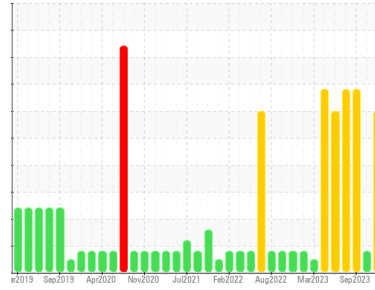




# PROBLEM SUMMARY

Area  
**Store 1 - Cowen [146783]**  
 Machine Id  
**PETERBILT 389 1XPXD40X0KD604035**  
 Component  
**Front Differential**  
 Fluid  
**GEAR OIL SAE 75W90 (5 GAL)**

Sample Rating Trend

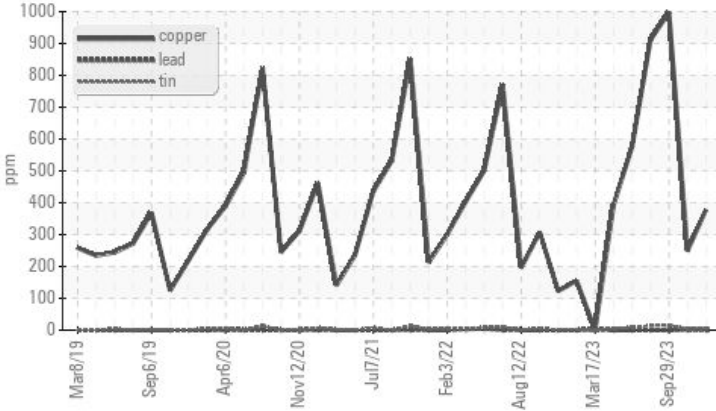


**WEAR**



## COMPONENT CONDITION SUMMARY

### Non-ferrous Metals



## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>SEVERE</b>	ABNORMAL	SEVERE
Copper	ppm	ASTM D5185m	>100	<b>378</b>	249	998

**Customer Id:** LESMAROH  
**Sample No.:** LEC0041129  
**Lab Number:** 06061482  
**Test Package:** CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Sean Felton +1 919-379-4092  
[sfelton@wearcheckusa.com](mailto:sfelton@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

## HISTORICAL DIAGNOSIS

### 17 Nov 2023 Diag: Sean Felton

#### WEAR



No corrective action is recommended at this time. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



### 29 Sep 2023 Diag: Sean Felton

#### WEAR



Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. The copper level is severe. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



### 07 Aug 2023 Diag: Sean Felton

#### WEAR



We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. The copper level is severe. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

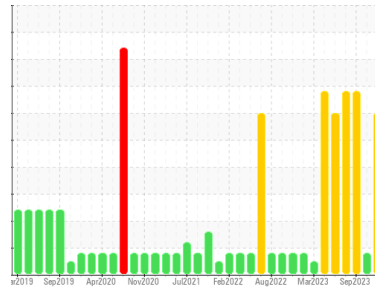
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**Store 1 - Cowen [146783]**  
 Machine Id  
**PETERBILT 389 1XPXD40X0KD604035**  
 Component  
**Front Differential**  
 Fluid  
**GEAR OIL SAE 75W90 (5 GAL)**

**DIAGNOSIS**

**Recommendation**  
 We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

**Wear**  
 Bearing and/or bushing wear is indicated.

**Contamination**  
 There is no indication of any contamination in the oil.

**Fluid Condition**  
 The oil is no longer serviceable as a result of the abnormal and/or severe wear.

**SAMPLE INFORMATION**

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>LEC0041129</b>	LEC0045968	LEC0043632
Sample Date	Client Info		<b>12 Jan 2024</b>	17 Nov 2023	29 Sep 2023
Machine Age	mls	Client Info	<b>533203</b>	518295	502301
Oil Age	mls	Client Info	<b>30902</b>	15994	59939
Oil Changed	Client Info		<b>Not Changd</b>	Not Changd	Changed
Sample Status			<b>SEVERE</b>	ABNORMAL	SEVERE

**CONTAMINATION**

	method	limit/base	current	history1	history2
Water	WC Method	>.2	<b>NEG</b>	NEG	NEG

**WEAR METALS**

	method	limit/base	current	history1	history2
PQ	ASTM D8184		<b>30</b>	18	28
Iron	ppm	ASTM D5185m >500	<b>82</b>	47	147
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185m >25	<b>0</b>	2	0
Copper	ppm	ASTM D5185m >100	<b>378</b>	249	998
Tin	ppm	ASTM D5185m >10	<b>5</b>	4	15
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 400	<b>217</b>	206	186
Barium	ppm	ASTM D5185m 200	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 12	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>2</b>	<1	2
Magnesium	ppm	ASTM D5185m 12	<b>1</b>	0	4
Calcium	ppm	ASTM D5185m 150	<b>7</b>	4	19
Phosphorus	ppm	ASTM D5185m 1650	<b>1458</b>	1386	1453
Zinc	ppm	ASTM D5185m 125	<b>5</b>	2	11
Sulfur	ppm	ASTM D5185m 22500	<b>23434</b>	23645	20943

