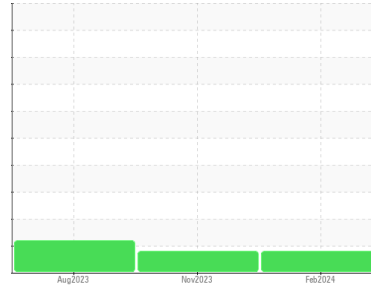




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
S0916A-Suamico
 Machine Id
514029

Component
Front Center Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (44 QTS)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level has decreased, but is still abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0095945	GFL0095965	GFL0074832
Sample Date	Client Info		13 Feb 2024	14 Nov 2023	01 Aug 2023
Machine Age	hrs	Client Info	1807	1224	607
Oil Age	hrs	Client Info	583	617	607
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	0.2
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 >200	15	17	26
Chromium	ppm	ASTM D5185m >20	1	1	1
Nickel	ppm	ASTM D5185m >2	<1	0	<1
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >30	6	11	10
Lead	ppm	ASTM D5185m >30	0	0	0
Copper	ppm	ASTM D5185m >30	▲ 35	▲ 37	▲ 259
Tin	ppm	ASTM D5185m >15	0	1	2
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	2	6	33
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	62	58	45
Manganese	ppm	ASTM D5185m 0	<1	<1	3
Magnesium	ppm	ASTM D5185m 1010	1070	879	567
Calcium	ppm	ASTM D5185m 1070	1215	1214	1800
Phosphorus	ppm	ASTM D5185m 1150	1037	931	731
Zinc	ppm	ASTM D5185m 1270	1314	1163	925
Sulfur	ppm	ASTM D5185m 2060	2617	2053	2354

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	4	7	10
Sodium	ppm	ASTM D5185m	2	<1	6
Potassium	ppm	ASTM D5185m >20	15	38	34

INFRA-RED

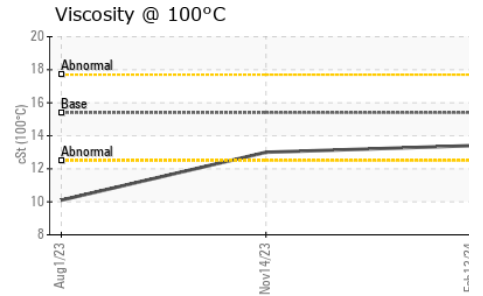
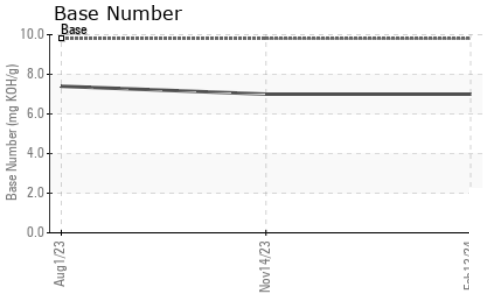
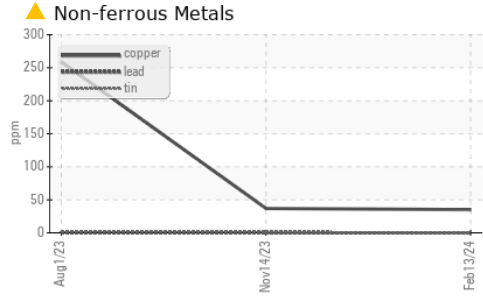
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.5	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.1	9.0	10.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.1	21.0	22.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.0	18.6	24.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.0	7.0	7.4



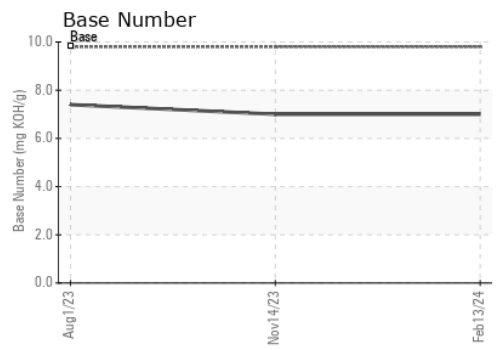
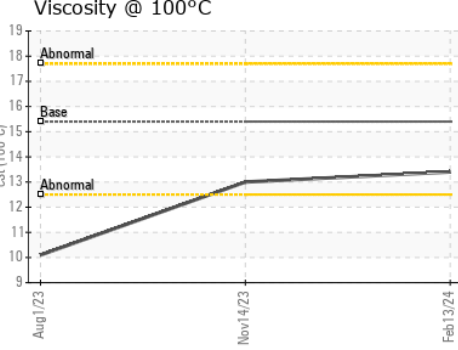
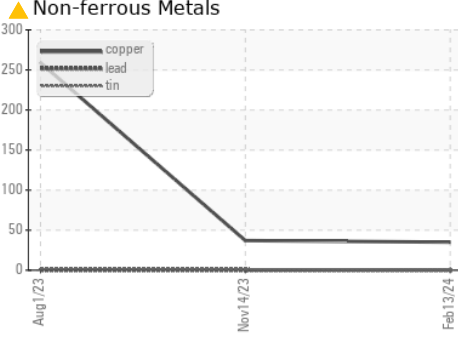
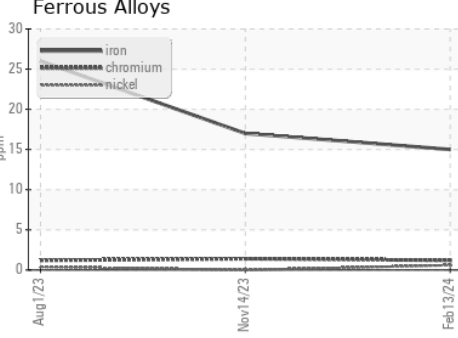
OIL ANALYSIS REPORT



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	13.4	13.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0095945 **Received** : 04 Mar 2024
Lab Number : 06106969 **Tested** : 05 Mar 2024
Unique Number : 10910466 **Diagnosed** : 06 Mar 2024 - Jonathan Hester
Test Package : FLEET

GFL Environmental - 916A - Suamico
 2300 Deerfield Ave E
 Suamico, WI
 US 54313
 Contact: NICHOLAS WEIDNER
 nweidner@gflenv.com

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)