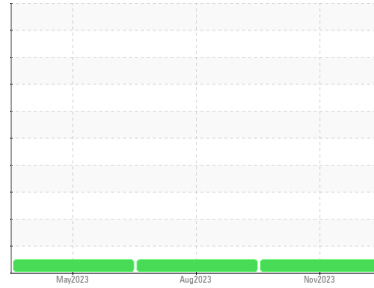




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**102-LYO-902**

Component  
**Hydraulic System**

Fluid  
**NAVI-GUARD PREMIUM AW-32 HYDRAULIC (--- LTR)**

### DIAGNOSIS

#### Recommendation

This is a baseline read-out on the submitted sample.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0850081</b>	WC0770766	WC0789097
Sample Date	Client Info			<b>09 Nov 2023</b>	07 Aug 2023	17 May 2023
Machine Age	yrs	Client Info		<b>0</b>	0	0
Oil Age	yrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

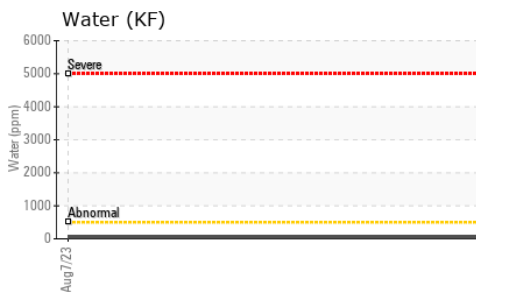
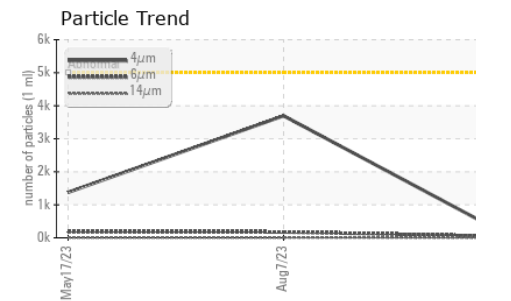
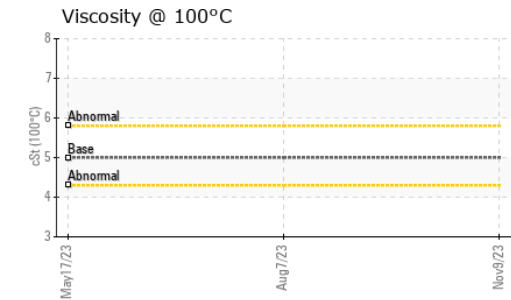
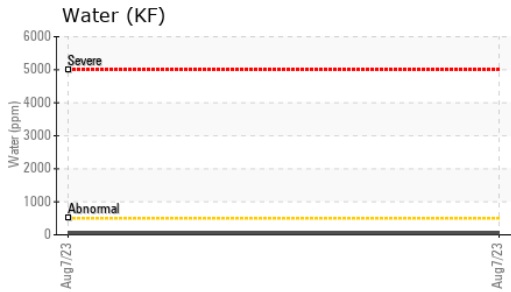
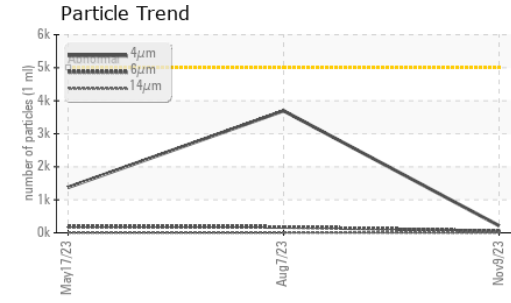
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	4	4
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>4</b>	8	9
Calcium	ppm	ASTM D5185m		<b>29</b>	82	88
Phosphorus	ppm	ASTM D5185m		<b>225</b>	283	282
Zinc	ppm	ASTM D5185m		<b>291</b>	352	351
Sulfur	ppm	ASTM D5185m		<b>1041</b>	4431	4409

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>8</b>	2	2
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Water	%	ASTM D6304	>0.05	<b>NEG</b>	0.005	NEG
ppm Water	ppm	ASTM D6304	>500	<b>---</b>	50.6	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>215</b>	3696	1376
Particles >6µm		ASTM D7647	>1300	<b>45</b>	176	182
Particles >14µm		ASTM D7647	>160	<b>4</b>	8	8
Particles >21µm		ASTM D7647	>40	<b>1</b>	2	2
Particles >38µm		ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>15/13/9</b>	19/15/10	18/15/10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.31</b>	0.34	0.34

# OIL ANALYSIS REPORT

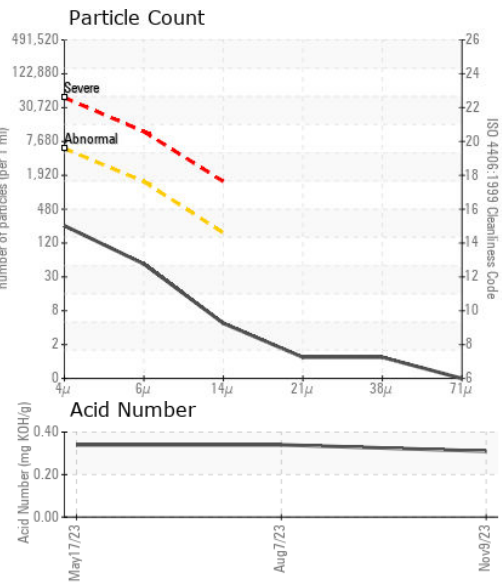
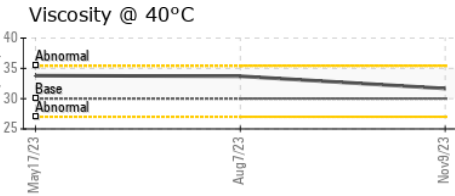
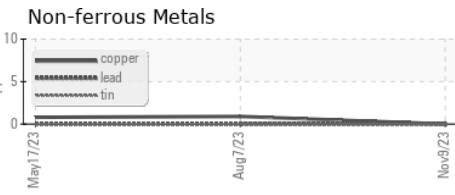
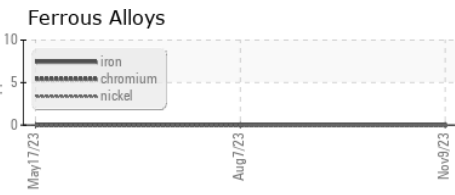


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	30	31.67	33.7
Visc @ 100°C	cSt	ASTM D445	5	6.15	---
Viscosity Index (VI)	Scale	ASTM D2270	87	146	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC					

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0850081 **Received** : 16 Nov 2023  
**Lab Number** : 06009955 **Diagnosed** : 05 Dec 2023  
**Unique Number** : 10749099 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, VI )

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)

**MERCK & COMPANY**  
 5325 OLD OXFORD RD  
 DURHAM, NC  
 US 27712  
 Contact: Mark Montalvo  
 mark\_montalvo@merck.com  
 T: (919)884-4103  
 F: