

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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.

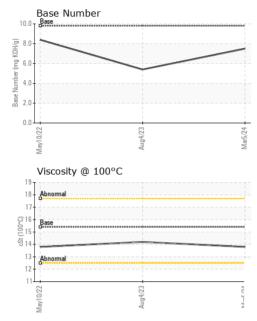
Fluid Condition

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

SAMPLE INFORI		method	limit/base	current	history1	history2
			mmubase			
Sample Number		Client Info		GFL0107697	GFL0081253	GFL0046437
Sample Date	h un	Client Info		05 Mar 2024	04 Aug 2023	10 May 2022
Machine Age	hrs	Client Info		15714	14731	12995
Oil Age	hrs	Client Info		600 N/A	600 Changed	600 Channad
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	ASTM D5185m	>100	11	45	15
Chromium	ppm	ASTM D5185m	>20	0	2	<1
Nickel	ppm	ASTM D5185m	>4	4	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	<1	5	4
Lead	ppm	ASTM D5185m	>40	0	5	<1
Copper	ppm	ASTM D5185m	>330	<1	2	<1
Tin	ppm	ASTM D5185m	>15	2	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
	ppm ppm		limit/base			
ADDITIVES		method	0	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current <1	history1 3	history2 7
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current <1 0	history1 3 0	history2 7 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current <1 0 56	history1 3 0 73	history2 7 0 56
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current <1 0 56 0	history1 3 0 73 <1	history2 7 0 56 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current <1 0 56 0 1051	history1 3 0 73 <1 1009	history2 7 0 56 <1 884
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	Current <1 0 56 0 1051 1180	history1 3 0 73 <1 1009 1285	history2 7 0 56 <1 884 1066
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	<1 0 56 0 1051 1180 1001	history1 3 0 73 <1 1009 1285 1138	history2 7 0 56 <1 884 1066 1013
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270	<1 0 56 0 1051 1180 1001 1315	history1 3 0 73 <1 1009 1285 1138 1373	history2 7 0 56 <1 884 1066 1013 1207
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	<1	history1 3 0 73 <1 1009 1285 1138 1373 3182	history2 7 0 56 <1 884 1066 1013 1207 2519
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	current <1 0 56 0 1051 1180 1001 1315 2927 current	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1	history2 7 0 56 <1 884 1066 1013 1207 2519 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base >25	<1 0 56 0 1051 1180 1001 1315 2927 current 2	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5	history2 7 0 56 <1 884 1066 1013 1207 2519 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 1010 1070 1150 1270 2060 limit/base >25	current <1 0 56 0 1051 1180 1001 1315 2927 current 2 2 2 2 2 2 2	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 4
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 0 1010 1070 1150 1270 2060 limit/base >25	<1 0 56 0 1051 1180 1001 1315 2927 current 2 2 0 0 current 2 0 current	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18 6	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 2
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 0 1010 1070 1150 1270 2060 limit/base >25	current <1 0 56 0 1051 1180 1001 1315 2927 current 2 2 0 current 0 current 0.5	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18 6 history1	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20	<1 0 56 0 1051 1180 1001 1315 2927 current 2 2 0 0 current 2 0 current	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18 6 history1 1.4	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 2 history2 0 0.4
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 t t t t	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >3 >20	<1 0 56 0 1051 1180 1001 1315 2927 current 2 2 0 current 0 current 0.5 8.5 19.3	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18 6 history1 1.4 13.8 27.6	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 2 history2 0.4 6.8 19.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7415 method	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 20 20 3 20 3 20 3 3 20 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 3	current <1 0 56 0 1051 1180 1001 1315 2927 current 2 2 0 current 0.5 8.5 19.3 current	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18 6 history1 1.4 13.8 27.6 history1	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 4 2 history2 0.4 6.8 19.3 history2
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 t t t t	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >3 >20	<1 0 56 0 1051 1180 1001 1315 2927 current 2 2 0 current 0 current 0.5 8.5 19.3	history1 3 0 73 <1 1009 1285 1138 1373 3182 history1 5 18 6 history1 1.4 13.8 27.6	history2 7 0 56 <1 884 1066 1013 1207 2519 history2 4 2 history2 0.4 6.8 19.3



OIL ANALYSIS REPORT



VISUAL		method				
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	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.2	13.8
Ferrous Alloys	\wedge					
iron chromium nickel	Aug 4/23		MatS/24			
iron chromium nickel			Mar5.24			
COOPPER COOPPER COOPPER			Mar5/24			
iron chromium nickel 2001/few Non-ferrous Meta			Mar6/24			

Base Number

10.0

8 (mg KOH/g)

6 | umber

4 (Base

0.0

Mav10/22

Mar5/24 -

: 06 Mar 2024

: 07 Mar 2024



Unique Number : 10914318 Diagnosed : 07 Mar 2024 - Wes Davis Test Package : FLEET Contact: Ricky Matthews Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rickymathews@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (586)825-9514 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Aug4/23 -

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

Received

Tested

Viscosity @ 100°C

19

18 17

+(100°C)

ぢ 14

Laboratory Sample No.

Lab Number : 06110821

Mav10/22

: GFL0107697

Aug4/23 -

GFL Environmental - 465 - Pontiac

888 Baldwin

Pontiac, MI

US 48340

Mar5/24

F: