



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
412008
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0091881	GFL0112775	GFL0112728
Sample Date		Client Info		02 Jul 2024	02 Apr 2024	23 Feb 2024
Machine Age	hrs	Client Info		4016	3483	3003
Oil Age	hrs	Client Info		3483	2981	2981
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Valve wear is indicated.

Iron	ppm	ASTM D5185m	>120	11	8	3
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>5	▲ 11	3	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	1	2	2
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	2	2	3
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

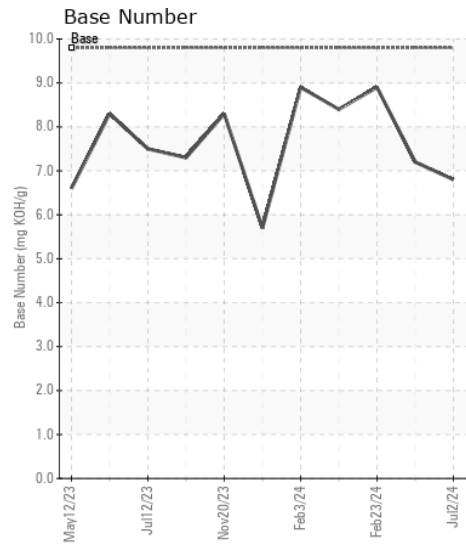
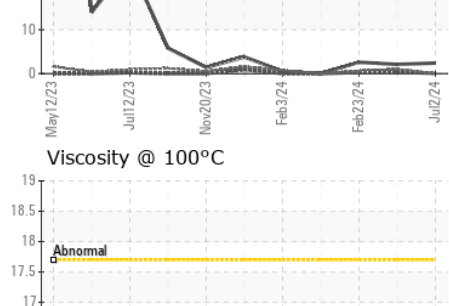
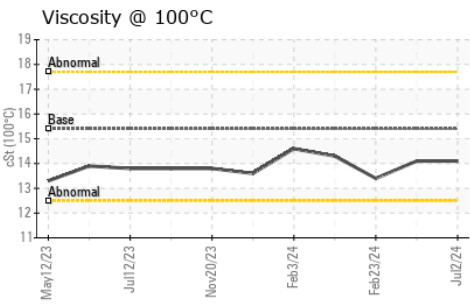
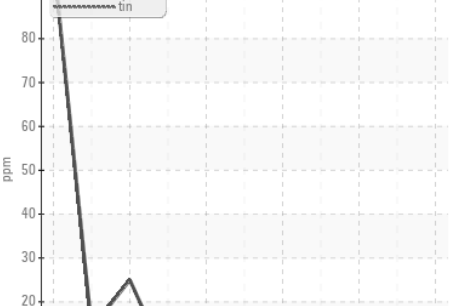
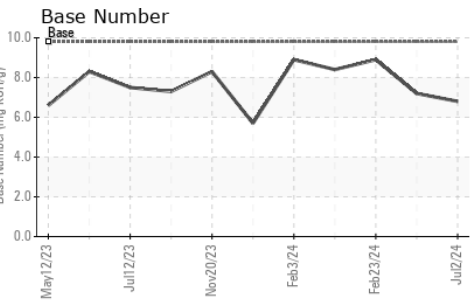
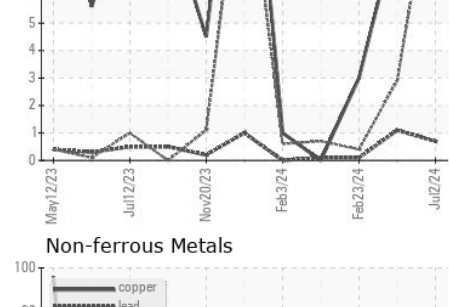
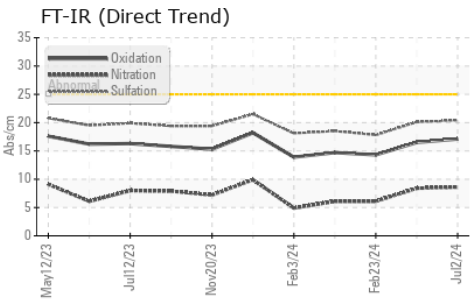
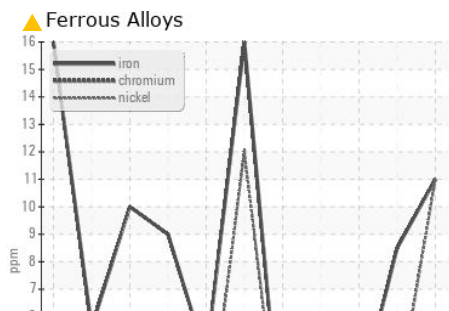
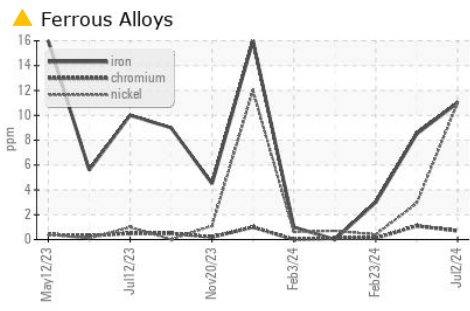
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	8
Potassium	ppm	ASTM D5185m	>20	1	2	23
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	>4	0.3	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.6	8.4	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	20.1	17.8
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	5	4
Boron	ppm	ASTM D5185m	0	2	<1	3
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	57	59	58
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	965	973	909
Calcium	ppm	ASTM D5185m	1070	1136	1061	989
Phosphorus	ppm	ASTM D5185m	1150	1007	1064	1042
Zinc	ppm	ASTM D5185m	1270	1238	1248	1241
Sulfur	ppm	ASTM D5185m	2060	3310	3043	3085
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	16.5	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.8	7.2	8.9
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.1	13.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0091881 **Received** : 05 Jul 2024
Lab Number : 06229470 **Tested** : 09 Jul 2024
Unique Number : 11112963 **Diagnosed** : 09 Jul 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 654 - Richmond Hauling
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 Chester, VA
 US 23831
 Contact: Jimmy Mayes
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 T:
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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)