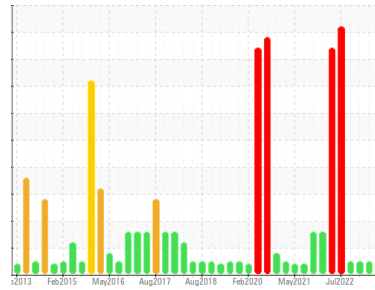




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**TURRET**  
Machine Id  
**91-A-9352 65 T DRUM WINCH & WIRE (S/N Maint Plan 22464)**  
Component  
**Hydraulic System**  
Fluid  
**SHELL DONAX TG (--- LTR)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### 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>	22 Jan 2023	20 Oct 2022
Machine Age	days	<b>0</b>	0	0
Oil Age	days	<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 D5185(m) >20	<b>3</b>	3	2
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	0	<1
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>&lt;1</b>	0	0
Lead	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m) >20	<b>1</b>	2	1
Tin	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	<1	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) 113	<b>90</b>	92	90
Barium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	1	<1
Calcium	ppm	ASTM D5185(m) 23	<b>128</b>	140	132
Phosphorus	ppm	ASTM D5185(m) 242	<b>335</b>	348	331
Zinc	ppm	ASTM D5185(m) 1.8	<b>18</b>	18	13
Sulfur	ppm	ASTM D5185(m)	<b>1533</b>	1641	1537
Lithium	ppm	ASTM D5185(m)	<b>1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >15	<b>2</b>	2	2
Sodium	ppm	ASTM D5185(m)	<b>7</b>	7	6
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	1	<1

## FLUID CLEANLINESS

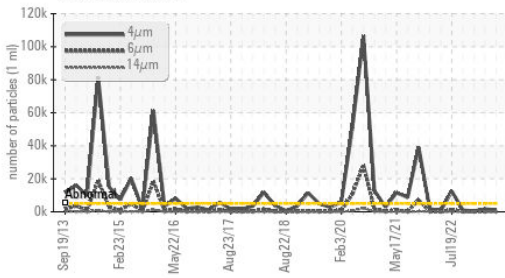
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>1191</b>	1704	542
Particles >6µm	ASTM D7647 >1300	<b>186</b>	346	58
Particles >14µm	ASTM D7647 >160	<b>17</b>	40	6
Particles >21µm	ASTM D7647 >40	<b>6</b>	11	3
Particles >38µm	ASTM D7647 >10	<b>1</b>	1	0
Particles >71µm	ASTM D7647 >3	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>17/15/11</b>	18/16/12	16/13/10

## FLUID DEGRADATION

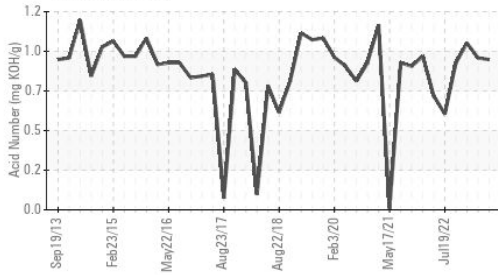
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	<b>0.91</b>	0.92	1.01

