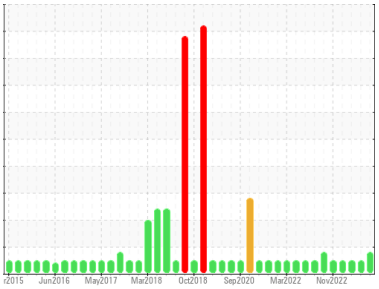
PROBLEM SUMMARY

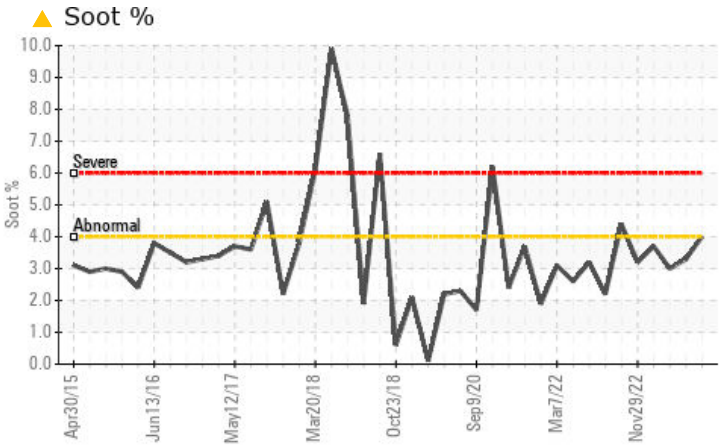
Sample Rating Trend



SOOT

Machine Id
2337 MACK GRANITE
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (48 QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Soot %	%	*ASTM D7844	>4	▲ **4**	3.3	3

Customer Id: GFL001
Sample No.: GFL0094740
Lab Number: 05981055
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.

HISTORICAL DIAGNOSIS

27 Jul 2023 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

06 Jul 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

27 Mar 2023 Diag: Wes Davis

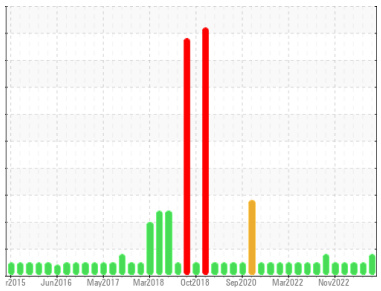
NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



SOOT

Machine Id
2337 MACK GRANITE
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (48 QTS)

DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done.

Wear
All component wear rates are normal.

Contamination
Light concentration of carbon/soot present in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0094740**	GFL0089303	GFL0087101
Sample Date		Client Info		**14 Oct 2023**	27 Jul 2023	06 Jul 2023
Machine Age	hrs	Client Info		**39750**	39218	39082
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Not Changd	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Glycol	WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**33**	33	30
Chromium	ppm	ASTM D5185m	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185m	>2	**0**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	3	6
Lead	ppm	ASTM D5185m	>40	**4**	4	3
Copper	ppm	ASTM D5185m	>330	**3**	4	4
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<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	**3**	8	6
Barium	ppm	ASTM D5185m	0	**0**	2	0
Molybdenum	ppm	ASTM D5185m	60	**58**	70	67
Manganese	ppm	ASTM D5185m	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**821**	1005	940
Calcium	ppm	ASTM D5185m	1070	**970**	1164	1107
Phosphorus	ppm	ASTM D5185m	1150	**886**	1093	1043
Zinc	ppm	ASTM D5185m	1270	**1061**	1330	1295
Sulfur	ppm	ASTM D5185m	2060	**2719**	3788	3736

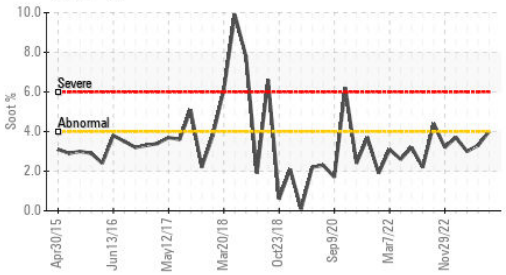
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**3**	4	8
Sodium	ppm	ASTM D5185m		**0**	6	<1
Potassium	ppm	ASTM D5185m	>20	**1**	12	7
Fuel	%	ASTM D3524	>3.0	**<1.0**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	▲ **4**	3.3	3
Nitration	Abs/cm	*ASTM D7624	>20	**10.2**	8.1	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.8**	22.9	23.7

