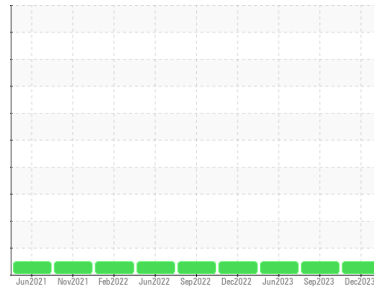




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

UNIT 11 (S/N 5960)

Component

Hydraulic System

Fluid

CHEVRON RANDO HD 46 (106 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service. Color L3.5

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0792221	WC0792216	WC0753787
Sample Date	Client Info	18 Dec 2023	11 Sep 2023	13 Jun 2023
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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >20	<1	0	0
Chromium	ppm ASTM D5185m >20	<1	0	0
Nickel	ppm ASTM D5185m >20	<1	0	<1
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m	0	0	0
Aluminum	ppm ASTM D5185m >20	2	0	<1
Lead	ppm ASTM D5185m >20	1	0	0
Copper	ppm ASTM D5185m >20	1	<1	<1
Tin	ppm ASTM D5185m >20	1	0	0
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	0	0	0
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	<1	2	0
Manganese	ppm ASTM D5185m	<1	0	<1
Magnesium	ppm ASTM D5185m	<1	21	0
Calcium	ppm ASTM D5185m	36	42	32
Phosphorus	ppm ASTM D5185m	278	266	260
Zinc	ppm ASTM D5185m	326	329	327
Sulfur	ppm ASTM D5185m	936	880	1076

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	1	<1	<1
Sodium	ppm ASTM D5185m	0	1	<1
Potassium	ppm ASTM D5185m >20	2	1	<1
Water	% ASTM D6304 >0.05	NEG	NEG	NEG

INFRA-RED

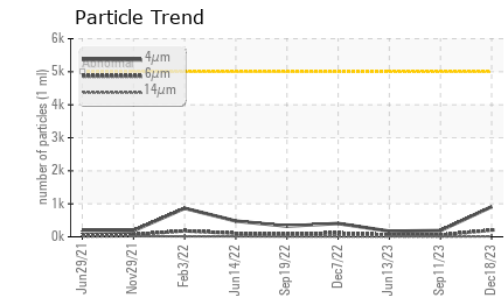
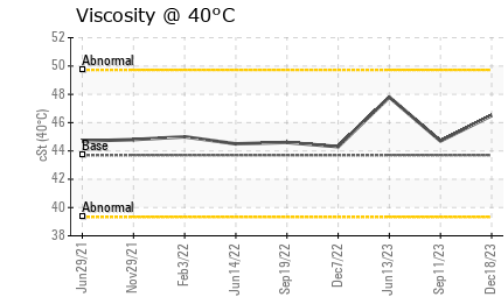
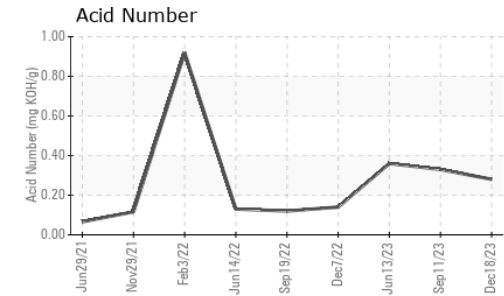
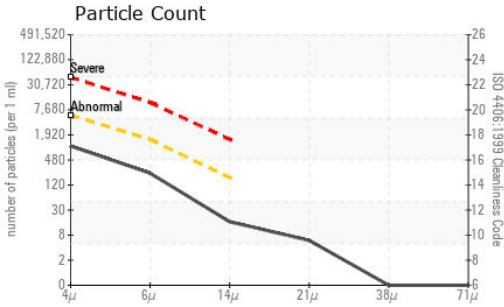
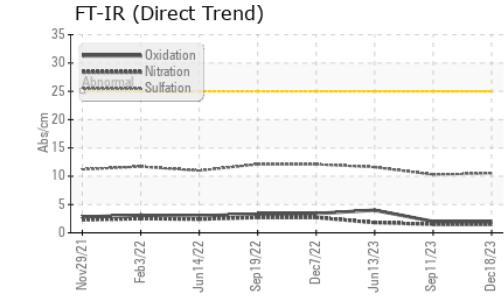
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0	0.1
Nitration	Abs/cm *ASTM D7624	1.5	1.5	1.8
Sulfation	Abs/.1mm *ASTM D7415	10.5	10.3	11.6

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	912	189	170
Particles >6µm	ASTM D7647 >1300	203	53	58
Particles >14µm	ASTM D7647 >160	14	6	9
Particles >21µm	ASTM D7647 >40	5	2	3
Particles >38µm	ASTM D7647 >10	0	1	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	17/15/11	15/13/10	15/13/10



OIL ANALYSIS REPORT



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0792221
Lab Number : **06135598**
Unique Number : 10955063
Test Package : PLANT (Additional Tests: Color-ASTM, FT-IR)

CHUGACH ELECTRIC - SULLIVAN PLANT
 8900 STARVIEW DRIVE
 ANCHORAGE, AK
 US 99504

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Contact: JON RIVERA

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Jon_Rivera@chugachelectric.com

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

T: (907)762-7804

F:

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	*ASTM D7414	2.0	2.0	4.0
Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	0.33	0.36

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	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.5	44.7	47.8
ASTM Color	scalar	*ASTM D1500	L3.5	L3.5	L3.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

