



Machine Id
712030
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122496	GFL0108796	GFL0108782
Sample Date		Client Info		22 May 2024	18 Mar 2024	08 Mar 2024
Machine Age	hrs	Client Info		8231	7636	7520
Oil Age	hrs	Client Info		7636	7520	6773
Filter Age	hrs	Client Info		7636	7520	6773
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

An increase in the iron level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	▲ 73	7	7
Chromium	ppm	ASTM D5185m	>20	3	0	0
Nickel	ppm	ASTM D5185m	>2	2	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	2	2
Lead	ppm	ASTM D5185m	>40	13	0	0
Copper	ppm	ASTM D5185m	>330	18	0	0
Tin	ppm	ASTM D5185m	>15	2	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

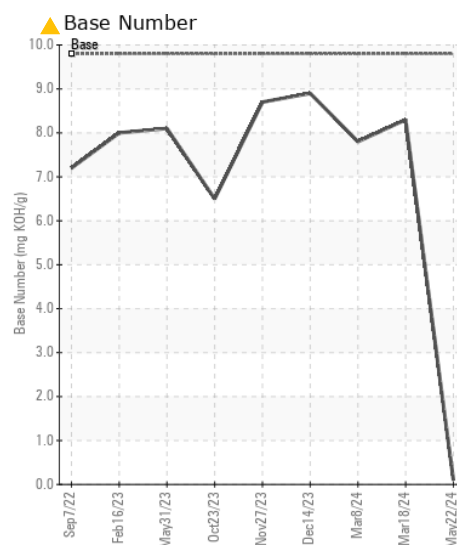
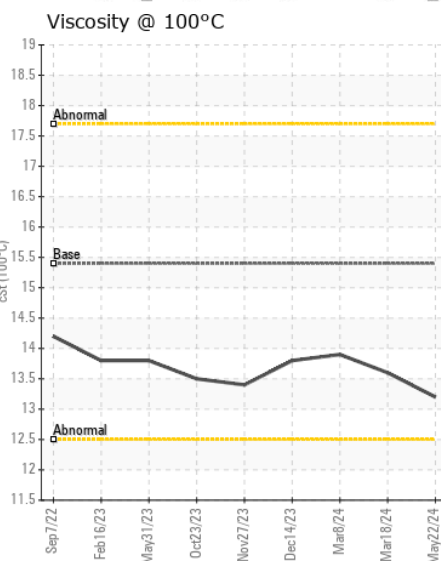
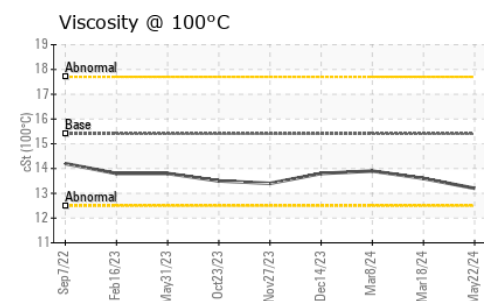
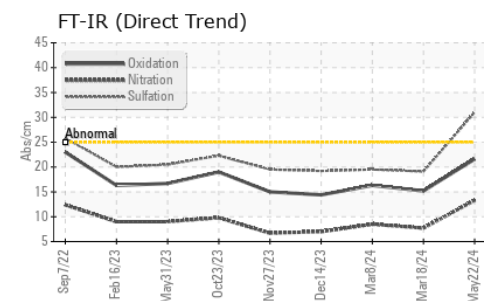
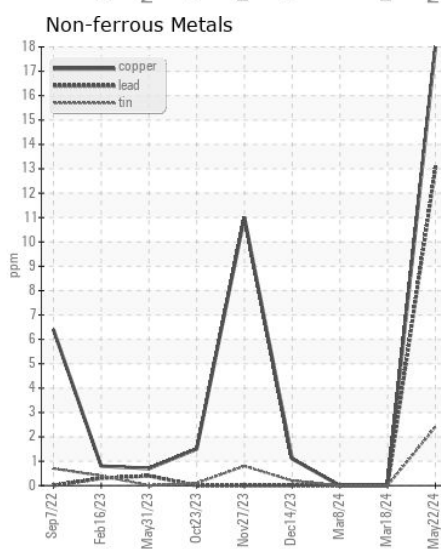
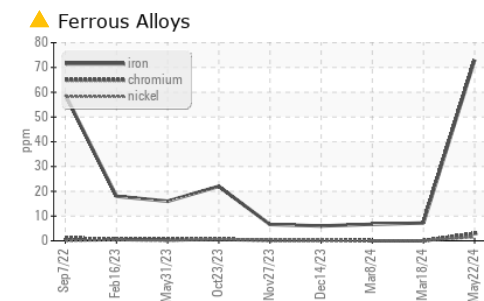
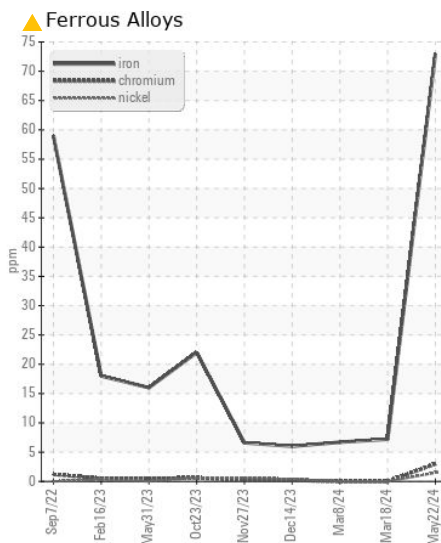
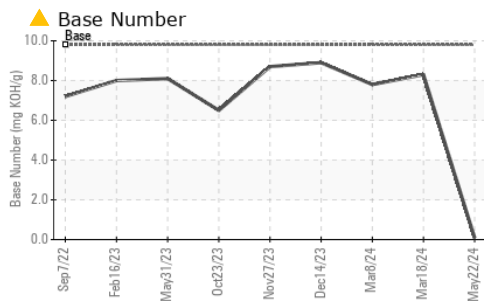
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	2	2
Potassium	ppm	ASTM D5185m	>20	3	1	0
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	>6	5	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	13.3	7.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.0	19.1	19.5
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 level is low. The oil is no longer serviceable.

Sodium	ppm	ASTM D5185m		4	2	4
Boron	ppm	ASTM D5185m	0	6	2	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	46	56	59
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	685	960	927
Calcium	ppm	ASTM D5185m	1070	839	1095	1076
Phosphorus	ppm	ASTM D5185m	1150	748	1048	1065
Zinc	ppm	ASTM D5185m	1270	1044	1314	1266
Sulfur	ppm	ASTM D5185m	2060	2260	3640	3364
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.6	15.2	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 0.1	8.3	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.6	13.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122496 **Received** : 24 May 2024
Lab Number : 06190327 **Tested** : 29 May 2024
Unique Number : 11047079 **Diagnosed** : 29 May 2024 - Don Baldrige
Test Package : FLEET

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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)