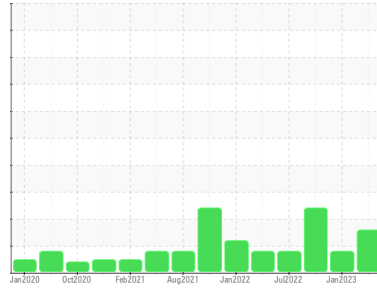




# PROBLEM SUMMARY

Sample Rating Trend



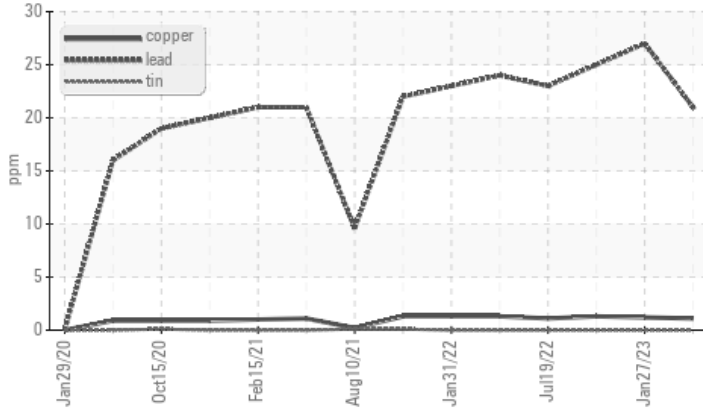
## Machine Id 91-A-9360 HPU TURRET VALVES/CONNS

Component  
Hydraulic System

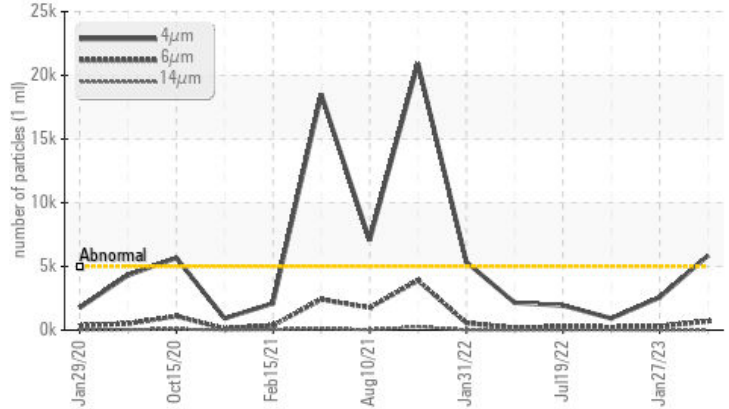
Fluid  
AW HYDRAULIC OIL ISO 15 (--- LTR)

### COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Particle Trend



### RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	ATTENTION	ABNORMAL	
Lead	ppm	ASTM D5185(m)	>20	▲ 21	▲ 27	▲ 25
Particles >4µm		ASTM D7647	>5000	▲ 5858	2570	927
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/17/12	19/15/11	17/15/12

Customer Id: SPESTJ  
Sample No.: PP  
Lab Number: 02580365  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

To change component or sample information:  
Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Alert	---	---	?	Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## HISTORICAL DIAGNOSIS

### 27 Jan 2023 Diag: Kevin Marson

#### WEAR



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Lead ppm levels are noted. All other component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 20 Oct 2022 Diag: Kevin Marson

#### WATER



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Lead ppm levels are noted. All other component wear rates are normal. Free water present. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



### 19 Jul 2022 Diag: Kevin Marson

#### WEAR



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Lead ppm levels are noted. All other component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

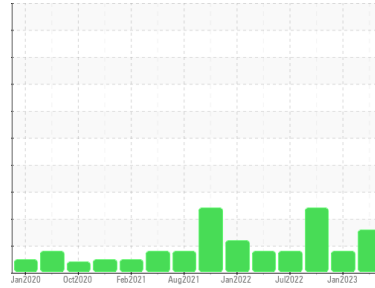
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



## 91-A-9360 HPU TURRET VALVES/CONNS

Machine Id  
Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 15 (--- LTR)**

### DIAGNOSIS

#### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

Lead ppm levels are noted. All other component wear rates are normal.

#### Contamination

There is a light amount of silt (particulates < 14 microns in size) present 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>PP</b>	PP	PP
Sample Date	Client Info	<b>04 Sep 2023</b>	27 Jan 2023	20 Oct 2022
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ATTENTION</b>	ATTENTION	ABNORMAL

### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >20	<b>1</b>	1	1
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>5</b>	6	6
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Lead	ppm	ASTM D5185(m) >20	<b>▲ 21</b>	▲ 27	▲ 25
Copper	ppm	ASTM D5185(m) >20	<b>1</b>	1	1
Tin	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 5	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m) 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 5	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 25	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185(m) 200	<b>30</b>	25	24
Phosphorus	ppm	ASTM D5185(m) 300	<b>369</b>	390	369
Zinc	ppm	ASTM D5185(m) 370	<b>315</b>	284	268
Sulfur	ppm	ASTM D5185(m) 2500	<b>690</b>	702	655
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >15	<b>1</b>	2	1
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0

### FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	<b>▲ 5858</b>	2570	927
Particles >6µm	ASTM D7647	>1300	<b>702</b>	306	230
Particles >14µm	ASTM D7647	>160	<b>30</b>	13	29
Particles >21µm	ASTM D7647	>40	<b>6</b>	5	10
Particles >38µm	ASTM D7647	>10	<b>1</b>	1	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	1
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 20/17/12</b>	19/15/11	17/15/12

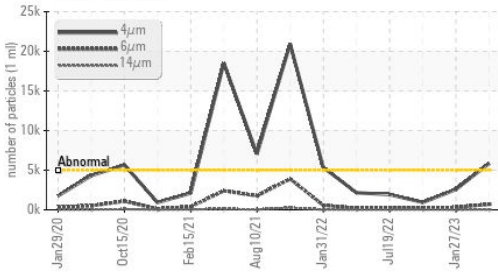
### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974* 0.57	<b>0.35</b>	0.32	0.34

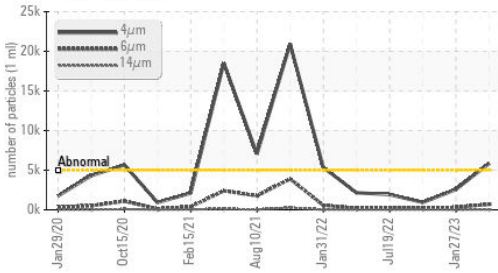


# OIL ANALYSIS REPORT

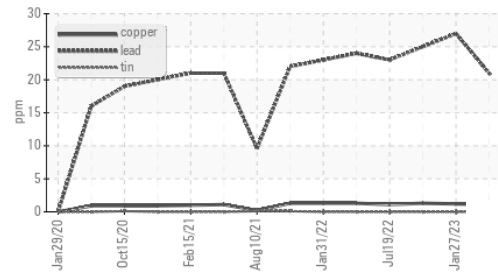
### ▲ Particle Trend



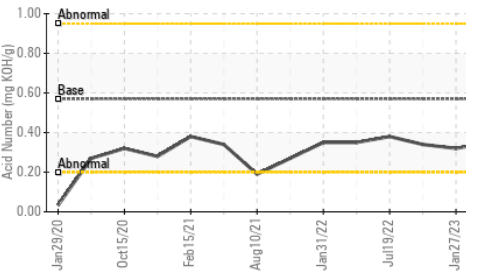
### ▲ Particle Trend



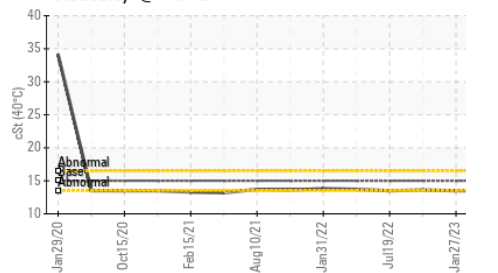
### ▲ Non-ferrous Metals



### Acid Number



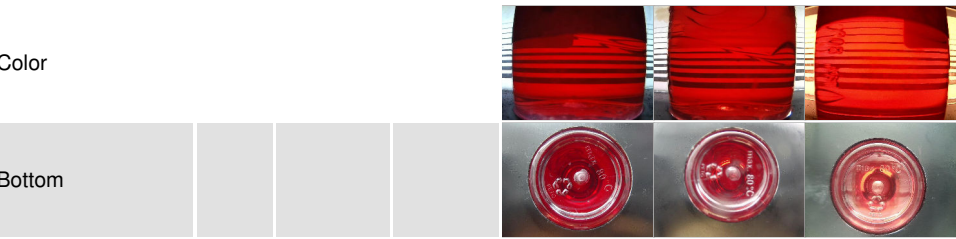
### Viscosity @ 40°C



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	▲ 1%

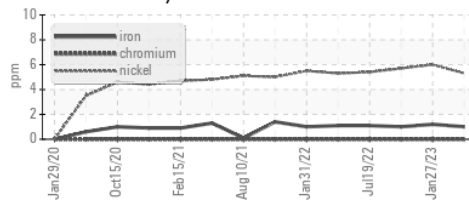
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	15	13.5	13.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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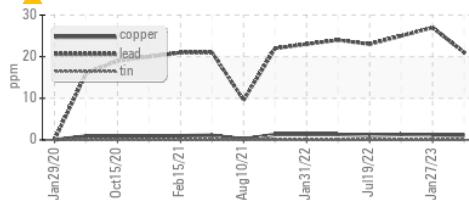


### GRAPHS

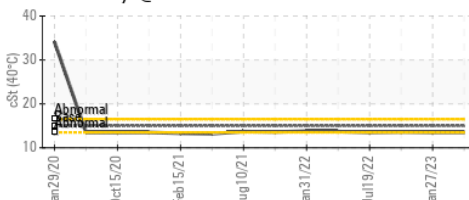
#### Ferrous Alloys



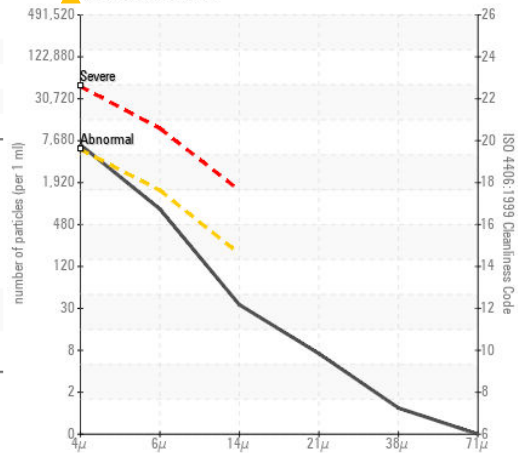
#### Non-ferrous Metals



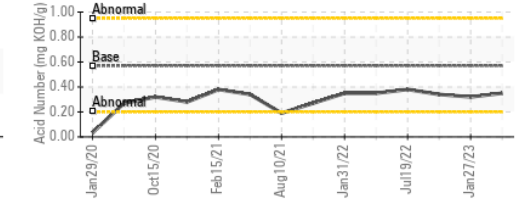
#### Viscosity @ 40°C



#### ▲ Particle Count



#### Acid Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HUSKY SEA ROSE /AKER SOLUTIONS  
**Sample No.** : PP  
**Lab Number** : 02580365  
**Unique Number** : 5633425  
**Test Package** : IND 2  
**Received** : 05 Sep 2023  
**Diagnosed** : 06 Sep 2023  
**Diagnostician** : Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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