FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
721012-361637
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

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

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

CONTAMINATION

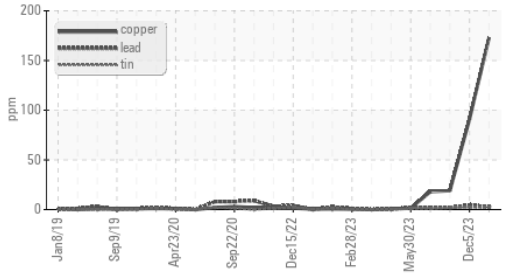
Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

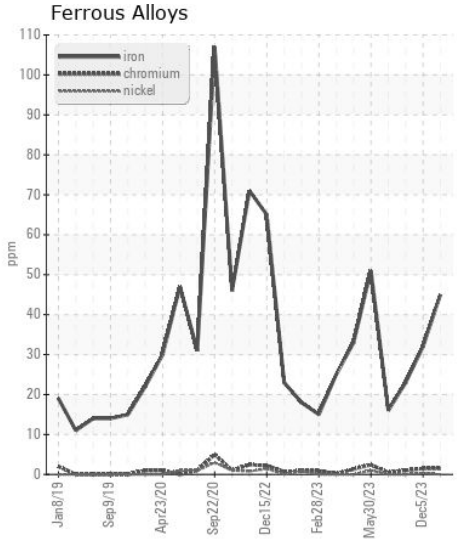
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0102492	GFL0102525	GFL0098584
Sample Date		Client Info		29 Dec 2023	05 Dec 2023	19 Nov 2023
Machine Age	hrs	Client Info		27642	27507	27381
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>80	45	32	23
Chromium	ppm	ASTM D5185m	>5	2	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>30	5	4	4
Lead	ppm	ASTM D5185m	>30	2	5	2
Copper	ppm	ASTM D5185m	>150	▲ 173	▲ 91	19
Tin	ppm	ASTM D5185m	>5	2	2	2
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	▲ 31	▲ 27	▲ 26
Potassium	ppm	ASTM D5185m	>20	5	4	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.6	8.7	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	22.7	20.8
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		6	4	4
Boron	ppm	ASTM D5185m	0	30	27	30
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	50	40	38
Manganese	ppm	ASTM D5185m	0	4	4	3
Magnesium	ppm	ASTM D5185m	1010	667	492	507
Calcium	ppm	ASTM D5185m	1070	2098	1687	1787
Phosphorus	ppm	ASTM D5185m	1150	1002	755	746
Zinc	ppm	ASTM D5185m	1270	1183	956	949
Sulfur	ppm	ASTM D5185m	2060	3319	2482	2479
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.4	22.1	19.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.4	9.0	7.6
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.1	13.1

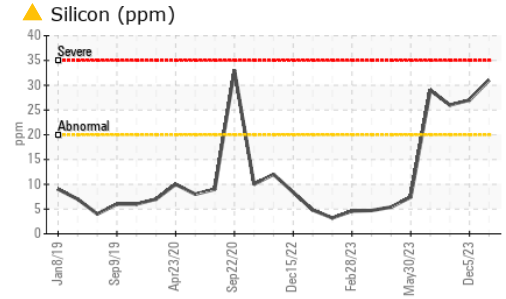
Non-ferrous Metals



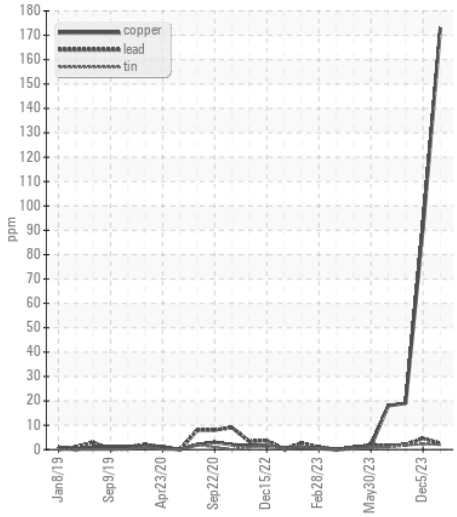
Ferrous Alloys



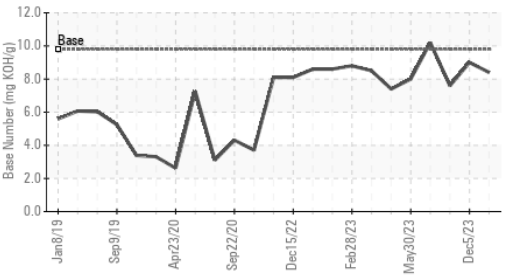
Silicon (ppm)



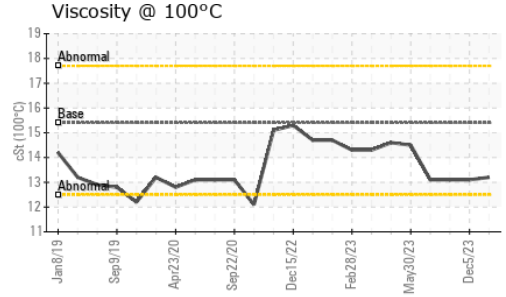
Non-ferrous Metals



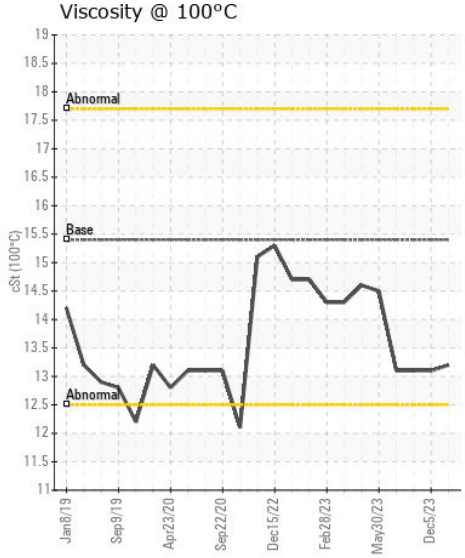
Base Number



Viscosity @ 100°C



Viscosity @ 100°C



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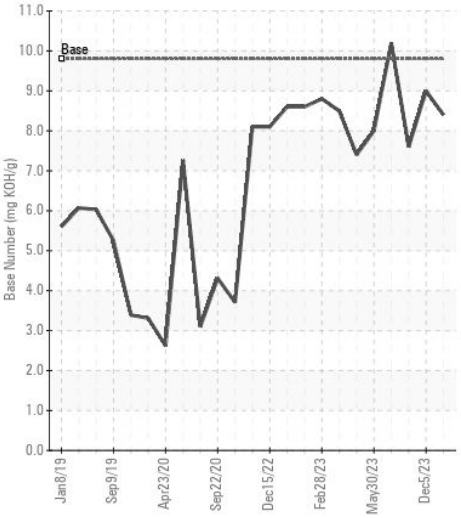

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102492
Lab Number : 06055792
Unique Number : 10821741
Test Package : FLEET

Recieved : 09 Jan 2024
Diagnosed : 10 Jan 2024
Diagnostician : 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)

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