



OIL ANALYSIS REPORT

Sample Rating Trend

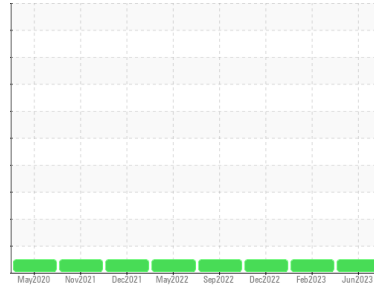
NORMAL



Machine Id
920087-205327

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	GFL0083415	GFL0054363	GFL0065190	
Sample Date	Client Info	15 Jun 2023	15 Feb 2023	19 Dec 2022	
Machine Age	mls	Client Info	152825	8523	119583
Oil Age	mls	Client Info	152825	8523	5915
Oil Changed	Client Info	Changed	Changed	Not Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >100	31	13	7
Chromium	ppm	ASTM D5185m >20	2	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	0	<1
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	<1	<1	<1
Tin	ppm	ASTM D5185m >15	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 0	26	0	5
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	45	60	59
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	698	881	938
Calcium	ppm	ASTM D5185m 1070	1503	1075	1089
Phosphorus	ppm	ASTM D5185m 1150	890	989	1035
Zinc	ppm	ASTM D5185m 1270	1094	1187	1208
Sulfur	ppm	ASTM D5185m 2060	3280	2973	3508

CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >25	7	2	3
Sodium	ppm	ASTM D5185m	2	0	1
Potassium	ppm	ASTM D5185m >20	2	3	<1

INFRA-RED

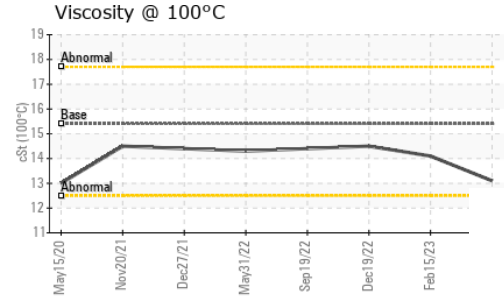
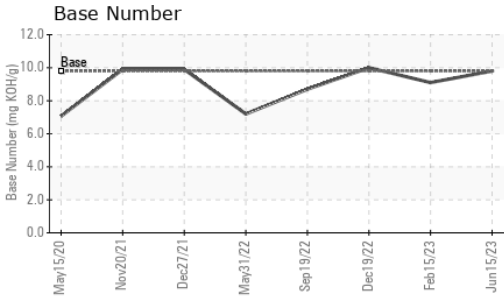
method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844 >3	0.6	0.9	0.8
Nitration	Abs/cm	*ASTM D7624 >20	9.7	7.6	7.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.9	19.6	20.6

FLUID DEGRADATION

method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	21.9	14.4	15.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.8	9.1	10.0



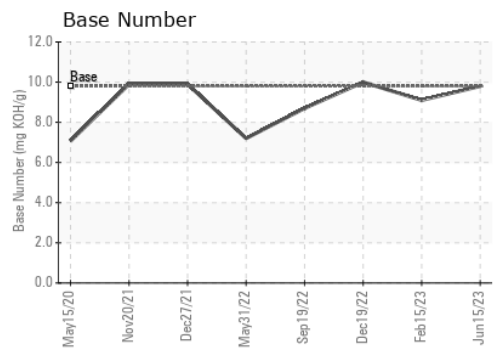
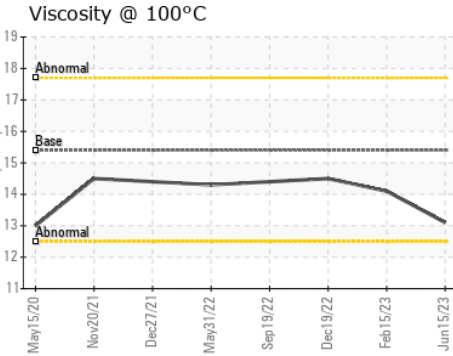
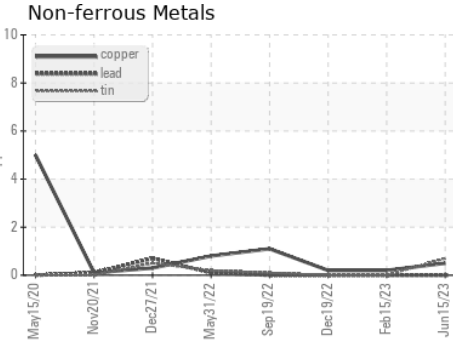
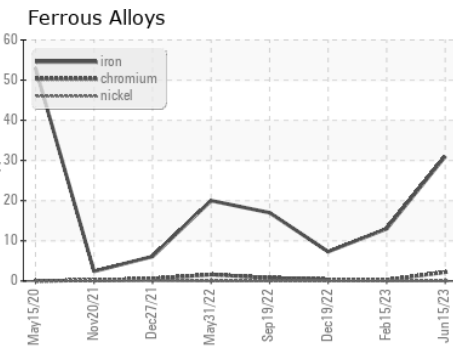
OIL ANALYSIS REPORT



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	13.1	14.1	14.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0083415 **Received** : 23 Jun 2023
Lab Number : **05881867** **Diagnosed** : 30 Jun 2023
Unique Number : 10532350 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
 saul.castillo@gflenv.com
 T:
 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)