



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
4612M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117689	GFL0108747	GFL0105622
Sample Date		Client Info		16 Apr 2024	20 Mar 2024	13 Dec 2023
Machine Age	hrs	Client Info		20007	19798	19404
Oil Age	hrs	Client Info		18924	19798	18924
Filter Age	hrs	Client Info		12969	12969	18924
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	37	25	19
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	4	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

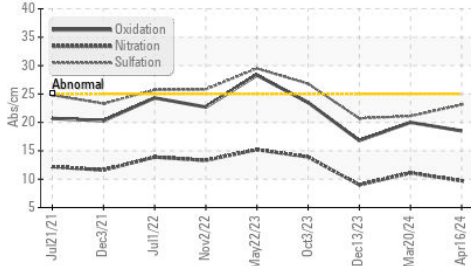
Silicon	ppm	ASTM D5185m	>25	7	6	6
Potassium	ppm	ASTM D5185m	>20	3	1	3
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	1.2	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	9.7	11.1	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	21.1	20.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

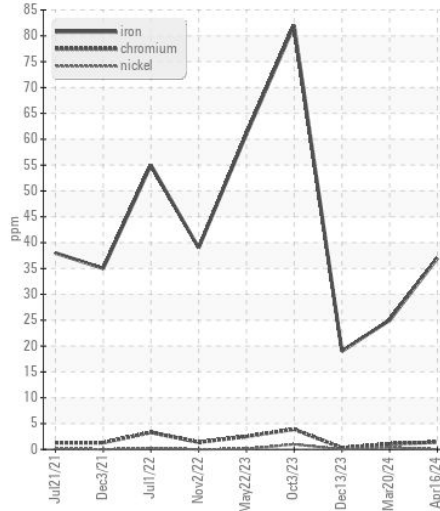
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		48	3	60
Boron	ppm	ASTM D5185m	0	3	0	<1
Barium	ppm	ASTM D5185m	0	2	0	0
Molybdenum	ppm	ASTM D5185m	60	64	61	59
Manganese	ppm	ASTM D5185m	0	2	<1	0
Magnesium	ppm	ASTM D5185m	1010	1043	941	1061
Calcium	ppm	ASTM D5185m	1070	1194	1079	1199
Phosphorus	ppm	ASTM D5185m	1150	1165	972	1120
Zinc	ppm	ASTM D5185m	1270	1363	1232	1288
Sulfur	ppm	ASTM D5185m	2060	3610	2664	3101
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	20.0	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.7	6.9	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	15.0	13.2	14.5

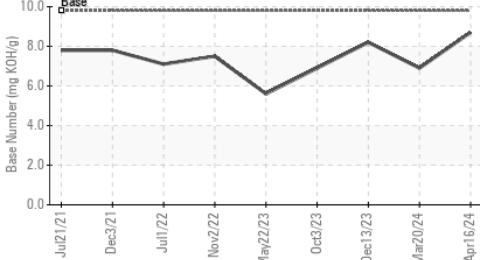
FT-IR (Direct Trend)



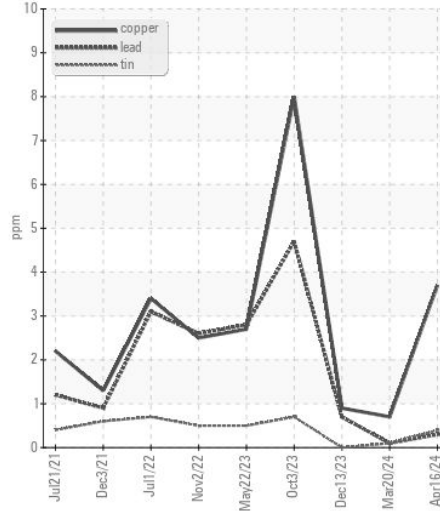
Ferrous Alloys



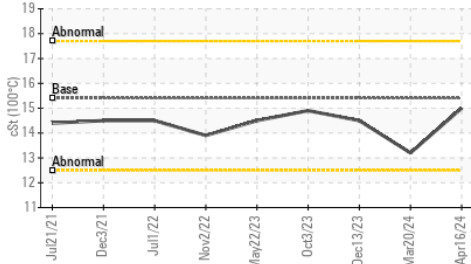
Base Number



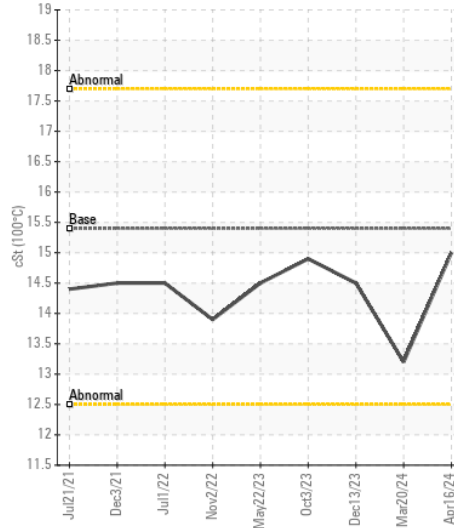
Non-ferrous Metals



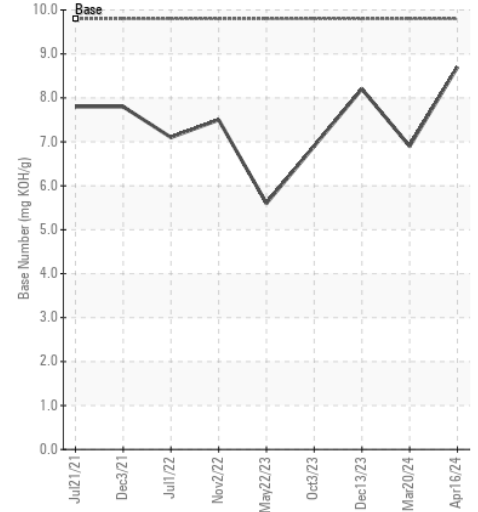
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117689
Lab Number : 06155743
Unique Number : 10991166
Test Package : FLEET

GFL Environmental - 415 - Michigan East
 6200 Elmridge
 Sterling Heights, MI
 US 48313
 Contact: Frank Wolak
 fwolak@gflenv.com
 T: (586)825-9514
 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)