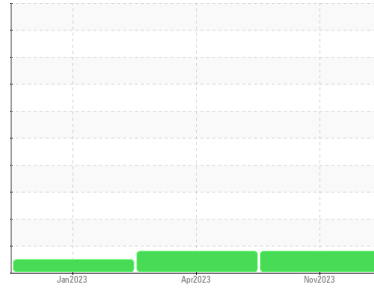




# PROBLEM SUMMARY

## Sample Rating Trend



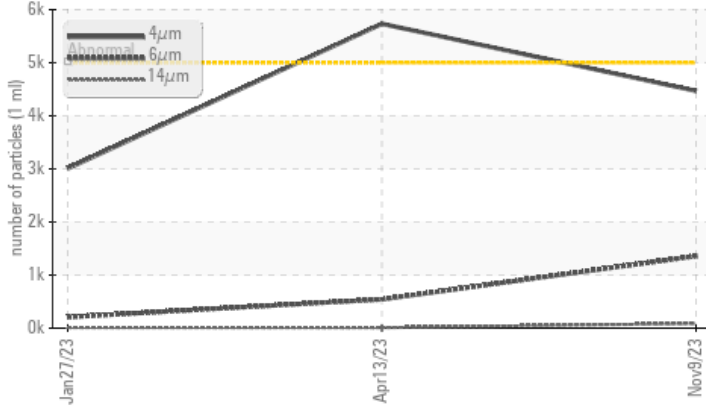
ISO



Machine Id  
**KD-1 GAS NOX**  
 Component  
**Pump**  
 Fluid  
**SAE 5W40 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status		ATTENTION	ATTENTION	NORMAL
Particles >6µm	ASTM D7647 >1300	▲ 1357	543	208
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 19/18/14	▲ 20/16/10	19/15/11

Customer Id: NRGDOV  
 Sample No.: USP255351  
 Lab Number: 06006377  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

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

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 13 Apr 2023 Diag: Doug Bogart

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 6 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 27 Jan 2023 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

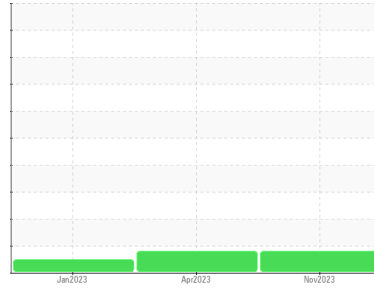
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**KD-1 GAS NOX**  
 Component  
**Pump**  
 Fluid  
**SAE 5W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>USP255351</b>	USP249787	USP246504
Sample Date	Client Info		<b>09 Nov 2023</b>	13 Apr 2023	27 Jan 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ATTENTION</b>	ATTENTION	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >90	<b>0</b>	<1	1
Chromium	ppm	ASTM D5185m >5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >7	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m >12	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >30	<b>0</b>	0	0
Tin	ppm	ASTM D5185m >9	<b>0</b>	0	0
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	<b>113</b>	153	159
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>39</b>	44	47
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>902</b>	920	865
Calcium	ppm	ASTM D5185m	<b>965</b>	972	968
Phosphorus	ppm	ASTM D5185m	<b>1031</b>	1041	1076
Zinc	ppm	ASTM D5185m	<b>1240</b>	1287	1217
Sulfur	ppm	ASTM D5185m	<b>3180</b>	3427	2790

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >60	<b>2</b>	5	4
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	1
Water	%	ASTM D6304 >.1	<b>0.046</b>	0.023	0.030
ppm Water	ppm	ASTM D6304 >1000	<b>462.2</b>	238.8	303.1

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>4469</b>	▲ 5734	3007
Particles >6µm	ASTM D7647	>1300	▲ <b>1357</b>	543	208
Particles >14µm	ASTM D7647	>160	<b>87</b>	9	11
Particles >21µm	ASTM D7647	>40	<b>22</b>	2	3
Particles >38µm	ASTM D7647	>10	<b>2</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ <b>19/18/14</b>	▲ 20/16/10	19/15/11

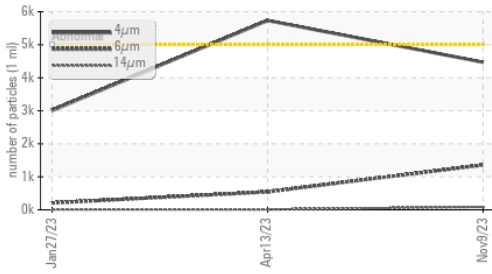
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.562</b>	1.49	1.56

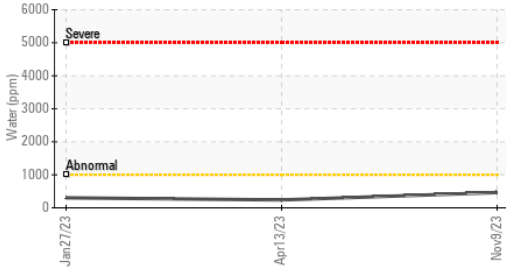


# OIL ANALYSIS REPORT

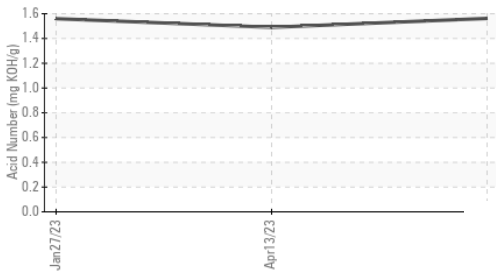
▲ Particle Trend



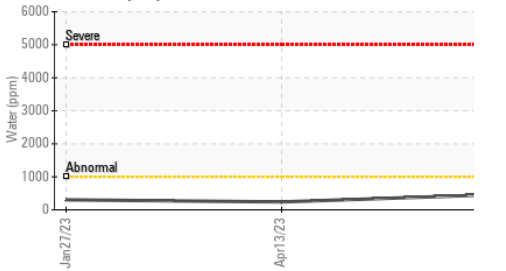
Water (KF)



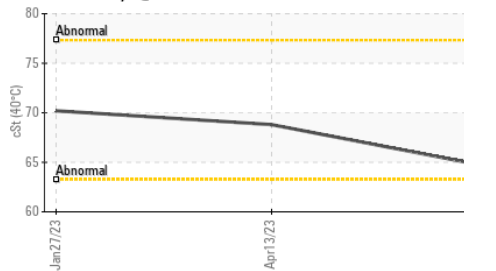
Acid Number



Water (KF)



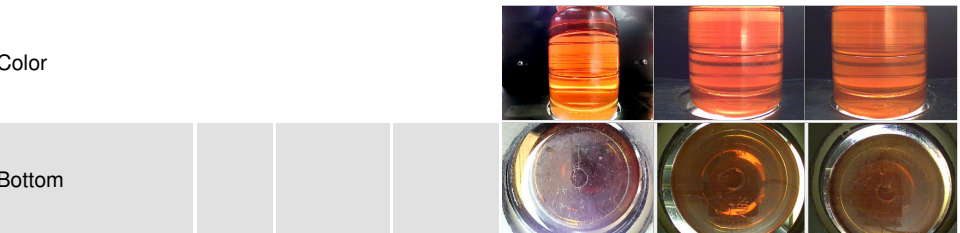
Viscosity @ 40°C



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	>.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

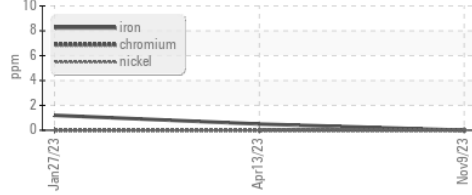
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	64.6	68.8	70.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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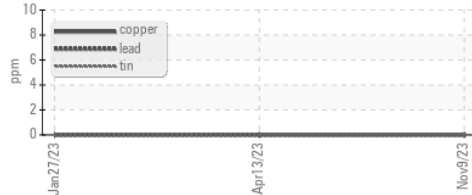


## GRAPHS

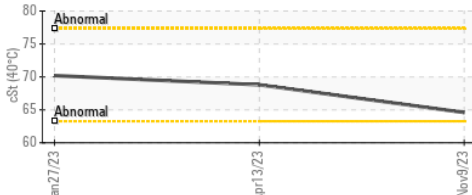
Ferrous Alloys



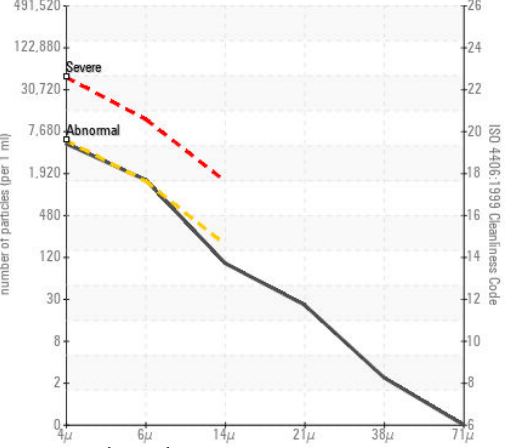
Non-ferrous Metals



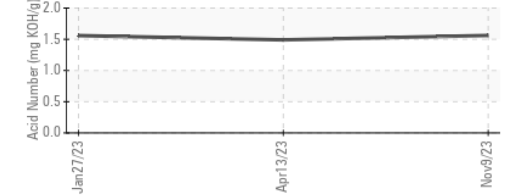
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP255351 **Received** : 13 Nov 2023  
**Lab Number** : 06006377 **Diagnosed** : 15 Nov 2023  
**Unique Number** : 10740139 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

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 US 19904  
 Contact: ERNIE JUST  
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 T: (302)678-4353  
 F:

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)