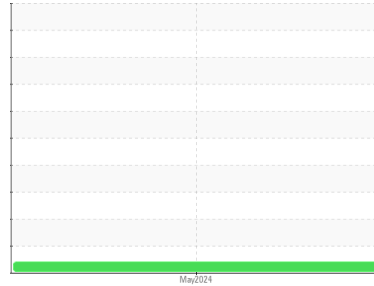




# OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id  
**83E-44B3**

Component  
**Gearbox**

Fluid  
**ROYAL PURPLE SYNERGY 90/150 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### ▲ Contamination

Moderate concentration of visible dirt/debris present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>HPL0004875</b>	---	---
Sample Date	Client Info		<b>15 May 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>14</b>	---	---
Chromium	ppm	ASTM D5185m >15	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m >15	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	---	---
Lead	ppm	ASTM D5185m >100	<b>1</b>	---	---
Copper	ppm	ASTM D5185m >200	<b>1</b>	---	---
Tin	ppm	ASTM D5185m >25	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Manganese	ppm	ASTM D5185m	<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Calcium	ppm	ASTM D5185m	<b>29</b>	---	---
Phosphorus	ppm	ASTM D5185m 200	<b>126</b>	---	---
Zinc	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>16990</b>	---	---

## CONTAMINANTS

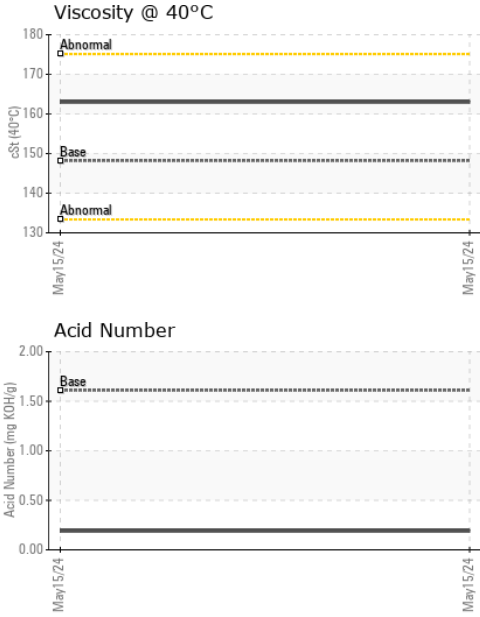
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>7</b>	---	---
Sodium	ppm	ASTM D5185m	<b>0</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.61	<b>0.19</b>	---	---



# OIL ANALYSIS REPORT



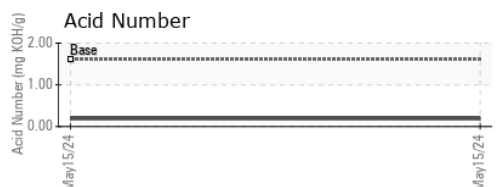
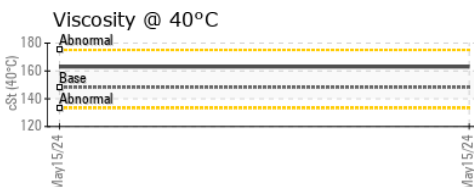
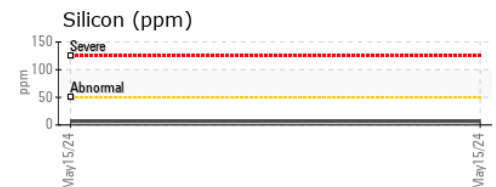
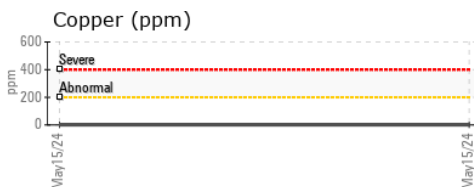
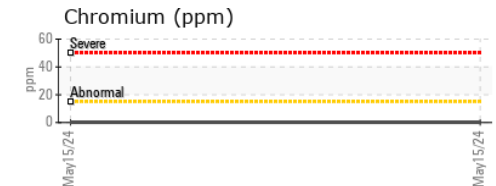
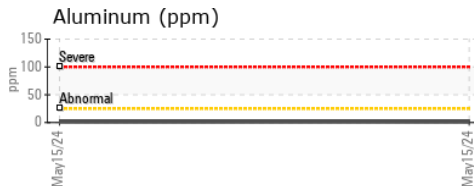
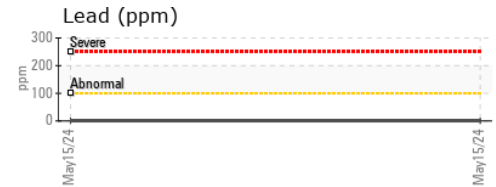
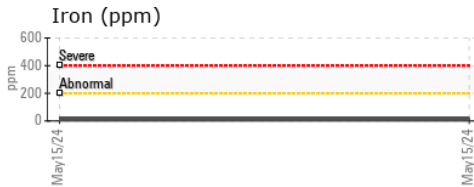
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	▲ MODER	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	148.2	163	---

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** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HPL0004875  
**Lab Number** : 06185201  
**Unique Number** : 11036527  
**Test Package** : MOB 2

**Received** : 20 May 2024  
**Tested** : 21 May 2024  
**Diagnosed** : 22 May 2024 - Sean Felton

**MARATHON PETROLEUM CO.**  
 IL. REFINING DIVISION, 400 S MARATHON AVE  
 ROBINSON, IL  
 US 62454

Contact: M.S. MANHART  
 mmanhart@marathonpetroleum.com  
 T: (618)544-2121

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)

F: x: