

## **OIL ANALYSIS REPORT**

## Area Royal Mat - R06700 A2403148

Hydraulic System AW HYDRAULIC OIL ISO 68 (--- GAL)

## DIAGNOSIS

A Recommendation

Viscosity is out of spec.

Wear

Iron ppm levels are noted.

				Mar2024			
SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2	
Batch #		Client Info		2024 02 0390			
Department		Client Info		Production			
Sample From		Client Info		Machine			
Production Stage		Client Info		Final			
Sent to WC		Client Info		04/04/2024			
Sample Number		Client Info		E30001787			
Sample Date		Client Info		21 Mar 2024			
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	
Iron	ppm	ASTM D5185(m)	>20	53			
Chromium	ppm	ASTM D5185(m)	>20	0			
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	6			
Lead	ppm	ASTM D5185(m)	>20	1			
Copper	ppm	ASTM D5185(m)	>20	13			
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)	-				
		ASTIVI DJ103(III)	5	<1			
Molybdenum		ASTM D5185(m)	5	<1 28			
	ppm	ASTM D5185(m)					
Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m)	5	28 <1			
Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25	28 <1 70			
Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200	28 <1 70 330			
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200 300	28 <1 70 330 649			
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200 300 370	28 <1 70 330 649 757		  	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200 300	28 <1 70 330 649 757 4699	  	  	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200 300 370	28 <1 70 330 649 757	    		
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200 300 370 2500 limit/base	28 <1 70 330 649 757 4699 <1 current	   	   	
Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m)	5 25 200 300 370 2500	28 <1 70 330 649 757 4699 <1 current 9	     history1	     history2	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 25 200 300 370 2500 limit/base >15	28 <1 70 330 649 757 4699 <1 current 9 2	     history1	     history2	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m)	5 25 200 300 370 2500 limit/base	28 <1 70 330 649 757 4699 <1 current 9	     history1	     history2	

VISCOSITY

Sample Rating Trend

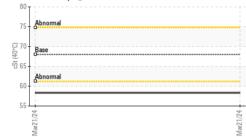


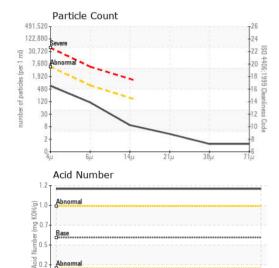


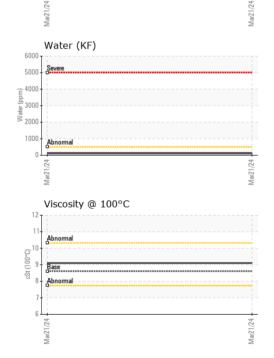
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## **OIL ANALYSIS REPORT**

🔺 Viscosity @ 40°C







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FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	607		
Particles >6µm		ASTM D7647	>640	98		
Particles >14µm		ASTM D7647	>160	8		
Particles >21µm		ASTM D7647	>40	3		
Particles >38µm		ASTM D7647	>10	1		
Particles >71µm		ASTM D7647		1		
Oil Cleanliness		ISO 4406 (c)	>19/16/14	16/14/10		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	1.16		
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	VLITE		
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)	68	<b>58.3</b>		
Visc @ 100°C	cSt	ASTM D7279(m)	8.6	9.1		
Viscosity Index (VI)	Scale	ASTM D2270*	96	135		
SAMPLE IMAGES	;	method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Environmental 360 Solutions Ltd. CALA Sample No. : E30001787 Received : 08 Apr 2024 640 Victoria Street Lab Number : 02627338 Tested : 10 Apr 2024 Cobourg, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5760470 Diagnosed : 15 Apr 2024 - Tatiana Sorkina CA K9A 5H5 Test Package : IND 2 (Additional Tests: KF, KV100, TAN Man, VI) Contact: Tatiana Sorkina tsorkina@e360s.ca To discuss this sample report, contact Customer Service at 1-905-372-2251. 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

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Contact/Location: Tatiana Sorkina - CHECOB Page 2 of 2