



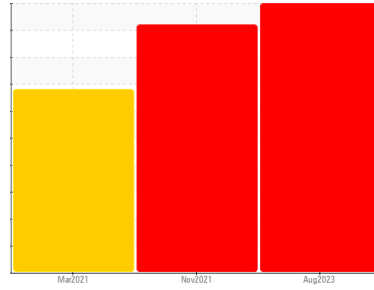
# PROBLEM SUMMARY

Sample Rating Trend

WEAR

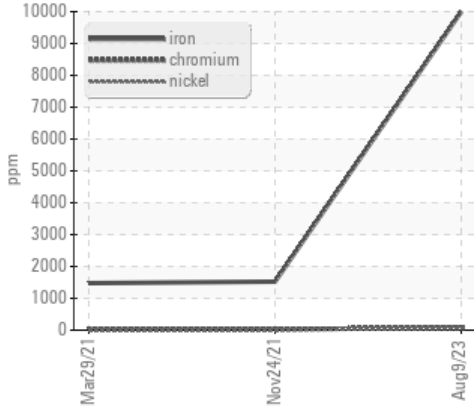


Area  
**[18459]**  
 Machine Id  
**50-101**  
 Component  
**Left Final Drive**  
 Fluid  
**CONOCO PHILLIPS 80W90 (--- GAL)**

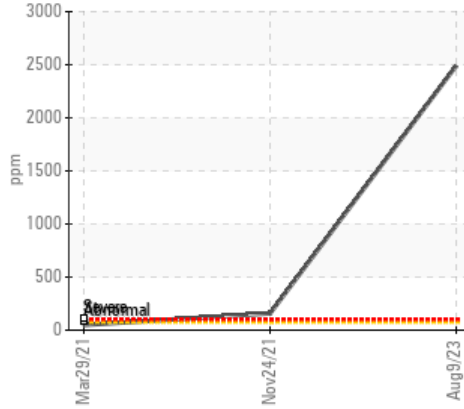


## COMPONENT CONDITION SUMMARY

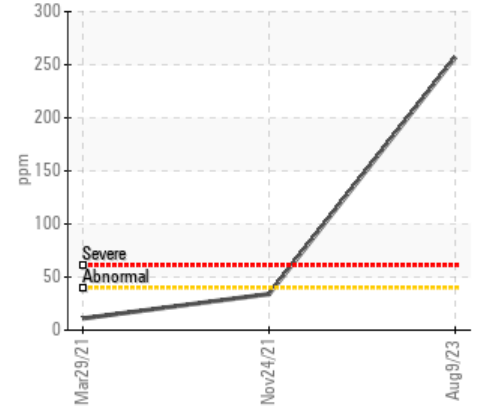
### Ferrous Alloys



### Silicon (ppm)



### Aluminum (ppm)



## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>750	10000	1523	1476
Chromium	ppm	ASTM D5185m	>9	90	19	15
Nickel	ppm	ASTM D5185m	>10	51	10	8
Aluminum	ppm	ASTM D5185m	>40	257	34	11
Silicon	ppm	ASTM D5185m	>75	2491	158	49

Customer Id: MANTUL  
 Sample No.: WC0793340  
 Lab Number: 05928989  
 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
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

## HISTORICAL DIAGNOSIS

### 24 Nov 2021 Diag: Don Baldrige

#### WEAR



We advise that you check all areas where dirt can enter the system. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The condition of the oil is acceptable for the time in service.

view report



### 29 Mar 2021 Diag: Don Baldrige

#### WEAR



The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

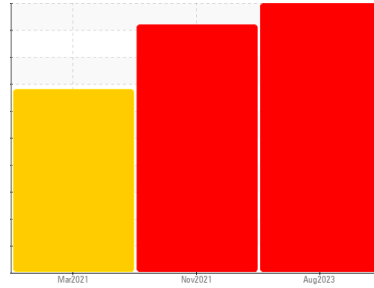
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area  
**[18459]**  
 Machine Id  
**50-101**  
 Component  
**Left Final Drive**  
 Fluid  
**CONOCO PHILLIPS 80W90 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### Wear

The iron, chrome and nickel levels are severe. Gear wear is indicated.

### Contamination

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

### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0793340</b>	WC0601384	WC0548893
Sample Date	Client Info		<b>09 Aug 2023</b>	24 Nov 2021	29 Mar 2021
Machine Age	hrs	Client Info	<b>4593</b>	4141	3876
Oil Age	hrs	Client Info	<b>1231</b>	265	1000
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status			<b>SEVERE</b>	SEVERE	SEVERE

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >750	<b>10000</b>	1523	1476
Chromium	ppm	ASTM D5185m >9	<b>90</b>	19	15
Nickel	ppm	ASTM D5185m >10	<b>51</b>	10	8
Titanium	ppm	ASTM D5185m	<b>21</b>	3	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m >40	<b>257</b>	34	11
Lead	ppm	ASTM D5185m >15	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185m >40	<b>11</b>	2	2
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185m >5	<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>2</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>30</b>	52	74
Barium	ppm	ASTM D5185m	<b>4</b>	26	66
Molybdenum	ppm	ASTM D5185m	<b>16</b>	3	2
Manganese	ppm	ASTM D5185m	<b>89</b>	14	16
Magnesium	ppm	ASTM D5185m	<b>57</b>	13	17
Calcium	ppm	ASTM D5185m	<b>194</b>	46	38
Phosphorus	ppm	ASTM D5185m	<b>262</b>	441	859
Zinc	ppm	ASTM D5185m	<b>129</b>	22	54
Sulfur	ppm	ASTM D5185m	<b>11721</b>	16761	23992

