

PROBLEM SUMMARY



Area [18573] 30-77 Component

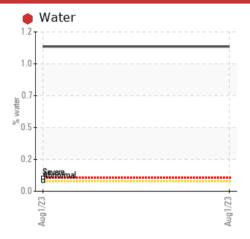
Right Final Drive

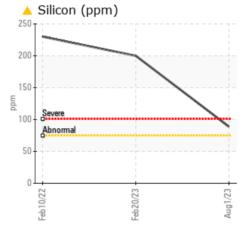
CONOCO PHILLIPS GUARDOL ECT 15W40 (--- GAL)

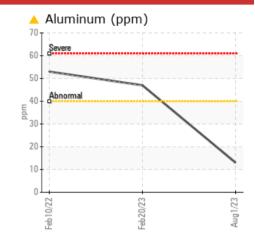




COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition.

PROBLEMATIC 1	TEST RE	SULTS				
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Aluminum	ppm	ASTM D5185m	>40	<u> </u>	4 7	△ 53
Silicon	ppm	ASTM D5185m	>75	A 89	<u>^</u> 200	<u>^</u> 230
Water	%	ASTM D6304	>0.075	1.09		
ppm Water	ppm	ASTM D6304	>750	10900		
Appearance	scalar	*Visual	NORML	▲ MILKY	NORML	NORML
Emulsified Water	scalar	*Visual	>0.075	0.2%	NEG	NEG

Customer Id: MANTUL **Sample No.:** WC0802433 Lab Number: 05928979 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

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

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Water Drain-off			?	We advise that you follow the water drain-off procedure for this component.			
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.			
Check Water Access			?	We advise that you check for the source of water entry.			

HISTORICAL DIAGNOSIS

20 Feb 2023 Diag: Don Baldridge





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 recommend an early resample to monitor this condition. All component wear rates are normal. 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.



10 Feb 2022 Diag: Doug Bogart





We advise that you check all areas where dirt can enter the system. We recommend an early resample to monitor this condition.All component wear rates are normal. 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.





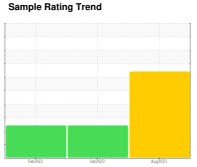
OIL ANALYSIS REPORT



Area [18573] 30-77

Right Final Drive

CONOCO PHILLIPS GUARD





DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of water present in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

OOL ECT 15W40 (-	GAL)	Fel	2022	Feb 2023 Aug 20	23	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0802433	WC0754825	WC0619423
Sample Date		Client Info		01 Aug 2023	20 Feb 2023	10 Feb 2022
Machine Age	hrs	Client Info		3625	3080	2577
Oil Age	hrs	Client Info		545	1080	2329
Oil Changed	1110	Client Info		Not Changd	Changed	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>750	427	525	505
Chromium	ppm	ASTM D5185m	>9	4	6	6
Nickel	ppm	ASTM D5185m	>10	1	2	<1
Titanium	ppm	ASTM D5185m		1	2	2
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>40	<u> </u>	<u> </u>	<u></u> 53
_ead	ppm	ASTM D5185m	>15	<1	<1	<1
Copper	ppm	ASTM D5185m		<1	1	<1
Борро. Гin	ppm	ASTM D5185m	>10	<1	0	0
Antimony	ppm	ASTM D5185m				0
√anadium	ppm	ASTM D5185m	70	<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
	ррпп		12 24 //			
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	85	54	161	179
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	3	3
Manganese	ppm	ASTM D5185m		7	10	10
Magnesium	ppm	ASTM D5185m	350	8	12	11
Calcium	ppm	ASTM D5185m	1800	65	158	227
Phosphorus	ppm	ASTM D5185m	1000	307	946	1052
Zinc	ppm	ASTM D5185m	1100	29	112	117
Sulfur						
	ppm	ASTM D5185m	3500	20101	18783	17463
CONTAMINANTS		ASTM D5185m method	3500 limit/base	20101 current	18783 history1	history2
					history1	
Silicon	3	method	limit/base >75	current	history1	history2
Silicon Sodium	ppm	method ASTM D5185m	limit/base >75	current	history1	history2
Silicon Sodium Potassium	ppm	method ASTM D5185m ASTM D5185m	limit/base >75 >51	current 89 5	history1 ▲ 200 7	history2 230 6
Silicon Sodium Potassium Water	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >75 >51 >20	current 89 5 6	history1 200 7 18	history2 230 6 19
Silicon Sodium Potassium Water	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	limit/base >75 >51 >20 >0.075	current 89 5 6 1.09	history1 200 7 18	history2 230 6 19
Silicon Sodium Potassium Vater opm Water VISUAL	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	limit/base >75 >51 >20 >0.075 >750	current 89 5 6 1.09 10900	history1 200 7 18	history2 230 6 19
Silicon Sodium Potassium Vater opm Water VISUAL White Metal	ppm ppm ppm % ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	limit/base >75 >51 >20 >0.075 >750 limit/base	current 89 5 6 1.09 10900 current	history1 ▲ 200 7 18 history1	history2 230 6 19 history2
Silicon Sodium Potassium Nater opm Water VISUAL White Metal Yellow Metal	ppm ppm ppm % ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE	current 89 5 6 1.09 10900 current NONE	history1 ▲ 200 7 18 history1 NONE	history2 230 6 19 history2 MODER
Silicon Sodium Potassium Water opm Water VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm % ppm	method ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE NONE	current ▲ 89 5 6 ■ 1.09 ■ 10900 current NONE NONE	history1 200 7 18 history1 NONE NONE	history2 230 6 19 history2 MODER NONE
Silicon Sodium Potassium Water Opm Water VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm % ppm	method ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE NONE NONE	current ▲ 89 5 6 ■ 1.09 ■ 10900 current NONE NONE NONE	history1 200 7 18 history1 NONE NONE NONE	history2 230 6 19 history2 MODER NONE NONE
Silicon Sodium Potassium Water Opm Water VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm % ppm scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual *Visual *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE NONE NONE NONE	Current ▲ 89 5 6 ■ 1.09 ■ 10900 Current NONE NONE NONE NONE	history1 200 7 18 history1 NONE NONE NONE NONE	history2 230 6 19 history2 MODER NONE NONE
Silicon Sodium Potassium Nater Opm Water VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm % ppm scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual *Visual *Visual *Visual *Visual *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE NONE NONE NONE NONE NONE NONE	current 89 5 6 1.09 10900 current NONE NONE NONE NONE NONE NONE NONE	history1 200 7 18 history1 NONE NONE NONE NONE NONE NONE NONE	history2 230 6 19 history2 MODER NONE NONE NONE NONE
Silicon Sodium Potassium Nater Opm Water VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm % ppm scalar scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE NONE NONE NONE NONE NONE NONE NON	current 89 5 6 1.09 10900 current NONE NONE NONE NONE NONE NONE NONE NON	history1 200 7 18 history1 NONE NONE NONE NONE NONE NONE NONE NO	history2 230 6 19 history2 MODER NONE NONE NONE NONE NONE
Silicon Sodium Potassium Water opm Water	ppm ppm % ppm % ppm scalar scalar scalar scalar scalar scalar	method ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method *Visual *Visual	limit/base >75 >51 >20 >0.075 >750 limit/base NONE NONE NONE NONE NONE NONE NONE NON	current 89 5 6 1.09 10900 current NONE NONE NONE NONE NONE NONE NONE NON	history1 200 7 18 history1 NONE NONE NONE NONE NONE NONE NONE NO	history2 230 6 19 history2 MODER NONE NONE NONE NONE NONE NONE NONE NO



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Unique Number

Lab Number

: WC0802433 : 05928979 : 10608926

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 18 Aug 2023 : 22 Aug 2023 Diagnostician : Don Baldridge

Test Package : CONST (Additional Tests: KF)

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)

MANHATTAN ROAD AND BRIDGE

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