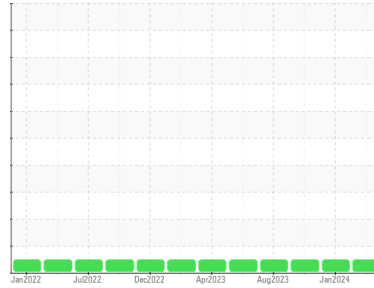




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
411042
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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	GFL0104568	GFL0104551	GFL0092635	
Sample Date	Client Info	04 Mar 2024	17 Jan 2024	11 Sep 2023	
Machine Age	hrs	Client Info	6525	6212	5607
Oil Age	hrs	Client Info	338	605	610
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	5	7	1
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >5	0	<1	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	1	2	1
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	4	15	0
Tin	ppm	ASTM D5185m >15	0	<1	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	0	0	2
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	61	55	61
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 1010	956	949	1031
Calcium	ppm	ASTM D5185m 1070	1054	1006	1131
Phosphorus	ppm	ASTM D5185m 1150	943	980	1076
Zinc	ppm	ASTM D5185m 1270	1185	1174	1322
Sulfur	ppm	ASTM D5185m 2060	2870	2550	3809

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	2	3	3
Sodium	ppm	ASTM D5185m	3	3	3
Potassium	ppm	ASTM D5185m >20	0	2	<1

INFRA-RED

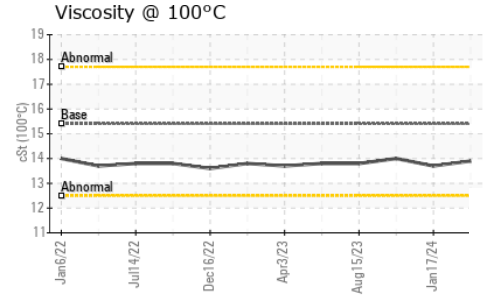
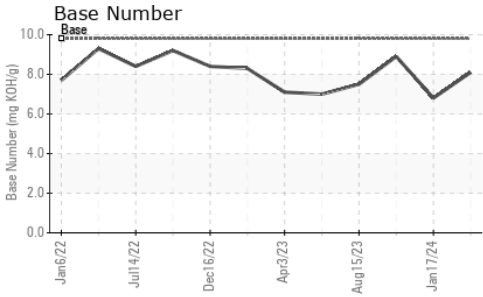
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >4	0.3	0.5	0
Nitration	Abs/cm	*ASTM D7624 >20	7.2	9.2	7.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.9	19.8	21.6

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.9	16.9	16.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.1	6.8	8.9



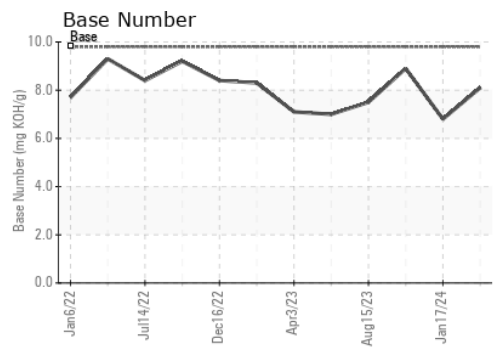
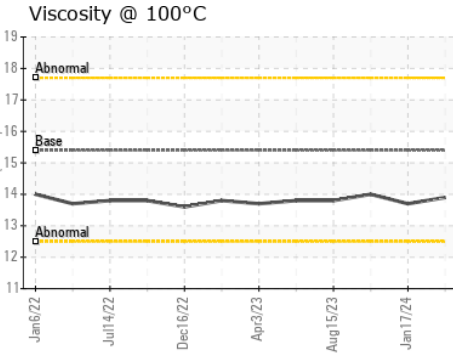
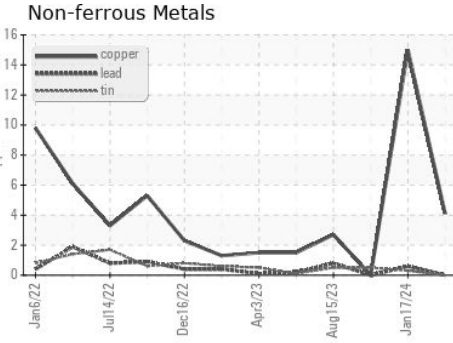
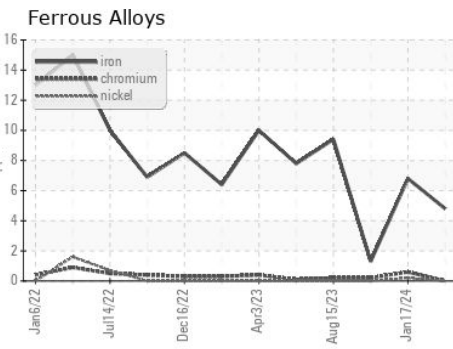
OIL ANALYSIS REPORT



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	13.9	13.7	14.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104568
Lab Number : 06111901
Unique Number : 10915398
Test Package : FLEET
Received : 07 Mar 2024
Tested : 08 Mar 2024
Diagnosed : 08 Mar 2024 - Wes Davis

GFL Environmental - 947 - WB Horicon HC
 N7296 County Rd V
 Horicon, WI
 US 53032
 Contact: Tim Kieffer
 tim.kieffer@gflenv.com
 T: (608)219-0288
 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)