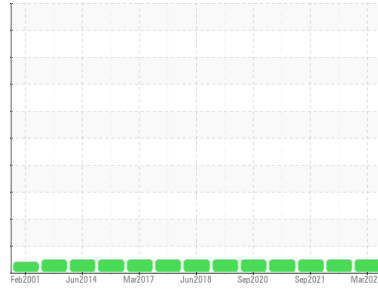




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

## 0014 HILL 4 MILL POWER PACK

Component

### Hydraulic System

Fluid

### MONARCH PREMIUM HYDRAULIC OIL AW R&O 46 (--- 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>WC0487108</b>	WC0397341	WC0397330
Sample Date	Client Info			<b>28 Mar 2024</b>	25 Mar 2022	17 Sep 2021
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>13</b>	10	8
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>20	<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)	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>20	<b>5</b>	6	4
Copper	ppm	ASTM D5185(m)	>20	<b>20</b>	14	11
Tin	ppm	ASTM D5185(m)	>20	<b>8</b>	6	3
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

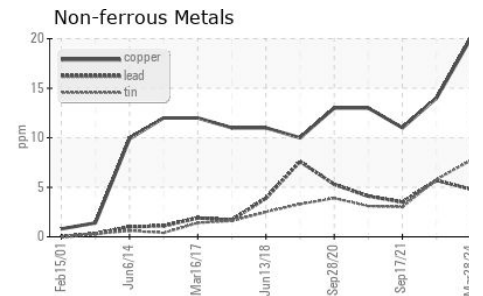
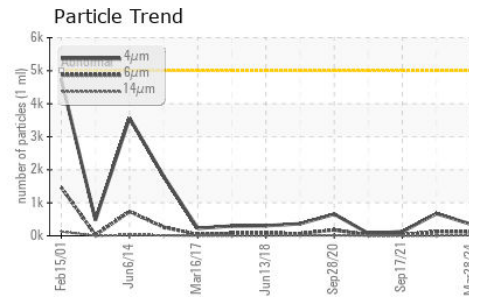
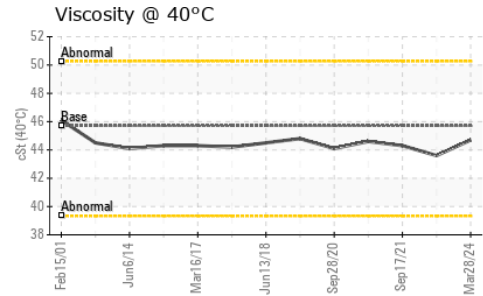
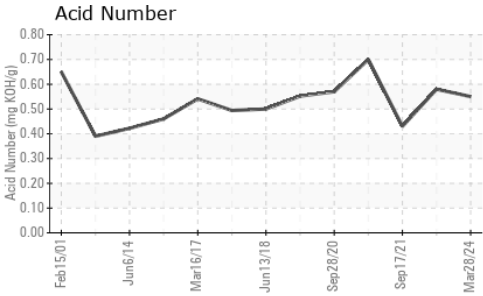
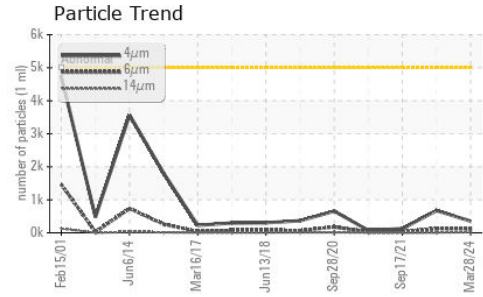
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	1
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>31</b>	25	38
Calcium	ppm	ASTM D5185(m)		<b>75</b>	72	79
Phosphorus	ppm	ASTM D5185(m)		<b>419</b>	414	440
Zinc	ppm	ASTM D5185(m)		<b>452</b>	448	471
Sulfur	ppm	ASTM D5185(m)		<b>1272</b>	1543	1767
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>	2	1
Sodium	ppm	ASTM D5185(m)		<b>4</b>	1	<1
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>354</b>	673	126
Particles >6µm		ASTM D7647	>1300	<b>115</b>	124	32
Particles >14µm		ASTM D7647	>160	<b>18</b>	8	2
Particles >21µm		ASTM D7647	>40	<b>7</b>	2	0
Particles >38µm		ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm		ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>16/14/11</b>	17/14/10	14/12/9



# OIL ANALYSIS REPORT



FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	<b>0.55</b>	0.58	0.43

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	NEG

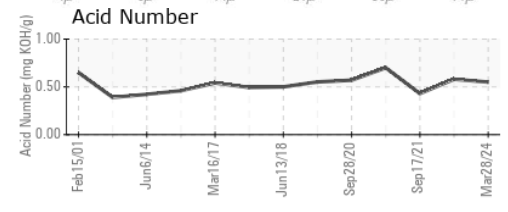
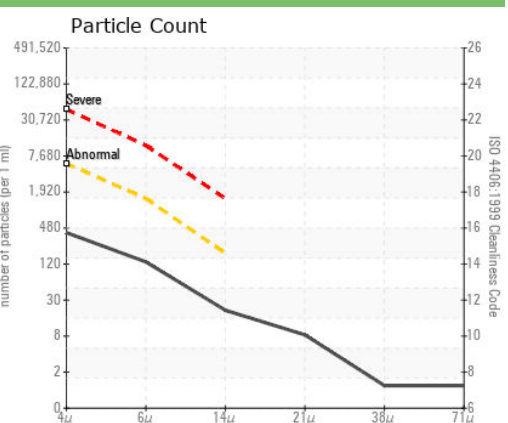
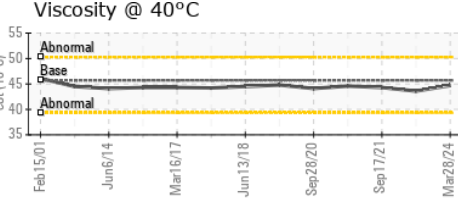
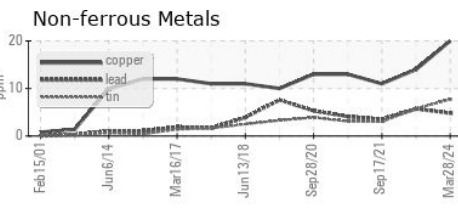
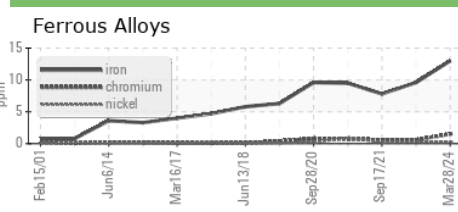
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	<b>44.7</b>	43.6	44.3

**SAMPLE IMAGES**

Color

Bottom

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0487108  
**Lab Number** : 02626423  
**Unique Number** : 5759555  
**Test Package** : IND 2

**Received** : 03 Apr 2024  
**Tested** : 04 Apr 2024  
**Diagnosed** : 05 Apr 2024 - Kevin Marson

**HENDRICKSON CANADA LTD.**  
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 STRATFORD, ON  
 CA N5A 7X1  
 Contact: Sandeep Bhatt  
 sbhatt@hendrickson-intl.com  
 T: (519)273-8707  
 F: (519)271-3103

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.