

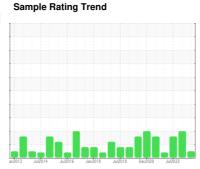
OIL ANALYSIS REPORT

[603777710 SR]

CRMB REFINER 5 (S/N 20059990)

Hydraulic System

AW HYDRAULIC OIL ISO 68 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

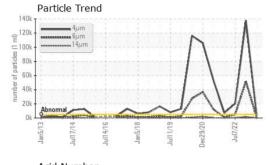
Fluid Condition

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

and2013 Jul2014 Jul2016 Jan2018 Jul2019 Dec2020 Jul2022						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0562492	WC0562119	WC0605636
Sample Date		Client Info		06 Jul 2023	07 Jan 2023	07 Jul 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<1	2	2
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	0	0
Lead	ppm	ASTM D5185m	>20	0	0	<1
Copper	ppm	ASTM D5185m	>20	<1	<1	<1
Tin	ppm	ASTM D5185m	>20	0	0	0
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	25	1	0	<1
Calcium	ppm	ASTM D5185m	200	7	11	1
Phosphorus	ppm	ASTM D5185m	300	212	195	185
Zinc	ppm	ASTM D5185m	370	4	10	2
Sulfur	ppm	ASTM D5185m	2500	2335	2097	2034
CONTAMINANTS	;	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	1	2	1
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	<1	0	2
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	3840	<u>▲</u> 137479	△ 20384
Particles >6µm		ASTM D7647	>1300	713	<u>▲</u> 51735	<u>▲</u> 4801
Particles >14µm		ASTM D7647	>160	42	▲ 1675	<u></u> ▲ 186
Particles >21µm		ASTM D7647	>40	8	<u>▲</u> 164	29
Particles >38μm		ASTM D7647	>10	0	7	4
Particles >71μm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/17/13	2 4/23/18	<u>22/19/15</u>
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.76	0.86	0.79



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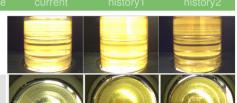
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

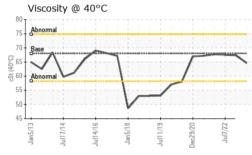
Acid	Numbe	er					
,B							
HOX B		/	1				
5 1.0 - Aboon	mal	/	1				
Acid Number (mg KOH/g)					_	$\overline{}$	
Abnon	mal						
0.0	- 4	- JI	18	19	/20 -	722	-
Jan5/	Jull7	Jul14/	Jan5/	Jul	Dec29/	Jul7	

FLUID PROPE	RHES	method			history1	history
Visc @ 40°C	cSt	ASTM D445	68	64.6	67.4	67.5

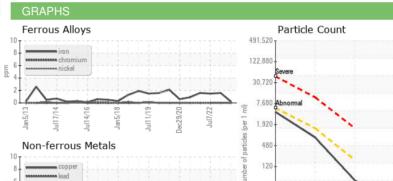


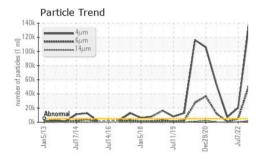
SAMPLE IMAGES

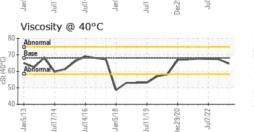


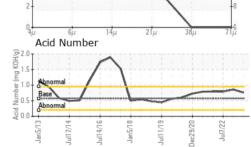
















Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05901239

: WC0562492 : 10562595

Received Diagnosed

: 18 Jul 2023 : 20 Jul 2023 Diagnostician : Don Baldridge

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

MARS CHOCOLATE 2019 NORTH OAK PARK CHICAGO, IL

US 60707 Contact: TONY FIORE tony.fiore@effem.com T: (773)745-2279

Contact/Location: TONY FIORE - MARSCHI