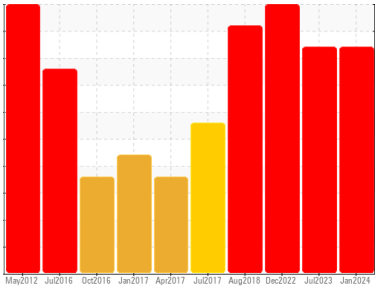
PROBLEM SUMMARY

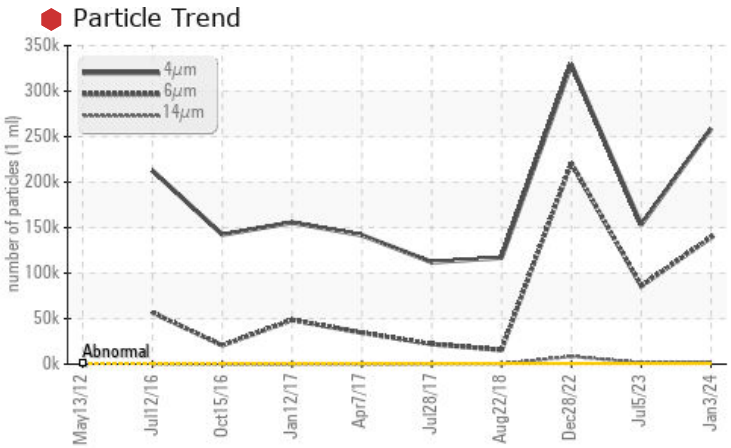
Sample Rating Trend

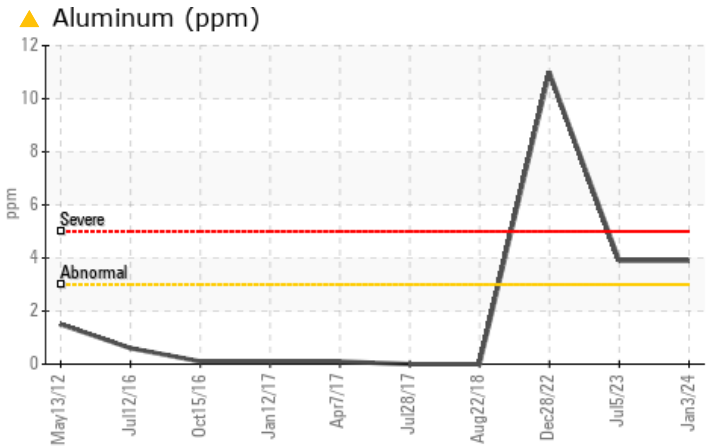


ISO

Area
54 LIME KILN
Machine Id
542508 - Kiln ID Fan DE - Inboard Bearing
Component
Inboard Bearing
Fluid
ESSO NUTO H ISO 68 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Particles >4µm		ASTM D7647	>640	**258867**	153175	329496
Particles >6µm		ASTM D7647	>160	**139272**	85831	221086
Particles >14µm		ASTM D7647	>20	**2211**	1776	8410
Particles >21µm		ASTM D7647	>4	**112**	181	499
Oil Cleanliness		ISO 4406 (c)	>16/14/11	**25/24/18**	24/24/18	26/25/20

Customer Id: STANAC
Sample No.: WC
Lab Number: 02607521
Test Package: IND 2

To manage this report scan the QR code

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Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

ISO

05 Jul 2023 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Aluminum ppm levels are noted. All other component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

WEAR

28 Dec 2022 Diag: Kevin Marson

We advise that you check all areas where contaminants can enter the system. We recommend either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Aluminum ppm levels are severe. Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Particles >4µm are severely high. Oil Cleanliness are severely high. Silicon ppm levels are abnormally high. Elemental level of silicon (Si) above normal indicating ingress of seal material. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

