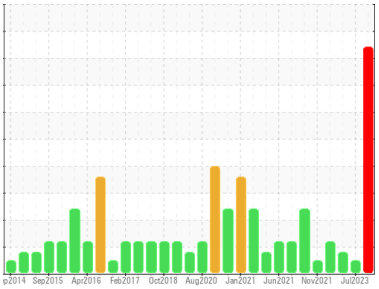
PROBLEM SUMMARY

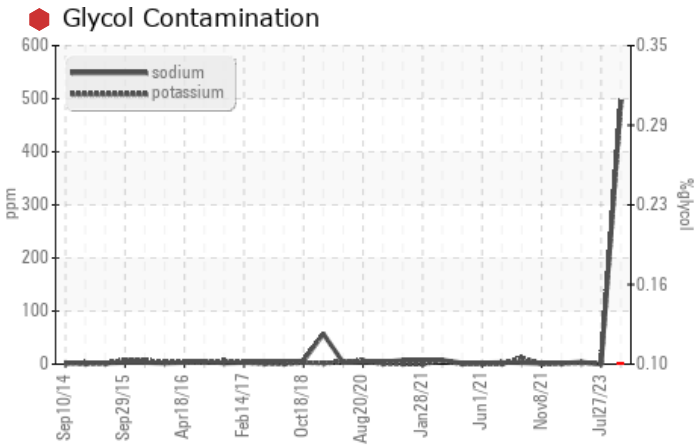
Area
(YA122699)
Machine Id
MACK 2420
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (48 GAL)

Sample Rating Trend



GLYCOL

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ABNORMAL
Potassium	ppm	ASTM D5185m	>20	▲ **495**	1	2
Glycol	%	*ASTM D2982		⬢ **0.10**	NEG	NEG

Customer Id: GFL004
Sample No.: GFL0111358
Lab Number: 06078161
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.
Flush System	---	---	?	We advise that you flush the component thoroughly before re-filling with oil.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

27 Jul 2023 Diag: Wes Davis

NORMAL

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected 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

09 Jun 2023 Diag: Wes Davis

FUEL

The oil 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 moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. 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.

view report

03 Feb 2022 Diag: Jonathan Hester

FUEL

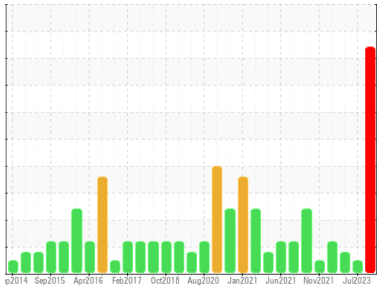
We advise that you check the fuel injection system. Resample at the next service interval to monitor.All component wear rates are normal. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Area
(YA122699)
Machine Id
MACK 2420
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (48 GAL)

Sample Rating Trend



GLYCOL

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a high concentration of glycol 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		**GFL0111358**	GFL0072239	GFL0059015
Sample Date		Client Info		**03 Feb 2024**	27 Jul 2023	09 Jun 2023
Machine Age	mls	Client Info		**0**	131591	131591
Oil Age	mls	Client Info		**0**	24909	24830
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	1.5	▲ 3.2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**23**	3	7
Chromium	ppm	ASTM D5185m	>20	**1**	0	0
Nickel	ppm	ASTM D5185m	>5	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>20	**2**	<1	1
Lead	ppm	ASTM D5185m	>40	**<1**	<1	0
Copper	ppm	ASTM D5185m	>330	**4**	<1	<1
Tin	ppm	ASTM D5185m	>15	**<1**	<1	0
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**20**	9	16
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**73**	61	58
Manganese	ppm	ASTM D5185m	0	**<1**	0	<1
Magnesium	ppm	ASTM D5185m	1010	**916**	872	899
Calcium	ppm	ASTM D5185m	1070	**981**	1087	1103
Phosphorus	ppm	ASTM D5185m	1150	**943**	989	976
Zinc	ppm	ASTM D5185m	1270	**1170**	1184	1177
Sulfur	ppm	ASTM D5185m	2060	**2932**	3318	3676

