

Area BARRIER DEPARTMENT SAMPLES Machine Id DAVIS STAND WEB 13 E (S/N N8652) Component

Gearbox Fluid

TEXACO MEROPA 220 (10 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

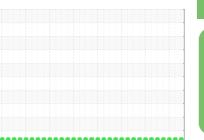
All component wear rates are normal.

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 Rating Trend



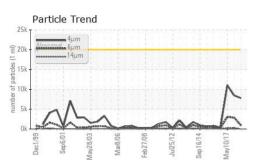
NORMAL

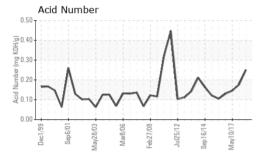
c1999 Sep2001 Mar/2003 Mar/2006 Feb2008 Jul/2012 Sep2014 Mar/2017

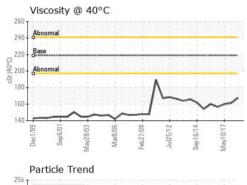
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WCI2319679	WCI2309895	WCI2277324
Sample Date		Client Info		04 Feb 2018	22 Aug 2017	10 May 2017
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	8	7	8
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	0	<1
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	1	<1	<1
Tin	ppm	ASTM D5185m	>25	0	<1	0
Antimony	ppm	ASTM D5185m		<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method				history2
Boron	ppm	method ASTM D5185m	limit/base 3.2	current 1	history1 1	history2 1
	ppm ppm		3.2			
Boron		ASTM D5185m	3.2	1	1	1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	3.2 0.5	1 0	1 0	1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5	1 0 4	1 0 4	1 0 4
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1	1 0 4 <1	1 0 4 <1	1 0 4 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1	1 0 4 <1 0	1 0 4 <1 <1	1 0 4 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6	1 0 4 <1 0 5	1 0 4 <1 <1 5	1 0 4 <1 <1 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159	1 0 4 <1 0 5 63	1 0 4 <1 <1 5 34	1 0 4 <1 <1 6 46
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5	1 0 4 <1 0 5 63 11	1 0 4 <1 <1 5 34 9	1 0 4 <1 <1 6 46 11 2416 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	1 0 4 <1 0 5 63 11 2758	1 0 4 <1 <1 5 34 9 1349	1 0 4 <1 <1 6 46 11 2416
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	1 0 4 <1 0 5 63 11 2758 current	1 0 4 <1 5 34 9 1349 history1	1 0 4 <1 <1 6 46 11 2416 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	1 0 4 <1 0 5 63 11 2758 current 2	1 0 4 <1 5 34 9 1349 history1 2	1 0 4 <1 <1 6 46 11 2416 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 imit/base >50 >20	1 0 4 <1 0 5 63 11 2758 current 2 2 2 0 0	1 0 4 <1 5 34 9 1349 history1 2 1 0 history1	1 0 4 <1 <1 6 46 11 2416 history2 2 2 2 7 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 bimit/base >50 >20	1 0 4 <1 0 5 63 11 2758 <i>current</i> 2 2 2 0 <i>current</i>	1 0 4 <1 5 34 9 1349 history1 2 1 0 history1 8465	1 0 4 <1 <1 6 46 11 2416 history2 2 2 2 7 history2 11053
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 imit/base >50 >20	1 0 4 <1 0 5 63 11 2758 <i>current</i> 2 2 2 0 <i>current</i> 7782 895	1 0 4 <1 5 34 9 1349 history1 2 1 0 history1 8465 2858	1 0 4 <1 <1 6 46 11 2416 history2 2 2 2 7 history2 11053 3036
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 bimit/base >50 20 bimit/base >20000 >5000 >5000 >640	1 0 4 <1 0 5 63 11 2758 <i>current</i> 2 2 2 0 <i>current</i> 7782 895 30	1 0 4 <1 5 34 9 1349 history1 2 1 2 1 0 history1 8465 2858 264	1 0 4 <1 <1 6 46 11 2416 history2 2 2 2 2 7 history2 11053 3036 264
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 bimit/base >50 20 bimit/base >20000 >5000 >5000 >640	1 0 4 <1 0 5 63 11 2758 <i>current</i> 2 2 2 0 <i>current</i> 7782 895	1 0 4 <1 5 34 9 1349 history1 2 1 2 1 0 <i>history1</i> 8465 2858 264 37	1 0 4 <1 (1 6 46 11 2416 history2 2 2 2 7 7 history2 11053 3036 264 42
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 bimit/base >50 20 bimit/base >20000 >5000 >5000 >640	1 0 4 <1 0 5 63 11 2758 current 2 2 2 0 current 7782 895 30 7 1	1 0 4 <1 5 34 9 1349 history1 2 1 2 1 0 <i>history1</i> 8465 2858 264 37 7	1 0 4 <1 <1 6 46 11 2416 history2 2 2 2 2 2 7 history2 11053 3036 264
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 imit/base >50 imit/base >20000 >5000 >640 >160 >40	1 0 4 <1 0 5 63 11 2758 <u>current</u> 2 2 2 0 <u>current</u> 7782 895 30 7	1 0 4 <1 5 34 9 1349 history1 2 1 2 1 0 <i>history1</i> 8465 2858 264 37	1 0 4 <1 <1 6 46 11 2416 history2 2 2 2 7 7 history2 11053 3036 264 42

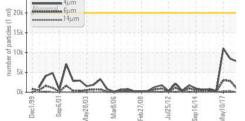


OIL ANALYSIS REPORT







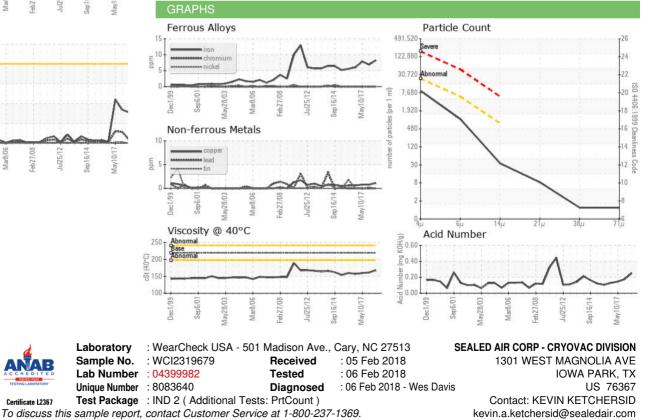


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.251	0.177	0.146
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	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	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	ΓIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	219	167.5	161.3	159.8
SAMPLE IMAGE	S	method	limit/base	current	history1	history2

Color



Bottom



* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T: (940)592-2111 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (940)592-2513

Certificate L2367

Contact/Location: KEVIN KETCHERSID - CRYIOW