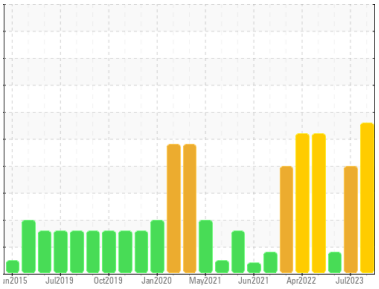
PROBLEM SUMMARY

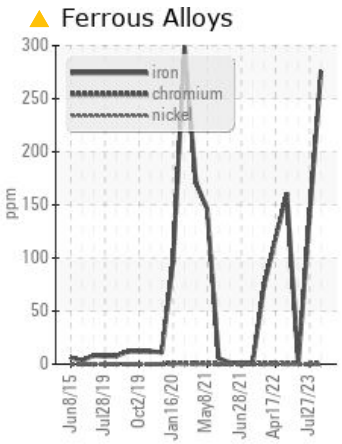
Sample Rating Trend

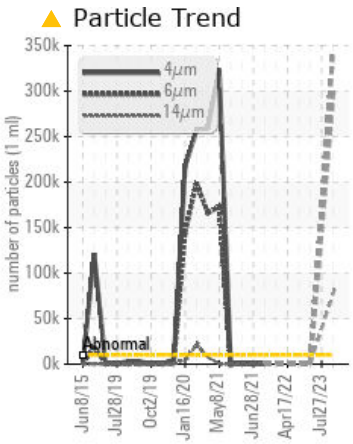


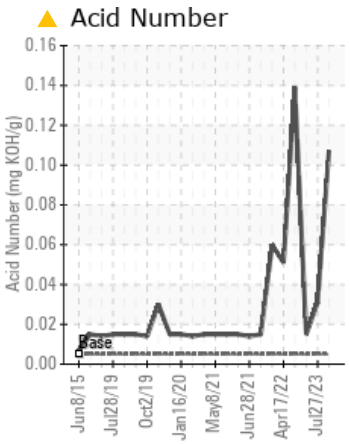
WATER

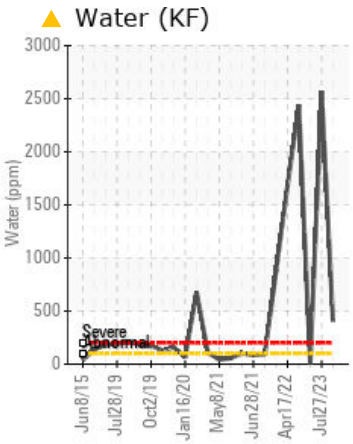
Machine Id
RS RECYCLED NH3 OIL
Component
Refrigeration Compressor
Fluid
USPI ALT-68 SC (200 GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

This is a baseline read-out on the submitted sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ATTENTION
Iron	ppm	ASTM D5185m	>8	▲ **276**	▲ 139	0
Water	%	ASTM D6304	>0.01	▲ **0.040**	▲ 0.256	0.001
ppm Water	ppm	ASTM D6304	>100	▲ **407.2**	▲ 2565.4	7.6
Particles >4µm		ASTM D7647	>10000	▲ **341668**	---	100
Particles >6µm		ASTM D7647	>2500	▲ **293259**	---	50
Particles >14µm		ASTM D7647	>320	▲ **76423**	---	5
Particles >21µm		ASTM D7647	>80	▲ **9240**	---	1
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ **26/25/23**	---	14/13/10
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	▲ **0.107**	0.031	0.015

Customer Id: TYSSED
Sample No.: USP248034
Lab Number: 05995664
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

27 Jul 2023 Diag: Doug Bogart

WATER

This is a baseline read-out on the submitted sample. We were unable to perform a particle count due to a high concentration of particles present in this sample.The iron level is abnormal. Appearance is hazy. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The oil viscosity is lower than normal. Confirmed. The AN level is acceptable for this fluid.

view report

22 Mar 2023 Diag: Doug Bogart

VISCOSITY

This is a baseline read-out on the submitted sample. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is lower than normal. Additive levels also confirmed. The AN level is acceptable for this fluid.

view report

03 Oct 2022 Diag: Doug Bogart

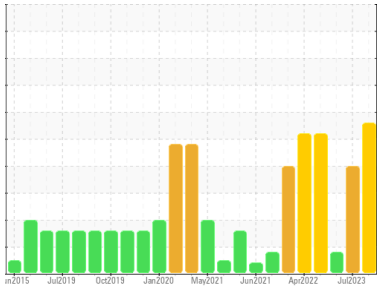
WATER

This is a baseline read-out on the submitted sample. We were unable to perform a particle count due to a high concentration of particles present in this sample.The iron level is abnormal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The oil viscosity is lower than normal. The AN level is approaching the top-end of the recommended limit.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
RS RECYCLED NH3 OIL
Component
Refrigeration Compressor
Fluid
USPI ALT-68 SC (200 GAL)

DIAGNOSIS

Recommendation
This is a baseline read-out on the submitted sample.

Wear
The iron level is abnormal.

Contamination
There is a high amount of particulates present in the oil. There is a light concentration of water present in the oil.

Fluid Condition
The AN level is approaching the top-end of the recommended limit.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**USP248034**	USP255316	USP247808
Sample Date		Client Info		**31 Oct 2023**	27 Jul 2023	22 Mar 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				**ABNORMAL**	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	▲ **276**	▲ 139	0
Chromium	ppm	ASTM D5185m	>2	**<1**	0	0
Nickel	ppm	ASTM D5185m		**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>3	**0**	0	<1
Lead	ppm	ASTM D5185m	>2	**0**	0	0
Copper	ppm	ASTM D5185m	>8	**<1**	<1	<1
Tin	ppm	ASTM D5185m	>4	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	<1	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		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**0**	<1	<1
Calcium	ppm	ASTM D5185m		**0**	0	0
Phosphorus	ppm	ASTM D5185m		**0**	0	▲ 33
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m	50	**0**	0	87

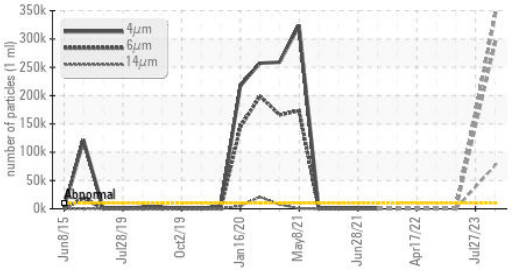
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	2	3
Sodium	ppm	ASTM D5185m		**0**	<1	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	<1
Water	%	ASTM D6304	>0.01	▲ **0.040**	▲ 0.256	0.001
ppm Water	ppm	ASTM D6304	>100	▲ **407.2**	▲ 2565.4	7.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **341668**	---	100
Particles >6µm		ASTM D7647	>2500	▲ **293259**	---	50
Particles >14µm		ASTM D7647	>320	▲ **76423**	---	5
Particles >21µm		ASTM D7647	>80	▲ **9240**	---	1
Particles >38µm		ASTM D7647	>20	**1**	---	0
Particles >71µm		ASTM D7647	>4	**0**	---	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	▲ **26/25/23**	---	14/13/10

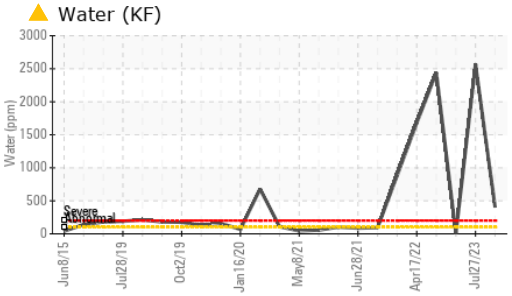
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	▲ **0.107**	0.031	0.015

OIL ANALYSIS REPORT

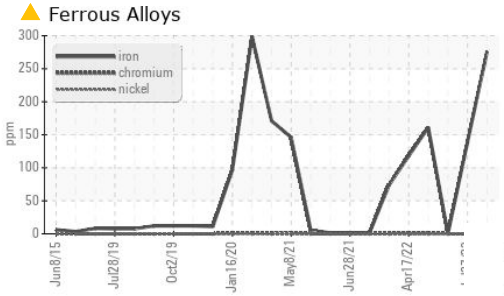
Particle Trend



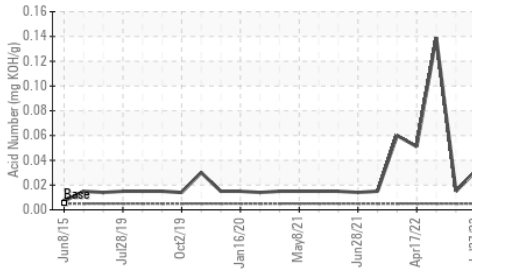
Water (KF)



