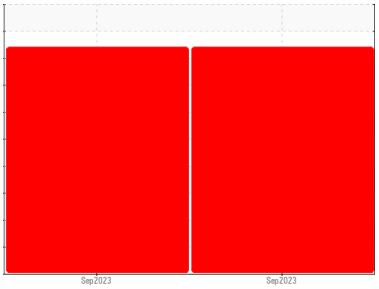
PROBLEM SUMMARY

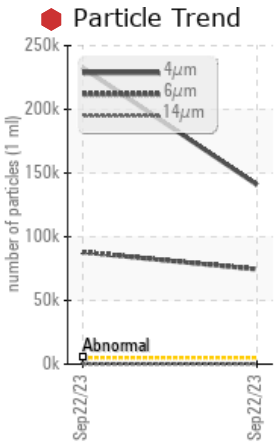
Sample Rating Trend

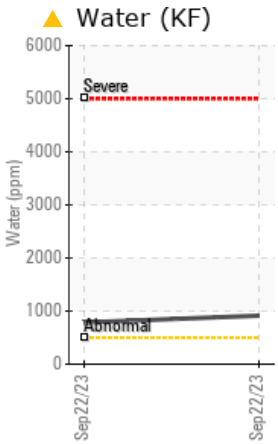


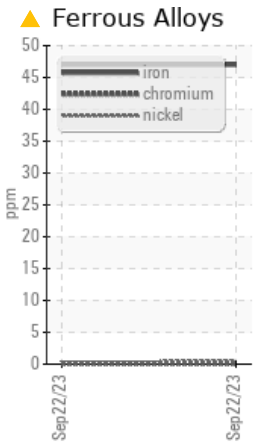
ISO

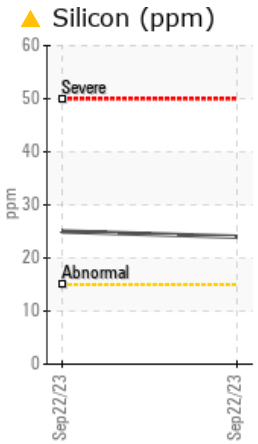
Area
Inland Iron - 888041
Machine Id
AG198
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

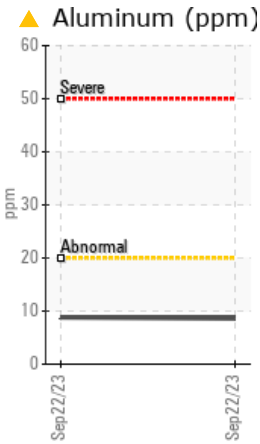
COMPONENT CONDITION SUMMARY











RECOMMENDATION

This is a baseline read-out on the submitted sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	---
Iron	ppm	ASTM D5185(m)	>20	▲ **47**	▲ 47	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ **9**	▲ 9	---
Silicon	ppm	ASTM D5185(m)	>15	▲ **25**	▲ 24	---
Water	%	ASTM D6304*	>0.05	▲ **0.091**	▲ 0.078	---
ppm Water	ppm	ASTM D6304*	>500	▲ **913.2**	▲ 785.1	---
Particles >4µm		ASTM D7647	>5000	⬢ **232650**	⬢ 140736	---
Particles >6µm		ASTM D7647	>1300	⬢ **87908**	⬢ 74425	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **25/24/12**	⬢ 24/23/14	---

Customer Id: CHECOB
Sample No.: E30000429
Lab Number: 02586109
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Tatiana Sorkina +1 (800)263-3939
tsorkina@e360s.ca

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

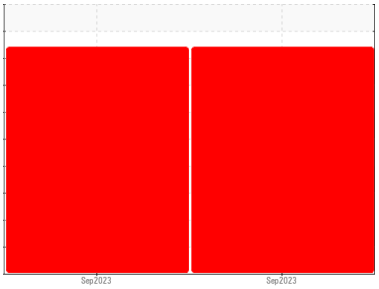
22 Sep 2023 Diag: Tatiana Sorkina

ISO

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
Inland Iron - 888041
Machine Id
AG198
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

Recommendation
This is a baseline read-out on the submitted sample.

Wear
Iron ppm levels are abnormal. Aluminum ppm levels are noted.

Contamination
Particles >6µm are severely high. Particles >4µm and oil cleanliness are severely high. Silicon ppm levels are abnormally high. Water and ppm water contamination levels are abnormal.

Fluid Condition
{not applicable}

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Batch #		Client Info		**AG198**	Big Tank	---
Machine ID		Client Info		**Sales**	AG198	---
Department		Client Info		**Tote**	Sales	---
Sample From		Client Info		**Initial**	---	---
Production Stage		Client Info		**09/28/2023**	---	---
Sent to WC		Client Info		**---**	09/25/2023	---
Sample Number		Client Info		**E30000429**	E30000214	---
Sample Date		Client Info		**22 Sep 2023**	22 Sep 2023	---
Machine Age	hrs	Client Info		**0**	0	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**SEVERE**	SEVERE	---

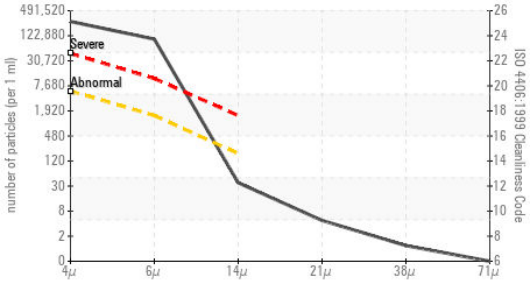
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	---
Iron	ppm	ASTM D5185(m)	>20	▲ **47**	▲ 47	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	---
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	---
Titanium	ppm	ASTM D5185(m)		**1**	1	---
Silver	ppm	ASTM D5185(m)		**<1**	<1	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ **9**	▲ 9	---
Lead	ppm	ASTM D5185(m)	>20	**15**	15	---
Copper	ppm	ASTM D5185(m)	>20	**13**	12	---
Tin	ppm	ASTM D5185(m)	>20	**0**	0	---
Antimony	ppm	ASTM D5185(m)		**0**	0	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
Beryllium	ppm	ASTM D5185(m)		**0**	0	---
Cadmium	ppm	ASTM D5185(m)		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	**<1**	<1	---
Barium	ppm	ASTM D5185(m)	5	**<1**	<1	---
Molybdenum	ppm	ASTM D5185(m)	5	**0**	0	---
Manganese	ppm	ASTM D5185(m)		**<1**	<1	---
Magnesium	ppm	ASTM D5185(m)	25	**6**	6	---
Calcium	ppm	ASTM D5185(m)	200	**68**	67	---
Phosphorus	ppm	ASTM D5185(m)	300	**325**	318	---
Zinc	ppm	ASTM D5185(m)	370	**363**	361	---
Sulfur	ppm	ASTM D5185(m)	2500	**2162**	2149	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

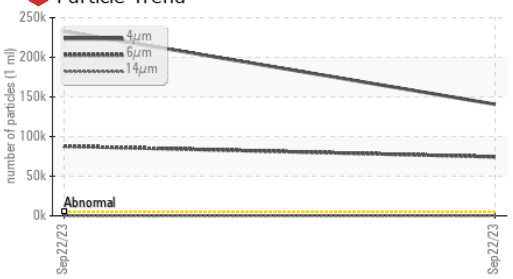
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	▲ **25**	▲ 24	---
Sodium	ppm	ASTM D5185(m)		**2**	2	---
Potassium	ppm	ASTM D5185(m)	>20	**2**	2	---
Water	%	ASTM D6304*	>0.05	▲ **0.091**	▲ 0.078	---
ppm Water	ppm	ASTM D6304*	>500	▲ **913.2**	▲ 785.1	---

OIL ANALYSIS REPORT

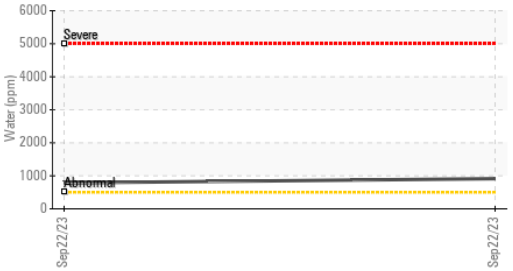
Particle Count



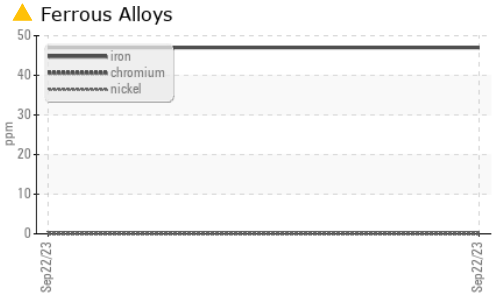
Particle Trend



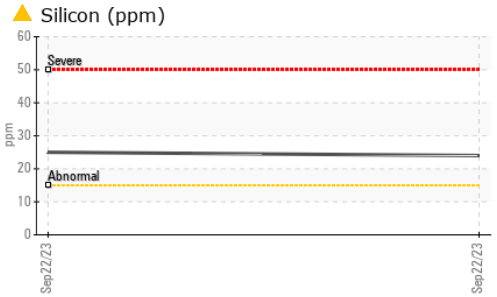
Water (KF)



Ferrous Alloys



Silicon (ppm)



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**232650**	140736	---
Particles >6µm		ASTM D7647	>1300	**87908**	74425	---
Particles >14µm		ASTM D7647	>160	**32**	97	---
Particles >21µm		ASTM D7647	>40	**4**	6	---
Particles >38µm		ASTM D7647	>10	**1**	1	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/24/12**	24/23/14	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	**0.36**	0.34	---

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	**VLITE**	NONE	---
Debris	scalar	Visual*	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	---
Appearance	scalar	Visual*	NORML	**HAZY**	NORML	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	---
Emulsified Water	scalar	Visual*	>0.05	**NEG**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	**42.9**	42.5	---
Visc @ 100°C	cSt	ASTM D7279(m)	6.7	**6.9**	6.7	---
Viscosity Index (VI)	Scale	ASTM D2270*	97	**118**	111	---

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

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : E30000429 **Received** : 02 Oct 2023
Lab Number : 02586109 **Diagnosed** : 05 Oct 2023
Unique Number : 5655175 **Diagnostician** : Tatiana Sorkina
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, VI)

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.

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