

OIL ANALYSIS REPORT

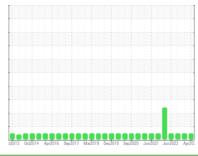
Sample Rating Trend

NORMAL

Southcentral Power Plant 11CTG-GLO

Component **Bearing**

SHELL TURBO J (500 GAL)



Recommendation

Resample at the next service interval to monitor.

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.

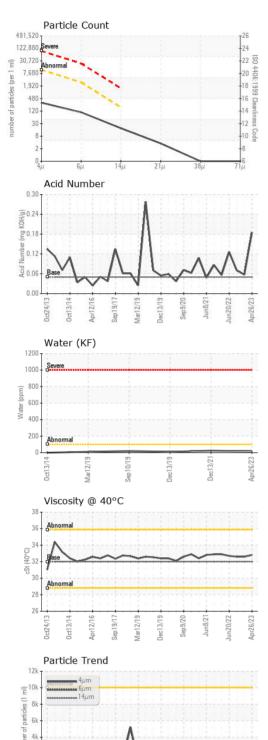
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service. Color 3.5.

:d013									
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2			
Sample Number		Client Info		WC0784109	WC0631021	WC0631020			
Sample Date		Client Info		26 Apr 2023	29 Dec 2022	27 Sep 2022			
Machine Age	hrs	Client Info		0	0	79521			
Oil Age	hrs	Client Info		0	0	79521			
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd			
Sample Status				NORMAL	NORMAL	NORMAL			
WEAR METALS		method	limit/base	current	history1	history2			
Iron	ppm	ASTM D5185m	>20	0	0	0			
Chromium	ppm	ASTM D5185m	>20	<1	0	0			
Nickel	ppm	ASTM D5185m	>20	0	0	0			
Titanium	ppm	ASTM D5185m		0	0	0			
Silver	ppm	ASTM D5185m		<1	0	0			
Aluminum	ppm	ASTM D5185m	>20	<1	0	0			
Lead	ppm	ASTM D5185m	>20	<1	0	<1			
Copper	ppm	ASTM D5185m	>20	0	0	0			
Tin	ppm	ASTM D5185m	>20	0	0	0			
Vanadium	ppm	ASTM D5185m		0	0	0			
Cadmium	ppm	ASTM D5185m		0	0	0			
ADDITIVES									
ADDITIVES		method	limit/base	current	history1	history2			
Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0			
	ppm ppm		limit/base						
Boron		ASTM D5185m	limit/base	0	0	0			
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	0	0			
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1	0 0 0	0 0 0			
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1	0 0 0	0 0 0			
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 10	0 0 0 0	0 0 0 0			
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 10	0 0 0 0 0	0 0 0 0 0			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 10 0	0 0 0 0 0 0 0 38	0 0 0 0 0 0			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 10 0 0	0 0 0 0 0 0 0 38	0 0 0 0 0 0 0			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 <1 10 0 0 4	0 0 0 0 0 0 0 38 0	0 0 0 0 0 0 0 1			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 <1 <1 10 0 0 4 0	0 0 0 0 0 0 0 38 0 0	0 0 0 0 0 0 1 0 17			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 <1 <1 10 0 0 4 0 current	0 0 0 0 0 0 38 0 0 history1	0 0 0 0 0 0 1 0 17 history2			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >15 >20	0 0 <1 <1 10 0 0 4 0 current <1 5	0 0 0 0 0 0 0 38 0 0 0 history1	0 0 0 0 0 0 0 1 0 17 history2			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >15 >20	0 0 <1 <1 10 0 0 4 0 current <1 5	0 0 0 0 0 0 0 38 0 0 0 history1	0 0 0 0 0 0 0 1 0 17 history2			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >15 >20	0 0 -1 -1 10 0 0 4 0 current -1 5 0 0.002	0 0 0 0 0 0 0 38 0 0 history1	0 0 0 0 0 0 0 1 0 17 history2 0 <1 1			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304	limit/base >15 >20 >2	0 0 <1 <1 10 0 0 4 0 current <1 5 0 0.002	0 0 0 0 0 0 0 38 0 0 0 history1	0 0 0 0 0 0 1 0 17 history2 0 <1 1			
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304	limit/base >15 >20 >2	0 0	0 0 0 0 0 0 0 38 0 0 history1	0 0 0 0 0 0 1 0 17 history2 0 <1 1 			



OIL ANALYSIS REPORT



FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	266	2343	456
Particles >6µm		ASTM D7647	>2500	93	522	95
Particles >14μm		ASTM D7647	>160	16	23	13
Particles >21µm		ASTM D7647	>40	3	7	4
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/14	15/14/11	18/16/12	16/14/11
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		4.0		
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	0.185	0.057	0.07
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	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	32.8	32.6	32.6
ASTM Color	scalar	*ASTM D1500	0.5	3.5	L5.5	L3.5
SAMPLE IMAGES	;	method	limit/base	current	history1	history2
Color						3000
Bottom						





Laboratory Sample No. Unique Number : 10493010

Lab Number : 05858545

: WC0784109

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

Diagnosed

: 26 May 2023 : 31 May 2023

: 31 May 2023 - Jonathan Hester Test Package: PLANT (Additional Tests: Color-ASTM, FT-IR)

CHUGACH ELECTRIC 5601 ELECTRON DR ANCHORAGE, AK US 99519

Contact: AARON LOVE aaron_love@chugachelectric.com

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:

F: