FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL

Machine Id
427034
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

All component wear rates are normal.

CONTAMINATION

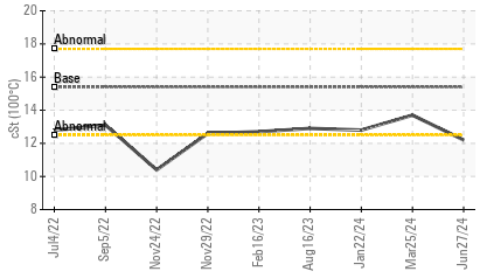
Fuel content negligible. There is no indication of any contamination in the oil.

FLUID CONDITION

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

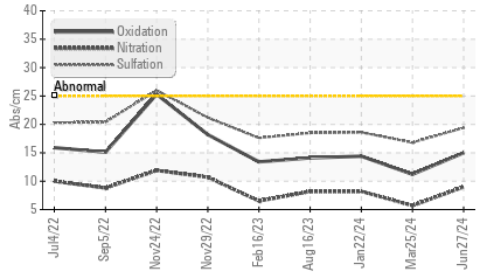
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122685	GFL0110200	GFL0110172
Sample Date		Client Info		27 Jun 2024	25 Mar 2024	22 Jan 2024
Machine Age	hrs	Client Info		17518	16952	16933
Oil Age	hrs	Client Info		600	10	600
Filter Age	hrs	Client Info		600	10	600
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				MARGINAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>110	19	8	8
Chromium	ppm	ASTM D5185m	>4	<1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	6	3	7
Lead	ppm	ASTM D5185m	>45	<1	0	0
Copper	ppm	ASTM D5185m	>85	8	2	2
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	8	8	4
Potassium	ppm	ASTM D5185m	>20	4	5	<1
Fuel	%	ASTM D3524	>5	0.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.0	5.7	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	16.8	18.6
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		0	<1	2
Boron	ppm	ASTM D5185m	0	11	99	6
Barium	ppm	ASTM D5185m	0	1	<1	0
Molybdenum	ppm	ASTM D5185m	60	54	18	54
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	812	610	904
Calcium	ppm	ASTM D5185m	1070	1290	1376	1042
Phosphorus	ppm	ASTM D5185m	1150	948	656	983
Zinc	ppm	ASTM D5185m	1270	1169	825	1132
Sulfur	ppm	ASTM D5185m	2060	2903	3433	2928
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	11.2	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	8.3	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.2	13.7	12.8

Viscosity @ 100°C

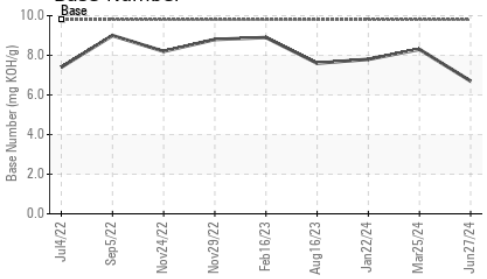


Fuel Dilution

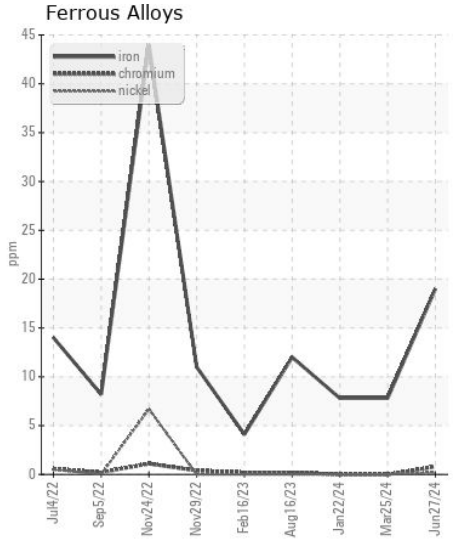
FT-IR (Direct Trend)



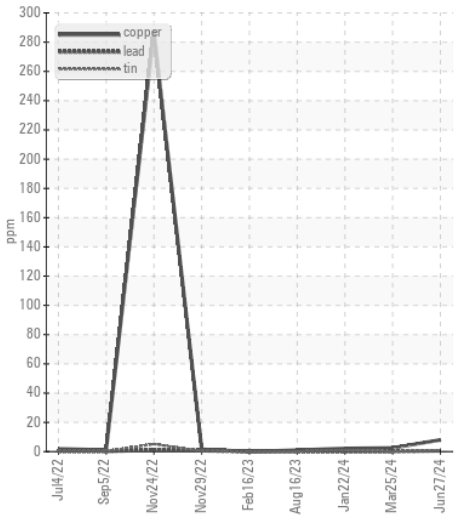
Base Number



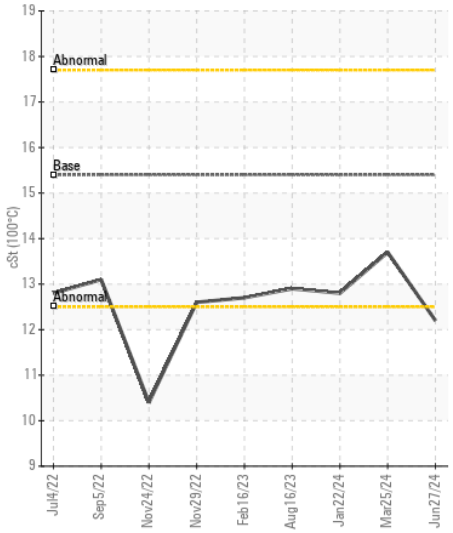
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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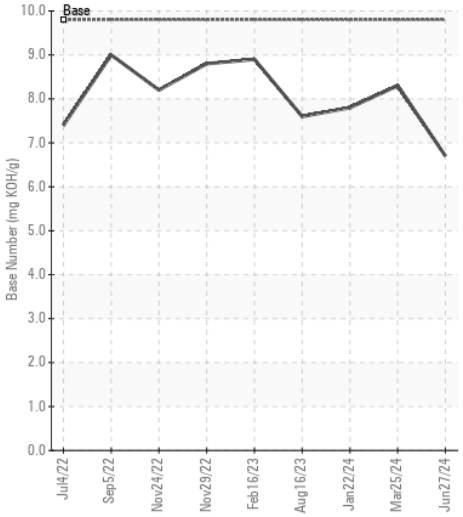

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122685
Lab Number : 06225662
Unique Number : 11103859
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 01 Jul 2024
Tested : 08 Jul 2024
Diagnosed : 08 Jul 2024 - Jonathan Hester

GFL Environmental - 660S - Roanoke
2045 LEE HWY
Cloverdale, VA
US 24077
Contact: DELBERT BEASLEY
T:
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)