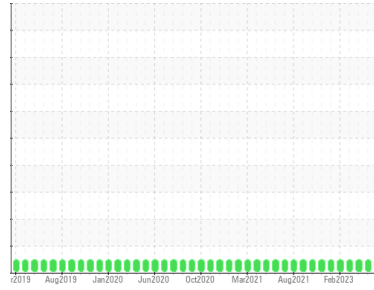


Area  
**Framo [450156594]**  
Machine Id  
**HPU Framo A Hyd. Power (S/N Sample Tag IH-65203-S1)**  
Component  
**Hydraulic System**  
Fluid  
**CASTROL HYSPIIN AWH-M ISO 46 (27000 LTR)**



**DIAGNOSIS**

**Recommendation**  
Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

**Wear**  
Component wear rates appear to be normal (unconfirmed).

**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	history 1	history 2
Sample Number	Client Info	<b>PC</b>	PC	PC0052467
Sample Date	Client Info	<b>10 Jun 2023</b>	14 May 2023	19 Apr 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

**WEAR METALS**

method	limit/base	current	history 1	history 2
PQ	ASTM D8184*	<b>0</b>	0	0
Iron	ppm ASTM D5185(m) >20	<b>2</b>	2	2
Chromium	ppm ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm ASTM D5185(m) >10	<b>0</b>	0	0
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>	<1	0
Lead	ppm ASTM D5185(m) >20	<b>0</b>	<1	<1
Copper	ppm ASTM D5185(m) >20	<b>4</b>	4	4
Tin	ppm ASTM D5185(m) >10	<b>0</b>	0	0
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	history 1	history 2
Boron	ppm ASTM D5185(m)	<b>&lt;1</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>	0	<1
Calcium	ppm ASTM D5185(m)	<b>4</b>	2	2
Phosphorus	ppm ASTM D5185(m)	<b>338</b>	353	347
Zinc	ppm ASTM D5185(m)	<b>40</b>	39	38
Sulfur	ppm ASTM D5185(m)	<b>3108</b>	3227	3141
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

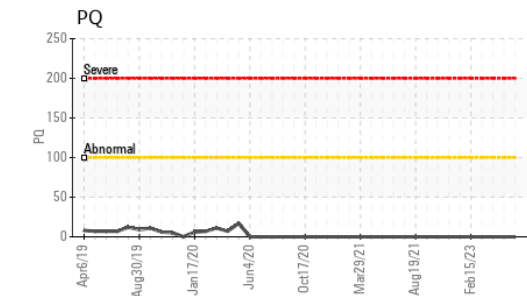
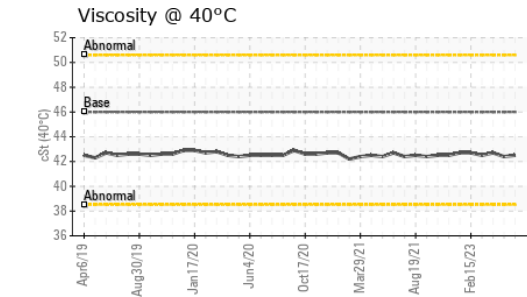
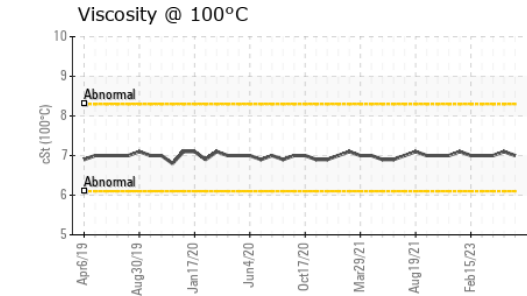
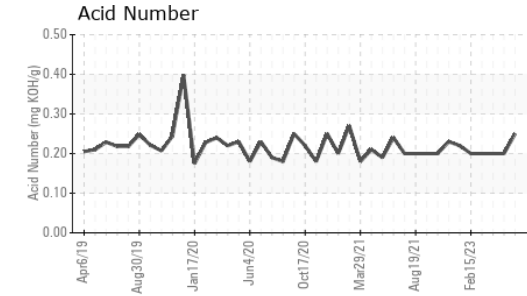
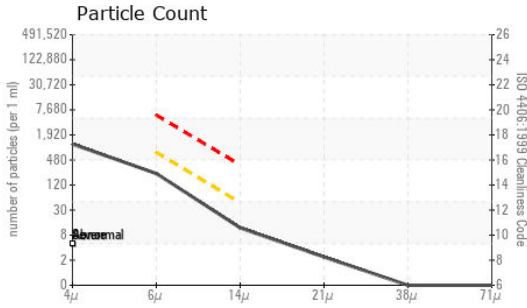
**CONTAMINANTS**

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185(m) >15	<b>&lt;1</b>	<1	<1
Sodium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm ASTM D5185(m) >20	<b>&lt;1</b>	0	0

**FLUID CLEANLINESS**

method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	<b>1013</b>	282	114
Particles >6µm	ASTM D7647 >640	<b>200</b>	106	31
Particles >14µm	ASTM D7647 >40	<b>10</b>	8	4
Particles >21µm	ASTM D7647 >10	<b>2</b>	2	1
Particles >38µm	ASTM D7647 >3	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >--/16/12	<b>17/15/10</b>	15/14/10	14/12/9

# OIL ANALYSIS REPORT

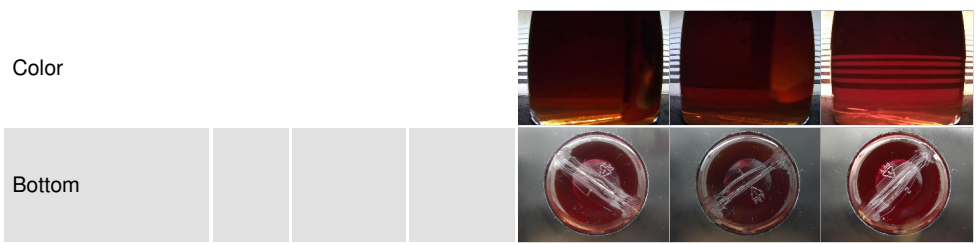


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.25</b>	0.20	0.20

VISUAL		method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	46.0	<b>42.5</b>	42.4	42.7
Visc @ 100°C	cSt	ASTM D7279(m)		<b>7</b>	7.1	7
Viscosity Index (VI)	Scale	ASTM D2270*	150	<b>123</b>	128	123

## SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC  
**Lab Number** : **02568265** **Received** : 06 Jul 2023  
**Unique Number** : 5605311 **Diagnosed** : 07 Jul 2023  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, TAN Man, VI ) **Diagnostician** : Kevin Marson

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Strret  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshynes@suncor.com  
 T: (709)778-3575  
 F: (709)724-2835

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.