

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

ES0-14 Component **Auxiliary Hydraulic System** AW HYDRAULIC OIL ISO 46 (--- GAL)

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.

NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

				Mar2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0914610		
Sample Date		Client Info		11 Mar 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed	1110	Client Info		N/A		
Sample Status				ATTENTION		
CONTAMINATIC	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>20	0		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	0		
Titanium	ppm	ASTM D5185(m)	-	0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>20	<1		
Lead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)	>20	2		
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
	ppm	ASTM D5185(m)	5	<1		
Boron	ppm ppm	. ,	5 5	<1 4		
Boron Barium	ppm	. 7				
Boron Barium Molybdenum		ASTM D5185(m) ASTM D5185(m)	5	4		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m)	5	4 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5	4 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 25	4 0 0 2		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 25 200	4 0 0 2 39		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 5 25 200 300	4 0 2 39 363	 	
Boron Barium Molybdenum 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) ASTM D5185(m)	5 5 25 200 300 370 2500	4 0 2 39 363 432	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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)	5 5 25 200 300 370 2500	4 0 2 39 363 432 1018	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT	ppm 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 5 25 200 300 370 2500	4 0 2 39 363 432 1018 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon	ppm 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) method	5 5 25 200 300 370 2500 Imit/base	4 0 2 39 363 432 1018 <1 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm spm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	5 5 25 200 300 370 2500 Imit/base	4 0 2 39 363 432 1018 <1 current 0	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium	ppm ppm 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) ASTM D5185(m)	5 5 25 200 300 370 2500 limit/base >15	4 0 0 2 39 363 432 1018 <1 current 0 <1	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium	ppm ppm 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) Method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 25 200 300 370 2500 limit/base >15 >20	4 0 0 2 39 363 432 1018 <1 current 0 <1 1	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000	4 0 0 2 39 363 432 1018 <1 0 current 0 <1 1 1 0	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000	4 0 0 2 39 363 432 1018 <1 0 current 0 <1 1 1 2 5463	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 25 200 300 370 2500 binit/base >15 >20 binit/base >5000 >1300 >160	4 0 0 2 39 363 432 1018 <1 current 0 <1 1 1 current 0 5463 5463 2114	 history1 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	5 5 25 200 300 370 2500 binit/base >15 >20 binit/base >5000 >1300 >160	4 0 0 2 39 363 432 1018 <1 current 0 <1 1 1 current 1 5463 2114 259	 history1 history1 history1	Image: Section of the section of
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 25 200 300 2500 2500 2500 bimit/base >15 >20 bimit/base >5000 >1300 >160 >160 >40 >10	4 0 0 2 39 363 432 1018 <1 current 0 <1 1 1 current 1 5463 2114 259 58	 history1 history1 	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >4µm Particles >4µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 25 200 300 2500 2500 2500 bimit/base >15 >20 bimit/base >5000 >1300 >160 >160 >40 >10	4 0 0 2 39 363 432 1018 <1 0 <1 1 0 <1 1 1 0 <1 1 1 0 2114 259 58 3	 history1 history1 	I history2 history2



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Mart1/24	Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	mg KOH/g scalar scalar scalar scalar scalar scalar	ASTM D974* method Visual* Visual* Visual* Visual* Visual* Visual* Visual*	0.57 limit/base NONE NONE NONE NONE	0.48 current NONE NONE NONE NONE NONE	 history1 	 history2
Mart 1/24	White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	scalar scalar scalar scalar	Visual* Visual* Visual* Visual* Visual*	NONE NONE NONE NONE	NONE NONE NONE NONE		
Mart 1/24	White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	scalar scalar scalar scalar	Visual* Visual* Visual* Visual*	NONE NONE NONE NONE	NONE NONE NONE		
Mart 1/24	Yellow Metal Precipitate Silt Debris Sand/Dirt	scalar scalar scalar scalar	Visual* Visual* Visual* Visual*	NONE NONE NONE NONE	NONE NONE NONE		
Mar11/24	Precipitate Silt Debris Sand/Dirt	scalar scalar scalar	Visual* Visual* Visual*	NONE NONE NONE	NONE NONE		
Marl1/24 -	Silt Debris Sand/Dirt	scalar scalar	Visual*	NONE			
Martl	Debris Sand/Dirt			NONE			
		scalar	Visual*				
	Appearance		viouui	NONE	NONE		
		scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.05	NEG		
	Free Water	scalar	Visual*		NEG		
	FLUID PROPER	FIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D7279(m)	46	43.8		
- 11/24 -	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Mai					4610		
	Color					no image	no image
						Ū	
	B						
	Bottom					no image	no image
	GRAPHS						
4. F	Ferrous Alloys				Particle Count		
h.f	10 iron 1			491,520	I		[²
	E 5 - nickel			122,880	Severe		-2
				30,720			-2
				÷ ≘ 7,680	Abnormal		-2
*****	ar11/2			2/11/2 1.920			-1
				Cles (F			-2 -1: -1
	Non-ferrous Meta	ls					
	copper			120 	+		-1
č	ā. 5-			30	-		-1
1 - F F F F F F F				8	-		1
	24 L 0						
	Mar11			Mar11			
				- 0	μ 6μ Acid Numbor	14μ 21μ	38µ 71µ
	55 T			울 1.00	Acid Number		
	So - Base			ng KO	Base		
	€ 45 - P			ja 0.50			
	Abnormal			5	Abnormal		
			***********************	N p			
	⁸³ 40 + Abnormal 35 + + + + + + + + + + + + + + + + + + +			Mar11/24	1/24		
		Visc @ 40°C SAMPLE IMAGE Color Bottom GRAPHS Ferrous Alloys	SAMPLE IMAGES Color Bottom GRAPHS Ferrous Alloys 10 10 10 10 10 10 10 10 10 10	Visc @ 40°C cSt ASTM D7279(m) SAMPLE IMAGES method Color Bottom GRAPHS Ferrous Alloys 	Visc @ 40°C cSt ASTM D7279(m) 46 SAMPLE IMAGES method imit/base Color Bottom GRAPHS Ferrous Alloys 122.880 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720 0.720	Visc @ 40°C cSt ASTM D7279(m) 46 43.8 SAMPLE IMAGES method imit/base current Color Bottom GRAPHS Ferrous Alloys 	Visc @ 40°C cSt ASTM D7279(m) 46 43.8 SAMPLE IMAGES method imit/base current history1 Color no image Bottom Particle Count 100 000 000 000 000 000 000 000 000 000

Contact/Location: Sandip Patel - AMCMIS