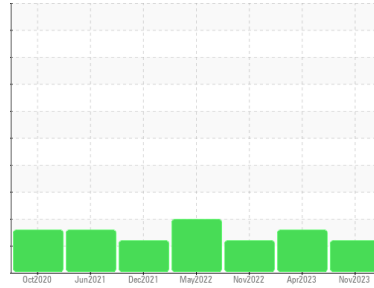


PROBLEM SUMMARY

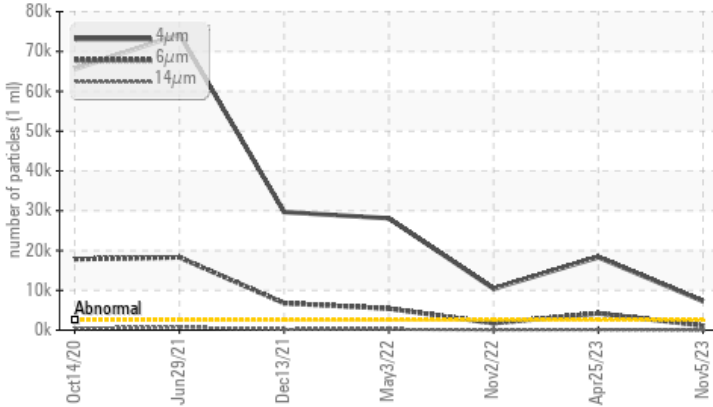
Sample Rating Trend



Area
Marcus Hook/Cryogenic/Compressor
Machine Id
CRYOGENIC COMPRESSOR 10-C-301A
Component
Rotary Compressor
Fluid
FRICK COMPRESSOR OIL #12B (385 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>2500	▲ 7268	▲ 18324	▲ 10420
Particles >6µm	ASTM D7647	>320	▲ 1133	▲ 4224	▲ 1740
Oil Cleanliness	ISO 4406 (c)	>18/15/13	▲ 20/17/12	▲ 21/19/14	▲ 21/18/13

Customer Id: ETCMHOOK
Sample No.: TO60001835
Lab Number: 05999950
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldrige +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.

HISTORICAL DIAGNOSIS

25 Apr 2023 Diag: Jonathan Hester

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



02 Nov 2022 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



03 May 2022 Diag: Don Baldrige

ISO

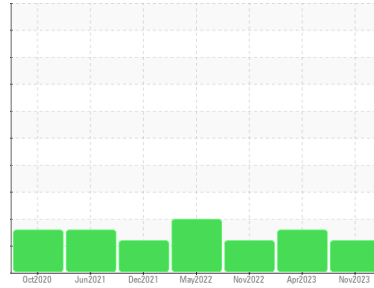


We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Area
Marcus Hook/Cryogenic/Compressor
 Machine Id
CRYOGENIC COMPRESSOR 10-C-301A
 Component
Rotary Compressor
 Fluid
FRICK COMPRESSOR OIL #12B (385 GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. 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	TO60001835	TO90003037	TO90002765
Sample Date	Client Info	05 Nov 2023	25 Apr 2023	02 Nov 2022
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	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >70	5	3	2
Chromium	ppm ASTM D5185m >10	<1	0	<1
Nickel	ppm ASTM D5185m	0	0	0
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m	0	0	0
Aluminum	ppm ASTM D5185m >3	0	0	0
Lead	ppm ASTM D5185m >4	0	0	<1
Copper	ppm ASTM D5185m >20	0	<1	<1
Tin	ppm ASTM D5185m >3	2	<1	1
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	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	<1	0
Calcium	ppm ASTM D5185m	82	84	65
Phosphorus	ppm ASTM D5185m	19	16	30
Zinc	ppm ASTM D5185m	0	4	0
Sulfur	ppm ASTM D5185m	552	491	251

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >45	4	4	4
Sodium	ppm ASTM D5185m	<1	1	<1
Potassium	ppm ASTM D5185m >20	0	<1	<1
Water	% ASTM D6304 >0.6	0.017	0.035	0.059
ppm Water	ppm ASTM D6304	173.9	356.2	590

FLUID CLEANLINESS

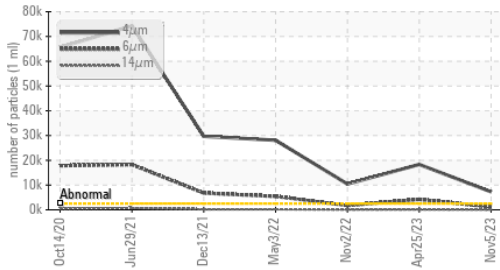
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >2500	▲ 7268	▲ 18324	▲ 10420
Particles >6µm	ASTM D7647 >320	▲ 1133	▲ 4224	▲ 1740
Particles >14µm	ASTM D7647 >80	22	▲ 96	65
Particles >21µm	ASTM D7647 >20	3	11	15
Particles >38µm	ASTM D7647 >4	0	1	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >18/15/13	▲ 20/17/12	▲ 21/19/14	▲ 21/18/13

