

Area BARRIER DEPARTMENT SAMPLES Machine Id DAVIS STAND WEB 12 C (S/N K3938) Component

Gearbox Fluid

TEXACO MEROPA 220 (25 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.





NORMAL

c1999 Mar2002 Feb2004 Aug2006 Aug2008 Feb2013 Jun2016 Jan2019 Dec2021

Sample Rating Trend

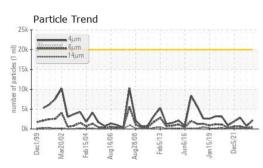
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0869573	WC0692846	WC0608631
Sample Date		Client Info		20 Nov 2023	30 Oct 2022	07 Aug 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	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	<1	6	6
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	0
Aluminum	ppm	ASTM D5185m	>25	2	0	0
Lead	ppm	ASTM D5185m	>100	0	<1	<1
Copper	ppm	ASTM D5185m	>200	2	6	6
Tin	ppm	ASTM D5185m	>25	0	<1	0
Antimony	ppm	ASTM D5185m	>5			
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	<1	0
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	3.2 0.5	0	<1	0
Barium						
	ppm ppm	ASTM D5185m	0.5	0	0	0
Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	0.5	0 15	0 63	0 69
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1	0 15 0	0 63 <1	0 69 0
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1	0 15 0 <1	0 63 <1 0	0 69 0 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6	0 15 0 <1 4	0 63 <1 0 2	0 69 0 <1 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 15 0 <1 4 304	0 63 <1 0 2 261	0 69 0 <1 2 254
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	0.5 1.1 0.1 1.6 159 0.5	0 15 0 <1 4 304 8	0 63 <1 0 2 261 61	0 69 0 <1 2 254 66
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	0.5 1.1 0.1 1.6 159 0.5 10342	0 15 0 <1 4 304 8 9957	0 63 <1 0 2 261 61 7872	0 69 0 <1 2 254 66 6516
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base	0 15 0 <1 4 304 8 9957 current	0 63 <1 0 2 261 61 7872 history1	0 69 0 <1 2 254 66 6516 bistory2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50	0 15 0 <1 4 304 8 9957 current 6	0 63 <1 0 2 261 61 7872 history1 4	0 69 0 <1 254 66 6516 history2 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50	0 15 0 <1 4 304 8 9957 current 6 0	0 63 <1 0 2 261 61 7872 history1 4 <1	0 69 0 <1 2 254 66 6516 history2 4 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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	0 15 0 <1 4 304 8 9957 <u>current</u> 6 0 1	0 63 <1 0 2 261 61 7872 history1 4 <1 0	0 69 0 <1 2 254 66 6516 history2 4 0 1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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 >20 limit/base >20000	0 15 0 <1 4 304 8 9957 current 6 0 1	0 63 <1 0 2 261 61 7872 history1 4 <1 0 history1	0 69 0 <1 254 66 6516 history2 4 0 1 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	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 >20 limit/base >20000	0 15 0 <1 4 304 8 9957 current 6 0 1 1 current 2228	0 63 <1 0 2 261 61 7872 history1 4 <1 0 history1 711	0 69 0 <1 2 254 66 6516 history2 4 0 1 1 history2 2821
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 ASTM D5185m	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 limit/base >20 limit/base >20000 >5000 >5000	0 15 0 <1 4 304 8 9957 <u>current</u> 6 0 1 1 <u>current</u> 2228 505	0 63 <1 0 2 261 61 7872 history1 4 <1 0 history1 711 217	0 69 0 <1 254 66 6516 history2 4 0 1 1 history2 2821 647
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0.5 1.1 0.1 1.6 159 0.5 10342 limit/base >50 limit/base >20 limit/base >20000 >5000 >5000	0 15 0 <1 4 304 8 9957 <u>current</u> 6 0 1 1 <u>current</u> 2228 505 110	0 63 <1 0 2 261 61 7872 history1 4 <1 0 history1 711 217 29	0 69 0 <1 2 254 66 6516 history2 4 0 1 1 history2 2821 647 117
Barium Molybdenum 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 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 s 20 limit/base >20000 >5000 >5000 >640 >160 >40	0 15 0 <1 4 304 8 9957 <u>current</u> 6 0 1 1 <u>current</u> 2228 505 110 29	0 63 <1 0 2 261 61 7872 history1 4 <1 0 V history1 711 217 29 4	0 69 0 <1 2 254 66 6516 history2 4 0 1 1 <u>history2</u> 2821 647 117 31
Barium Molybdenum 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 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 s 20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >20 limit/base >10 >10 >10 >10 >10 >10	0 15 0 <1 4 304 8 9957 current 6 0 1 1 2228 505 110 29 1	0 63 <1 0 2 261 61 7872 history1 4 <1 0 <i>history1</i> 711 217 29 4 0	0 69 0 <1 2 54 66 6516 history2 4 0 1 1 <u>history2</u> 2821 647 117 31 2

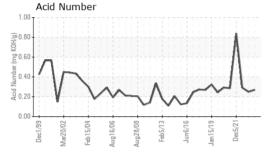


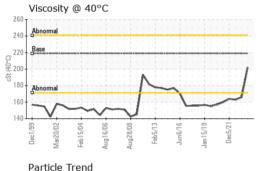
OIL ANALYSIS REPORT

Color

Bottom

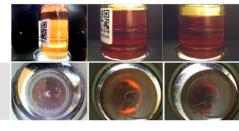


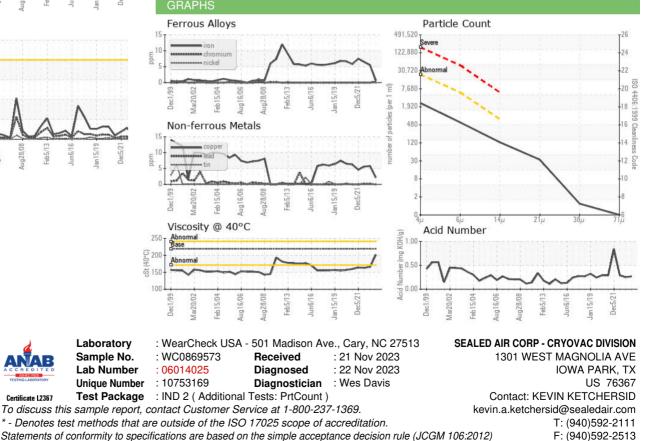




20k - Ah	9/ normal 6/ 14	um um ¥µm						
15k - 10k - 5k -	٨			٨				
5k	4	20	5	A	A	$ \mathbf{L} $		\leq
UK 66	02 -	04	90/9	Aug28/08	Feb5/13	Jun6/16	61/	/21-

FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.27	0.25	0.29
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	LIGHT
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 PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	219	202	166	163
SAMPLE IMAGES	6	method	limit/base	current	history1	history2





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

Certificate L2367

Contact/Location: KEVIN KETCHERSID - CRYIOW