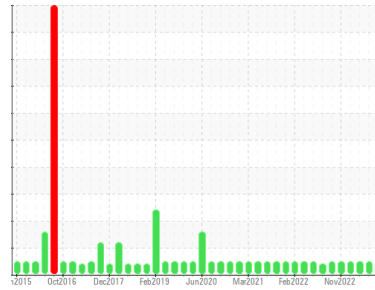




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**2517 PETERBILD isx-12**  
 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>GFL0094662</b>	GFL0089321	GFL0089343
Sample Date	Client Info	<b>06 Nov 2023</b>	04 Aug 2023	20 Jul 2023
Machine Age	hrs	<b>23059</b>	22518	22396
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Changed	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>18</b>	15	13
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	<1	2
Lead	ppm ASTM D5185m >150	<b>1</b>	<1	0
Copper	ppm ASTM D5185m >90	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	<b>4</b>	2	3
Barium	ppm ASTM D5185m 10	<b>5</b>	0	<1
Molybdenum	ppm ASTM D5185m 100	<b>66</b>	66	67
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 450	<b>950</b>	946	1099
Calcium	ppm ASTM D5185m 3000	<b>1153</b>	1151	1217
Phosphorus	ppm ASTM D5185m 1150	<b>1128</b>	1099	1187
Zinc	ppm ASTM D5185m 1350	<b>1251</b>	1271	1446
Sulfur	ppm ASTM D5185m 4250	<b>3226</b>	3042	4037

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	<b>6</b>	6	7
Sodium	ppm ASTM D5185m >216	<b>2</b>	0	4
Potassium	ppm ASTM D5185m >20	<b>3</b>	3	1

## INFRA-RED

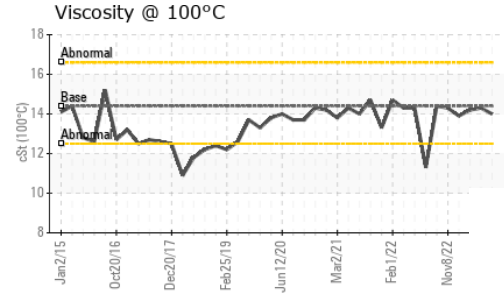
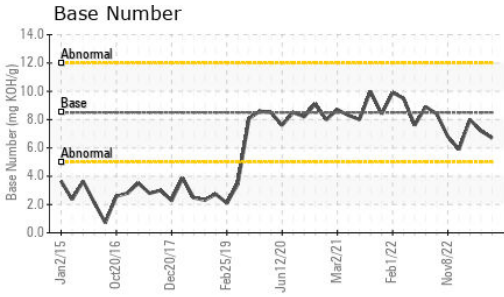
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >7.5	<b>0.5</b>	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>11.7</b>	10.1	10.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>23.5</b>	21.6	21.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>21.0</b>	18.7	18.7
Base Number (BN)	mg KOH/g ASTM D2896 8.5	<b>6.7</b>	7.2	8.0



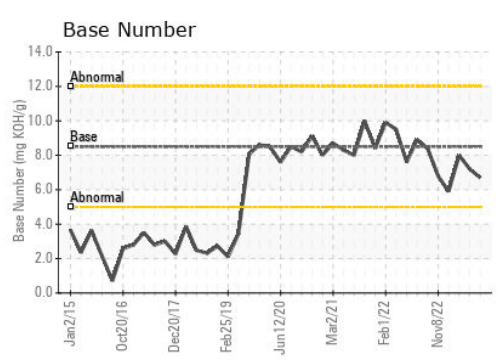
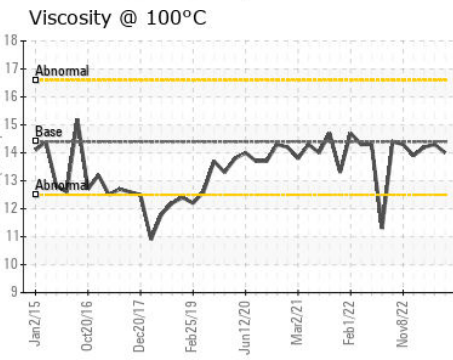
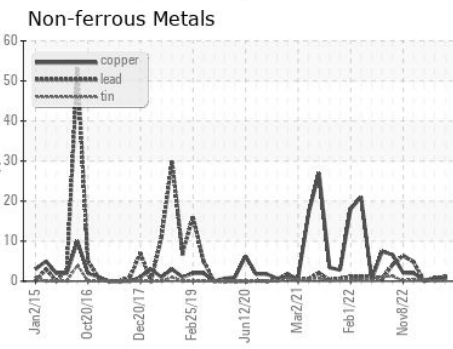
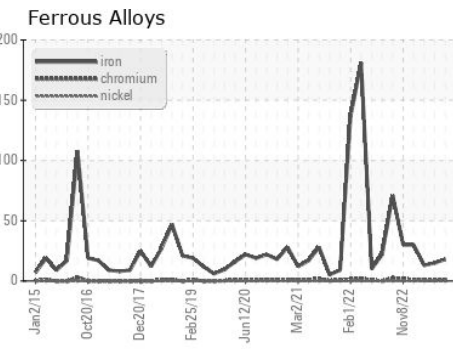
# OIL ANALYSIS REPORT



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>14.0</b>	14.3	14.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0094662 **Received** : 07 Nov 2023  
**Lab Number** : **06000223** **Diagnosed** : 07 Nov 2023  
**Unique Number** : 10728583 **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)