



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
819018
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		GFL0100997	GFL0101072	GFL0092781
Sample Date		Client Info		17 May 2024	12 Feb 2024	31 Oct 2023
Machine Age	hrs	Client Info		3715	3715	3715
Oil Age	hrs	Client Info		3715	3715	3715
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	53	15	10
Chromium	ppm	ASTM D5185m	>5	2	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>30	5	1	2
Lead	ppm	ASTM D5185m	>30	<1	<1	0
Copper	ppm	ASTM D5185m	>150	2	2	1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	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.

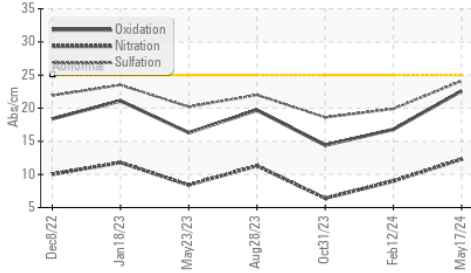
Silicon	ppm	ASTM D5185m	>20	8	6	4
Potassium	ppm	ASTM D5185m	>20	3	3	6
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	12.3	9.0	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.1	19.9	18.6
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

FLUID CONDITION

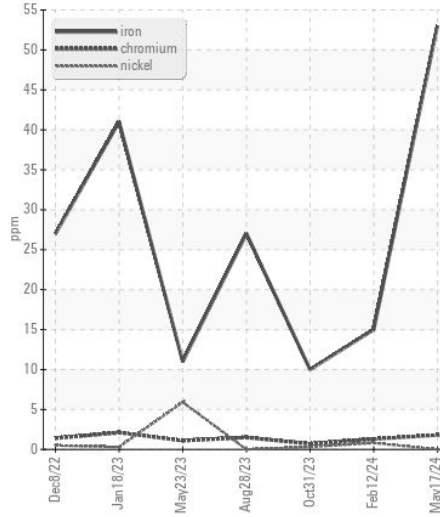
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	0	1
Boron	ppm	ASTM D5185m	0	5	3	2
Barium	ppm	ASTM D5185m	0	0	0	4
Molybdenum	ppm	ASTM D5185m	60	68	63	60
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	1016	942	850
Calcium	ppm	ASTM D5185m	1070	1139	1077	1000
Phosphorus	ppm	ASTM D5185m	1150	1076	1051	906
Zinc	ppm	ASTM D5185m	1270	1351	1198	1136
Sulfur	ppm	ASTM D5185m	2060	2989	3488	2674
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.6	16.8	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.9	7.5	8.6
Visc @ 100°C	cSt	ASTM D445	15.4	14.9	13.9	13.9

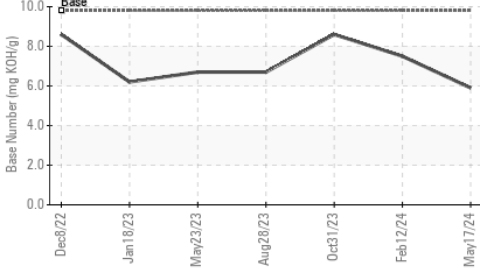
FT-IR (Direct Trend)



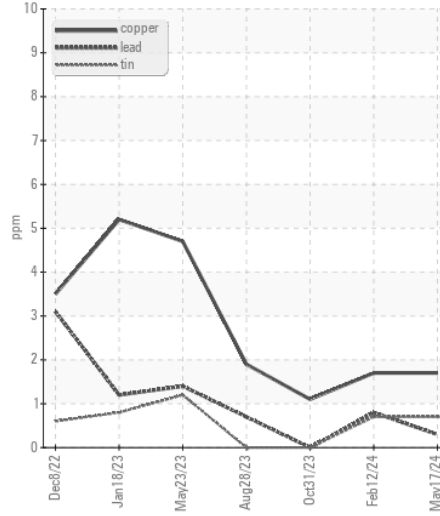
Ferrous Alloys



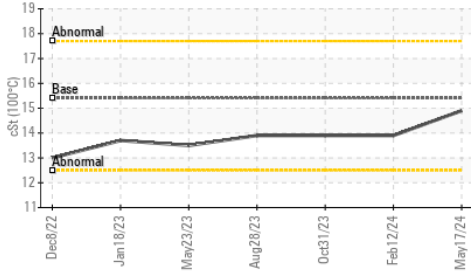
Base Number



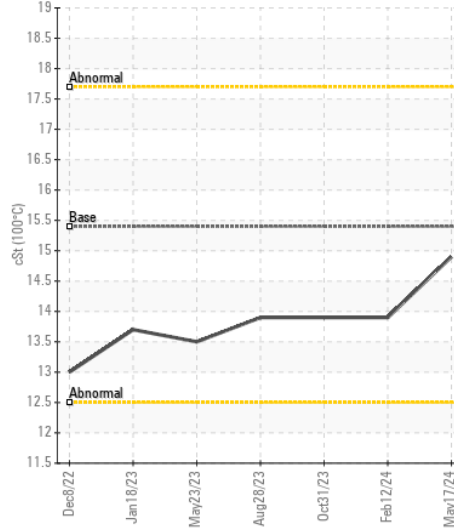
Non-ferrous Metals



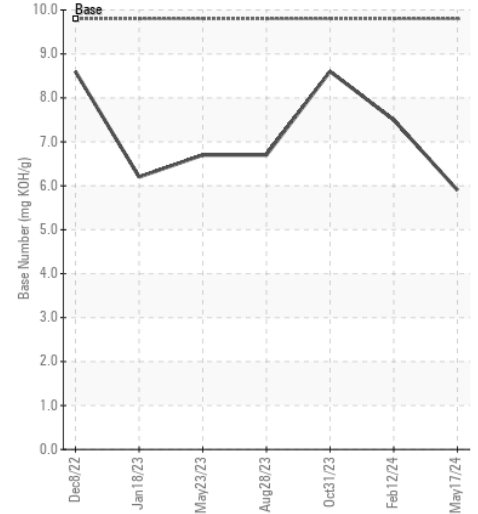
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0100997

Lab Number : 06188927

Unique Number : 11045679

Test Package : FLEET

Received : 23 May 2024

Tested : 24 May 2024

Diagnosed : 28 May 2024 - Don Baldrige

GFL Environmental - 455 - Flint

2051 W. Bristol Rd

Flint Township, MI

US 48507

Contact: MARK WOMBLE

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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)