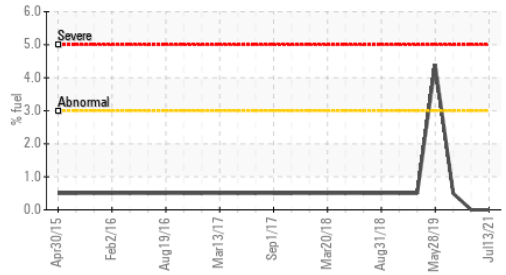
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.5**	12.0	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**4.2**	9.80	8.3

OIL ANALYSIS REPORT

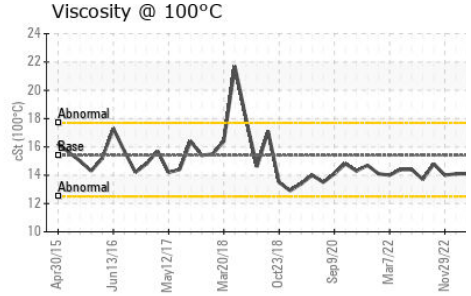
Soot %



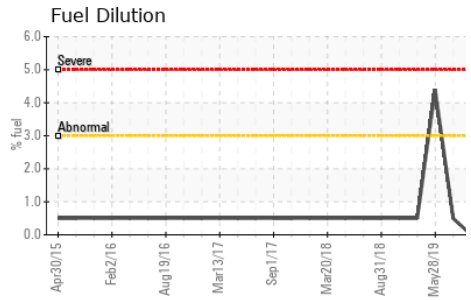
Fuel Dilution



Viscosity @ 100°C



Fuel Dilution

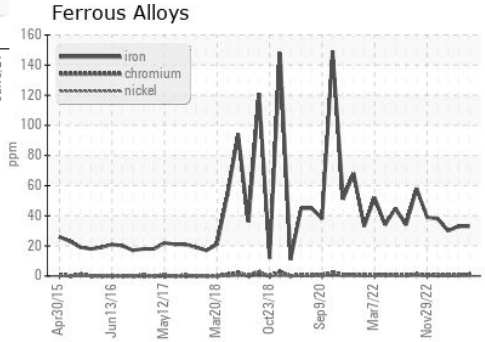


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

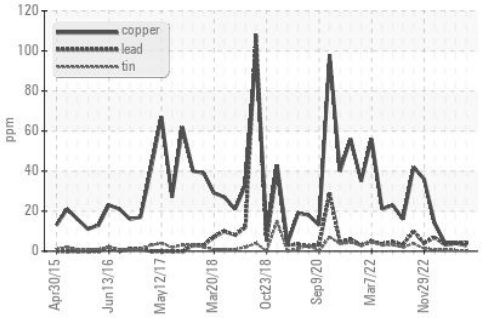
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.7**	14.5	14.1

GRAPHS

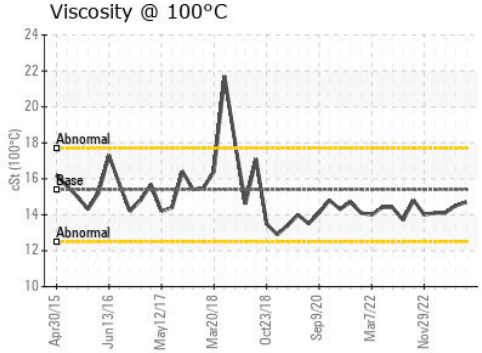
Ferrous Alloys



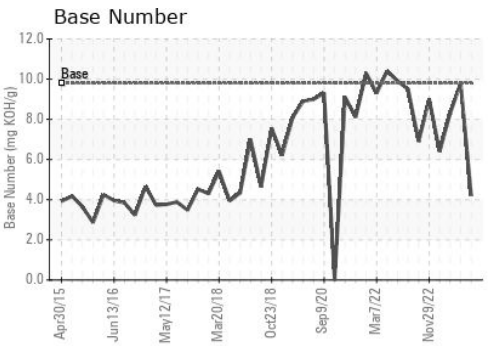
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0094740 **Received** : 17 Oct 2023
Lab Number : 05981055 **Diagnosed** : 18 Oct 2023
Unique Number : 10698350 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution)

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)

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