

# **PROBLEM SUMMARY**

# Sample Rating Trend

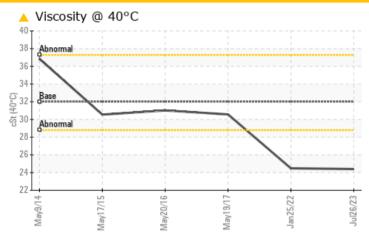
# **VISCOSITY**

# ROSENBAUER TOWER 61

**Hydraulic System** 

AW HYDRAULIC OIL ISO 32 (--- LTR)

# **COMPONENT CONDITION SUMMARY**



# RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC I	EST RE	SULIS					
Sample Status				ATTENTION	ATTENTION	NORMAL	
Visc @ 40°C	cSt	ASTM D445	32	<b>24.4</b>	<b>24.48</b>	30.57	

**Customer Id: BEABEAUS** Sample No.: WC0835781 Lab Number: 05933959 Test Package: FLEET To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

# **RECOMMENDED ACTIONS**

There are no recommended actions for this sample.

# HISTORICAL DIAGNOSIS

# 25 Jan 2022 Diag: Don Baldridge

#### VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.



# 19 May 2017 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.All component wear rates are normal. There is no indication of any contamination in the component(unconfirmed). The condition of the oil is acceptable for the time in service.

# view report

## 20 May 2016 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.All component wear rates are normal. There is no indication of any contamination in the component(unconfirmed). The condition of the oil is acceptable for the time in service.





# **OIL ANALYSIS REPORT**

# Sample Rating Trend

VISCOSITY



# **ROSENBAUER TOWER 61**

Component

**Hydraulic System** 

AW HYDRAULIC OIL ISO 32 (--- LTR)

# DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil

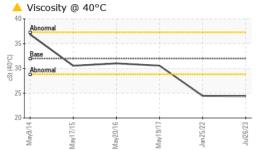
# Fluid Condition

The oil viscosity is lower than normal. Confirm oil type.

Client Info			May2014	May2015 May2016	May2017 Jan2022	Jul2023	
Client Info   26 Jul 2023   25 Jan 2022   19 May 2017	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         59094         37100         37100           Oil Age         mls         Client Info         37100         37100         0           Oil Changed         Client Info         N/A         N/A         N/A           Sample Status         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         1         3         3           Chromium         ppm         ASTM D5185m         >10         0         0         <1	Sample Number		Client Info		WC0835781	WC0624547	WCM1386834
Oil Age         mls         Client Info         37100         37100         0           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         1         3         3           Chromium         ppm         ASTM D5185m         >10         0         0         <1           Nickel         ppm         ASTM D5185m         >10         0         0         <1           Nickel         ppm         ASTM D5185m         >10         0         0         <1           Nickel         ppm         ASTM D5185m         >10         0         0         <1           Aluminum         ppm         ASTM D5185m         >10         0         0         <1           Lead         ppm         ASTM D5185m         >10         0         0         <1           Copper         ppm         ASTM D5185m         >10         0         0         <1           Lead         ppm         ASTM D5185m         >10         0         0         <1	Sample Date		Client Info		26 Jul 2023	25 Jan 2022	19 May 2017
Client Info	Machine Age	mls	Client Info		59094	37100	37100
Mathematical	Oil Age	mls	Client Info		37100	37100	0
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         1         3         3           Chromium         ppm         ASTM D5185m         >10         0         0         <1	Oil Changed		Client Info		N/A	N/A	N/A
	Sample Status				ATTENTION	ATTENTION	NORMAL
Chromium         ppm         ASTM D5185m         >10         0         0         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	1	3	3
Description   Description	Chromium	ppm	ASTM D5185m	>10	0	0	<1
Silver	Nickel	ppm	ASTM D5185m	>10	0	0	<1
Aluminum	Titanium	ppm	ASTM D5185m		0	0	0
Lead	Silver	ppm	ASTM D5185m		0	<1	0
Copper         ppm         ASTM D5185m         >75         6         5         5           Tin         ppm         ASTM D5185m         >10         0         0         0           Antimony         ppm         ASTM D5185m           0           Vanadium         ppm         ASTM D5185m         <1	Aluminum	ppm	ASTM D5185m	>10	2	1	1
Trin	Lead	ppm	ASTM D5185m	>10	0	0	<1
Tin         ppm         ASTM D5185m         >10         0         0         0           Antimony         ppm         ASTM D5185m           0           Vanadium         ppm         ASTM D5185m         <1         0         1           Cadmium         ppm         ASTM D5185m         <1         <1         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         0         <1         <1           Barium         ppm         ASTM D5185m         5         0         0         <1         <1           Molybdenum         ppm         ASTM D5185m         5         0         0         <1         <1           Magnesium         ppm         ASTM D5185m         25         6         5         8           Calcium         ppm         ASTM D5185m         20         49         52         60           Calcium         ppm         ASTM D5185m         20         49         52         60           Calcium         ppm         ASTM D5185m         370         342         346         364	Copper	ppm	ASTM D5185m	>75	6	5	5
Vanadium         ppm         ASTM D5185m         <1         0         1           Cadmium         ppm         ASTM D5185m         <1         <1         1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         0         <1         <1           Barium         ppm         ASTM D5185m         5         0         0         <1         <1           Molybdenum         ppm         ASTM D5185m         5         0         0         <1         <1           Molybdenum         ppm         ASTM D5185m         5         0         0         <1            Mangaese         ppm         ASTM D5185m         5         0         0         0            Magnesium         ppm         ASTM D5185m         20         49         52         60         5         8           Calcium         ppm         ASTM D5185m         200         49         52         60         9           Phosphorus         ppm         ASTM D5185m         200         342         346         364           Sulfur	Tin	ppm	ASTM D5185m	>10	0	0	0
Cadmium         ppm         ASTM D5185m         <1         <1         1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         0         <1	Antimony	ppm	ASTM D5185m				0
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         0         <1	Vanadium	ppm	ASTM D5185m		<1	0	1
Boron	Cadmium	ppm	ASTM D5185m		<1	<1	1
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         5         0         0         0           Manganese         ppm         ASTM D5185m         <1         0         0           Magnesium         ppm         ASTM D5185m         25         6         5         8           Calcium         ppm         ASTM D5185m         200         49         52         60           Phosphorus         ppm         ASTM D5185m         300         358         366         391           Zinc         ppm         ASTM D5185m         370         342         346         364           Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         <1         <1         0         <1           Potassium         ppm         ASTM D5185m         >20	Boron	ppm	ASTM D5185m	5	0	<1	<1
Manganese         ppm         ASTM D5185m         <1         0         0           Magnesium         ppm         ASTM D5185m         25         6         5         8           Calcium         ppm         ASTM D5185m         200         49         52         60           Phosphorus         ppm         ASTM D5185m         300         358         366         391           Zinc         ppm         ASTM D5185m         370         342         346         364           Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         <1         <1         <1         <1           Sodium         ppm         ASTM D5185m         >20         <	Barium	ppm	ASTM D5185m	5	0	0	<1
Magnesium         ppm         ASTM D5185m         25         6         5         8           Calcium         ppm         ASTM D5185m         200         49         52         60           Phosphorus         ppm         ASTM D5185m         300         358         366         391           Zinc         ppm         ASTM D5185m         370         342         346         364           Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         0         0         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual	Molybdenum	ppm	ASTM D5185m	5	0	0	0
Calcium         ppm         ASTM D5185m         200         49         52         60           Phosphorus         ppm         ASTM D5185m         300         358         366         391           Zinc         ppm         ASTM D5185m         370         342         346         364           Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1	Manganese	ppm	ASTM D5185m		<1	0	0
Phosphorus         ppm         ASTM D5185m         300         358         366         391           Zinc         ppm         ASTM D5185m         370         342         346         364           Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1	Magnesium	ppm	ASTM D5185m	25	6	5	8
Zinc         ppm         ASTM D5185m         370         342         346         364           Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1         <1         0         <1           Sodium         ppm         ASTM D5185m         >20         0         0         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE         NONE           Silt         sc	Calcium	ppm	ASTM D5185m	200	49	52	60
Sulfur         ppm         ASTM D5185m         2500         1904         1524         1967           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1	Phosphorus	ppm	ASTM D5185m	300	358	366	391
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         <1	Zinc	ppm	ASTM D5185m	370	342	346	364
Silicon         ppm         ASTM D5185m         >20         <1         <1         1           Sodium         ppm         ASTM D5185m         >20         0         0         <1           Potassium         ppm         ASTM D5185m         >20         0         0         3           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         NORML           Odor         s	Sulfur	ppm	ASTM D5185m	2500	1904	1524	1967
Sodium         ppm         ASTM D5185m         <1         0         <1           Potassium         ppm         ASTM D5185m         >20         0         0         3           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE <t< td=""><td>CONTAMINANTS</td><td></td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></t<>	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         0         0         3           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         NORM         NORML         NORML <t< td=""><td>Silicon</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;20</td><td>&lt;1</td><td>&lt;1</td><td>1</td></t<>	Silicon	ppm	ASTM D5185m	>20	<1	<1	1
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 >0.1 NEG NEG	Sodium	ppm	ASTM D5185m		<1	0	<1
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 LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Potassium	ppm	ASTM D5185m	>20	0	0	3
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONELIGHTSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEG	VISUAL		method	limit/base	current	history1	history2
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 >0.1 NEG NEG	White Metal						
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 >0.1 NEG NEG	Yellow Metal						
Debrisscalar*VisualNONENONENONELIGHTSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEG	Precipitate	scalar					
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEG	Silt		*Visual		NONE	NONE	
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEG	Debris						
Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.1 NEG NEG NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG

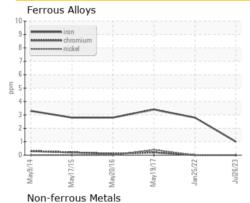


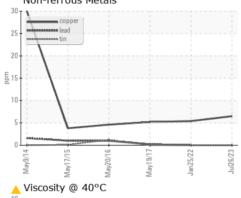
# **OIL ANALYSIS REPORT**

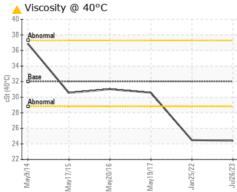


FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	<b>24.4</b>	<b>2</b> 4.48	30.57
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image

# **GRAPHS**











Certificate L2367

Laboratory Sample No. Lab Number

: WC0835781 : 05933959 Unique Number : 10619230 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 24 Aug 2023 Diagnosed : 26 Aug 2023 Diagnostician : Don Baldridge

**BEAVER CREEK FIRE DEPT** 1981 DAYTON-XENIA RD

BEAVER CREEK, OH US 45434

Contact: BEN NORTHUP

bnorthup@beavercreektownship.org T: (937)429-3672

\* - 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)