



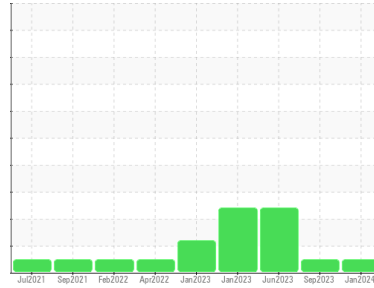
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
221092
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Top Up Amount: 2 LTR)

Wear

All 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		GFL0092587	GFL0092551	GFL0081559
Sample Date	Client Info		03 Jan 2024	19 Sep 2023	14 Jun 2023
Machine Age	hrs	Client Info	7200	6971	6937
Oil Age	hrs	Client Info	600	600	600
Oil Changed	Client Info		Oil Added	Changed	Not Chngd
Sample Status			NORMAL	NORMAL	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	0.3	13.6
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 >80	11	12	74
Chromium	ppm	ASTM D5185m >5	<1	<1	5
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >30	4	<1	16
Lead	ppm	ASTM D5185m >30	3	3	0
Copper	ppm	ASTM D5185m >150	<1	<1	2
Tin	ppm	ASTM D5185m >5	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	4	3	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	62	64	53
Manganese	ppm	ASTM D5185m 0	<1	<1	2
Magnesium	ppm	ASTM D5185m 1010	907	987	769
Calcium	ppm	ASTM D5185m 1070	1133	1215	1018
Phosphorus	ppm	ASTM D5185m 1150	1041	1092	854
Zinc	ppm	ASTM D5185m 1270	1296	1355	1045
Sulfur	ppm	ASTM D5185m 2060	3030	3819	2936

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	4	4	6
Sodium	ppm	ASTM D5185m	4	5	7
Potassium	ppm	ASTM D5185m >20	7	8	35

INFRA-RED

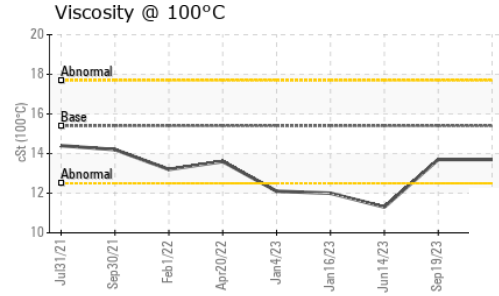
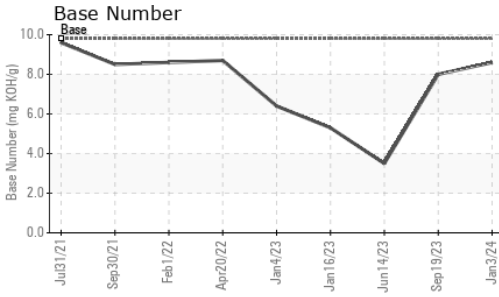
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.5	2.7
Nitration	Abs/cm	*ASTM D7624 >20	9.6	9.1	14.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.8	21.0	32.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.5	16.6	30.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.6	8.0	3.5



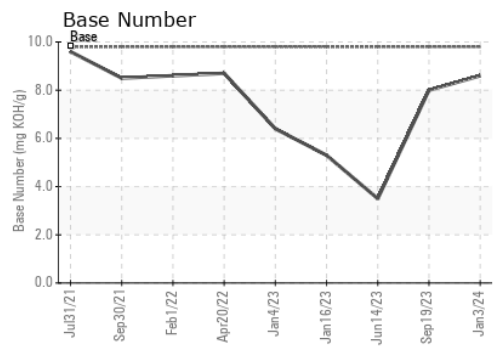
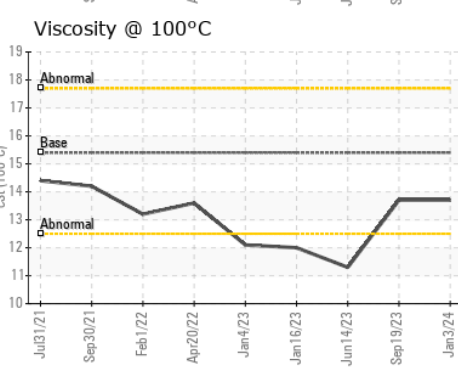
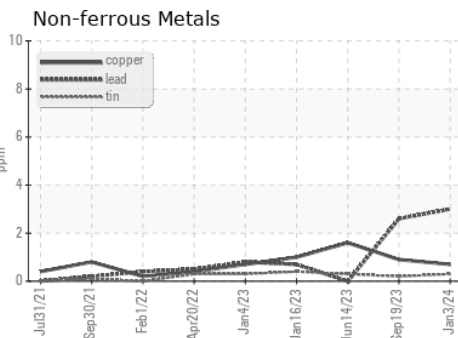
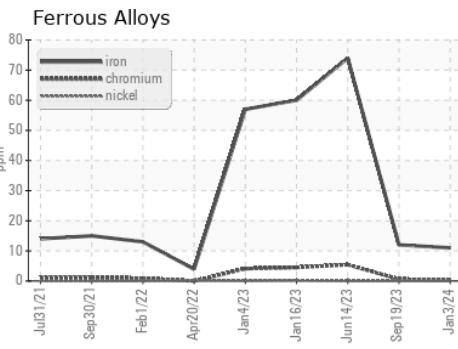
OIL ANALYSIS REPORT



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	13.7	13.7 ▲ 11.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0092587 **Received** : 04 Jan 2024
Lab Number : **06051382** **Diagnosed** : 05 Jan 2024
Unique Number : 10817331 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 885 - Orlando
 1263 W Landstreet Rd
 Orlando, FL
 US 32824
 Contact: Brian Bou Diaz
 bboudiaz@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)