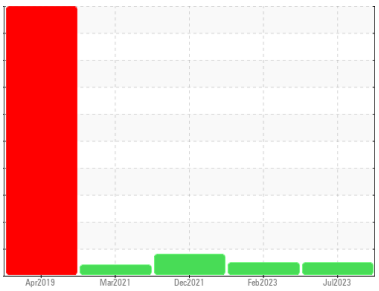
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
LINE 14 (S/N 776034)
Component
Hydraulic System
Fluid
SUNOCO SUNVIS 846 ISO 46 (75 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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		**WC0760811**	WC0760813	WC0560294
Sample Date		Client Info		**17 Jul 2023**	13 Feb 2023	02 Dec 2021
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**<1**	5	19
Chromium	ppm	ASTM D5185m	>20	**<1**	1	1
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	0
Lead	ppm	ASTM D5185m	>20	**<1**	0	<1
Copper	ppm	ASTM D5185m	>20	**1**	3	11
Tin	ppm	ASTM D5185m	>20	**0**	0	<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**	0	2
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m		**3**	4	3
Calcium	ppm	ASTM D5185m		**81**	52	47
Phosphorus	ppm	ASTM D5185m		**361**	331	359
Zinc	ppm	ASTM D5185m		**474**	360	382
Sulfur	ppm	ASTM D5185m		**3726**	3324	1526

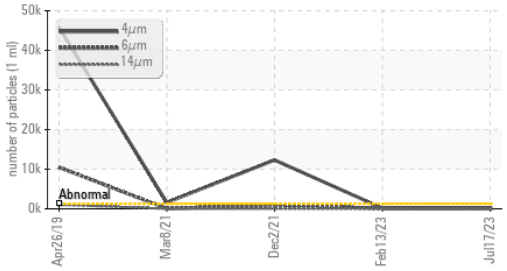
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	2	0
Sodium	ppm	ASTM D5185m		**0**	<1	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>1300	**165**	159	▲ 12323
Particles >6µm	ASTM D7647	>320	**61**	53	▲ 976
Particles >14µm	ASTM D7647	>80	**13**	9	42
Particles >21µm	ASTM D7647	>20	**5**	2	14
Particles >38µm	ASTM D7647	>4	**1**	1	1
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>17/15/13	**15/13/11**	14/13/10	▲ 21/17/13

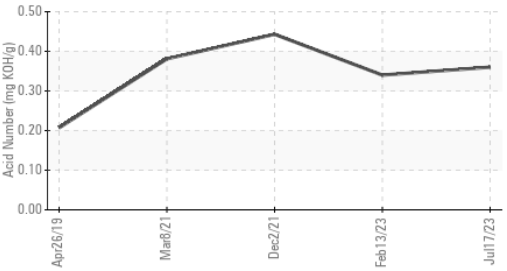
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.36**	0.34	0.443

OIL ANALYSIS REPORT

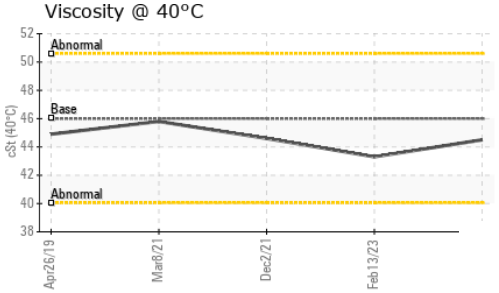
Particle Trend



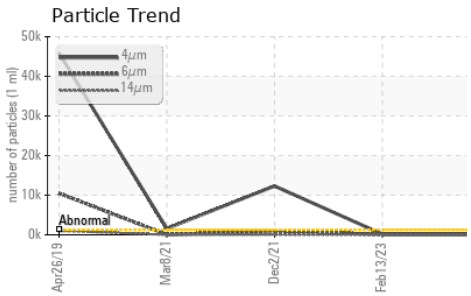
Acid Number



Viscosity @ 40°C



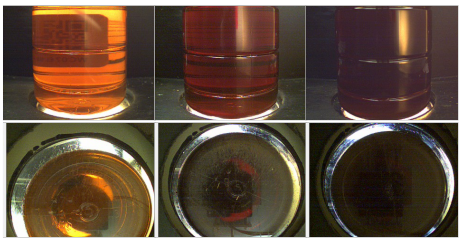
Particle Trend



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**	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	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

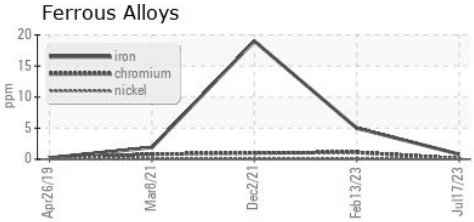
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.0	**44.5**	43.3	44.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

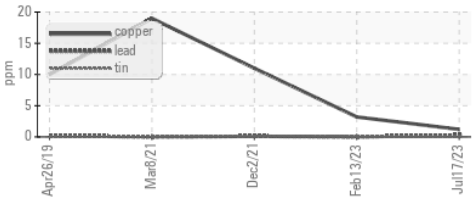


GRAPHS

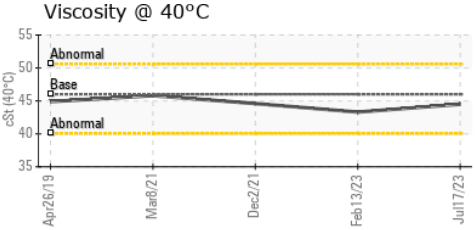
Ferrous Alloys



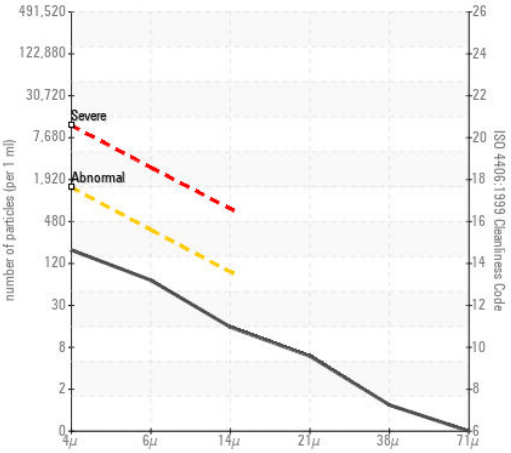
Non-ferrous Metals



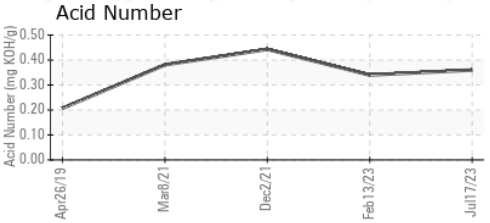
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0760811
Lab Number : 05904901
Unique Number : 10566257
Test Package : IND 2

Received : 21 Jul 2023
Diagnosed : 24 Jul 2023
Diagnostician : Wes Davis

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)

Altium Packaging - ALLENTOWN - Plant 1034A
6831 RUPPSVILLE RD
ALLENTOWN, PA
US 18106
Contact: JIM BUCHANAN
james.buchanan@altiumpkg.com
T: (610)597-6530
F: