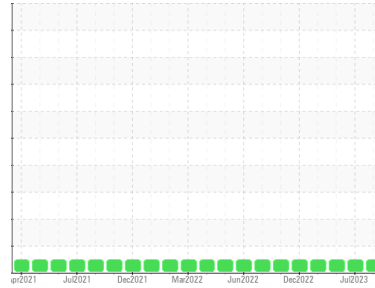




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**2831 PETERBILT 567**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 40 (48 QTS)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>GFL0089271</b>	GFL0087124	GFL0056724
Sample Date	Client Info			<b>30 Aug 2023</b>	17 Jul 2023	05 May 2023
Machine Age	hrs	Client Info		<b>12447</b>	11981	11404
Oil Age	hrs	Client Info		<b>1043</b>	577	429
Oil Changed	Client Info			<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>165	<b>7</b>	9	4
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	0
Lead	ppm	ASTM D5185m	>150	<b>0</b>	2	<1
Copper	ppm	ASTM D5185m	>90	<b>4</b>	2	2
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>0</b>	2	8
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>62</b>	66	63
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>988</b>	1068	927
Calcium	ppm	ASTM D5185m	3000	<b>1137</b>	1194	1048
Phosphorus	ppm	ASTM D5185m	1150	<b>1046</b>	1152	1049
Zinc	ppm	ASTM D5185m	1350	<b>1307</b>	1384	1262
Sulfur	ppm	ASTM D5185m	4250	<b>3699</b>	3884	3790

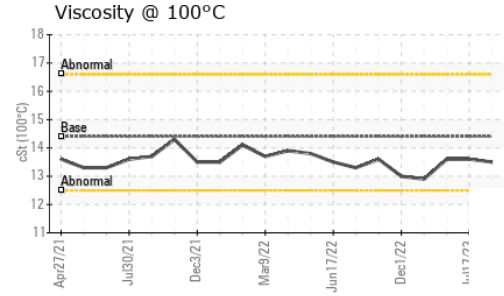
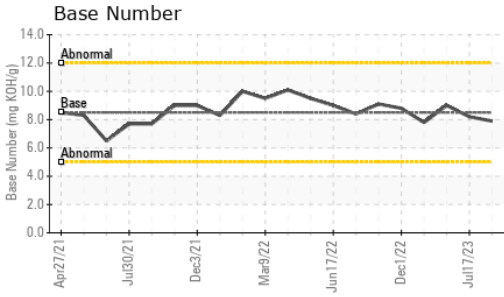
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	<b>12</b>	25	33
Sodium	ppm	ASTM D5185m	>216	<b>4</b>	5	2
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	<b>0.3</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	8.4	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	20.0	18.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	16.1	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.9</b>	8.2	9.0



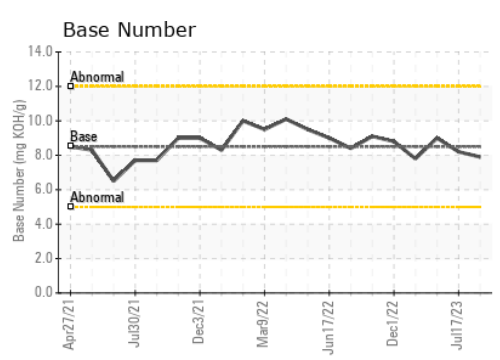
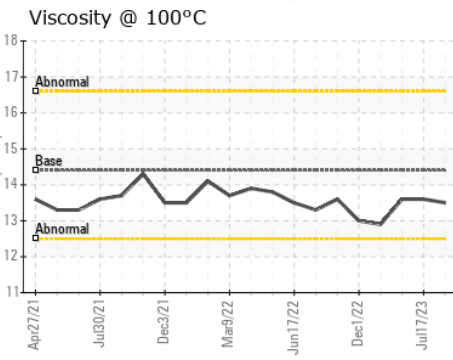
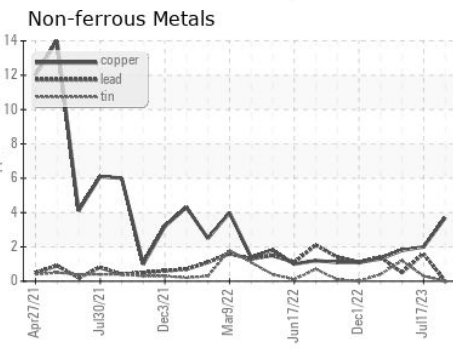
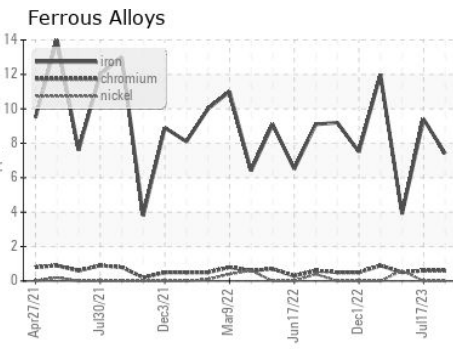
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.5</b>	13.6	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0089271 **Received** : 31 Aug 2023  
**Lab Number** : **05939557** **Diagnosed** : 31 Aug 2023  
**Unique Number** : 10630169 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 001 - Raleigh(CNG)**  
 3741 Conquest Drive  
 Garner, NC  
 US 27529  
 Contact: Craig Johnson  
 craig.johnson@gflenv.com  
 T: (919)662-7100  
 F: (919)662-7130

Certificate L2367  
 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)