 ▲ 29.2 history1 1.7 12.3 25.6 history1	5 0 40 <1 616 769 676 858 2375 history2 8 8 2 ▲ 26.4 history2 1.2 9.7 22.1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20 >30 limit/base >25	21 0 53 <1 742 1041 867 1044 3126 current 6 <1 2 0.7 current 0.1 4.6 16.2	5 0 36 <1 589 739 702 810 2435 history1 13 16 4 ▲ 29.2 history1 1.7 12.3 25.6	5 0 40 <1 616 769 676 858 2375 history2 8 8 2 ▲ 26.4 history2 1.2 9.7 22.1

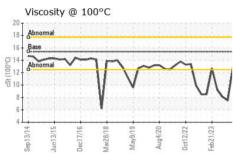


OIL ANALYSIS REPORT



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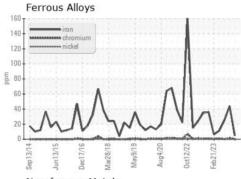


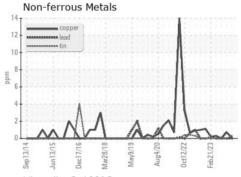


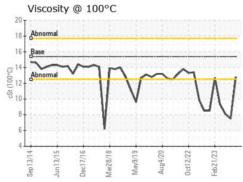
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

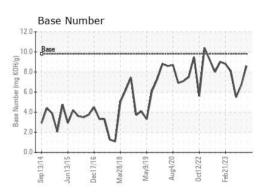
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.8	△ 7.5	▲ 8.1

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0115700 Lab Number : 06143812 Unique Number : 10968620

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 15 Apr 2024 Diagnosed Test Package : FLEET (Additional Tests: PercentFuel)

: 15 Apr 2024 - Wes Davis

: 10 Apr 2024

Stockbridge, GA US 30281

GFL Environmental - 010 - Stockbridge

Contact: JOSHUA TINKER joshuatinker@gflenv.com T:

1280 Rum Creek Parkway

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)

Report Id: GFL010 [WUSCAR] 06143812 (Generated: 04/15/2024 09:20:42) Rev: 1

Submitted By: JOSHUA TINKER

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