



OIL ANALYSIS REPORT



Area
{UNASSIGNED}
 Machine Id
TRANE WSU-Shapiro (S/N U95B04716)
 Component
Chiller
 Fluid
REFRIG COMP OIL ISO 68 (--- GAL)

Sample Rating Trend



WEAR



DIAGNOSIS

▲ Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: WSU-Shapiro)

▲ Wear

The copper level is abnormal. All other component wear rates are normal.

● Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0827315	---	---
Sample Date	Client Info	12 Apr 2024	---	---
Machine Age	hrs Client Info	0	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>8	2	---	---
Chromium ppm ASTM D5185m	>2	0	---	---
Nickel ppm ASTM D5185m		0	---	---
Titanium ppm ASTM D5185m		0	---	---
Silver ppm ASTM D5185m	>2	0	---	---
Aluminum ppm ASTM D5185m	>3	0	---	---
Lead ppm ASTM D5185m	>2	0	---	---
Copper ppm ASTM D5185m	>8	▲ 16	---	---
Tin ppm ASTM D5185m	>4	0	---	---
Vanadium ppm ASTM D5185m		0	---	---
Cadmium ppm ASTM D5185m		0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m	5	0	---	---
Barium ppm ASTM D5185m	5	0	---	---
Molybdenum ppm ASTM D5185m	5	0	---	---
Manganese ppm ASTM D5185m		0	---	---
Magnesium ppm ASTM D5185m	5	0	---	---
Calcium ppm ASTM D5185m	12	0	---	---
Phosphorus ppm ASTM D5185m	12	0	---	---
Zinc ppm ASTM D5185m	12	0	---	---
Sulfur ppm ASTM D5185m	1000	219	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>15	7	---	---
Sodium ppm ASTM D5185m		<1	---	---
Potassium ppm ASTM D5185m	>20	2	---	---
Water % ASTM D6304	>0.030	0.001	---	---
ppm Water ppm ASTM D6304	>300	15	---	---

FLUID CLEANLINESS

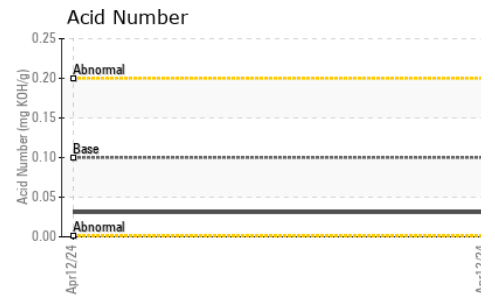
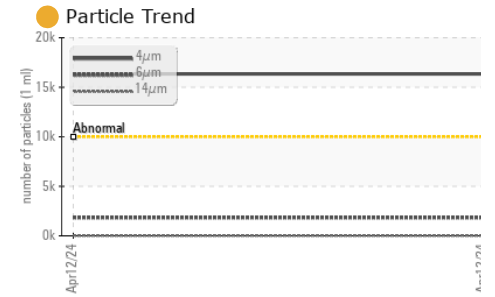
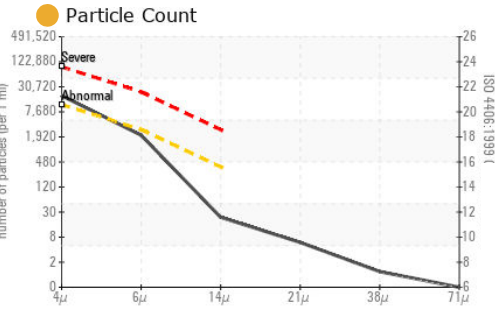
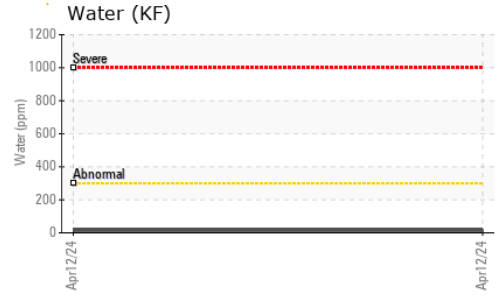
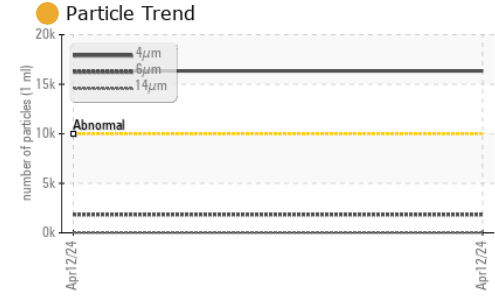
method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>10000	● 16340	---	---
Particles >6µm ASTM D7647	>2500	1845	---	---
Particles >14µm ASTM D7647	>320	20	---	---
Particles >21µm ASTM D7647	>80	5	---	---
Particles >38µm ASTM D7647	>20	1	---	---
Particles >71µm ASTM D7647	>4	0	---	---
Oil Cleanliness ISO 4406 (c)	>20/18/15	● 21/18/11	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045	0.10	0.031	---	---



OIL ANALYSIS REPORT



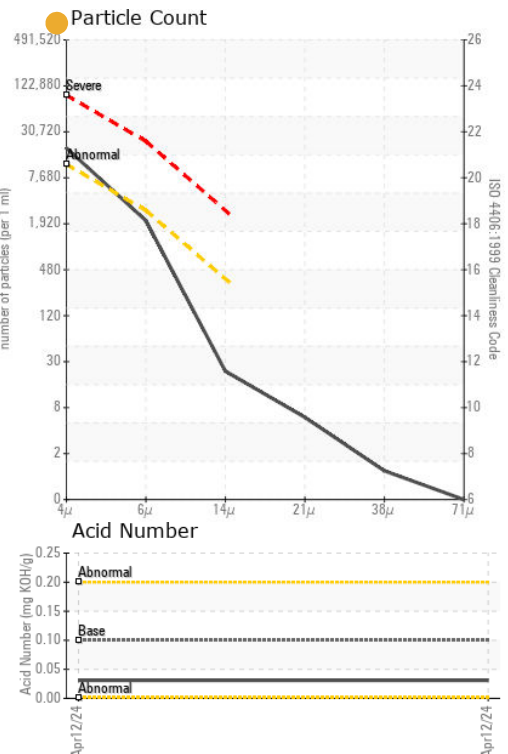
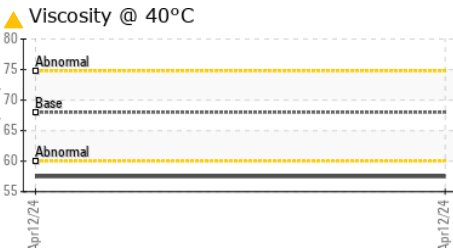
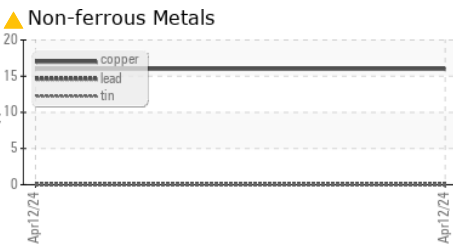
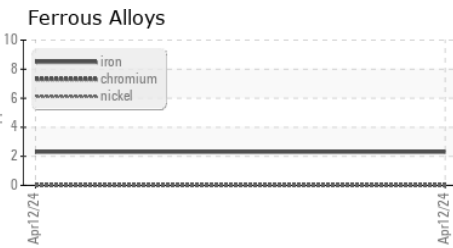
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.030	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 68	▲ 57.5	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color		no image	no image
Bottom		no image	no image

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0827315 **Received** : 18 Apr 2024
Lab Number : 06153202 **Tested** : 19 Apr 2024
Unique Number : 10983280 **Diagnosed** : 22 Apr 2024 - Angela Borella
Test Package : PLANT

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 3955 PINNACLE COURT SUITE 200
 AUBURN HILLS, MI 48326
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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)