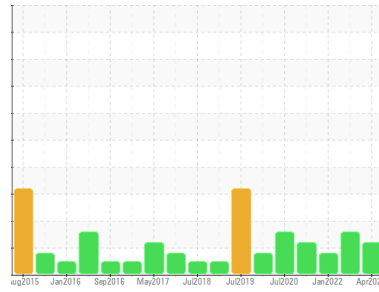




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
FRICK TYSVIE MSC-1 (S/N S0394MFMPTHAA3)
 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 a high amount of silt (particulates < 14 microns in size) present in the oil.

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	USP234226	USP230200	USP22781
Sample Date	Client Info	15 Apr 2024	23 May 2022	31 Jan 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >8	0	<1	<1
Chromium	ppm	ASTM D5185m >2	0	0	0
Nickel	ppm	ASTM D5185m	0	1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >3	<1	<1	<1
Lead	ppm	ASTM D5185m >2	0	0	0
Copper	ppm	ASTM D5185m >8	2	<1	0
Tin	ppm	ASTM D5185m >4	<1	<1	<1
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
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	0	0
Magnesium	ppm	ASTM D5185m	1	0	0
Calcium	ppm	ASTM D5185m	<1	0	0
Phosphorus	ppm	ASTM D5185m	0	1	0
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m 50	12	15	13

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<1	<1	1
Sodium	ppm	ASTM D5185m	2	0	0
Potassium	ppm	ASTM D5185m >20	3	0	0
Water	%	ASTM D6304 >0.01	0.007	0.008	0.001
ppm Water	ppm	ASTM D6304 >100	77	85.8	5.4

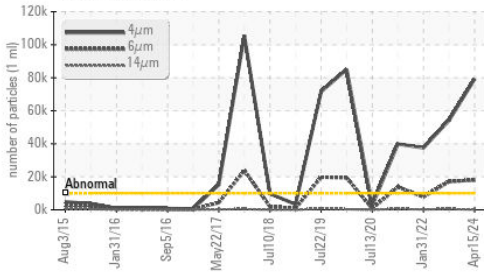
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	▲ 79219	▲ 54155	▲ 37541
Particles >6µm	ASTM D7647 >2500	▲ 18001	▲ 17161	▲ 7852
Particles >14µm	ASTM D7647 >320	43	▲ 496	186
Particles >21µm	ASTM D7647 >80	3	43	32
Particles >38µm	ASTM D7647 >20	0	0	0
Particles >71µm	ASTM D7647 >4	0	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/15	▲ 23/21/13	▲ 23/21/16	▲ 22/20/15

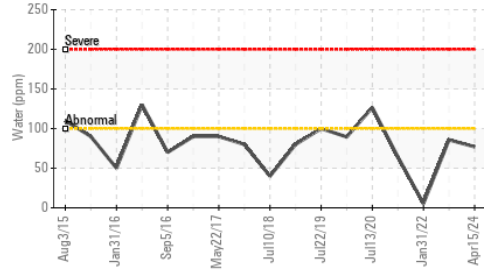
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974 0.005	0.057	0.014	0.014

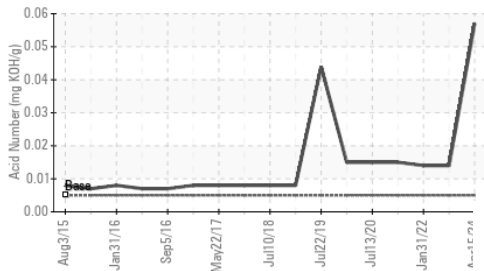
Particle Trend



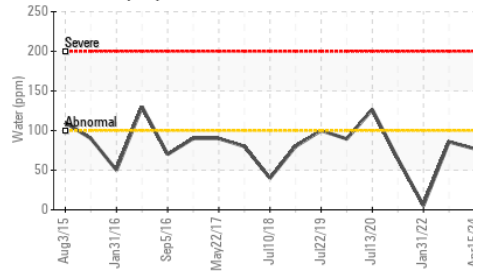
Water (KF)



