



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL

Machine Id
TRANE WSU MANOOGIAN HALL TRANE 1 (S/N L02E08736)
 Component
Refrigeration Compressor
 Fluid
TRANE 0022 (9 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Annual test)

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

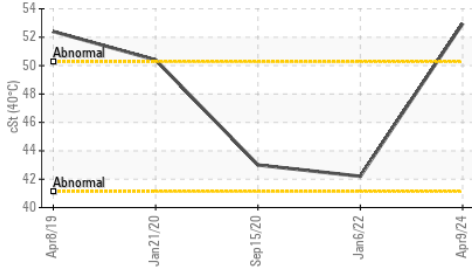
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0827286	WC0618949	WC0426224
Sample Date		Client Info		09 Apr 2024	06 Jan 2022	15 Sep 2020
Machine Age	hrs	Client Info		28106	25154	24337
Oil Age	hrs	Client Info		28106	25154	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	NORMAL	NORMAL

Iron	ppm	ASTM D5185m	>8	4	5	5
Chromium	ppm	ASTM D5185m	>2	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		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	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	6	8	8
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

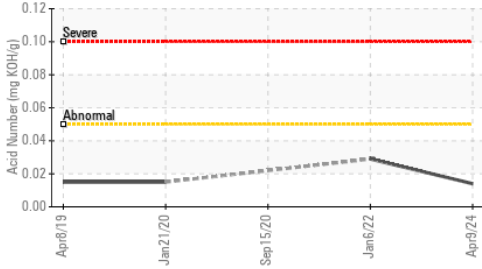
Silicon	ppm	ASTM D5185m	>15	4	6	5
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water	%	ASTM D6304	>0.005	0.001	0.001	0.001
ppm Water	ppm	ASTM D6304	>50	15	7.6	14.0
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.005	NEG	NEG	NEG

Sodium	ppm	ASTM D5185m		<1	0	<1
Boron	ppm	ASTM D5185m		0	<1	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		0	0	<1
Calcium	ppm	ASTM D5185m		0	1	3
Phosphorus	ppm	ASTM D5185m		0	7	3
Zinc	ppm	ASTM D5185m		0	0	<1
Sulfur	ppm	ASTM D5185m		0	26	10
Acid Number (AN)	mg KOH/g	ASTM D974		0.014	0.029	---
Visc @ 40°C	cSt	ASTM D445		▲ 52.96	42.2	43.0

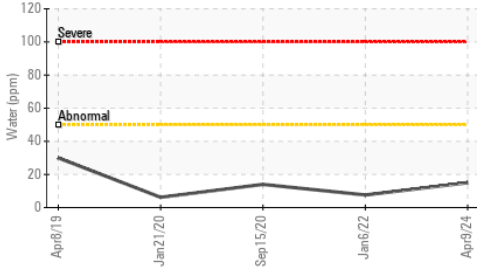
▲ Viscosity @ 40°C



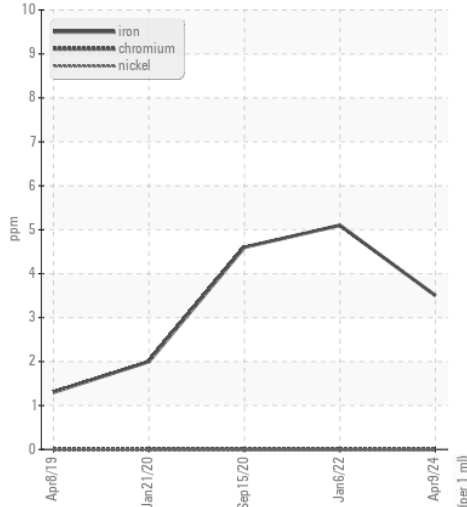
Acid Number



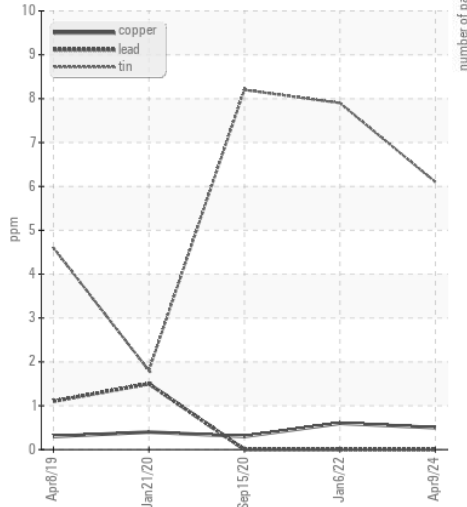
Water (KF)



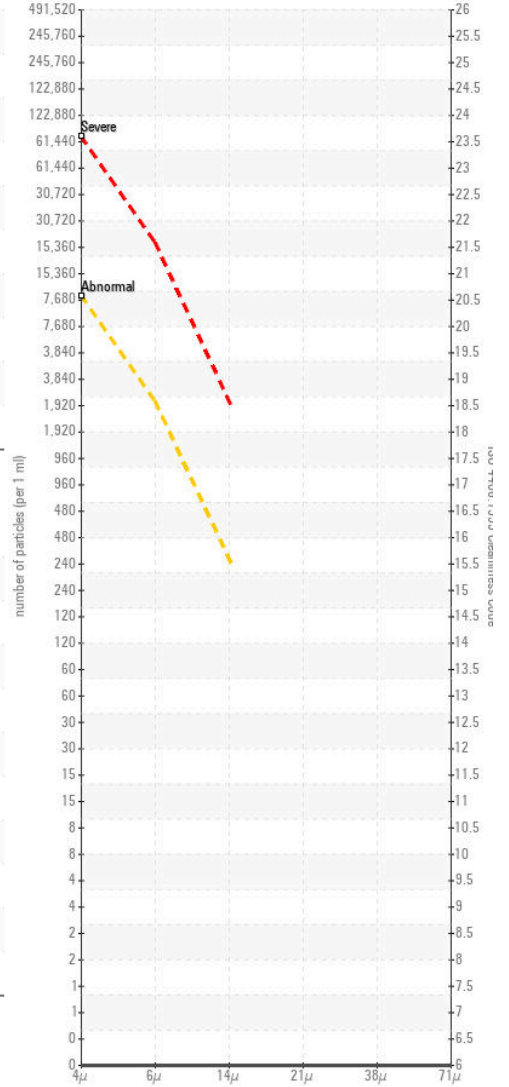
Ferrous Alloys



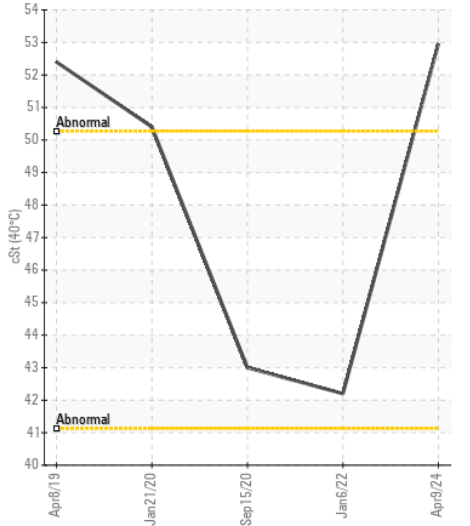
Non-ferrous Metals



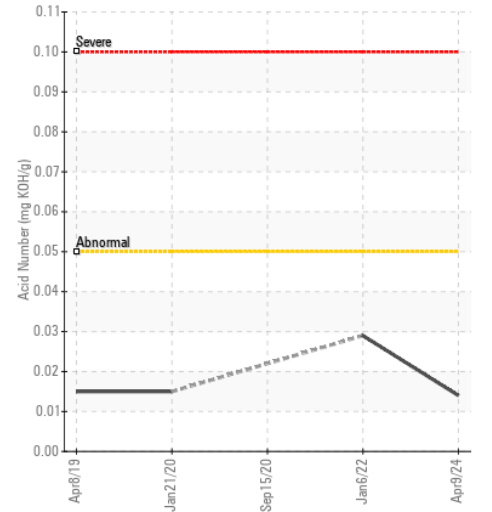
Particle Count



▲ Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0827286
Lab Number : 06148744
Unique Number : 10978822
Test Package : PLANT
Received : 15 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 19 Apr 2024 - Jonathan Hester

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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)