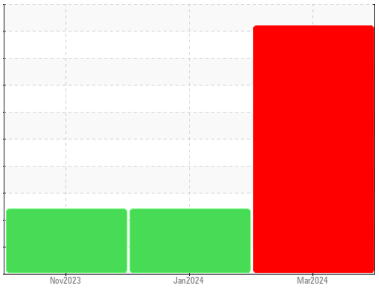
PROBLEM SUMMARY

Sample Rating Trend

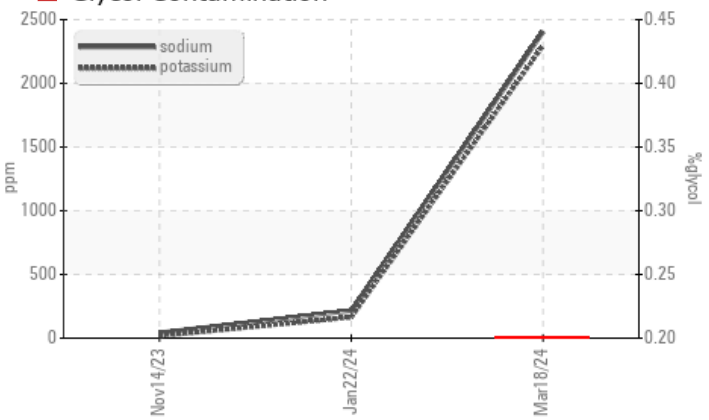


GLYCOL

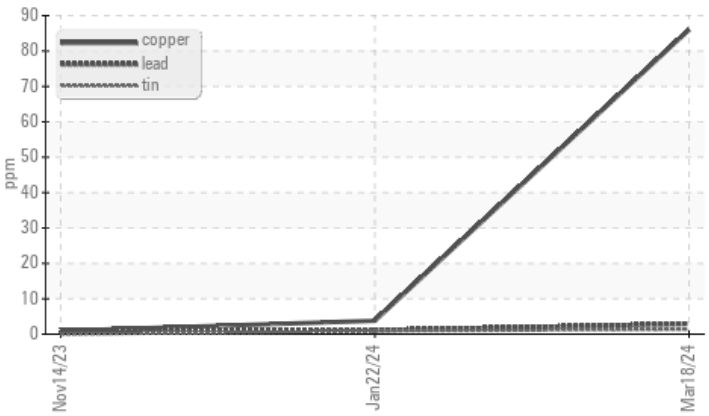
Machine Id
820052 PETERBILT 320
Component
Diesel Engine
Fluid
TIER ONE 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



▲ Non-ferrous Metals



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	ABNORMAL	SEVERE
Copper	ppm	ASTM D5185m	>85	▲ **86**	4	<1
Sodium	ppm	ASTM D5185m		▲ **2403**	▲ 216	42
Potassium	ppm	ASTM D5185m	>20	▲ **2295**	▲ 164	17
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

Customer Id: GFL642
Sample No.: GFL0061427
Lab Number: 06126979
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	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
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

22 Jan 2024 Diag: Jonathan Hester

GLYCOL

We advise that you check for the source of the coolant leak. Check for low coolant level. 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. Sodium and/or potassium levels are high. 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.

view report

14 Nov 2023 Diag: Wes Davis

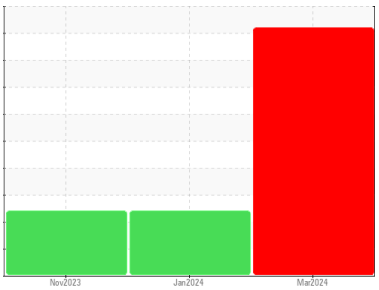
FUEL

We advise that you check the fuel injection system. 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 high 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. 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



GLYCOL

Machine Id
820052 PETERBILT 320
Component
Diesel Engine
Fluid
TIER ONE 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear
The copper level is abnormal. All other component wear rates are normal.

▲ Contamination
Sodium and/or potassium levels are high. 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		**GFL0061427**	GFL0102208	GFL0102204
Sample Date		Client Info		**18 Mar 2024**	22 Jan 2024	14 Nov 2023
Machine Age	hrs	Client Info		**15078**	15059	14462
Oil Age	hrs	Client Info		**277**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	0.5	▲ 10.9
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	**60**	33	30
Chromium	ppm	ASTM D5185m	>4	**2**	2	1
Nickel	ppm	ASTM D5185m	>2	**1**	<1	0
Titanium	ppm	ASTM D5185m		**1**	2	<1
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>25	**10**	7	6
Lead	ppm	ASTM D5185m	>45	**3**	1	1
Copper	ppm	ASTM D5185m	>85	▲ **86**	4	<1
Tin	ppm	ASTM D5185m	>4	**1**	<1	0
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**7**	8	2
Barium	ppm	ASTM D5185m		**2**	0	<1
Molybdenum	ppm	ASTM D5185m		**208**	83	54
Manganese	ppm	ASTM D5185m		**2**	4	0
Magnesium	ppm	ASTM D5185m		**812**	1070	762
Calcium	ppm	ASTM D5185m		**1072**	1260	926
Phosphorus	ppm	ASTM D5185m		**1003**	1226	835
Zinc	ppm	ASTM D5185m		**1137**	1441	1064
Sulfur	ppm	ASTM D5185m		**3296**	4236	2711

