



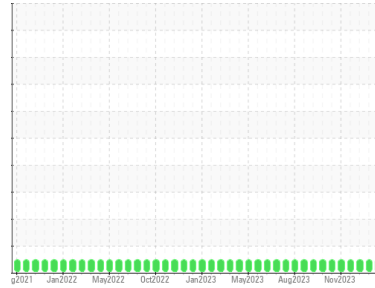
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**ENGINE ROOM 2ND DECK**  
 Machine Id  
**17-A-7850 DEEPWELL PUMP HPU (S/N Maint Plan 22464)**  
 Component  
**1 Hydraulic Power Pack**  
 Fluid  
**MOBIL DTE EXCEL ISO 46 (2000 LTR)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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>19 Dec 2023</b>	19 Dec 2023	16 Nov 2023
Machine Age	hrs Client Info	<b>0</b>	0	0
Oil Age	hrs 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

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.05	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Chromium	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm ASTM D5185(m) >20	<b>0</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) >20	<b>&lt;1</b>	<1	<1
Lead	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Copper	ppm ASTM D5185(m) >20	<b>2</b>	2	2
Tin	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	0
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)	<b>0</b>	0	0
Barium	ppm ASTM D5185(m)	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Calcium	ppm ASTM D5185(m)	<b>109</b>	112	112
Phosphorus	ppm ASTM D5185(m)	<b>437</b>	451	438
Zinc	ppm ASTM D5185(m)	<b>32</b>	32	33
Sulfur	ppm ASTM D5185(m)	<b>1265</b>	1276	1241
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>0</b>	0	0
Sodium	ppm ASTM D5185(m)	<b>1</b>	<1	1
Potassium	ppm ASTM D5185(m) >20	<b>1</b>	<1	2

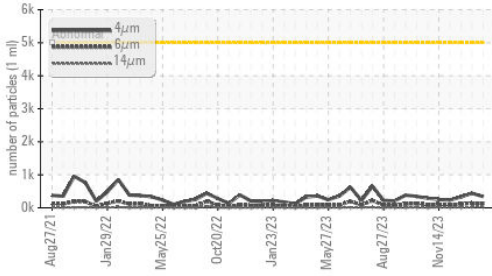
## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>442</b>	339	235
Particles >6µm	ASTM D7647 >1300	<b>140</b>	138	86
Particles >14µm	ASTM D7647 >160	<b>18</b>	19	11
Particles >21µm	ASTM D7647 >40	<b>5</b>	6	4
Particles >38µm	ASTM D7647 >10	<b>1</b>	1	1
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>16/14/11</b>	16/14/11	15/14/11

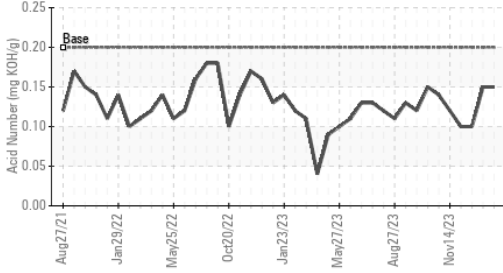


# OIL ANALYSIS REPORT

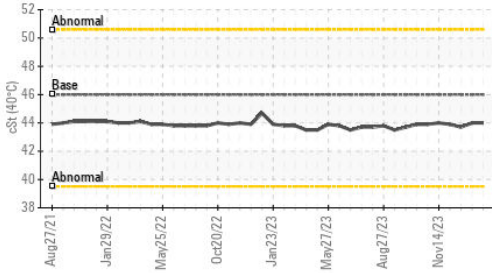
### Particle Trend



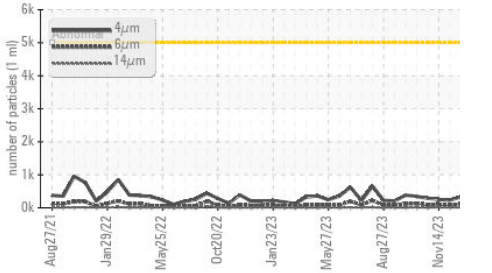
### Acid Number



### Viscosity @ 40°C



### Particle Trend



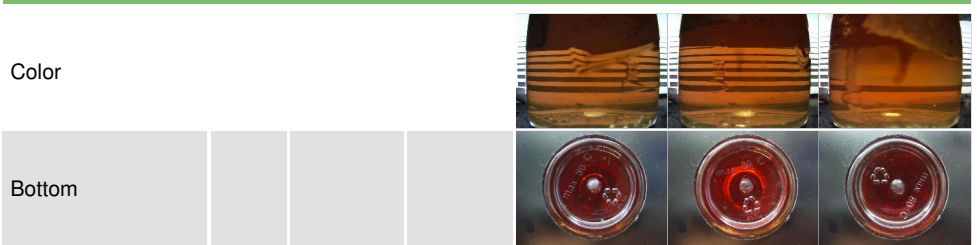
### FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	.2	<b>0.15</b>	0.15	0.10
<b>VISUAL</b>						
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

### FLUID PROPERTIES

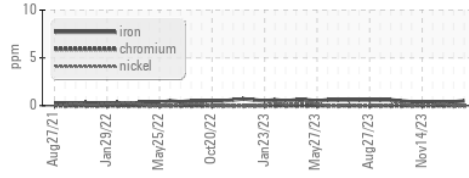
	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	46	<b>44.0</b>	44.0	43.7

### SAMPLE IMAGES

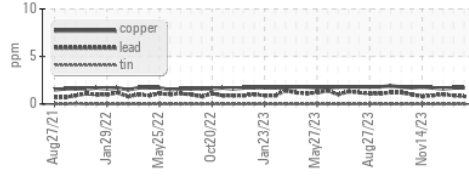


### GRAPHS

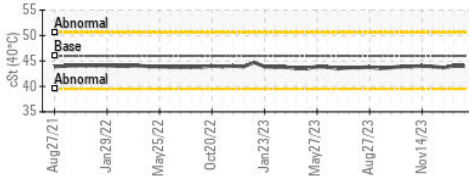
#### Ferrous Alloys



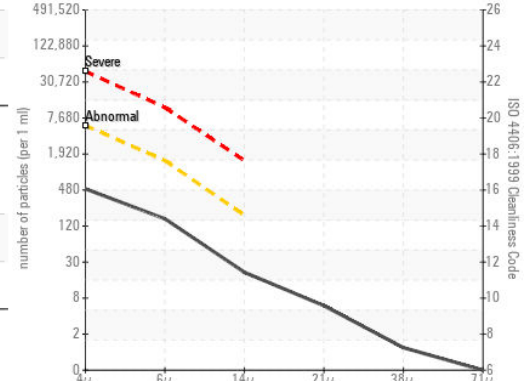
#### Non-ferrous Metals



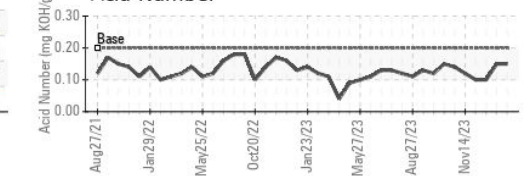
#### Viscosity @ 40°C



#### Particle Count



#### Acid Number



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HUSKY SEA ROSE /AKER SOLUTIONS  
**Sample No.** : PP **Received** : 17 Jan 2024  
**Lab Number** : 02609341 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 5710427 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

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: