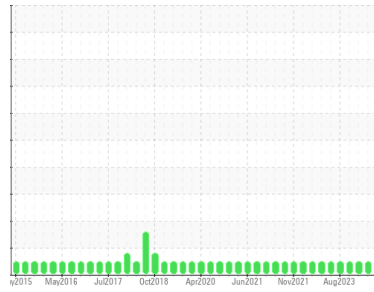




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(P587730)

Machine Id
2573

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (10 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Unsure why the hours are so off. Current hours is 23426)

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 acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0110365	GFL0110377	GFL0110373
Sample Date	Client Info	16 May 2024	15 Feb 2024	12 Feb 2024
Machine Age	hrs Client Info	23426	22862	22824
Oil Age	hrs Client Info	23000	0	22000
Oil Changed	Client Info	N/A	Not Changd	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 >165	23	4	21
Chromium	ppm ASTM D5185m >5	1	<1	2
Nickel	ppm ASTM D5185m >4	0	<1	<1
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	<1	<1
Aluminum	ppm ASTM D5185m >20	3	1	1
Lead	ppm ASTM D5185m >150	5	<1	3
Copper	ppm ASTM D5185m >90	<1	<1	2
Tin	ppm ASTM D5185m >5	<1	<1	<1
Vanadium	ppm ASTM D5185m	0	<1	<1
Cadmium	ppm ASTM D5185m	0	<1	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	15	9	15
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	72	60	68
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	975	890	868
Calcium	ppm ASTM D5185m 1070	1128	1062	1113
Phosphorus	ppm ASTM D5185m 1150	1134	988	1006
Zinc	ppm ASTM D5185m 1270	1288	1147	1156
Sulfur	ppm ASTM D5185m 2060	3519	3682	3411

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	7	4	6
Sodium	ppm ASTM D5185m	16	0	4
Potassium	ppm ASTM D5185m >20	14	4	8

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >7.5	1.4	0.2	1.4
Nitration	Abs/cm *ASTM D7624 >20	12.4	6.5	11.6
Sulfation	Abs/.1mm *ASTM D7415 >30	24.3	18.0	23.4

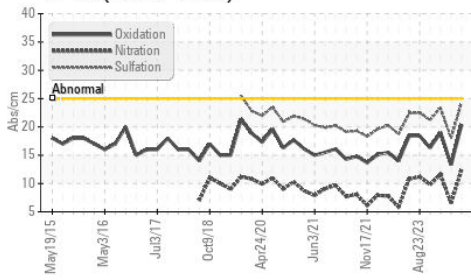
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	20.4	13.3	19.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.1	7.5	6.9

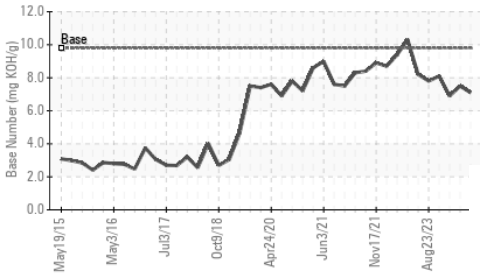


OIL ANALYSIS REPORT

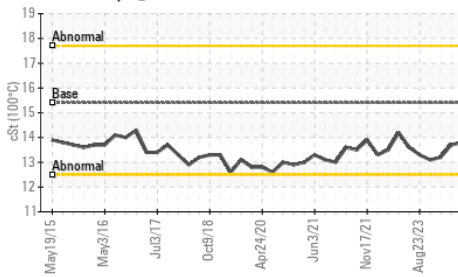
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

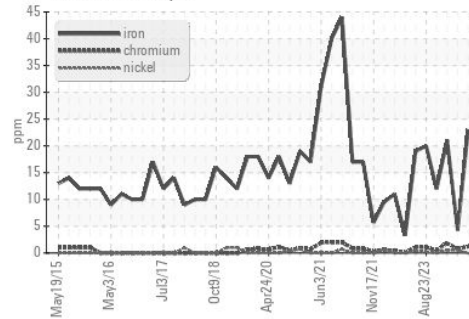


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

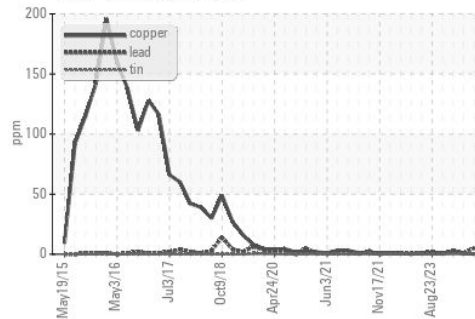
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.7

GRAPHS

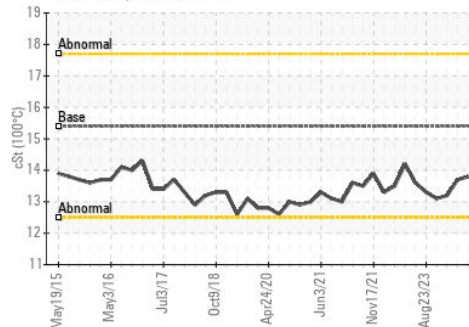
Ferrous Alloys



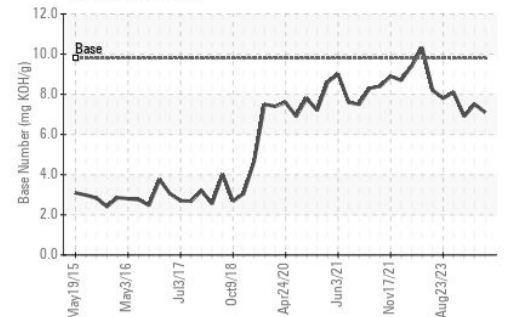
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110365
Lab Number : 06187078
Unique Number : 11043830
Test Package : FLEET

GFL Environmental - 031 - Greenville/Spartanburg
 1635 Antioch Church Rd
 Piedmont, SC
 US 29673

Contact: TECHNICIAN ACCOUNT
 catherine.anastasio@wearcheck.com

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: