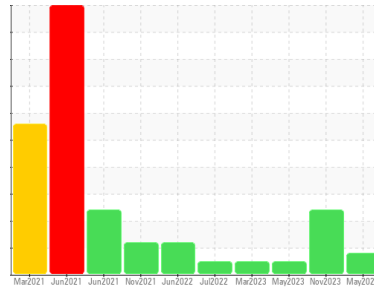




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
725013-583

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Sample only, out of service)

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0116212	GFL0100053	GFL0062230	
Sample Date	Client Info	21 May 2024	30 Nov 2023	15 May 2023	
Machine Age	hrs	Client Info	14072	13844	13506
Oil Age	hrs	Client Info	431	203	500
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd	
Sample Status		MARGINAL	SEVERE	NORMAL	

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	>100	63	27	97
Chromium	ppm	ASTM D5185m	>20	3	<1	10
Nickel	ppm	ASTM D5185m	>4	<1	0	6
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	10	1	16
Lead	ppm	ASTM D5185m	>40	<1	0	4
Copper	ppm	ASTM D5185m	>330	3	<1	3
Tin	ppm	ASTM D5185m	>15	<1	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	24	9	10
Barium	ppm	ASTM D5185m	0	0	3	0
Molybdenum	ppm	ASTM D5185m	60	71	66	65
Manganese	ppm	ASTM D5185m	0	1	0	1
Magnesium	ppm	ASTM D5185m	1010	856	758	978
Calcium	ppm	ASTM D5185m	1070	1243	993	1197
Phosphorus	ppm	ASTM D5185m	1150	1083	867	1080
Zinc	ppm	ASTM D5185m	1270	1254	1030	1353
Sulfur	ppm	ASTM D5185m	2060	3331	2809	3597

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	9	6	10
Sodium	ppm	ASTM D5185m		39	16	36
Potassium	ppm	ASTM D5185m	>20	6	3	5
Fuel	%	ASTM D3524	>5	▲ 2.6	▲ 10.6	<1.0

INFRA-RED

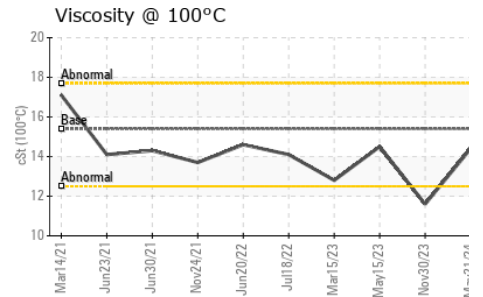
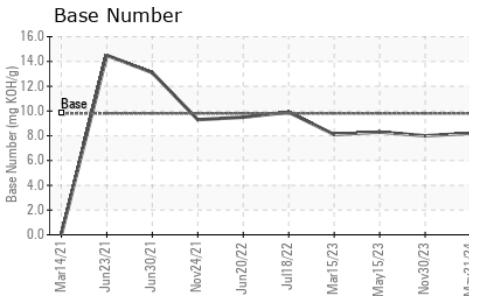
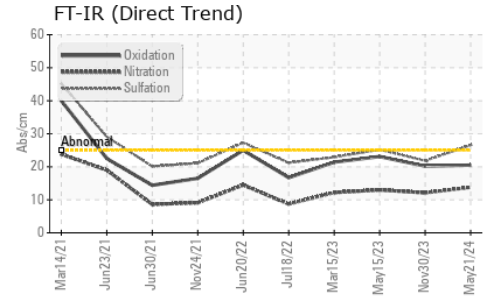
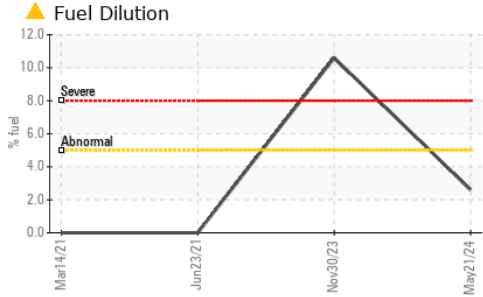
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	2.5	0.9	1.3
Nitration	Abs/cm	*ASTM D7624	>20	13.8	12.1	13.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.6	21.8	25.2

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.5	20.2	23.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	8.0	8.3



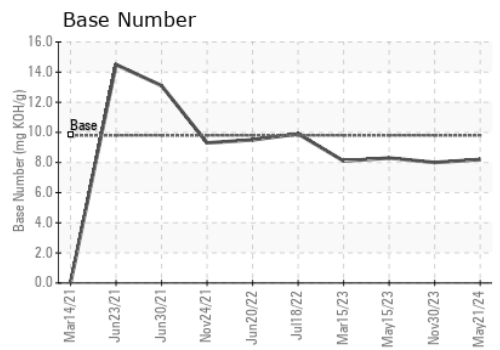
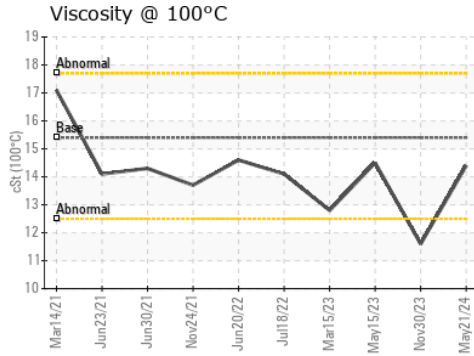
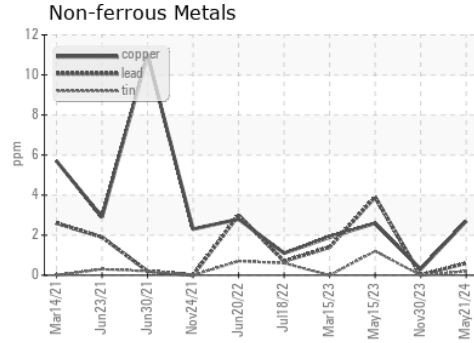
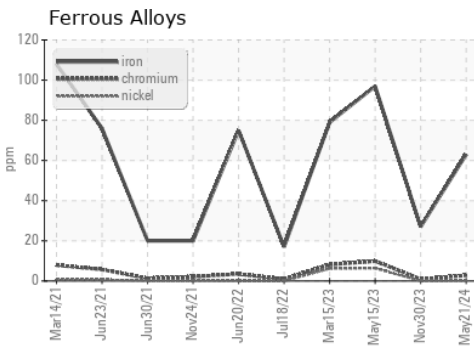
OIL ANALYSIS REPORT



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	14.4	▲ 11.6	14.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116212 **Received** : 24 May 2024
Lab Number : **06191744** **Tested** : 30 May 2024
Unique Number : 11048496 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 626 - Cadillac Hauling
 1501 Ron Wilson St
 Cadillac, MI
 US 49601
 Contact: GARY BREWER
 gbrewerjr@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)