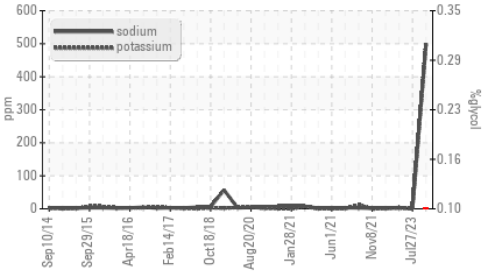
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	5	7
Sodium	ppm	ASTM D5185m		▲ **497**	0	4
Potassium	ppm	ASTM D5185m	>20	▲ **495**	1	2
Glycol	%	*ASTM D2982		● **0.10**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.4**	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**8.9**	5.2	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.4**	17.2	18.2

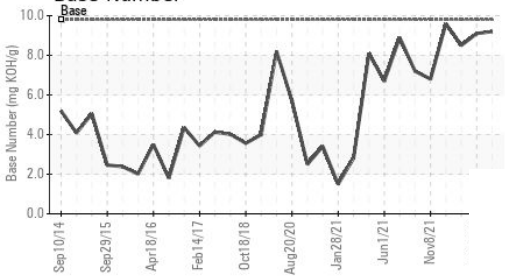
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.3**	13.3	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.2**	9.1	8.5

OIL ANALYSIS REPORT

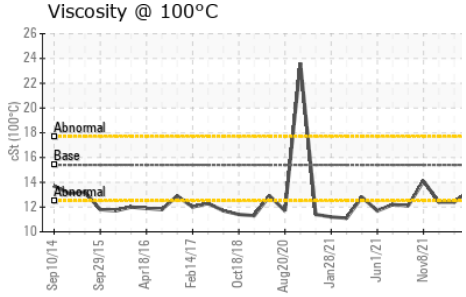
Glycol Contamination



Base Number



Viscosity @ 100°C

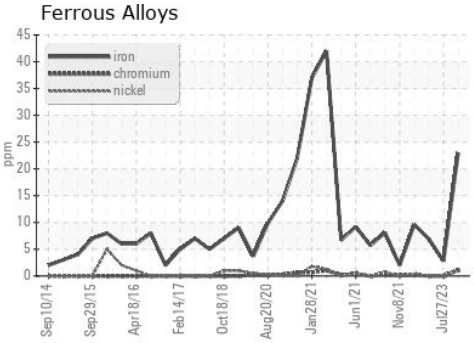


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

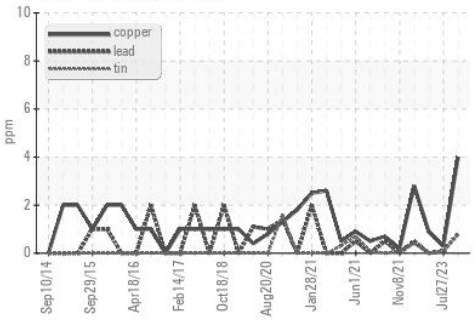
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**12.9**	13.3	12.4

GRAPHS

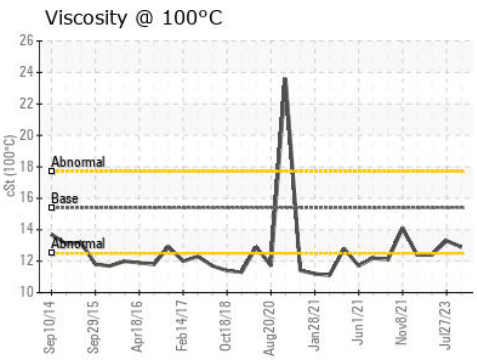
Ferrous Alloys



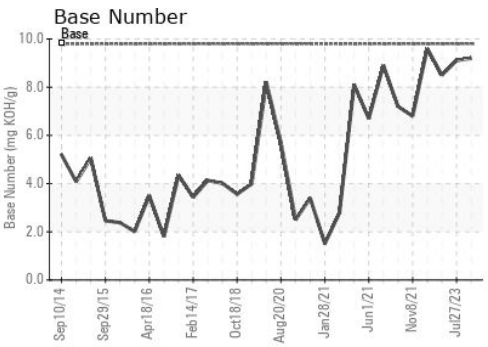
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111358 **Recieved** : 02 Feb 2024
Lab Number : 06078161 **Diagnosed** : 05 Feb 2024
Unique Number : 10860252 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

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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