



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
913154
 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		GFL0114432	GFL0100475	GFL0093277
Sample Date		Client Info		16 Apr 2024	09 Dec 2023	04 Oct 2023
Machine Age	mls	Client Info		72902	3599	3024
Oil Age	mls	Client Info		14245	3599	3024
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>110	12	10	7
Chromium	ppm	ASTM D5185m	>4	<1	<1	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	5	3	0
Lead	ppm	ASTM D5185m	>45	<1	<1	0
Copper	ppm	ASTM D5185m	>85	2	1	1
Tin	ppm	ASTM D5185m	>4	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

CONTAMINATION

There is no indication of any contamination in the oil.

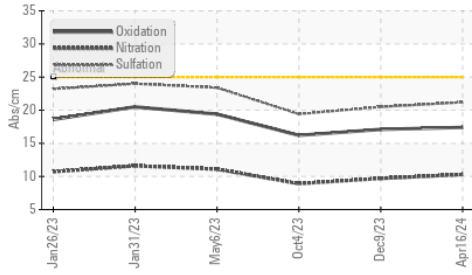
Silicon	ppm	ASTM D5185m	>30	5	5	4
Potassium	ppm	ASTM D5185m	>20	7	3	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.3	9.7	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	20.5	19.4
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

FLUID CONDITION

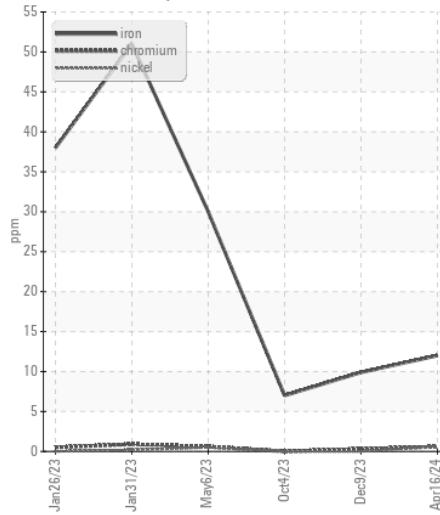
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	4	0
Boron	ppm	ASTM D5185m	0	0	1	0
Barium	ppm	ASTM D5185m	0	0	0	<1
Molybdenum	ppm	ASTM D5185m	60	62	58	64
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	942	970	945
Calcium	ppm	ASTM D5185m	1070	1086	1066	1082
Phosphorus	ppm	ASTM D5185m	1150	1121	1030	1034
Zinc	ppm	ASTM D5185m	1270	1269	1313	1278
Sulfur	ppm	ASTM D5185m	2060	3268	2421	3138
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	17.1	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	7.1	7.3
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.1	14.4

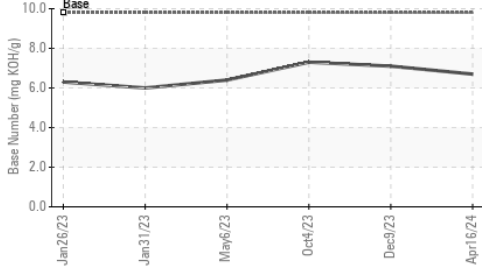
FT-IR (Direct Trend)



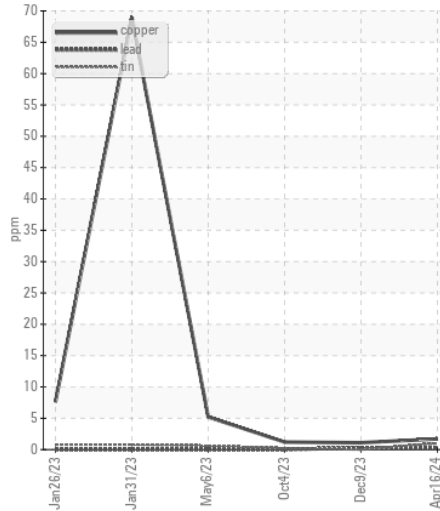
Ferrous Alloys



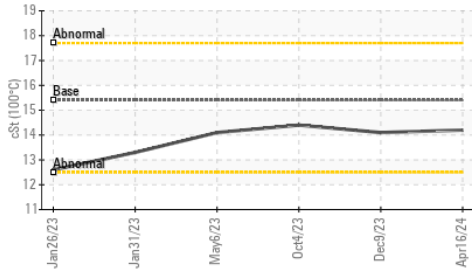
Base Number



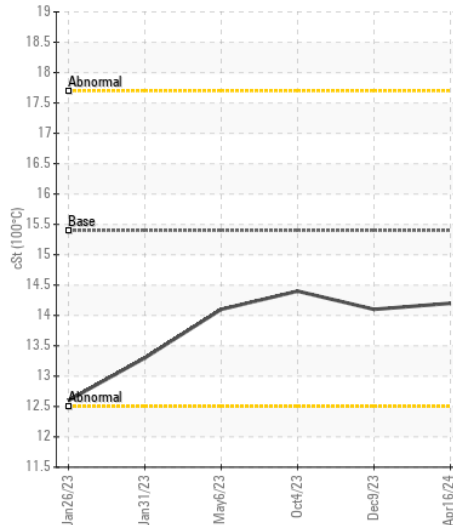
Non-ferrous Metals



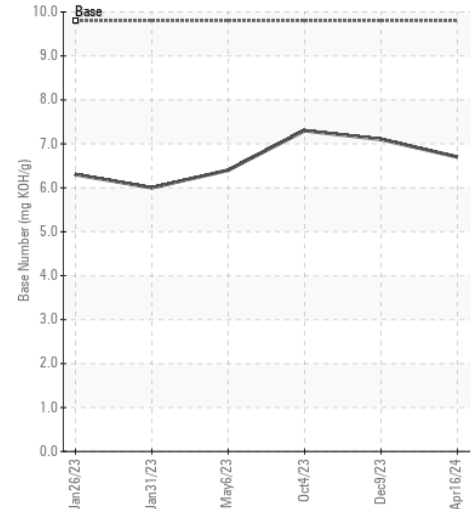
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114432
Lab Number : 06156765
Unique Number : 10992188
Test Package : FLEET

Received : 22 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 23 Apr 2024 - Wes Davis

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050

Contact: Saul Castillo
 saul.castillo@gflenv.com

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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F: