FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

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

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

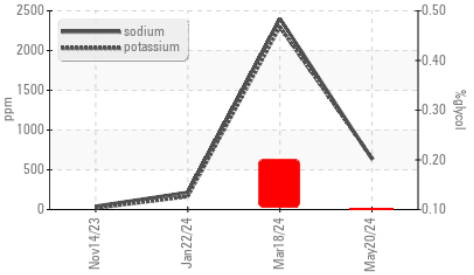
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. Light fuel dilution occurring.

FLUID CONDITION

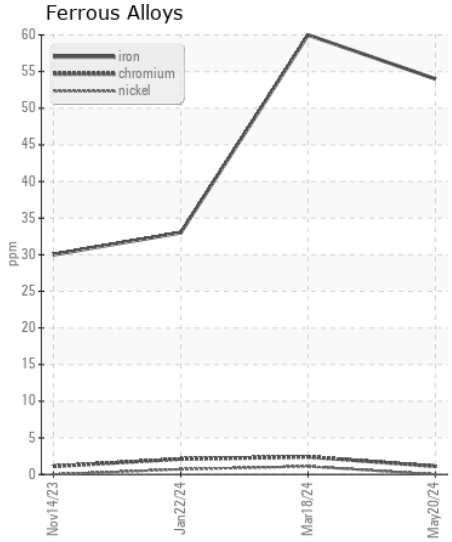
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0115240	GFL0061427	GFL0102208
Sample Date		Client Info		20 May 2024	18 Mar 2024	22 Jan 2024
Machine Age	hrs	Client Info		15422	15078	15059
Oil Age	hrs	Client Info		3	277	600
Filter Age	hrs	Client Info		3	277	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>110	54	60	33
Chromium	ppm	ASTM D5185m	>4	1	2	2
Nickel	ppm	ASTM D5185m	>2	0	1	<1
Titanium	ppm	ASTM D5185m		2	1	2
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>25	7	10	7
Lead	ppm	ASTM D5185m	>45	4	3	1
Copper	ppm	ASTM D5185m	>85	▲ 137	▲ 86	4
Tin	ppm	ASTM D5185m	>4	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	10	16	20
Potassium	ppm	ASTM D5185m	>20	▲ 645	▲ 2295	▲ 164
Fuel	%	ASTM D3524	>5	▲ 3.9	<1.0	0.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.10	▲ 0.20	NEG
Soot %	%	*ASTM D7844	>3	1.3	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	11.3	15.9	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	22.0	19.9
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
Sodium	ppm	ASTM D5185m		▲ 634	▲ 2403	▲ 216
Boron	ppm	ASTM D5185m		13	7	8
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		92	208	83
Manganese	ppm	ASTM D5185m		1	2	4
Magnesium	ppm	ASTM D5185m		849	812	1070
Calcium	ppm	ASTM D5185m		1072	1072	1260
Phosphorus	ppm	ASTM D5185m		998	1003	1226
Zinc	ppm	ASTM D5185m		1190	1137	1441
Sulfur	ppm	ASTM D5185m		3374	3296	4236
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	16.2	14.8
Base Number (BN)	mg KOH/g	ASTM D2896		10.6	25.8	9.8
Visc @ 100°C	cSt	ASTM D445		12.2	14.9	13.3

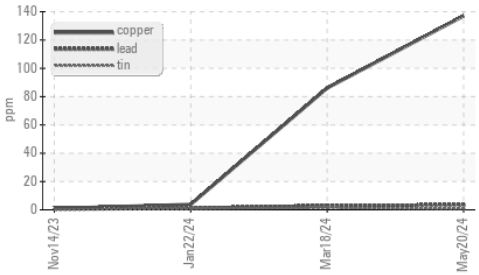
Glycol Contamination



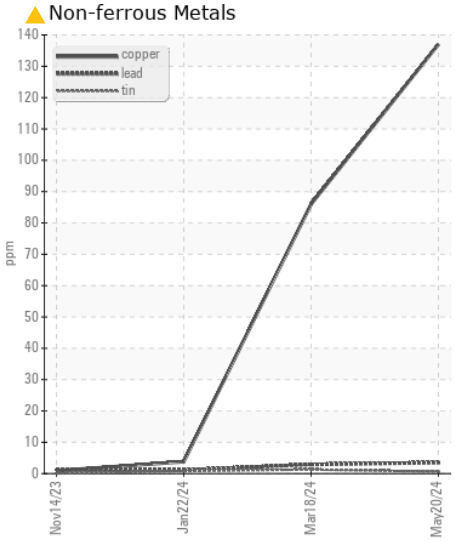
Ferrous Alloys



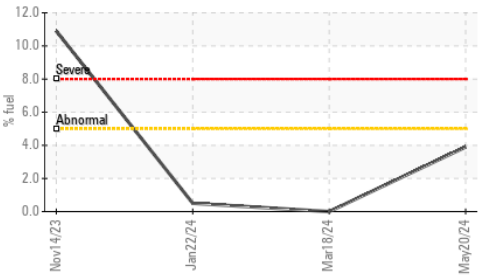
Non-ferrous Metals



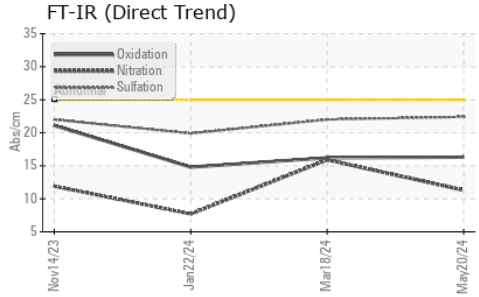
Non-ferrous Metals



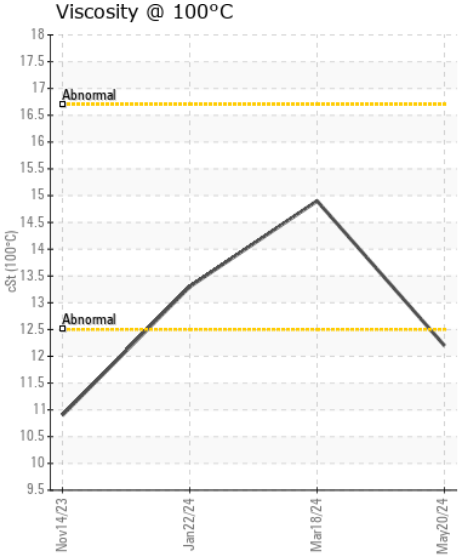
Fuel Dilution



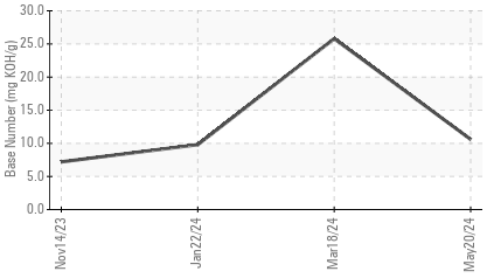
FT-IR (Direct Trend)



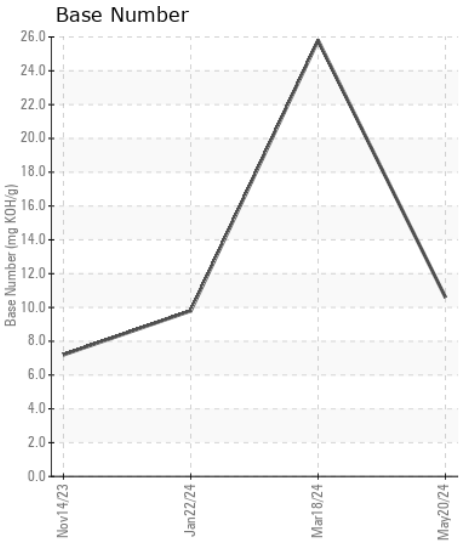
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115240
Lab Number : 06196485
Unique Number : 11058608
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 31 May 2024
Tested : 05 Jun 2024
Diagnosed : 05 Jun 2024 - Don Baldridge

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)

GFL Environmental - 642- Grand Rapids Hauling
5826 Alden Nash Ave SE
Lowell, MI
US 49331
Contact: Josh Arnett
joshuaarnett@gflenv.com
T:
F: