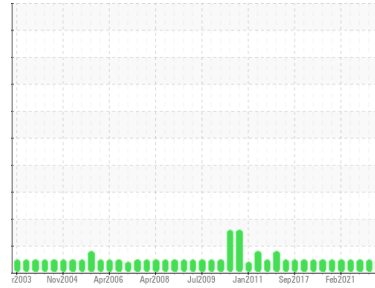




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
#1 Boiler Feed Pump Variable Speed Drive (S/N 43200-P -1)
 Component
Speed Reducer
 Fluid
ESSO NUTO H ISO 46 (650 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0774118	WC0714808	WC0655677
Sample Date	Client Info		17 Jan 2023	06 Sep 2022	17 Mar 2022
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			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >150	<1	<1	<1
Chromium	ppm	ASTM D5185(m) >10	0	0	0
Nickel	ppm	ASTM D5185(m) >10	<1	0	0
Titanium	ppm	ASTM D5185(m)	<1	<1	0
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >25	<1	<1	0
Lead	ppm	ASTM D5185(m) >100	0	<1	0
Copper	ppm	ASTM D5185(m) >50	3	3	3
Tin	ppm	ASTM D5185(m) >10	<1	0	<1
Antimony	ppm	ASTM D5185(m) >5	<1	0	<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) 0	<1	<1	<1
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m) 5	<1	<1	<1
Calcium	ppm	ASTM D5185(m) 50	50	55	49
Phosphorus	ppm	ASTM D5185(m) 330	348	350	323
Zinc	ppm	ASTM D5185(m) 410	407	414	425
Sulfur	ppm	ASTM D5185(m) 2700	2529	2549	2480
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

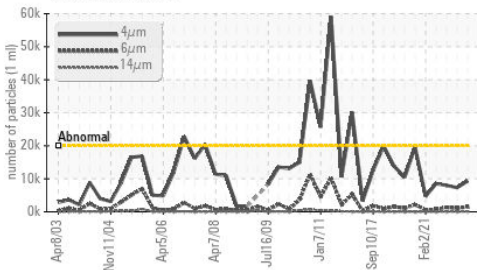
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	<1	<1	<1
Sodium	ppm	ASTM D5185(m)	<1	1	<1
Potassium	ppm	ASTM D5185(m) >20	0	<1	<1

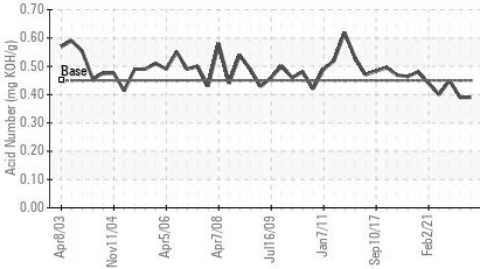
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	9341	7328	7999
Particles >6µm	ASTM D7647	>5000	1461	1074	1356
Particles >14µm	ASTM D7647	>640	77	32	67
Particles >21µm	ASTM D7647	>160	20	7	13
Particles >38µm	ASTM D7647	>40	0	1	0
Particles >71µm	ASTM D7647	>10	0	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	20/18/13	20/17/12	20/18/13

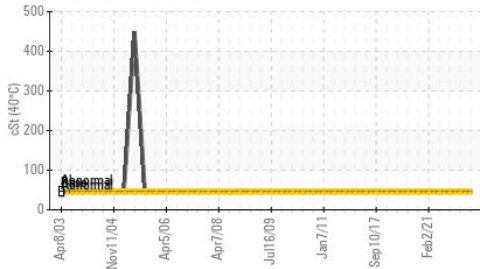
Particle Trend



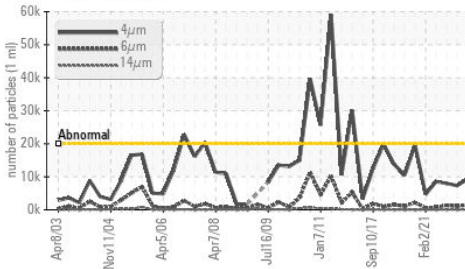
Acid Number



Viscosity @ 40°C



Particle Trend



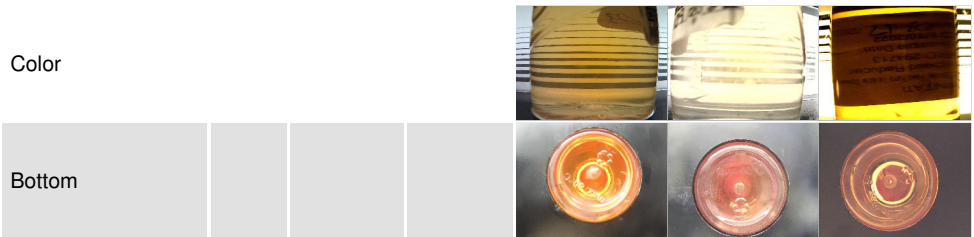
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.45	0.39	0.39	0.45
VISUAL						
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*	>0.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES

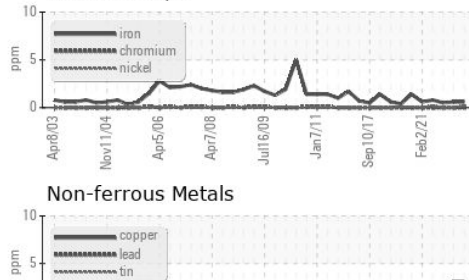
	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	46	45.6	45.3	45.6

SAMPLE IMAGES

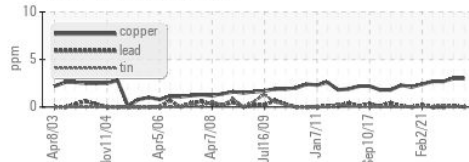


GRAPHS

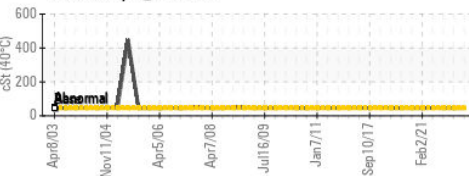
Ferrous Alloys



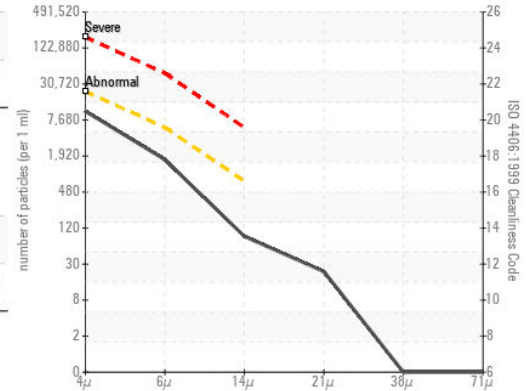
Non-ferrous Metals



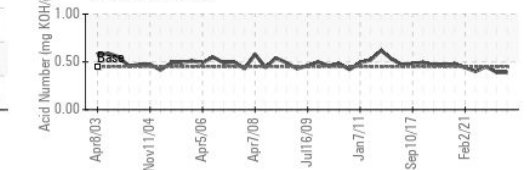
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0774118 **Received** : 03 Feb 2023
Lab Number : **02537345** **Tested** : 06 Feb 2023
Unique Number : 5526345 **Diagnosed** : 06 Feb 2023 - Wes Davis
Test Package : IND 2

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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.