



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(MC13051)
Machine Id
812104
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (38 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0120612	GFL0066143	GFL0060496
Sample Date		Client Info		06 May 2024	31 Oct 2023	16 Aug 2023
Machine Age	hrs	Client Info		0	3545	3011
Oil Age	hrs	Client Info		0	500	0
Filter Age	hrs	Client Info		0	500	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	9	17	8
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>5	1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	2	0	2
Tin	ppm	ASTM D5185m	>15	<1	0	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

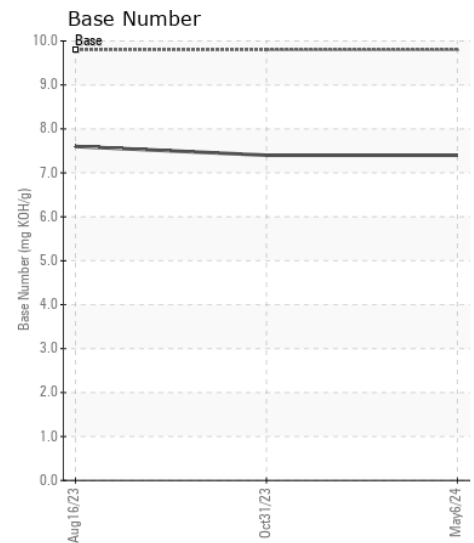
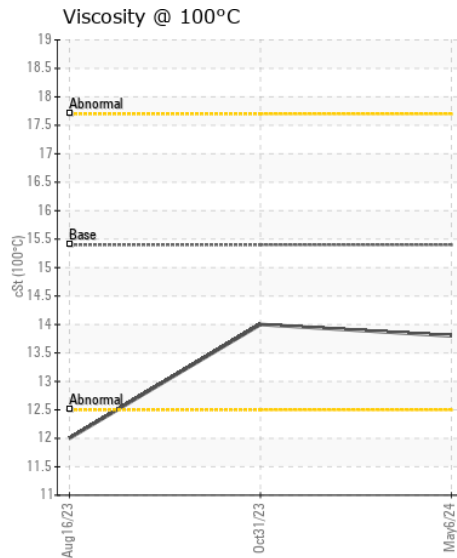
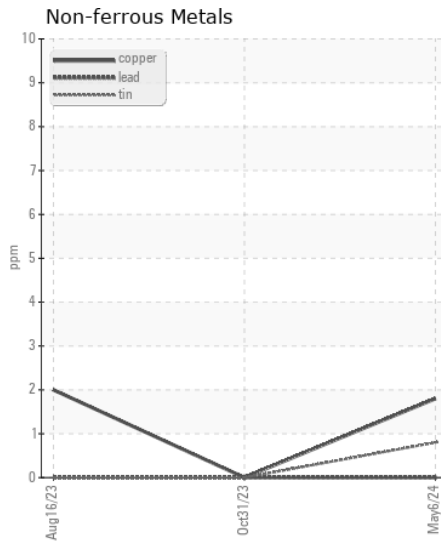
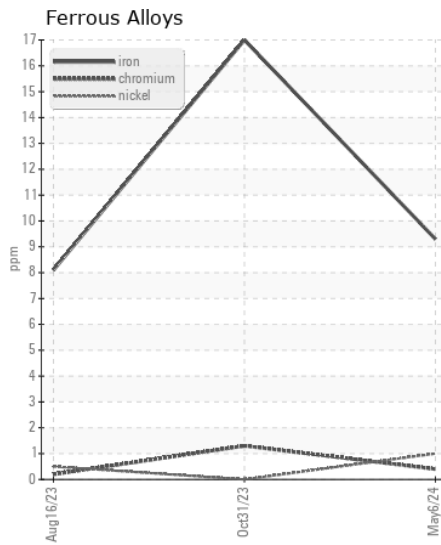
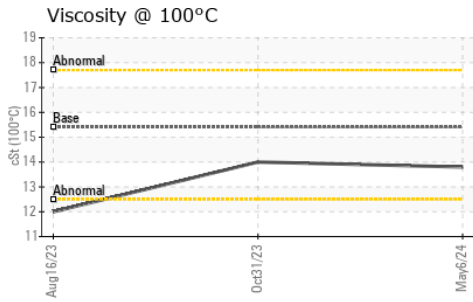
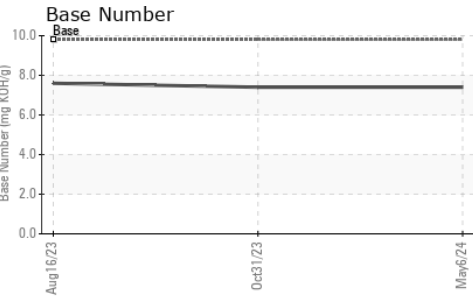
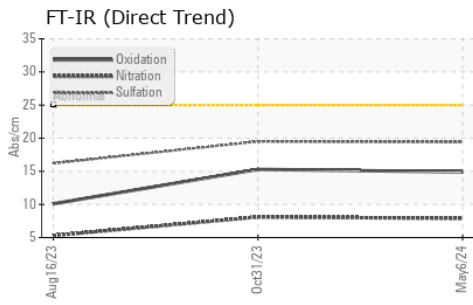
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	0	6
Potassium	ppm	ASTM D5185m	>20	2	0	0
Fuel		WC Method	>3.0	<1.0	<1.0	0.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.6	0.9	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.9	8.1	5.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	19.5	16.2
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		3	0	<1
Boron	ppm	ASTM D5185m	0	2	0	41
Barium	ppm	ASTM D5185m	0	0	4	0
Molybdenum	ppm	ASTM D5185m	60	56	54	18
Manganese	ppm	ASTM D5185m	0	0	0	<1
Magnesium	ppm	ASTM D5185m	1010	914	833	95
Calcium	ppm	ASTM D5185m	1070	1029	1086	2414
Phosphorus	ppm	ASTM D5185m	1150	1001	932	1025
Zinc	ppm	ASTM D5185m	1270	1212	1158	1208
Sulfur	ppm	ASTM D5185m	2060	3050	2812	4655
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	15.3	10.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.4	7.4	7.6
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.0	12.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0120612
Lab Number : 06178530
Unique Number : 11029856
Test Package : FLEET

Received : 14 May 2024
Tested : 15 May 2024
Diagnosed : 15 May 2024 - Wes Davis

GFL Environmental - 904A - Thorpe
 N14985 Tieman Ave
 Thorp, WI
 US 54771
 Contact: Andy Kane
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 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)