FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
(BC14412)
Machine Id
929017-1271
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (46 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

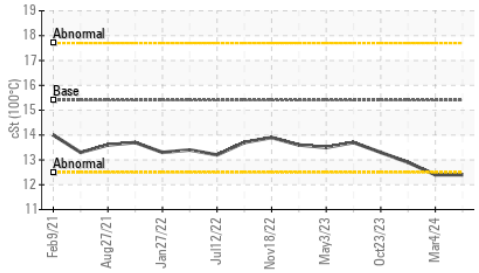
Sodium and/or potassium levels are high. Test for glycol is negative.

FLUID CONDITION

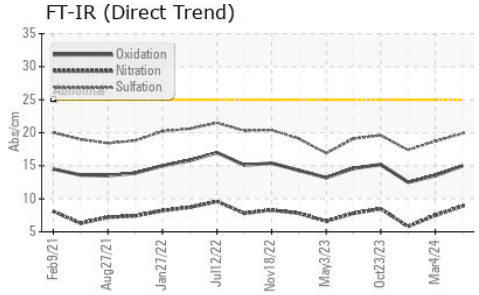
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110327	GFL0110282	GFL0090486
Sample Date		Client Info		11 Apr 2024	04 Mar 2024	21 Nov 2023
Machine Age	hrs	Client Info		13568	13568	13568
Oil Age	hrs	Client Info		600	0	0
Filter Age	hrs	Client Info		600	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>90	21	15	1
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	1	1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	3	2
Potassium	ppm	ASTM D5185m	>20	24	4	3
Fuel		WC Method	>3.0	<1.0	1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.8	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.9	7.5	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	18.7	17.4
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
Sodium	ppm	ASTM D5185m		▲ 157	▲ 118	26
Boron	ppm	ASTM D5185m	0	4	5	9
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	64	66	55
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	821	824	822
Calcium	ppm	ASTM D5185m	1070	1057	1057	1003
Phosphorus	ppm	ASTM D5185m	1150	907	853	995
Zinc	ppm	ASTM D5185m	1270	1087	1068	1105
Sulfur	ppm	ASTM D5185m	2060	3036	2656	2916
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	13.5	12.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.2	7.9	8.6
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.4	▲ 12.4	12.9

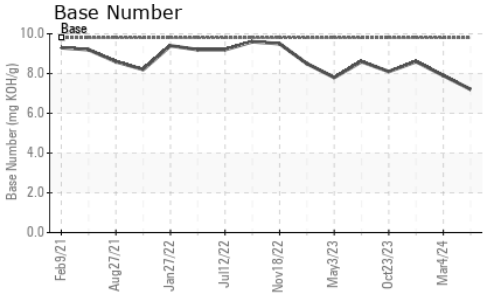
Viscosity @ 100°C



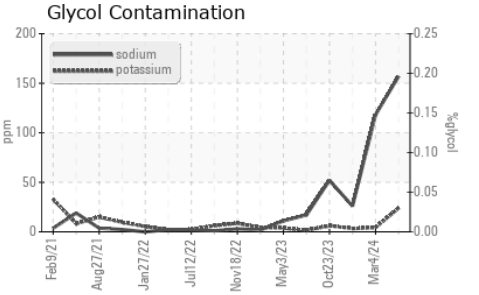
FT-IR (Direct Trend)



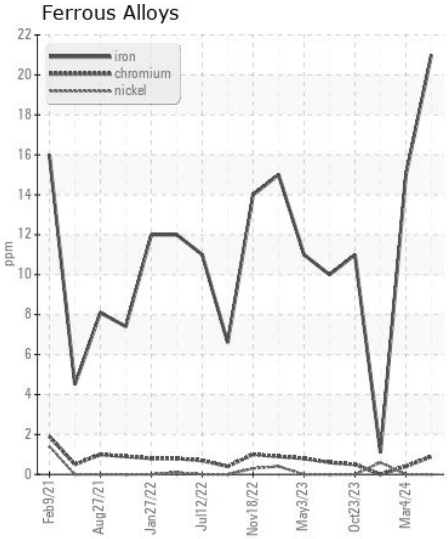
Base Number



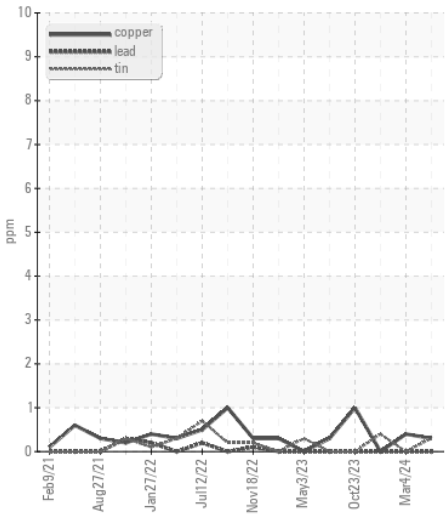
Glycol Contamination



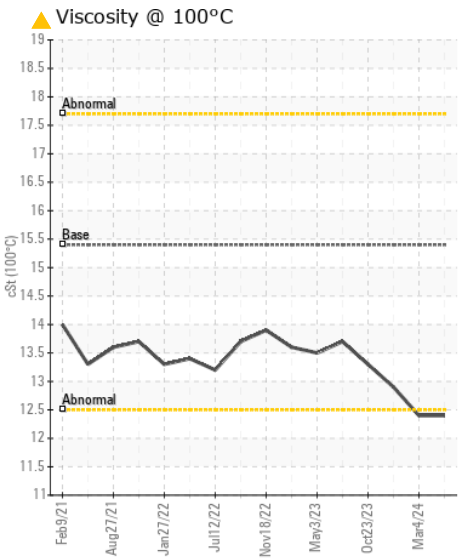
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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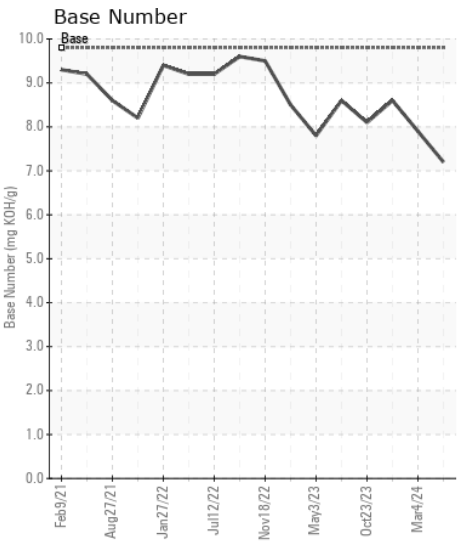

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110327
Lab Number : 06150962
Unique Number : 10981040
Test Package : FLEET (Additional Tests: Glycol)

Received : 16 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 19 Apr 2024 - Jonathan Hester

GFL Environmental - 622 - Traverse City Hauling
160 Hughes Dr
Traverse City, MI
US 49686
Contact: GARY BREWER

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)

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