



OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

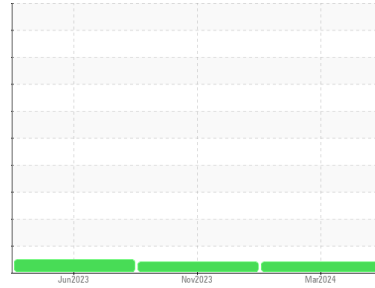


Area
(30300996)

Machine Id
FL0112

Component
Propane Engine

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



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Sample only)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0101615	GFL0094848	GFL0077505
Sample Date	Client Info	11 Mar 2024	06 Nov 2023	07 Jun 2023
Machine Age	hrs	7602	7560	7524
Oil Age	hrs	78	36	39
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd
Sample Status		ATTENTION	ATTENTION	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	88	93	75
Chromium	ppm	ASTM D5185m	>25	3	2	2
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	8	7
Lead	ppm	ASTM D5185m	>25	20	19	17
Copper	ppm	ASTM D5185m	>35	15	13	11
Tin	ppm	ASTM D5185m	>8	2	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	9	6	8
Barium	ppm	ASTM D5185m	0	0	<1	2
Molybdenum	ppm	ASTM D5185m	60	51	55	55
Manganese	ppm	ASTM D5185m	0	2	2	2
Magnesium	ppm	ASTM D5185m	1010	600	603	609
Calcium	ppm	ASTM D5185m	1070	1569	1572	1525
Phosphorus	ppm	ASTM D5185m	1150	844	807	904
Zinc	ppm	ASTM D5185m	1270	1124	1167	1136
Sulfur	ppm	ASTM D5185m	2060	3505	3266	3358

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>50	12	13	11
Sodium	ppm	ASTM D5185m		11	9	7
Potassium	ppm	ASTM D5185m	>20	1	3	1

INFRA-RED

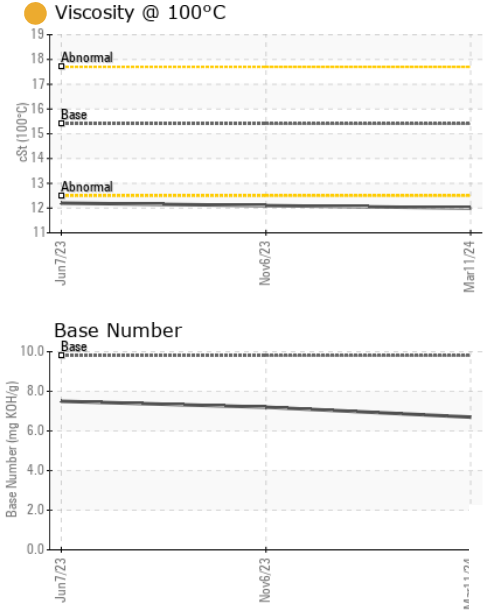
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	8.3	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	21.0	20.9

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	15.4	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	7.2	7.5



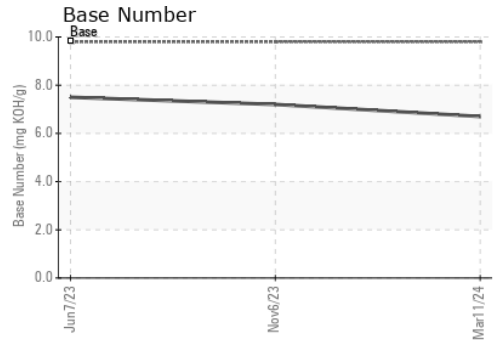
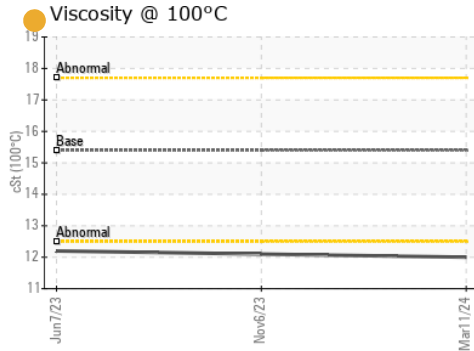
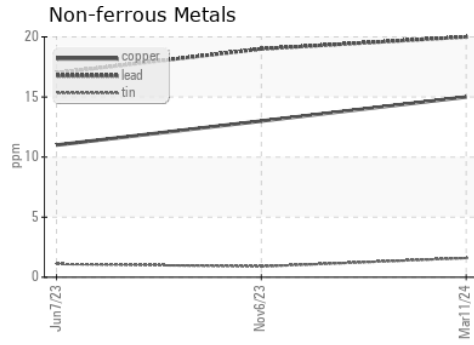
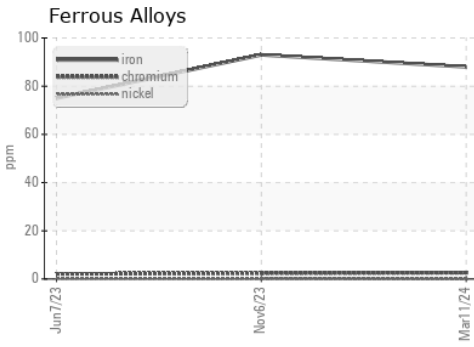
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	● 12.0	12.1	12.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0101615 **Received** : 13 Mar 2024
Lab Number : 06117677 **Tested** : 14 Mar 2024
Unique Number : 10926510 **Diagnosed** : 15 Mar 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 625 - Harrison Hauling
 4102 Industrial Pkwy
 Harrison, MI
 US 48625
Contact: RON TROJANEK
 ront@northern1.com
 T: (231)624-0372
 F:

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)