



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
711044
 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		GFL012992	GFL0108426	GFL0089501
Sample Date		Client Info		22 Apr 2024	29 Jan 2024	16 Aug 2023
Machine Age	hrs	Client Info		6309	5865	4880
Oil Age	hrs	Client Info		6309	5865	0
Filter Age	hrs	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

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	16	28	24
Chromium	ppm	ASTM D5185m	>4	2	2	3
Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	4	4	8
Lead	ppm	ASTM D5185m	>45	1	1	0
Copper	ppm	ASTM D5185m	>85	2	2	2
Tin	ppm	ASTM D5185m	>4	1	<1	<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.

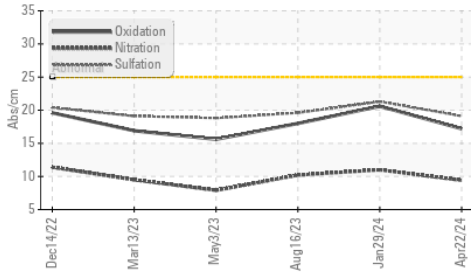
Silicon	ppm	ASTM D5185m	>30	4	3	4
Potassium	ppm	ASTM D5185m	>20	8	7	8
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.4	11.0	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	21.3	19.6
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

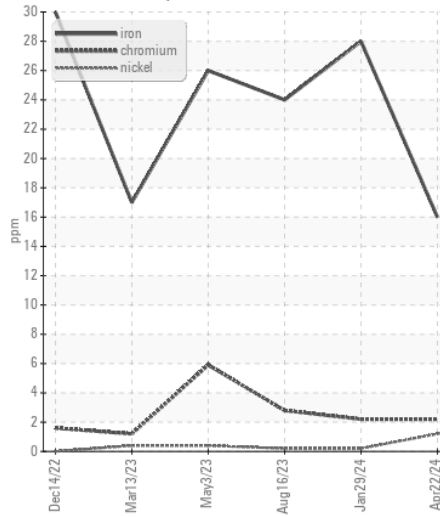
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	6	5
Boron	ppm	ASTM D5185m	0	1	0	1
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	59	49	65
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	887	841	1079
Calcium	ppm	ASTM D5185m	1070	1008	897	1175
Phosphorus	ppm	ASTM D5185m	1150	925	884	1160
Zinc	ppm	ASTM D5185m	1270	1164	1088	1436
Sulfur	ppm	ASTM D5185m	2060	3094	2485	4019
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	20.6	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.9	5.3	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	13.3	14.0

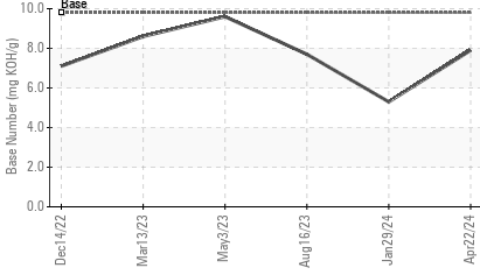
FT-IR (Direct Trend)



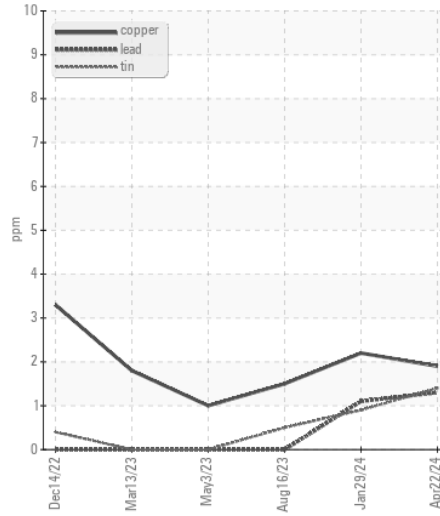
Ferrous Alloys



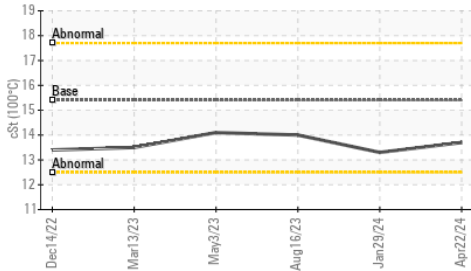
Base Number



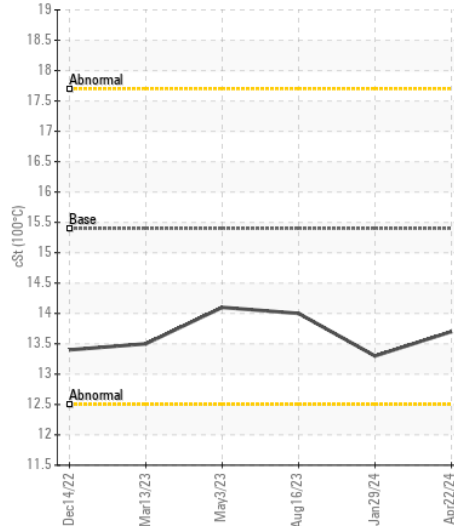
Non-ferrous Metals



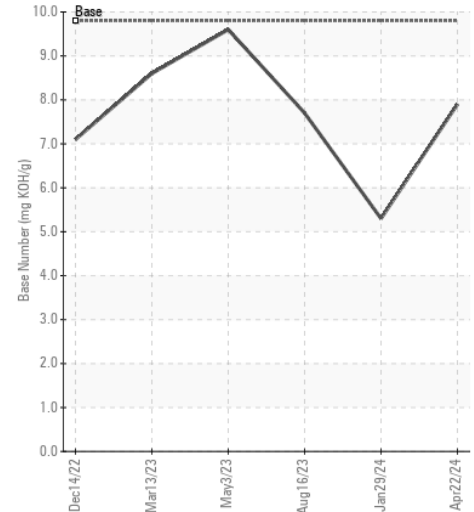
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0112992

Lab Number : 06160209

Unique Number : 10995632

Test Package : FLEET

Received : 25 Apr 2024

Tested : 26 Apr 2024

Diagnosed : 26 Apr 2024 - Don Baldrige

GFL Environmental - 918 - Hartland HC

630 E Industrial Drive

Hartland, WI

US 53029

Contact: David McCall

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T: (262)369-3069

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)