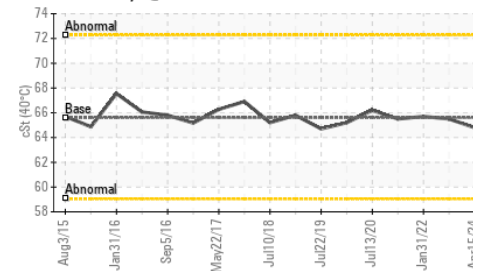
Acid Number



Water (KF)



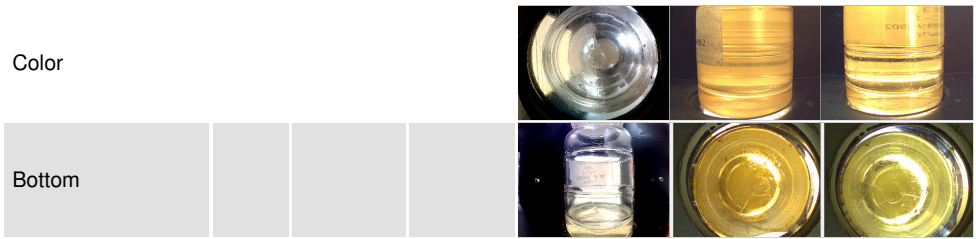
Viscosity @ 40°C



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

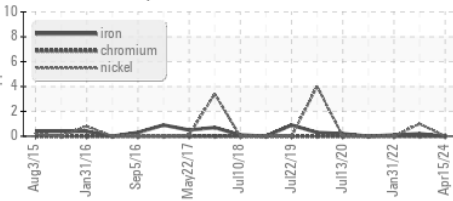
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	64.8	65.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

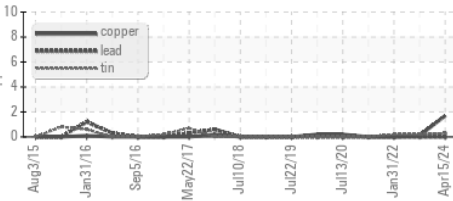


GRAPHS

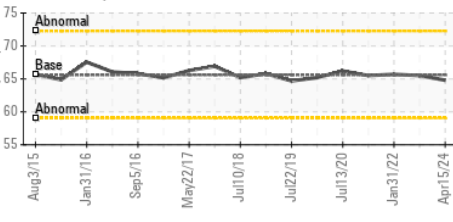
Ferrous Alloys



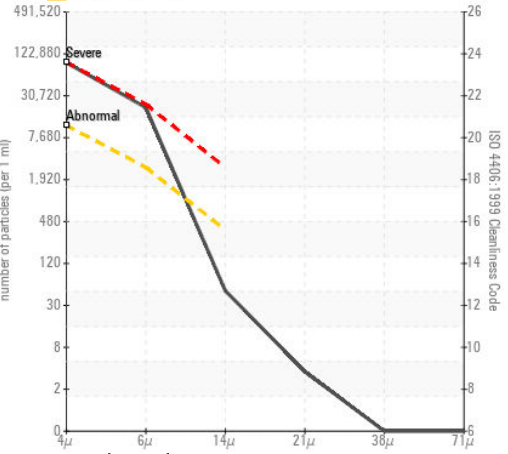
Non-ferrous Metals



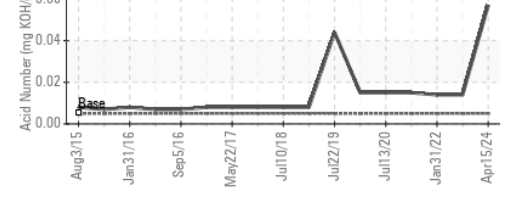
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP234226 **Received** : 16 Apr 2024
Lab Number : 06150494 **Tested** : 17 Apr 2024
Unique Number : 10980572 **Diagnosed** : 17 Apr 2024 - Doug Bogart
Test Package : IND 2

TYSON- VIENNA - USP
 VIENNA, GA
 US
 Contact: SERVICE MANAGER

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)