**CONTAMINANTS**

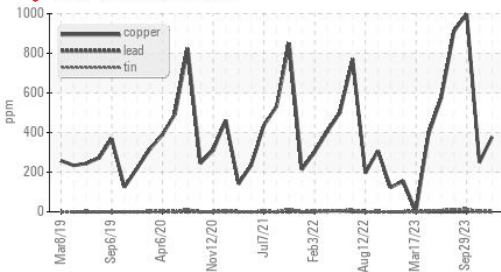
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	<b>24</b>	17	70
Sodium	ppm	ASTM D5185m	<b>0</b>	1	1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	0

**VISUAL**

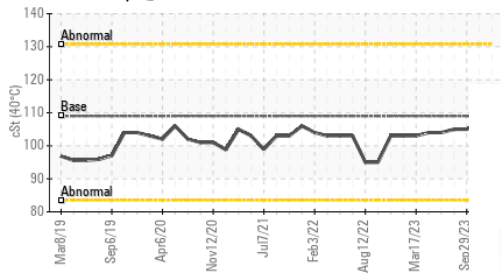
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
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 >.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG

# OIL ANALYSIS REPORT

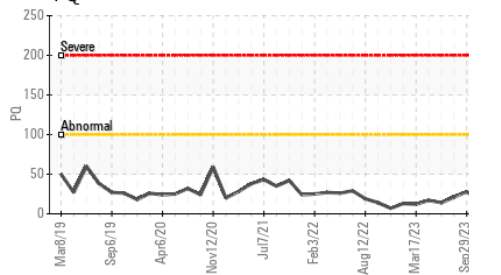
### Non-ferrous Metals



### Viscosity @ 40°C



### PQ



### FLUID PROPERTIES

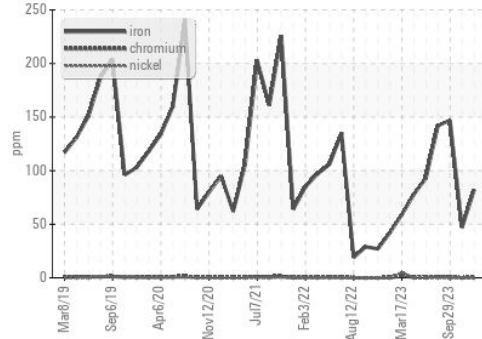
method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D445	109	107	105

### SAMPLE IMAGES

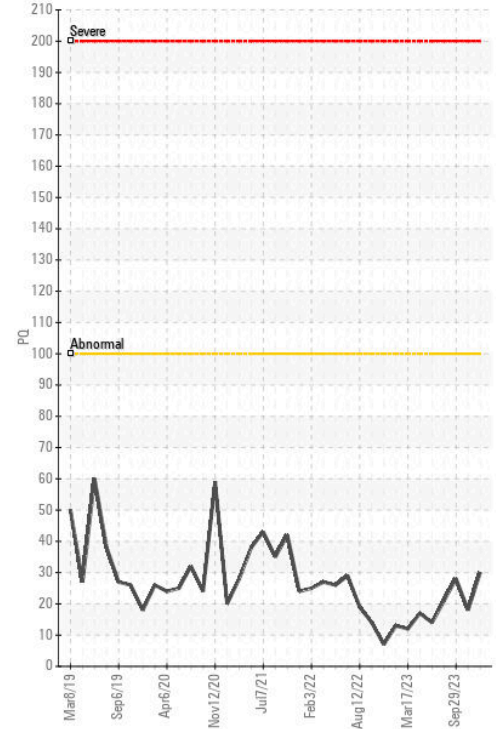
method	limit/base	current	history1	history2
Color		no image	no image	no image
Bottom		no image	no image	no image

### GRAPHS

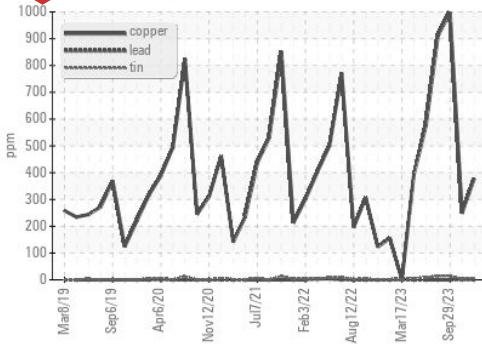
#### Ferrous Alloys



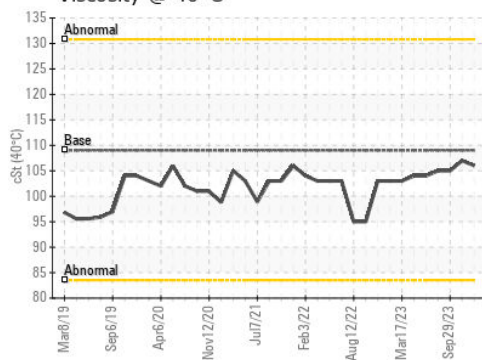
#### PQ



### Non-ferrous Metals



### Viscosity @ 40°C



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0041129 **Received** : 16 Jan 2024  
**Lab Number** : 06061482 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10832864 **Diagnostician** : Sean Felton  
**Test Package** : CONST ( Additional Tests: PQ )

**LESLIE EQUIPMENT COMPANY**  
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 MARIETTA, OH  
 US 45750-9765  
 Contact: LEANNE KENDALL  
 KendallLeanne@lec1.com  
 T:  
 F: (740)373-5570

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)