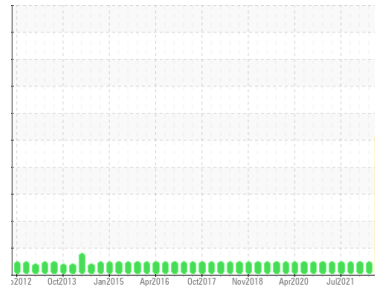




# PROBLEM SUMMARY

Sample Rating Trend

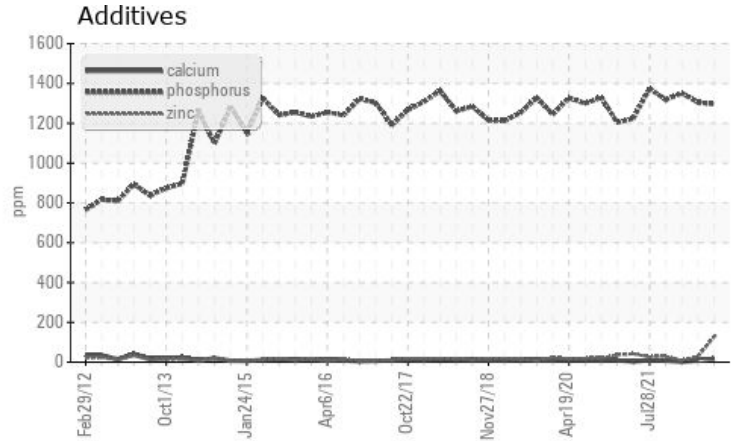
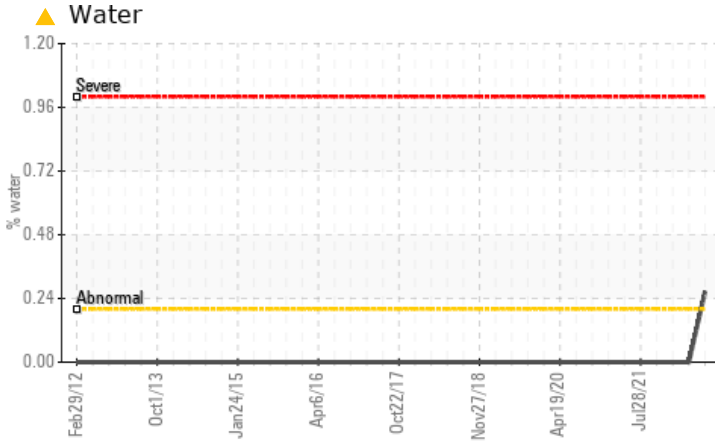


**WATER**



Area  
**STARBOARD CRANE**  
 Machine Id  
**58-GB-7647F STARBOARD CRANE HOIST GEARBOX (S/N Maint Plan 28275)**  
 Component  
**Starboard Gearbox**  
 Fluid  
**MOBIL MOBILUBE HD PLUS 75W (--- LTR)**

## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

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 recommend that you change the oil. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL
Water	%	ASTM D6304*	>0.2	▲ <b>0.266</b>	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ <b>2669.4</b>	---	---
Precipitate	scalar	Visual*	NONE	▲ <b>MODER</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ <b>WGOIL</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ <b>.5%</b>	NEG	NEG
Free Water	scalar	Visual*		▲ <b>5%</b>	NEG	NEG

Customer Id: SPESTJ  
 Sample No.: WC0711673  
 Lab Number: 02580492  
 Test Package: IND 1



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 Fluid	---	---	?	We recommend that you change the oil.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	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.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.
Check Water Access	---	---	?	We advise that you check for the source of water entry.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

## HISTORICAL DIAGNOSIS

### 15 May 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



### 18 Jan 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



### 16 Nov 2021 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



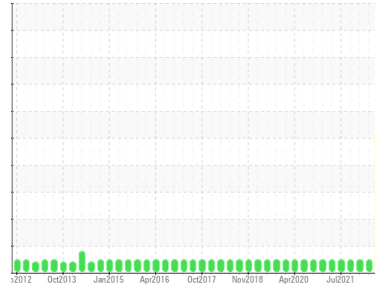


# OIL ANALYSIS REPORT

Sample Rating Trend

**WATER**

Area  
**STARBOARD CRANE**  
 Machine Id  
**58-GB-7647F STARBOARD CRANE HOIST GEARBOX (S/N Maint Plan 28275)**  
 Component  
**Starboard Gearbox**  
 Fluid  
**MOBIL MOBILUBE HD PLUS 75W (--- LTR)**



## DIAGNOSIS

### Recommendation

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 recommend that you change the oil. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate concentration of water present in the oil. Free water present.

### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The white residue present in the sample is oil additive precipitate. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC0711673</b>	WC0590011	WC0590018
Sample Date	Client Info	<b>03 Aug 2023</b>	15 May 2022	18 Jan 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >150	<b>14</b>	6	3
Chromium	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	<1	<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) >5	<b>2</b>	<1	<1
Lead	ppm	ASTM D5185(m) >65	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185(m) >80	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >8	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m) >5	<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>&lt;1</b>	0	0

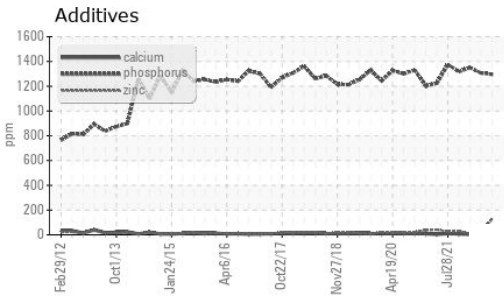
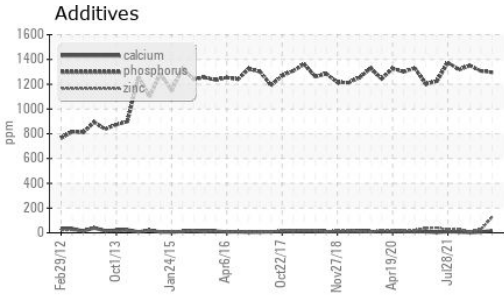
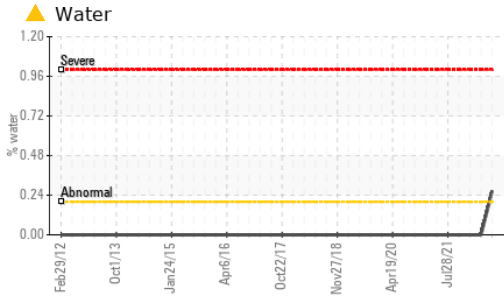
## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	<b>97</b>	178	221
Barium	ppm	ASTM D5185(m)	<b>3</b>	2	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185(m)	<b>1</b>	<1	0
Calcium	ppm	ASTM D5185(m)	<b>17</b>	8	2
Phosphorus	ppm	ASTM D5185(m)	<b>1295</b>	1306	1351
Zinc	ppm	ASTM D5185(m)	<b>127</b>	28	8
Sulfur	ppm	ASTM D5185(m)	<b>21317</b>	21988	22169
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	<b>2</b>	1	<1
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	1	<1
Water	%	ASTM D6304* >0.2	<b>▲ 0.266</b>	---	---
ppm Water	ppm	ASTM D6304* >2000	<b>▲ 2669.4</b>	---	---

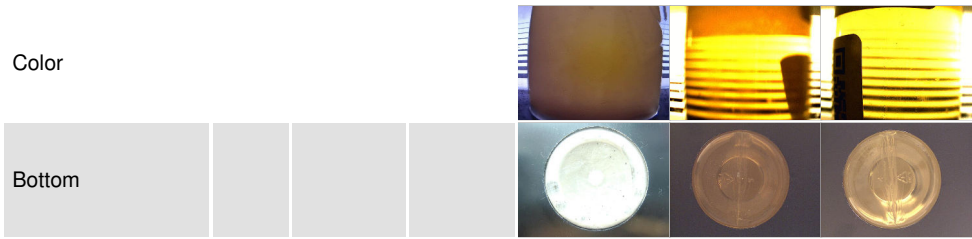
# OIL ANALYSIS REPORT



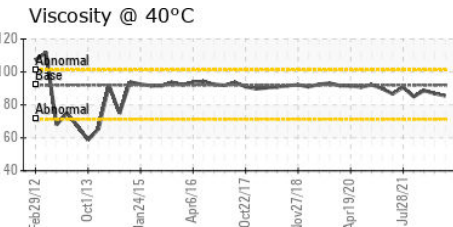
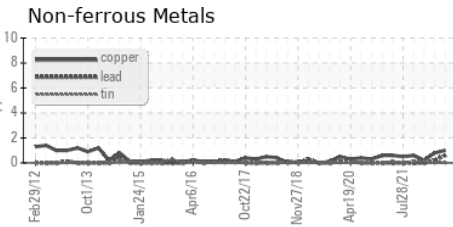
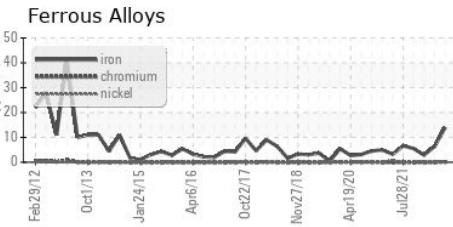
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	▲ MODER	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ WGOIL	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ .5%	NEG
Free Water	scalar	Visual*		▲ 5%	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	92	85.5	86.9

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



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HUSKY SEA ROSE /AKER SOLUTIONS  
**Sample No.** : WC0711673 **Received** : 05 Sep 2023  
**Lab Number** : 02580492 **Diagnosed** : 07 Sep 2023  
**Unique Number** : 5633552 **Diagnostician** : Kevin Marson  
**Test Package** : IND 1 ( Additional Tests: Bottom, KF )

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: