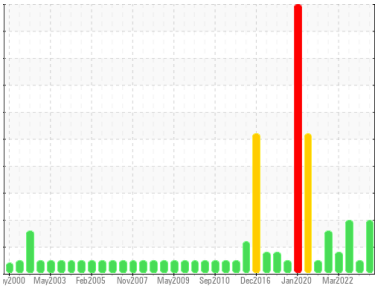
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
#2 C.W. Pump Motor (S/N 71120-PM-2)
Component
Pump
Fluid
ESSO NUTO H ISO 68 (115 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
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0831837**	WC0774126	WC0714814
Sample Date		Client Info		**10 Jul 2023**	24 Jan 2023	07 Sep 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				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.1	**NEG**	NEG	NEG

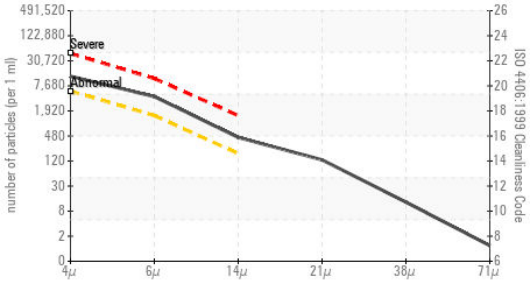
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>90	**<1**	0	<1
Chromium	ppm	ASTM D5185(m)	>5	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)	>3	**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>7	**<1**	0	0
Lead	ppm	ASTM D5185(m)	>12	**<1**	15	18
Copper	ppm	ASTM D5185(m)	>30	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>9	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	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	**2**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**<1**	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	**0**	<1	<1
Calcium	ppm	ASTM D5185(m)	50	**53**	58	55
Phosphorus	ppm	ASTM D5185(m)	330	**349**	363	375
Zinc	ppm	ASTM D5185(m)	420	**399**	408	424
Sulfur	ppm	ASTM D5185(m)	3100	**2729**	2500	2624
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

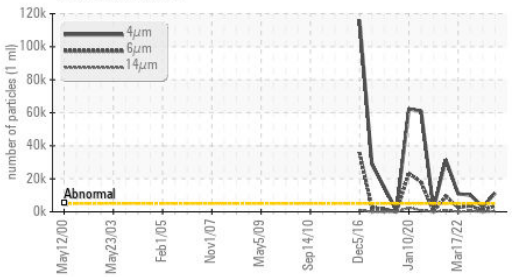
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>60	**4**	3	2
Sodium	ppm	ASTM D5185(m)		**<1**	0	<1
Potassium	ppm	ASTM D5185(m)	>20	**0**	0	0

OIL ANALYSIS REPORT

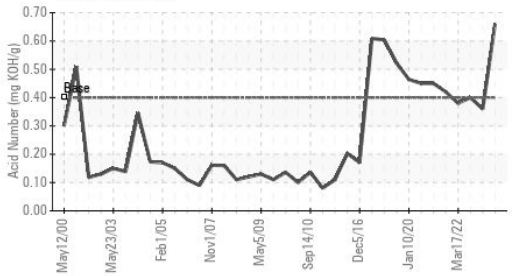
Particle Count



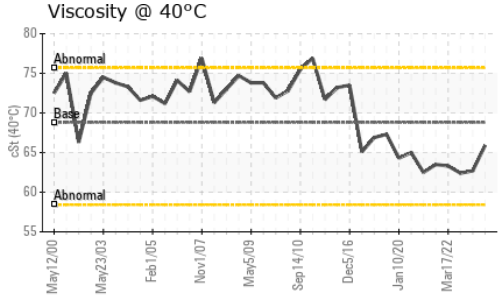
Particle Trend



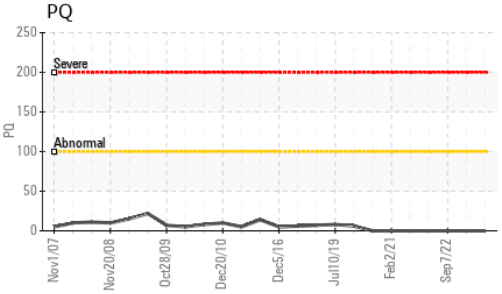
Acid Number



Viscosity @ 40°C



PQ

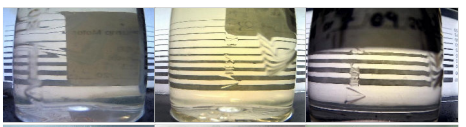


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **11326**	2976	▲ 10106
Particles >6µm		ASTM D7647	>1300	▲ **3698**	807	▲ 3624
Particles >14µm		ASTM D7647	>160	▲ **390**	49	▲ 450
Particles >21µm		ASTM D7647	>40	▲ **113**	13	▲ 152
Particles >38µm		ASTM D7647	>10	**11**	1	8
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/19/16**	19/17/13	▲ 21/19/16

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.40	**0.66**	0.36	0.40

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**	VLITE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>.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)	68.8	**65.9**	62.7	62.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0831837 **Recieved** : 19 Dec 2023
Lab Number : 02604139 **Diagnosed** : 21 Dec 2023
Unique Number : 5697224 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: PQ, PrtCount, 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.

Ontario Power Generation
ATIKOKAN T.G.S., BOX 1900
ATIKOKAN, ON
CA P0T 1C0
Contact: Dale Anthony
dale.anthony@opg.com
T:
F: (807)597-1198