



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
227116
 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		GFL0106939	GFL0098803	GFL0073238
Sample Date		Client Info		14 Jun 2024	20 Oct 2023	07 Jun 2023
Machine Age	hrs	Client Info		645	475	417
Oil Age	hrs	Client Info		106	44	300
Filter Age	hrs	Client Info		106	44	300
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	28	9	10
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	8	4	4
Lead	ppm	ASTM D5185m	>40	<1	0	2
Copper	ppm	ASTM D5185m	>330	5	3	4
Tin	ppm	ASTM D5185m	>15	<1	0	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

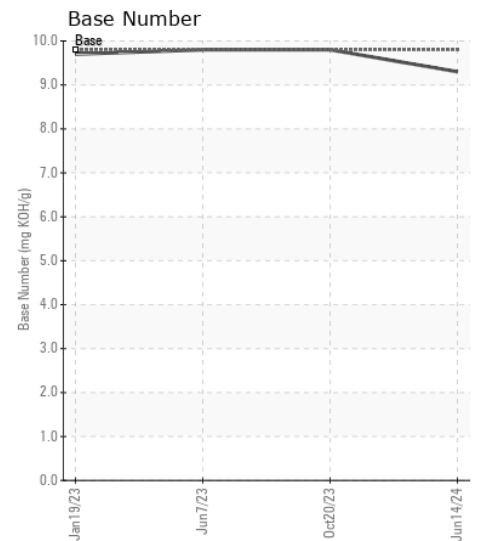
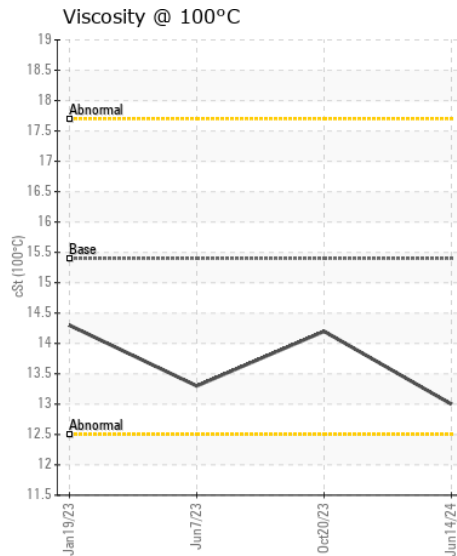
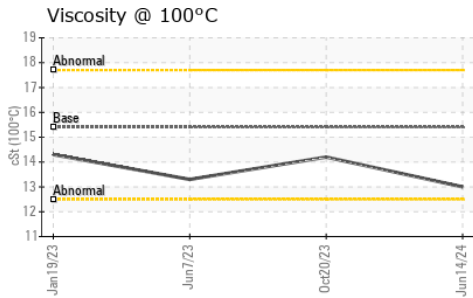
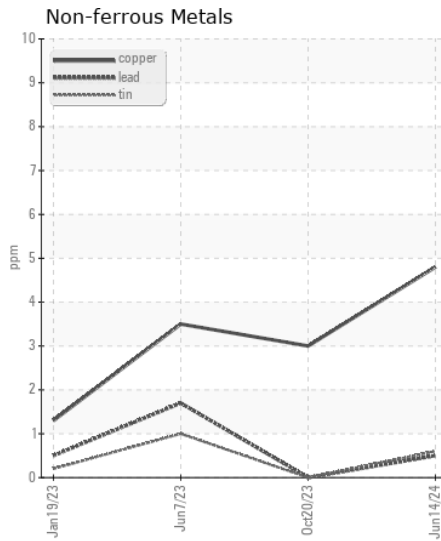
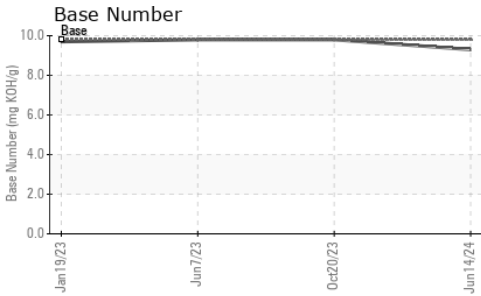
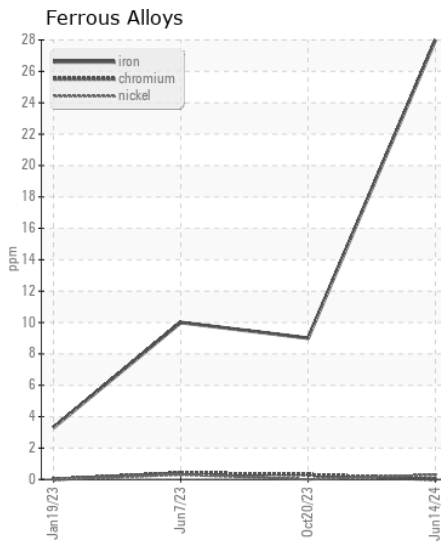
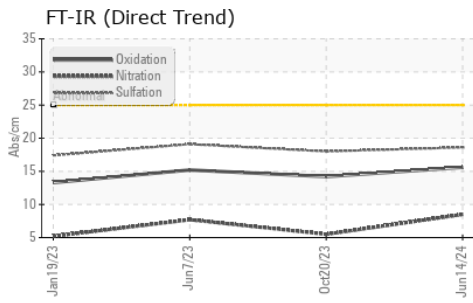
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	4
Potassium	ppm	ASTM D5185m	>20	6	3	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.5	5.5	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	18.0	19.1
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		4	17	2
Boron	ppm	ASTM D5185m	0	2	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	60	61	59
Manganese	ppm	ASTM D5185m	0	1	0	<1
Magnesium	ppm	ASTM D5185m	1010	994	926	1003
Calcium	ppm	ASTM D5185m	1070	1100	1038	1157
Phosphorus	ppm	ASTM D5185m	1150	1111	1021	1031
Zinc	ppm	ASTM D5185m	1270	1310	1214	1318
Sulfur	ppm	ASTM D5185m	2060	3761	3384	3885
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	14.2	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.3	9.8	9.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	14.2	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0106939
Lab Number : 06215429
Unique Number : 11088293
Test Package : FLEET

Received : 20 Jun 2024
Tested : 21 Jun 2024
Diagnosed : 21 Jun 2024 - Wes Davis

GFL Environmental - 097 - Knoxville Hauling
 1901 Sutherland Ave
 Knoxville, TN
 US 37921
 Contact: Doug Weeden
 dweeden@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: