



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**822052 PETERBILT 320**  
 Component  
**Diesel Engine**  
 Fluid  
**TIER ONE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0115234</b>	GFL0110980	GFL0102221
Sample Date		Client Info		<b>08 Jul 2024</b>	10 Apr 2024	26 Feb 2024
Machine Age	hrs	Client Info		<b>14446</b>	14039	13887
Oil Age	hrs	Client Info		<b>543</b>	13	100
Filter Age	hrs	Client Info		<b>543</b>	0	100
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	<b>13</b>	21	12
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>2</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	7	6
Lead	ppm	ASTM D5185m	>45	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>85	<b>&lt;1</b>	4	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

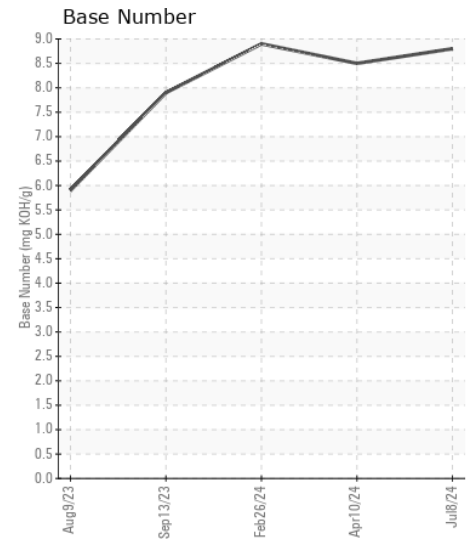
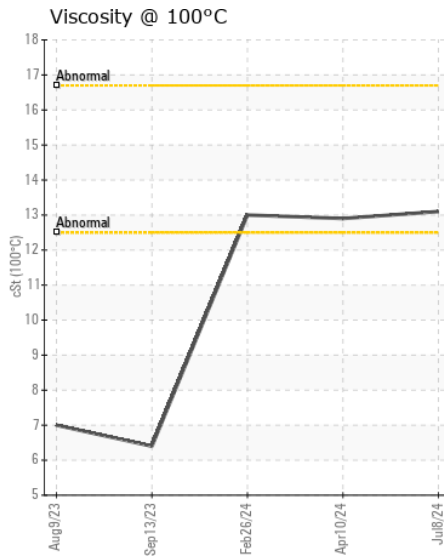
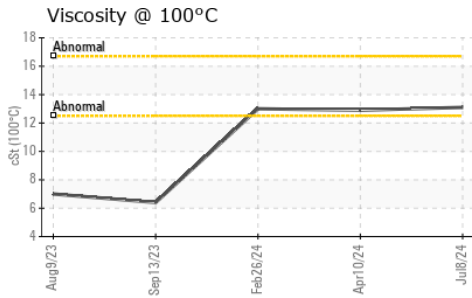
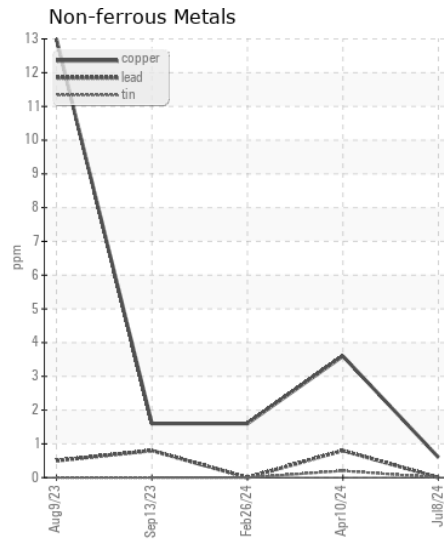
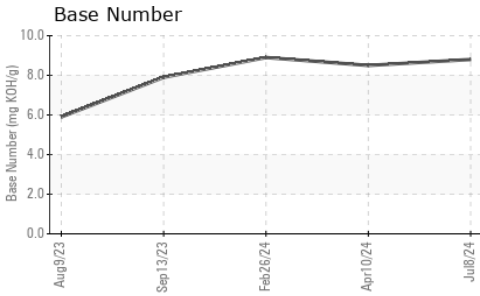
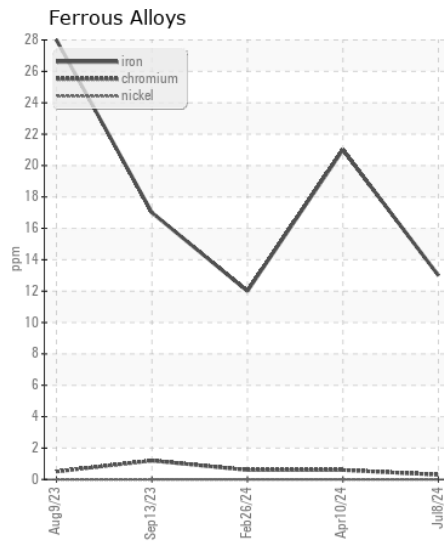
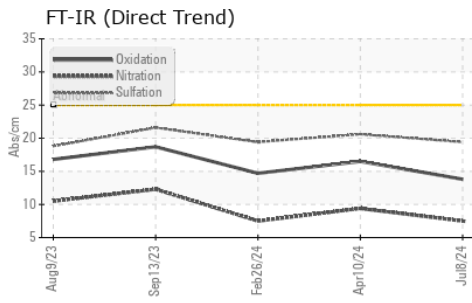
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	<b>9</b>	8	7
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	18	18
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	1.6
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	9.4	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.4</b>	20.6	19.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	7	7
Boron	ppm	ASTM D5185m		<b>7</b>	9	10
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>56</b>	57	55
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>858</b>	898	858
Calcium	ppm	ASTM D5185m		<b>1228</b>	1131	1020
Phosphorus	ppm	ASTM D5185m		<b>1034</b>	1047	1017
Zinc	ppm	ASTM D5185m		<b>1242</b>	1275	1201
Sulfur	ppm	ASTM D5185m		<b>3632</b>	3641	3027
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.8</b>	16.5	14.7
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.8</b>	8.5	8.9
Visc @ 100°C	cSt	ASTM D445		<b>13.1</b>	12.9	13.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0115234  
**Lab Number** : 06234292  
**Unique Number** : 11123126  
**Test Package** : FLEET

**Received** : 11 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Wes Davis

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

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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F: