



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Area
{UNASSIGNED}
Machine Id
834023
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

RECOMMENDATION

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0107224	GFL0101247	GFL0101204
Sample Date		Client Info		08 Jan 2024	01 Dec 2023	17 Nov 2023
Machine Age	hrs	Client Info		1339	1005	900
Oil Age	hrs	Client Info		167	390	285
Filter Age	hrs	Client Info		167	390	285
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	19	19	37
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	1	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	1	4
Lead	ppm	ASTM D5185m	>40	2	0	<1
Copper	ppm	ASTM D5185m	>330	5	4	1
Tin	ppm	ASTM D5185m	>15	2	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

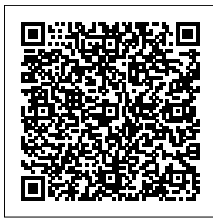
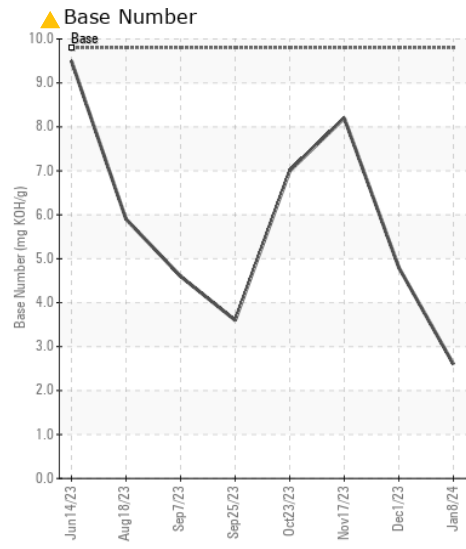
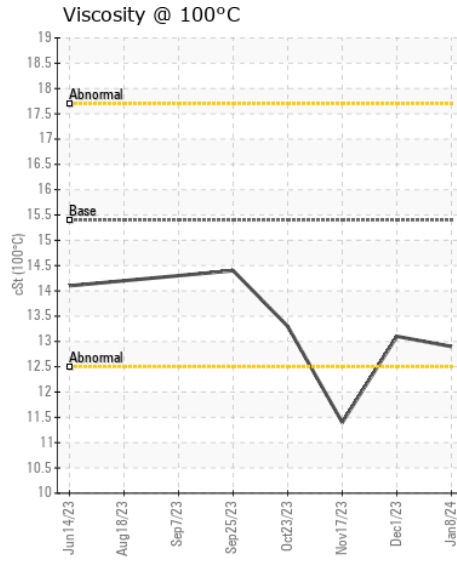
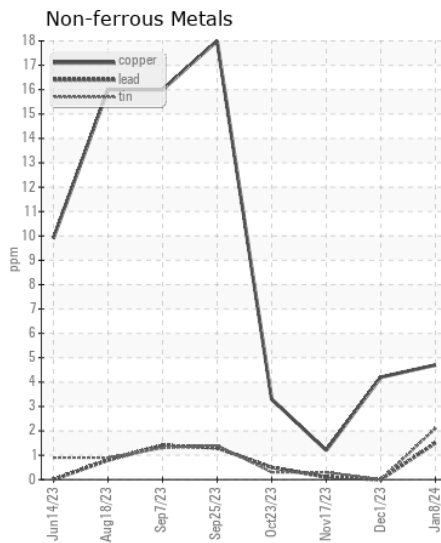
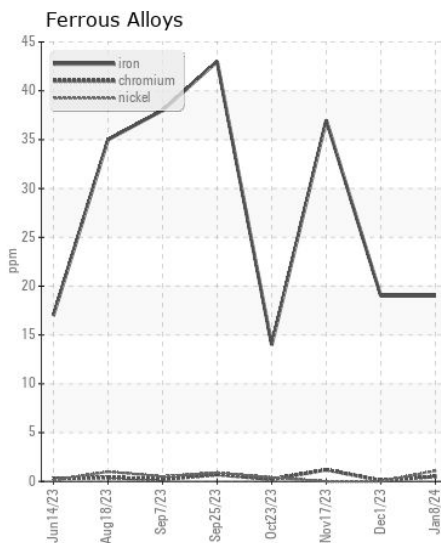
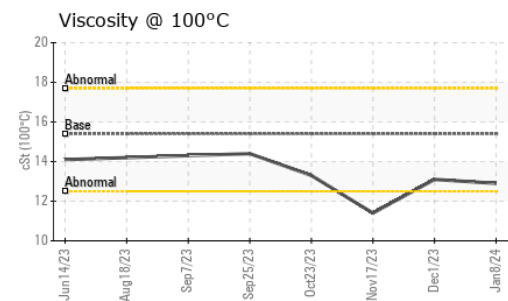
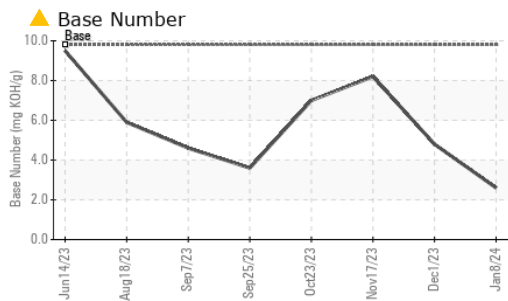
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	10	10	10
Potassium	ppm	ASTM D5185m	>20	0	2	3
Fuel		WC Method	>3.0	<1.0	<1.0	0.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	9.8	9.2	4.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	18.1	16.7
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		4	4	57
Boron	ppm	ASTM D5185m	0	0	<1	9
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	60	62	60	57
Manganese	ppm	ASTM D5185m	0	2	1	<1
Magnesium	ppm	ASTM D5185m	1010	887	795	733
Calcium	ppm	ASTM D5185m	1070	1088	1075	967
Phosphorus	ppm	ASTM D5185m	1150	835	797	846
Zinc	ppm	ASTM D5185m	1270	1167	1042	1029
Sulfur	ppm	ASTM D5185m	2060	2418	2870	2429
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	14.3	11.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 2.6	4.8	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	12.9	13.1	▲ 11.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0107224 **Received** : 11 Jan 2024
Lab Number : 06057855 **Diagnosed** : 12 Jan 2024
Unique Number : 10829237 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 010 - Stockbridge
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 Stockbridge, GA
 US 30281
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 T:
 F:

Certificate L2367
 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)