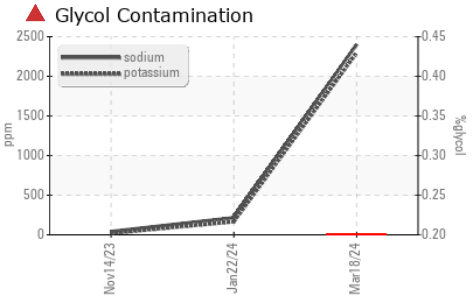
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**16**	20	5
Sodium	ppm	ASTM D5185m		▲ **2403**	▲ 216	42
Potassium	ppm	ASTM D5185m	>20	▲ **2295**	▲ 164	17
Glycol	%	*ASTM D2982		▲ **0.20**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.9**	0.7	0.9
Nitration	Abs/cm	*ASTM D7624	>20	**15.9**	7.7	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.0**	19.9	22.0

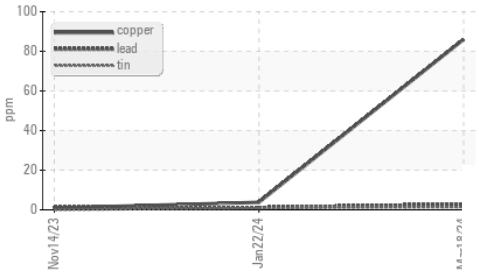
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.2**	14.8	21.1
Base Number (BN)	mg KOH/g	ASTM D2896		**25.8**	9.8	7.2

OIL ANALYSIS REPORT

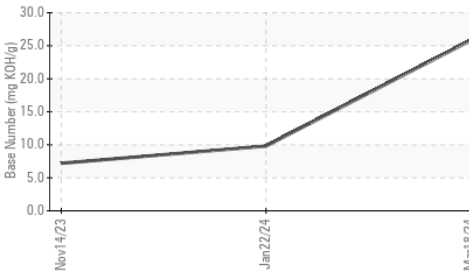
Glycol Contamination



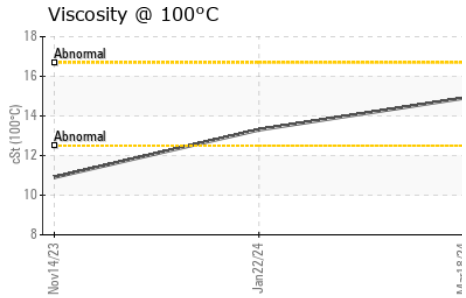
Non-ferrous Metals



Base Number



Viscosity @ 100°C

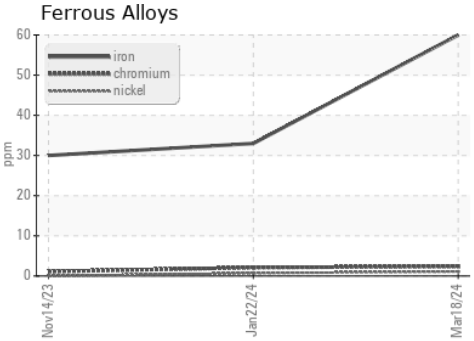


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

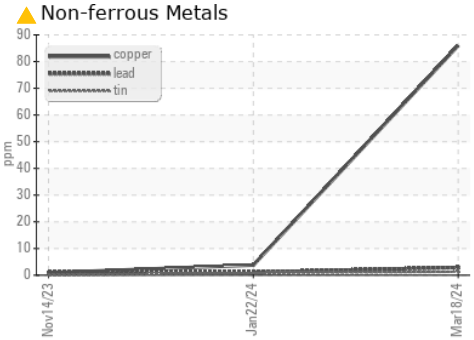
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**14.9**	13.3	▲ 10.9

GRAPHS

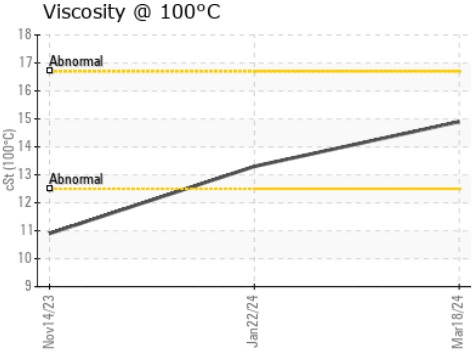
Ferrous Alloys



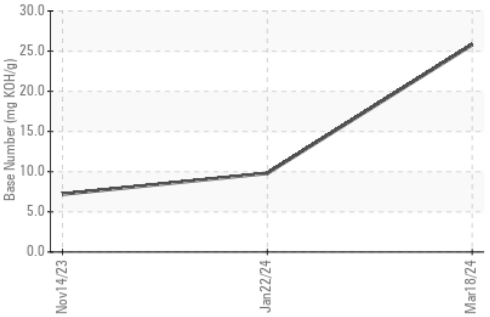
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0061427
Lab Number : 06126979
Unique Number : 10941130
Test Package : FLEET (Additional Tests: Glycol)

Received : 22 Mar 2024
Tested : 27 Mar 2024
Diagnosed : 27 Mar 2024 - Jonathan Hester

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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