



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
724027-367
 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		GFL0118635	GFL0100208	GFL0100200
Sample Date		Client Info		15 Apr 2024	12 Feb 2024	29 Dec 2023
Machine Age	mls	Client Info		141371	139474	138195
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	23	41	42
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	2	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	5	9	8
Lead	ppm	ASTM D5185m	>40	1	1	<1
Copper	ppm	ASTM D5185m	>330	27	127	81
Tin	ppm	ASTM D5185m	>15	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	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.

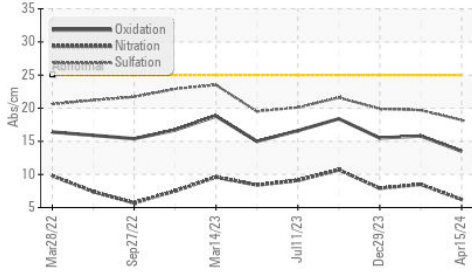
Silicon	ppm	ASTM D5185m	>25	13	20	22
Potassium	ppm	ASTM D5185m	>20	5	10	11
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.2	8.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	19.7	19.9
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

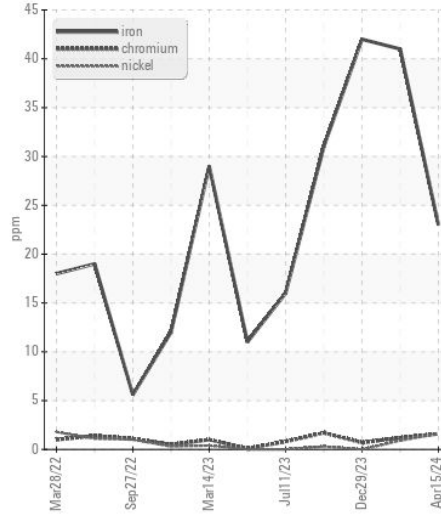
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		61	▲ 243	▲ 314
Boron	ppm	ASTM D5185m	0	82	7	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	78	60	62
Manganese	ppm	ASTM D5185m	0	1	1	<1
Magnesium	ppm	ASTM D5185m	1010	1090	924	1016
Calcium	ppm	ASTM D5185m	1070	1842	960	1050
Phosphorus	ppm	ASTM D5185m	1150	1487	927	1019
Zinc	ppm	ASTM D5185m	1270	1630	1226	1293
Sulfur	ppm	ASTM D5185m	2060	4790	2653	2970
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	15.8	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.1	8.6	8.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.0	14.1

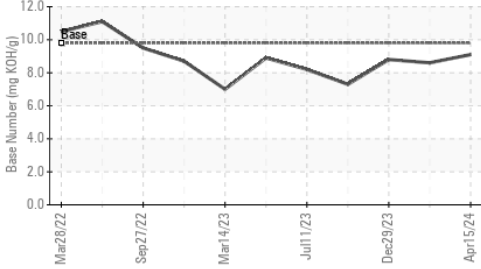
FT-IR (Direct Trend)



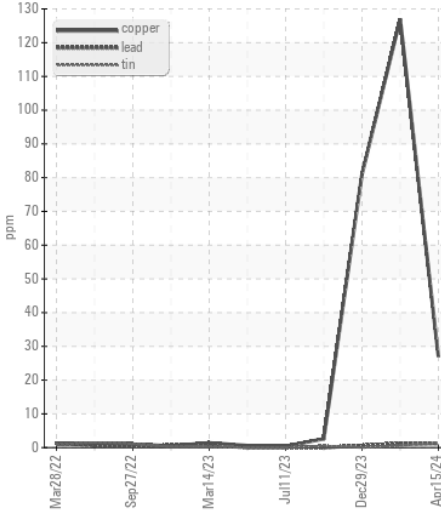
Ferrous Alloys



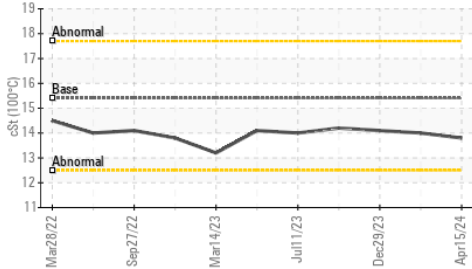
Base Number



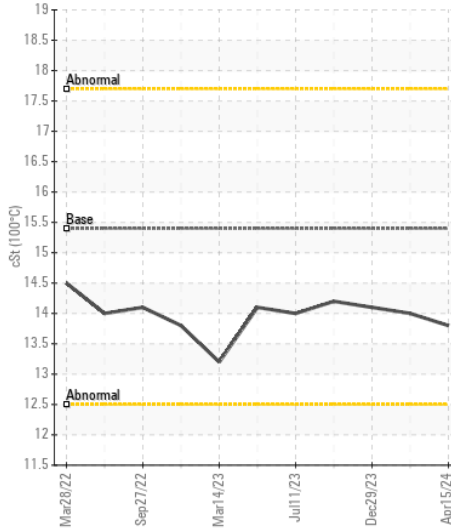
Non-ferrous Metals



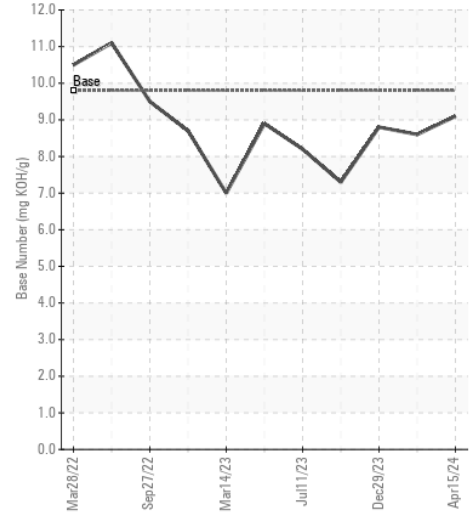
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0118635

Lab Number : 06152763

Unique Number : 10982841

Test Package : FLEET

Received : 18 Apr 2024

Tested : 18 Apr 2024

Diagnosed : 22 Apr 2024 - Don Baldrige

GFL Environmental - 166 - Phenix City

18 Old Brickyard Rd

Phenix City, AL

US 36869

Contact: EDWARD CASHMAN

ecashman@gflenv.com

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)