



# OIL ANALYSIS REPORT

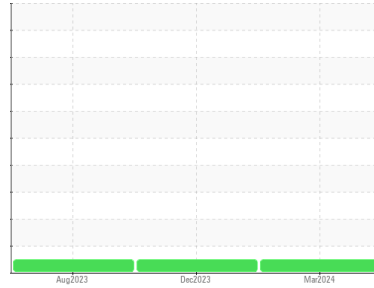
Sample Rating Trend

**NORMAL**



Machine Id  
**GEA TYSWAL HS-04 NEW (S/N 00856-009-1-01-01)**

Component  
**Refrigeration Compressor**  
Fluid  
**USPI ALT-68 SC (--- 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 component. The amount and size of particulates present in the system 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			<b>USP0006166</b>	USP0004063	USP0000378
Sample Date	Client Info			<b>19 Mar 2024</b>	06 Dec 2023	27 Aug 2023
Machine Age	hrs	Client Info		<b>0</b>	4157	1815
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m		<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>8	<b>0</b>	0	0
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

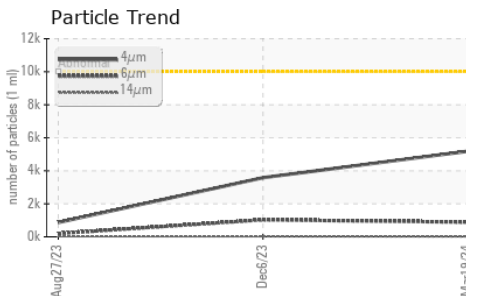
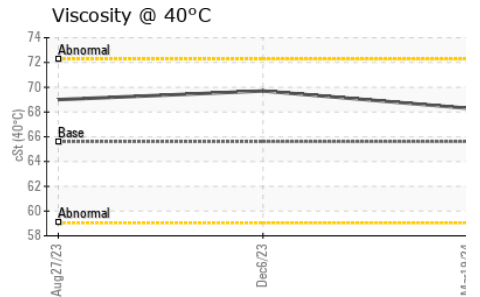
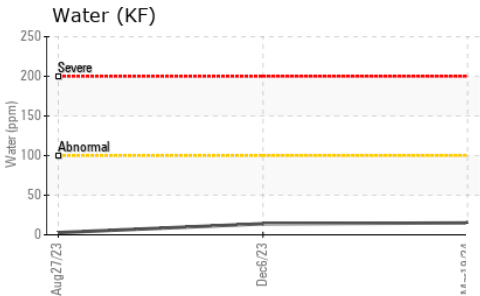
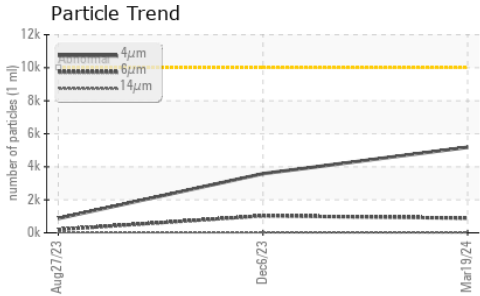
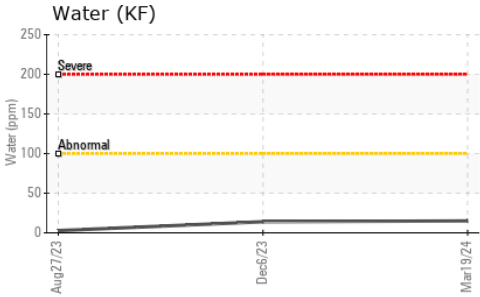
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	0
Calcium	ppm	ASTM D5185m		<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>0</b>	0	1
Zinc	ppm	ASTM D5185m		<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m	50	<b>41</b>	0	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	<1
Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	<1
Water	%	ASTM D6304	>0.01	<b>0.001</b>	0.001	0.001
ppm Water	ppm	ASTM D6304	>100	<b>15</b>	14	2.8

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	<b>5184</b>	3581	870
Particles >6µm		ASTM D7647	>2500	<b>886</b>	1029	198
Particles >14µm		ASTM D7647	>320	<b>25</b>	32	35
Particles >21µm		ASTM D7647	>80	<b>7</b>	7	11
Particles >38µm		ASTM D7647	>20	<b>1</b>	0	0
Particles >71µm		ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>20/17/12</b>	19/17/12	17/15/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	<b>0.014</b>	0.015	0.015

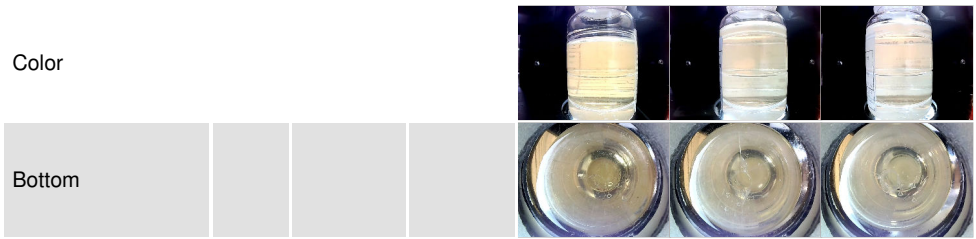
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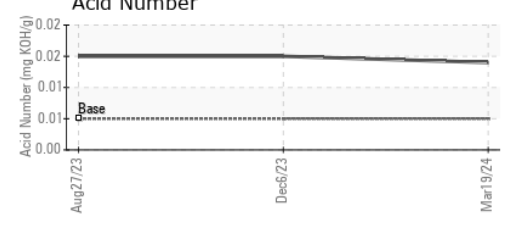
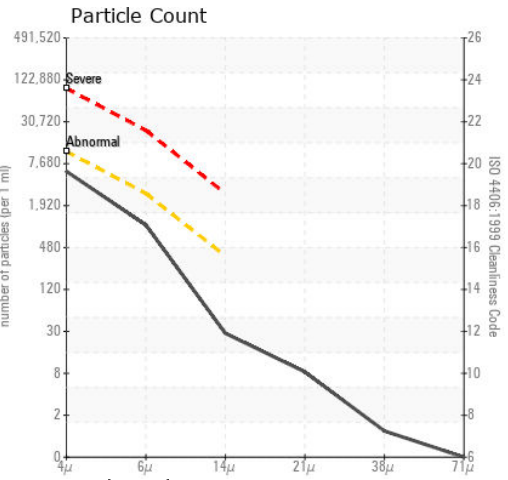
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	65.6	<b>68.3</b>	69.7	69.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0006166  
**Lab Number** : 06123699  
**Unique Number** : 10937850  
**Test Package** : IND 2  
**Received** : 20 Mar 2024  
**Tested** : 25 Mar 2024  
**Diagnosed** : 25 Mar 2024 - Jonathan Hester

**TYSON - WALDRON- USP**  
 WALDRON, AR  
 US  
 Contact: DANNY HOUSTON  
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 T: (479)637-2121  
 F: (479)637-5602

Certificate L2367  
 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)