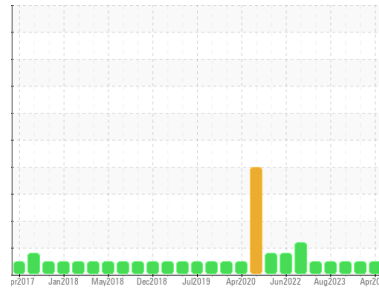




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**PETERBILT 348 RTK9746 (S/N 2NP3LJ0X8HM417297)**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (6 GAL)**

## 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>ARI0007320</b>	ARI06084447	ARI05998588
Sample Date	Client Info		<b>04 Apr 2024</b>	08 Feb 2024	05 Nov 2023
Machine Age	mls	Client Info	<b>141948</b>	138161	136321
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>9</b>	4	4
Chromium	ppm	ASTM D5185m >4	<b>1</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>5</b>	3	3
Lead	ppm	ASTM D5185m >45	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >85	<b>6</b>	3	1
Tin	ppm	ASTM D5185m >4	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>308</b>	347	267
Barium	ppm	ASTM D5185m 10	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 100	<b>115</b>	115	100
Manganese	ppm	ASTM D5185m	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 450	<b>605</b>	622	547
Calcium	ppm	ASTM D5185m 3000	<b>1456</b>	1642	1646
Phosphorus	ppm	ASTM D5185m 1150	<b>745</b>	801	783
Zinc	ppm	ASTM D5185m 1350	<b>870</b>	946	965
Sulfur	ppm	ASTM D5185m 4250	<b>2713</b>	2793	2757

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>9</b>	5	5
Sodium	ppm	ASTM D5185m >158	<b>2</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>3</b>	2	1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.0</b>	6.8	7.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.5</b>	22.9	23.0

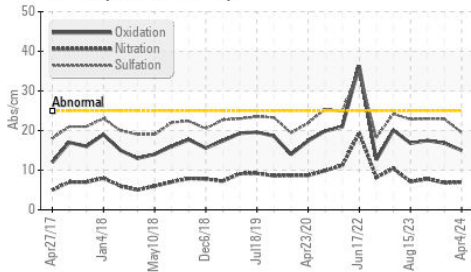
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.0</b>	16.8	17.5
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>5.0</b>	8.7	8.6

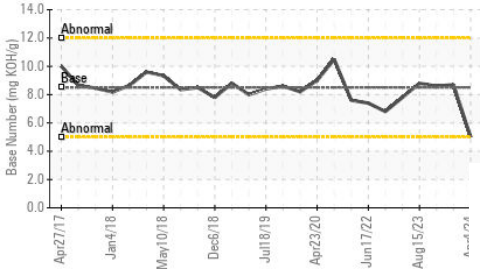


# OIL ANALYSIS REPORT

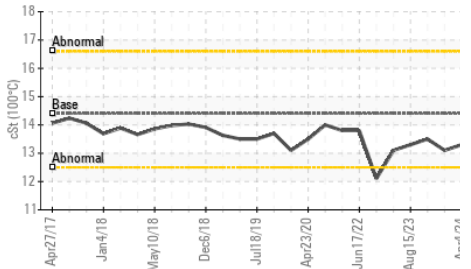
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

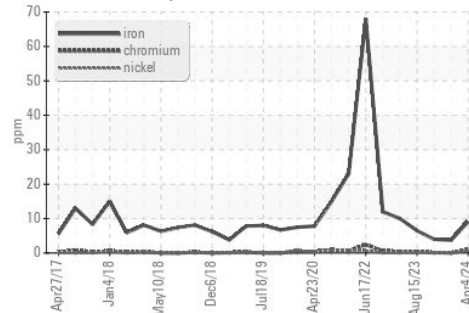


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

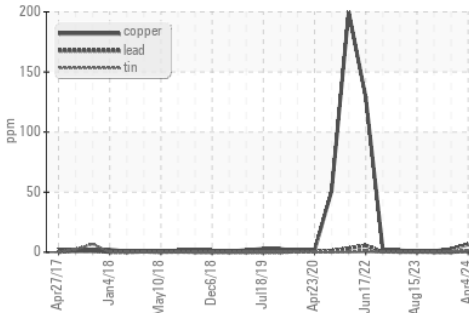
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.1

GRAPHS

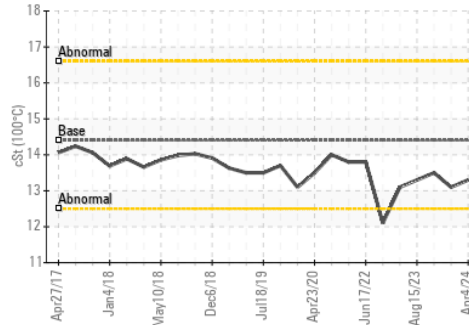
Ferrous Alloys



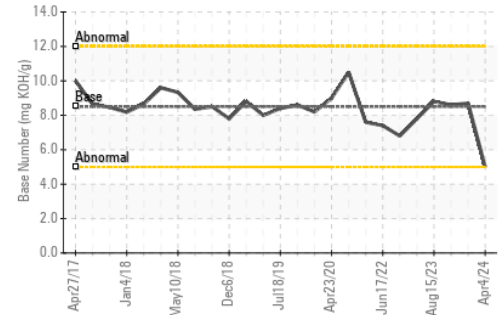
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : ARI0007320  
 Lab Number : 06142823  
 Unique Number : 10967631  
 Test Package : CONST ( Additional Tests: TBN )

Received : 09 Apr 2024  
 Tested : 10 Apr 2024  
 Diagnosed : 10 Apr 2024 - Wes Davis

**INSITUFORM TECHNOLOGIES, INC**  
 17988 EDISON AVE.  
 CHESTERFIELD, MO  
 US 63005

Contact: ANDY RICHTER  
 ARICHTER@INSITUFORM.COM  
 T: (314)280-7555

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)