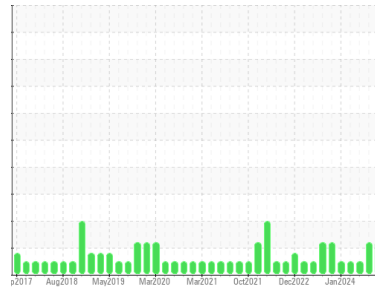




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id

3729

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (10 GAL)

DIAGNOSIS

Recommendation

Check for low coolant level. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

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 INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0125894	GFL0125840	GFL0118658	
Sample Date	Client Info	08 Jul 2024	01 Jul 2024	07 May 2024	
Machine Age	hrs	Client Info	18318	18318	18320
Oil Age	hrs	Client Info	600	39	200
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd	
Sample Status		ATTENTION	ATTENTION	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >75	6	6	8
Chromium	ppm ASTM D5185m >5	<1	<1	<1
Nickel	ppm ASTM D5185m >4	0	0	0
Titanium	ppm ASTM D5185m >2	<1	0	0
Silver	ppm ASTM D5185m >2	0	<1	<1
Aluminum	ppm ASTM D5185m >15	4	3	4
Lead	ppm ASTM D5185m >25	0	<1	0
Copper	ppm ASTM D5185m >100	2	2	6
Tin	ppm ASTM D5185m >4	0	0	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<1	0	2
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	65	64	59
Manganese	ppm ASTM D5185m 0	0	<1	1
Magnesium	ppm ASTM D5185m 1010	969	985	947
Calcium	ppm ASTM D5185m 1070	1108	1089	1026
Phosphorus	ppm ASTM D5185m 1150	1056	1153	1043
Zinc	ppm ASTM D5185m 1270	1248	1316	1236
Sulfur	ppm ASTM D5185m 2060	2923	3955	3595

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	8	5
Sodium	ppm ASTM D5185m	150	100	48
Potassium	ppm ASTM D5185m >20	4	3	5
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.3	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	7.3	6.6	5.2
Sulfation	Abs.1mm *ASTM D7415 >30	19.0	18.5	17.0

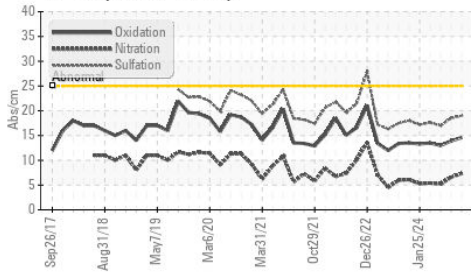
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs.1mm *ASTM D7414 >25	14.6	13.9	13.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.7	9.4	9.5

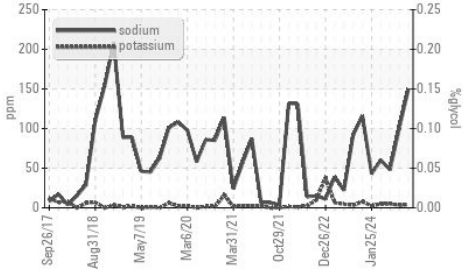


OIL ANALYSIS REPORT

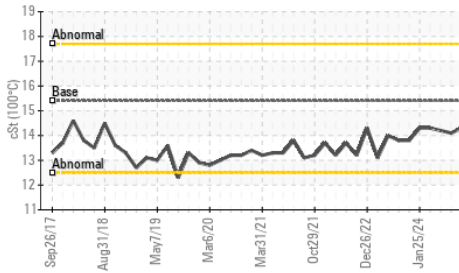
FT-IR (Direct Trend)



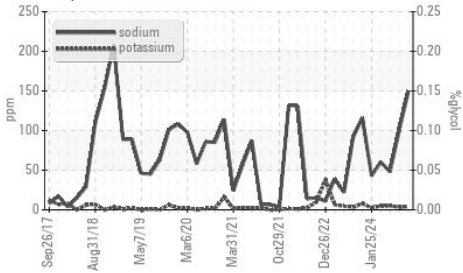
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

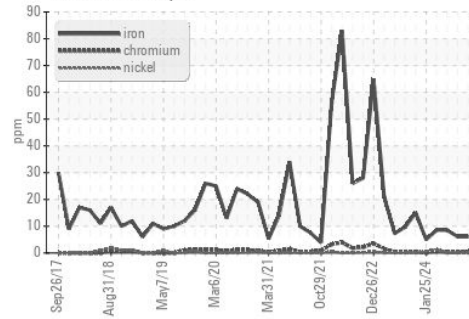


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

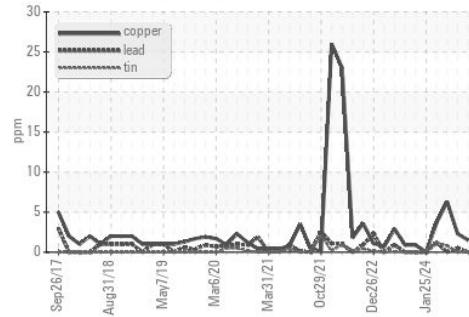
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	14.1

GRAPHS

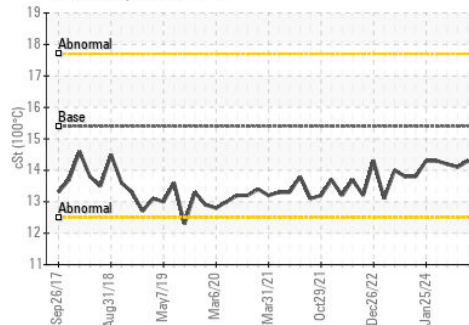
Ferrous Alloys



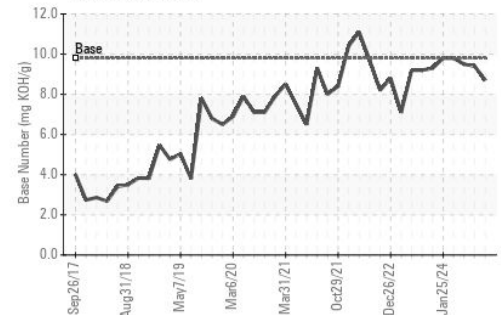
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0125894

Lab Number : 06234533

Unique Number : 11123367

Test Package : FLEET (Additional Tests: Glycol)

Received : 12 Jul 2024

Tested : 16 Jul 2024

Diagnosed : 16 Jul 2024 - Sean Felton

GFL Environmental - 166 - Phenix City

18 Old Brickyard Rd

Phenix City, AL

US 36869

Contact: DEAN PEACE JR

dean.peace@gflenv.com

T:

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)