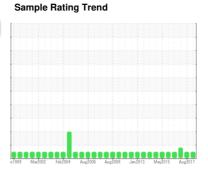


OIL ANALYSIS REPORT

BARRIER DEPARTMENT SAMPLES **REIFENHAUSER WEB 14 B**

Component **Gearbox**

TEXACO MEROPA 220 (10 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.

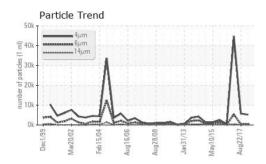
Fluid Condition

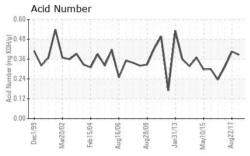
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

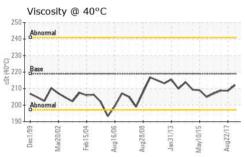
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WCI2319702	WCI2309902	WCI2277322
Sample Date		Client Info		04 Feb 2018	22 Aug 2017	10 May 2017
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINATION	V	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	4	4	6
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m		0	0	<1
Lead	ppm	ASTM D5185m	>100	0	<1	0
Copper	ppm	ASTM D5185m		2	1	<1
Tin	ppm	ASTM D5185m	>25	0	<1	0
Antimony	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 3.2	current 34	history1 34	history2 10
	ppm					
Boron		ASTM D5185m	3.2	34	34	10
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	3.2 0.5 1.1	34 0	34	10 0 3
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1	34 0 10	34 0 10 <1 15	10 0 3 0 14
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6	34 0 10	34 0 10 <1	10 0 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159	34 0 10 0 16 3 239	34 0 10 <1 15 4 223	10 0 3 0 14 28 202
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	34 0 10 0 16 3 239	34 0 10 <1 15 4 223	10 0 3 0 14 28 202
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	34 0 10 0 16 3 239	34 0 10 <1 15 4 223	10 0 3 0 14 28 202
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	34 0 10 0 16 3 239	34 0 10 <1 15 4 223	10 0 3 0 14 28 202 13 10566
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 ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	34 0 10 0 16 3 239 12 6803	34 0 10 <1 15 4 223 12 4382	10 0 3 0 14 28 202 13 10566 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50	34 0 10 0 16 3 239 12 6803	34 0 10 <1 15 4 223 12 4382 history1 10 <1	10 0 3 0 14 28 202 13 10566 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	34 0 10 0 16 3 239 12 6803 current	34 0 10 <1 15 4 223 12 4382 history1	10 0 3 0 14 28 202 13 10566 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	34 0 10 0 16 3 239 12 6803 current 8 1 0	34 0 10 <1 15 4 223 12 4382 history1 10 <1	10 0 3 0 14 28 202 13 10566 history2 2 1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20	34 0 10 0 16 3 239 12 6803 current 8 1	34 0 10 <1 15 4 223 12 4382 history1 10 <1 0	10 0 3 0 14 28 202 13 10566 history2 2 1
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 ppm	ASTM D5185m	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20	34 0 10 0 16 3 239 12 6803 current 8 1 0	34 0 10 <1 15 4 223 12 4382 history1 10 <1 0 history1 5745 403	10 0 3 0 14 28 202 13 10566 history2 2 1 0 history2 44683
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base	34 0 10 0 16 3 239 12 6803 current 8 1 0 current 5215 394 48	34 0 10 <1 15 4 223 12 4382 history1 10 <1 0 history1 5745 403 39	10 0 3 0 14 28 202 13 10566 history2 2 1 0 history2 44683 5294 396
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 ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20	34 0 10 0 16 3 239 12 6803 current 8 1 0 current 5215 394 48 11	34 0 10 <1 15 4 223 12 4382 history1 10 <1 0 history1 5745 403	10 0 3 0 14 28 202 13 10566 history2 2 1 0 history2 44683
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base >5000 >640 >160 >40	34 0 10 0 16 3 239 12 6803 current 8 1 0 current 5215 394 48 11 1	34 0 10 <1 15 4 223 12 4382 history1 10 <1 0 history1 5745 403 39	10 0 3 0 14 28 202 13 10566 history2 2 1 0 history2 44683 5294 396 78 10
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 ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	3.2 0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base >5000 >640 >160 >40	34 0 10 0 16 3 239 12 6803 current 8 1 0 current 5215 394 48 11	34 0 10 <1 15 4 223 12 4382 history1 10 <1 0 history1 5745 403 39 13	10 0 3 0 14 28 202 13 10566 history2 2 1 0 history2 44683 5294 396 78

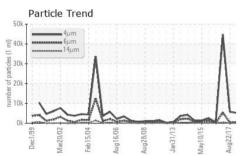


OIL ANALYSIS REPORT

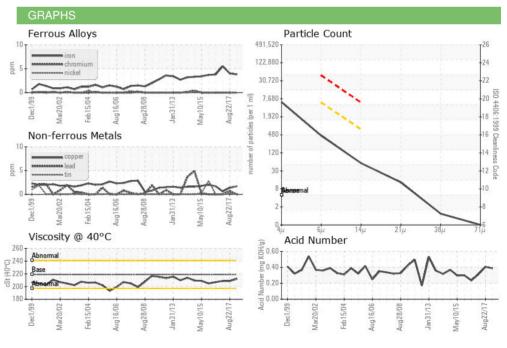








FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.386	0.406	0.313
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	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	TES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	219	212.1	208.7	208.8
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						







Certificate 12367

Laboratory Sample No.

Lab Number : 04399990 Unique Number : 8083648

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WCI2319702

Test Package : IND 2 (Additional Tests: PrtCount)

Received **Tested** Diagnosed

: 05 Feb 2018 : 06 Feb 2018 : 07 Feb 2018 - Doug Bogart

1301 WEST MAGNOLIA AVE IOWA PARK, TX US 76367

Contact: KEVIN KETCHERSID kevin.a.ketchersid@sealedair.com

SEALED AIR CORP - CRYOVAC DIVISION

T: (940)592-2111 F: (940)592-2513

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Bottom

* - 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)