



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
Milliken
 Machine Id
INGERSOLL RAND EE4347U19082 - MILLIKEN
 Component
Compressor
 Fluid
INGERSOLL-RAND SSR ULTRA COOLANT (--- GAL)

RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		APCI2320833	APC0000297	APCI2320835
Sample Date		Client Info		05 Dec 2023	18 Sep 2023	08 Aug 2023
Machine Age	hrs	Client Info		33169	33401	32420
Oil Age	hrs	Client Info		4000	0	6000
Filter Age	hrs	Client Info		2000	0	1000
Oil Changed		Client Info		Not Chngd	Not Chngd	N/A
Filter Changed		Client Info		Changed	Not Chngd	Not Chngd
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

The tin level is severe. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	0	3
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m		<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	3	1
Lead	ppm	ASTM D5185m	>25	<1	<1	<1
Copper	ppm	ASTM D5185m	>50	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	233	148	183
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

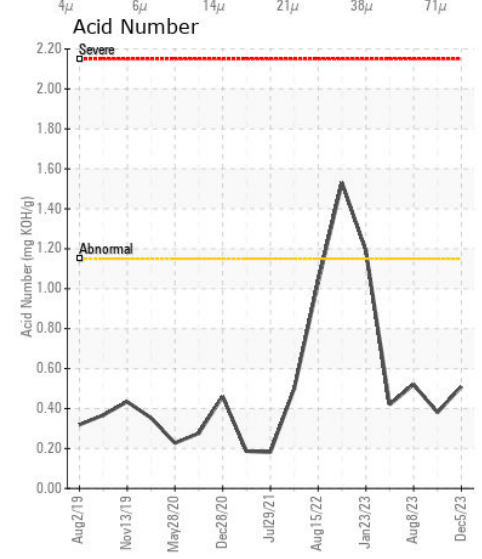
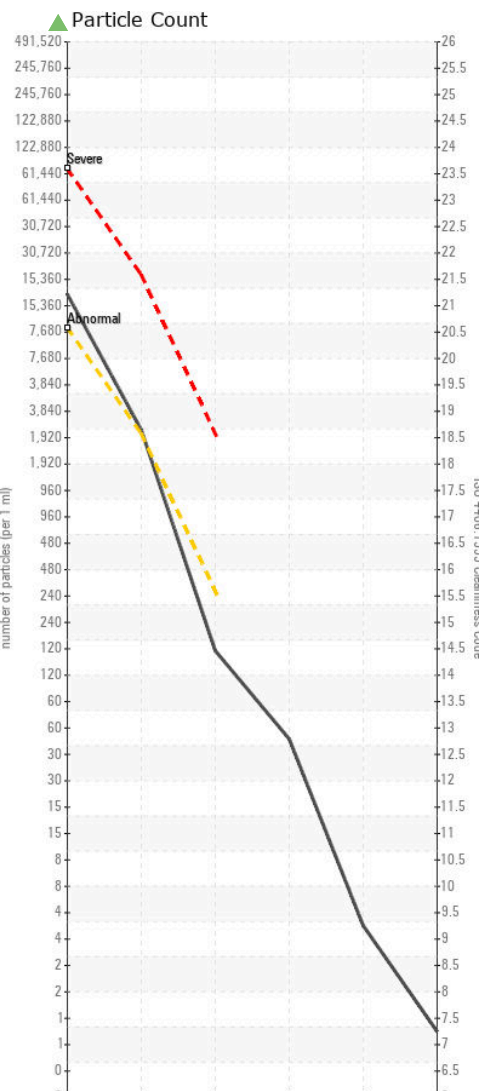
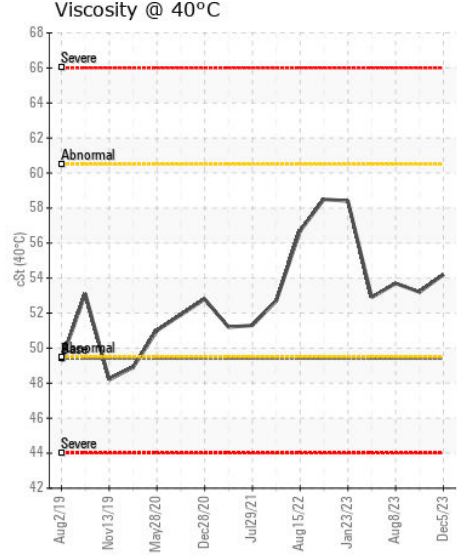
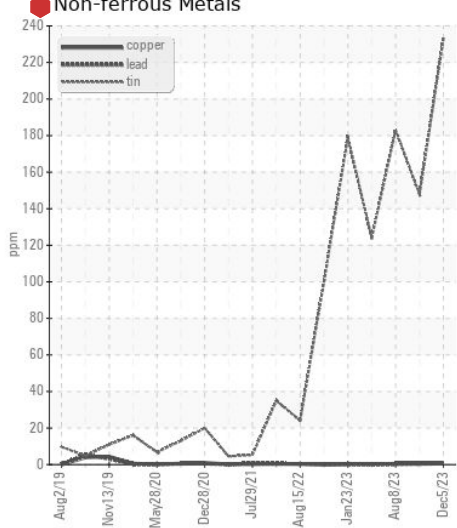
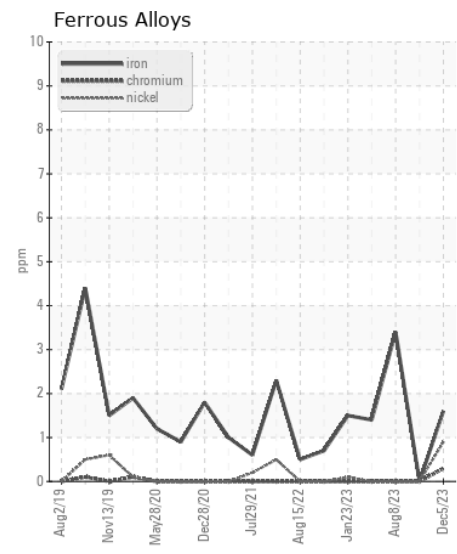
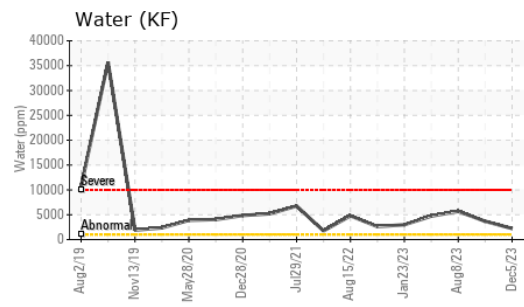
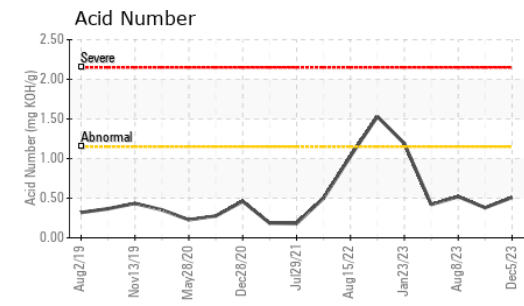
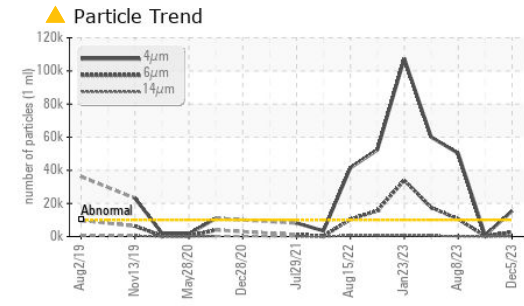
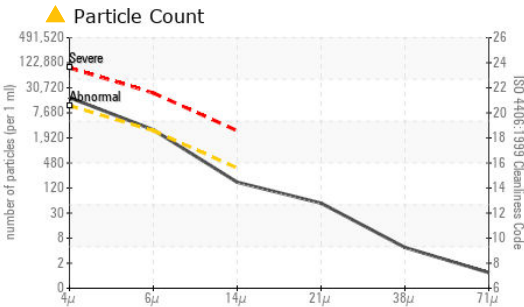
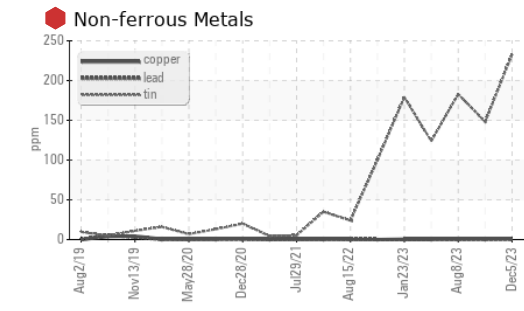
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>25	2	<1	2
Potassium	ppm	ASTM D5185m	>20	7	8	9
Water	%	ASTM D6304	>0.1	0.222	0.368	0.568
ppm Water	ppm	ASTM D6304	>1000	2227	3680.4	5682.9
Particles >4µm		ASTM D7647	>10000	15505	774	50248
Particles >6µm		ASTM D7647	>2500	2628	221	10570
Particles >14µm		ASTM D7647	>320	146	23	189
Particles >21µm		ASTM D7647	>80	46	7	43
Particles >38µm		ASTM D7647	>20	4	0	2
Particles >71µm		ASTM D7647	>4	1	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	21/19/14	17/15/12	23/21/15
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		52	35	33
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	500	590	580	480
Molybdenum	ppm	ASTM D5185m	0	<1	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	<1	2	<1
Calcium	ppm	ASTM D5185m	0	4	4	2
Phosphorus	ppm	ASTM D5185m	20	23	7	7
Zinc	ppm	ASTM D5185m	0	0	<1	14
Sulfur	ppm	ASTM D5185m	200	217	336	348
Acid Number (AN)	mg KOH/g	ASTM D8045		0.51	0.380	0.52
Visc @ 40°C	cSt	ASTM D445	49.4	54.2	53.2	53.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : APCI2320833 **Received** : 08 Jan 2024
Lab Number : 06054945 **Diagnosed** : 10 Jan 2024
Unique Number : 10820894 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

AIR PRODUCTS AND CHEMICALS INC - ALLENTOWN
 7201 HAMILTON BLVD
 ALLENTOWN, PA
 US 18195
 Contact: MICHAEL PROTZEK
 protzema@airproducts.com

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)