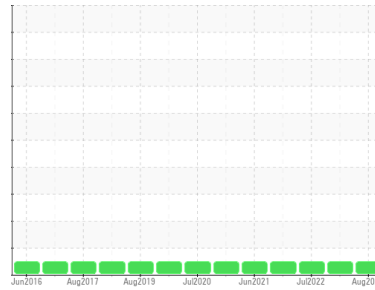




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**HAPL**  
 Machine Id  
**HAPL BRIDLE 1.1 SNUBBER ROLL**  
 Component  
**Gearbox**  
 Fluid  
**GEAR OIL ISO 220 (--- QTS)**

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>RP0035435</b>	RP0031166	RP0028610
Sample Date	Client Info			<b>24 Aug 2023</b>	24 Mar 2023	15 Jul 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

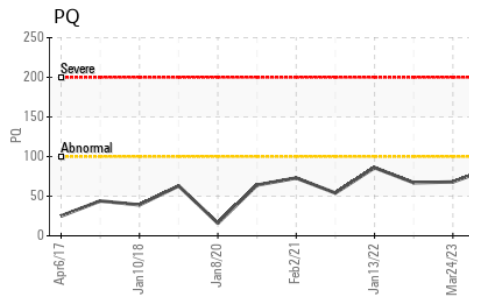
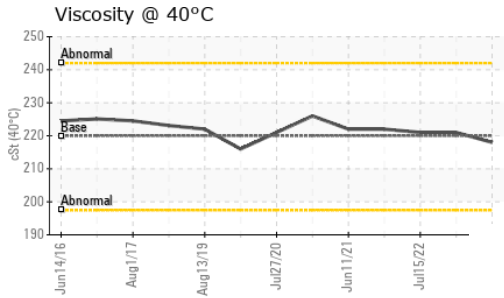
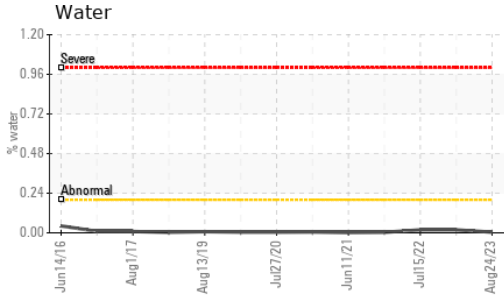
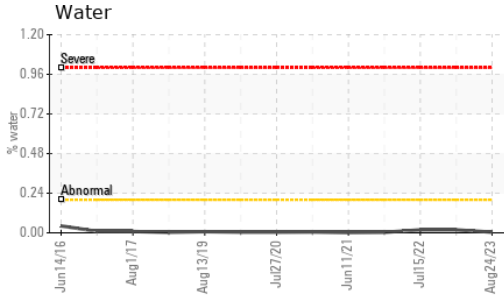
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		<b>86</b>	68	67
Iron	ppm	ASTM D5185m	>200	<b>105</b>	103	76
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>25	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	<b>0</b>	1	3
Barium	ppm	ASTM D5185m	15	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	15	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m	50	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185m	50	<b>26</b>	27	21
Phosphorus	ppm	ASTM D5185m	350	<b>132</b>	130	106
Zinc	ppm	ASTM D5185m	100	<b>3</b>	2	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>6</b>	5	3
Sodium	ppm	ASTM D5185m		<b>0</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	0
Water	%	ASTM D6304	>0.2	<b>0.004</b>	0.018	0.018
ppm Water	ppm	ASTM D6304	>2000	<b>42.0</b>	189.3	181.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	<b>0.18</b>	0.22	0.61

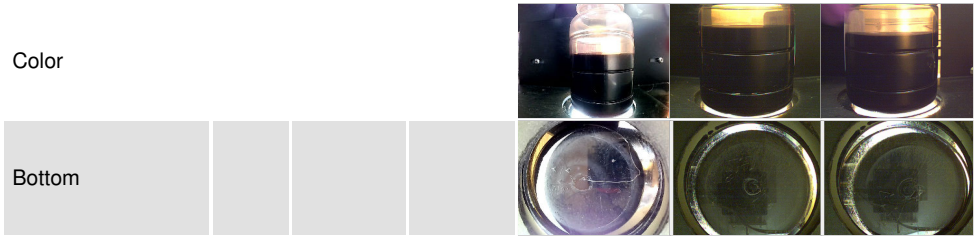
# OIL ANALYSIS REPORT



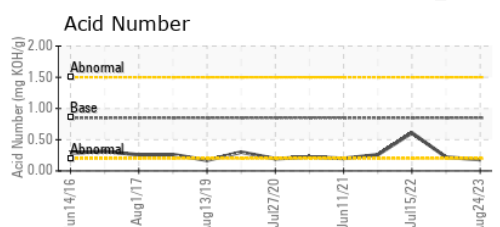
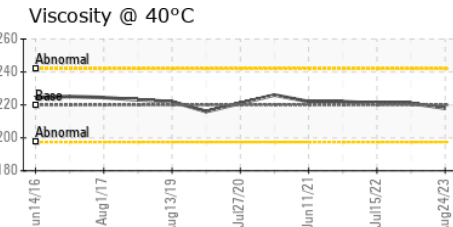
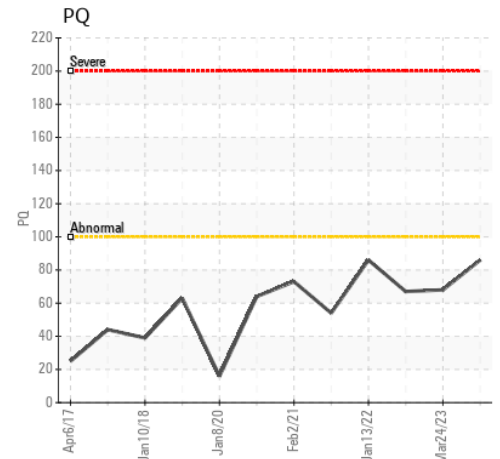
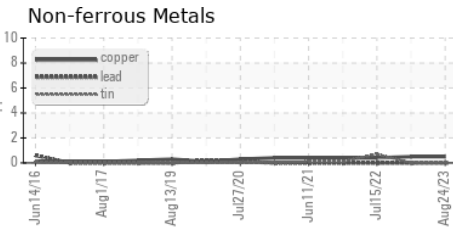
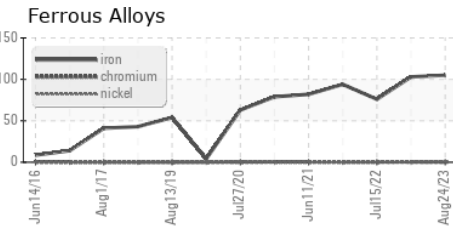
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	218	221

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0035435 **Received** : 25 Aug 2023  
**Lab Number** : 05935578 **Diagnosed** : 28 Aug 2023  
**Unique Number** : 10620849 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PQ )

**OUTOKUMPU STAINLESS USA**  
 HWY 43 N  
 CALVERT, AL  
 US 36513  
 Contact: MARIO JOHNSON  
 Mario.johnson@outokumpu.com  
 T: (251)321-4105  
 F: x:

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