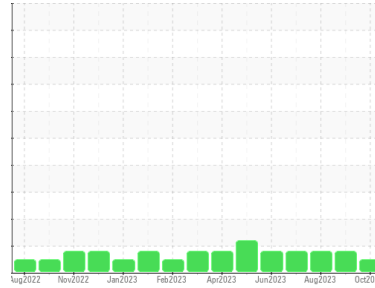




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**MERCURY MARINE**

Component  
**Transmission (Auto)**

Fluid  
**CASTROL TRANSMAX SYNTHETIC MV ATF (45 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0791124</b>	WC0791121	WC0791115
Sample Date	Client Info		<b>02 Oct 2023</b>	07 Sep 2023	01 Aug 2023
Machine Age	mths	Client Info	<b>0</b>	0	0
Oil Age	mths	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >160	<b>&lt;1</b>	0	<1
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >50	<b>7</b>	6	5
Lead	ppm	ASTM D5185m >50	<b>1</b>	1	<1
Copper	ppm	ASTM D5185m >225	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 100	<b>98</b>	95	100
Barium	ppm	ASTM D5185m 0	<b>23</b>	17	15
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m 10	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185m 370	<b>74</b>	73	75
Phosphorus	ppm	ASTM D5185m 300	<b>205</b>	212	216
Zinc	ppm	ASTM D5185m 0	<b>5</b>	0	0
Sulfur	ppm	ASTM D5185m 1600	<b>973</b>	965	977

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>1</b>	<1	<1
Sodium	ppm	ASTM D5185m	<b>3</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0

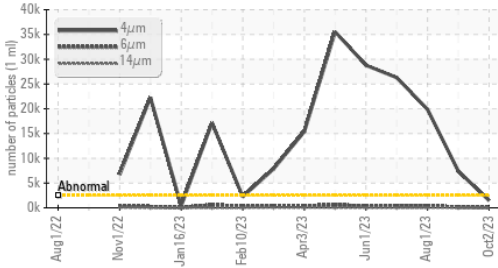
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	<b>1477</b>	▲ 7414	▲ 19883
Particles >6µm	ASTM D7647	>640	<b>39</b>	143	388
Particles >14µm	ASTM D7647	>80	<b>4</b>	14	10
Particles >21µm	ASTM D7647	>20	<b>1</b>	4	3
Particles >38µm	ASTM D7647	>4	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>18/12/9</b>	▲ 20/14/11	▲ 21/16/10

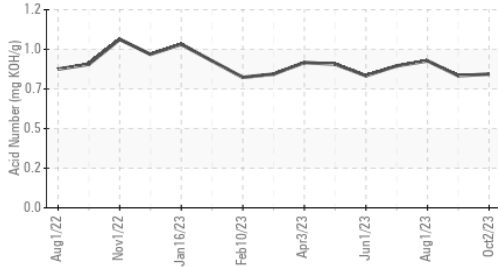
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.81</b>	0.80	0.89

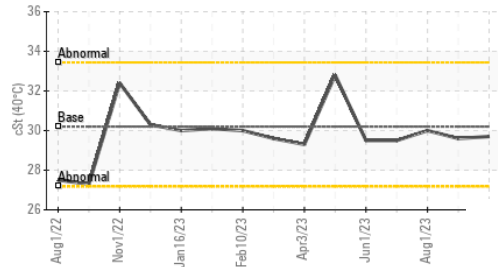
### Particle Trend



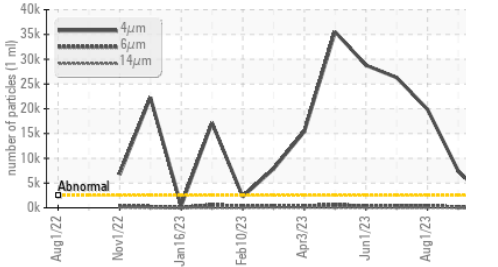
### Acid Number



### Viscosity @ 40°C



### Particle Trend



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	30.2	29.7	29.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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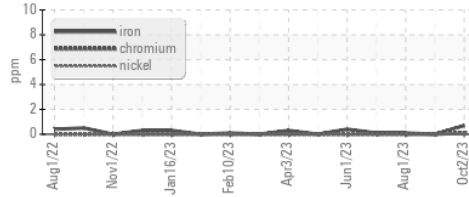
### Color



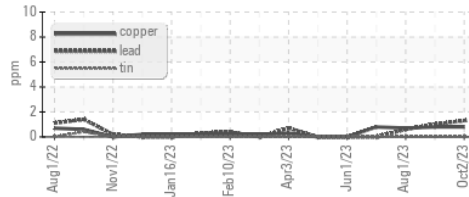
### Bottom

### GRAPHS

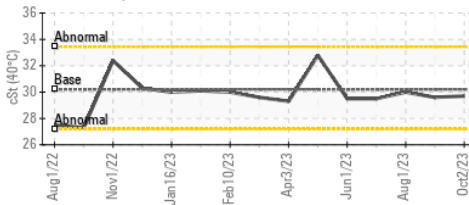
#### Ferrous Alloys



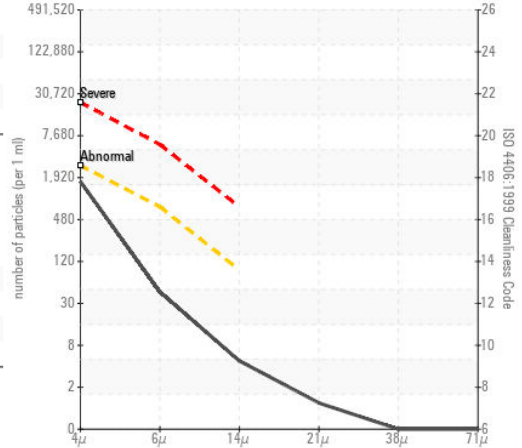
#### Non-ferrous Metals



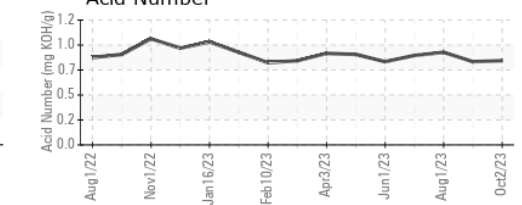
#### Viscosity @ 40°C



#### Particle Count



#### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0791124 **Received** : 04 Oct 2023  
**Lab Number** : 05968914 **Diagnosed** : 06 Oct 2023  
**Unique Number** : 10675465 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**HAWE HYDRAULICS - HUNTERVILLE**  
 13020 JAMESBURG DR SUITE A  
 HUNTERVILLE, NC  
 US 28078

Contact: Kristina Smith  
 k.smith@hawe.com  
 T: (704)927-5610  
 F: (704)509-6302

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)