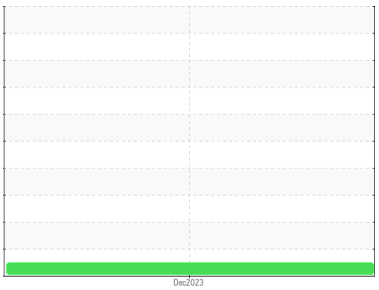
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
K. SIMKE GUN DRILLING K05100
Machine Id
A2312042
Component
Cutting Fluid
Fluid
{not provided} (--- GAL)

DIAGNOSIS

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

Wear
Iron ppm levels are noted.

Contamination
{not applicable}

Fluid Condition
{not applicable}

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Batch #		Client Info		**2023 11 0602**	---	---
Machine ID		Client Info		**A2312042**	---	---
Department		Client Info		**Production**	---	---
Sample From		Client Info		**Machine**	---	---
Production Stage		Client Info		**Final**	---	---
Sent to WC		Client Info		**12/11/2023**	---	---
Sample Number		Client Info		**E30000908**	---	---
Sample Date		Client Info		**08 Dec 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**NORMAL**	---	---

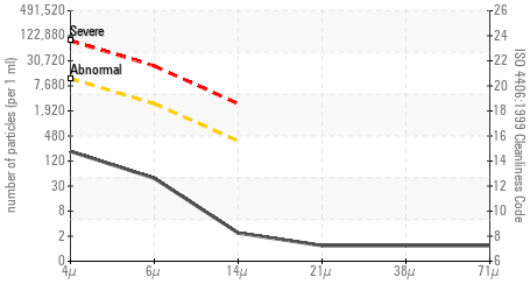
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)		**35**	---	---
Chromium	ppm	ASTM D5185(m)		**0**	---	---
Nickel	ppm	ASTM D5185(m)		**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)		**<1**	---	---
Aluminum	ppm	ASTM D5185(m)		**1**	---	---
Lead	ppm	ASTM D5185(m)		**<1**	---	---
Copper	ppm	ASTM D5185(m)		**4**	---	---
Tin	ppm	ASTM D5185(m)		**0**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**1**	---	---
Barium	ppm	ASTM D5185(m)		**1**	---	---
Molybdenum	ppm	ASTM D5185(m)		**0**	---	---
Manganese	ppm	ASTM D5185(m)		**<1**	---	---
Magnesium	ppm	ASTM D5185(m)		**2**	---	---
Calcium	ppm	ASTM D5185(m)		**14**	---	---
Phosphorus	ppm	ASTM D5185(m)		**52**	---	---
Zinc	ppm	ASTM D5185(m)		**15**	---	---
Sulfur	ppm	ASTM D5185(m)		**8384**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

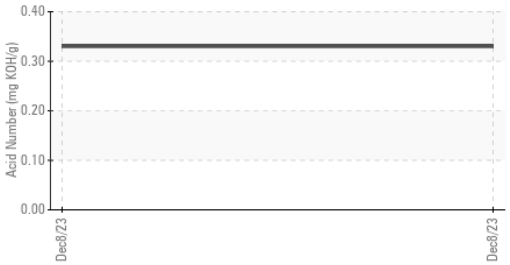
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)		**1**	---	---
Sodium	ppm	ASTM D5185(m)		**6**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**1**	---	---
Water	%	ASTM D6304*		**0.002**	---	---
ppm Water	ppm	ASTM D6304*		**21**	---	---

OIL ANALYSIS REPORT

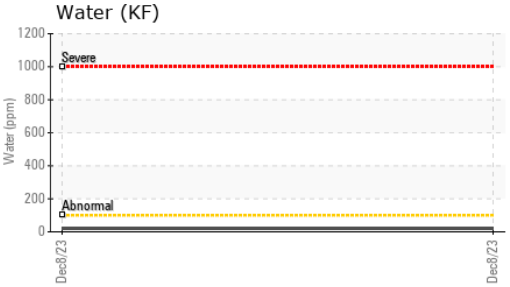
Particle Count



Acid Number

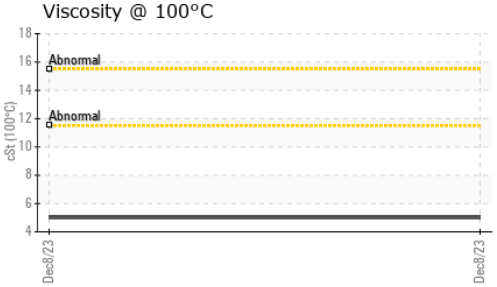


Water (KF)



Particle Trend

Viscosity @ 100°C



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**180**	---	---
Particles >6µm		ASTM D7647	>2500	**41**	---	---
Particles >14µm		ASTM D7647	>320	**2**	---	---
Particles >21µm		ASTM D7647	>80	**1**	---	---
Particles >38µm		ASTM D7647	>20	**1**	---	---
Particles >71µm		ASTM D7647	>4	**1**	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**15/13/9**	---	---

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

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*		**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*		**6.42**	---	---
Visc @ 40°C	cSt	ASTM D7279(m)		**26.3**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		**5**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*		**117**	---	---

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

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : E30000908 **Received** : 13 Dec 2023
Lab Number : 02602843 **Diagnosed** : 15 Dec 2023
Unique Number : 5695928 **Diagnostician** : Tatiana Sorkina
Test Package : IND 2 (Additional Tests: KV100, PrtCount, VI)

To discuss this sample report, contact Customer Service at 1-905-372-2251.
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: Tatiana Sorkina
tsorkina@e360s.ca
T: (800)263-3939
F: (905)373-4950