



PROBLEM SUMMARY

Sample Rating Trend

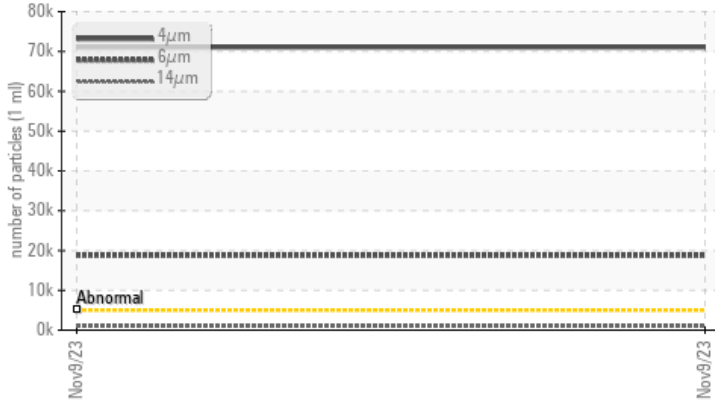
ISO



Machine Id
KD-2 LIQUID NOX PUMP
Component
Gearbox
Fluid
NOT GIVEN (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please specify the brand and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	---	---
Particles >4µm	ASTM D7647	>5000	▲ 71067	---	---
Particles >6µm	ASTM D7647	>1300	▲ 18762	---	---
Particles >14µm	ASTM D7647	>160	▲ 955	---	---
Particles >21µm	ASTM D7647	>40	▲ 278	---	---
Particles >38µm	ASTM D7647	>10	▲ 32	---	---
Particles >71µm	ASTM D7647	>3	▲ 6	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 23/21/17	---	---

Customer Id: NRGDOV
Sample No.: USP255337
Lab Number: 06006372
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

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KD-2 LIQUID NOX PUMP
 Component
Gearbox
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please specify the brand and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates 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	USP255337	---	---
Sample Date	Client Info	09 Nov 2023	---	---
Machine Age	hrs Client Info	0	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >200	0	---	---
Chromium ppm	ASTM D5185m >15	0	---	---
Nickel ppm	ASTM D5185m >15	0	---	---
Titanium ppm	ASTM D5185m	0	---	---
Silver ppm	ASTM D5185m	0	---	---
Aluminum ppm	ASTM D5185m >25	0	---	---
Lead ppm	ASTM D5185m >100	0	---	---
Copper ppm	ASTM D5185m >200	0	---	---
Tin ppm	ASTM D5185m >25	0	---	---
Vanadium ppm	ASTM D5185m	0	---	---
Cadmium ppm	ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185m	0	---	---
Barium ppm	ASTM D5185m	0	---	---
Molybdenum ppm	ASTM D5185m	0	---	---
Manganese ppm	ASTM D5185m	0	---	---
Magnesium ppm	ASTM D5185m	0	---	---
Calcium ppm	ASTM D5185m	0	---	---
Phosphorus ppm	ASTM D5185m	454	---	---
Zinc ppm	ASTM D5185m	0	---	---
Sulfur ppm	ASTM D5185m	57	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >50	18	---	---
Sodium ppm	ASTM D5185m	0	---	---
Potassium ppm	ASTM D5185m >20	0	---	---
Water %	ASTM D6304 >0.2	0.004	---	---
ppm Water	ASTM D6304 >2000	44.1	---	---

FLUID CLEANLINESS

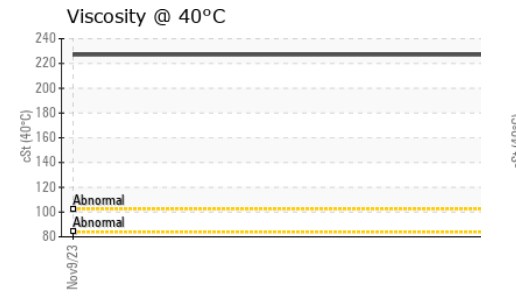
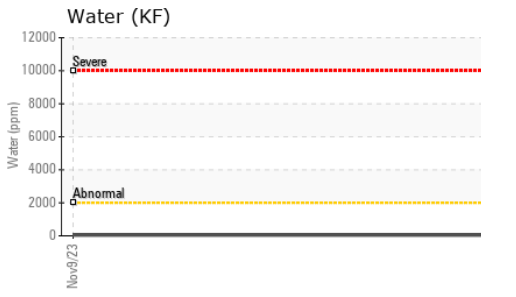
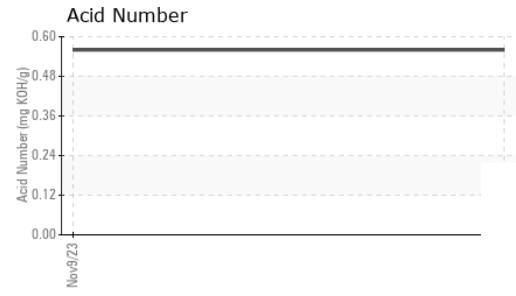
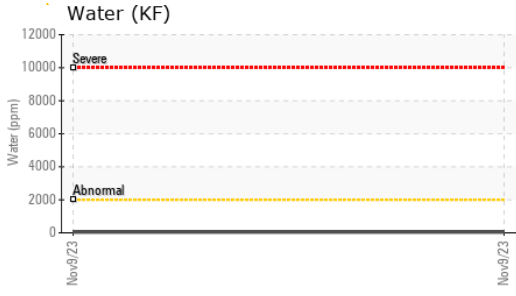
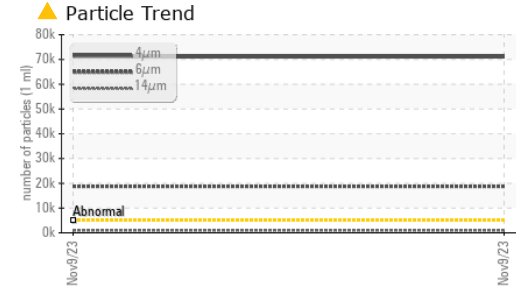
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 71067	---	---
Particles >6µm	ASTM D7647 >1300	▲ 18762	---	---
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Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 23/21/17	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D8045	0.56	---	---





OIL ANALYSIS REPORT



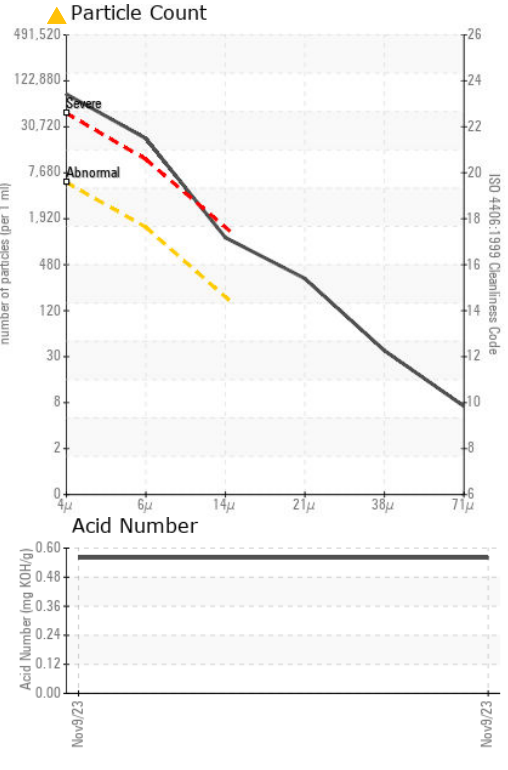
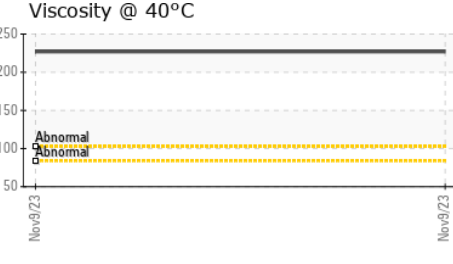
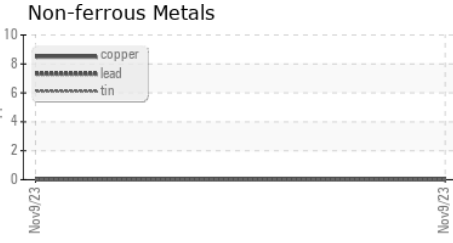
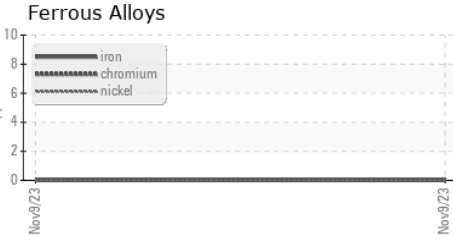
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	227	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color		no image	no image
Bottom		no image	no image

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP255337 **Received** : 13 Nov 2023
Lab Number : 06006372 **Diagnosed** : 14 Nov 2023
Unique Number : 10740134 **Diagnostician** : Doug Bogart
Test Package : IND 2

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Certificate L2367
 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)