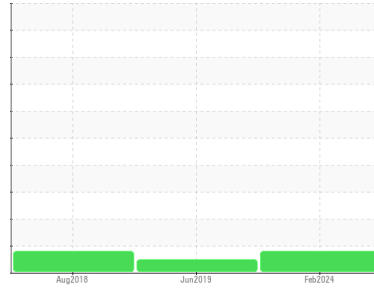




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**BLAWKNOX 617**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 15W40 (5 GAL)**

## DIAGNOSIS

### ▲ 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.

### ▲ Wear

Cylinder, crank, or cam shaft wear is indicated.

### 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>RW0005046</b>	RWM2321982	RWM2317887
Sample Date	Client Info		<b>03 Feb 2024</b>	21 Jun 2019	18 Aug 2018
Machine Age	hrs	Client Info	<b>0</b>	1625	1624
Oil Age	hrs	Client Info	<b>0</b>	125	100
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.21	<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	>51	<b>▲ 51</b>	8	<b>▲ 60</b>
Chromium	ppm	ASTM D5185m	>11	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>31	<b>4</b>	1	2
Lead	ppm	ASTM D5185m	>26	<b>3</b>	3	1
Copper	ppm	ASTM D5185m	>26	<b>3</b>	<1	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185m		<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	<b>55</b>	13	10
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>40</b>	61	55
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	450	<b>329</b>	901	704
Calcium	ppm	ASTM D5185m	3000	<b>1776</b>	1092	1244
Phosphorus	ppm	ASTM D5185m	1150	<b>924</b>	1112	885
Zinc	ppm	ASTM D5185m	1350	<b>1194</b>	1120	982
Sulfur	ppm	ASTM D5185m	4250	<b>3282</b>	2830	3175

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>22	<b>7</b>	3	3
Sodium	ppm	ASTM D5185m	>158	<b>0</b>	6	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	0.1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	4.9	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.2</b>	17.3	17.7

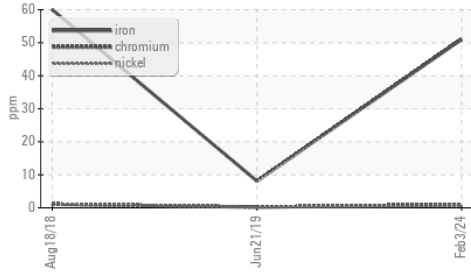
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.2</b>	12.8	12.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>10.23</b>	9.26	8.96

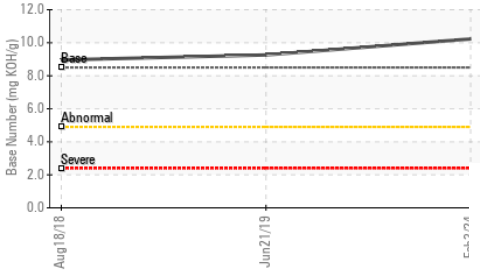


# OIL ANALYSIS REPORT

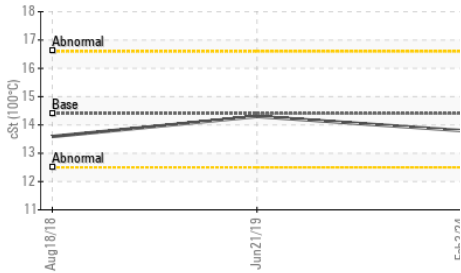
### ▲ Ferrous Alloys



### Base Number



### Viscosity @ 100°C

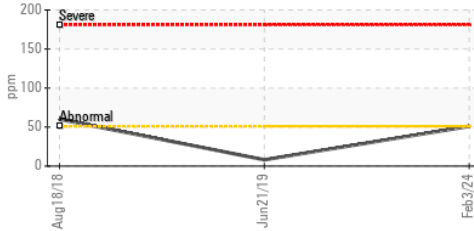


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

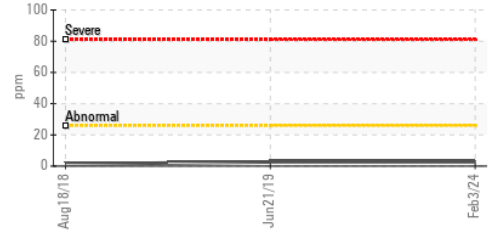
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	14.3

### GRAPHS

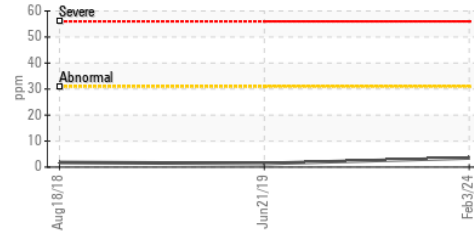
#### ▲ Iron (ppm)



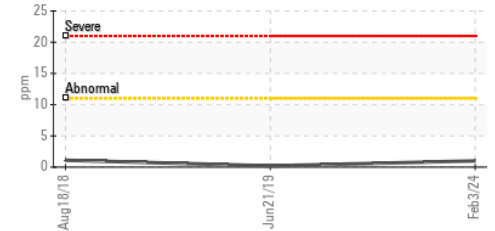
#### Lead (ppm)



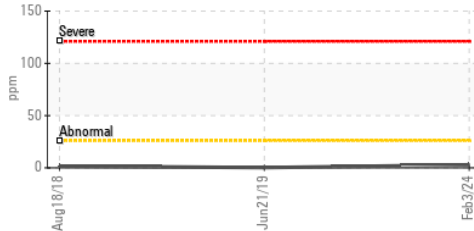
#### Aluminum (ppm)



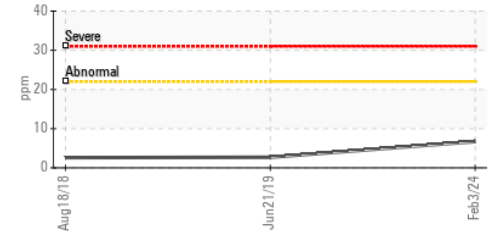
#### Chromium (ppm)



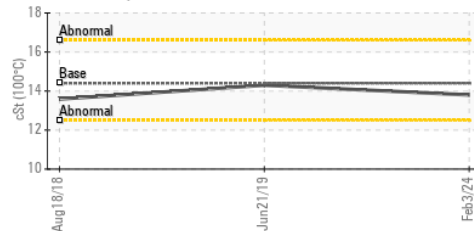
#### Copper (ppm)



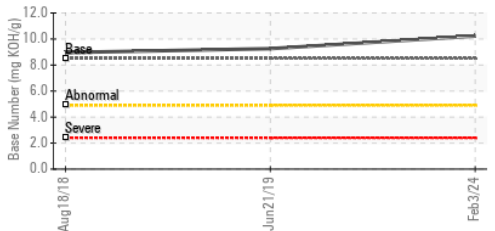
#### Silicon (ppm)



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0005046  
**Lab Number** : 06101136  
**Unique Number** : 10899366  
**Test Package** : MOB 2

**Received** : 26 Feb 2024  
**Tested** : 28 Feb 2024  
**Diagnosed** : 28 Feb 2024 - Sean Felton

**HALLACK CONTRACTING, INC.**  
 4223 W POLK  
 HART, MI  
 US 49420

Contact: DAN HALLACK KARL BUTCHER  
 shop@hallackcontracting.com

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)

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