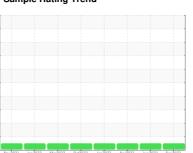


OIL ANALYSIS REPORT

Sample Rating Trend







428040-402374

Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (10 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

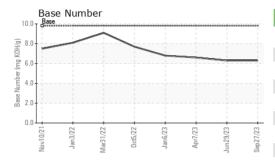
Fluid Condition

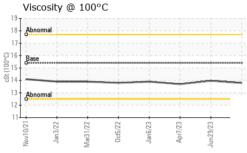
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0078386	GFL0078391	GFL0066613
Sample Date		Client Info		27 Sep 2023	29 Jun 2023	07 Apr 2023
Machine Age	hrs	Client Info		14543	13926	13355
Oil Age	hrs	Client Info		617	571	611
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	9	9	9
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>40	2	1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium						
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	ASTM D5185m method	limit/base	o current	0 history1	0 history2
	ppm	method	limit/base			
ADDITIVES		method	0	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 0	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 0 0	history1 0 2	history2 3 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 0 0 65	history1 0 2 65	history2 3 0 59
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 0 0 65 <1	history1 0 2 65 <1	history2 3 0 59 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 0 0 65 <1 914	history1 0 2 65 <1 872	history2 3 0 59 <1 941
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	current 0 0 65 <1 914 1076	history1 0 2 65 <1 872 1133	history2 3 0 59 <1 941 1110
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150	current 0 0 65 <1 914 1076 1014	history1 0 2 65 <1 872 1133 1033	history2 3 0 59 <1 941 1110 979
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270	current 0 0 65 <1 914 1076 1014 1249	history1 0 2 65 <1 872 1133 1033 1203	history2 3 0 59 <1 941 1110 979 1251
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current 0 0 65 <1 914 1076 1014 1249 3325	history1 0 2 65 <1 872 1133 1033 1203 3101	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current 0 0 65 <1 914 1076 1014 1249 3325 current	history1 0 2 65 <1 872 1133 1033 1203 3101 history1	history2 3 0 59 <1 941 1110 979 1251 3143 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current 0 0 65 <1 914 1076 1014 1249 3325 current 6	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 0 0 65 <1 914 1076 1014 1249 3325 current 6 2	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4 0	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 0 0 65 <1 914 1076 1014 1249 3325 current 6 2 2	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4 0 2	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4 3 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 0 0 65 <1 914 1076 1014 1249 3325 current 6 2 current	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4 0 2 history1	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4 3 0 history2
ADDITIVES 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	method ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	current 0 0 65 <1 914 1076 1014 1249 3325 current 6 2 current 0.4	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4 0 2 history1 0.4	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4 3 0 history2 0.4
ADDITIVES 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	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current 0 0 65 <1 914 1076 1014 1249 3325 current 6 2 current 0.4 9.4	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4 0 2 history1 0.4 9.4	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4 3 0 history2 0.4 9.7
ADDITIVES 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	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7624 *ASTM D7624	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >4 >20 >30	current 0 0 65 <1 914 1076 1014 1249 3325 current 6 2 2 current 0.4 9.4 20.7	history1 0 2 65 <1 872 1133 1033 1203 3101 history1 4 0 2 history1 0.4 9.4 21.1	history2 3 0 59 <1 941 1110 979 1251 3143 history2 4 3 0 history2 0.4 9.7 20.2



OIL ANALYSIS REPORT

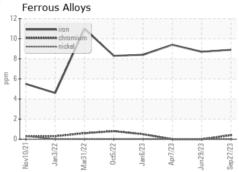


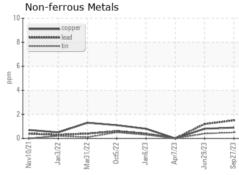


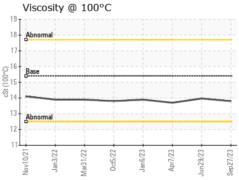
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

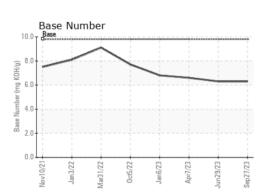
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.97	13.7	

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0078386 : 05964450 : 10671001

Received Diagnosed

: 29 Sep 2023 : 29 Sep 2023 Diagnostician : Wes Davis

GFL Environmental - 894 - Ada Hauling 1904 North Broadway, Suite D

Ada, OK US 74820

Contact: Johnny Spurlock jspurlock@gflenv.com T: (405)664-4476

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)