



# OIL ANALYSIS REPORT

Sample Rating Trend

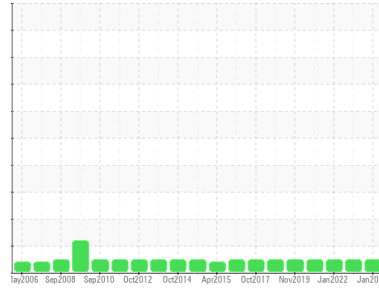
**NORMAL**



Machine Id  
**PHILADELPHIA A-4201 (S/N 93DE11154)**

Component  
**Gearbox**

Fluid  
**ROYAL PURPLE SYNERGY 90/220 (7 GAL)**



## 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>RP0035877</b>	RP0028436	RP0002008
Sample Date	Client Info		<b>16 Jan 2024</b>	16 Jan 2023	12 Jan 2022
Machine Age	yrs	Client Info	<b>0</b>	0	0
Oil Age	yrs	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
Iron	ppm	ASTM D5185m >200	<b>14</b>	15	19
Chromium	ppm	ASTM D5185m >15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	0
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>0</b>	<1	<1
Tin	ppm	ASTM D5185m >25	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m >5	<b>---</b>	---	189
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>0</b>	0	19
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>4</b>	2	1
Calcium	ppm	ASTM D5185m	<b>175</b>	150	139
Phosphorus	ppm	ASTM D5185m 370	<b>153</b>	140	134
Zinc	ppm	ASTM D5185m	<b>5</b>	0	0

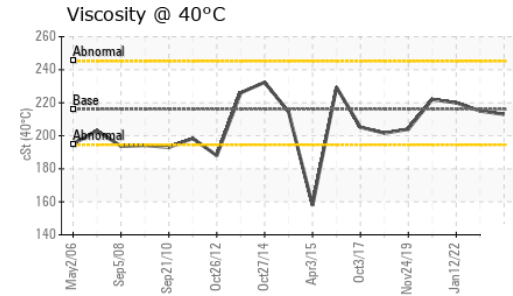
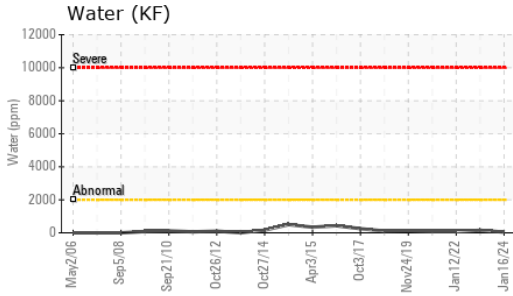
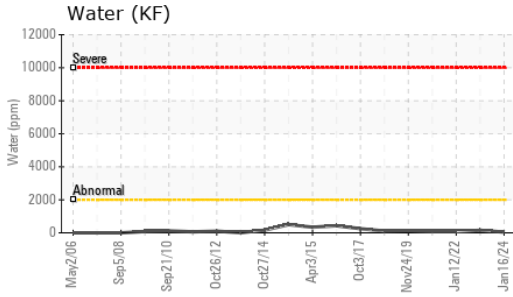
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>2</b>	2	2
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Water	%	ASTM D6304 >0.2	<b>0.004</b>	0.015	0.007
ppm Water	ppm	ASTM D6304 >2000	<b>45</b>	153.8	74.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.33	<b>0.28</b>	0.27	0.266

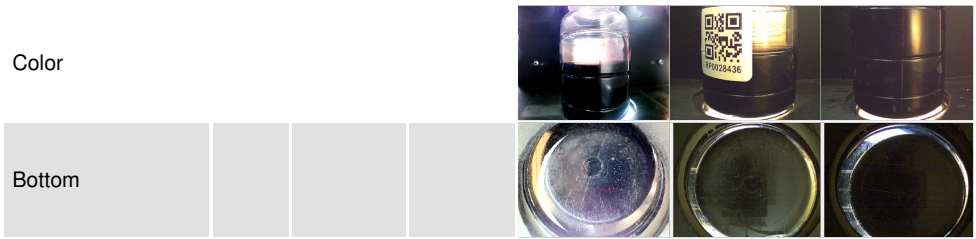
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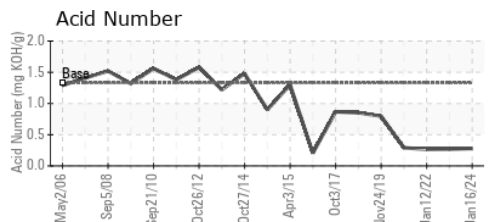
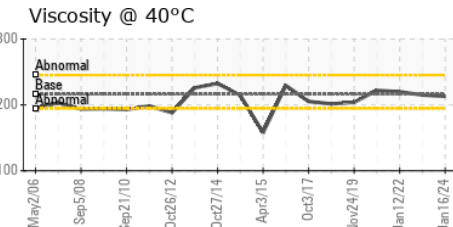
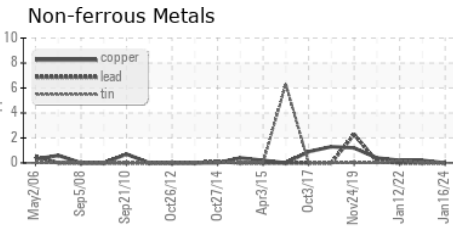
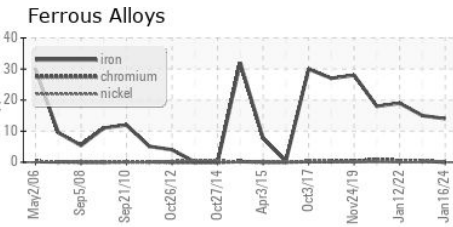
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	216.1	<b>213</b>	215	220

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0035877 **Recieved** : 17 Jan 2024  
**Lab Number** : 06062918 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834300 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2

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 US 38474  
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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)