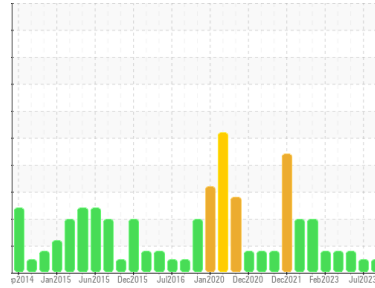




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(YA139885)
Machine Id
2464
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (60 GAL)



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	GFL0090001	GFL0080552	GFL0066868
Sample Date	Client Info	03 Feb 2024	20 Jul 2023	04 Jul 2023
Machine Age	hrs	43350	617178	617178
Oil Age	hrs	600	617178	617178
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
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 >120	12	4	14
Chromium	ppm ASTM D5185m >20	<1	<1	1
Nickel	ppm ASTM D5185m >5	0	0	0
Titanium	ppm ASTM D5185m >2	<1	0	0
Silver	ppm ASTM D5185m >2	<1	0	0
Aluminum	ppm ASTM D5185m >20	2	<1	0
Lead	ppm ASTM D5185m >40	<1	0	2
Copper	ppm ASTM D5185m >330	<1	0	2
Tin	ppm ASTM D5185m >15	0	0	<1
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	0	6	3
Barium	ppm ASTM D5185m 0	12	0	0
Molybdenum	ppm ASTM D5185m 60	50	60	59
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	757	992	944
Calcium	ppm ASTM D5185m 1070	883	1138	1040
Phosphorus	ppm ASTM D5185m 1150	915	1098	1032
Zinc	ppm ASTM D5185m 1270	1008	1310	1257
Sulfur	ppm ASTM D5185m 2060	2913	3936	3661

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	2	3	3
Sodium	ppm ASTM D5185m	0	2	<1
Potassium	ppm ASTM D5185m >20	1	<1	3
Fuel	% ASTM D3524 >3.0	2.5	1.9	▲ 4.0

INFRA-RED

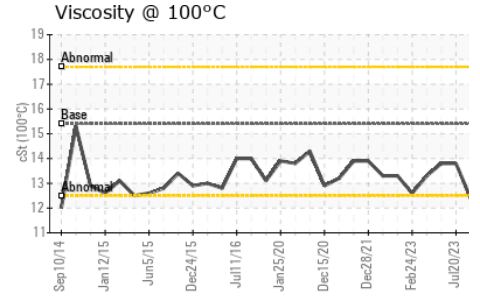
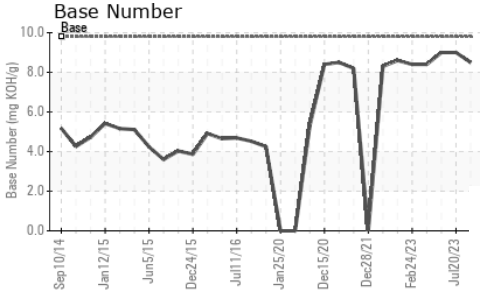
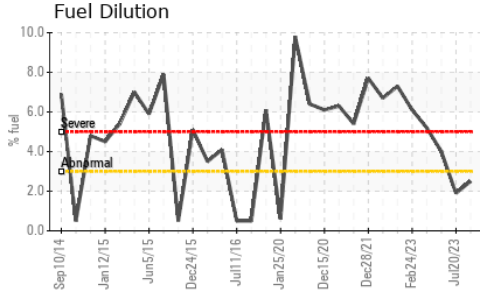
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	1.8	0.4	2.1
Nitration	Abs/cm *ASTM D7624 >20	7.9	4.9	7.8
Sulfation	Abs/.1mm *ASTM D7415 >30	20.2	17.6	22.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.6	12.7	15.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.5	9.0	9.0



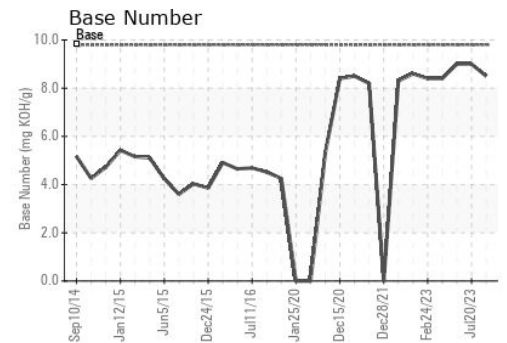
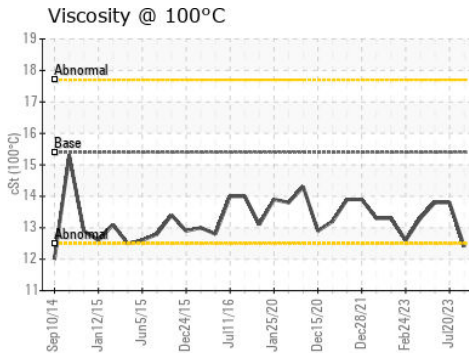
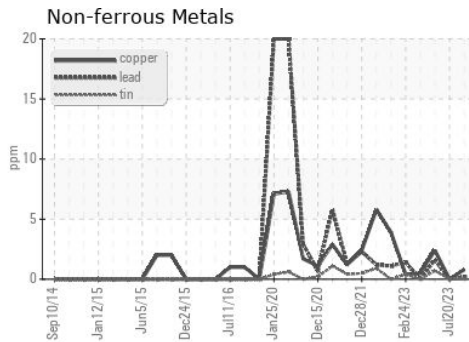
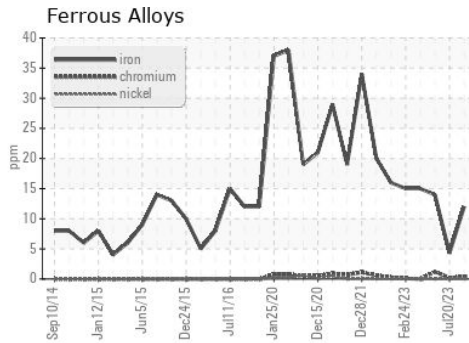
OIL ANALYSIS REPORT



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	13.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0090001 Received : 14 Feb 2024
 Lab Number : 06088565 Tested : 15 Feb 2024
 Unique Number : 10876010 Diagnosed : 15 Feb 2024 - Wes Davis
 Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 018 - Fayetteville
 4621 Marracco Drive
 Hope Mills, NC
 US 28348
 Contact: Robert Carter
 robert.carter@gflenv.com
 T: (910)596-1170
 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)