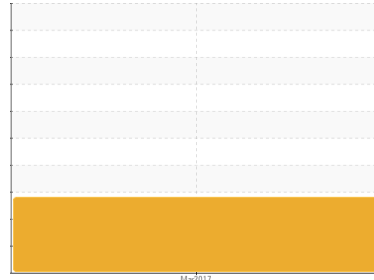


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
AMMONIA COMP - OK FOODS

Component
Refrigeration Compressor

Fluid
FRICK COMPRESSOR OIL #3 (400 GAL)

DIAGNOSIS

▲ Recommendation

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

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of particulates 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		TO4007719	---	---
Sample Date	Client Info		09 Mar 2017	---	---
Machine Age	yrs	Client Info	0	---	---
Oil Age	yrs	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			ABNORMAL	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	7	---	---
Chromium	ppm	ASTM D5185m >10	0	---	---
Nickel	ppm	ASTM D5185m	0	---	---
Titanium	ppm	ASTM D5185m	0	---	---
Silver	ppm	ASTM D5185m	0	---	---
Aluminum	ppm	ASTM D5185m >10	<1	---	---
Lead	ppm	ASTM D5185m >10	0	---	---
Copper	ppm	ASTM D5185m >50	<1	---	---
Tin	ppm	ASTM D5185m >10	0	---	---
Antimony	ppm	ASTM D5185m	<1	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

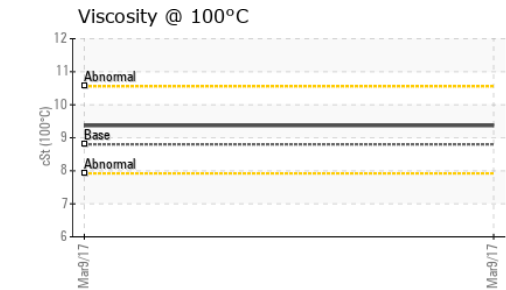
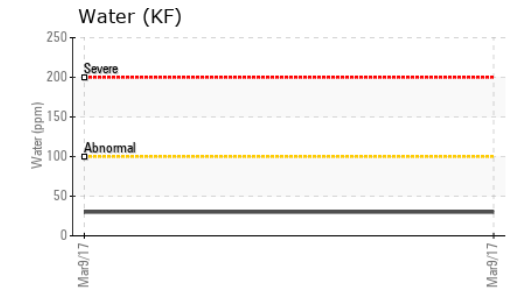
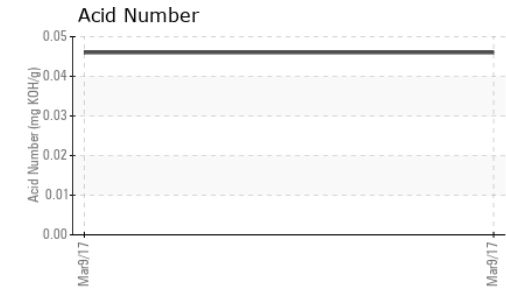
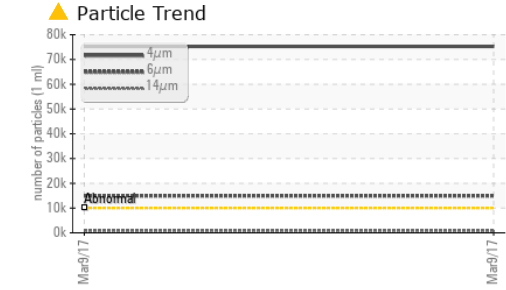
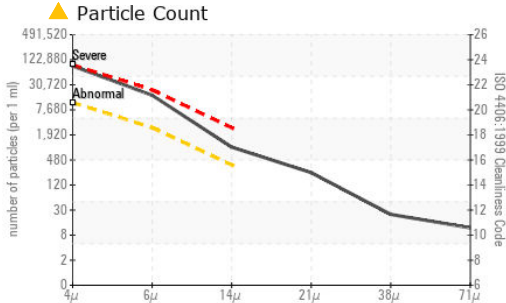
ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	---	---
Barium	ppm	ASTM D5185m	<1	---	---
Molybdenum	ppm	ASTM D5185m	0	---	---
Manganese	ppm	ASTM D5185m	0	---	---
Magnesium	ppm	ASTM D5185m	0	---	---
Calcium	ppm	ASTM D5185m	1	---	---
Phosphorus	ppm	ASTM D5185m	3	---	---
Zinc	ppm	ASTM D5185m	5	---	---
Sulfur	ppm	ASTM D5185m	290	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	1	---	---
Sodium	ppm	ASTM D5185m	0	---	---
Potassium	ppm	ASTM D5185m >20	2	---	---
Water	%	ASTM D6304 >0.01	0.003	---	---
ppm Water	ppm	ASTM D6304 >100	30	---	---

OIL ANALYSIS REPORT



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO4007719 **Received** : 15 Mar 2017
Lab Number : **04182505** **Tested** : 20 Mar 2017
Unique Number : 7730920 **Diagnosed** : 20 Mar 2017 - Don Baldrige
Test Package : IND 2 (Additional Tests: KV100, PrtCount, PrtCountNAS, VI)

TULCO OILS INC (004-VAN BUREN DIVISION)
 1621 SOUTH 28TH ST
 VAN BUREN, AR
 US 72956
 Contact: MARTY ABRAHAMSEN
 martyabrahamsen@tulco.com
 T: (479)471-5262
 F: (479)471-1183

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)

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 75259	---	---
Particles >6µm	ASTM D7647	>2500	▲ 14944	---	---
Particles >14µm	ASTM D7647	>320	▲ 857	---	---
Particles >21µm	ASTM D7647	>80	▲ 210	---	---
Particles >38µm	ASTM D7647	>20	▲ 21	---	---
Particles >71µm	ASTM D7647	>4	▲ 10	---	---
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 23/21/17	---	---
Particles 5-15µm	count	*NAS 1638	>2500	1384598	---
Particles 15-25µm	count	*NAS 1638	>320	61510	---
Particles 25-50µm	count	*NAS 1638	>80	17862	---
Particles 50-100µm	count	*NAS 1638	>20	1062	---
Particles >100µm	count	*NAS 1638	>4	1039	---
NAS Code	*NAS 1638	>20/18/15	>12	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.046	---	---

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	73	69.88	---
Visc @ 100°C	cSt	ASTM D445	8.8	9.37	---
Viscosity Index (VI)	Scale	ASTM D2270	91	111	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image