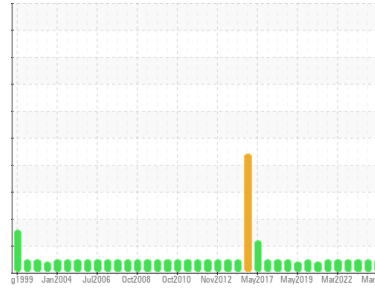




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
EQR [163273]
 Machine Id
DONNHPU3 (S/N 10-45126/4/1)
 Component
Pump Hydraulic System
 Fluid
SHELL TELLUS 32 (80 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		WC0906710	WC0779294	WC0779156
Sample Date	Client Info		09 Mar 2024	19 Sep 2023	13 Mar 2023
Machine Age	mths	Client Info	336	330	324
Oil Age	mths	Client Info	102	84	78
Oil Changed	Client Info		Not Changed	Not Changd	Not Changed
Sample Status			NORMAL	NORMAL	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 D5185(m) >40	<1	<1	<1
Chromium	ppm	ASTM D5185(m) >4	0	<1	0
Nickel	ppm	ASTM D5185(m) >20	0	<1	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >4	<1	0	0
Lead	ppm	ASTM D5185(m) >10	<1	<1	<1
Copper	ppm	ASTM D5185(m) >60	4	4	4
Tin	ppm	ASTM D5185(m) >4	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	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m) 11	14	15	14
Calcium	ppm	ASTM D5185(m) 35	45	46	45
Phosphorus	ppm	ASTM D5185(m) 259	245	267	262
Zinc	ppm	ASTM D5185(m) 277	280	290	271
Sulfur	ppm	ASTM D5185(m) 1865	2588	2511	2432
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	<1	1	<1
Sodium	ppm	ASTM D5185(m)	0	0	0
Potassium	ppm	ASTM D5185(m) >20	11	0	<1

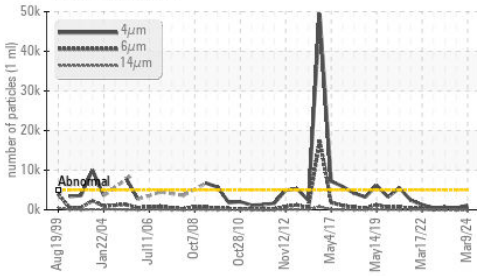
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	1140	475	643
Particles >6µm	ASTM D7647	>1300	192	132	205
Particles >14µm	ASTM D7647	>160	15	11	7
Particles >21µm	ASTM D7647	>40	4	3	1
Particles >38µm	ASTM D7647	>10	1	1	0
Particles >71µm	ASTM D7647	>3	0	1	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	17/15/11	16/14/11	17/15/10

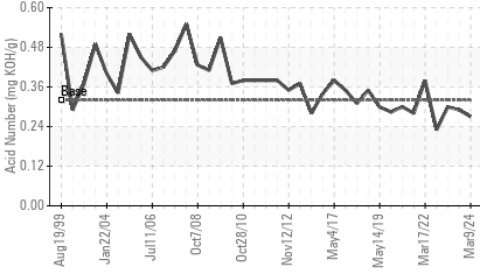


OIL ANALYSIS REPORT

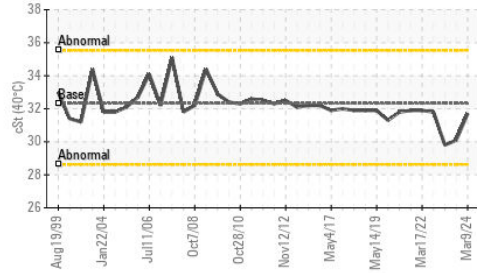
Particle Trend



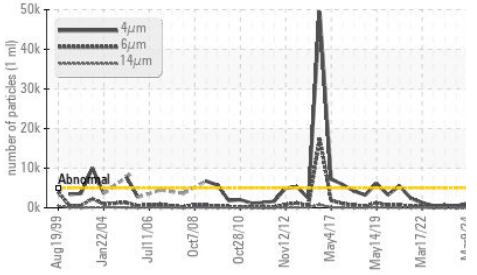
Acid Number



Viscosity @ 40°C



Particle Trend



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN) mg KOH/g	ASTM D974*	0.32	0.27	0.29	0.30

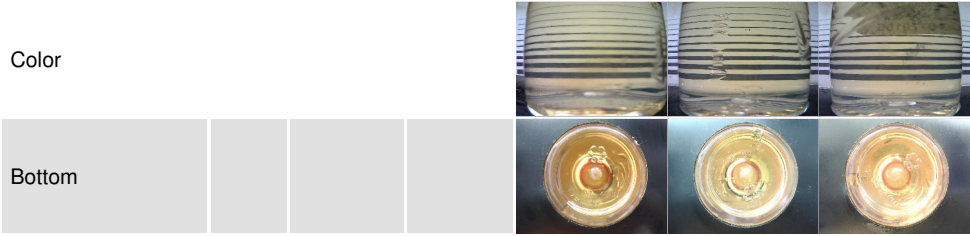
VISUAL

method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES

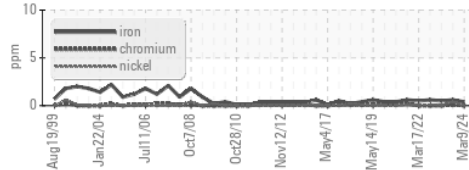
method	limit/base	current	history1	history2		
Visc @ 40°C	cSt	ASTM D7279(m)	32.32	31.7	30.1	29.8

SAMPLE IMAGES

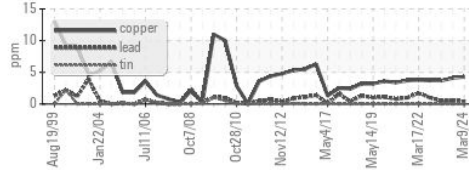


GRAPHS

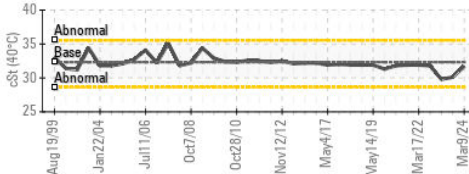
Ferrous Alloys



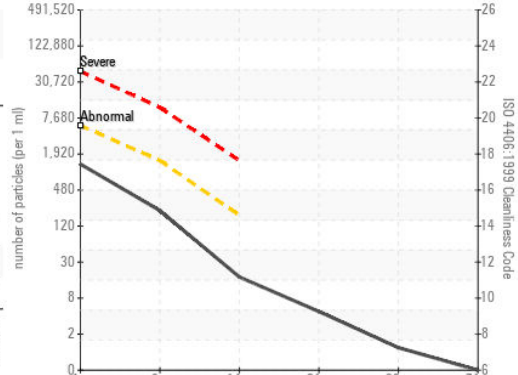
Non-ferrous Metals



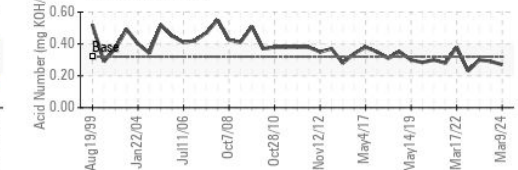
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : WC0906710
 Lab Number : 02622338
 Unique Number : 5747457
 Test Package : IND 2

ALGONQUIN POWER SYSTEMS INC.
 354 DAVIS ROAD
 OAKVILLE, ON
 CA L6J 2X1
 Contact: Antonino Champ Fernando
 antoninoChamp.fernando@algonquinpower.com
 T: (905)465-7065
 F: x:

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.