

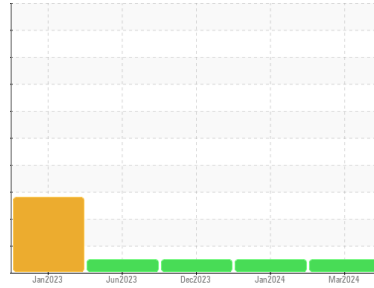


OIL ANALYSIS REPORT



Area
(50032Z)
Machine Id
412059
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

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 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	GFL0107494	GFL0107500	GFL0064700	
Sample Date	Client Info	14 Mar 2024	17 Jan 2024	06 Dec 2023	
Machine Age	hrs	Client Info	4516	4056	3746
Oil Age	hrs	Client Info	609	310	609
Oil Changed	Client Info	Changed	Not Changd	Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0
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	1	9
Chromium	ppm ASTM D5185m >20	<1	0	<1
Nickel	ppm ASTM D5185m >5	<1	0	2
Titanium	ppm ASTM D5185m >2	<1	0	0
Silver	ppm ASTM D5185m >2	<1	0	0
Aluminum	ppm ASTM D5185m >20	4	2	3
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	3	<1	4
Tin	ppm ASTM D5185m >15	1	0	<1
Vanadium	ppm ASTM D5185m	<1	0	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	15	31	20
Barium	ppm ASTM D5185m 0	2	0	0
Molybdenum	ppm ASTM D5185m 60	67	59	61
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	907	855	848
Calcium	ppm ASTM D5185m 1070	1242	1025	1136
Phosphorus	ppm ASTM D5185m 1150	939	892	963
Zinc	ppm ASTM D5185m 1270	1205	1154	1154
Sulfur	ppm ASTM D5185m 2060	3069	2958	2719

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	3	6
Sodium	ppm ASTM D5185m	1	<1	4
Potassium	ppm ASTM D5185m >20	6	<1	3

INFRA-RED

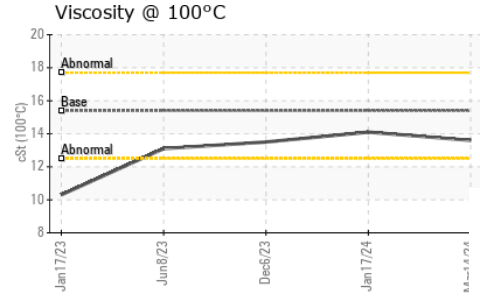
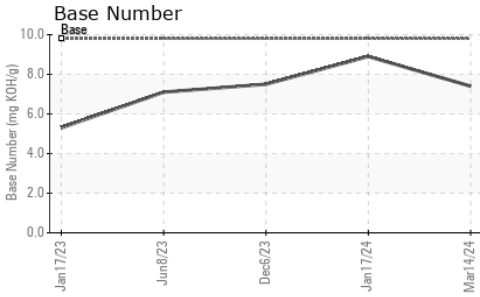
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.4	0.1	0.4
Nitration	Abs/cm *ASTM D7624 >20	8.1	5.3	8.3
Sulfation	Abs/.1mm *ASTM D7415 >30	19.6	18.0	20.4

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	16.0	13.9	16.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.4	8.9	7.5



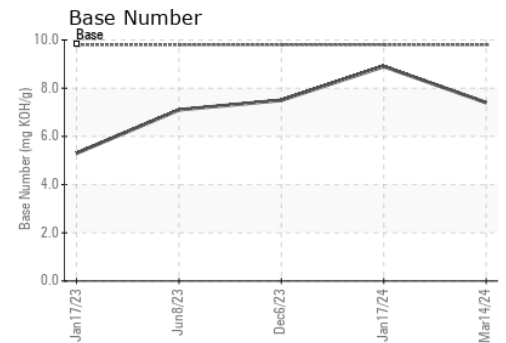
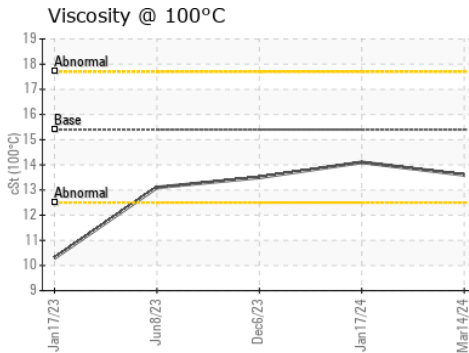
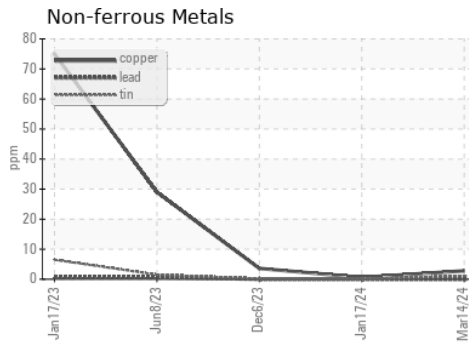
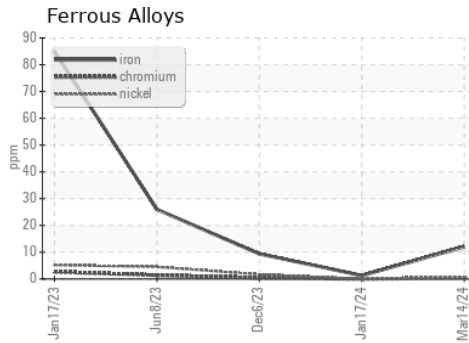
OIL ANALYSIS REPORT



PARAMETER	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

PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	14.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0107494
 Lab Number : 06125377
 Unique Number : 10939528
 Test Package : FLEET

Received : 21 Mar 2024
 Tested : 24 Mar 2024
 Diagnosed : 24 Mar 2024 - Wes Davis

GFL Environmental - 912 - Fort Atkinson HC
 1215 Klement St.
 Fort Atkinson, WI
 US 53538

Contact: LEONARD KOZLEUCHAR
 leonard.kozleuchar@gflenv.com

T: (262)210-6528

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)