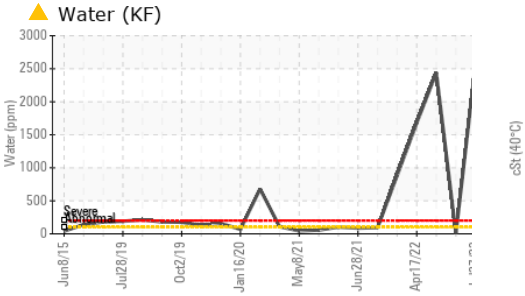
Ferrous Alloys



Acid Number

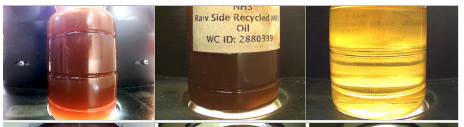
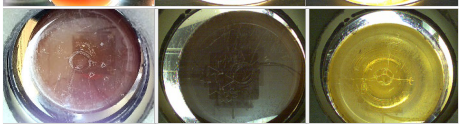


Water (KF)



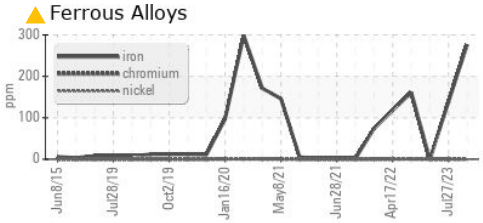
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	▲ MODER	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	**60.1**	▲ 56.6	▲ 55.89

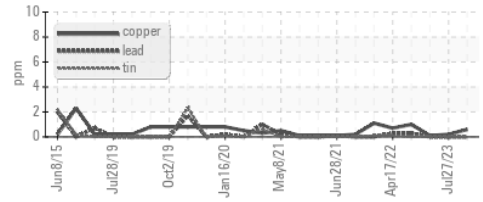
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

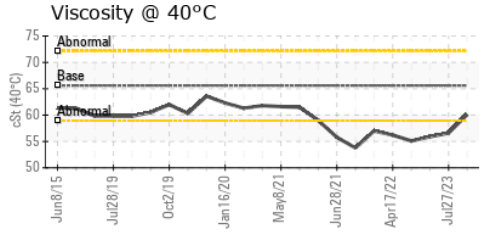
Ferrous Alloys



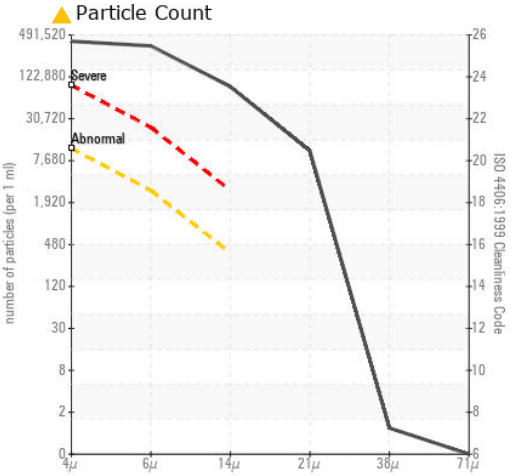
Non-ferrous Metals



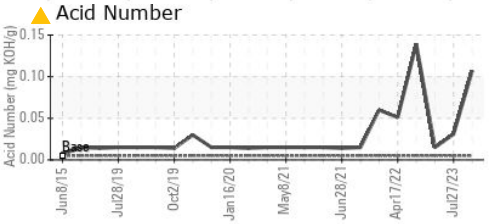
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP248034
Lab Number : 05995664
Unique Number : 10724024
Test Package : IND 2

Received : 01 Nov 2023
Diagnosed : 03 Nov 2023
Diagnostician : Doug Bogart

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)

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