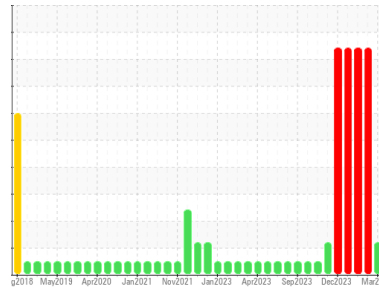




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
10867
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (40 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

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		GFL0098884	GFL0099030	GFL0098942
Sample Date	Client Info		14 Mar 2024	13 Feb 2024	25 Jan 2024
Machine Age	mls	Client Info	219035	219035	217432
Oil Age	mls	Client Info	204515	204515	204515
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ATTENTION	SEVERE	SEVERE

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	13	36	23
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	6	4
Lead	ppm	ASTM D5185m	>25	0	<1	0
Copper	ppm	ASTM D5185m	>100	<1	1	1
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	0	<1	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	58	96	84
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	906	975	931
Calcium	ppm	ASTM D5185m	1070	1081	1298	1164
Phosphorus	ppm	ASTM D5185m	1150	989	1117	1032
Zinc	ppm	ASTM D5185m	1270	1234	1329	1256
Sulfur	ppm	ASTM D5185m	2060	3785	3393	3263

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	7	10	7
Sodium	ppm	ASTM D5185m		79	594	537
Potassium	ppm	ASTM D5185m	>20	76	541	434
Glycol	%	*ASTM D2982		0.0	0.10	0.10

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>6	0.2	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.8	10.6	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	20.9	19.5

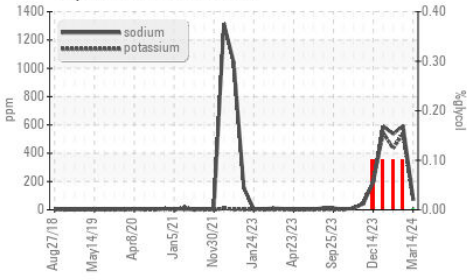
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.9	16.1	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	9.8	10.9

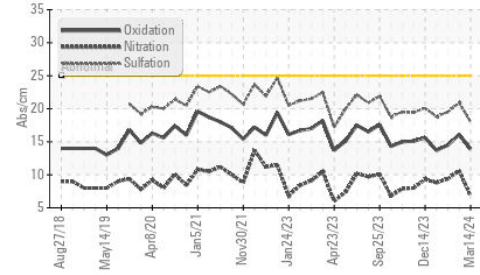


OIL ANALYSIS REPORT

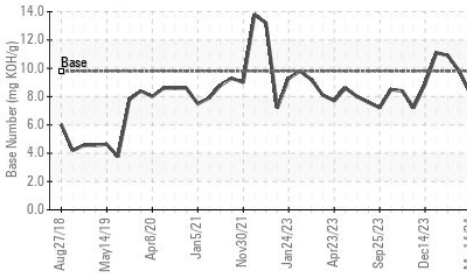
Glycol Contamination



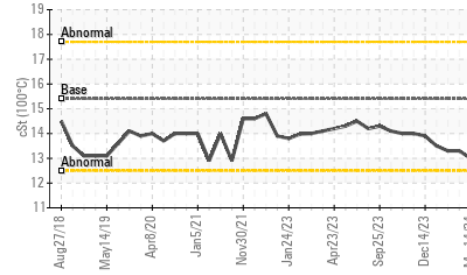
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



Viscosity @ 100°C

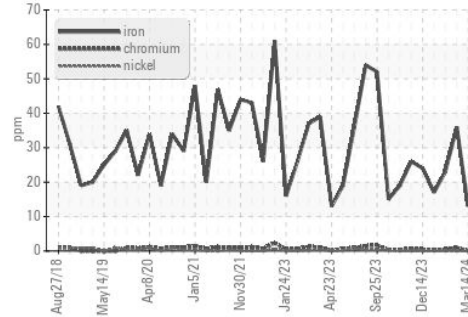


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

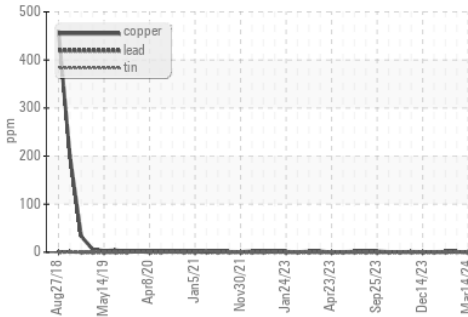
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	13.3

GRAPHS

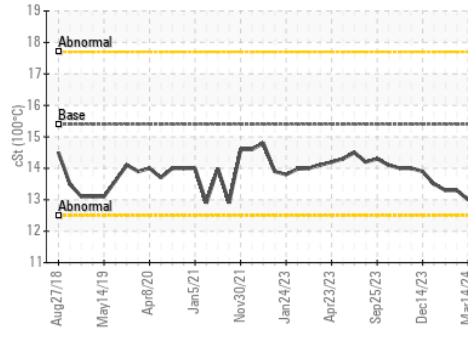
Ferrous Alloys



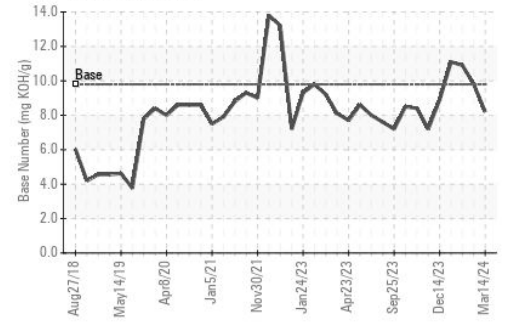
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0098884
 Lab Number : 06142064
 Unique Number : 10966872
 Test Package : FLEET

Received : 08 Apr 2024
 Tested : 11 Apr 2024
 Diagnosed : 11 Apr 2024 - Jonathan Hester

GFL Environmental - 084 - Clarksville
 699 Jack Miller Boulevard
 Clarksville, TN
 US 37042

Contact: ROBERT THIBAUT
 robert.thibault@gflenv.com

T: (931)552-7276

F: (931)572-9674

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)