

## **OIL ANALYSIS REPORT**

### Area Acelor Mittal - D00400 A2310159

Component Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (--- GAL)

#### DIAGNOSIS

Recommendation

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

Wear

{not applicable}

**Contamination** {not applicable}





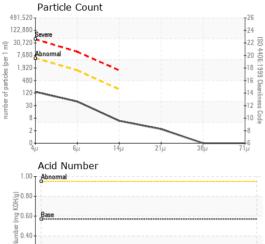
NORMAL

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Batch #		Client Info		2023 10 0362		
Machine ID		Client Info		A2310159		
Department		Client Info		Production		
Sample From		Client Info		Machine		
Production Stage		Client Info		Final		
Sent to WC		Client Info		10/26/2023		
Sample Number		Client Info		E30000629		
Sample Date		Client Info		26 Oct 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)	>20	3		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>20	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>20	<1		
Lead	ppm	ASTM D5185(m)	>20	1		
Copper	ppm	ASTM D5185(m)	>20	3		
Tin	ppm	ASTM D5185(m)	>20	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)	5	<1		
Barium	ppm	ASTM D5185(m)	5	<1		
Molybdenum	ppm	ASTM D5185(m)	5	0		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)	25	41		
Calcium	ppm	ASTM D5185(m)	200	5		
Phosphorus	ppm	ASTM D5185(m)	300	274		
Zinc	ppm	ASTM D5185(m)	370	260		
Sulfur	ppm	ASTM D5185(m)	2500	895		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<1		
Sodium	ppm	ASTM D5185(m)		<1		
Potassium	ppm	ASTM D5185(m)	>20	0		
Water	%	ASTM D6304*	>0.05	0.003		
ppm Water	ppm	ASTM D6304*	>500	37.8		

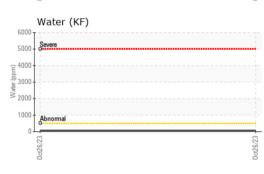
#### Sample Rating Trend

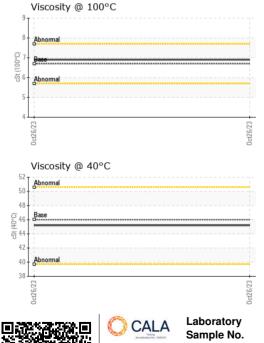


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Particles >4µm	ESS	method	limit/base	current	history1	history2
1 ailiues >4µ11		ASTM D7647	>5000	121		
Particles >6µm		ASTM D7647	>1300	42		
Particles >14µm		ASTM D7647	>160	5		
Particles >21µm		ASTM D7647	>40	2		
Particles >38µm		ASTM D7647	>10	0		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	14/13/10		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.30		
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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	45.2		
	01	ASTM D7279(m)	6.7	6.9		
VISC @ 100°C	cSt	AO INI DI 213(III)	0.7	0.9		
	cSt Scale	ASTM D2270*	97	108		
Visc @ 100°C Viscosity Index (VI) SAMPLE IMAGES	Scale					
Viscosity Index (VI)	Scale	ASTM D2270*	97	108		

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Environmental 360 Solutions Ltd. : E30000629 Received : 30 Oct 2023 640 Victoria Street Lab Number : 02592673 Diagnosed : 10 Nov 2023 Cobourg, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5669752 Diagnostician : Tatiana Sorkina CA K9A 5H5 Test Package : IND 2 (Additional Tests: KF, KV100, VI) Contact: Tatiana Sorkina To discuss this sample report, contact Customer Service at 1-905-372-2251. tsorkina@e360s.ca T: (800)263-3939 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. F: (905)373-4950