



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(YA146574)
Machine Id
10905
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (42 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0094491	GFL0072414	GFL0048095
Sample Date		Client Info		08 Jul 2024	07 Sep 2023	30 Aug 2022
Machine Age	hrs	Client Info		50221	50221	12888
Oil Age	hrs	Client Info		50221	50221	0
Filter Age	hrs	Client Info		0	0	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	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	8	24	24
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>15	4	0	2
Lead	ppm	ASTM D5185m	>25	0	0	<1
Copper	ppm	ASTM D5185m	>100	7	1	2
Tin	ppm	ASTM D5185m	>4	0	<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.

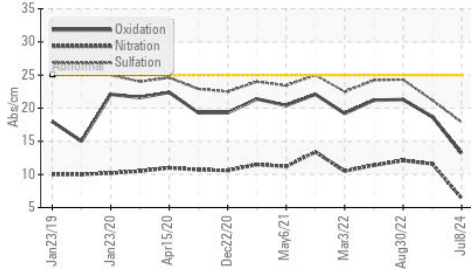
Silicon	ppm	ASTM D5185m	>25	4	6	14
Potassium	ppm	ASTM D5185m	>20	3	1	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.3	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	6.4	11.6	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	21.2	24.3
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

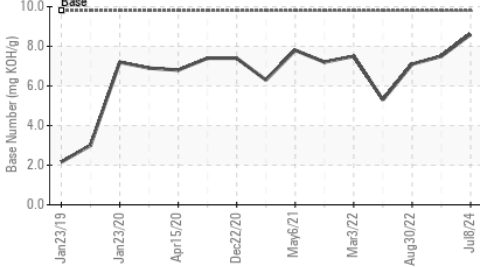
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	10	8
Boron	ppm	ASTM D5185m	0	3	2	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	60	61	58
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	869	1036	829
Calcium	ppm	ASTM D5185m	1070	1101	1355	1017
Phosphorus	ppm	ASTM D5185m	1150	951	1059	911
Zinc	ppm	ASTM D5185m	1270	1141	1337	1153
Sulfur	ppm	ASTM D5185m	2060	2493	3736	2761
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	18.7	21.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.6	7.5	7.1
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	14.1	14.1

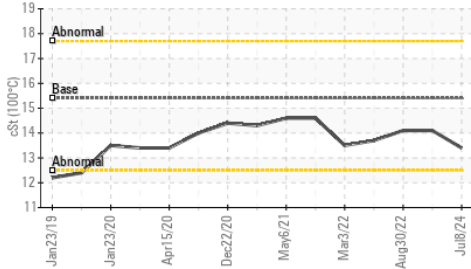
FT-IR (Direct Trend)



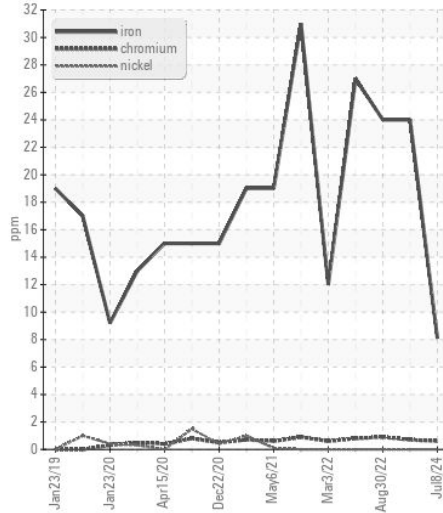
Base Number



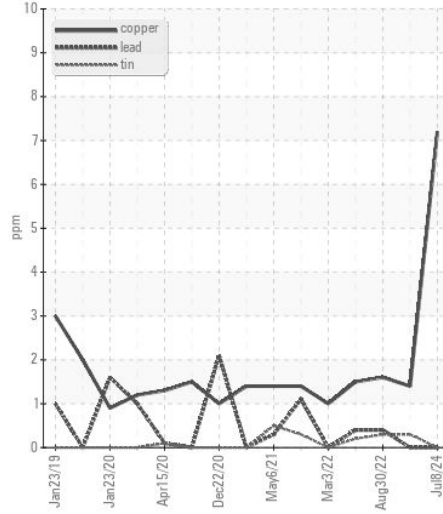
Viscosity @ 100°C



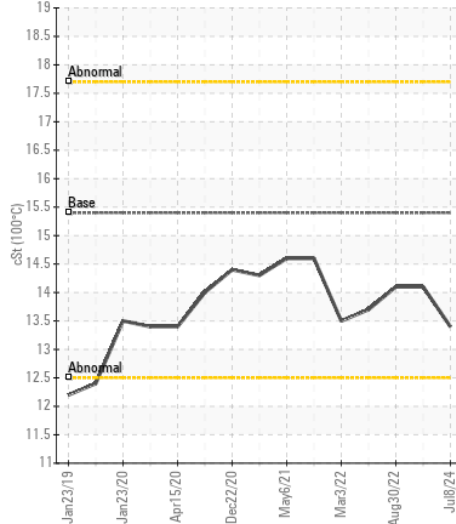
Ferrous Alloys



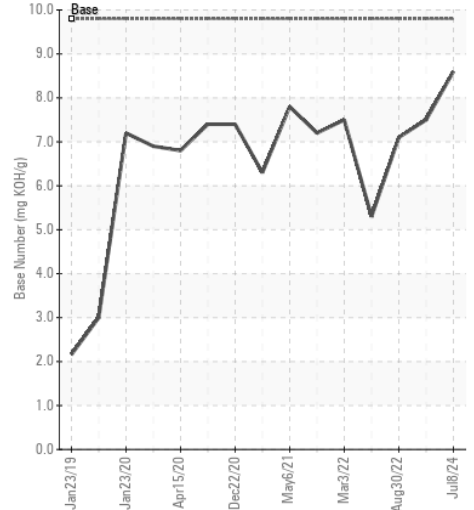
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0094491
 Lab Number : 06234610
 Unique Number : 11123444
 Test Package : FLEET

Received : 12 Jul 2024
 Tested : 15 Jul 2024
 Diagnosed : 15 Jul 2024 - Wes Davis

GFL Environmental - 119 - Williamston Hauling/TriEast
 1805 West Main Street
 Williamston, NC
 US 27892

Contact: Spencer Ligon
 spencer.ligon@gflenv.com
 T: (800)207-6618

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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