



Area
(83J 44U)
Machine Id
913147
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		GFL0118804	GFL0114173	GFL0114125
Sample Date		Client Info		17 Apr 2024	26 Mar 2024	05 Mar 2024
Machine Age	hrs	Client Info		3243	3103	2970
Oil Age	hrs	Client Info		2970	0	1857
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				ATTENTION	ATTENTION	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	6	2	15
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	3	2	▲ 11
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	<1	<1
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	<1	5
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

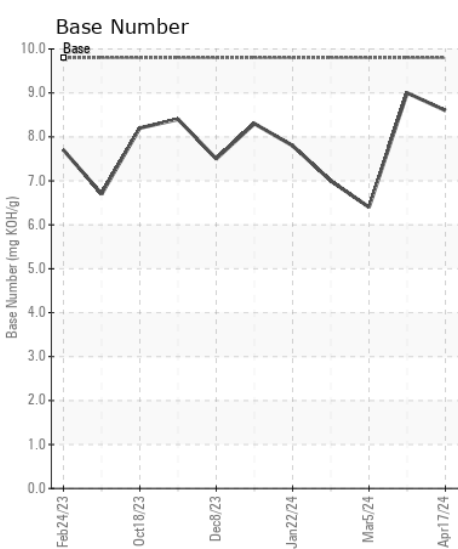
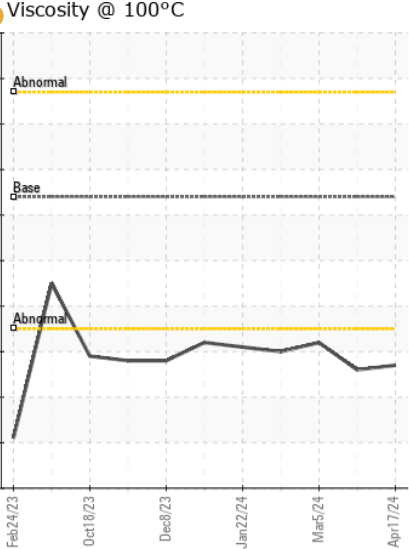
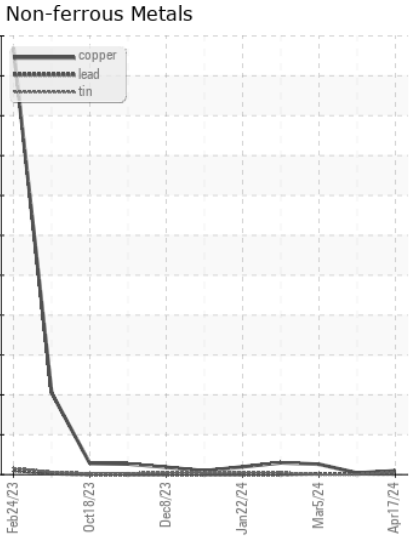
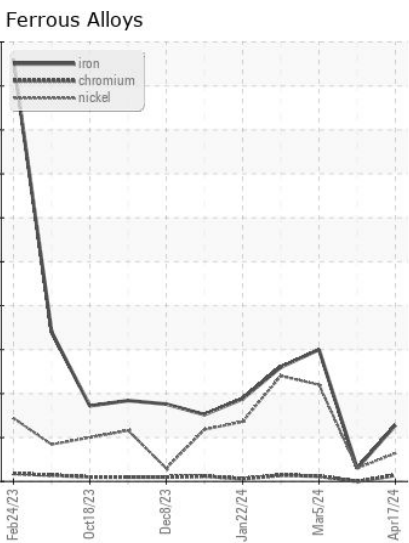
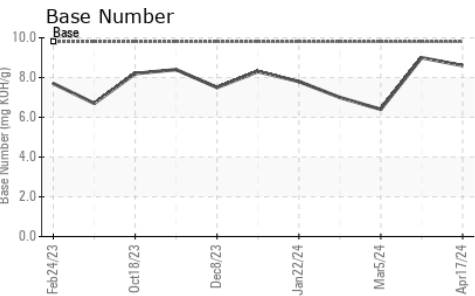
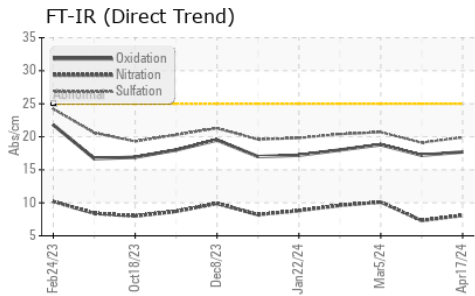
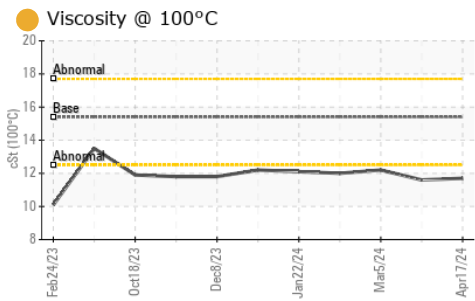
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	6
Potassium	ppm	ASTM D5185m	>20	2	<1	2
Fuel		WC Method	>3.0	<1.0	0.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.1	7.3	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	19.1	20.7
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		3	4	7
Boron	ppm	ASTM D5185m	0	40	57	15
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	58	55	58
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	1038	1142	1130
Calcium	ppm	ASTM D5185m	1070	813	872	913
Phosphorus	ppm	ASTM D5185m	1150	1058	960	1032
Zinc	ppm	ASTM D5185m	1270	1199	1299	1296
Sulfur	ppm	ASTM D5185m	2060	3392	3975	3674
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	17.2	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.6	9.0	6.4
Visc @ 100°C	cSt	ASTM D445	15.4	11.7	11.6	12.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0118804 **Received** : 22 Apr 2024
Lab Number : 06156725 **Tested** : 23 Apr 2024
Unique Number : 10992148 **Diagnosed** : 24 Apr 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@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: