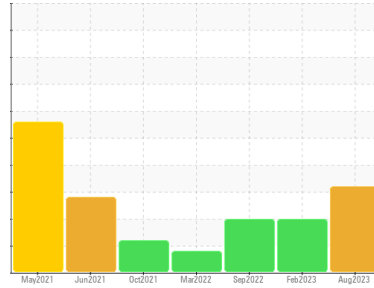




# OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Area  
**DICK LAVY**  
 Machine Id  
**DICK LAVY 4830**

Component  
**Transmission (Manual)**  
 Fluid  
**Transmission (Manual) Oil (--- GAL)**

## DIAGNOSIS

### Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. We recommend an early resample to monitor this condition.

### Wear

The copper level is abnormal. All other component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the fluid.

### Fluid Condition

The AN level is at the top-end of the recommended limit.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0843170</b>	WC0797160	WC0751683
Sample Date	Client Info		<b>01 Aug 2023</b>	09 Feb 2023	02 Sep 2022
Machine Age	mls	Client Info	<b>296070</b>	245376	197469
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>138</b>	141	167
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	2	3
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>7	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>8</b>	8	14
Lead	ppm	ASTM D5185m	>45	<b>0</b>	0	4
Copper	ppm	ASTM D5185m	>225	<b>▲ 869</b>	▲ 596	▲ 352
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>247</b>	237	211
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>1</b>	3	3
Manganese	ppm	ASTM D5185m		<b>22</b>	21	22
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	4	1
Calcium	ppm	ASTM D5185m		<b>207</b>	198	188
Phosphorus	ppm	ASTM D5185m		<b>1258</b>	1176	1138
Zinc	ppm	ASTM D5185m		<b>255</b>	120	32
Sulfur	ppm	ASTM D5185m		<b>1216</b>	1622	923

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>125	<b>10</b>	10	10
Sodium	ppm	ASTM D5185m		<b>3</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Water	%	ASTM D6304	>0.1	<b>0.047</b>	0.047	0.057
ppm Water	ppm	ASTM D6304	>1000	<b>472.5</b>	478.9	578.1

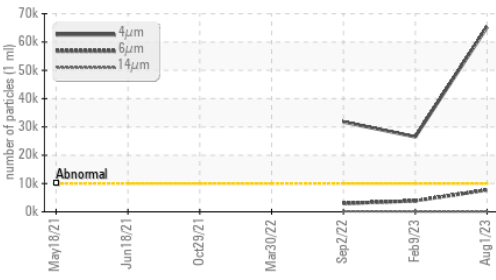
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>▲ 65289</b>	▲ 26503	▲ 31771
Particles >6µm	ASTM D7647	>2500	<b>▲ 7702</b>	▲ 3876	▲ 2950
Particles >14µm	ASTM D7647	>320	<b>112</b>	140	195
Particles >21µm	ASTM D7647	>80	<b>15</b>	46	65
Particles >38µm	ASTM D7647	>20	<b>0</b>	4	2
Particles >71µm	ASTM D7647	>4	<b>0</b>	1	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<b>▲ 23/20/14</b>	▲ 22/19/14	▲ 22/19/15

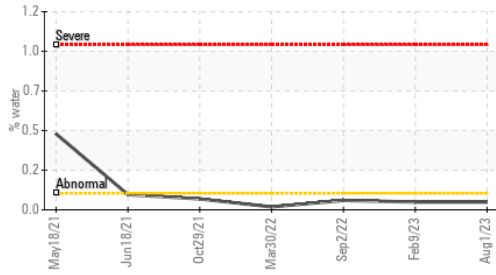
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>▲ 3.88</b>	2.67	2.677

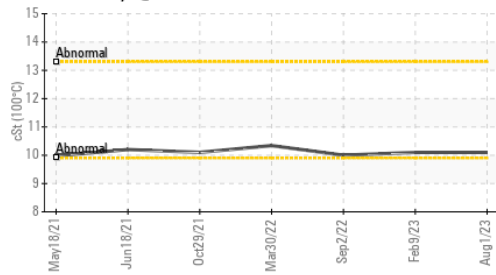
### Particle Trend



### Water



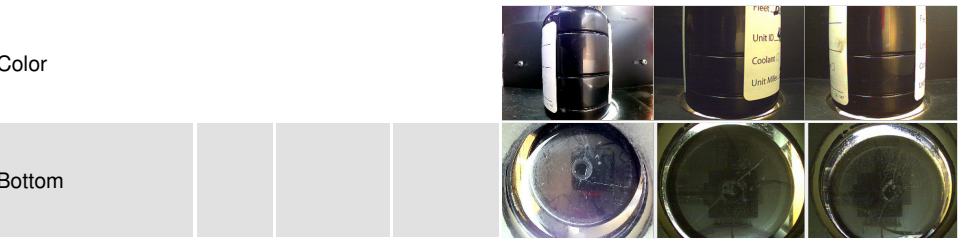
### Viscosity @ 100°C



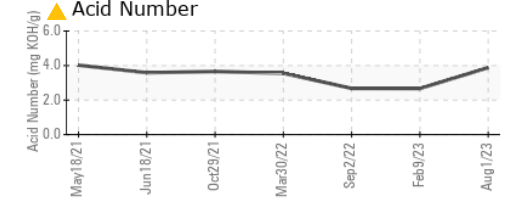
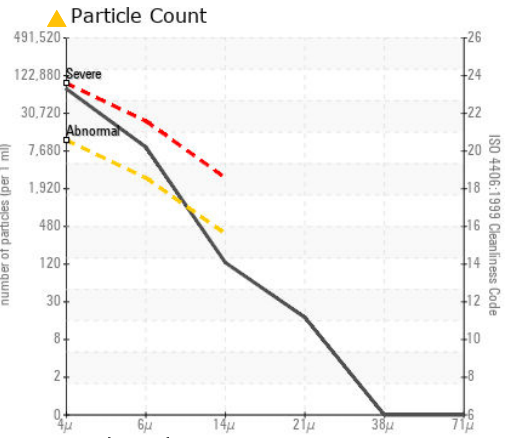
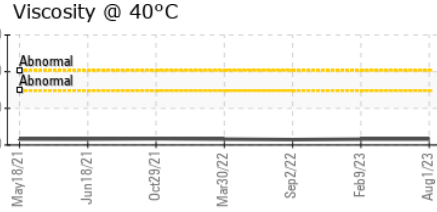
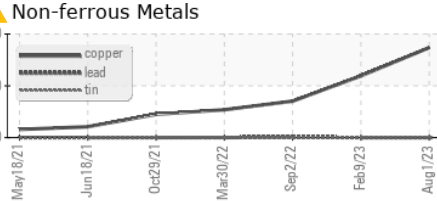
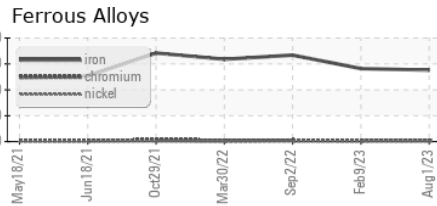
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	58.0	58.0	57.3
Visc @ 100°C	cSt	ASTM D445	10.1	10.1	10.0
Viscosity Index (VI)	Scale	ASTM D2270	162	162	162

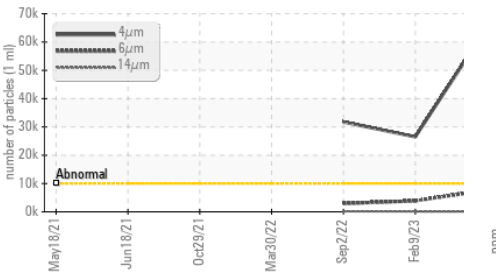
### SAMPLE IMAGES



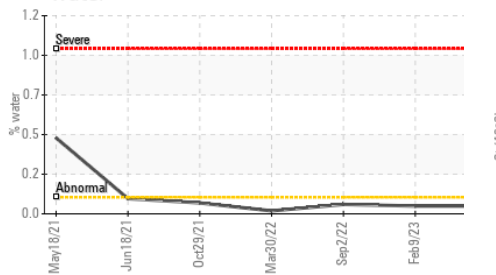
### GRAPHS



### Particle Trend



### Water



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0843170 **Received** : 22 Aug 2023  
**Lab Number** : 05931519 **Diagnosed** : 24 Aug 2023  
**Unique Number** : 10616790 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: KF, KV100, PrtCount, VI )

**BASF - GIANNA CREDAROLI**  
 500 WHITE PLAINS RD  
 TARRYTOWN, NY  
 US 10591  
 Contact: GIANNA CREDAROLI  
 gianna.credaroli@basf.com

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)