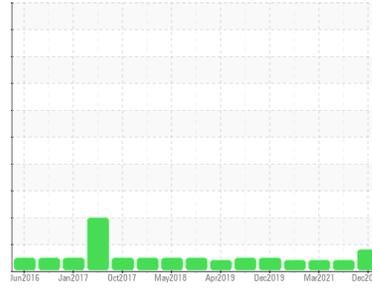




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
2146-C-9 (S/N R1332)

Component
Refrigeration Compressor
Fluid
USPI 1009-68 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	USP0005001	USP221041	USP213334
Sample Date	Client Info	09 Dec 2023	10 Jun 2021	04 Mar 2021
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	ATTENTION	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >8	<1	3	<1
Chromium	ppm	ASTM D5185m >2	<1	0	0
Nickel	ppm	ASTM D5185m	0	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >3	0	0	0
Lead	ppm	ASTM D5185m >2	0	0	<1
Copper	ppm	ASTM D5185m >8	0	0	<1
Tin	ppm	ASTM D5185m >4	0	0	0
Antimony	ppm	ASTM D5185m	---	0	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	<1
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	0	0	<1
Phosphorus	ppm	ASTM D5185m	0	0	0
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m 50	0	4	14

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	0	<1	<1
Sodium	ppm	ASTM D5185m	0	2	0
Potassium	ppm	ASTM D5185m >20	<1	0	0
Water	%	ASTM D6304 >0.01	0.004	0.001	0.001
ppm Water	ppm	ASTM D6304 >100	40	8.8	10.9

FLUID CLEANLINESS

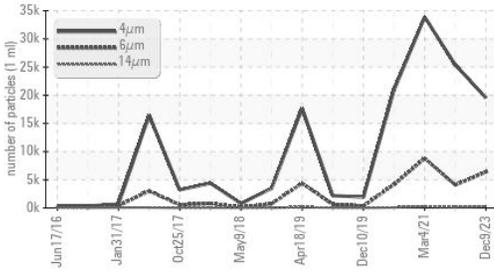
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	19537	25397	33887
Particles >6µm	ASTM D7647 >2500	6391	4078	8814
Particles >14µm	ASTM D7647 >320	267	125	265
Particles >21µm	ASTM D7647 >80	35	10	31
Particles >38µm	ASTM D7647 >20	1	0	0
Particles >71µm	ASTM D7647 >4	0	0	0
Oil Cleanliness	ISO 4406 (c) >--/18/15	21/20/15	22/19/14	22/20/15

FLUID DEGRADATION

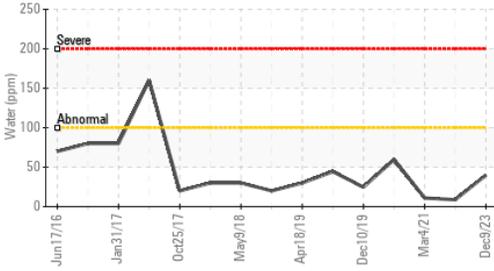
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974 0.005	0.014	0.015	0.015

OIL ANALYSIS REPORT

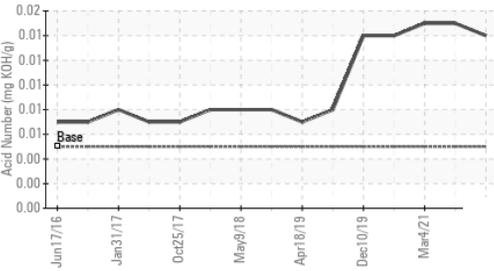
▲ Particle Trend



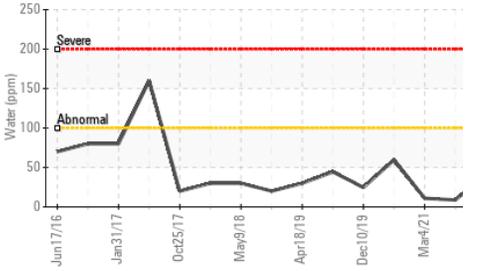
Water (KF)



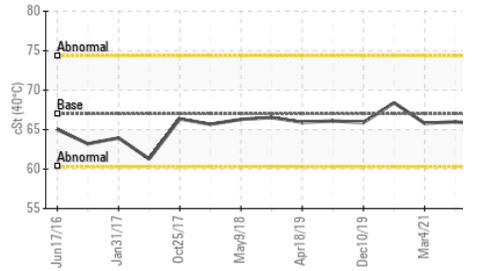
Acid Number



Water (KF)



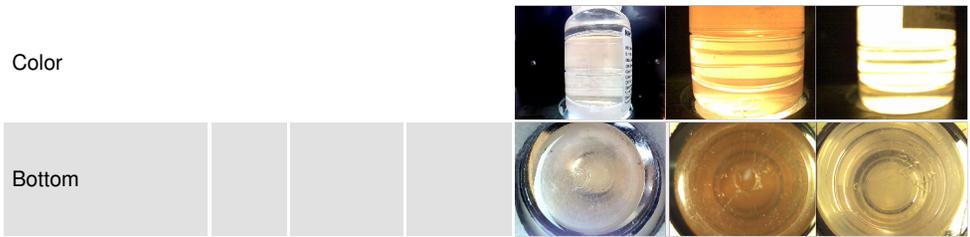
Viscosity @ 40°C



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

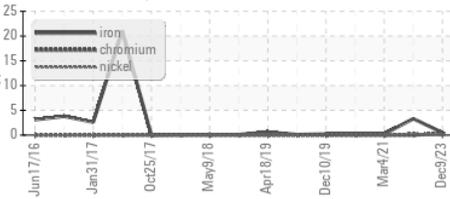
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 67	65.6	66.0	65.8

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

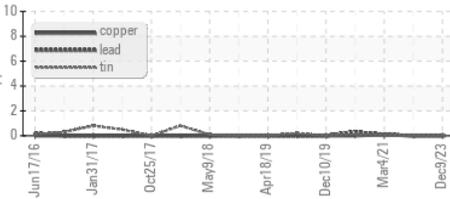


GRAPHS

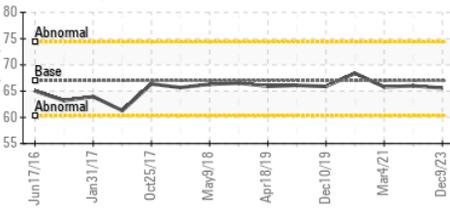
Ferrous Alloys



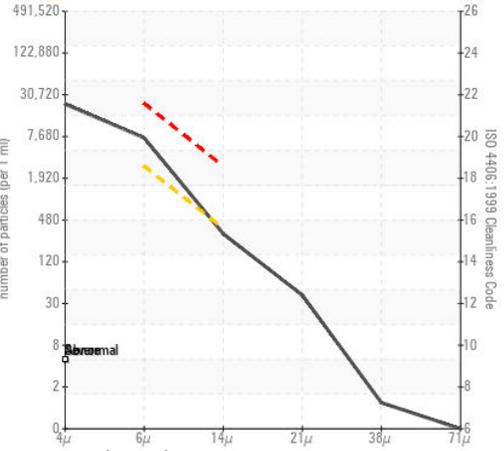
Non-ferrous Metals



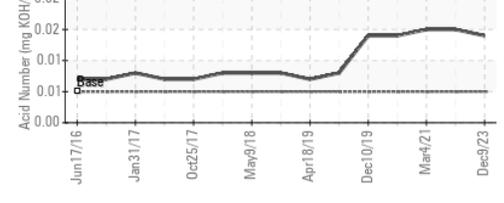
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0005001 **Received** : 16 Jan 2024
Lab Number : 06061184 **Diagnosed** : 17 Jan 2024
Unique Number : 10832566 **Diagnostician** : Doug Bogart
Test Package : IND 2

SMITHFIELD - DENISON - SMIDENIOW
 800 INDUSTRIAL ROAD
 DENISON, IA
 US 51442
 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)

T: (712)263-7414
 F: (712)263-7314