ISO

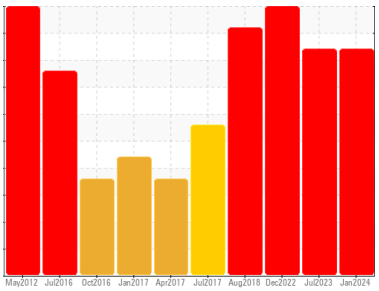
22 Aug 2018 Diag: Kevin Marson

Check seals and/or filters for points of contaminant entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Copper ppm levels are noted. All other component wear rates are normal. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Particles >4µm are severely high. Silicon ppm levels are abnormally high. Elemental level of silicon (Si) above normal indicating ingress of seal material. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
54 LIME KILN
Machine Id
542508 - Kiln ID Fan DE - Inboard Bearing
Component
Inboard Bearing
Fluid
ESSO NUTO H ISO 68 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

Aluminum ppm levels are noted. All other component wear rates are normal.

Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil. The water content is negligible. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC**	WC	WC
Sample Date		Client Info		**03 Jan 2024**	05 Jul 2023	28 Dec 2022
Machine Age	days	Client Info		**0**	0	0
Oil Age	days	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**24**	17	51
Iron	ppm	ASTM D5185(m)	>84	**64**	44	▲ 99
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>3	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)		**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>3	▲ **4**	▲ 4	⬢ 11
Lead	ppm	ASTM D5185(m)	>143	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>13	**4**	6	21
Tin	ppm	ASTM D5185(m)	>41	**10**	10	30
Antimony	ppm	ASTM D5185(m)		**<1**	<1	3
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

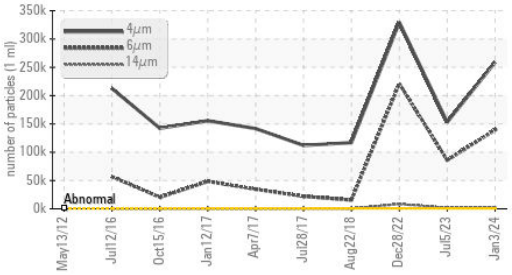
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**0**	<1	2
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	<1	1
Magnesium	ppm	ASTM D5185(m)	5	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	50	**79**	55	86
Phosphorus	ppm	ASTM D5185(m)	330	**314**	372	367
Zinc	ppm	ASTM D5185(m)	420	**399**	439	398
Sulfur	ppm	ASTM D5185(m)	3100	**7154**	5997	7405
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**7**	9	▲ 36
Sodium	ppm	ASTM D5185(m)		**2**	<1	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	0
Water	%	ASTM D6304*	>2	**0.014**	---	---
ppm Water	ppm	ASTM D6304*		**141**	---	---

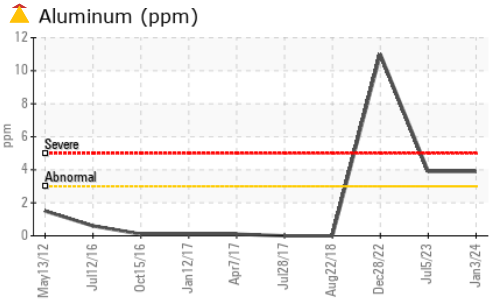
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>640	⬢ **258867**	⬢ 153175	⬢ 329496
Particles >6µm	ASTM D7647	>160	⬢ **139272**	⬢ 85831	⬢ 221086
Particles >14µm	ASTM D7647	>20	⬢ **2211**	⬢ 1776	⬢ 8410
Particles >21µm	ASTM D7647	>4	⬢ **112**	⬢ 181	⬢ 499
Particles >38µm	ASTM D7647	>3	**1**	1	5
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>16/14/11	⬢ **25/24/18**	⬢ 24/24/18	⬢ 26/25/20

