



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[166440]
 Machine Id
TINHGEN4BRG
 Component
Turbine
 Fluid
ESSO TERESSO ISO 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0862806	WC0862796	WC0602578
Sample Date		Client Info		06 May 2024	03 Oct 2023	01 Nov 2021
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		60	42	12
Filter Age	mths	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>15	<1	<1	<1
Chromium	ppm	ASTM D5185(m)	>4	0	0	0
Nickel	ppm	ASTM D5185(m)	>2	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	<1
Lead	ppm	ASTM D5185(m)		24	22	18
Copper	ppm	ASTM D5185(m)	>5	0	<1	<1
Tin	ppm	ASTM D5185(m)	>5	1	1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

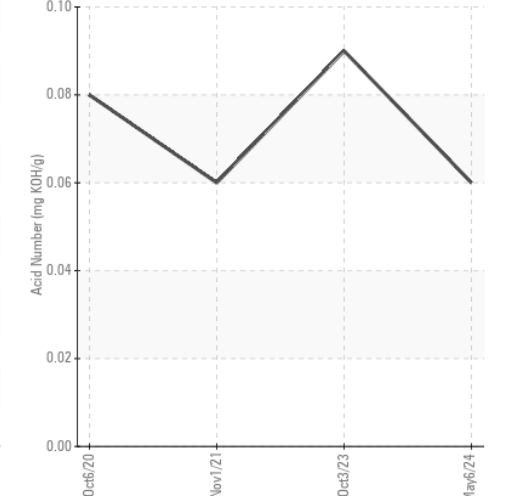
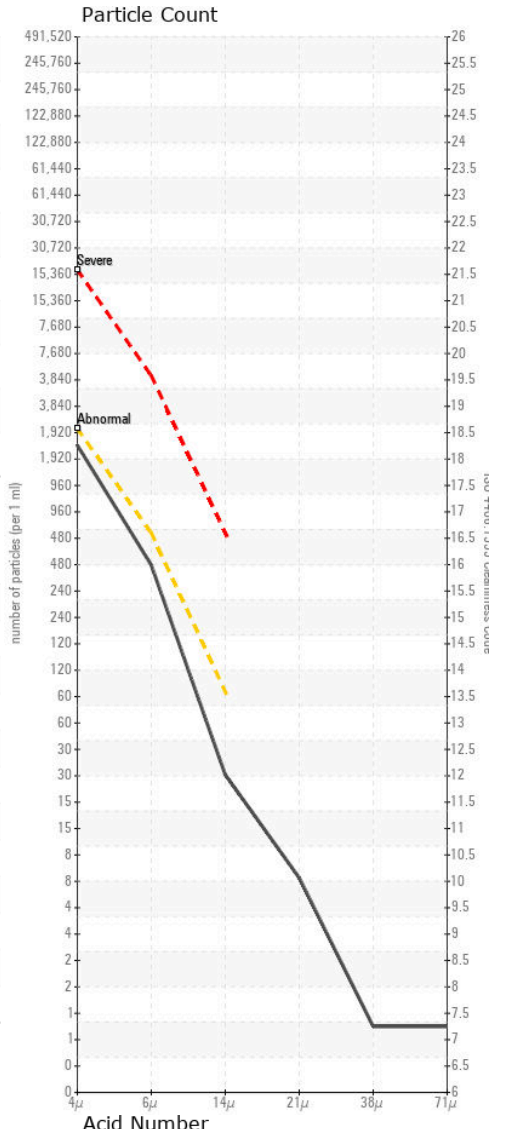
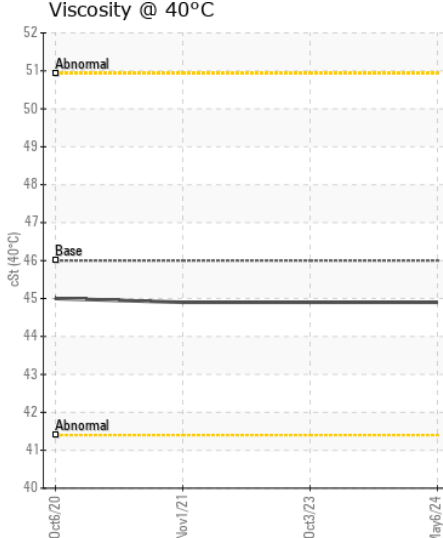
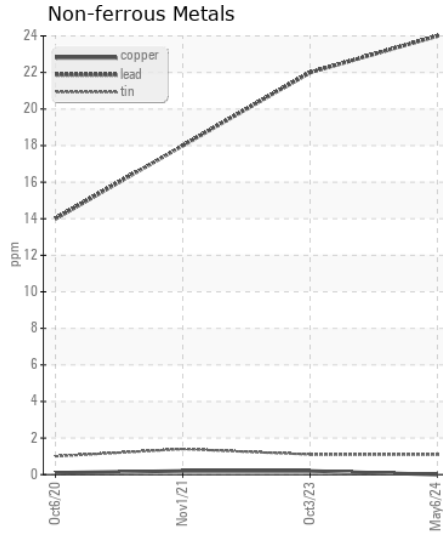
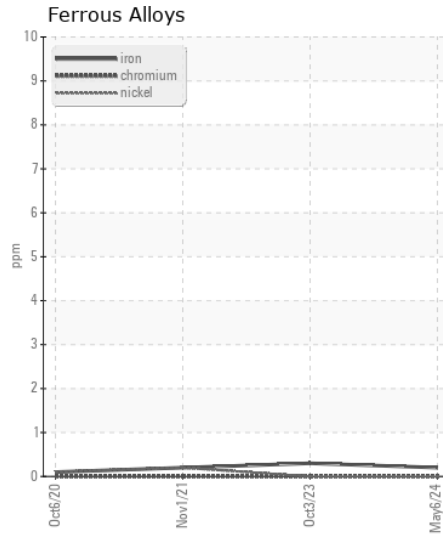
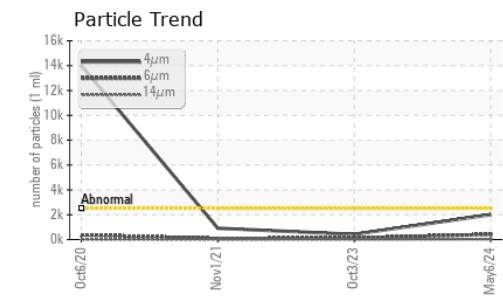
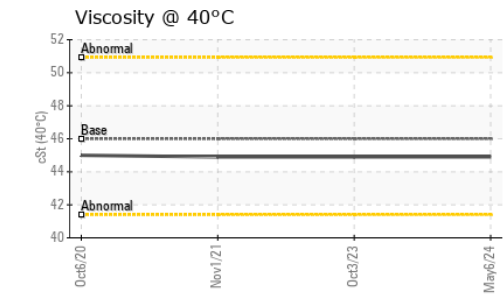
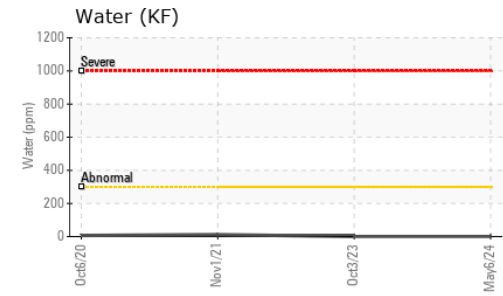
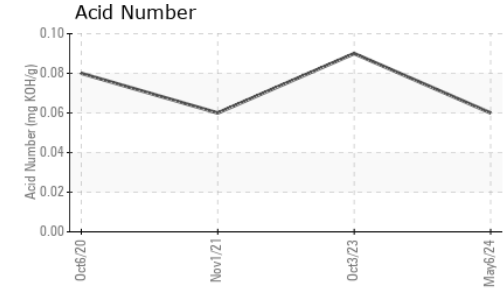
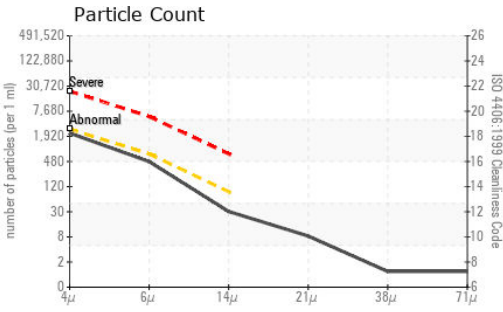
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	2	3	2
