



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
427117
 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		GFL0116017	GFL0092883	GFL0097460
Sample Date		Client Info		16 May 2024	03 Jan 2024	31 Oct 2023
Machine Age	hrs	Client Info		12136	11561	11409
Oil Age	hrs	Client Info		10018	10018	10018
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	>110	27	6	26
Chromium	ppm	ASTM D5185m	>4	2	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	1	0	0
Aluminum	ppm	ASTM D5185m	>25	6	1	6
Lead	ppm	ASTM D5185m	>45	5	2	8
Copper	ppm	ASTM D5185m	>85	2	0	1
Tin	ppm	ASTM D5185m	>4	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

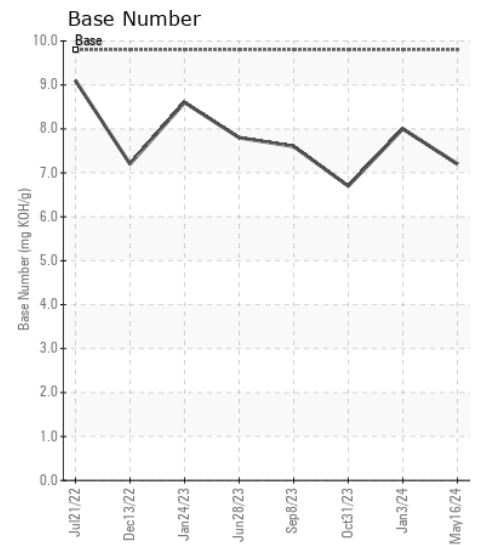
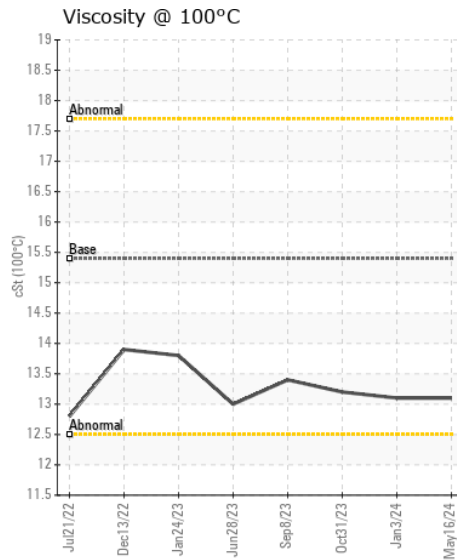
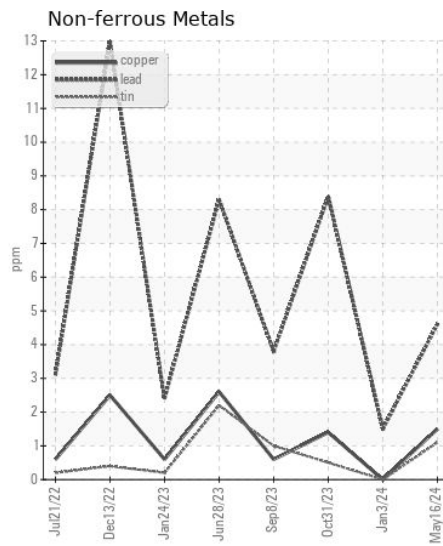
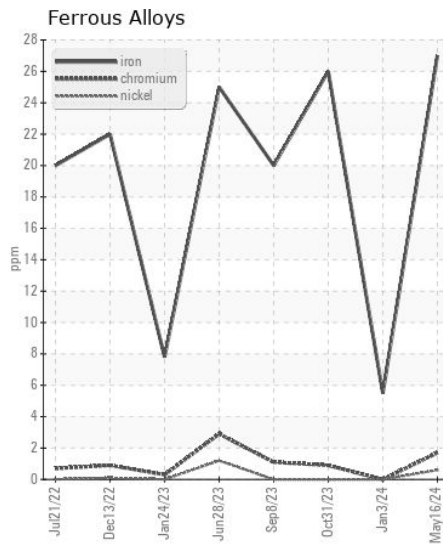
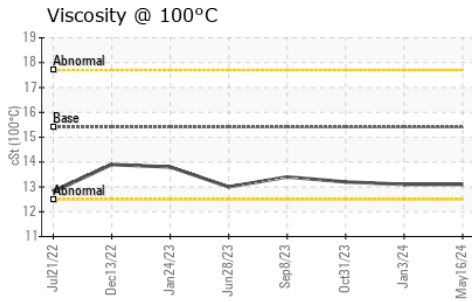
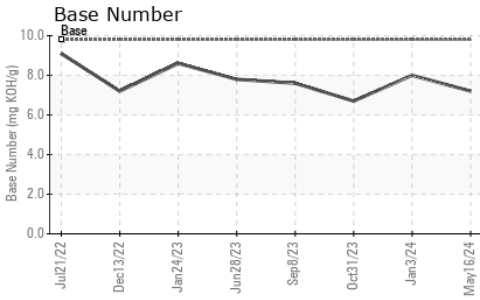
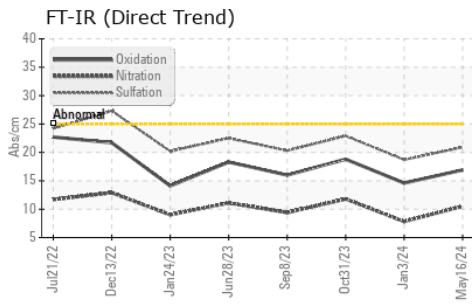
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	7	2	6
Potassium	ppm	ASTM D5185m	>20	7	4	15
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	0.7	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.5	7.8	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	18.7	22.9
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		7	2	6
Boron	ppm	ASTM D5185m	0	6	6	6
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	60	86	56	64
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	1304	901	965
Calcium	ppm	ASTM D5185m	1070	1457	1034	1223
Phosphorus	ppm	ASTM D5185m	1150	1404	944	1107
Zinc	ppm	ASTM D5185m	1270	1685	1247	1283
Sulfur	ppm	ASTM D5185m	2060	4160	2886	3017
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	14.6	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.2	8.0	6.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.1	13.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116017
Lab Number : 06191883
Unique Number : 11048635
Test Package : FLEET
Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 30 May 2024 - Sean Felton

GFL Environmental - 641 - Alpena
 1241 KING SETTLEMENT RD
 ALPENA, MI
 US 49707

Contact: DYLAN TOLAN
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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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