OIL ANALYSIS REPORT

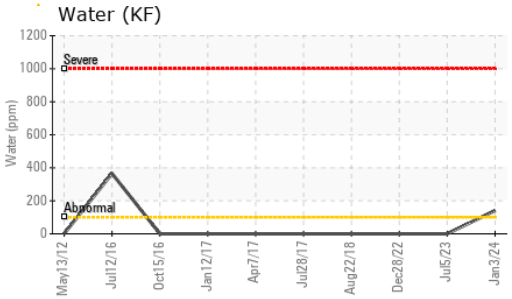
Particle Trend



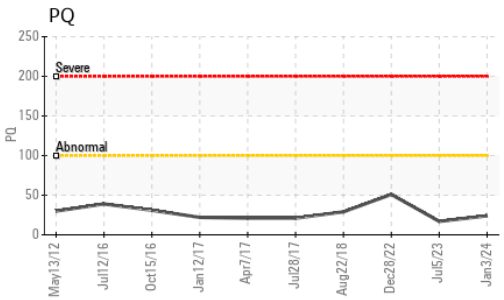
Aluminum (ppm)



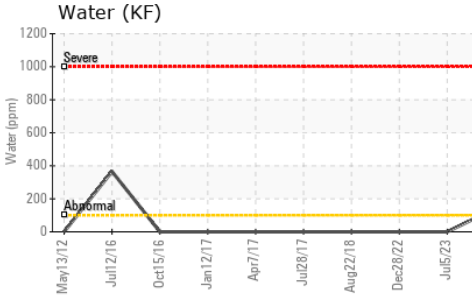
Water (KF)



PQ



Water (KF)

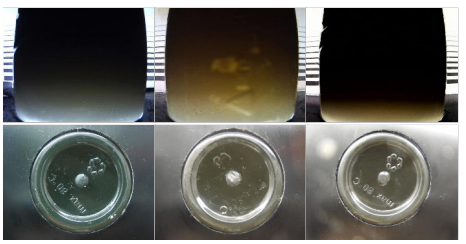


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.40	**0.46**	0.51	0.59

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	VLITE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>2	**.2%**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

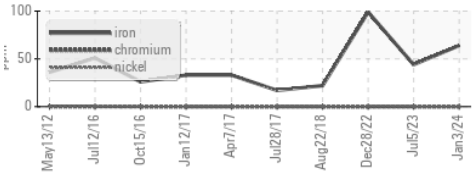
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68.8	**64.6**	65.4	68.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

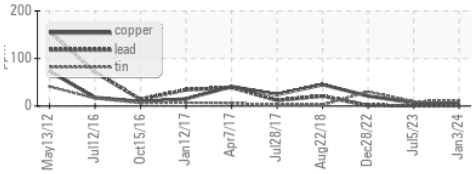


GRAPHS

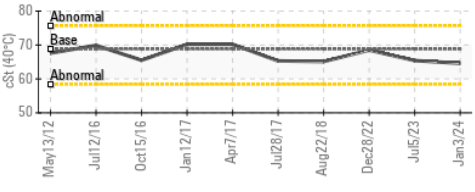
Ferrous Alloys



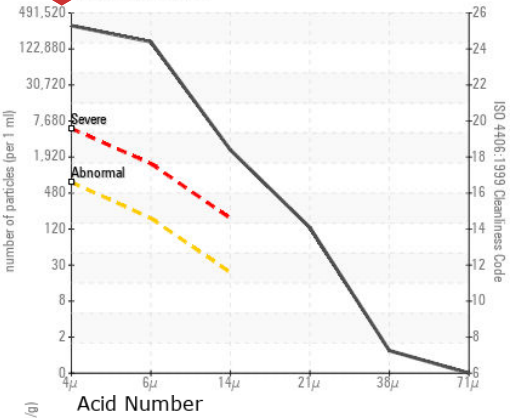
Non-ferrous Metals



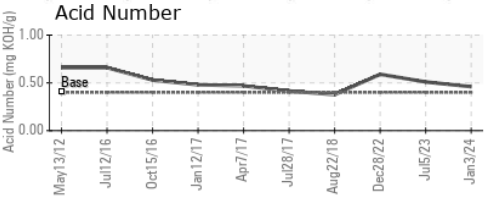
Viscosity @ 40°C



Particle Count



Acid Number



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC **Recieved** : 09 Jan 2024
Lab Number : 02607521 **Diagnosed** : 12 Jan 2024
Unique Number : 5708607 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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