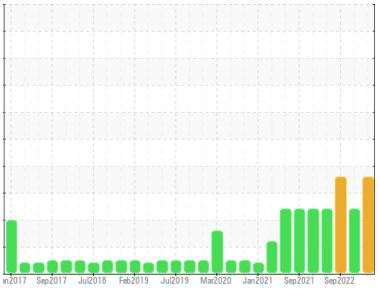
PROBLEM SUMMARY

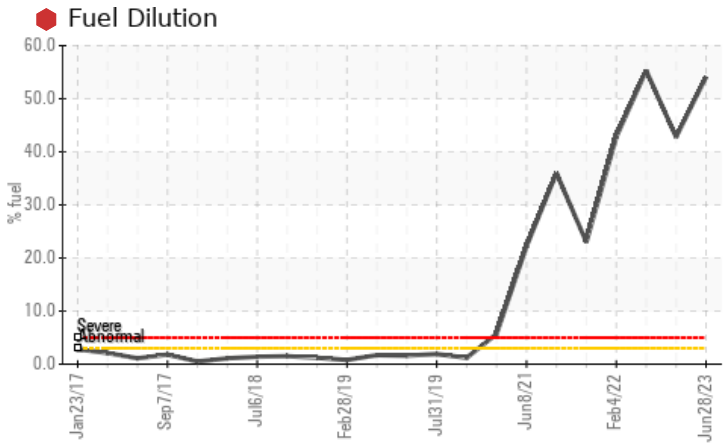
Machine Id
MACK 2655
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

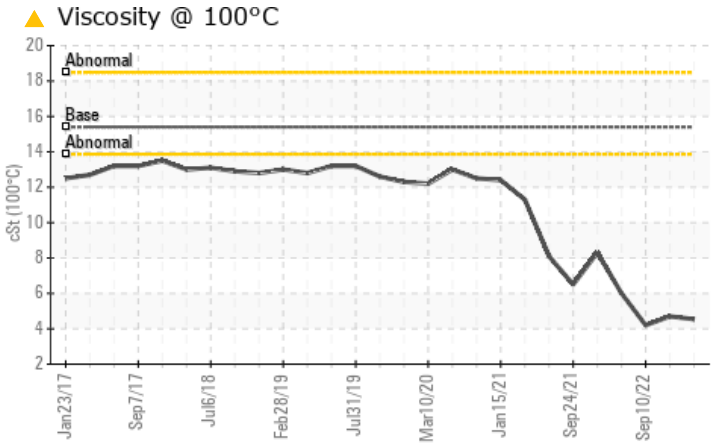
Sample Rating Trend



FUEL

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Fuel	%	ASTM D3524	>3.0	**54.1**	42.8	55.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**3.7**	5.1	3.6
Visc @ 100°C	cSt	ASTM D445	15.4	**4.54**	4.7	4.2

Customer Id: GFL009
Sample No.: GFL0057566
Lab Number: 05887683
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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 and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

12 Jan 2023 Diag: Don Baldridge

FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

view report

10 Sep 2022 Diag: Jonathan Hester

FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

view report

04 Feb 2022 Diag: Don Baldridge

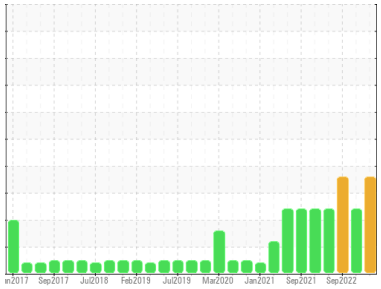
FUEL

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
MACK 2655
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0057566**	GFL0057581	GFL0057591
Sample Date		Client Info		**28 Jun 2023**	12 Jan 2023	10 Sep 2022
Machine Age	hrs	Client Info		**30660**	29807	28392
Oil Age	hrs	Client Info		**0**	29807	28069
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION	method	limit/base	current	history 1	history 2
Glycol	WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>120	**20**	11	32
Chromium	ppm	ASTM D5185m	>20	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	1	2
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**<1**	<1	4
Lead	ppm	ASTM D5185m	>40	**0**	<1	1
Copper	ppm	ASTM D5185m	>330	**22**	11	6
Tin	ppm	ASTM D5185m	>15	**2**	2	2
Antimony	ppm	ASTM D5185m		**---**	---	---
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	**<1**	3	3
Barium	ppm	ASTM D5185m	0	**14**	0	0
Molybdenum	ppm	ASTM D5185m	60	**26**	30	25
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**343**	360	287
Calcium	ppm	ASTM D5185m	1070	**427**	538	404
Phosphorus	ppm	ASTM D5185m	1150	**419**	473	352
Zinc	ppm	ASTM D5185m	1270	**504**	541	442
Sulfur	ppm	ASTM D5185m	2060	**1275**	1350	1093

