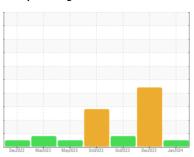


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 122036

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

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

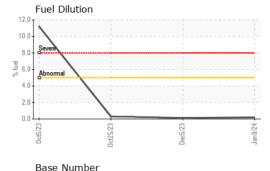
Fluid Condition

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

GAL)		Dec2022	Mar2023 May2023	Oct2023 Oct2023 Dec2023	Jan2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0105126	GFL0090289	GFL0090252
Sample Date		Client Info		09 Jan 2024	05 Dec 2023	25 Oct 2023
Machine Age	mls	Client Info		439764	1813	24085
Oil Age	mls	Client Info		1500	150	600
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	SEVERE	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
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	>100	<1	15	<u> </u>
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	11	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	6	6
Lead	ppm	ASTM D5185m	>40	0	20	0
Copper	ppm	ASTM D5185m	>330	0	1	2
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 1	history1 31	history2 <1
	ppm					
Boron		ASTM D5185m	0	1	31	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	1 0	31	<1
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	1 0 57	31 0 130	<1 0 63
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	1 0 57 0	31 0 130 <1	<1 0 63 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	1 0 57 0 952	31 0 130 <1 584	<1 0 63 <1 966
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	1 0 57 0 952 1057	31 0 130 <1 584 1339	<1 0 63 <1 966 1071
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	1 0 57 0 952 1057 1060	31 0 130 <1 584 1339 713	<1 0 63 <1 966 1071 988
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270	1 0 57 0 952 1057 1060	31 0 130 <1 584 1339 713 802	<1 0 63 <1 966 1071 988 1238
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	1 0 57 0 952 1057 1060 1193 3503	31 0 130 <1 584 1339 713 802 3402	<1 0 63 <1 966 1071 988 1238 2733
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	1 0 57 0 952 1057 1060 1193 3503	31 0 130 <1 584 1339 713 802 3402 history1	<1 0 63 <1 966 1071 988 1238 2733 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	1 0 57 0 952 1057 1060 1193 3503 current	31 0 130 <1 584 1339 713 802 3402 history1	<1 0 63 <1 966 1071 988 1238 2733 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	1 0 57 0 952 1057 1060 1193 3503 current 5	31 0 130 <1 584 1339 713 802 3402 history1 8	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	1 0 57 0 952 1057 1060 1193 3503 current 5 0	31 0 130 <1 584 1339 713 802 3402 history1 8 ▲ 368 ▲ 896	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	1 0 57 0 952 1057 1060 1193 3503 current 5 0 2	31 0 130 <1 584 1339 713 802 3402 history1 8 368 896 0.12	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71 15 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >5	1 0 57 0 952 1057 1060 1193 3503 current 5 0 2 0.2	31 0 130 <1 584 1339 713 802 3402 history1 8 ▲ 368 ▲ 896 ● 0.12 history1	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71 15 0.3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	1 0 57 0 952 1057 1060 1193 3503 current 5 0 2 0.2	31 0 130 <1 584 1339 713 802 3402 history1 8 ▲ 368 ▲ 896 ♠ 0.12 history1 0	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71 15 0.3 history2 1.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	1 0 57 0 952 1057 1060 1193 3503 current 5 0 2 0.2 current	31 0 130 <1 584 1339 713 802 3402 history1 8 ▲ 368 ▲ 896 ● 0.12 history1 0 4.0	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71 15 0.3 history2 1.8 10.4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >5 limit/base >3 >20 >3	1 0 57 0 952 1057 1060 1193 3503 current 5 0 2 0.2 current 0 4.0	31 0 130 <1 584 1339 713 802 3402 history1 8 ▲ 368 ▲ 896 ● 0.12 history1 0 4.0 17.2	<1 0 63 <1 966 1071 988 1238 2733 history2 9 71 15 0.3 history2 1.8 10.4 22.6



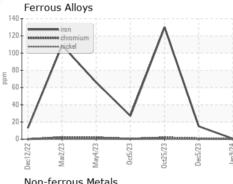
OIL ANALYSIS REPORT

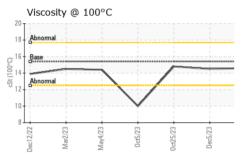


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal scal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

10.0 T Base	Numbe	er				
-	_					_
BE 6.0						
0.8 Base Number (mg KOH/g)						
gg 2.0						
0.0	- 52	- 623	23			_
Dec12/2	Mar2/	May4,	0ct5	0ct25/	Dec5,	

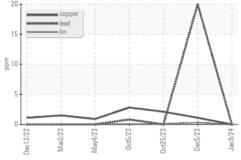
FLUID PROP	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.6	14.5	14.8

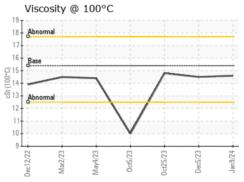


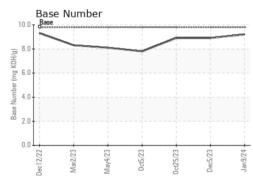




GRAPHS











Laboratory Sample No.

Lab Number **Unique Number**

: GFL0105126 : 06059911

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 10831293

: 12 Jan 2024 Diagnosed : 16 Jan 2024 Diagnostician : Wes Davis

Test Package : FLEET (Additional Tests: PercentFuel) 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)

GFL Environmental - 821 - Ozarks Hauling

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