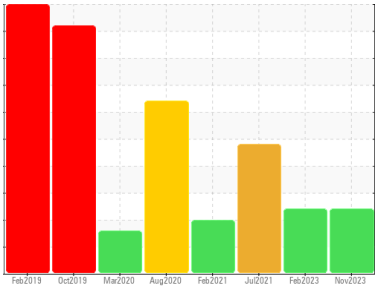
PROBLEM SUMMARY

Area
075 G4 [2994724]
Machine Id
B1 Blower
Component
Inboard Bearing
Fluid
SHELL CORENA S4 R46 (--- QTS)

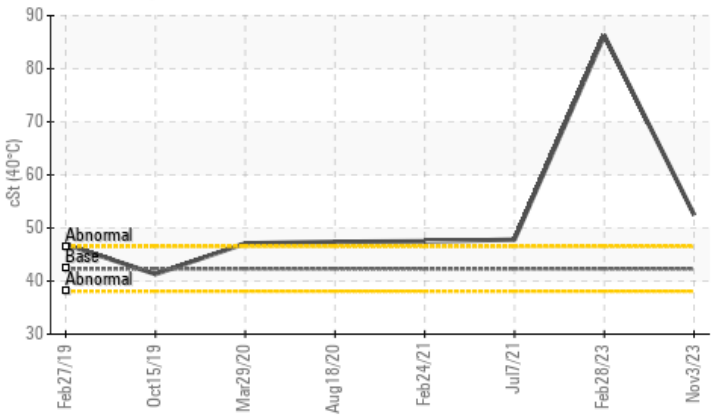
Sample Rating Trend



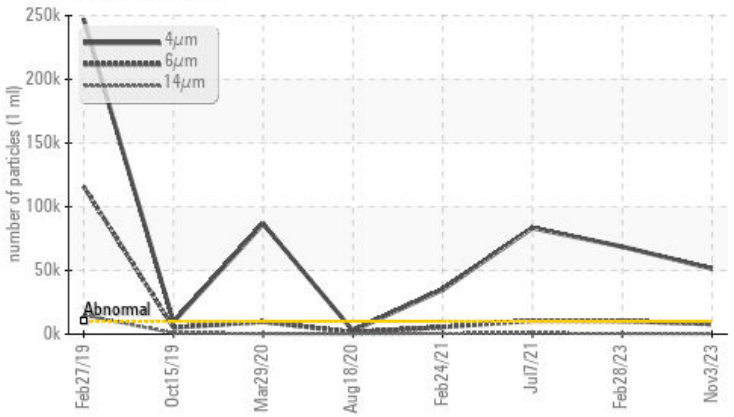
VISCOSITY

COMPONENT CONDITION SUMMARY

Viscosity @ 40°C



Particle Trend



RECOMMENDATION

Viscosity is mostly returned to stock oil viscosity. Change in viscosity is likely due to incorrect oil application. Contamination is elevated. Filter oil if possible using B6=75 filter media or better. Ensure future oil changes are done with the correct oil. Resample at next normal interval.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	SEVERE
Particles >4µm		ASTM D7647	>10000	▲ **51450**	▲ 68619	▲ 83378
Particles >6µm		ASTM D7647	>2500	▲ **7946**	▲ 10277	▲ 10531
Particles >14µm		ASTM D7647	>160	▲ **256**	▲ 438	▲ 706
Particles >21µm		ASTM D7647	>40	▲ **67**	▲ 115	▲ 190
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **23/20/15**	▲ 23/21/16	▲ 24/21/17
Visc @ 40°C	cSt	ASTM D445	42.3	▲ **52.5**	▲ 86.25	47.8

Customer Id: HEXGEI
Sample No.: PLS0000678
Lab Number: 06006264
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Mike Johnson +1 (615)771-6030
mike.johnson@amrri.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

28 Feb 2023 Diag: Mike Johnson

VISCOSITY

Viscosity is significantly deviated from previous samples and from the reference ISO 46 oil. Consider flushing and changing oil. Change in viscosity is likely due to incorrect oil application.Wear particles are low and steady. Contamination is elevated. Viscosity is significantly increased, likely due to mixing of stock oils.

view report

07 Jul 2021 Diag: Mike Johnson

WATER

The moisture contaminant level is severely elevated. Please drain, flush and refill the drive. Please chekc the vent port to verify that a high quality dessicant vent filter is in use, and install one if NOT already in use. Please check for other sources of moisture. If the system incorporates the use of a shell and tube oil cooler please pressure check the cooler for air-tight function.The wear rate is low and steady. Aluminum is still very slightly elevated. This may be related to process contaminants. At the given water percentage particle counting information is not reliable. However, the particle counts shows would be considered to be severely elevated. Filtering the oil will help control the particulate at an acceptable level for a blower (20/18/16). At the observed moisture level it is likely that the fluid is chemicall impaired. It would be best to change the oil.

view report

24 Feb 2021 Diag: Mike Johnson

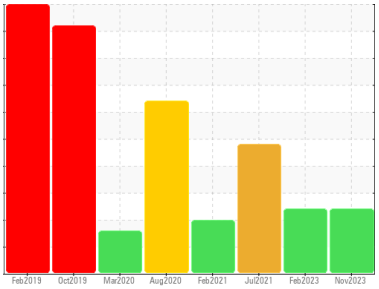
ISO

Continue sampling at regular intervals.Wear debris is low and steady. Aluminum values are higher than normal. The particle count is moderately elevated. Concentrations for particles greater than 38 microns is high. Conditions suggest that fluid is acceptable for continued use.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Area
075 G4 [2994724]
Machine Id
B1 Blower
Component
Inboard Bearing
Fluid
SHELL CORENA S4 R46 (--- QTS)

DIAGNOSIS

Recommendation

Viscosity is mostly returned to stock oil viscosity. Change in viscosity is likely due to incorrect oil application. Contamination is elevated. Filter oil if possible using B6=75 filter media or better. Ensure future oil changes are done with the correct oil. Resample at next normal interval.

Wear

Wear particles are low and steady.

Contamination

Contamination is elevated.

Fluid Condition

Viscosity is slightly increased, likely due to mixing of stock oils.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PLS0000678**	PLS0000662	PLS0000322
Sample Date		Client Info		**03 Nov 2023**	28 Feb 2023	07 Jul 2021
Machine Age	mths	Client Info		**24**	8	0
Oil Age	mths	Client Info		**8**	8	0
Oil Changed		Client Info		**Changed**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**12**	13	16
Iron	ppm	ASTM D5185m	>20	**<1**	2	4
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**0**	<1	9
Lead	ppm	ASTM D5185m	>20	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>20	**0**	0	<1
Tin	ppm	ASTM D5185m	>20	**<1**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	<1

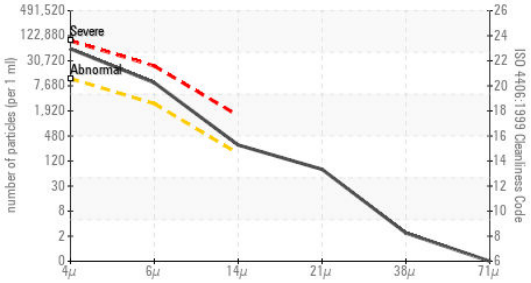
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	1
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m		**0**	<1	<1
Calcium	ppm	ASTM D5185m		**<1**	0	<1
Phosphorus	ppm	ASTM D5185m		**128**	201	85
Zinc	ppm	ASTM D5185m		**0**	6	3
Sulfur	ppm	ASTM D5185m		**145**	122	152

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	2	0
Sodium	ppm	ASTM D5185m		**0**	<1	1
Potassium	ppm	ASTM D5185m	>20	**0**	0	0

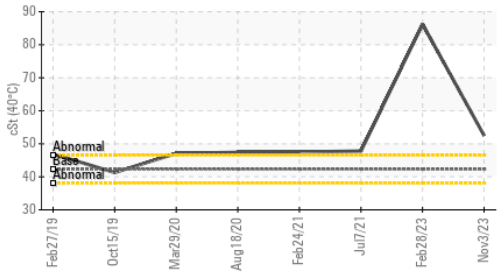
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624		**4.3**	4.6	5
Sulfation	Abs/.1mm	*ASTM D7415		**8.8**	9.0	8.5

OIL ANALYSIS REPORT

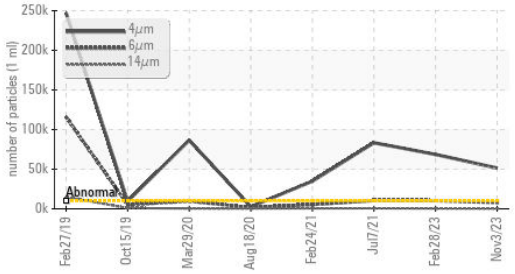
Particle Count



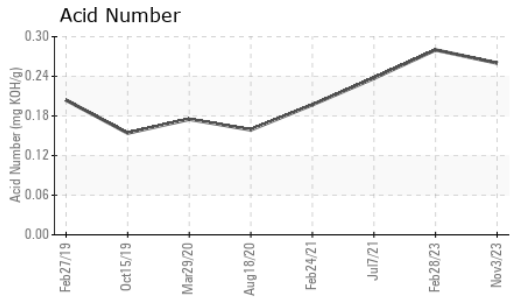
Viscosity @ 40°C



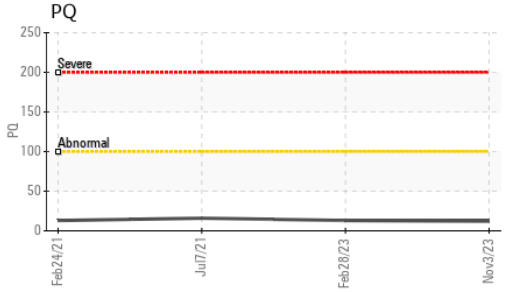
Particle Trend



Acid Number



PQ

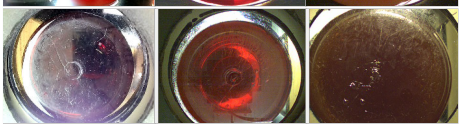


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **51450**	▲ 68619	▲ 83378
Particles >6µm		ASTM D7647	>2500	▲ **7946**	▲ 10277	▲ 10531
Particles >14µm		ASTM D7647	>160	▲ **256**	▲ 438	▲ 706
Particles >21µm		ASTM D7647	>40	▲ **67**	▲ 115	▲ 190
Particles >38µm		ASTM D7647	>10	**2**	3	5
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **23/20/15**	▲ 23/21/16	▲ 24/21/17

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**3.1**	3.4	3.2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.26**	0.28	0.237

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	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>2	**NEG**	NEG	0.2%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	42.3	▲ **52.5**	▲ 86.25	47.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000678 **Received** : 13 Nov 2023
Lab Number : 06006264 **Diagnosed** : 27 Nov 2023
Unique Number : 10740026 **Diagnostician** : Mike Johnson
Test Package : IND 2 (Additional Tests: FT-IR, PQ, PrtCount)

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)

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