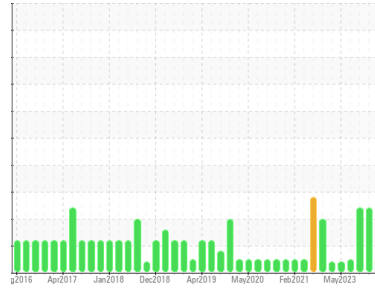




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
2412 MACK GU713
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (48 QTS)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	GFL0103208	GFL0103262	GFL0089291
Sample Date	Client Info	20 Dec 2023	06 Dec 2023	08 Sep 2023
Machine Age	hrs	29076	28970	28473
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Not Changed	Changed	Changed
Sample Status		NORMAL	SEVERE	SEVERE

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 >120	3	8	8
Chromium	ppm ASTM D5185m >20	<1	<1	0
Nickel	ppm ASTM D5185m >5	<1	0	<1
Titanium	ppm ASTM D5185m >2	0	0	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	2	1	0
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	1	<1	1
Tin	ppm ASTM D5185m >15	<1	0	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	2	1	0
Barium	ppm ASTM D5185m 0	0	3	0
Molybdenum	ppm ASTM D5185m 60	59	58	57
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	989	826	928
Calcium	ppm ASTM D5185m 1070	1082	979	1102
Phosphorus	ppm ASTM D5185m 1150	1118	926	951
Zinc	ppm ASTM D5185m 1270	1310	1098	1210
Sulfur	ppm ASTM D5185m 2060	3448	2961	3510

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	4	4
Sodium	ppm ASTM D5185m	2	<1	3
Potassium	ppm ASTM D5185m >20	2	2	2
Fuel	% ASTM D3524 >3.0	2.0	5.2	7.9

INFRA-RED

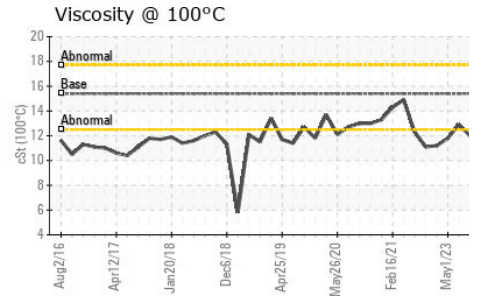
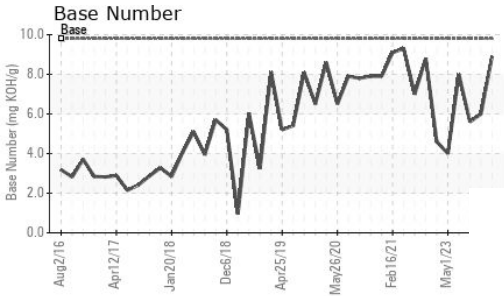
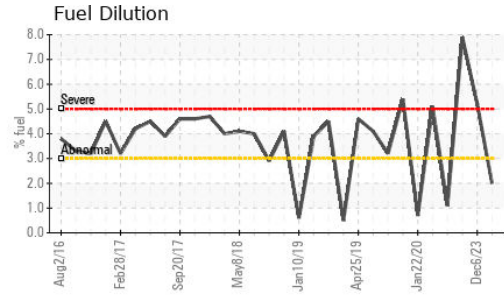
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.2	0.8	0.7
Nitration	Abs/cm *ASTM D7624 >20	6.1	10.0	9.7
Sulfation	Abs/.1mm *ASTM D7415 >30	17.7	19.5	19.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.2	15.2	15.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.9	6.0	5.6



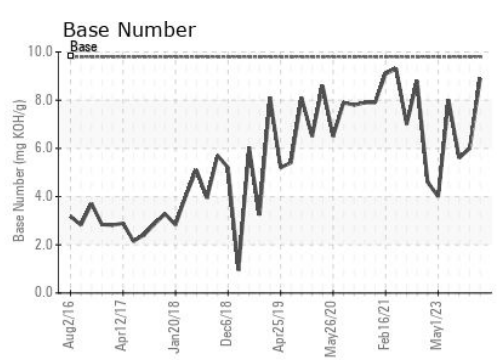
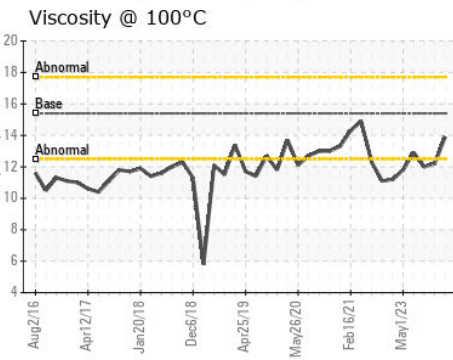
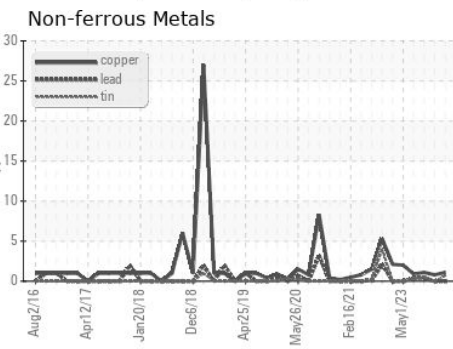
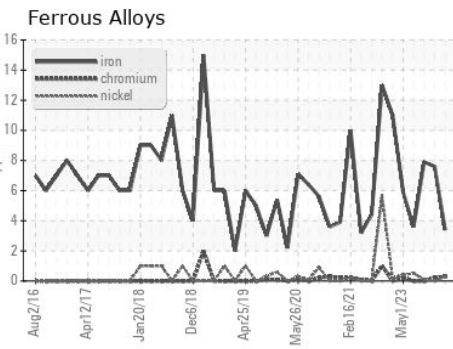
OIL ANALYSIS REPORT



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	▲ 12.2	▲ 12.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103208 **Received** : 21 Dec 2023
Lab Number : **06041801** **Diagnosed** : 26 Dec 2023
Unique Number : 10802409 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 001 - Raleigh(CNG)
 3741 Conquest Drive
 Garner, NC
 US 27529
 Contact: Craig Johnson
 craig.johnson@gflenv.com
 T: (919)662-7100
 F: (919)662-7130

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)