

### **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

Machine Id

# MACHINE 200 (S/N 3092-28-88)

Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (41 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

#### Fluid Condition

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

2000 Feb2004 Dec2005	S-2002 S-2000 A-2011 0-2012 A-2014 A-2016 0-2022	

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0933798	WC0708349	WC0332714
Sample Date		Client Info		20 May 2024	26 Oct 2022	13 Apr 2019
Machine Age	hrs	Client Info		0	2818	0
Oil Age	hrs	Client Info		0	2818	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	2	2	<1
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>20	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	0	<1
Lead	ppm	ASTM D5185m	>20	<1	0	<1
Copper	ppm	ASTM D5185m	>20	1	1	7
Tin	ppm	ASTM D5185m	>20	<1	0	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	<1
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	5 5	0	0	<1 0
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5	0 0 <1	0 0 <1	<1 0 <1
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5	0 0 <1 <1	0 0 <1 <1	<1 0 <1 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25	0 0 <1 <1 2	0 0 <1 <1 <1	<1 0 <1 0 3
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200	0 0 <1 <1 2 20	0 0 <1 <1 <1 <1 46	<1 0 <1 0 3 71
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300	0 0 <1 <1 2 20 256	0 0 <1 <1 <1 <1 46 279	<1 0 <1 0 3 71 327
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300 370	0 0 <1 2 20 256 299	0 0 <1 <1 <1 46 279 420	<1 0 <1 0 3 71 327 409
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500	0 0 <1 2 20 256 299 1248	0 0 <1 <1 <1 46 279 420 2753	<1 0 <1 0 3 71 327 409 1829
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base	0 0 <1 2 20 256 299 1248 current	0 0 <1 <1 <1 46 279 420 2753 history1	<1 0 <1 0 3 71 327 409 1829 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	5 5 25 200 300 370 2500 limit/base >15	0 0 <1 2 20 256 299 1248 current 2	0 0 <1 <1 46 279 420 2753 history1 <1	<1 0 <1 0 3 71 327 409 1829 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15	0 0 <1 2 20 256 299 1248 <u>current</u> 2 9	0 0 <1 <1 46 279 420 2753 history1 <1 <1	<1 0 <1 0 3 71 327 409 1829 history2 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 >20	0 0 <1 2 20 256 299 1248 <u>current</u> 2 9 1	0 0 <1 <1 46 279 420 2753 history1 <1 <1 0	<1 0   <
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 .20	0 0 <1 2 20 256 299 1248 <u>current</u> 2 9 1 <u>current</u>	0 0 <1 <1 <1 46 279 420 2753 history1 <1 <1 0 history1	<1 0 1 0 3 71 327 409 1829 history2 3 2 </1 history2</th
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 20 limit/base	0 0 <1 <1 2 20 256 299 1248 current 2 9 1 1 current 400	0 0 <1 <1 46 279 420 2753 history1 <1 <1 0 history1 694	<1 0 <1 0 3 71 327 409 1829 history2 3 2 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >10000 >1300	0 0 <1 <1 2 20 256 299 1248 current 2 9 1 1 current 400 146	0 0 <1 <1 46 279 420 2753 history1 <1 <1 0 history1 694 280	<1 0   <1   0   3   71   327   409   1829   history2   3   2   <1   history2   ▲ 41800   ▲ 23687
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >10000 >1300 >160	0 0 <1 <1 2 20 256 299 1248 <u>current</u> 2 9 1 <u>current</u> 400 146 16	0 0 <1 <1 <1 46 279 420 2753 history1 <1 <1 <1 0 history1 694 280 41	<1 0 ( 1 0 ( 1 0 3 7 1 327 409 1829 1829 1829 1829 ( 1829 ( 1829 ( 1829) ( 18
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 <b>limit/base</b> >15 >20 <b>limit/base</b> >10000 >1300 >1300 >160 >40	0 0 <1 2 20 256 299 1248 <u>current</u> 2 9 1 <u>current</u> 400 146 16 4	0 0 <1 <1 <1 46 279 420 2753 history1 <1 <1 <1 0 history1 694 280 41 12	<1 0    <1   0   3   71   327   409   1829   history2   3   2   <1   history2   41800   23687   6299   2042
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >14µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 2500 1imit/base >15 >20 1imit/base >10000 >1300 >1300 >160 >40 >10	0 0 <1 2 20 256 299 1248 <u>current</u> 2 9 1 <u>current</u> 400 146 16 4 0	0 0 <1 <1 46 279 420 2753 history1 <1 <1 <1 0 history1 694 280 41 12 0	<1 0 ( ) ( ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 <b>limit/base</b> >15 >20 <b>limit/base</b> >10000 >1300 >160 >160 >10 >40 >10	0 0 <1 <1 2 20 256 299 1248 <u>current</u> 2 9 1 <u>current</u> 400 146 16 4 0 0	0 0 <1 <1 46 279 420 2753 history1 <1 <1 <1 0 history1 694 280 41 12 0 0 0	<1 0 ( ) ( ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )



## **OIL ANALYSIS REPORT**









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FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.36	0.38	0.293
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.3	45.1	45.99
SAMPLE IMAGES		method	limit/base	current	history1	history2

Color

Bottom



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **ALLIANCE PRECISION PLASTICS** Sample No. : WC0933798 Received : 29 May 2024 1220 LEE RD Lab Number : 06194617 Tested : 30 May 2024 ROCHESTER, NY Unique Number : 11056740 Diagnosed : 30 May 2024 - Wes Davis US 14606 Test Package : IND 2 Contact: RON ORT Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rort@allianceppc.com

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: AMPROC [WUSCAR] 06194617 (Generated: 05/30/2024 17:45:25) Rev: 1

Contact/Location: RON ORT - AMPROC

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