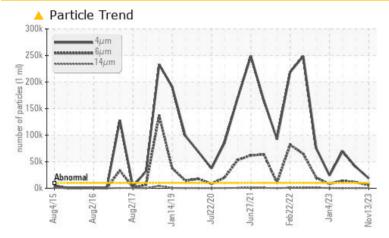


PROBLEM SUMMARY

NORTH Machine Id NORTH HS-3 (S/N AB10718)

Component Refrigeration Compressor Fluid REFRIG COMP OIL ISO 68 (55 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor.

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PROBLEMATIC TEST RESULTS												
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL							
Particles >4µm	ASTM D7647	>10000	<u> </u>	4 0413	69348							
Particles >6µm	ASTM D7647	>2500	🔺 5847	🔺 11339	1 4017							
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<u> </u>	🔺 23/21/15	▲ 23/21/14							

Customer Id: TYSTAR Sample No.: USP0003458 Lab Number: 06006401 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 <u>dougb@wearcheckusa.com</u>

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

07 Aug 2023 Diag: Doug Bogart



Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 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

09 May 2023 Diag: Doug Bogart

Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 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.

04 Jan 2023 Diag: Doug Bogart



We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.







OIL ANALYSIS REPORT

Area NORTH Machine Id NORTH HS-3 (S/N AB10718) Component

Refrigeration Compressor

REFRIG COMP OIL ISO 68 (55 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high 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 Rating Trend

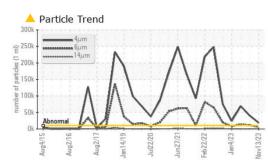
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0003458	USP248334	USP244224
Sample Date		Client Info		13 Nov 2023	07 Aug 2023	09 May 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	3	11	13
Chromium	ppm	ASTM D5185m	>2	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	0	<1	0
Lead	ppm	ASTM D5185m	>2	0	0	0
Copper	ppm	ASTM D5185m	>8	0	<1	0
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	5	0	1	0
Calcium	ppm	ASTM D5185m	12	0	0	0
Phosphorus	ppm	ASTM D5185m	12	<1	0	0
Zinc	ppm	ASTM D5185m	12	0	0	0
Sulfur	ppm	ASTM D5185m	1000	0	0	6
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	0	<1	<1
Sodium	ppm	ASTM D5185m		<1	<1	1
Potassium	ppm	ASTM D5185m	>20	0	0	1
Water	%	ASTM D6304	>0.01	0.001	0.001	0.002
ppm Water	ppm	ASTM D6304	>100	0.00	14.7	18.2
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	18725	40413	69348
Particles >6µm		ASTM D7647	>2500	<u> </u>	1 1339	1 4017
Particles >14µm		ASTM D7647	>320	170	183	102
Particles >21µm		ASTM D7647	>80	22	14	8
Particles >38µm		ASTM D7647	>20	1	0	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	A 21/20/15	▲ 23/21/15	▲ 23/21/14
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.10	0.015	0.015	0.014

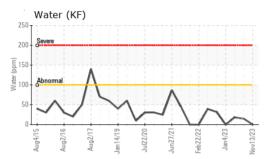


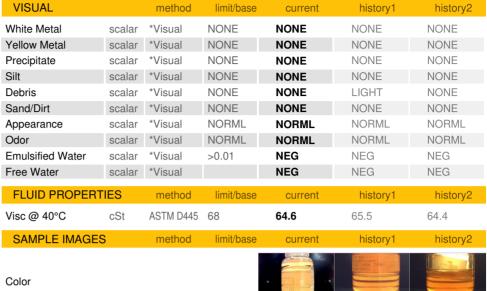
Acid Number

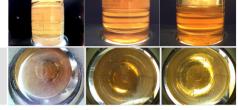
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OIL ANALYSIS REPORT









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