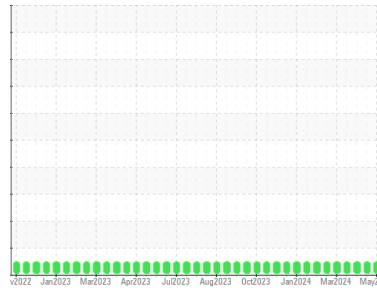




OIL ANALYSIS REPORT

Area
MONTGOMERY
 Machine Id
MACK 913016
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



NORMAL

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 INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0088013	GFL0118453	GFL0083570
Sample Date	Client Info	08 May 2024	22 Apr 2024	11 Apr 2024
Machine Age	hrs	5330	13292	2918
Oil Age	hrs	5330	146	2918
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		NORMAL	NORMAL	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
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	6	7	15
Chromium	ppm ASTM D5185m >20	<1	0	<1
Nickel	ppm ASTM D5185m >5	<1	0	0
Titanium	ppm ASTM D5185m >2	<1	1	0
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	2	2	1
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	<1	0	3
Tin	ppm ASTM D5185m >15	<1	0	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	0	2	4
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	58	60	64
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	865	1033	998
Calcium	ppm ASTM D5185m 1070	974	1162	1116
Phosphorus	ppm ASTM D5185m 1150	981	1039	1121
Zinc	ppm ASTM D5185m 1270	1172	1318	1333
Sulfur	ppm ASTM D5185m 2060	3050	3456	3541

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	4	4
Sodium	ppm ASTM D5185m	3	4	5
Potassium	ppm ASTM D5185m >20	2	<1	<1

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.3	0.4	0.7
Nitration	Abs/cm *ASTM D7624 >20	5.8	7.0	10.1
Sulfation	Abs/.1mm *ASTM D7415 >30	18.2	18.8	22.8

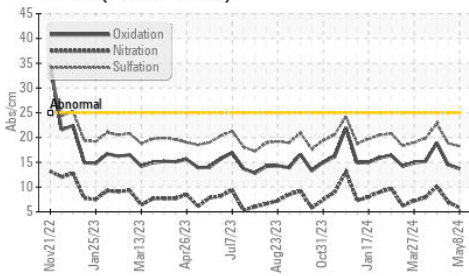
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.7	14.5	18.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.3	7.3	7.2

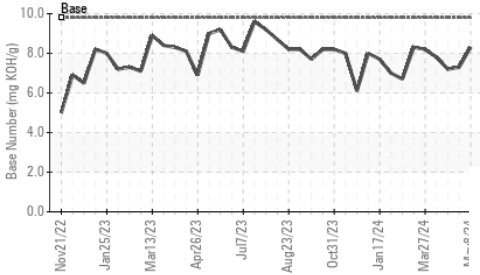


OIL ANALYSIS REPORT

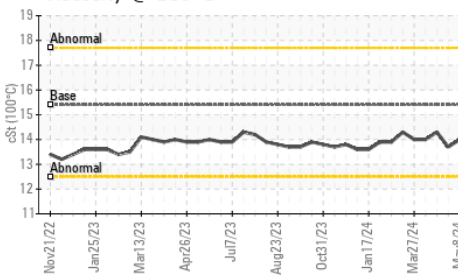
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

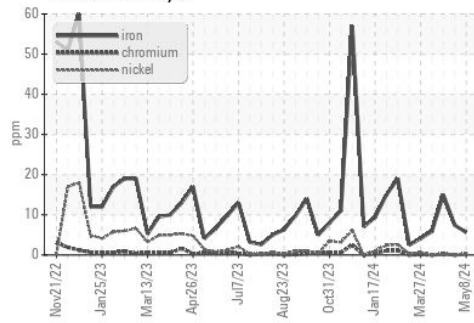


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

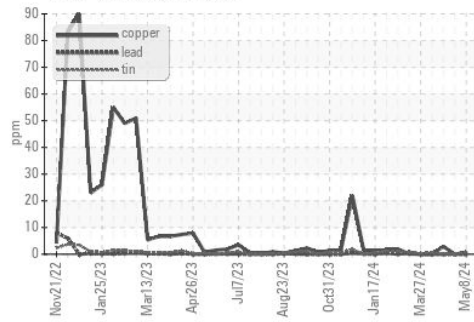
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.7

GRAPHS

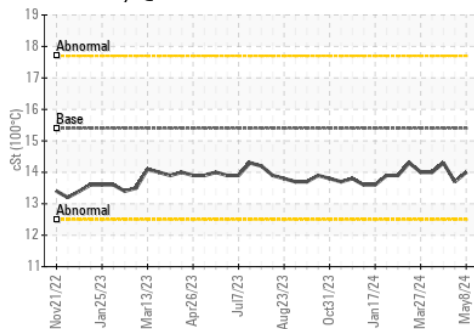
Ferrous Alloys



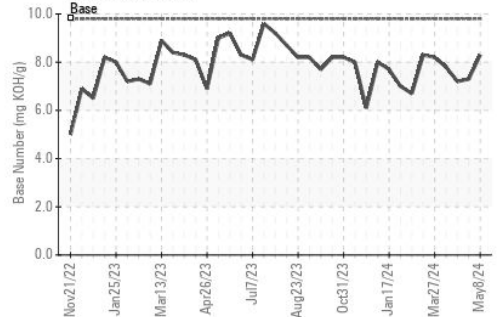
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0088013 **Received** : 14 May 2024
Lab Number : 06178549 **Tested** : 15 May 2024
Unique Number : 11029875 **Diagnosed** : 15 May 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 955 - Montgomery
 1121 Wilbanks St
 Montgomery, AL
 US 36108
 Contact: LISA REEVES

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)

T:
F: