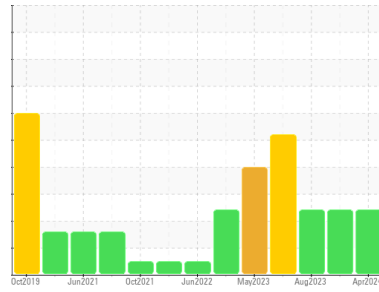


# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area  
**K5 CONSTRUCTION CORPORATION - HODGKINS IL**  
 Machine Id  
**4360**  
 Component  
**Diesel Engine**  
 Fluid  
**GASOLINE ENGINE OIL SAE 5W40 (15 hrs)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a high amount of fuel present in the oil.

### ▲ Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0122003</b>	LW0008344	LW0007729
Sample Date	Client Info			<b>19 Apr 2024</b>	11 Dec 2023	23 Aug 2023
Machine Age	hrs	Client Info		<b>8995</b>	8995	8995
Oil Age	hrs	Client Info		<b>8995</b>	222	102
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
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	>100	<b>37</b>	26	12
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>70</b>	78	84
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>6</b>	4	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	1
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	75	<b>48</b>	57	84
Barium	ppm	ASTM D5185m	5	<b>0</b>	12	0
Molybdenum	ppm	ASTM D5185m	100	<b>0</b>	2	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	12	<b>581</b>	571	651
Calcium	ppm	ASTM D5185m	2100	<b>1067</b>	1059	1212
Phosphorus	ppm	ASTM D5185m	650	<b>785</b>	809	904
Zinc	ppm	ASTM D5185m	850	<b>941</b>	951	1059
Sulfur	ppm	ASTM D5185m	2500	<b>3186</b>	2822	3771

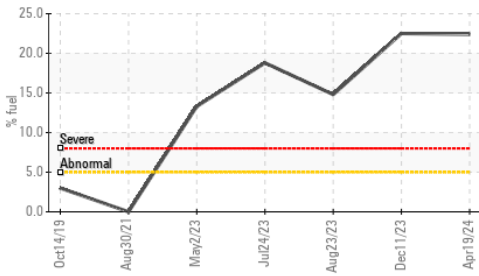
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>23</b>	22	20
Sodium	ppm	ASTM D5185m		<b>3</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	2
Fuel	%	ASTM D3524	>5	<b>▲ 22.4</b>	▲ 22.5	▲ 14.8

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.7</b>	11.8	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>27.3</b>	26.7	24.0

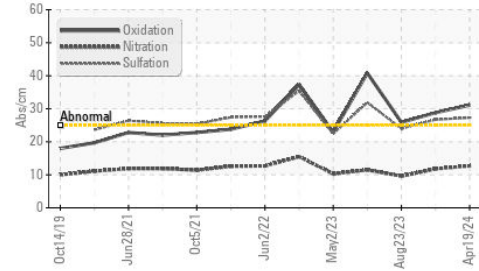
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>31.1</b>	28.8	25.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.1</b>	5.3	5.6

# OIL ANALYSIS REPORT

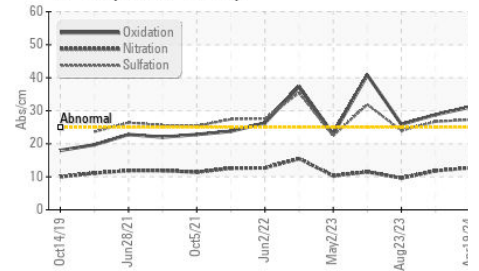
## Fuel Dilution



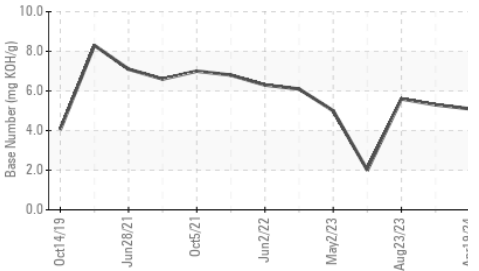
## FT-IR (Direct Trend)



## FT-IR (Direct Trend)



## Base Number



## VISUAL

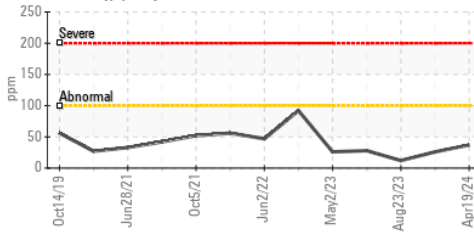
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

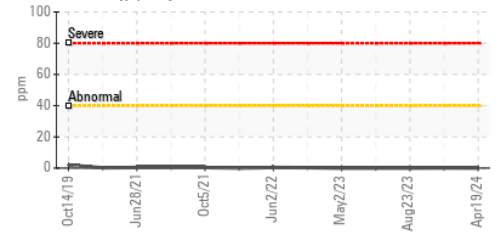
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 9.4	▲ 10.4

## GRAPHS

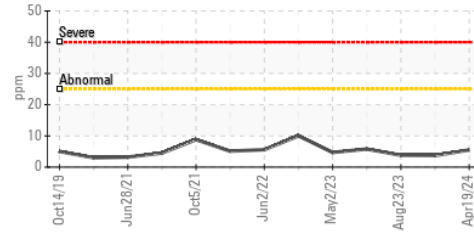
### Iron (ppm)



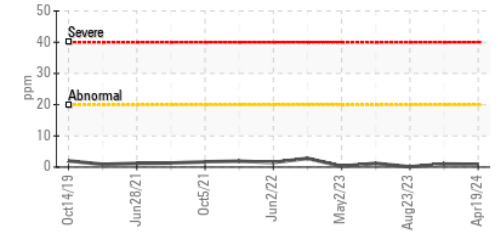
### Lead (ppm)



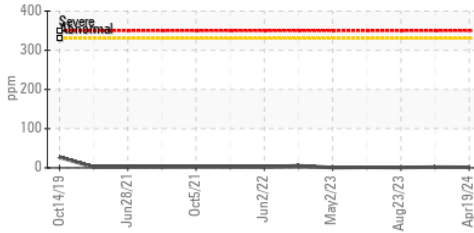
### Aluminum (ppm)



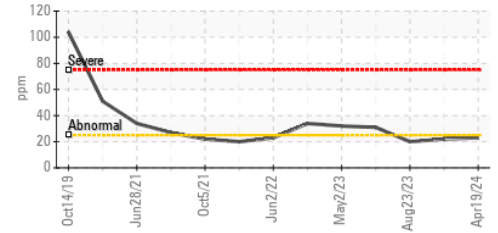
### Chromium (ppm)



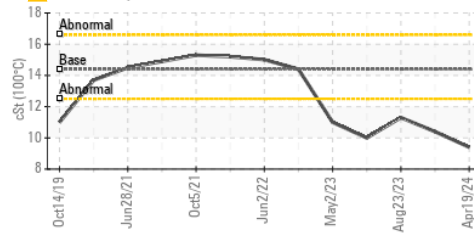
### Copper (ppm)



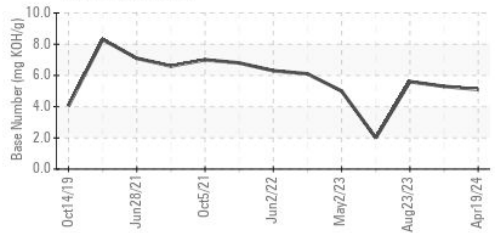
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : PCA0122003

**Lab Number** : 06160067

**Unique Number** : 10995490

**Test Package** : MOB 1 ( Additional Tests: PercentFuel, TBN )

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)

**Received** : 25 Apr 2024

**Tested** : 29 Apr 2024

**Diagnosed** : 29 Apr 2024 - Sean Felton

**K5 CONSTRUCTION CORPORATION**

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US 60525

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T: (630)257-5600

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