FLUID DEGRADATION

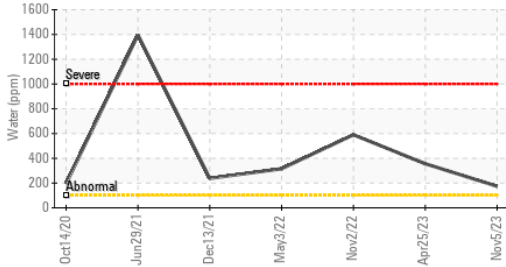
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	0.077	0.058	0.11

OIL ANALYSIS REPORT

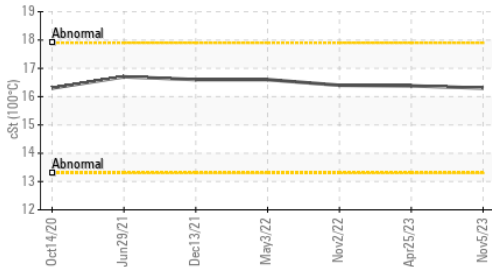
▲ Particle Trend



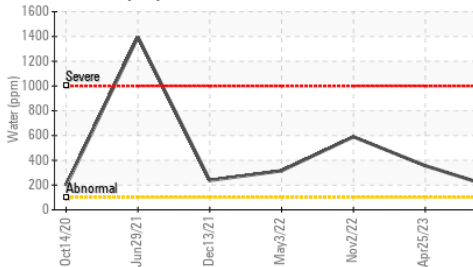
Water (KF)



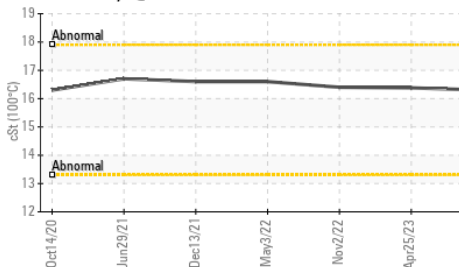
Viscosity @ 100°C



Water (KF)



Viscosity @ 100°C

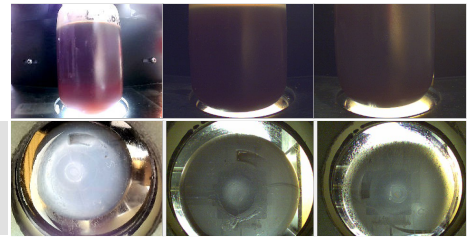


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.6	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	105	105	110
Visc @ 100°C	cSt	ASTM D445	16.3	16.38	16.4
Viscosity Index (VI)	Scale	ASTM D2270	167	168	160

SAMPLE IMAGES

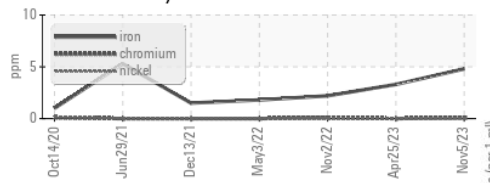
Color



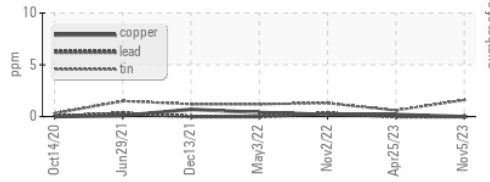
Bottom

GRAPHS

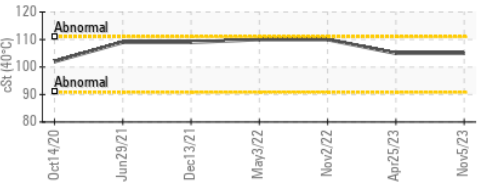
Ferrous Alloys



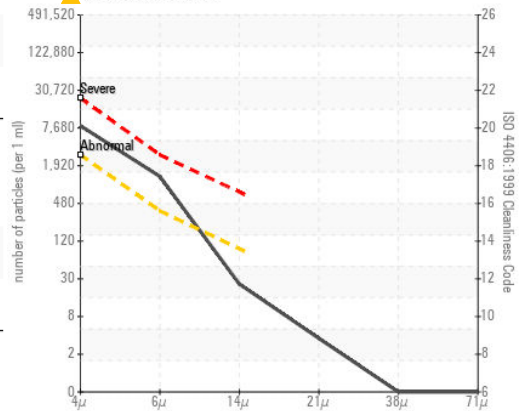
Non-ferrous Metals



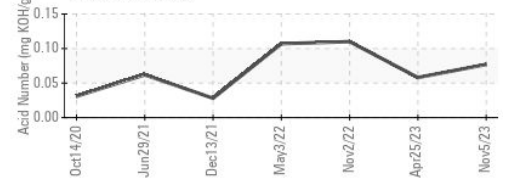
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO60001835 **Received** : 06 Nov 2023
Lab Number : 05999950 **Diagnosed** : 08 Nov 2023
Unique Number : 10728310 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

ENERGY TRANSFER - MARCUS HOOK
 2ND & GREEN STREETS
 MARCUS HOOK, PA
 US 19061
 Contact: CHRISTOPHER HOFFA
 christopher.hoffa@energytransfer.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)

T:
F: