



# OIL ANALYSIS REPORT

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

Area  
**Rockaway**  
Machine Id  
**PETERBILT 6671**  
Component  
**Diesel Engine**  
Fluid  
**GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0858456</b>	WC0840416	WC0840418
Sample Date		Client Info		<b>15 Feb 2024</b>	15 Jan 2024	06 Nov 2023
Machine Age	hrs	Client Info		<b>16759</b>	9062865	90628
Oil Age	hrs	Client Info		<b>9062865</b>	90628	8671
Filter Age	hrs	Client Info		<b>9062865</b>	90628	8671
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR

Bearing and/or bushing wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	<b>38</b>	4	7
Chromium	ppm	ASTM D5185m	>4	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>22</b>	2	2
Lead	ppm	ASTM D5185m	>45	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m	>85	<b>▲ 71</b>	<1	3
Tin	ppm	ASTM D5185m	>4	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

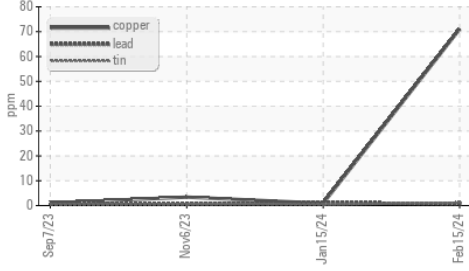
Silicon	ppm	ASTM D5185m	>30	<b>7</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>59</b>	3	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.3</b>	7.6	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.8</b>	19.0	19.3
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

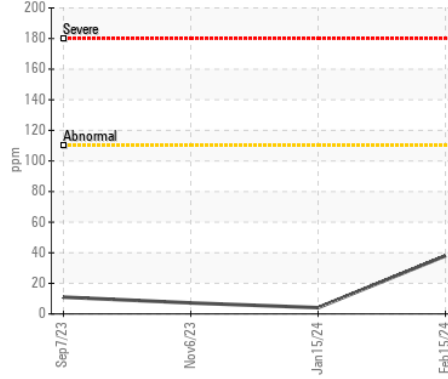
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>2</b>	1	0
Boron	ppm	ASTM D5185m		<b>7</b>	15	15
Barium	ppm	ASTM D5185m		<b>1</b>	0	<1
Molybdenum	ppm	ASTM D5185m	66	<b>63</b>	62	70
Manganese	ppm	ASTM D5185m		<b>2</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1000	<b>814</b>	796	829
Calcium	ppm	ASTM D5185m	1050	<b>1278</b>	1168	1324
Phosphorus	ppm	ASTM D5185m	1150	<b>895</b>	1084	1060
Zinc	ppm	ASTM D5185m	1270	<b>1191</b>	1245	1271
Sulfur	ppm	ASTM D5185m		<b>2612</b>	3275	3067
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.8</b>	14.5	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>6.1</b>	8.1	8.0
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.6</b>	14.2	14.3

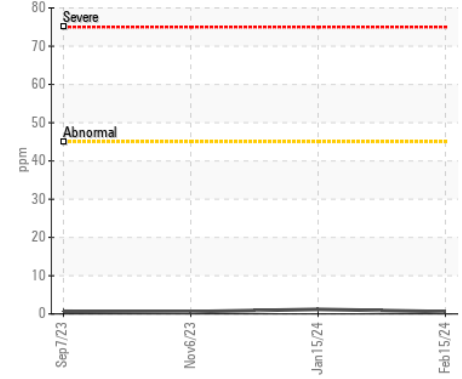
▲ Non-ferrous Metals



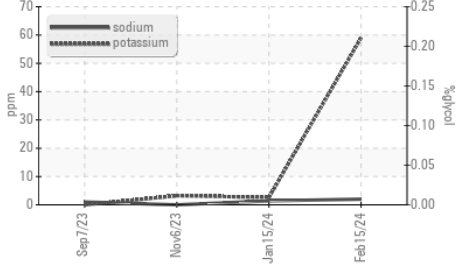
Iron (ppm)



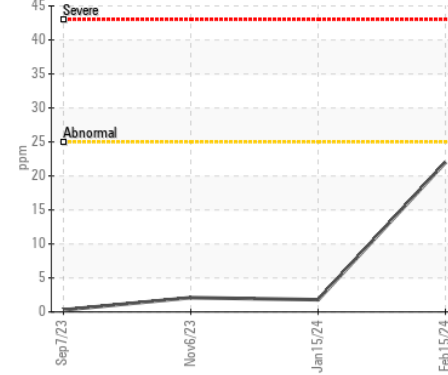
Lead (ppm)