# OIL ANALYSIS REPORT

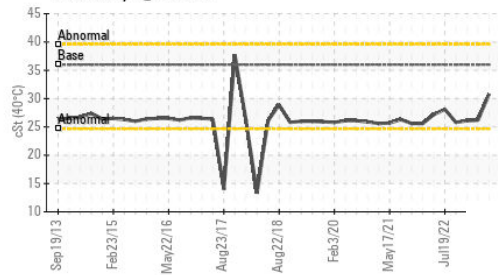
**Particle Trend**



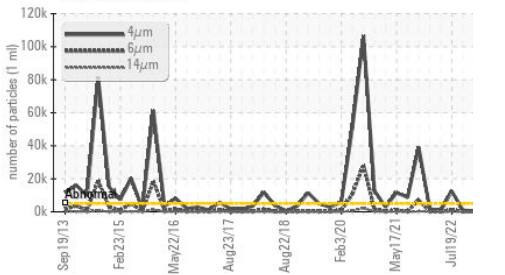
**Acid Number**



**Viscosity @ 40°C**



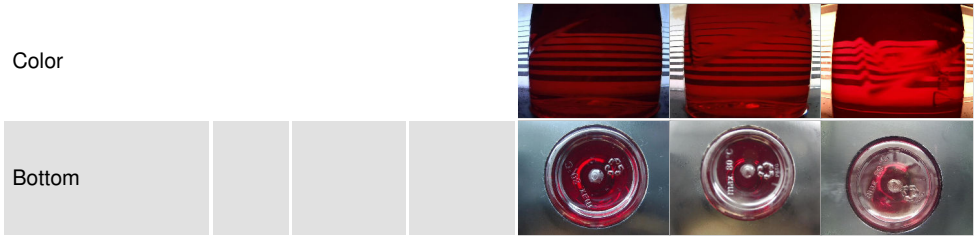
**Particle Trend**



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*	>0.05	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

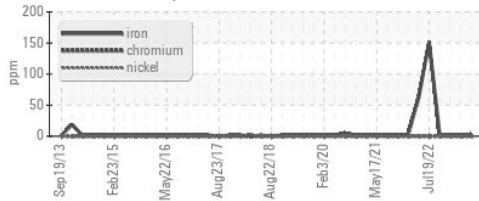
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	36	30.8	26.2, 26.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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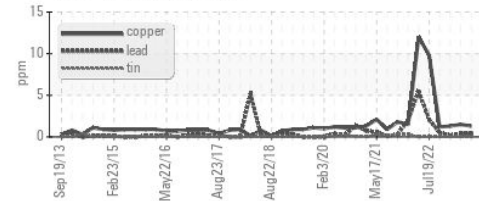


## GRAPHS

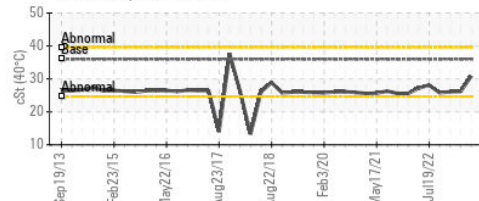
**Ferrous Alloys**



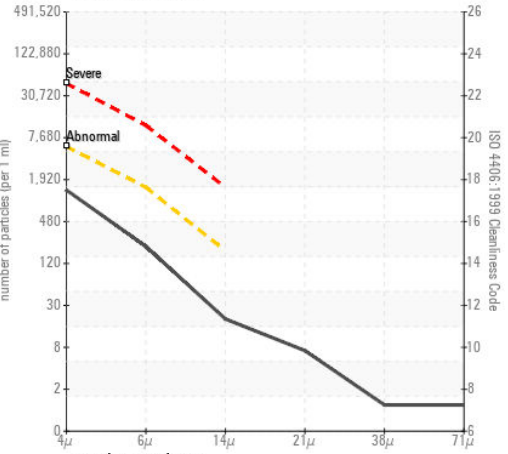
**Non-ferrous Metals**



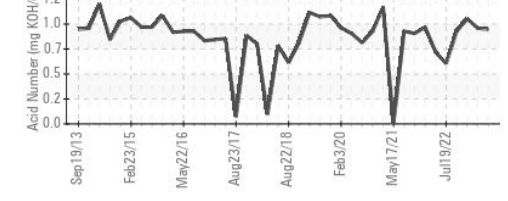
**Viscosity @ 40°C**



**Particle Count**



**Acid Number**



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HUSKY SEA ROSE /AKER SOLUTIONS  
**Sample No.** : PP **Received** : 05 Sep 2023  
**Lab Number** : 02580362 **Diagnosed** : 06 Sep 2023  
**Unique Number** : 5633422 **Diagnostician** : Wes Davis  
**Test Package** : IND 2

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.

Contact: Maintenance Supervisor  
 maintsuper.searose@huskyenergy.ca  
 T: x:  
 F: x: