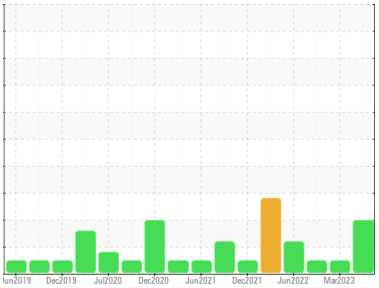
PROBLEM SUMMARY

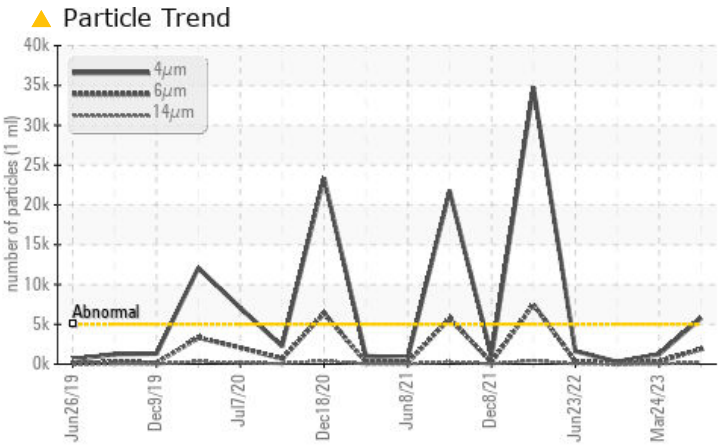
Sample Rating Trend



ISO

Area
[123035]
Machine Id
0964-4 HILLE 2 MILL POWER PACK
Component
Hydraulic System
Fluid
MONARCH PREMIUM HYDRAULIC OIL AW R&O 46 (--- LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	NORMAL	NORMAL
Particles >4µm		ASTM D7647	>5000	▲ **5803**	1256	269
Particles >6µm		ASTM D7647	>1300	▲ **1885**	343	50
Particles >14µm		ASTM D7647	>160	▲ **225**	19	8
Particles >21µm		ASTM D7647	>40	▲ **63**	3	3
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/18/15**	17/16/11	15/13/10

Customer Id: HENSTR
Sample No.: WC0378090
Lab Number: 02575922
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

HISTORICAL DIAGNOSIS

24 Mar 2023 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. 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

15 Sep 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. 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

23 Jun 2022 Diag: Kevin Marson

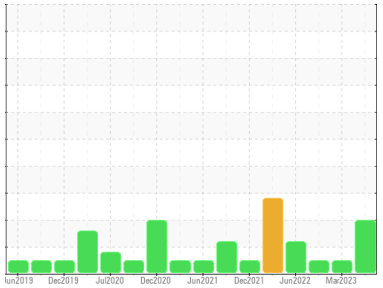
VISUAL METAL

We advise that you check for visible metal particles in the oil. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Light concentration of visible metal present. 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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
[123035]
Machine Id
0964-4 HILLE 2 MILL POWER PACK
Component
Hydraulic System
Fluid
MONARCH PREMIUM HYDRAULIC OIL AW R&O 46 (--- LTR)

DIAGNOSIS

Recommendation

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.

Wear

All 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		**WC0378090**	WC0487127	WC0307883
Sample Date		Client Info		**28 Jun 2023**	24 Mar 2023	15 Sep 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**7**	8	8
Chromium	ppm	ASTM D5185(m)	>20	**1**	1	1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**2**	3	3
Copper	ppm	ASTM D5185(m)	>20	**12**	15	14
Tin	ppm	ASTM D5185(m)	>20	**2**	3	4
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	<1	<1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**4**	14	16
Calcium	ppm	ASTM D5185(m)		**37**	58	52
Phosphorus	ppm	ASTM D5185(m)		**381**	405	407
Zinc	ppm	ASTM D5185(m)		**394**	403	394
Sulfur	ppm	ASTM D5185(m)		**975**	1106	1134
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

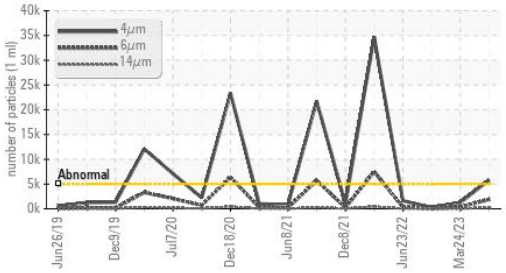
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**<1**	1	1
Sodium	ppm	ASTM D5185(m)		**1**	2	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **5803**	1256	269
Particles >6µm		ASTM D7647	>1300	▲ **1885**	343	50
Particles >14µm		ASTM D7647	>160	▲ **225**	19	8
Particles >21µm		ASTM D7647	>40	▲ **63**	3	3
Particles >38µm		ASTM D7647	>10	**4**	0	0
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/18/15**	17/16/11	15/13/10

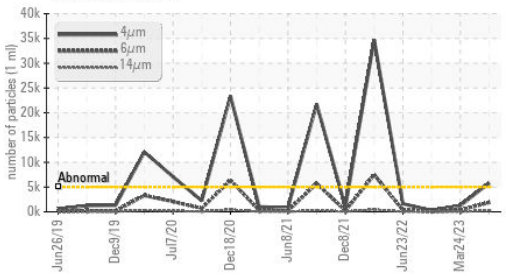
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.43**	0.33	0.51

OIL ANALYSIS REPORT

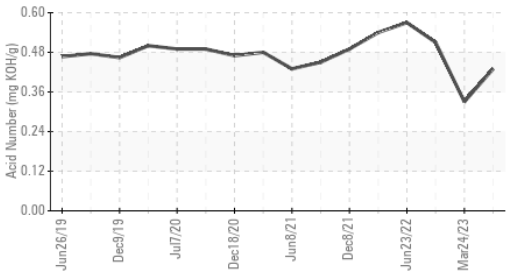
Particle Trend



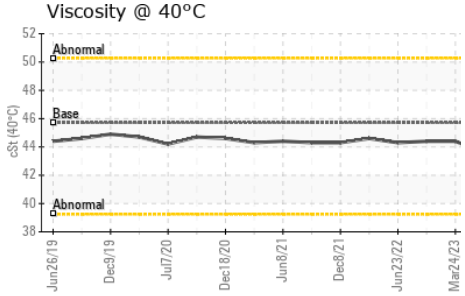
Particle Trend



Acid Number

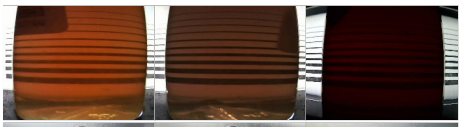


Viscosity @ 40°C



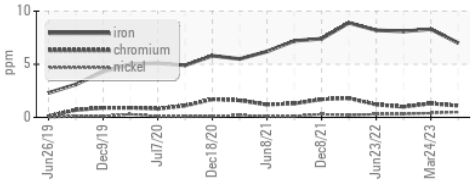
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	45.7	**43.6**	44.4	44.4

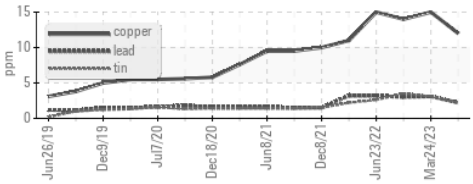
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter			*no image*	*no image*	*no image*

GRAPHS

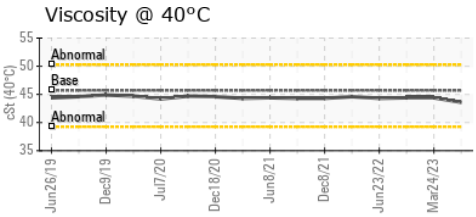
Ferrous Alloys



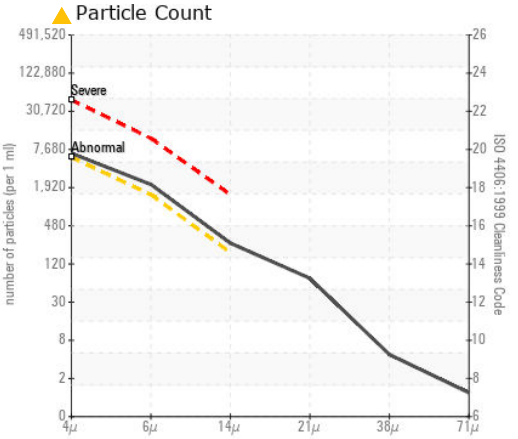
Non-ferrous Metals



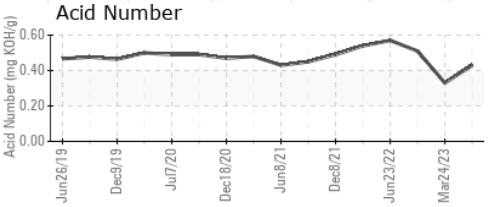
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0378090 **Received** : 15 Aug 2023
Lab Number : 02575922 **Diagnosed** : 16 Aug 2023
Unique Number : 5628982 **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.

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