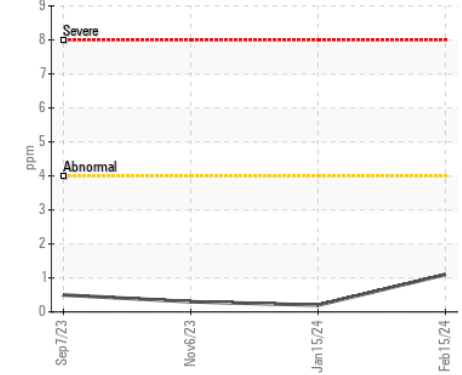
Glycol Contamination



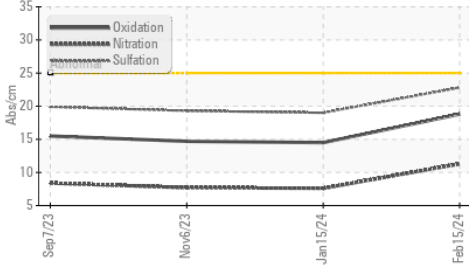
Aluminum (ppm)



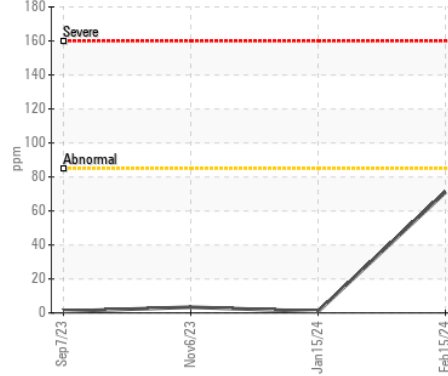
Chromium (ppm)



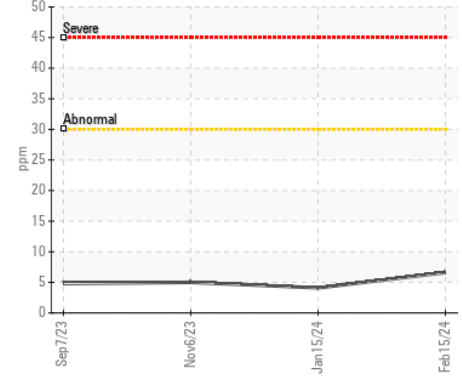
FT-IR (Direct Trend)



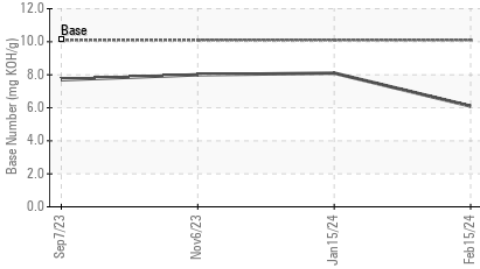
▲ Copper (ppm)



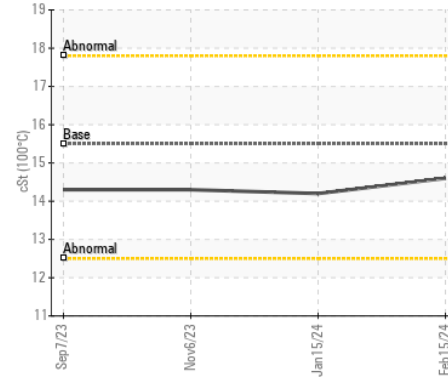
Silicon (ppm)



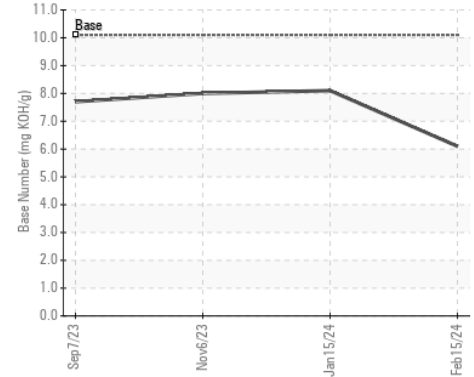
Base Number



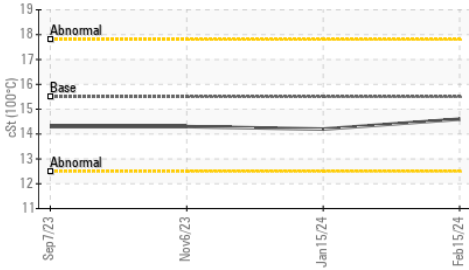
Viscosity @ 100°C



Base Number



Viscosity @ 100°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0858456 Received : 28 Jun 2024  
 Lab Number : 06223149 Tested : 28 Jun 2024  
 Unique Number : 11101346 Diagnosed : 30 Jun 2024 - Don Baldrige  
 Test Package : MOB 1 ( Additional Tests: TBN )

**INTERSTATE WASTE-ROCKAWAY**  
 311 WEST MAIN STREET, STE 8  
 ROCKAWAY, NJ  
 US 07866  
 Contact: Service Manager

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)

T:  
F: