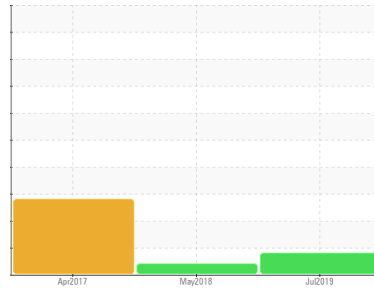


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
TKS PRESS 1 UNIT 4
 Component
Hydraulic System
 Fluid
TULCO LUBSOIL SUPER HYDRAULIC AW 68 (50 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	TO5000394	TO5010023	TO5008012
Sample Date	Client Info	23 Jul 2019	14 May 2018	03 Apr 2017
Machine Age	hrs	0	0	0
Oil Age	hrs	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 >20	15	15	14
Chromium	ppm	ASTM D5185m >10	<1	<1	0
Nickel	ppm	ASTM D5185m	<1	<1	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >10	<1	<1	<1
Lead	ppm	ASTM D5185m >10	4	4	5
Copper	ppm	ASTM D5185m >75	14	14	16
Tin	ppm	ASTM D5185m >10	<1	0	0
Antimony	ppm	ASTM D5185m	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<1	<1	0
Barium	ppm	ASTM D5185m	0	<1	0
Molybdenum	ppm	ASTM D5185m	<1	0	<1
Manganese	ppm	ASTM D5185m	<1	1	<1
Magnesium	ppm	ASTM D5185m	6	6	4
Calcium	ppm	ASTM D5185m	6	6	4
Phosphorus	ppm	ASTM D5185m 425	210	219	214
Zinc	ppm	ASTM D5185m 500	210	214	212
Sulfur	ppm	ASTM D5185m 1900	4941	2640	3776

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >20	22	22	▲ 21
Sodium	ppm	ASTM D5185m	2	2	1
Potassium	ppm	ASTM D5185m >20	2	<1	0
Water	%	ASTM D6304 >0.1	0.004	0.003	0.004
ppm Water	ppm	ASTM D6304 >1000	40	30	40

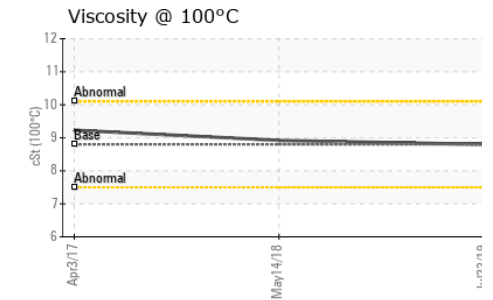
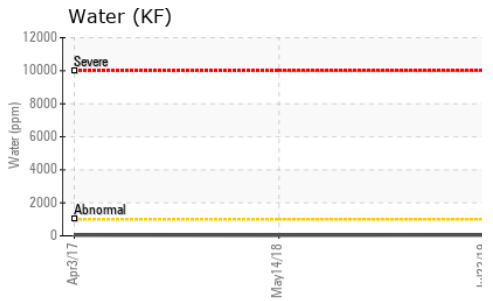
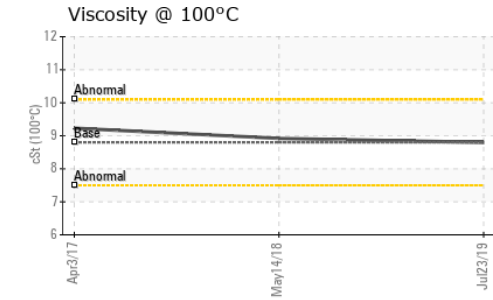
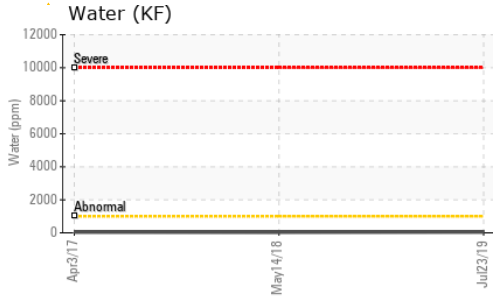
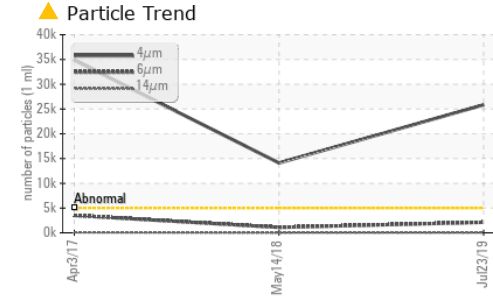
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 25854	▲ 14111	▲ 34854
Particles >6µm	ASTM D7647 >1300	● 2131	1105	▲ 3517
Particles >14µm	ASTM D7647 >160	45	35	95
Particles >21µm	ASTM D7647 >40	12	9	23
Particles >38µm	ASTM D7647 >10	0	2	5
Particles >71µm	ASTM D7647 >3	0	0	5
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 22/18/13	▲ 21/17/12	▲ 22/19/14

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.7	0.455	0.444	0.437

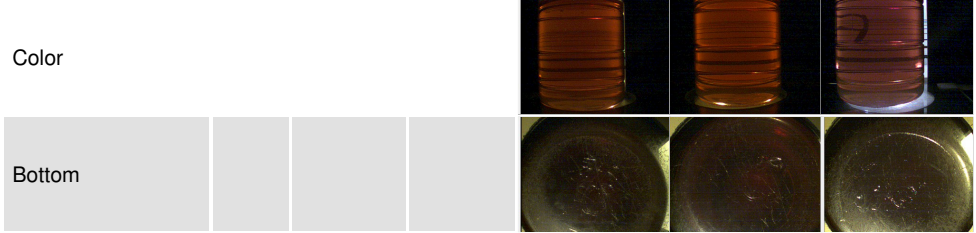
OIL ANALYSIS REPORT



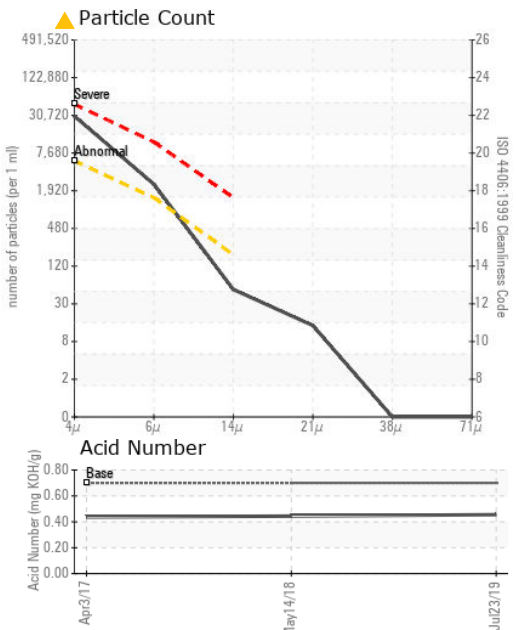
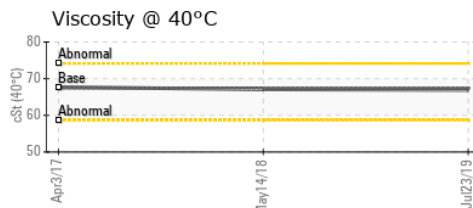
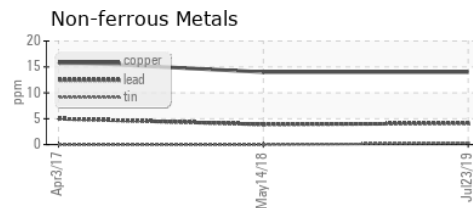
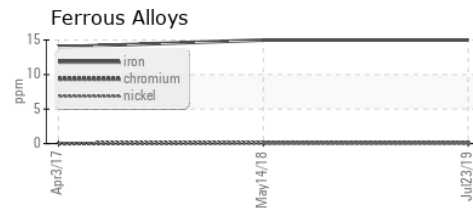
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	67.4	67.08	67.71
Visc @ 100°C	cSt	ASTM D445	8.8	8.92	9.23
Viscosity Index (VI)	Scale	ASTM D2270	102	106	112

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO5000394 **Received** : 24 Jul 2019
Lab Number : **04761304** **Tested** : 25 Jul 2019
Unique Number : 8674030 **Diagnosed** : 25 Jul 2019 - Doug Bogart
Test Package : IND 2 (Additional Tests: KF, KV100, VI)

DALLAS MORNING NEWS
 3900 W PLANO PKWY
 PLANO, TX
 US 75075
 Contact: KENNY CLARK
 kclark@dallasnews.com
 T: (214)977-6929
 F: (214)977-6888

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)