



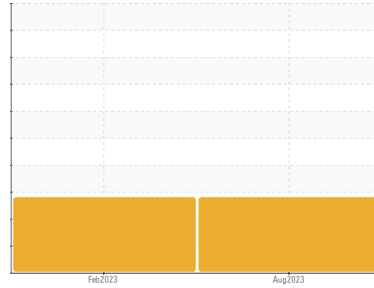
# PROBLEM SUMMARY

Sample Rating Trend

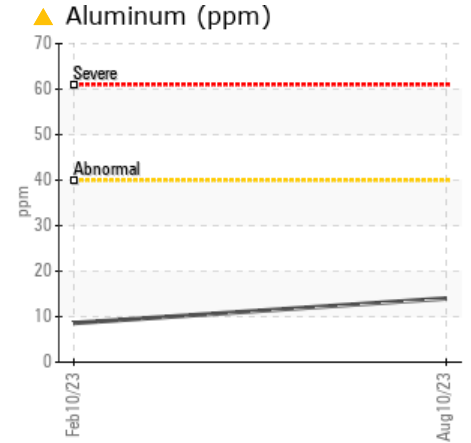
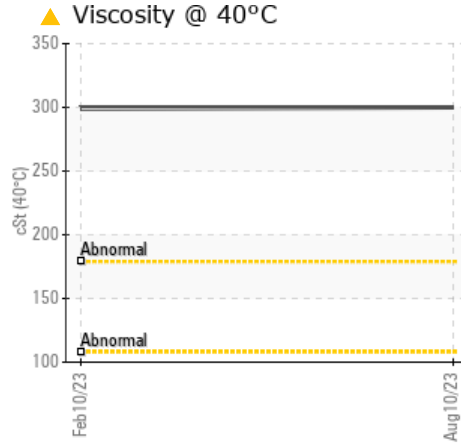
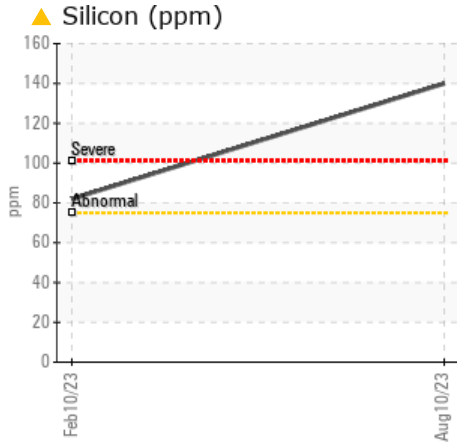
DIRT



Area  
**[18747]**  
 Machine Id  
**40-209**  
 Component  
**Right Final Drive**  
 Fluid  
**ConocoPhillips 80w/90 (--- GAL)**



## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: ConocoPhillips gear oil 80w/90 )

## PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	---
Aluminum	ppm	ASTM D5185m	>40	▲ 14	▲ 9	---
Silicon	ppm	ASTM D5185m	>75	▲ 140	▲ 82	---
Visc @ 40°C	cSt	ASTM D445		▲ 300	▲ 299	---

Customer Id: MANTUL  
 Sample No.: WC0793335  
 Lab Number: 05928982  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

## HISTORICAL DIAGNOSIS

10 Feb 2023 Diag: Don Baldrige

### DIRT



We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor. All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is higher than normal. Confirm oil type.

view report





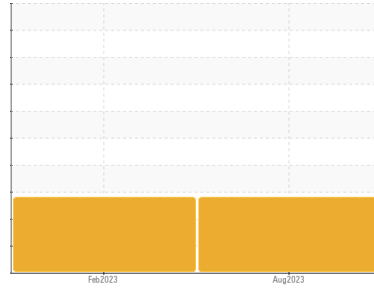
# OIL ANALYSIS REPORT

Sample Rating Trend

DIRT



Area  
**[18747]**  
 Machine Id  
**40-209**  
 Component  
**Right Final Drive**  
 Fluid  
**ConocoPhillips 80w/90 (--- GAL)**



## DIAGNOSIS

### Recommendation

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: ConocoPhillips gear oil 80w/90 )

### Wear

All component wear rates are normal.

### Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

### Fluid Condition

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

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC0793335</b>	WC0754792	---
Sample Date	Client Info	<b>10 Aug 2023</b>	10 Feb 2023	---
Machine Age	hrs	Client Info	<b>3154</b>	2618
Oil Age	hrs	Client Info	<b>536</b>	618
Oil Changed	Client Info	<b>Changed</b>	Not Changd	---
Sample Status		<b>ABNORMAL</b>	ABNORMAL	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >750	<b>701</b>	462
Chromium	ppm	ASTM D5185m >9	<b>6</b>	4
Nickel	ppm	ASTM D5185m >10	<b>&lt;1</b>	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0
Aluminum	ppm	ASTM D5185m >40	<b>▲ 14</b>	<b>▲ 9</b>
Lead	ppm	ASTM D5185m >15	<b>0</b>	0
Copper	ppm	ASTM D5185m >40	<b>2</b>	<1
Tin	ppm	ASTM D5185m >10	<b>0</b>	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>271</b>	215
Barium	ppm	ASTM D5185m	<b>0</b>	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	<1
Manganese	ppm	ASTM D5185m	<b>7</b>	5
Magnesium	ppm	ASTM D5185m	<b>14</b>	<1
Calcium	ppm	ASTM D5185m	<b>42</b>	21
Phosphorus	ppm	ASTM D5185m	<b>939</b>	867
Zinc	ppm	ASTM D5185m	<b>18</b>	0
Sulfur	ppm	ASTM D5185m	<b>24935</b>	23367

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	<b>▲ 140</b>	<b>▲ 82</b>
Sodium	ppm	ASTM D5185m >51	<b>2</b>	1
Potassium	ppm	ASTM D5185m >20	<b>4</b>	3

## VISUAL

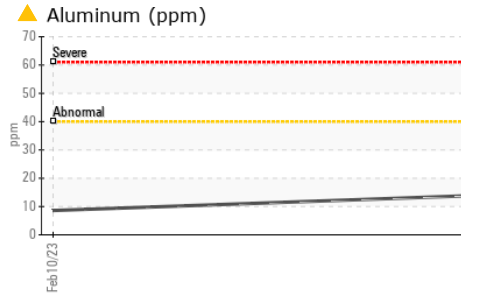
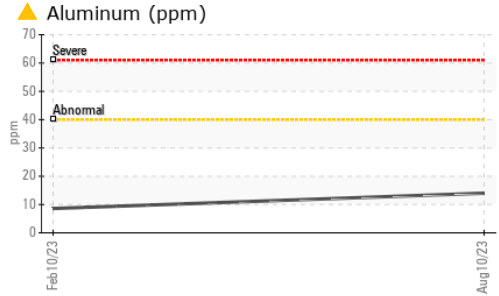
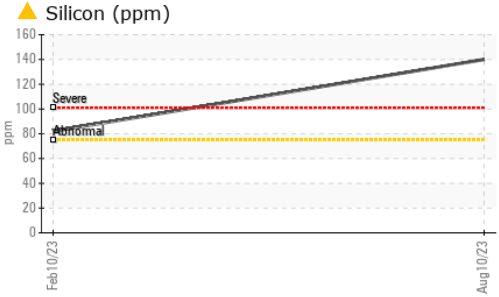
method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	NONE
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	NONE
Precipitate	scalar	*Visual NONE	<b>NONE</b>	NONE
Silt	scalar	*Visual NONE	<b>NONE</b>	NONE
Debris	scalar	*Visual NONE	<b>NONE</b>	NONE
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	NONE
Appearance	scalar	*Visual NORML	<b>NORML</b>	NORML
Odor	scalar	*Visual NORML	<b>NORML</b>	NORML
Emulsified Water	scalar	*Visual >0.075	<b>NEG</b>	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG

## FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	<b>▲ 300</b>	<b>▲ 299</b>

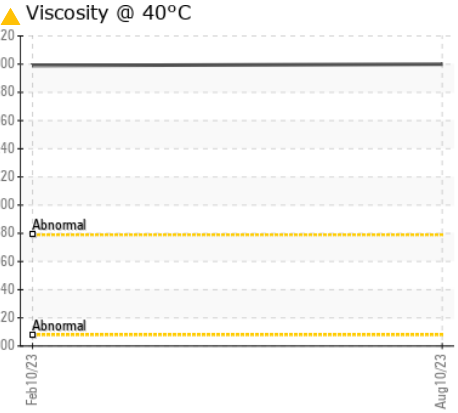
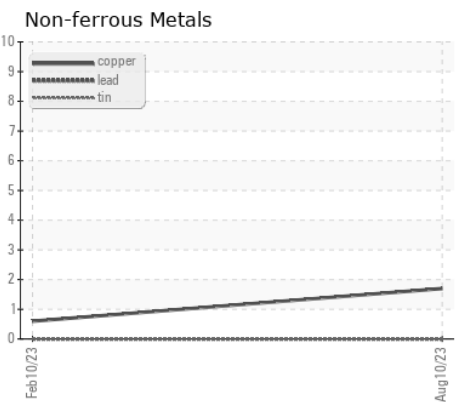
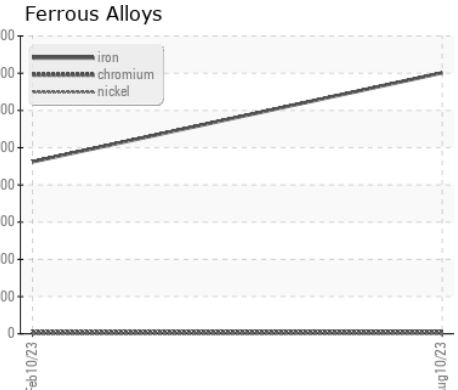


# OIL ANALYSIS REPORT



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.** : WC0793335      **Received** : 18 Aug 2023  
**Lab Number** : 05928982      **Diagnosed** : 22 Aug 2023  
**Unique Number** : 10608929      **Diagnostician** : Don Baldrige  
**Test Package** : CONST

**MANHATTAN ROAD AND BRIDGE**  
 5601 S 122ND E AVE  
 TULSA, OK  
 US 74146  
 Contact: JAMES STEELMON  
 james.steelmon@manhattanrb.com  
 T:  
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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)