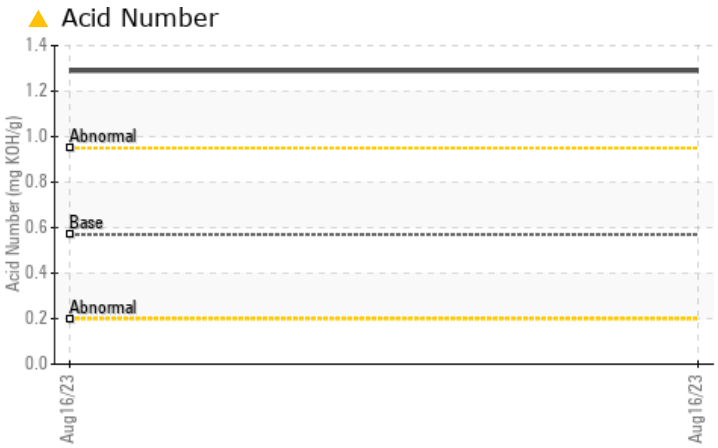
PROBLEM SUMMARY

Sample Rating Trend

DEGRADATION

Area
AO Smith - A09200
Machine Id
A2308069
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	▲ **1.29**	---	---

Customer Id: CHECOB
Sample No.: E30000089
Lab Number: 02576770
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

OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Area
AO Smith - A09200
Machine Id
A2308069
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

DIAGNOSIS

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

Wear
Copper and iron ppm levels are noted.

Contamination
{not applicable}

Fluid Condition
Acid Number (AN) is abnormally high. Phosphorus ppm levels are notably high. Sulfur ppm levels are notably high.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**E30000089**	---	---
Sample Date		Client Info		**16 Aug 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	---	---
Iron	ppm	ASTM D5185(m)	>20	**421**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**1**	---	---
Nickel	ppm	ASTM D5185(m)	>20	**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**<1**	---	---
Silver	ppm	ASTM D5185(m)		**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**4**	---	---
Lead	ppm	ASTM D5185(m)	>20	**12**	---	---
Copper	ppm	ASTM D5185(m)	>20	**238**	---	---
Tin	ppm	ASTM D5185(m)	>20	**11**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**1**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**1**	---	---

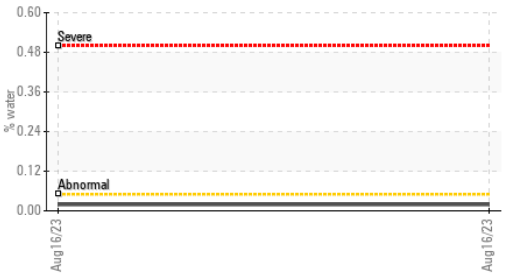
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	**<1**	---	---
Barium	ppm	ASTM D5185(m)	5	**3**	---	---
Molybdenum	ppm	ASTM D5185(m)	5	**0**	---	---
Manganese	ppm	ASTM D5185(m)		**8**	---	---
Magnesium	ppm	ASTM D5185(m)	25	**58**	---	---
Calcium	ppm	ASTM D5185(m)	200	**97**	---	---
Phosphorus	ppm	ASTM D5185(m)	300	**660**	---	---
Zinc	ppm	ASTM D5185(m)	370	**421**	---	---
Sulfur	ppm	ASTM D5185(m)	2500	**7581**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**3**	---	---
Sodium	ppm	ASTM D5185(m)		**25**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**36**	---	---
Water	%	ASTM D6304*	>0.05	**0.019**	---	---
ppm Water	ppm	ASTM D6304*	>500	**198.1**	---	---

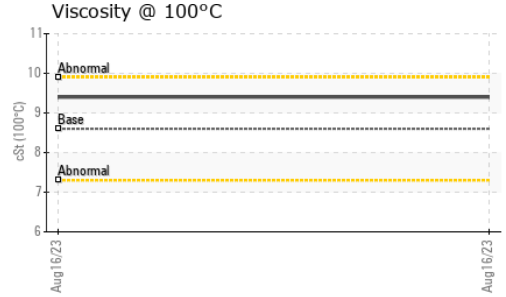
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**121**	---	---
Particles >6µm		ASTM D7647	>1300	**43**	---	---
Particles >14µm		ASTM D7647	>160	**8**	---	---
Particles >21µm		ASTM D7647	>40	**4**	---	---
Particles >38µm		ASTM D7647	>10	**1**	---	---
Particles >71µm		ASTM D7647	>3	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**14/13/10**	---	---

OIL ANALYSIS REPORT

Water

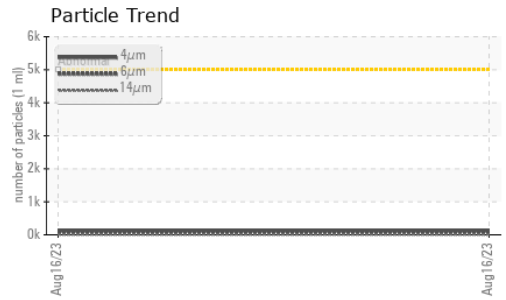


Viscosity @ 100°C

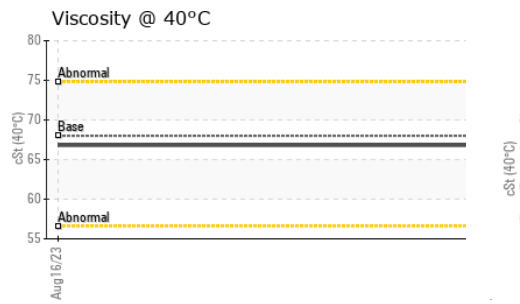


PQ

Particle Trend



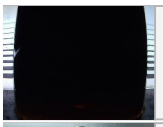
Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	▲ **1.29**	---	---

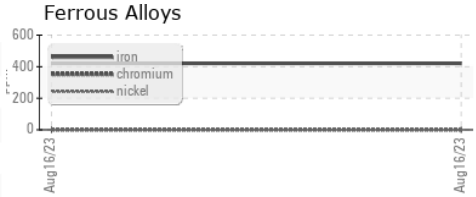
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	**66.8**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	8.6	**9.4**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	96	**119**	---	---

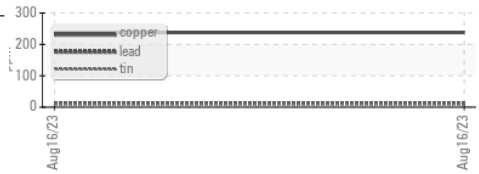
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

Ferrous Alloys

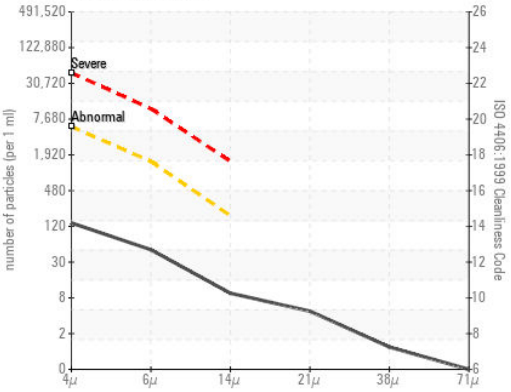


Non-ferrous Metals

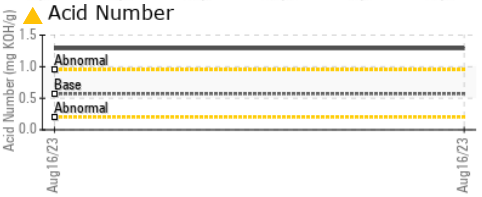


Viscosity @ 40°C

Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : E30000089
Lab Number : 02576770
Unique Number : 5629830
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, VI)

Received : 18 Aug 2023
Diagnosed : 28 Aug 2023
Diagnostician : Tatiana Sorkina

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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