

OIL ANALYSIS REPORT

BARRIER DEPARTMENT SAMPLES REIFENHAUSER WEB 15 D Component

Gearbox Fluic

TEXACO MEROPA 220 (10 GAL)

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

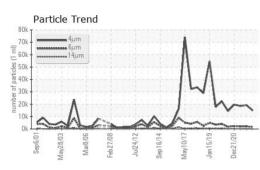
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0869515	WC0682506	WC0608723
Sample Date		Client Info		20 Nov 2023	30 Oct 2022	24 Jan 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	I	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	10	7	8
Chromium	ppm	ASTM D5185m	>15	<1	0	0
Nickel	ppm	ASTM D5185m	>15	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	0	0
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	5	4	5
Tin	ppm	ASTM D5185m	>25	0	0	0
Antimony	ppm	ASTM D5185m	>5			0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron			3.2			
	nnn	ASTM D5185m		4	.5	18
	ppm	ASTM D5185m		4	3	18
Barium	ppm	ASTM D5185m	0.5	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		0 <1	0 <1	0 <1
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1	0 <1 <1	0 <1 <1	0 <1 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1	0 <1 <1 <1	0 <1 <1 0	0 <1 <1 0
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6	0 <1 <1 <1 <1 3	0 <1 <1 0 2	0 <1 <1 0 3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6 159	0 <1 <1 <1 <1 3 199	0 <1 <1 0 2 187	0 <1 <1 0 3 196
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6	0 <1 <1 <1 <1 3	0 <1 <1 0 2	0 <1 <1 0 3
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	0.5 1.1 0.1 1.6 159 0.5	0 <1 <1 <1 3 199 0	0 <1 <1 0 2 187 3	0 <1 <1 0 3 196 3
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	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	0 <1 <1 3 199 0 10928	0 <1 <1 0 2 187 3 11521 history1	0 <1 <1 0 3 196 3 9794 history2
Barium Molybdenum Manganese Magnesium Calcium Chosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	0 <1 <1 <1 3 199 0 10928 current 2	0 <1 <1 0 2 187 3 11521 history1 2	0 <1 <1 0 3 196 3 9794 history2 1
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	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50	0 <1 <1 <1 3 199 0 10928 current	0 <1 <1 0 2 187 3 11521 history1	0 <1 <1 0 3 196 3 9794 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50	0 <1 <1 <1 3 199 0 10928 current 2 0	0 <1 <1 0 2 187 3 11521 history1 2 <1	0 <1 <1 0 3 196 3 9794 history2 1 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm 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 ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20	0 <1 <1 <1 3 199 0 10928 <u>current</u> 2 0 1	0 <1 <1 0 2 187 3 11521 history1 2 <1 0	0 <1 <1 0 3 196 3 9794 history2 1 <1 <1 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base	0 <1 <1 <1 3 199 0 10928 current 2 0 1 1 2 0 1 1 2 0 1 1 2	0 <1 <1 0 2 187 3 11521 history1 2 <1 0 history1 19294	0 <1 <1 0 3 196 3 9794 history2 1 <1 0 history2 18587
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base	0 <1 <1 <1 3 199 0 10928 current 2 0 1 2 0 1 1 2 0 1 1 4903 1662	0 <1 <1 0 2 187 3 11521 history1 2 <1 0 history1	0 <1 <1 0 3 196 3 9794 history2 1 <1 0 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0.5 1.1 1.1 0.1 1.6 159 0.5 10342 imit/base >50 i mit/base >20 i mit/base >20	0 <1 <1 <1 3 199 0 10928 <u>current</u> 2 0 1 2 0 1 1 4903 1662 53	0 <1 <1 0 2 187 3 11521 <u>history1</u> 2 <1 0 <u>history1</u> 19294 1944 41	0 <1 <1 0 3 196 3 9794 <u>history2</u> 1 <1 <1 0 <u>history2</u> 18587 1901 55
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.5 1.1 1.1 0.1 1.6 159 0.5 10342 limit/base >50 s 20 limit/base >50 s 20 limit/base >20	0 <1 <1 <1 3 199 0 10928 <u>current</u> 2 0 1 2 0 1 1 4903 1662 53 11	0 <1 <1 0 2 187 3 11521 <u>history1</u> 2 <1 0 <u>history1</u> 19294 1944 41 4	0 <1 <1 0 3 196 3 9794 <u>history2</u> 1 <1 <1 0 <u>history2</u> 18587 1901 55 10
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 limit/base >50 limit/base >5000 >640 >160 >40	0 <1 <1 <1 3 199 0 10928 current 2 0 1 2 0 1 1 2 0 1 1 4903 1662 53 11 1 1	0 <1 <1 0 2 187 3 11521 history1 2 <1 0 history1 19294 1944 41 4 4 0	0 <1 <1 0 3 196 3 9794 history2 1 <1 <1 0 history2 18587 1901 55 10 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 limit/base >50 limit/base >5000 >640 >160 >40	0 <1 <1 <1 3 199 0 10928 <u>current</u> 2 0 1 2 0 1 1 4903 1662 53 11	0 <1 <1 0 2 187 3 11521 <u>history1</u> 2 <1 0 <u>history1</u> 19294 1944 41 4	0 <1 <1 0 3 196 3 9794 <u>history2</u> 1 <1 <1 0 <u>history2</u> 18587 1901 55 10

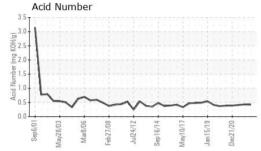


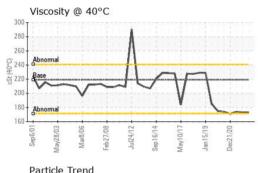
OIL ANALYSIS REPORT

Color

Bottom



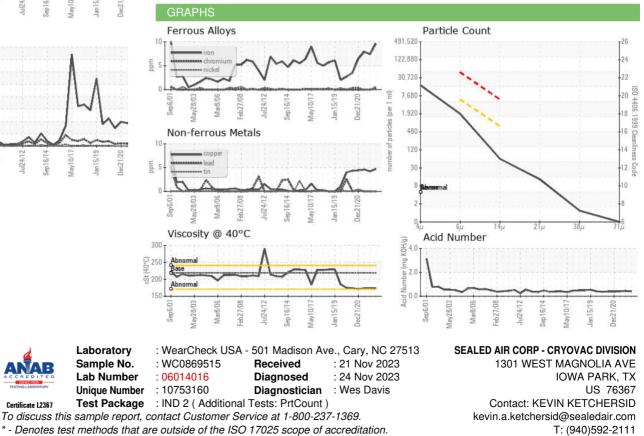




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FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.42	0.43	0.41
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	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	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	219	173	173	174
SAMPLE IMAGES	6	method	limit/base	current	history1	history2





* - 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)

Report Id: CRYIOW [WUSCAR] 06014016 (Generated: 11/24/2023 08:30:33) Rev: 1

Certificate L2367

Laboratory

Sample No.

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