

PROBLEM SUMMARY

Sample Rating Trend

WATER

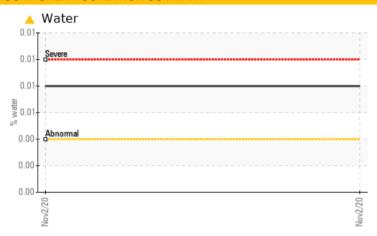


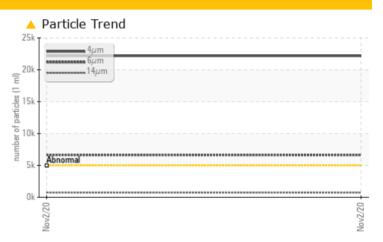
BDE Unit 4 Excitation Transformer Oil (S/N BX00003-004)

Transformer Oil

NATURAL ESTER FLUID (1620 LTR)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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 advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this transformer oil. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status				ABNORMAL			
Water	%	ASTM D6304*	>0.0035	△ 0.008			
ppm Water	ppm	ASTM D6304*	>35	<u>^</u> 80			
Particles >4µm		ASTM D7647	>5000	<u>22181</u>			
Particles >6μm		ASTM D7647	>1300	6641			
Particles >14μm		ASTM D7647	>160	<u> </u>			
Particles >21µm		ASTM D7647	>40	276			
Particles >38µm		ASTM D7647	>10	43			
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<u>22/20/17</u>			
Interfacial Tension	mN/m	ASTM D971(e)*		12.88			

Customer Id: NEWMIL Sample No.: WC0380011 Lab Number: 02389639 Test Package: TRF 1



To manage this report scan the QR code

To discuss the diagnosis or test data: Bill Quesnel CLS, OMA II, MLA-III, LLA-I+1 (289)291-4641 x4641

Bill.Quesnel@wearcheck.com

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS					
Action	Status	Date	Done By	Description	
Resample			?	We recommend an early resample to monitor this condition.	
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.	
Filter Fluid			?	We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this transformer oil.	



OIL ANALYSIS REPORT



Machine Id

BDE Unit 4 Excitation Transformer Oil (S/N BX00003-004)

Component

Transformer Oil

NATURAL ESTER FLUID (1620 LTR)

DIAGNOSIS

Recommendation

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 advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this transformer oil. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Water and ppm water contamination levels are abnormal. Particles >14 μ m are abnormally high. Particles >21 μ m are abnormally high. Particles >4 μ m are abnormally high. Particles >38 μ m are abnormally high. Particles >6 μ m are abnormally high. There is a moderate concentration of water present in the transformer oil.

Fluid Condition

The interfacial tension is low at 12.9. The AN level is acceptable for this fluid. The transformer oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sampl	e Rating Trend			
<u> </u>				
			4	
1	Nov202	0		
method	limit/base	current	his	t
Client Info	w	C0380011		

				Nov2020		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0380011		
Sample Date		Client Info		02 Nov 2020		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				ABNORMAL		
CONTAMINANTS		method	limit/base	current	history1	history2
Water	%	ASTM D6304*	>0.0035	0.008		
ppm Water	ppm	ASTM D6304*	>35	<u>^</u> 80		
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<u>22181</u>		
Particles >6µm		ASTM D7647	>1300	6641		
Particles >14µm		ASTM D7647	>160	^ 737		
Particles >21µm		ASTM D7647	>40	276		
Particles >38µm		ASTM D7647	>10	43		
Particles >71µm		ASTM D7647	>3	4		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<u> 22/20/17</u>		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.04		
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	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Specific Gravity		ASTM D4052(e)		0.917		
Dielectric Breakdown	kV	ASTM D3612(e)*		49		
Interfacial Tension	mN/m	ASTM D971(e)*		12.88		
ASTM Color	scalar	ASTM D1500(e)		>0.5		
SAMPLE IMAGES	5	method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5137096

: WC0380011 : 02389639

Received

: 25 Nov 2020 Diagnosed : 15 Dec 2020 Diagnostician : Bill Quesnel

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 NEWFOUNDLAND & LABRADOR HYDRO BAY D'ESPOIR WHSE,, 1 CAMP BOGGY RD., PO BOX 100 MILLTOWN, BAY D'ESPOIR, NL

CA A0H 1W0 Contact: Matthew Lambert matthewlambert@nlh.nl.ca

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.

Test Package : TRF 1 (Additional Tests: PrtCount)

T: (709)882-3126 F: (709)882-3161