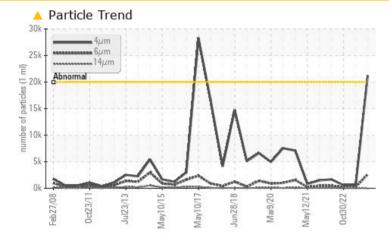


PROBLEM SUMMARY

BARRIER DEPARTMENT SAMPLES WEB 03 SF

Component Gearbox Fluid **TEXACO MEROPA 220 (--- GAL)**

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

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PROBLEMATIC TEST RESULTS							
Sample Status			ATTENTION	NORMAL	NORMAL		
Particles >4µm	ASTM D7647	>20000	<u> </u>	617	573		
Oil Cleanliness	ISO 4406 (c)	>21/19/16	A 22/19/12	16/15/12	16/15/11		

Customer Id: CRYIOW Sample No.: WC0869523 Lab Number: 06014000 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

Page 1	of 4

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Filter			?	We recommend you service the filters on this component.			
Information Required			?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.			

HISTORICAL DIAGNOSIS



04 Apr 2023 Diag: Wes Davis

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

30 Oct 2022 Diag: Wes Davis



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

08 May 2022 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.







OIL ANALYSIS REPORT

Area BARRIER DEPARTMENT SAMPLES Machine Id WEB 03 SF Component

TEXACO MEROPA 220 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

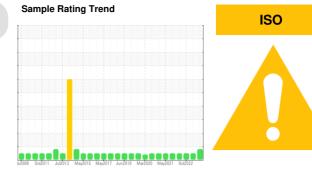
All component wear rates are normal.

Contamination

There is a light 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.



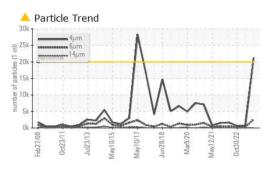
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0869523	WC0757197	WC0365575
Sample Date		Client Info		20 Nov 2023	04 Apr 2023	30 Oct 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	1110	Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL
÷	N	method	limit/base			-
	N			current	history1	history2
Water		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	65	41	38
Chromium	ppm	ASTM D5185m	>15	1	<1	<1
Nickel	ppm	ASTM D5185m	>15	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	3
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	<1	2	2
Tin	ppm	ASTM D5185m	>25	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	3.2	0	0	0
Barium	ppm	ASTM D5185m	0.5	4	0	0
	1-1-					
Molvbdenum	mag	ASTM D5185m	1.1	<1	0	0
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	1.1	<1 <1	0 <1	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0.1	<1 0	<1 0	<1 0
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.1 1.6	<1 0 0	<1 0 0	<1 0 0
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.1 1.6 159	<1 0 0 410	<1 0 0 562	<1 0 0 562
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5	<1 0 0 410 0	<1 0 0 562 8	<1 0 0 562 8
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342	<1 0 410 0 3725	<1 0 562 8 3285	<1 0 0 562 8 3748
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base	<1 0 410 0 3725 current	<1 0 562 8 3285 history1	<1 0 562 8 3748 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base >50	<1 0 410 0 3725 current 3	<1 0 0 562 8 3285 history1 4	<1 0 0 562 8 3748 history2 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base >50	<1 0 410 0 3725 current	<1 0 562 8 3285 history1	<1 0 562 8 3748 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base >50	<1 0 410 0 3725 current 3	<1 0 0 562 8 3285 history1 4	<1 0 0 562 8 3748 history2 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base >50	<1 0 410 0 3725 <u>current</u> 3 2	<1 0 562 8 3285 history1 4 2	<1 0 562 8 3748 history2 2 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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	0.1 1.6 159 0.5 10342 limit/base >50 >20	<1 0 410 0 3725 current 3 2 <1	<1 0 0 562 8 3285 history1 4 2 <1	<1 0 562 8 3748 history2 2 2 2 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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	0.1 1.6 159 0.5 10342 limit/base >20 limit/base	<1 0 410 0 3725 current 3 2 <1 current	<1 0 0 562 8 3285 history1 4 2 <1 kistory1	<1 0 562 8 3748 history2 2 2 0 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base >20 limit/base >20000	<1 0 410 0 3725 current 3 2 <1 current 2 2 <1	<1 0 0 562 8 3285 history1 4 2 <1 4 2 <1 history1 617	<1 0 562 8 3748 history2 2 2 2 0 history2 573
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base >20000 >5000	<1 0 410 0 3725 current 3 2 <1 current 21211 2608	<1 0 0 562 8 3285 history1 4 2 <1 4 2 <1 history1 617 231	<1 0 0 562 8 3748 history2 2 2 2 2 0 history2 573 175
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0.1 1.6 159 0.5 10342 Imit/base >50 S20 Imit/base >20000 >5000 >5000 >640	<1 0 0 410 0 3725 current 3 2 <1 current 2 2 2 2 3 2 2 3 2 2 3 3 2 3 3 3 2 3	<1 0 0 562 8 3285 history1 4 2 <1 2 1 history1 617 231 30	<1 0 0 562 8 3748 3748 history2 2 2 2 0 history2 573 175 16
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	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.1 1.6 159 0.5 10342 limit/base >20 limit/base >20000 >20000 >5000 >640 >160	<1 0 410 0 3725 current 3 2 <1 current 2 2 1 2 2 3 8 2 38 6	<1 0 0 562 8 3285 history1 4 2 <1 4 2 <1 history1 617 231 30 4	<1 0 0 562 8 3748 history2 2 2 2 0 history2 573 175 16 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.1 1.6 159 0.5 10342 imit/base >20 imit/base >20000 >20000 >5000 >640 >160 >40	<1 0 410 0 3725 current 3 2 <1 current 2 2 1 2 2 0 2 1 2 2 0 8 3 8 6 1	<1 0 0 562 8 3285 history1 4 2 <1 4 2 <1 history1 617 231 30 4 1	<1 0 0 562 8 3748 history2 2 2 2 0 history2 573 175 16 2 0 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >14µm Particles >38µm Particles >38µm Particles >71µm Oil Cleanliness	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.1 1.6 159 0.5 10342 limit/base >50 >20 limit/base >20000 >640 >160 >40 >10 >10 >10 >10 >10 >10 >10 >1	<1 0 0 410 0 3725 current 3 2 <1 current 2 2 1 2 1 2 608 38 6 1 1 1 22/19/12	<1 0 0 562 8 3285 history1 4 2 <1 history1 617 231 30 4 1 1 1 1 16/15/12	<1 0 0 562 8 3748 history2 2 2 2 0 history2 573 175 16 2 0 0 16/15/11
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >21µm Particles >38µm Particles >71µm	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.1 1.6 159 0.5 10342 limit/base >20 limit/base >20000 >20000 >50000 >50000 >640 >160 >40 >10	<1 0 410 0 3725 current 3 2 <1 current ▲ 21211 2608 38 6 1 1	<1 0 0 562 8 3285 history1 4 2 <1 4 2 <1 617 231 30 4 4 1 1 1	<1 0 0 562 8 3748 3748 bistory2 2 2 2 0 bistory2 573 175 16 2 0 0 0 0 0 0 0

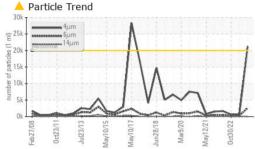
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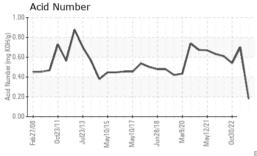
Contact/Location: KEVIN KETCHERSID - CRYIOW

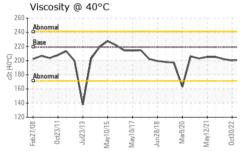


OIL ANALYSIS REPORT







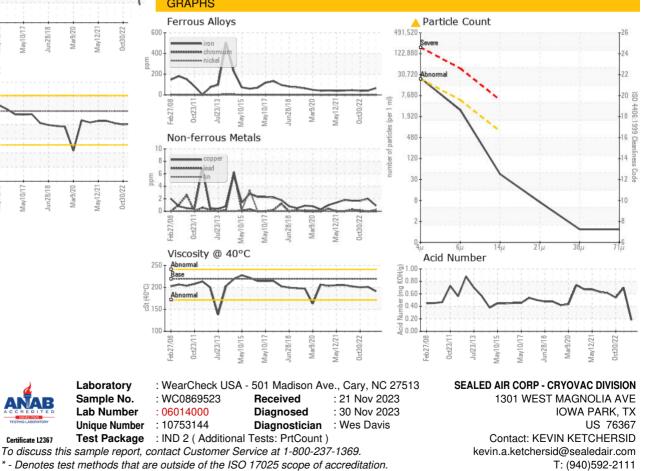


Certificate L2367

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	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	219	191	201	200
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						

Bottom





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: (940)592-2513