

# **PROBLEM SUMMARY**

# Area 1200 Machine Id Micropress #17

Hydraulic System

FORSYTHE TURBO HYDRAULIC AW 32 (30 GAL)

# COMPONENT CONDITION SUMMARY





Non-ferrous Metals



### RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

# PROBLEMATIC TEST RESULTS

10

5

0

Sample Status				SEVERE	ATTENTION	ABNORMAL
Copper	ppm	ASTM D5185(m)	>20	<u> </u>	9	7
Particles >4µm		ASTM D7647	>5000	<b>66802</b>	7882	19748
Particles >6µm		ASTM D7647	>1300	<b>A</b> 11075	679	2161
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>4</b> 23/21/15	20/17/11	🔺 21/18/13

Customer Id: SUMBUR Sample No.: WC0932077 Lab Number: 02628013 Test Package: IND 2



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RECOMMENDED ACTIONS							
Action Change Filter	Status	Date	Done By	Description We recommend you service the filters on this component.			
Resample			?	Resample in 30-45 days to monitor this situation.			
Check Breathers			?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.			
Check Seals			?	Check seals and/or filters for points of contaminant entry.			

### HISTORICAL DIAGNOSIS

#### 02 Jun 2022 Diag: Wes Davis

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





### 08 Dec 2021 Diag: Wes Davis

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles  $>4\mu m$  are abnormally high. Particles  $>6\mu m$  are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





### 16 Nov 2020 Diag: Wes Davis

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >14µm are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**

## Area 1200 Machine Id Micropress #17

Hydraulic System

FORSYTHE TURBO HYDRAULIC AW 32 (30 GAL)

### DIAGNOSIS

### Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

## 🔺 Wear

Copper ppm levels are marginal. All other component wear rates are normal.

### Contamination

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

#### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0932077	WC0708610	WC0651970
Sample Date		Client Info		09 Apr 2024	02 Jun 2022	08 Dec 2021
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ATTENTION	ABNORMAL
CONTAMINATION	٧	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 D5185(m)	>20	2	2	2
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	0	0	<1
Lead	ppm	ASTM D5185(m)	>20	1	<1	<1
Copper	ppm	ASTM D5185(m)	>20	<u> </u>	9	7
Tin	ppm	ASTM D5185(m)	>20	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron				.1	4	-
DOIOII	ppm	ASTM D5185(m)		51	<	<
Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0	0	0
Barium Molybdenum	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0	<1 0 0	<1 0 0
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0 0	<1 0 0 0	<1 0 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0 <1	<1 0 0 0 <1	<1 0 0 0 <1
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0 <1 39	<1 0 0 <1 41	<1 0 0 <1 42
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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)		0 0 0 <1 39 329	<1 0 0 <1 41 356	<1 0 0 <1 42 338
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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)		0 0 0 <1 39 329 403	<1 0 0 <1 41 356 408	<1 0 0 <1 42 338 407
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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)		0 0 0 <1 39 329 403 932	<1 0 0 <1 41 356 408 1006	<1 0 0 <1 42 338 407 978
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	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)		0 0 2 39 329 403 932 <1	<1 0 0 <1 41 356 408 1006 <1	<1 0 0 <1 42 338 407 978 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base	0 0 0 <1 39 329 403 932 <1 current	<1 0 0 <1 41 356 408 1006 <1 history1	<1 0 0 <1 42 338 407 978 <1 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15	0 0 0 <1 39 329 403 932 <1 current 0	<1 0 0 <1 41 356 408 1006 <1 history1 0	<1 0 0 <1 42 338 407 978 <1 <b>history2</b> 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base	0 0 0 <1 39 329 403 932 <1 current 0 0	<1 0 0 <1 41 356 408 1006 <1 <b>history1</b> 0 0	<1 0 0 <1 42 338 407 978 <1 history2 0 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20	0 0 0 <1 39 329 403 932 <1 <b>current</b> 0 0 <1	<1 0 0 <1 41 356 408 1006 <1 <b>history1</b> 0 0 <1	<1 0 0 <1 42 338 407 978 <1 <b>history2</b> 0 0 0 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base >15 >20	0 0 0 <1 39 329 403 932 <1 <b>Current</b> 0 0 <1 <b>Current</b>	<1 0 0 <1 41 356 408 1006 <1 history1 0 0 <1 history1	<1 0 0 4 42 338 407 978 <1 <b>history2</b> 0 0 0 <1 <b>history2</b>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base >15 >20 limit/base >5000	<pre>     0     0     0     </pre> <pre>         <pre>             </pre>             </pre> <pre></pre>	<1 0 0 4 4 1 356 408 1006 <1 <b>history1</b> 0 0 <1 <b>history1</b> 7882	<1 0 0 0 <1 42 338 407 978 <1 <b>history2</b> 0 0 0 <1 <b>history2</b> 19748
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	Imit/base >15 >20 Imit/base >5000 >1300	<ul> <li>0</li> <li>0</li> <li>0</li> <li>&lt;1</li> <li>39</li> <li>329</li> <li>403</li> <li>932</li> <li>&lt;1</li> <li>current</li> <li>0</li> <li>0</li> <li>&lt;1</li> <li>current</li> <li>66802</li> <li>11075</li> </ul>	<1 0 0 0 <1 41 356 408 1006 <1 history1 0 0 <1 history1 7882 679	<1 0 0 0 <1 42 338 407 978 <1 <b>history2</b> 0 0 0 <1 <b>history2</b> <b>history2</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base >15 >20 limit/base >5000 >1300 >160	<ul> <li>&lt;1</li> <li>0</li> <li>0</li> <li>&lt;1</li> <li>39</li> <li>329</li> <li>403</li> <li>932</li> <li>&lt;1</li> <li>current</li> <li>0</li> <li>0</li> <li>&lt;1</li> <li>current</li> <li>66802</li> <li>11075</li> <li>207</li> </ul>	<1 0 0 0 <1 41 356 408 1006 <1 <b>history1</b> 0 0 <1 <b>history1</b> 7882 679 17	<1 0 0 0 <1 42 338 407 978 <1 history2 0 0 0 <1 history2 19748 2161 44
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)           ASTM D7647           ASTM D7647           ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40	<pre>     0     0     0     -1     39     329     403     932     &lt;1     current     0     0     &lt;1     current     0     0     &lt;1     current     66802     11075     207     20 </pre>	<1 0 0 4 1 41 356 408 1006 <1 <b>history1</b> 0 0 0 <1 <b>history1</b> 7882 679 17 3	<1 0 0 0 <1 42 338 407 978 <1 history2 0 0 0 <1 history2 0 19748 2161 44 9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm 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           ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	<pre></pre>	<1 0 0 0 <1 41 356 408 1006 <1 history1 0 0 c 1 history1 0 7882 679 17 3 0 0 0	<1 0 0 0 <1 42 338 407 978 <1 history2 0 0 0 <1 history2 0 1 978 <1 1 1 1 1 1 1 1 1 1 1 1 1 1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)           ASTM D7647           ASTM D7647           ASTM D7647           ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10 >3	<pre></pre>	<1 0 0 0 <1 41 356 408 1006 <1 history1 0 0 <1 history1 0 7882 679 17 3 0 0 0 0 0 0 17 3 0 0 0 0 0 0 0 0 0 0 0 0 0	<1 0 0 0 <1 42 338 407 978 <1 history2 0 0 0 <1 history2 1 9748 2161 44 9 1 0 0



# **OIL ANALYSIS REPORT**



FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.36	0.28	0.27
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	NONE
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 D7279(m)	32	32.8	33.0	33.1
SAMPLE IMAGES	;	method	limit/base	current	history1	history2
Color						

Bottom



To discuss this sample report, contact Customer Service at 1-800-268-2131. 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.

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