



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
712047
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		GFL0119872	GFL0103598	GFL0085287
Sample Date		Client Info		24 Jun 2024	11 Dec 2023	28 Aug 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		530	598	0
Filter Age	hrs	Client Info		530	598	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	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	15	11	30
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	4	2	▲ 8
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	<1	0
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	2	3	9
Tin	ppm	ASTM D5185m	>15	<1	<1	0
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.

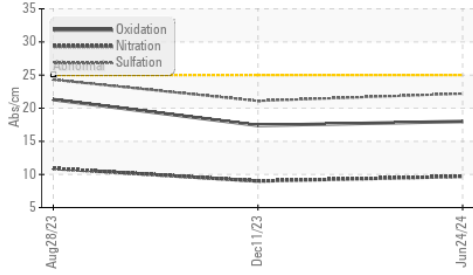
Silicon	ppm	ASTM D5185m	>25	5	4	6
Potassium	ppm	ASTM D5185m	>20	4	<1	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.6	0.5	0.9
Nitration	Abs/cm	*ASTM D7624	>20	9.7	9.0	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	21.1	24.3
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

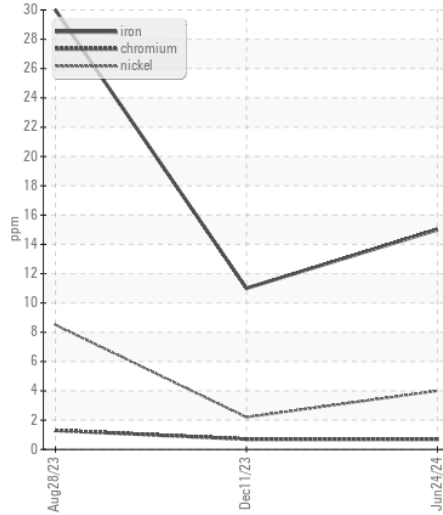
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	4	6
Boron	ppm	ASTM D5185m	0	4	1	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	62	59	55
Manganese	ppm	ASTM D5185m	0	1	<1	2
Magnesium	ppm	ASTM D5185m	1010	1042	959	895
Calcium	ppm	ASTM D5185m	1070	1138	1030	1165
Phosphorus	ppm	ASTM D5185m	1150	1087	889	937
Zinc	ppm	ASTM D5185m	1270	1384	1220	1196
Sulfur	ppm	ASTM D5185m	2060	3467	2737	2943
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	17.4	21.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.4	6.1	5.2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.8	13.7

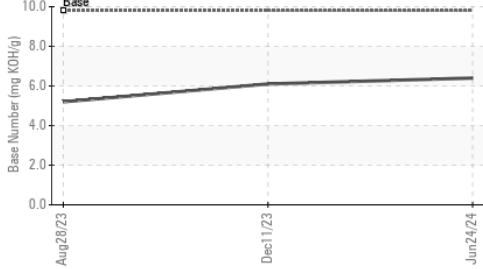
FT-IR (Direct Trend)



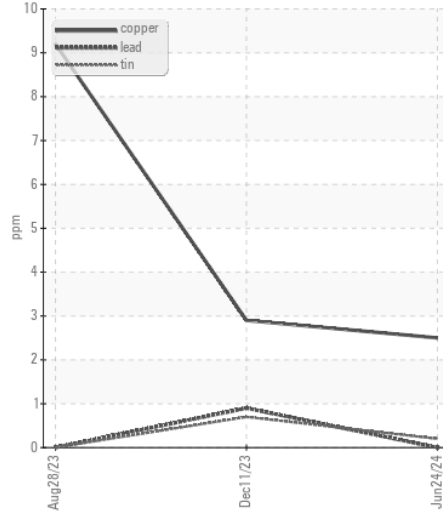
Ferrous Alloys



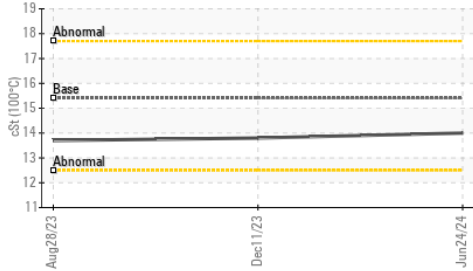
Base Number



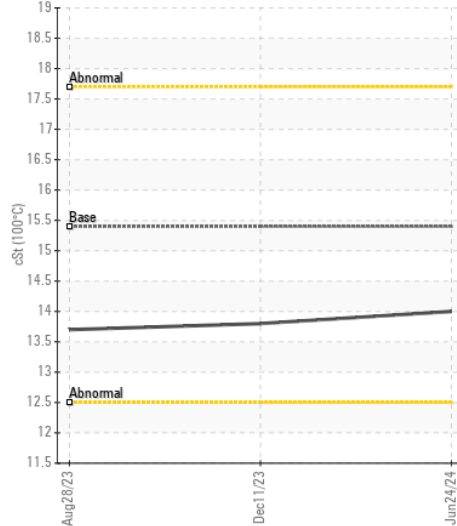
Non-ferrous Metals



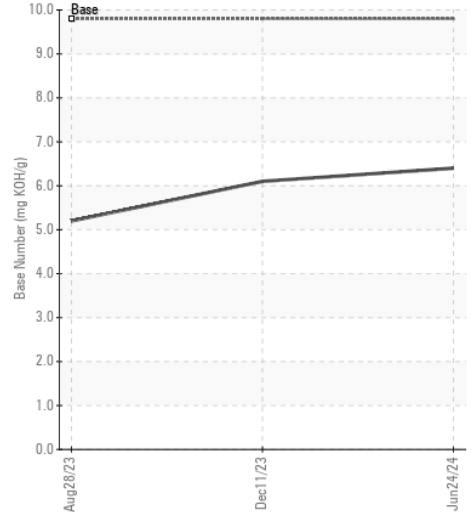
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0119872
Lab Number : 06223045
Unique Number : 11101242
Test Package : FLEET

Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 28 Jun 2024 - Wes Davis

GFL Environmental - 958 - Tri County HC Morton
 1090 W. Jefferson St.
 Morton, IL
 US 61550
 Contact: Bryan Link
 blink@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: