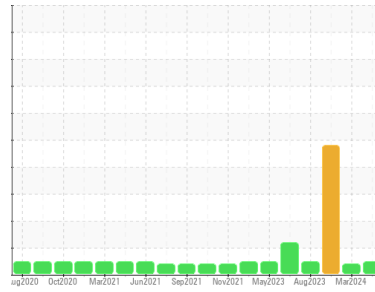




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(EJZ942)

Machine Id
910025

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0114546	GFL0103426	GFL0074632
Sample Date	Client Info			29 May 2024	06 Mar 2024	27 Nov 2023
Machine Age	hrs	Client Info		9224	8945	8682
Oil Age	hrs	Client Info		542	263	124
Oil Changed	Client Info			Changed	Not Changd	Changed
Sample Status				NORMAL	MARGINAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	1.4	▲ 4.1	
Water	WC Method	>0.2	NEG	NEG	NEG	
Glycol	WC Method		NEG	NEG	NEG	

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	13	7	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	2	1
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	6	6	<1
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	60	57	● 19
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	807	775	● 310
Calcium	ppm	ASTM D5185m	1070	1016	999	● 356
Phosphorus	ppm	ASTM D5185m	1150	1014	951	● 492
Zinc	ppm	ASTM D5185m	1270	1122	1053	● 563
Sulfur	ppm	ASTM D5185m	2060	2992	2949	● 1360

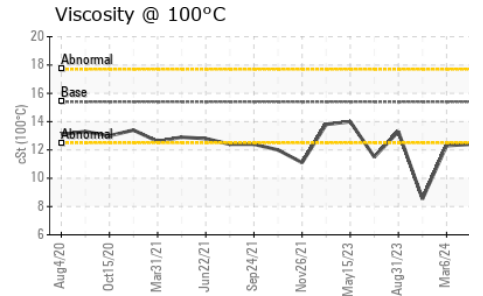
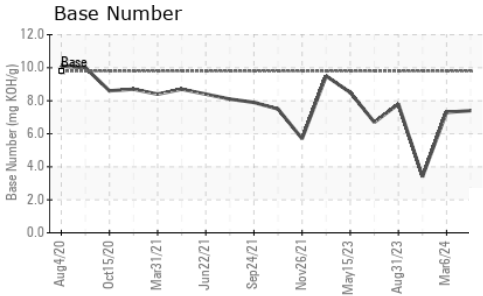
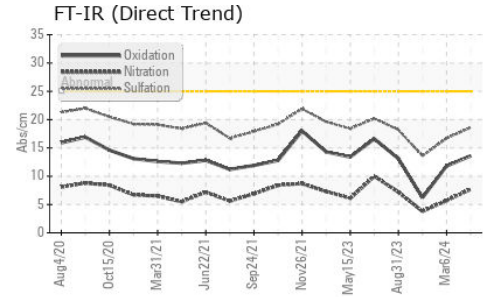
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	3	1
Sodium	ppm	ASTM D5185m		3	2	2
Potassium	ppm	ASTM D5185m	>20	4	3	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.5	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.7	5.7	3.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	16.7	13.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	11.8	6.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.4	7.3	▲ 3.4



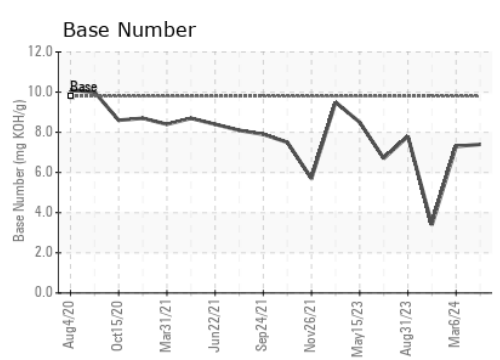
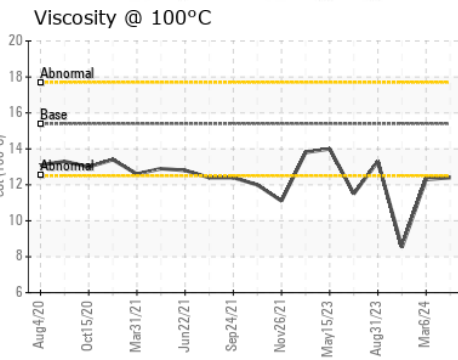
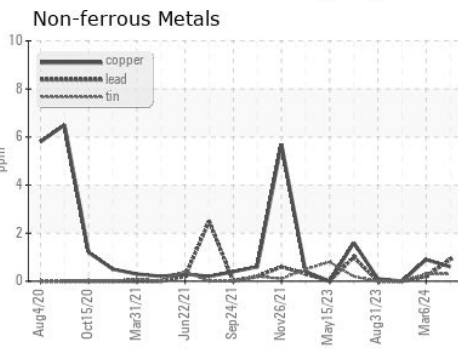
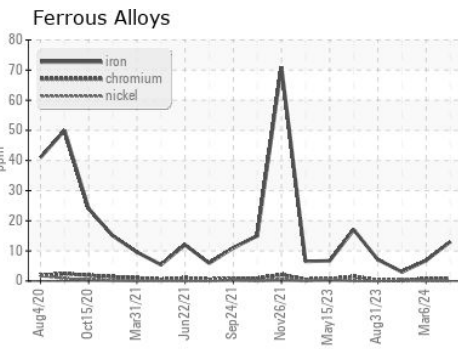
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.4	▲ 12.3 ● 8.53

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114546 **Received** : 31 May 2024
Lab Number : 06196321 **Tested** : 03 Jun 2024
Unique Number : 11058444 **Diagnosed** : 03 Jun 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 095 - Atlanta West
 2699 Cochran Industrial Blvd
 Douglasville, GA
 US 30127-1332
 Contact: Darrell Welch
 darrell.welch@gflenv.com
 T: (800)207-6618
 F:

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)