FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
(34706UA)
Machine Id
712015
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

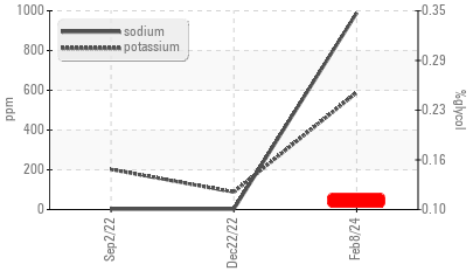
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil.

FLUID CONDITION

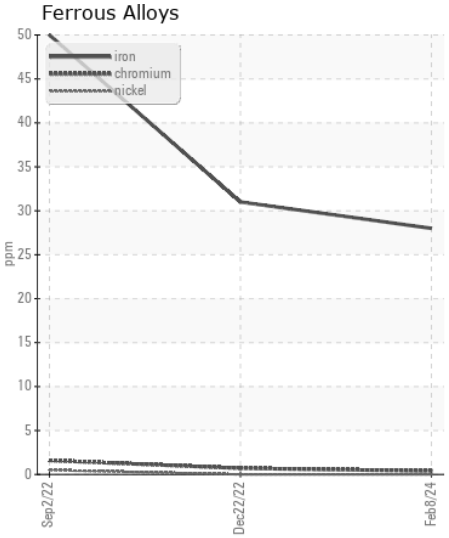
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**GFL0112138**	GFL0060127	GFL0052192
Sample Date		Client Info		**08 Feb 2024**	22 Dec 2022	02 Sep 2022
Machine Age	hrs	Client Info		**724**	724	724
Oil Age	hrs	Client Info		**724**	2350	1579
Filter Age	hrs	Client Info		**724**	771	855
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>90	**28**	31	50
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	2
Nickel	ppm	ASTM D5185m	>2	**0**	0	<1
Titanium	ppm	ASTM D5185m	>2	**0**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**15**	42	91
Lead	ppm	ASTM D5185m	>40	**0**	0	<1
Copper	ppm	ASTM D5185m	>330	**<1**	1	3
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**7**	4	6
Potassium	ppm	ASTM D5185m	>20	▲ **589**	88	202
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol	%	*ASTM D2982		⬢ **0.12**	NEG	NEG
Soot %	%	*ASTM D7844	>6	**0.4**	0.9	1
Nitration	Abs/cm	*ASTM D7624	>20	**13.6**	10.9	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.5**	22.3	23.2
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		▲ **989**	2	2
Boron	ppm	ASTM D5185m	0	**26**	2	6
Barium	ppm	ASTM D5185m	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185m	60	**112**	63	56
Manganese	ppm	ASTM D5185m	0	**<1**	<1	1
Magnesium	ppm	ASTM D5185m	1010	**864**	918	807
Calcium	ppm	ASTM D5185m	1070	**1078**	1161	1007
Phosphorus	ppm	ASTM D5185m	1150	**1015**	1055	881
Zinc	ppm	ASTM D5185m	1270	**1201**	1253	1111
Sulfur	ppm	ASTM D5185m	2060	**2749**	3952	2617
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.9**	18.6	19.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**12.5**	8.7	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	**14.1**	13.6	13.3

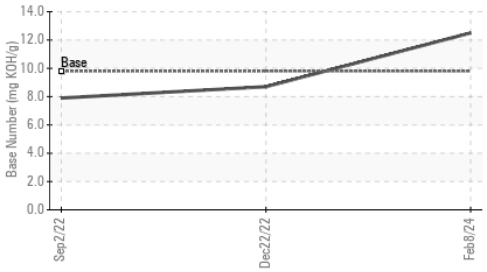
Glycol Contamination



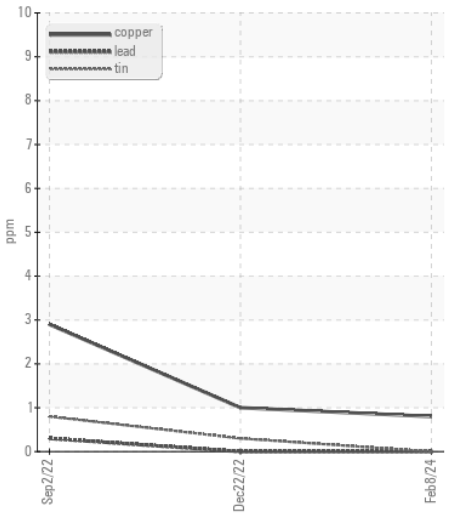
Ferrous Alloys



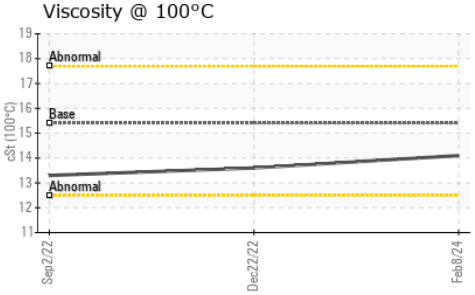
Base Number



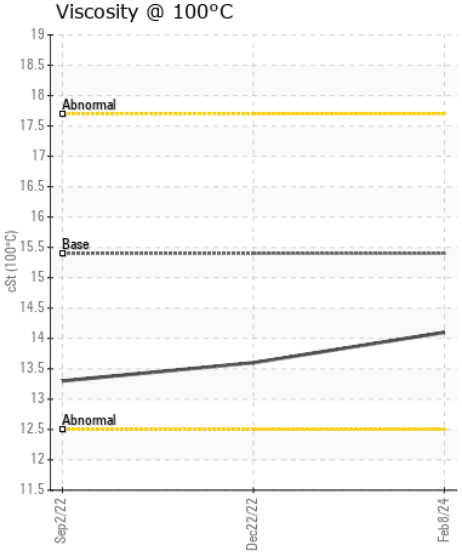
Non-ferrous Metals



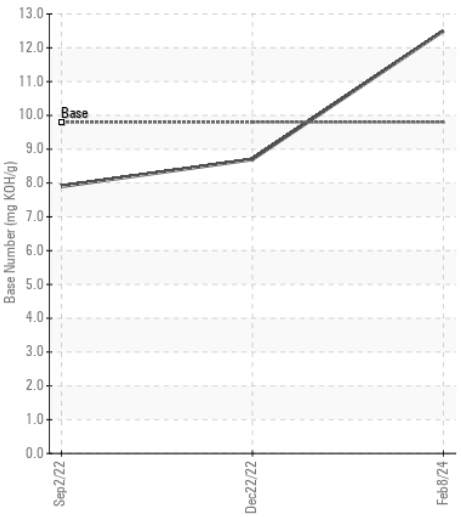
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0112138
Lab Number : 06085881
Unique Number : 10873326
Test Package : FLEET (Additional Tests: Glycol)

Received : 12 Feb 2024
Tested : 13 Feb 2024
Diagnosed : 13 Feb 2024 - Jonathan Hester

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)

GFL Environmental - 045 - Tidewater
3821 Cook Blvd.
Chesapeake, VA
US 23323
Contact: ELVIN RODRIGUEZ
elvinrodriguez@gflenv.com
T:
F: