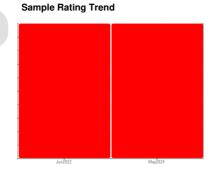


# **PROBLEM SUMMARY**





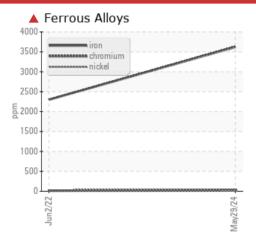


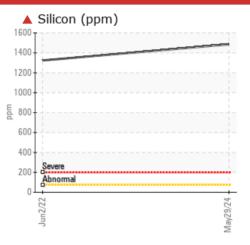
Area [23093] Machine Id 30-70

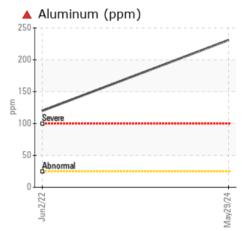
Left Final Drive

**CONOCO PHILLIPS GUARDOL ECT 15W40 (--- 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. 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					
Iron	ppm	ASTM D5185m	>500	<b>▲</b> 3621	<b>2300</b>					
Chromium	ppm	ASTM D5185m	>10	<b>4</b> 32	<u> </u>					
Nickel	ppm	ASTM D5185m	>10	<u> </u>	4					
Aluminum	ppm	ASTM D5185m	>25	<b>231</b>	<b>120</b>					
Silicon	ppm	ASTM D5185m	>75	<b>1486</b>	<b>▲</b> 1324					

Customer Id: MANTUL Sample No.: WC0940716 Lab Number: 06207225 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data: Angela Borella +1 800-237-1369 angela.borella@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 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.			
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

## 02 Jun 2022 Diag: Don Baldridge

WEAR



We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. 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 a moderate concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil is no longer serviceable due to the presence of contaminants.



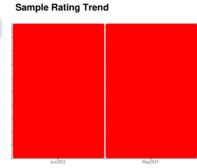


# **OIL ANALYSIS REPORT**

Area [23093] 30-70

**Left Final Drive** 

CONOCO PHILLIPS GUARDOL ECT 15W40 (--- 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. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### ▲ Wear

Gear wear is indicated.

#### ▲ Contamination

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

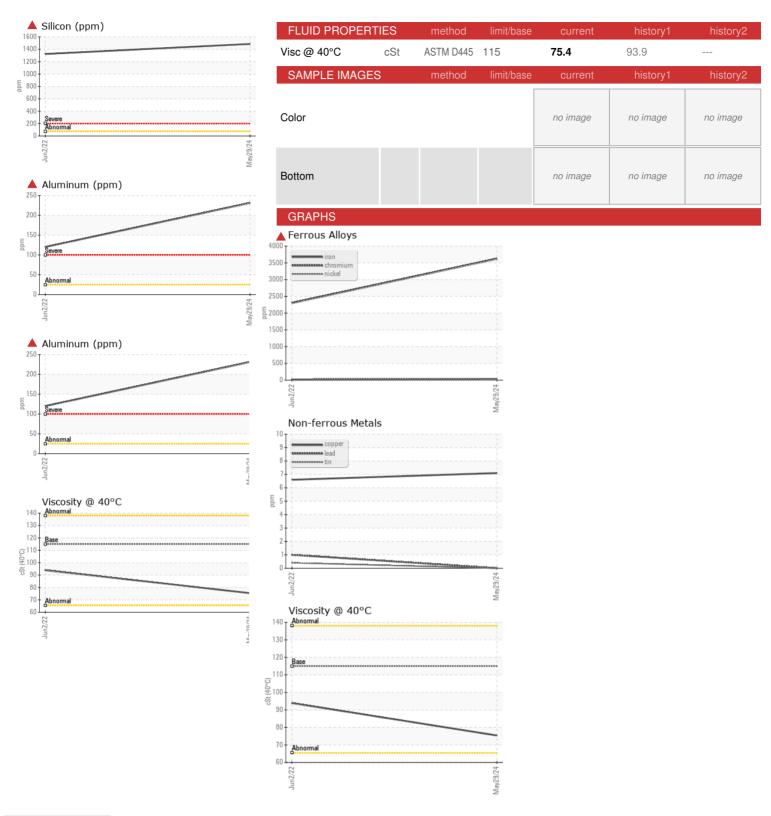
#### **Fluid Condition**

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

( GAL)			Jun2022	May2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0940716	WC0619299	
Sample Date		Client Info		29 May 2024	02 Jun 2022	
Machine Age	hrs	Client Info		4535	3563	
Oil Age	hrs	Client Info		972	3295	
Oil Changed		Client Info		Changed	Changed	
Sample Status				SEVERE	SEVERE	
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	<b>3621</b>	<b>2300</b>	
Chromium	ppm	ASTM D5185m	>10	<b>A</b> 32	<u>17</u>	
Nickel	ppm	ASTM D5185m	>10	<u> </u>	4	
Titanium	ppm	ASTM D5185m		14	12	
Silver	ppm	ASTM D5185m		0	<1	
Aluminum	ppm	ASTM D5185m	>25	<b>231</b>	120	
Lead	ppm	ASTM D5185m	>25	0	1	
Copper	ppm	ASTM D5185m	>50	7	7	
Tin	ppm	ASTM D5185m	>10	0	<1	
Vanadium	ppm	ASTM D5185m		2	1	
Cadmium	ppm	ASTM D5185m		0	<1	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	85	96	84	
Barium	ppm	ASTM D5185m		4	4	
Molybdenum	ppm	ASTM D5185m		9	7	
Manganese	ppm	ASTM D5185m		30	19	
Magnesium	ppm	ASTM D5185m	350	618	444	
Calcium	ppm	ASTM D5185m	1800	1249	1040	
Phosphorus	ppm	ASTM D5185m	1000	949	865	
Zinc	ppm	ASTM D5185m	1100	983	734	
Sulfur	ppm	ASTM D5185m	3500	6019	9017	
CONTAMINANTS	S	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	<b>1486</b>	▲ 1324	
Sodium	ppm	ASTM D5185m		29	21	
Potassium	ppm	ASTM D5185m	>20	81	62	
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	<b>△</b> 0.2%	
Free Water	scalar	*Visual		NEG	NEG	



## **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No. : WC0940716 Lab Number : 06207225 Unique Number : 11074686

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Jun 2024 **Tested** : 13 Jun 2024 Diagnosed Test Package : CONST

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

: 13 Jun 2024 - Angela Borella

To discuss this sample report, contact Customer Service at 1-800-237-1369. kevin.marson@wearcheck.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (918)728-5749

Report Id: MANTUL [WUSCAR] 06207225 (Generated: 06/15/2024 09:14:43) Rev: 1

Submitted By: JAMES STEELMON

**MANHATTAN ROAD AND BRIDGE** 

5601 S 122ND E AVE

Contact: BEN CALDWELL

TULSA, OK

US 74146