



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
933034
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- 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		GFL0106845	GFL0092114	GFL0084665
Sample Date		Client Info		09 Feb 2024	05 Dec 2023	28 Sep 2023
Machine Age	hrs	Client Info		2392	1828	15030
Oil Age	hrs	Client Info		600	600	0
Filter Age	hrs	Client Info		600	600	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	23	16
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	20	56	16
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	<1	2	4
Tin	ppm	ASTM D5185m	>15	<1	<1	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

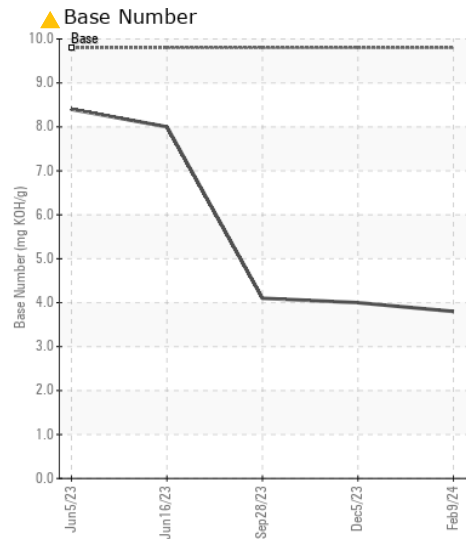
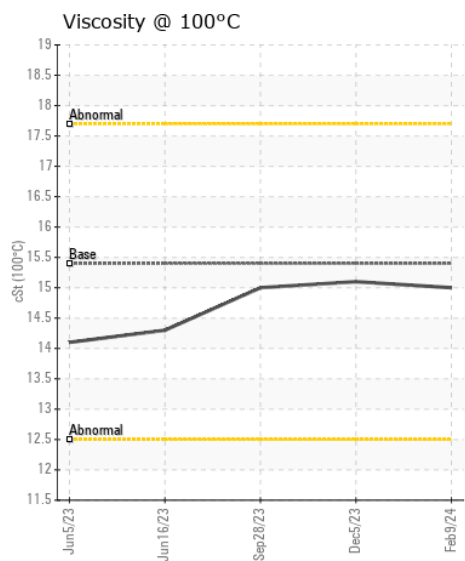
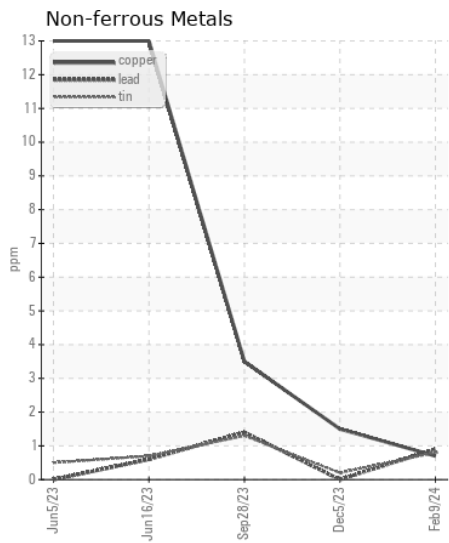
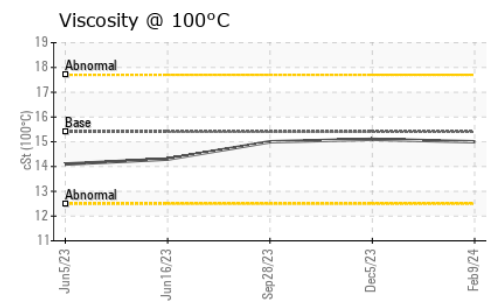
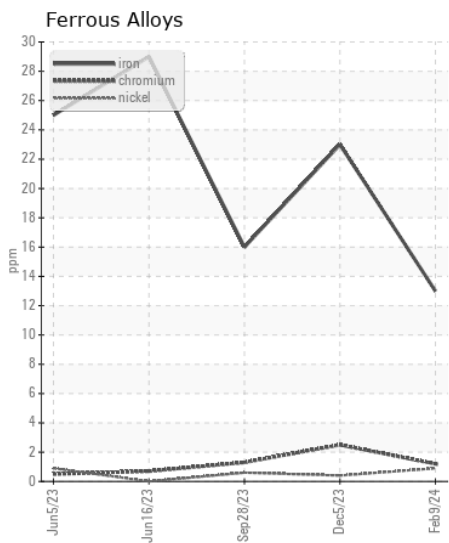
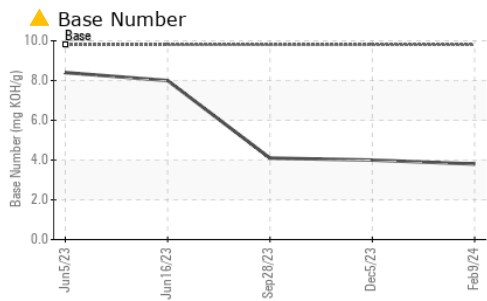
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	9	9
Potassium	ppm	ASTM D5185m	>20	67	178	63
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	0	0
Nitration	Abs/cm	*ASTM D7624	>20	11.4	11.3	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	23.9	23.2
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		7	9	8
Boron	ppm	ASTM D5185m	0	8	8	5
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	56	60	57
Manganese	ppm	ASTM D5185m	0	<1	<1	2
Magnesium	ppm	ASTM D5185m	1010	573	608	634
Calcium	ppm	ASTM D5185m	1070	1623	1710	1683
Phosphorus	ppm	ASTM D5185m	1150	737	721	701
Zinc	ppm	ASTM D5185m	1270	1001	1050	989
Sulfur	ppm	ASTM D5185m	2060	2524	2560	2456
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	19.8	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 3.8	4.0	4.1
Visc @ 100°C	cSt	ASTM D445	15.4	15.0	15.1	15.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0106845 **Received** : 13 Feb 2024
Lab Number : 06088049 **Tested** : 14 Feb 2024
Unique Number : 10875494 **Diagnosed** : 15 Feb 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 856 - Houston South
 8515 Highway 6 South
 Houston, TX
 US 77083
 Contact: Apolinar Zacarias
 pzacariascano@gflenv.com
 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)