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Water	%	ASTM D6304*	>0.03	0.00	0.001	0.001
ppm Water	ppm	ASTM D6304*	>300	0	0.1	12.1
Particles >4µm		ASTM D7647	>2500	2010	421	913
Particles >6µm		ASTM D7647	>640	419	120	79
Particles >14µm		ASTM D7647	>80	27	9	5
Particles >21µm		ASTM D7647	>20	7	2	2
Particles >38µm		ASTM D7647	>4	1	0	0
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	18/16/12	16/14/10	17/13/10
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	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*	>0.03	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		0	0	0
Boron	ppm	ASTM D5185(m)		0	<1	<1
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		<1	0	<1
Calcium	ppm	ASTM D5185(m)		0	<1	2
Phosphorus	ppm	ASTM D5185(m)		0	0	1
Zinc	ppm	ASTM D5185(m)		<1	<1	2
Sulfur	ppm	ASTM D5185(m)		460	452	455
Acid Number (AN)	mg KOH/g	ASTM D974*		0.06	0.09	0.06
Visc @ 40°C	cSt	ASTM D7279(m)	46	44.9	44.9	44.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0862806
Lab Number : 02634351
Unique Number : 5775504
Test Package : IND 2
Received : 09 May 2024
Tested : 10 May 2024
Diagnosed : 13 May 2024 - Kevin Marson

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.