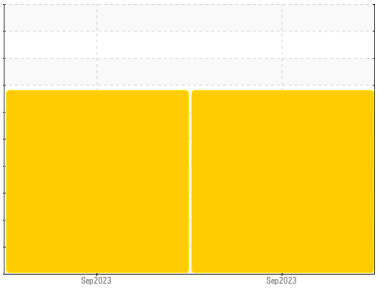
PROBLEM SUMMARY

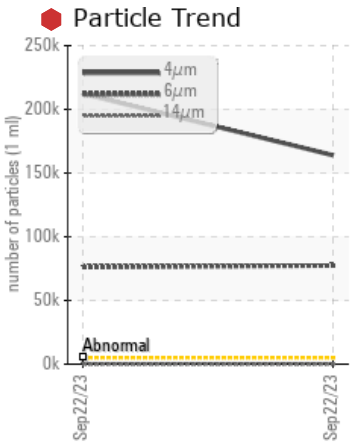
Sample Rating Trend

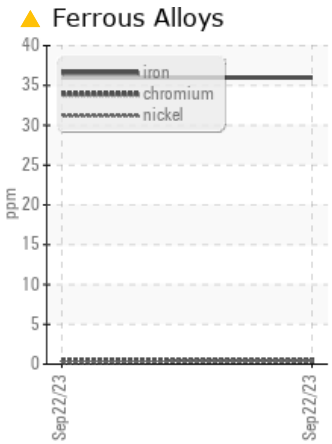


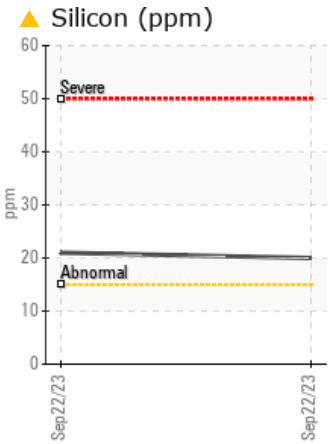
ISO

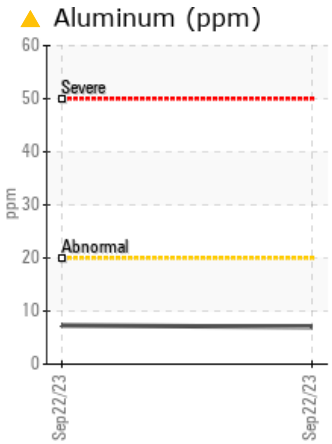
Area
Inland Iron - 888041
Machine Id
AG196
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

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	▲ **36**	▲ 36	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ **7**	▲ 7	---
Silicon	ppm	ASTM D5185(m)	>15	▲ **21**	▲ 20	---
Particles >4µm		ASTM D7647	>5000	⬢ **212308**	⬢ 163963	---
Particles >6µm		ASTM D7647	>1300	⬢ **76190**	⬢ 77396	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **25/23/10**	⬢ 25/23/12	---

Customer Id: CHECOB
Sample No.: E30000427
Lab Number: 02586123
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

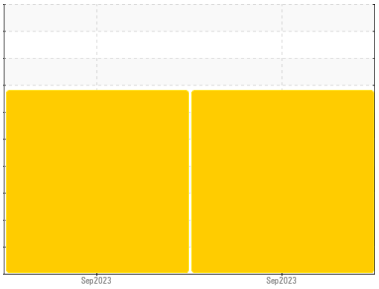
ISO

Iron ppm levels are abnormal. Aluminum ppm levels are noted. Particles >6µm are severely high. Particles >4µm and oil cleanliness are severely high. Silicon ppm levels are abnormally high.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
Inland Iron - 888041
Machine Id
AG196
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

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

Wear
Aluminum and iron ppm levels are noted.

Contamination
Particles >6µm are severely high. Particles >4µm and oil cleanliness are severely high. Silicon ppm levels are notably high.