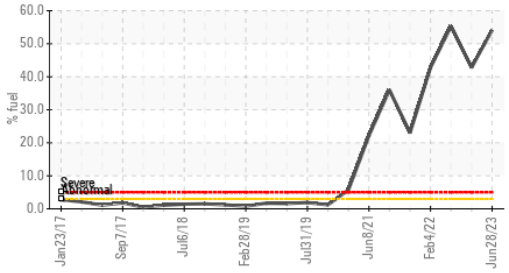
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**6**	4	10
Sodium	ppm	ASTM D5185m		**3**	<1	2
Potassium	ppm	ASTM D5185m	>20	**<1**	0	2
Fuel	%	ASTM D3524	>3.0	**54.1**	42.8	55.3

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>4	**0.2**	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**9.4**	7.8	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**17.2**	15.8	19.3

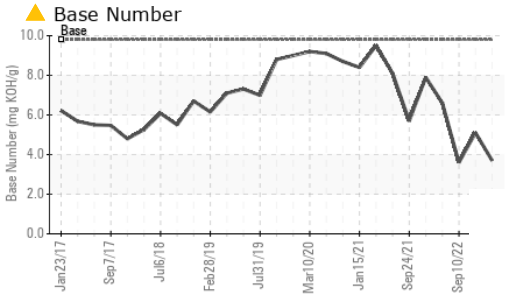
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**13.6**	11.2	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**3.7**	5.1	3.6

OIL ANALYSIS REPORT

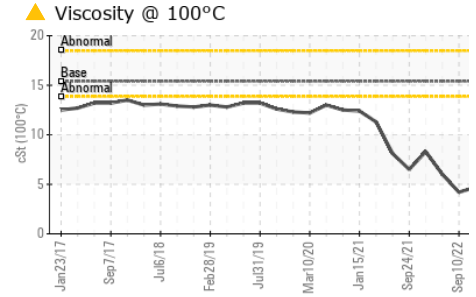
Fuel Dilution



Base Number



Viscosity @ 100°C

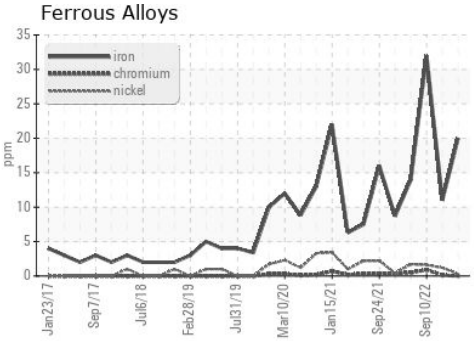


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

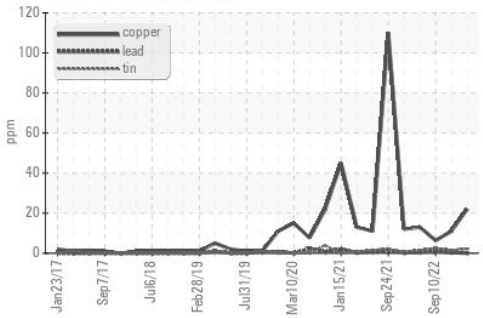
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **4.54**	▲ 4.7	▲ 4.2

GRAPHS

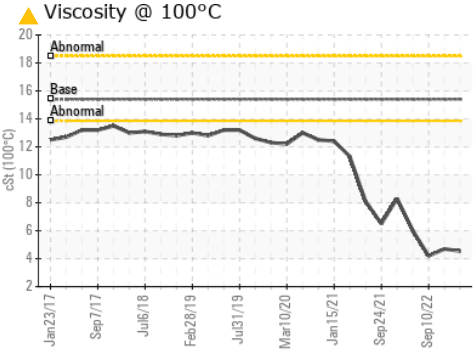
Ferrous Alloys



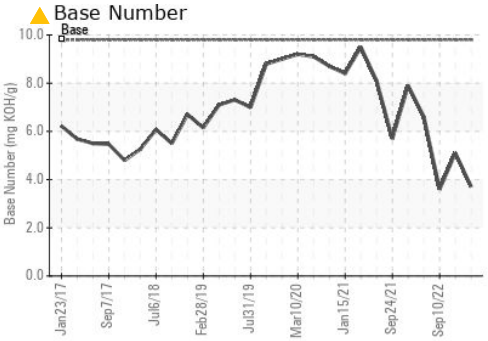
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0057566 **Received** : 30 Jun 2023
Lab Number : 05887683 **Diagnosed** : 06 Jul 2023
Unique Number : 10538166 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: PercentFuel)

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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