



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(YA141217)
Machine Id
2700
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0119630	GFL0110410	GFL0092337
Sample Date		Client Info		01 Jul 2024	02 Apr 2024	05 Dec 2023
Machine Age	mls	Client Info		426196	0	17566
Oil Age	mls	Client Info		0	0	20496
Filter Age	mls	Client Info		0	0	450
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	10	11	10
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	9	6	7
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	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.

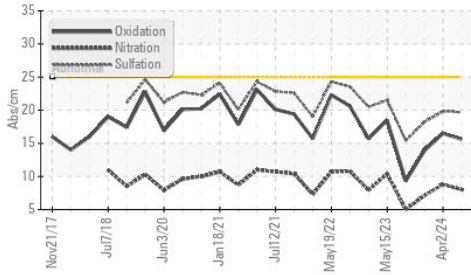
Silicon	ppm	ASTM D5185m	>25	11	23	60
Potassium	ppm	ASTM D5185m	>20	22	15	16
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	8.8	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	19.8	18.2
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

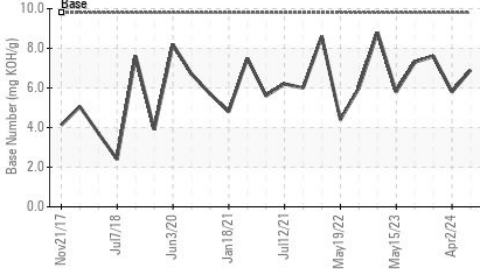
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	5	5
Boron	ppm	ASTM D5185m	0	4	5	9
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	63	65	56
Manganese	ppm	ASTM D5185m	0	<1	0	0
Magnesium	ppm	ASTM D5185m	1010	898	983	819
Calcium	ppm	ASTM D5185m	1070	1110	1190	1236
Phosphorus	ppm	ASTM D5185m	1150	993	1032	976
Zinc	ppm	ASTM D5185m	1270	1186	1309	1226
Sulfur	ppm	ASTM D5185m	2060	2528	3507	3002
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	16.5	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.9	5.8	7.6
Visc @ 100°C	cSt	ASTM D445	15.4	12.9	12.7	12.8

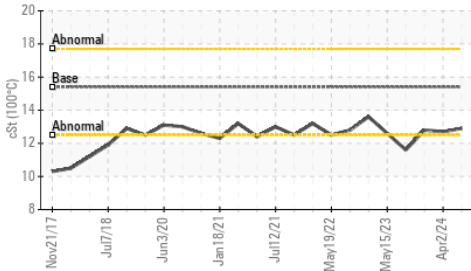
FT-IR (Direct Trend)



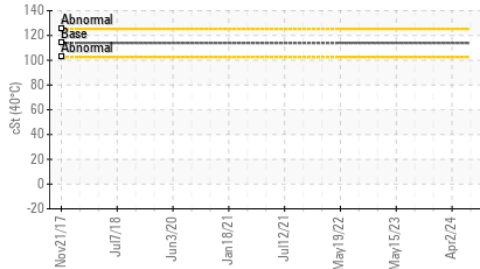
Base Number



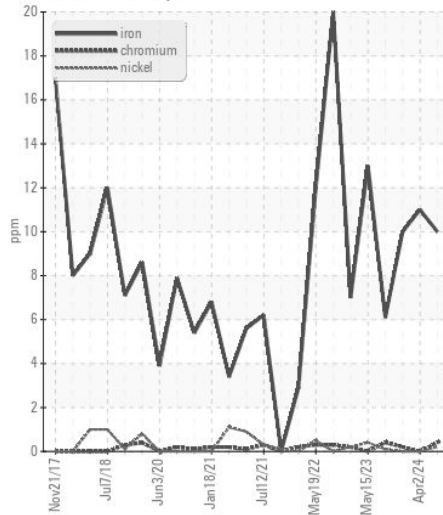
Viscosity @ 100°C



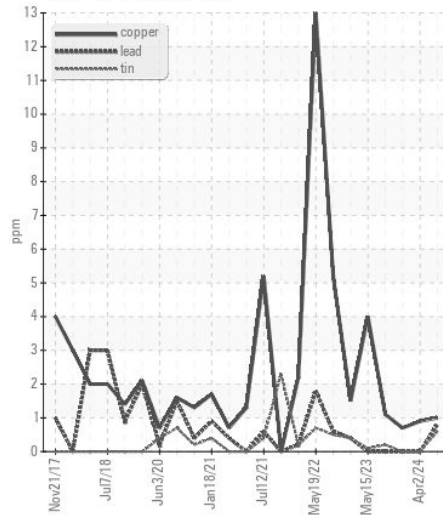
Viscosity @ 40°C



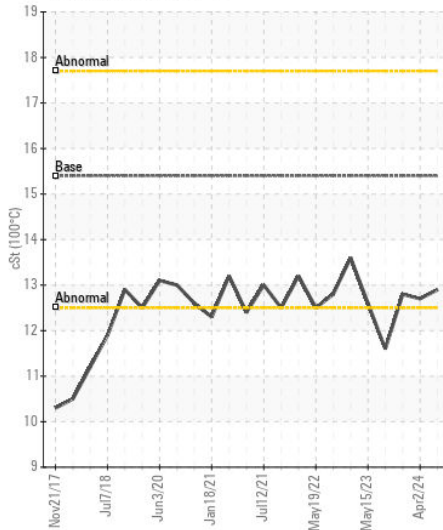
Ferrous Alloys



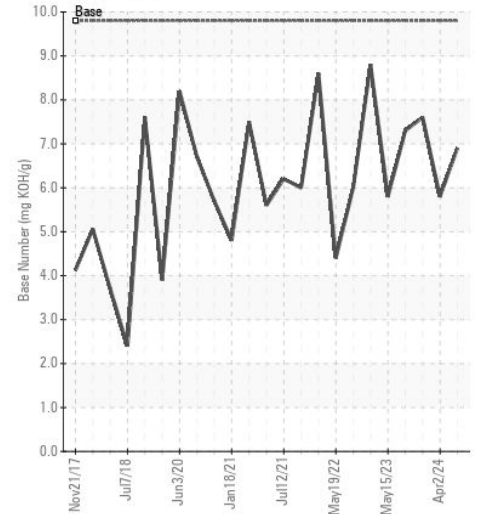
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0119630

Lab Number : 06226081

Unique Number : 11109574

Test Package : FLEET (Additional Tests: KV40)

Received : 02 Jul 2024

Tested : 05 Jul 2024

Diagnosed : 05 Jul 2024 - Jonathan Hester

GFL Environmental - 112 - New Bern

705 Airport Road

New Bern, NC

US 28560

Contact: Marquis Williams

marquis.williams@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: