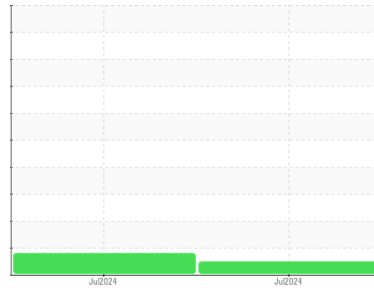




# OIL ANALYSIS REPORT

Area  
**Cleveland Cliffs - 888102**  
 Machine ID  
**RB046-R**  
 Component  
**Hydraulic System**  
 Fluid  
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

## Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
 We certify that this oil is clean, that the additives are at acceptable levels, and that it is suitable for use.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Machine ID	Client Info		<b>Press 603</b>	Press 603	---
Department	Client Info		<b>Sales</b>	Sales	---
Sample From	Client Info		<b>Machine</b>	Machine	---
Production Stage	Client Info		<b>Lab Reclaim</b>	Lab Reclaim	---
Sent to WC	Client Info		<b>07/11/2024</b>	07/05/2024	---
Sample Number	Client Info		<b>E30002618</b>	E30002574	---
Sample Date	Client Info		<b>10 Jul 2024</b>	05 Jul 2024	---
Machine Age	hrs	Client Info	<b>0</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	0	---
Oil Changed		Client Info	<b>N/A</b>	N/A	---
Sample Status			<b>NORMAL</b>	ATTENTION	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >20	<b>2</b>	2	---
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	---
Nickel	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	---
Lead	ppm	ASTM D5185(m) >20	<b>0</b>	0	---
Copper	ppm	ASTM D5185(m) >20	<b>6</b>	5	---
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	---

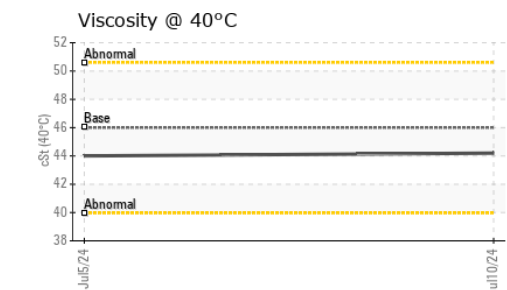
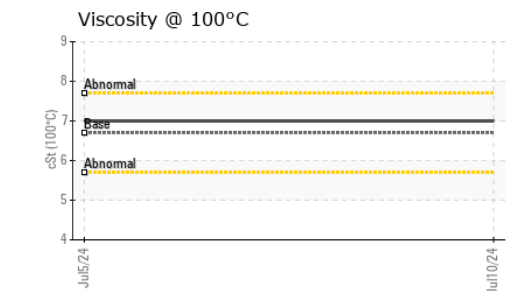
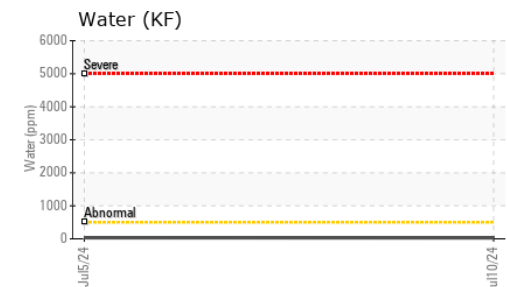
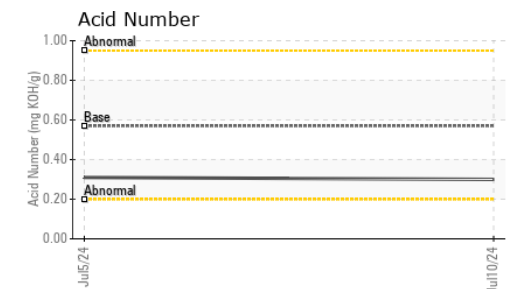
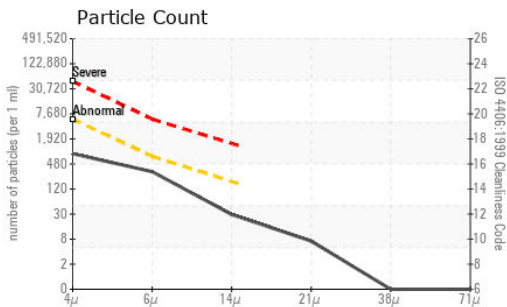
## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 5	<b>&lt;1</b>	<1	---
Barium	ppm	ASTM D5185(m) 5	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m) 5	<b>0</b>	0	---
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	---
Magnesium	ppm	ASTM D5185(m) 25	<b>&lt;1</b>	<1	---
Calcium	ppm	ASTM D5185(m) 200	<b>28</b>	30	---
Phosphorus	ppm	ASTM D5185(m) 300	<b>332</b>	333	---
Zinc	ppm	ASTM D5185(m) 370	<b>297</b>	305	---
Sulfur	ppm	ASTM D5185(m) 2500	<b>800</b>	794	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>0</b>	0	---
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	---
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	<1	---
Water	%	ASTM D6304* >0.05	<b>0.003</b>	0.003	---
ppm Water	ppm	ASTM D6304* >500	<b>28</b>	32	---

# OIL ANALYSIS REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>744</b>	2995	---
Particles >6µm	ASTM D7647	>640	<b>276</b>	914	---
Particles >14µm	ASTM D7647	>160	<b>26</b>	96	---
Particles >21µm	ASTM D7647	>40	<b>6</b>	27	---
Particles >38µm	ASTM D7647	>10	<b>0</b>	2	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	1	---
Oil Cleanliness	ISO 4406 (c)	>19/16/14	<b>17/15/12</b>	19/17/14	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.57	<b>0.30</b>	0.31	---

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	46	<b>44.2</b>	44.0	---
Visc @ 100°C	cSt ASTM D7279(m)	6.7	<b>7.0</b>	7.0	---
Viscosity Index (VI)	Scale ASTM D2270*	97	<b>116</b>	117	---

## SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				no image
Bottom				no image



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : E30002618  
**Lab Number** : **02647814**  
**Unique Number** : 5813366  
**Test Package** : IND 2 ( Additional Tests: VI )

**Environmental 360 Solutions Ltd.**  
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 Cobourg, ON  
 CA K9A 5H5  
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 tsorkina@e360s.ca  
 T: (800)263-3939  
 F: (905)373-4950

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.