

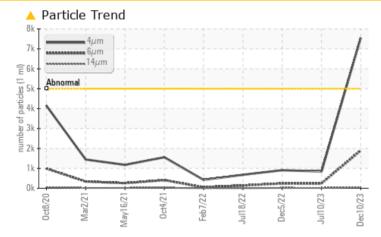
PROBLEM SUMMARY

Area **Lockring Roughing** Machine Id **Index G420 Turn-Mill Center #1101 (NGOM-A1-CFF) -cc 4980** Component

Hydraulic System

AW HYDRAULIC OIL ISO 32 (--- LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS							
Sample Status			ATTENTION	NORMAL	NORMAL		
Particles >4µm	ASTM D7647	>5000	<u> </u>	842	908		
Particles >6µm	ASTM D7647	>1300	A 1897	237	243		
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<u> </u>	17/15/11	17/15/11		

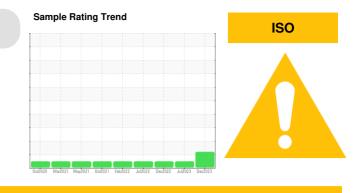
Customer Id: HUSBOLED Sample No.: WC0887630 Lab Number: 02602274 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

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



RECOMMENDED A	CTIONS			
Action	Status	Date	Done By	Description
Change Filter			?	We recommend you service the filters on this component.
Information Required			?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

HISTORICAL DIAGNOSIS



10 Jul 2023 Diag: Wes Davis

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 32. Please confirm.

NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.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

05 Dec 2022 Diag: Wes Davis



 \checkmark

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. 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.

NORMAL



18 Jul 2022 Diag: Wes Davis

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. 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





OIL ANALYSIS REPORT

Area Lockring Roughing Machine Id Index G420 Turn-Mill Center #1101 (NGOM-A1-CFF) -cc 4980 Component

Hydraulic System

AW HYDRAULIC OIL ISO 32 (--- LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

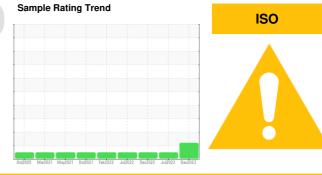
All component wear rates are normal.

Contamination

There is a light 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.



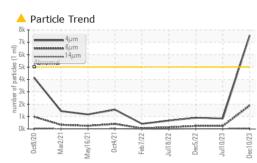
Sample Number Client Info WC0837630 WC0837620 WC0837828 WC0763300 Sample Date Client Info 0 0 0 0 Oli Age days Client Info 0 0 0 Oli Age days Client Info 0 0 0 Oli Age Client Info N/A N/A N/A Sample Status Imit Mase current history1 Mistory2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method Imit/base current history1 history2 Kononium ppm ASTM 05185m >20 0 0 0 Nickel ppm ASTM 05185m >20 <1 <1 0 Naminum ppm ASTM 05185m >20 0 0 0 Silver ppm ASTM 05185m >20 11 9 13 Silver ppm ASTM 05185m	SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Date Client Info 10 Dec 2023 10 Jul 2023 05 Dec 2022 Machine Age days Client Info 0 0 0 Dil Age days Client Info 0 0 0 0 Sample Status Client Info N/A N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Kinde Igen ppm ASTM0588m >20 2 2 3 Vickel ppm ASTM0588m >20 c1 <1 <1 <1 Lead ppm ASTM0588m >20 c1 <1 <1 <1 Cadmium ppm ASTM0588m >20 0 0 0 0 Lead ppm ASTM0588m >20 0				iiiiiii base			
Machine Age days Client Info 0 0 0 Dil Age days Client Info N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history1 history1 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Ikckel ppm ASTM0516500 >20 2 2 3 Chromium ppm ASTM0516500 >20 <1							
Dil Age days Client Info 0 0 0 Dil Changed Client Info N/A N/A N/A N/A Sample Status Imitibase current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limitbase current history1 history2 Koronium ppm ASTM 05165(m) >20 2 2 3 Contraking ppm ASTM 05165(m) >20 <1							
Dil Changed Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05/65(m) >20 2 2 3 Chromium ppm ASTM 05/65(m) >20 2 2 3 Vickel ppm ASTM 05/65(m) >20 2 2 3 Othornium ppm ASTM 05/65(m) >20 2 2 3 Sikver ppm ASTM 05/65(m) >20 21 <1 <1 Copper ppm ASTM 05/65(m) >20 0 <1 <1 Candinum ppm ASTM 05/65(m) >20 0 <0 <0 Cardmium ppm ASTM 05/65(m) >20 0 <0 <0 Cardmium ppm ASTM 05/65(m) >20 0 <0 <0 Cardmium ppm ASTM 05/65(m) 0 0 <0 <0 Cardmium ppm <	0						
Sample Status method Imit base current history1 NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM DB18(m) >20 0 0 0 Nickel ppm ASTM DB18(m) >20 <1	•	days			-		
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185(m) >20 2 2 3 Schornium ppm ASTM 05185(m) >20 0 0 0 Nickel ppm ASTM 05185(m) >20 <1	•		Client Info				,
Water WC Method >0.0.5 NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >20 2 2 3 Chromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 1 <1	Sample Status				ATTENTION	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 iron ppm ASTM 05185(m) >20 2 2 3 Chromium ppm ASTM 05185(m) >20 0 0 0 Nickel ppm ASTM 05185(m) >20 <1	CONTAMINATION	N	method	limit/base	current	history1	history2
Iron ppm ASTM D5185(m) >20 2 2 3 Chromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 <1	Water		WC Method	>0.05	NEG	NEG	NEG
Dromium ppm ASTM D5185(m) >20 0 0 0 Nickel ppm ASTM D5185(m) >20 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185(m) >20 <1 <1 <1 Titanium ppm ASTM D5185(m) 0 0 0 Silver ppm ASTM D5185(m) <20	Iron	ppm	ASTM D5185(m)	>20	2	2	3
Titanium ppm ASTM D5185(m) 0 0 0 Silver ppm ASTM D5185(m) <1	Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Silver ppm ASTM D5185(m) <1 <1 0 Aluminum ppm ASTM D5185(m) >20 0 <1	Nickel	ppm	ASTM D5185(m)	>20	<1	<1	<1
Aluminum ppm ASTM D5185(m) >20 0 <1 <1 Lead ppm ASTM D5185(m) >20 <1	Titanium	ppm	ASTM D5185(m)		0	0	0
Lead ppm ASTM D5185(m) >20 <1	Silver	ppm	ASTM D5185(m)		<1	<1	0
Copper ppm ASTM D5185(m) >20 11 9 13 Tin ppm ASTM D5185(m) >20 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 0 0 0 Magnesium ppm ASTM D5185(m) 25 42 45 93 Calcium ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 250 387	Aluminum	ppm	ASTM D5185(m)	>20	0	<1	<1
Tin ppm ASTM D5188(m) >20 0 0 0 Vanadium ppm ASTM D5188(m) 0 0 0 0 Beryllium ppm ASTM D5188(m) 0 0 0 0 Cadmium ppm ASTM D5188(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5188(m) 5 2 2 3 Barium ppm ASTM D5188(m) 5 <1	Lead	ppm	ASTM D5185(m)	>20	<1	<1	<1
Antimony ppm ASTM D5188(m) 0 .	Copper	ppm	ASTM D5185(m)	>20	11	9	13
Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 0 0 0 Molybdenum ppm ASTM D5185(m) 5 0 0 0 1 Magnesium ppm ASTM D5185(m) 25 42 45 93 Calcium ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 250 3873 3982 5841 Lithium ppm ASTM D5185(m) 250 3873 3982 5841 Solifur ppm ASTM D5185(m)	Tin	ppm	ASTM D5185(m)	>20	0	0	0
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 5 2 2 3 Boron ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 0 0 0 Molybdenum ppm ASTM D5185(m) 5 0 0 0 Magnese ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 300 338 364 365 Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 20 3873 3982	Antimony	ppm	ASTM D5185(m)		0	0	<1
Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 0 0 0 Molybdenum ppm ASTM D5185(m) 5 0 0 0 0 Magnesium ppm ASTM D5185(m) 20 236 245 93 Calcium ppm ASTM D5185(m) 20 236 245 507 Magnesium ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 200 236 245 507 Sulfur ppm ASTM D5185(m) 200 3873 3982 5841 Lithium ppm ASTM D5185(m) 20 3873 3982 5841 Sodium ppm ASTM D5	Vanadium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 <1	Beryllium	ppm	ASTM D5185(m)		0	0	0
Boron ppm ASTM D5185(m) 5 2 2 3 Barium ppm ASTM D5185(m) 5 <1	Cadmium	ppm			0	0	0
Barium ppm ASTM D5185(m) 5 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 5 0 0 0 Magnesee ppm ASTM D5185(m) 25 42 45 93 Calcium ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 300 338 364 365 Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 <1	Boron	ppm	ASTM D5185(m)	5	2	2	3
Maganese ppm ASTM D5185(m) 0 0 <1 Magnesium ppm ASTM D5185(m) 25 42 45 93 Calcium ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 300 338 364 365 Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 <1	Barium	ppm	ASTM D5185(m)	5	<1	<1	1
Magnesium ppm ASTM D5165(m) 25 42 45 93 Calcium ppm ASTM D5165(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 300 338 364 365 Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) >15 <1			ASTM D5185(m)	5	0	0	0
Calcium ppm ASTM D5185(m) 200 236 245 507 Phosphorus ppm ASTM D5185(m) 300 338 364 365 Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 <1	Molybdenum	ppm	A0110 D0100(III)	0		0	0
Phosphorus ppm ASTM D5185(m) 300 338 364 365 Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 <1	-			0	0		-
Zinc ppm ASTM D5185(m) 370 405 412 385 Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)		-	0	<1
Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) <1	Manganese Magnesium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	25	42	0 45	<1 93
Sulfur ppm ASTM D5185(m) 2500 3873 3982 5841 Lithium ppm ASTM D5185(m) <1	Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	25 200	42 236	0 45 245	<1 93 507
Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 <1 <1 <1 <1 Sodium ppm ASTM D5185(m) >15 <1 <1 <1 <1 <1 Potassium ppm ASTM D5185(m) >20 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	25 200 300	42 236 338	0 45 245 364	<1 93 507 365
Silicon ppm ASTM D5185(m) >15 <1 <1 <1 Sodium ppm ASTM D5185(m) >15 <1	Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	25 200 300 370	42 236 338 405	0 45 245 364 412	<1 93 507 365 385
Sodium ppm ASTM D5185(m) <1	Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	25 200 300 370	42 236 338 405 3873	0 45 245 364 412 3982	<1 93 507 365 385 5841
Sodium ppm ASTM D5185(m) <1 <1 <1 <1 Potassium ppm ASTM D5185(m) >20 0 <1	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	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)	25 200 300 370 2500	42 236 338 405 3873 <1	0 45 245 364 412 3982 <1	<1 93 507 365 385 5841
Potassium ppm ASTM D5185(m) >20 0 <1 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7547 842 908 Particles >6µm ASTM D7647 >1300 1897 237 243 Particles >14µm ASTM D7647 >160 50 17 20 Particles >14µm ASTM D7647 >40 7 4 5 Particles >21µm ASTM D7647 >10 1 0 1 Particles >38µm ASTM D7647 >3 1 0 0 Particles >71µm ASTM D7647 >3 1 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	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) method	25 200 300 370 2500 limit/base	42 236 338 405 3873 <1 current	0 45 245 364 412 3982 <1 history1	<1 93 507 365 385 5841 <1 history2
Particles >4μm ASTM D7647 >5000 7547 842 908 Particles >6μm ASTM D7647 >1300 1897 237 243 Particles >14μm ASTM D7647 >160 50 17 20 Particles >14μm ASTM D7647 >40 7 4 5 Particles >21μm ASTM D7647 >10 1 0 1 Particles >38μm ASTM D7647 >3 1 0 0 Particles >71μm ASTM D7647 >3 1 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	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) Method ASTM D5185(m)	25 200 300 370 2500 limit/base	42 236 338 405 3873 <1 current <1	0 45 245 364 412 3982 <1 history1 <1	<1 93 507 365 385 5841 <1 history2 <1
Particles >4μm ASTM D7647 >5000 ▲ 7547 842 908 Particles >6μm ASTM D7647 >1300 ▲ 1897 237 243 Particles >14μm ASTM D7647 >160 50 17 20 Particles >14μm ASTM D7647 >40 7 4 5 Particles >21μm ASTM D7647 >10 1 0 1 Particles >38μm ASTM D7647 >3 1 0 0 Particles >71μm ASTM D7647 >3 1 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Lithium CONTAMINANTS	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)	25 200 300 370 2500 limit/base >15	42 236 338 405 3873 <1 current <1 <1	0 45 245 364 412 3982 <1 history1 <1 <1	<1 93 507 365 385 5841 <1 history2 <1 <1
Particles >6µm ASTM D7647 >1300 ▲ 1897 237 243 Particles >14µm ASTM D7647 >160 50 17 20 Particles >14µm ASTM D7647 >40 7 4 5 Particles >21µm ASTM D7647 >40 7 4 5 Particles >38µm ASTM D7647 >10 1 0 1 Particles >71µm ASTM D7647 >3 1 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	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) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	25 200 300 370 2500 limit/base >15 >20	42 236 338 405 3873 <1 current <1 <1 <1 0	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1	<1 93 507 365 385 5841 <1 history2 <1 <1
Particles >14μm ASTM D7647 >160 50 17 20 Particles >21μm ASTM D7647 >40 7 4 5 Particles >38μm ASTM D7647 >10 1 0 1 Particles >38μm ASTM D7647 >3 1 0 0 Particles >71μm ASTM D7647 >3 1 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	25 200 300 370 2500 limit/base >15 >20 limit/base	42 236 338 405 3873 <1 current <1 <1 0 current	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 history1	<pre><1 93 507 365 385 5841 </pre> <pre><1 </pre> <pre></pre> <
Particles >21μm ASTM D7647 >40 7 4 5 Particles >38μm ASTM D7647 >10 1 0 1 Particles >37μm ASTM D7647 >3 1 0 0 Oli Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	25 200 300 370 2500 limit/base >15 >20 limit/base >5000	42 236 338 405 3873 <1 current <1 <1 <1 0 current 0 x	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 <1 <1 842	<1 93 507 365 385 5841 <1 history2 <1 <1 <1 <1 <1 <hr/> history2 <1 <1 history2 <1 <1 history2 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Particles >38μm ASTM D7647 >10 1 0 1 Particles >71μm ASTM D7647 >3 1 0 0 Dil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300	42 236 338 405 3873 <1 current <1 <1 <1 0 current 0 2 7547 ▲ 1897	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 <1 <1 842 237	<pre><1 93 507 365 385 5841 </pre> <pre><1 <pre>history2 <1 <pre><1 <pre><21 </pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>
Particles >71μm ASTM D7647 >3 1 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	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	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	42 236 338 405 3873 <1 <1 <1 <1 <1 0 current 0 current 0 x1 3873 <1 3873 <1 2 x1 x1 x1 x1 x1 x1 x1 x1 x1 x1 x1 x1 x1	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 <1 <1 842 237 17	<1 93 507 365 385 5841 <1 history2 <1 <1 <1 <hr/> <hr/> 1 21 908 243 20
Oil Cleanliness ISO 4406 (c) >19/17/14 20/18/13 17/15/11 17/15/11	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	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	42 236 338 405 3873 <1 <1 <1 <1 <1 0 current 0 current 0 x 2547 1897 50 7	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 <1 <1 21 842 237 17 4	<pre><1 93 507 365 385 5841 </pre> <pre><1 </pre> <pre< td=""></pre<>
	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >20 limit/base >5000 >1300 >160 >40 >10	42 236 338 405 3873 <1 <1 <1 <1 <1 0 current 0 current 0 x 7547 1897 50 7 1	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 <1 <1 237 17 4 0	<1 93 507 365 385 5841 <1 1 <1 1 </1 </1 </1 </1 </1 </1 </</td
	Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >20 limit/base >5000 >1300 >160 >40 >10 >3	42 236 338 405 3873 <1 current <1 <1 <1 0 current 0 current 1 897 50 7 1 1 1	0 45 245 364 412 3982 <1 history1 <1 <1 <1 <1 <1 <1 237 17 4 0 0 0	<1 93 507 365 385 5841 <1 <1 <1 <1 <1 <1 <1 <21 908 243 20 5 1 <0

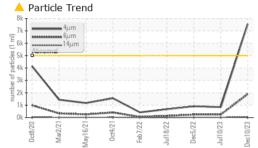


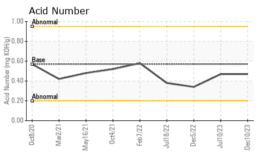
OIL ANALYSIS REPORT

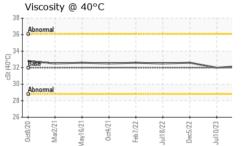
Color

Bottom

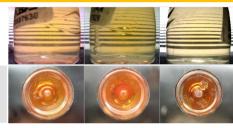


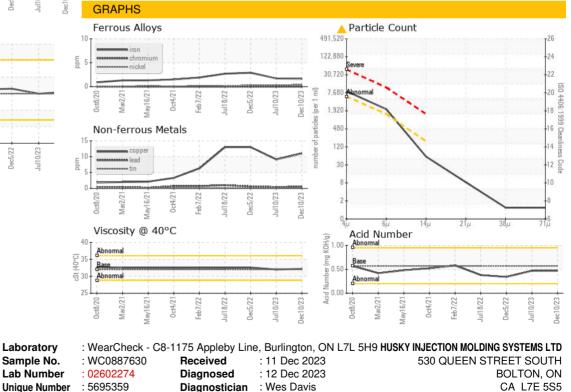






FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.47	0.47	0.34
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	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*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32	32.2	32.0	32.6
SAMPLE IMAGES		method	limit/base	current	history1	history2
				1Heren and	1CA	







Laboratory Test Package : IND 2 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.

CA L7E 5S5 Contact: Robert Cameron rcameron@husky.ca T: (905)951-5000 F: (905)951-5167

CALA

ISO 17025:2017 Accredited

Laboratory

Sample No.

Submitted By: Robert Cameron

Page 4 of 4