

## **OIL ANALYSIS REPORT**

## FES HTC-2 (S/N 23441-001-1-01-02) Component

**Refrigeration Compressor** USPI ALT-68 SC (--- GAL)

### Recommendation

Resample at the next service interval to monitor.

#### Wear

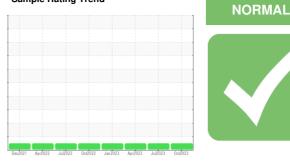
All component wear rates are normal.

#### 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.



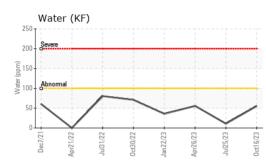
Sample Rating Trend

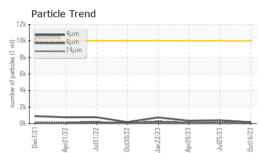


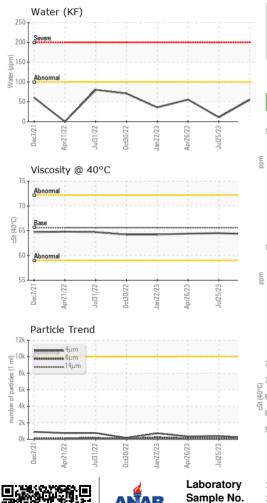
SAMPLE INFORM	<b>NATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0001102	USP249773	USP245567
Sample Date		Client Info		16 Oct 2023	25 Jul 2023	26 Apr 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
		ASTM D5185m	>8		<1	0
Iron Chromium	ppm			0		0
	ppm	ASTM D5185m	>2		0	
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m	0	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	0	0	0
Lead	ppm	ASTM D5185m	>2	0	0	0
Copper	ppm	ASTM D5185m	>8	0	0	0
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		3	1	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	<1	<1
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m		1	0	0
Zinc	ppm	ASTM D5185m		5	0	0
Sulfur	ppm	ASTM D5185m	50	11	27	0
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	1	1	1
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	2	<1	<1
Water	%	ASTM D6304	>0.01	0.005	0.001	0.005
ppm Water	ppm	ASTM D6304	>100	55.3	10.9	55.7
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	151	406	350
Particles >6µm		ASTM D7647	>2500	40	109	95
Particles >14µm		ASTM D7647	>320	4	5	6
Particles >21µm		ASTM D7647	>80	1	2	2
Particles >38µm		ASTM D7647	>20	0	0	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	14/12/9	16/14/10	16/14/10
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	0.014	0.013	0.014



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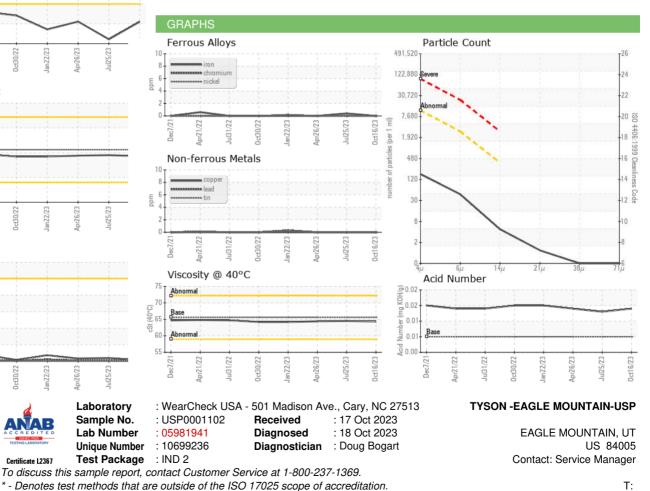






NONE NONE \*Visual NONE NONE White Metal scalar Yellow Metal NONE NONE NONE NONE scalar \*Visual Precipitate scalar \*Visua NONE NONE NONE NONE Silt scalar \*Visual NONE NONE NONE NONE NONE NONE Debris \*Visual NONE NONE scalar NONE Sand/Dirt scalar \*Visual NONE NONE NONE NORML Appearance NORML NORML NORML scalar \*Visua Odor \*Visual NORML NORML NORML NORML scalar \*Visual **Emulsified Water** scalar >0.01 NEG NEG NEG Free Water scalar \*Visual NEG NEG NEG FLUID PROPERTIES 64.5 Visc @ 40°C cSt ASTM D445 65.6 64.3 64.4 SAMPLE IMAGES Color

Bottom



\* - 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)

Certificate L2367

Contact/Location: Service Manager - TYSEAG

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