## CONTAMINANTS

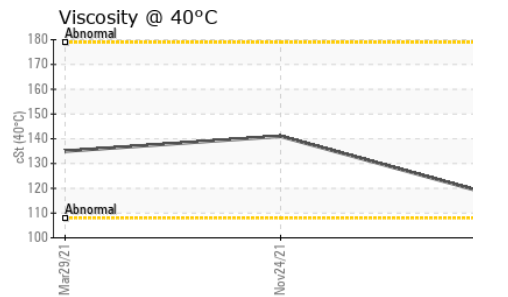
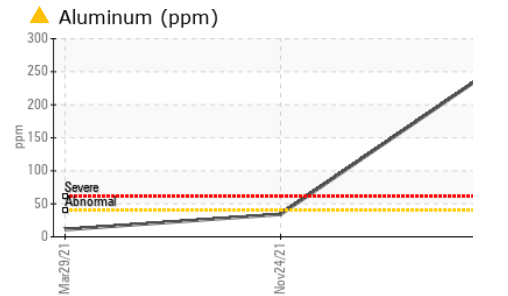
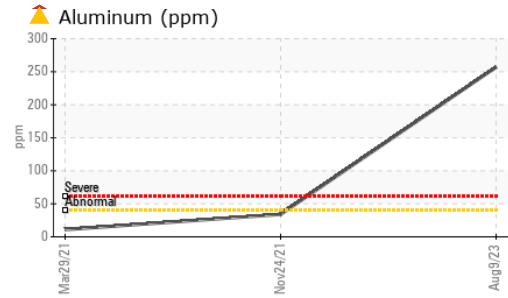
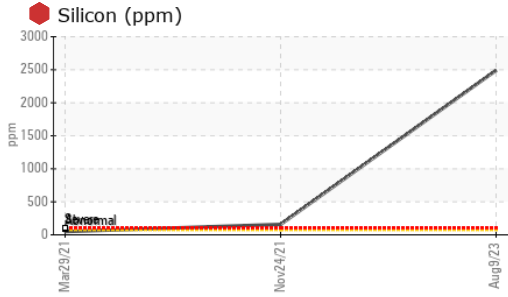
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	<b>2491</b>	158	49
Sodium	ppm	ASTM D5185m >51	<b>39</b>	8	10
Potassium	ppm	ASTM D5185m >20	<b>86</b>	20	25

## VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
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>	NONE	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 >0.075	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG



# OIL ANALYSIS REPORT

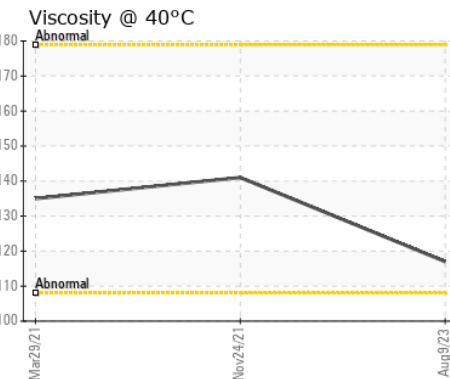
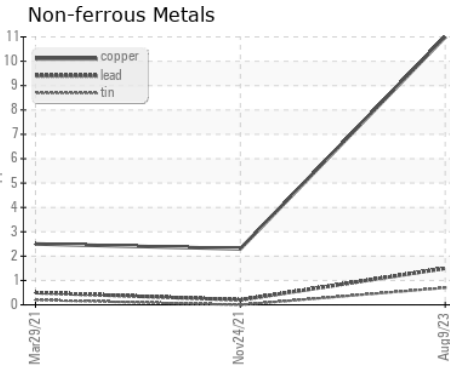
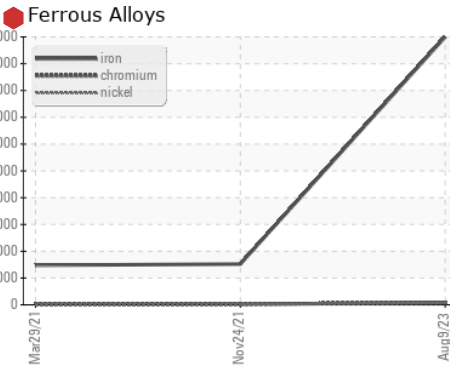


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		117	141	135

SAMPLE IMAGES		method	limit/base	current	history1	history2
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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.** : WC0793340 **Received** : 18 Aug 2023  
**Lab Number** : **05928989** **Diagnosed** : 22 Aug 2023  
**Unique Number** : 10608936 **Diagnostician** : Don Baldrige  
**Test Package** : CONST

**MANHATTAN ROAD AND BRIDGE**  
 5601 S 122ND E AVE  
 TULSA, OK  
 US 74146  
 Contact: BEN CALDWELL  
 kevin.marson@wearcheck.com  
 T: (918)728-5749  
 F:

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)