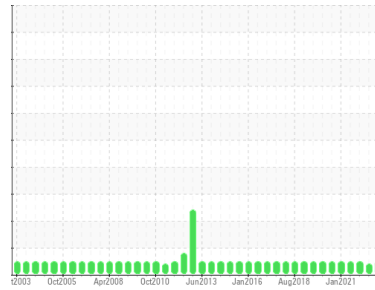




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**PA-401A**

Component  
**Gearbox**

Fluid  
**ROYAL PURPLE SYNERGY 90/220 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

The water content is negligible. 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>RP0027588</b>	RP0020871	RP0019980
Sample Date	Client Info		<b>01 Mar 2023</b>	10 Aug 2022	01 Feb 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>	MARGINAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>26</b>	25	38
Chromium	ppm	ASTM D5185m >15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m >100	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	7	6
Tin	ppm	ASTM D5185m >25	<b>0</b>	<1	0
Antimony	ppm	ASTM D5185m >5	<b>---</b>	---	<1
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	<b>&lt;1</b>	2	16
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	1	0
Calcium	ppm	ASTM D5185m	<b>9</b>	2	4
Phosphorus	ppm	ASTM D5185m 370	<b>371</b>	112	116
Zinc	ppm	ASTM D5185m	<b>15</b>	17	19

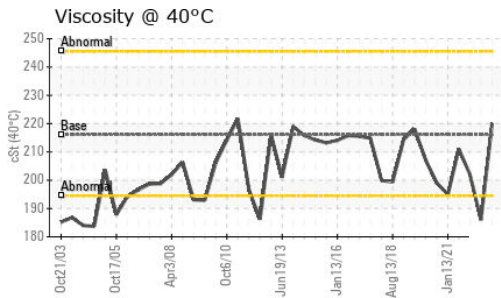
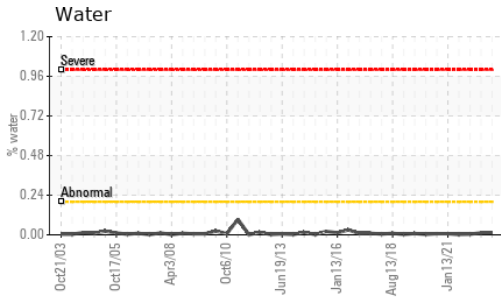
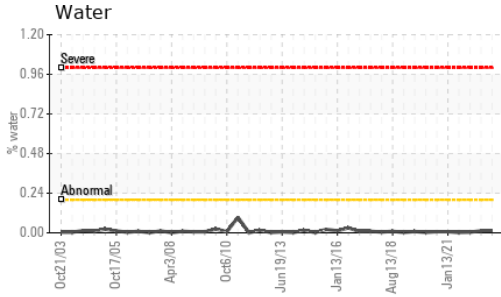
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>11</b>	3	3
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	0
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Water	%	ASTM D6304 >0.2	<b>0.013</b>	0.012	0.004
ppm Water	ppm	ASTM D6304 >2000	<b>139.4</b>	128.8	46.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.33	<b>0.76</b>	0.36	0.34

# OIL ANALYSIS REPORT

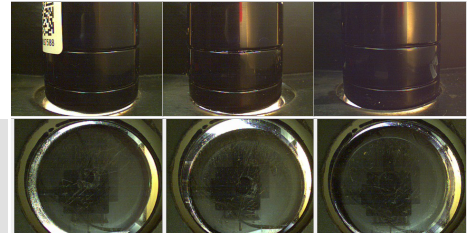


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	216.1	220	▲ 186	202

SAMPLE IMAGES	method	limit/base	current	history1	history2
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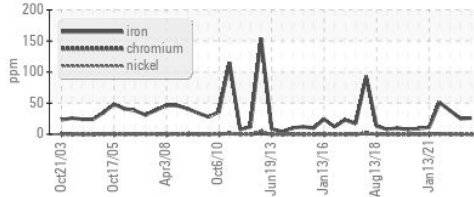
Color



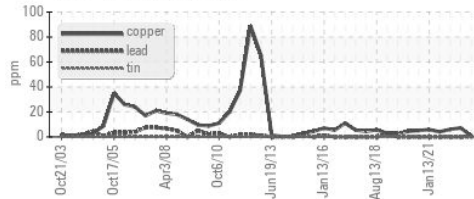
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## GRAPHS

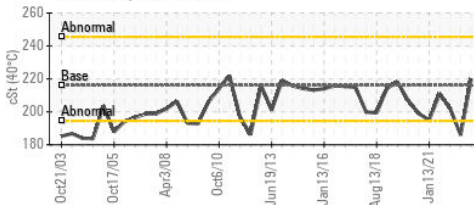
### Ferrous Alloys



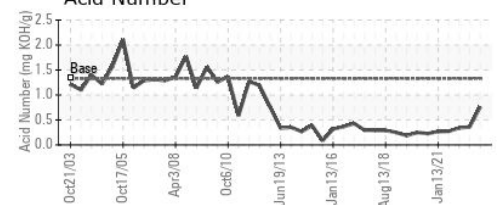
### Non-ferrous Metals



### Viscosity @ 40°C



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0027588 **Received** : 09 Mar 2023  
**Lab Number** : 05787413 **Diagnosed** : 10 Mar 2023  
**Unique Number** : 10372084 **Diagnostician** : Wes Davis  
**Test Package** : IND 2

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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)