



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(BD17483)
Machine Id
912081
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample
Comment: Sample only, was a little over full)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0116219	GFL0116281	GFL0094875
Sample Date		Client Info		02 Jul 2024	18 Apr 2024	04 Jan 2024
Machine Age	hrs	Client Info		6257	5686	4980
Oil Age	hrs	Client Info		5551	155	591
Filter Age	hrs	Client Info		145	155	591
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	3	10	9
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	1	1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	1	3	1
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	0	4	2
Tin	ppm	ASTM D5185m	>15	0	2	1
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.

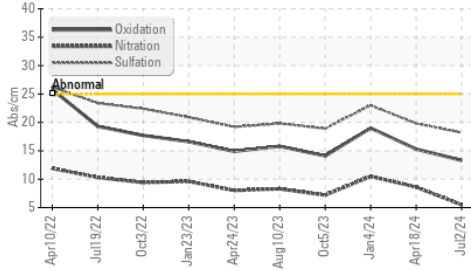
Silicon	ppm	ASTM D5185m	>25	5	4	4
Potassium	ppm	ASTM D5185m	>20	1	3	<1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.7	0.9
Nitration	Abs/cm	*ASTM D7624	>20	5.5	8.6	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	19.8	23.0
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

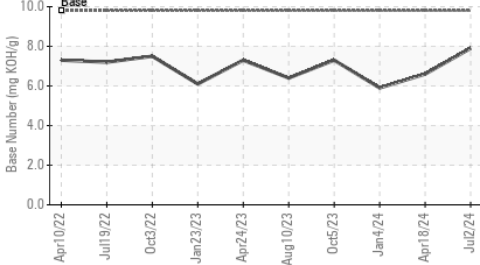
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	4
Boron	ppm	ASTM D5185m	0	15	2	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	56	62	59
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	932	883	934
Calcium	ppm	ASTM D5185m	1070	1193	1057	1064
Phosphorus	ppm	ASTM D5185m	1150	1055	1010	1061
Zinc	ppm	ASTM D5185m	1270	1313	1186	1289
Sulfur	ppm	ASTM D5185m	2060	3736	2879	2813
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	15.3	19.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.9	6.6	5.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.2	13.1

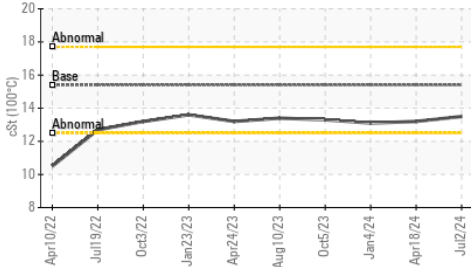
FT-IR (Direct Trend)



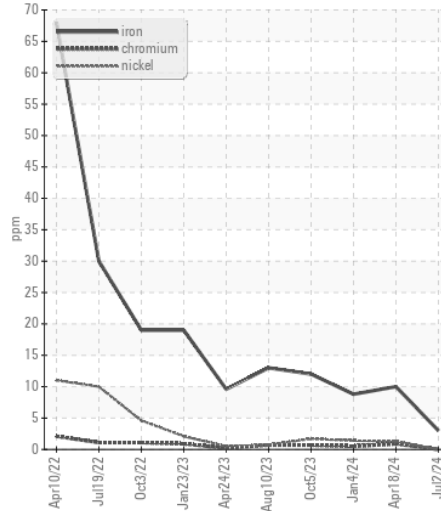
Base Number



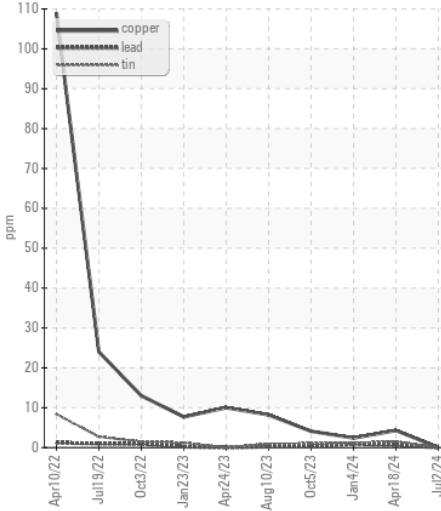
Viscosity @ 100°C



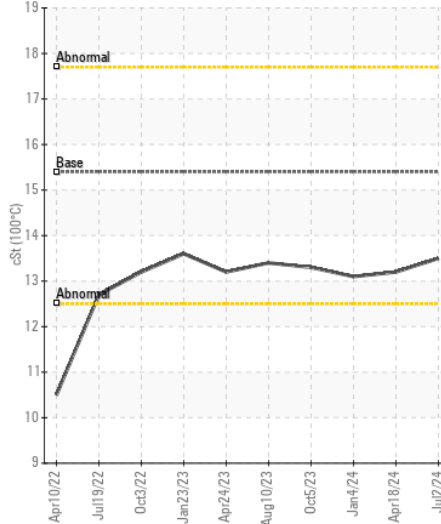
Ferrous Alloys



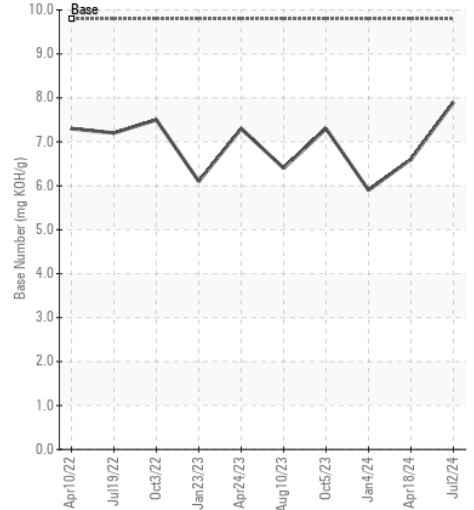
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116219
Lab Number : 06229574
Unique Number : 11113067
Test Package : FLEET

Received : 05 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Jonathan Hester

GFL Environmental - 625 - Harrison Hauling
 2480 S Clare Ave
 Clare, MI
 US 48617
 Contact: Glenda Standen
 gstanden@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)

T:
F: