

OIL ANALYSIS REPORT

(EHT512) 11267

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (16 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

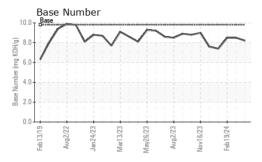
Fluid Condition

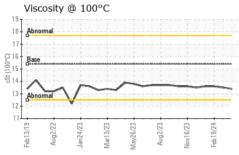
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0068831	GFL0068840	GFL0068892
Sample Date		Client Info		22 Mar 2024	01 Mar 2024	19 Feb 2024
Machine Age	hrs	Client Info		12622	12503	12396
Oil Age	hrs	Client Info		496	377	270
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel	1011	WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
		WC Method	>0.2	NEG	NEG	NEG
Glycol		VVC IVIELLIOU		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	17	13	10
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	2	<1	<1
Copper	ppm	ASTM D5185m	>330	2	2	<1
Tin	ppm	ASTM D5185m	>15	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVEC		method	limit/base	current	history1	history2
ADDITIVES		memou	IIIIII/Dase		History	
Boron	ppm	ASTM D5185m	0	3	17	3
	ppm		0			
Boron	• • • • • • • • • • • • • • • • • • • •	ASTM D5185m	0	3	17	3
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	3 <1	17 0	3
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	3 <1 62	17 0 63	3 0 61
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	3 <1 62 1	17 0 63 <1	3 0 61 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	3 <1 62 1 931	17 0 63 <1 973	3 0 61 <1 980
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	3 <1 62 1 931 1089	17 0 63 <1 973 1089	3 0 61 <1 980 1035
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	3 <1 62 1 931 1089 1110	17 0 63 <1 973 1089 1019	3 0 61 <1 980 1035 1044
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	3 <1 62 1 931 1089 1110	17 0 63 <1 973 1089 1019 1204	3 0 61 <1 980 1035 1044 1315
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	3 <1 62 1 931 1089 1110 1219 3138	17 0 63 <1 973 1089 1019 1204 3194	3 0 61 <1 980 1035 1044 1315 3179
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	3 <1 62 1 931 1089 1110 1219 3138 current	17 0 63 <1 973 1089 1019 1204 3194 history1	3 0 61 <1 980 1035 1044 1315 3179 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 limit/base	3 <1 62 1 931 1089 1110 1219 3138 current	17 0 63 <1 973 1089 1019 1204 3194 history1	3 0 61 <1 980 1035 1044 1315 3179 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	3 <1 62 1 931 1089 1110 1219 3138 current 7	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8	3 0 61 <1 980 1035 1044 1315 3179 history2 4
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 >20	3 <1 62 1 931 1089 1110 1219 3138 current 7 0 2 current	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8 24 history1	3 0 61 <1 980 1035 1044 1315 3179 history2 4 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 ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	3 <1 62 1 931 1089 1110 1219 3138 current 7 0 2 current	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8 24 history1 0.8	3 0 61 <1 980 1035 1044 1315 3179 history2 4 1 2 history2
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 method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	3 <1 62 1 931 1089 1110 1219 3138 current 7 0 2 current 1 10.5	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8 24 history1 0.8 9.3	3 0 61 <1 980 1035 1044 1315 3179 history2 4 1 2 history2
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 Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	3 <1 62 1 931 1089 1110 1219 3138 current 7 0 2 current 1 10.5 19.7	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8 24 history1 0.8 9.3 19.5	3 0 61 <1 980 1035 1044 1315 3179 history2 4 1 2 history2 0.7 8.4 19.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	3 <1 62 1 931 1089 1110 1219 3138 current 7 0 2 current 1 10.5 19.7 current	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8 24 history1 0.8 9.3 19.5 history1	3 0 61 <1 980 1035 1044 1315 3179 history2 4 1 2 history2 0.7 8.4 19.1
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 Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base >25	3 <1 62 1 931 1089 1110 1219 3138 current 7 0 2 current 1 10.5 19.7	17 0 63 <1 973 1089 1019 1204 3194 history1 5 8 24 history1 0.8 9.3 19.5	3 0 61 <1 980 1035 1044 1315 3179 history2 4 1 2 history2 0.7 8.4 19.1



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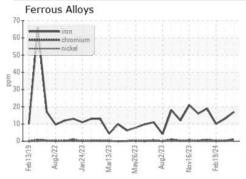


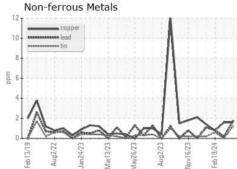


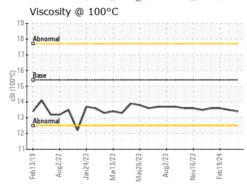
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

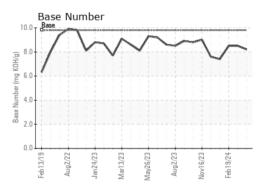
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.5	13.6

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number : 06130122

: GFL0068831

Unique Number: 10949587 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 27 Mar 2024 **Tested**

: 27 Mar 2024 Diagnosed : 27 Mar 2024 - Wes Davis

GFL Environmental - 073 - Warner Robins - Transwaste

155 Story Road Warner Robins, GA US 31093

Contact: JOSH MALONEY jmaloney@gflenv.com

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)

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