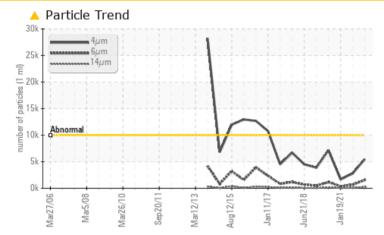


PROBLEM SUMMARY

NCH G1 UGBR/THBR

Bearing Fluid ESSO TERESSO ISO 68 (205 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status			ABNORMAL	NORMAL	NORMAL		
Particles >14µm	ASTM D7647	>160	<u> </u>	85	40		
Particles >21µm	ASTM D7647	>40	<mark>人</mark> 95	31	15		
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<u> </u>	19/17/14	18/16/12		

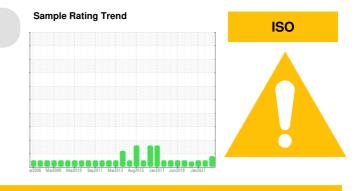
Customer Id: NEWSTJ Sample No.: WC0445186 Lab Number: 02473260 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Kevin Marson +1 (289)291-4644 x4644 Kevin.Marson@wearcheck.com

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



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			?	We recommend an early resample to monitor this condition.			
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



14 Jun 2021 Diag: Kevin Marson

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

19 Jan 2021 Diag: Kevin Marson



Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





07 Nov 2019 Diag: Wes Davis

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 light 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.





OIL ANALYSIS REPORT

NCH G1 UGBR/THBR

Bearing Fluid ESSO TERESSO ISO 68 (205 LTR)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear

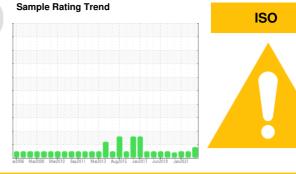
All component wear rates are normal.

Contamination

Particles >21 μ m are abnormally high. Particles >14 μ m are notably high.

Fluid Condition

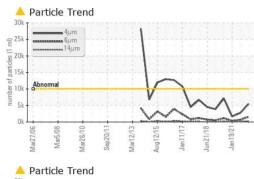
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

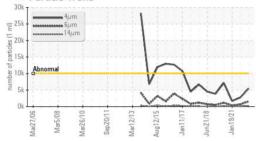


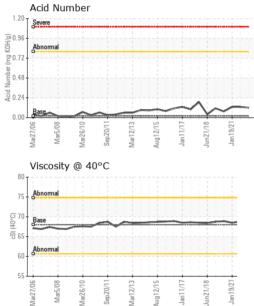
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0445186	WC0327866	WC0327939
Sample Date		Client Info		20 Jan 2022	14 Jun 2021	19 Jan 2021
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>63	0	<1	<1
Chromium	ppm	ASTM D5185(m)		0	0	0
Nickel	ppm	ASTM D5185(m)		<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>161	1	<1	<1
Copper	ppm	ASTM D5185(m)	>13	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>27	3	2	3
Antimony	ppm	ASTM D5185(m)		0	<1	<1
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)	4.5	<1	<1	<1
	ppm ppm		4.5 0.4	<1 0		
Boron		ASTM D5185(m)			<1	<1
Boron Barium Molybdenum	ppm	ASTM D5185(m) ASTM D5185(m)	0.4	0	<1 0	<1 0
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4	0 0	<1 0 0	<1 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0	0 0 0	<1 0 0 0	<1 0 0 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0	0 0 0 0	<1 0 0 0 0	<1 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0	0 0 0 <1	<1 0 0 0 0 <1	<1 0 0 0 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7	0 0 0 <1 0	<1 0 0 0 0 <1 <1	<1 0 0 0 0 <1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0	0 0 0 <1 0 <1	<1 0 0 0 0 <1 <1 <1 <1	<1 0 0 0 0 <1 1 1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0	0 0 0 <1 0 <1 2182	<1 0 0 0 <1 <1 <1 <1 2205	<1 0 0 0 0 <1 1 1 <1 2200
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315	0 0 0 <1 0 <1 2182 0	<1 0 0 0 <1 <1 <1 <1 2205 <1	<1 0 0 0 <1 1 <1 2200 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 limit/base	0 0 0 <1 0 <1 2182 0 0	<1 0 0 0 <1 <1 <1 2205 <1 history1	<1 0 0 0 <1 1 2200 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 limit/base	0 0 0 <1 0 <1 2182 0 0 current 4	<1 0 0 0 <1 <1 <1 2205 <1 2205 <1 history1 4	<1 0 0 0 <1 1 <1 2200 <1 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 Iimit/base >12	0 0 0 <1 0 <1 2182 0 0 <i>current</i> 4 0	<1 0 0 0 <1 <1 <1 2205 <1 2205 <1 history1 4 0	<1 0 0 0 (0 (1 1 2200 <1 2200 <1 history2 4 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 limit/base >12 >20	0 0 0 <1 0 <1 2182 0 <u>current</u> 4 0 <1	<1 0 0 0 <1 <1 <1 2205 <1 <u>history1</u> 4 0 <1	<1 0 0 0 <1 1 2200 <1 history2 4 0 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 Imit/base >12 >20 Imit/base	0 0 0 (1 0 <1 2182 0 2182 0 0 <i>current</i> 4 0 <1 <i>current</i>	<1 0 0 0 <1 <1 <1 2205 <1 history1 4 0 <1 history1	<1 0 0 0 (1 1 2200 <1 2200 <1 history2 4 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 limit/base >12 >20 limit/base >20	0 0 0 (1 0 (1 2182 0 (2182 0 0 (2182 0 0 (2182 0 (2182) 0 (2182) 0 (2182) 0 (2182) 0 (2182) (218)) (218))(218))(218))(218))(218))(218))((218))((218))((218))((218))((218))((218))((218))((218))((<1 0 0 0 <1 <1 <1 2205 <1 history1 4 0 <1 history1 2787	<1 0 0 0 0 <1 1 2200 <1 2200 <1 history2 4 0 <1 history2 1664
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0.4 0 0 0 0.7 0 1315 1315 >12 >12 >20 limit/base >20 limit/base >200	0 0 0 (1 0 (1 2182 0 2 182 0 0 <i>current</i> 4 0 (2 1 2 1 2 1 2 1 8 2 1 2 1 2 1 8 2 1 2 1	<1 0 0 0 (1 (1 2205 (1 2205 (1 history1 4 0 (1 history1 2787 665	<1 0 0 0 0 <1 1 2200 <1 history2 4 0 <1 history2 1664 342
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D7647	0.4 0 0 0 0.7 0 1315 imit/base >12 >20 imit/base >20 >200 >2500 >160	0 0 0 3 3 3 4 0 3 4 0 5 4 7 3 4 0 3 3 3 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 4 7 5 7 7 7 7	<1 0 0 0 1 -1 -1 2205 -1 history1 4 0 -1 history1 2787 665 85	<1 0 0 0 0 (1 1 2200 <1 2200 <1 history2 4 0 <1 history2 1 664 342 40
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0.4 0 0 0 0.7 0 1315 3 1315 1315 1315 1315 1315 1315 1315 1315 1315 1311 1315 13111 13111 13111 13111 13111 13111 1311111 131111 13111111	0 0 0 2 1 2 182 0 2 182 0 0 current 4 0 <1 2 1 2 1 8 2 1 5 4 7 5 4 75 1 5 60 2 54 7 5 4 5 4 2 5 4 2 5 4 2 5 4	<1 0 0 0 1 <1 <1 2205 <1 history1 4 0 <1 history1 2787 665 85 31	<1 0 0 0 1 1 1 2200 <1 2200 <1 history2 4 0 <1 history2 1664 342 40 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.4 0 0 0 0.7 0 1315 3 1315 1315 1315 1315 1315 1315 1315 1315 1315 1311 1315 13111 13111 13111 13111 13111 13111 1311111 131111 13111111	0 0 0 3 4 2182 0 2182 0 0 current 4 0 <1 5475 1560 254 ≥54 95 9	<1 0 0 0 1 4 2205 <1 history1 4 0 <1 history1 2787 665 85 31 3	<1 0 0 0 (1 1 2200 <1 2200 <1 history2 4 0 <1 history2 1664 342 40 15 0



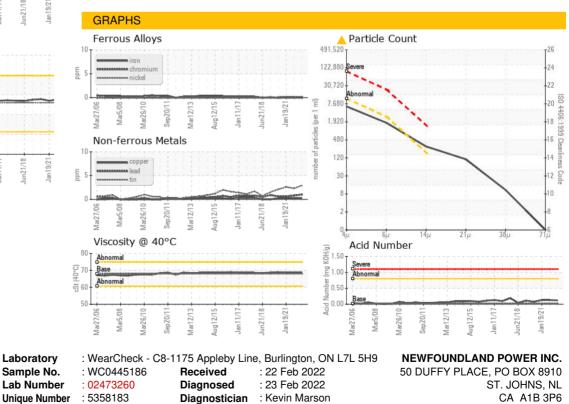
OIL ANALYSIS REPORT







FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.02	0.12	0.13	0.13
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	VLITE
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	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	68.8	68.8	68.5
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color					UNC OF	
Bottom						



Accredited Laboratory Test Package : IND 2 (Additional Tests: TAN Man) 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.

Contact: Paul Martin pmartin@newfoundlandpower.com T: F: (709)737-2926



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