Fluid Condition
{not applicable}

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Batch #		Client Info		**AG196**	Tote 28	---
Machine ID		Client Info		**Sales**	AG196	---
Department		Client Info		**Tote**	Sales	---
Sample From		Client Info		**Initial**	---	---
Production Stage		Client Info		**09/28/2023**	Initial	---
Sent to WC		Client Info		**---**	09/25/2023	---
Sample Number		Client Info		**E30000427**	E30000223	---
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	---

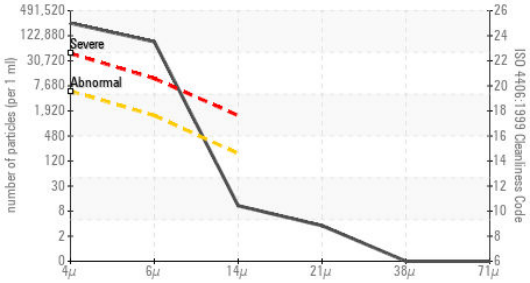
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	---
Iron	ppm	ASTM D5185(m)	>20	▲ **36**	▲ 36	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	---
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	---
Titanium	ppm	ASTM D5185(m)		**3**	3	---
Silver	ppm	ASTM D5185(m)		**<1**	<1	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ **7**	▲ 7	---
Lead	ppm	ASTM D5185(m)	>20	**10**	9	---
Copper	ppm	ASTM D5185(m)	>20	**11**	11	---
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	**62**	63	---
Phosphorus	ppm	ASTM D5185(m)	300	**341**	318	---
Zinc	ppm	ASTM D5185(m)	370	**373**	360	---
Sulfur	ppm	ASTM D5185(m)	2500	**1517**	1471	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

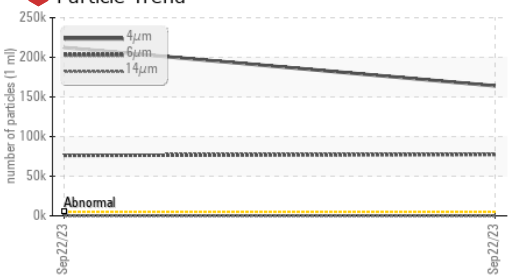
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	▲ **21**	▲ 20	---
Sodium	ppm	ASTM D5185(m)		**2**	1	---
Potassium	ppm	ASTM D5185(m)	>20	**3**	2	---
Water	%	ASTM D6304*	>0.05	**0.002**	0.002	---
ppm Water	ppm	ASTM D6304*	>500	**16.6**	21.1	---

OIL ANALYSIS REPORT

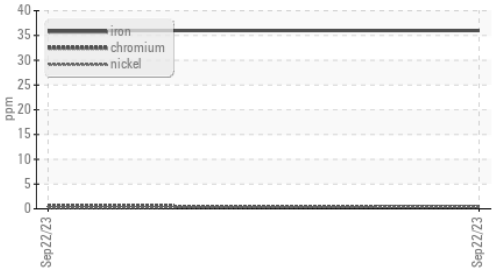
Particle Count



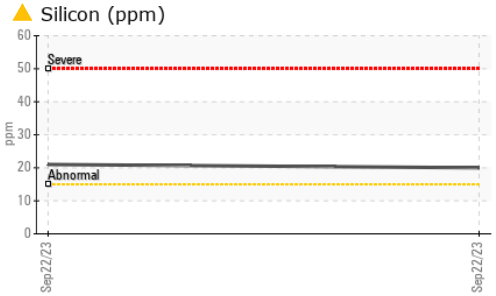
Particle Trend



Ferrous Alloys



Silicon (ppm)



Aluminum (ppm)

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**212308**	163963	---
Particles >6µm		ASTM D7647	>1300	**76190**	77396	---
Particles >14µm		ASTM D7647	>160	**9**	22	---
Particles >21µm		ASTM D7647	>40	**3**	3	---
Particles >38µm		ASTM D7647	>10	**0**	1	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**25/23/10**	25/23/12	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	**0.34**	0.33	---

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	**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	**43.6**	43.5	---
Visc @ 100°C	cSt	ASTM D7279(m)	6.7	**6.9**	6.9	---
Viscosity Index (VI)	Scale	ASTM D2270*	97	**115**	115	---

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. : E30000427 **Received** : 02 Oct 2023
Lab Number : 02586123 **Diagnosed** : 05 Oct 2023
Unique Number : 5655189 **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.

Environmental 360 Solutions Ltd.
640 Victoria Street
Cobourg, ON
CA K9A 5H5
Contact: Fred Kosseim
fkosseim@e360s.ca
T: (905)372-2251
F: (905)372-1658