



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Machine Id
925036-142557
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 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		GFL0110810	GFL0073221	GFL0088465
Sample Date		Client Info		21 Feb 2024	24 Oct 2023	12 Jul 2023
Machine Age	hrs	Client Info		22016	21453	20827
Oil Age	hrs	Client Info		600	650	650
Filter Age	hrs	Client Info		600	650	650
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	23	5	11
Chromium	ppm	ASTM D5185m	>20	2	<1	1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	1	2
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	2	2	3
Tin	ppm	ASTM D5185m	>15	0	0	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

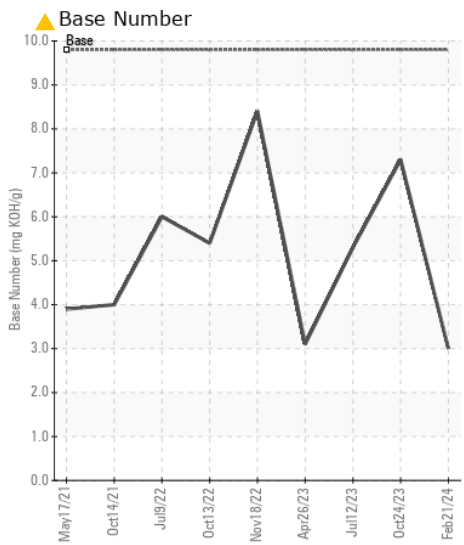
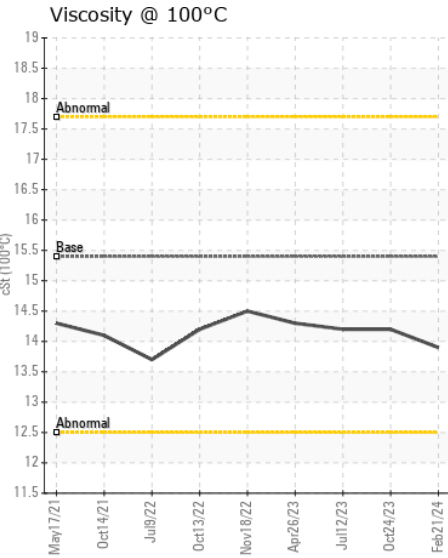
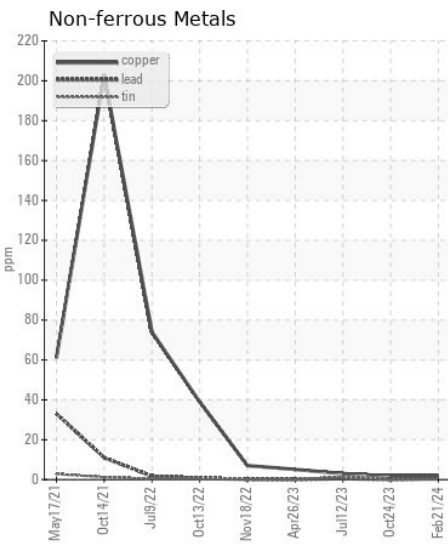
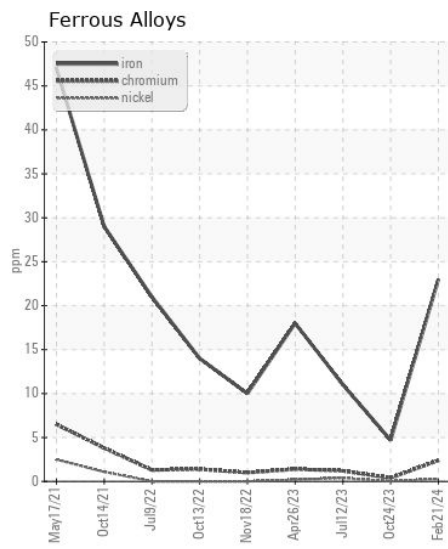
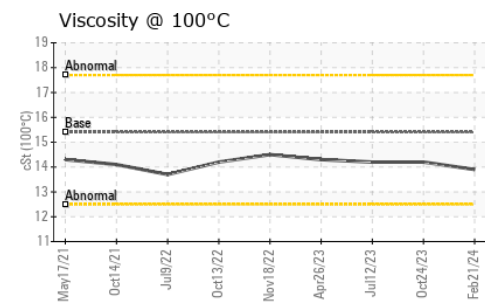
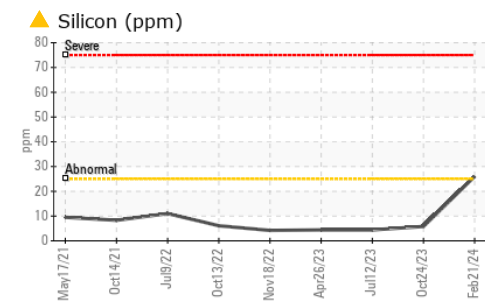
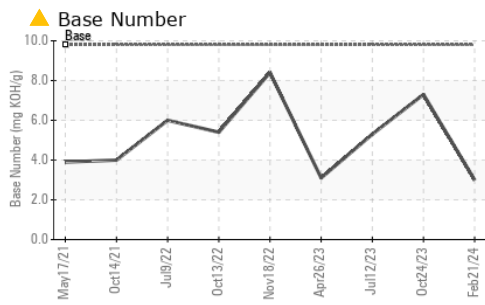
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>25	▲ 26	6	4
Potassium	ppm	ASTM D5185m	>20	0	<1	2
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	0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.7	6.8	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	18.3	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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		12	2	6
Boron	ppm	ASTM D5185m	0	9	47	34
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	56	55	61
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	489	502	575
Calcium	ppm	ASTM D5185m	1070	1516	1423	1528
Phosphorus	ppm	ASTM D5185m	1150	629	682	717
Zinc	ppm	ASTM D5185m	1270	839	883	973
Sulfur	ppm	ASTM D5185m	2060	2026	2220	2911
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	14.3	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 3.0	7.3	5.3
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.2	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110810 **Received** : 26 Feb 2024
Lab Number : 06099843 **Tested** : 27 Feb 2024
Unique Number : 10898073 **Diagnosed** : 27 Feb 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)