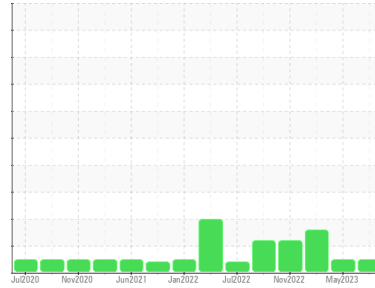




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
825043-6018

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	history 1	history 2	
Sample Number	Client Info	GFL0079137	GFL0072463	GFL0062870	
Sample Date	Client Info	03 Jul 2023	19 May 2023	01 Feb 2023	
Machine Age	hrs	Client Info	302574	298498	283549
Oil Age	hrs	Client Info	206714	217587	202638
Oil Changed	Client Info	N/A	N/A	N/A	
Sample Status		NORMAL	NORMAL	ATTENTION	

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >5	<1.0	<1.0	0.5
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >110	16	14	32
Chromium	ppm	ASTM D5185m >4	<1	<1	2
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	35	40	10
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	3	6	3
Lead	ppm	ASTM D5185m >45	0	0	<1
Copper	ppm	ASTM D5185m >85	<1	0	<1
Tin	ppm	ASTM D5185m >4	<1	0	<1
Vanadium	ppm	ASTM D5185m	<1	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 0	46	88	19
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	37	34	55
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	712	668	813
Calcium	ppm	ASTM D5185m 1070	1366	1388	1140
Phosphorus	ppm	ASTM D5185m 1150	1023	984	961
Zinc	ppm	ASTM D5185m 1270	1242	1195	1137
Sulfur	ppm	ASTM D5185m 2060	4203	4206	3549

CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >30	8	19	7
Sodium	ppm	ASTM D5185m	22	9	▲ 56
Potassium	ppm	ASTM D5185m >20	5	5	7

INFRA-RED

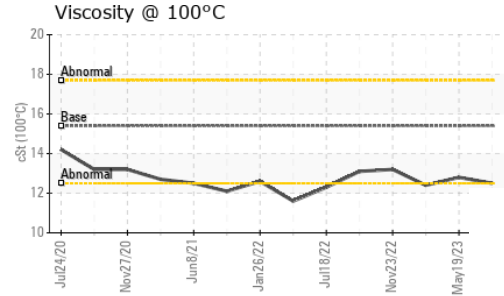
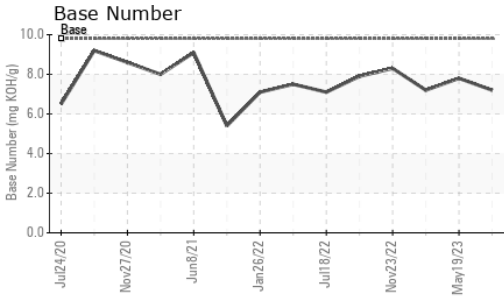
method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844 >3	0.4	0.2	0.8
Nitration	Abs/cm	*ASTM D7624 >20	9.0	7.0	9.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.5	18.9	20.4

FLUID DEGRADATION

method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.3	13.5	15.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.2	7.8	7.2



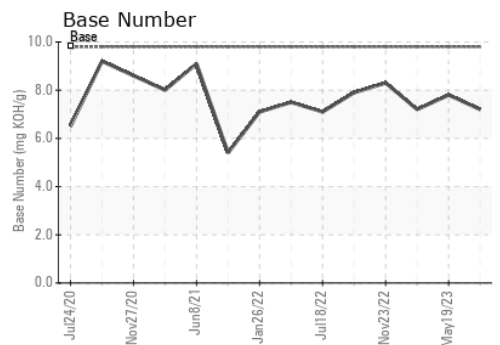
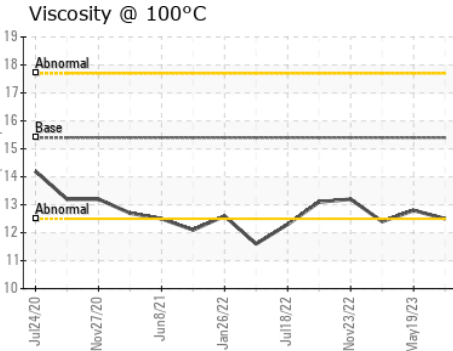
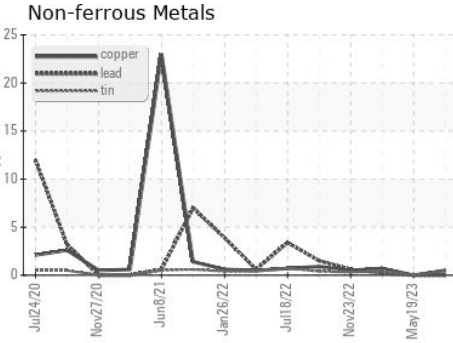
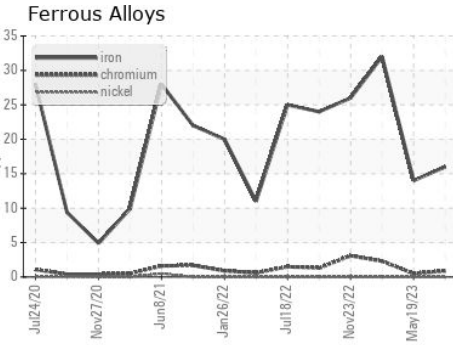
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	12.5	12.8 ▲ 12.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0079137 **Received** : 10 Jul 2023
Lab Number : 05894262 **Diagnosed** : 12 Jul 2023
Unique Number : 10550072 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 665 - Stroudsburg
 658 Silverspring Blvd
 Kunkletown, PA
 US 18058
 Contact: David Bowman
 dbowman@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)