

OIL ANALYSIS REPORT

Area [20020] 40-190

Component **Diesel Engine**

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

Sample Rating Trend



Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

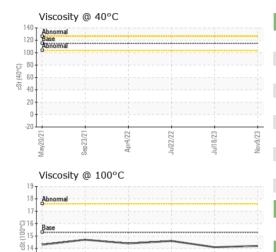
		May2021	Sep2021 Apr2022	Jul2022 Jul2023	Nov2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0836129	WC0818658	WC0619251
Sample Date		Client Info		09 Nov 2023	18 Jul 2023	22 Jul 2022
Machine Age	hrs	Client Info		4096	3799	3059
Oil Age	hrs	Client Info		297	740	2768
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	25	11
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	5	3
Lead	ppm	ASTM D5185m	>40	1	5	2
Copper	ppm	ASTM D5185m	>330	<1	2	1
Tin	ppm	ASTM D5185m	>15	<1	2	1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
				-	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base			history2
	ppm			current	history1	
Boron		ASTM D5185m		current 44	history1	30
Boron Barium	ppm	ASTM D5185m ASTM D5185m		current 44 0	history1 32 0	30
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m		current 44 0	history1 32 0 12	30 0 30
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	85	current 44 0 1 <1	history1 32 0 12 <1	30 0 30 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	350	current 44 0 1 <1 725	history1 32 0 12 <1 767	30 0 30 <1 840
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	350 1800 1000	current 44 0 1 <1 725 1214	history1 32 0 12 <1 767 1427	30 0 30 <1 840 1290
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	350 1800 1000	current 44 0 1 <1 725 1214 969	history1 32 0 12 <1 767 1427 1071	30 0 30 <1 840 1290 1057
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	350 1800 1000 1100	current 44 0 1 <1 725 1214 969 1202	history1 32 0 12 <1 767 1427 1071 1261	30 0 30 <1 840 1290 1057 1223
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	350 1800 1000 1100 3500	current 44 0 1 <1 725 1214 969 1202 3595	history1 32 0 12 <1 767 1427 1071 1261 4371	30 0 30 <1 840 1290 1057 1223 4074
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	350 1800 1000 1100 3500 limit/base	current 44 0 1 <1 725 1214 969 1202 3595 current	history1 32 0 12 <1 767 1427 1071 1261 4371 history1	30 0 30 <1 840 1290 1057 1223 4074 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	350 1800 1000 1100 3500 limit/base	current 44 0 1 <1 725 1214 969 1202 3595 current 8	history1 32 0 12 <1 767 1427 1071 1261 4371 history1	30 0 30 <1 840 1290 1057 1223 4074 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	350 1800 1000 1100 3500 limit/base >25	current 44 0 1 <1 725 1214 969 1202 3595 current 8 1	history1 32 0 12 <1 767 1427 1071 1261 4371 history1 14 3	30 0 30 <1 840 1290 1057 1223 4074 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	350 1800 1000 1100 3500 limit/base >25 >20	current 44 0 1 <1 725 1214 969 1202 3595 current 8 1 1	history1 32 0 12 <1 767 1427 1071 1261 4371 history1 14 3 4	30 0 30 <1 840 1290 1057 1223 4074 history2 12 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	85 350 1800 1000 1100 3500 limit/base >25 >20 limit/base >3	current 44 0 1 <1 725 1214 969 1202 3595 current 8 1 1 current	history1 32 0 12 <1 767 1427 1071 1261 4371 history1 14 3 4 history1	30 0 30 <1 840 1290 1057 1223 4074 history2 12 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	85 350 1800 1000 1100 3500 limit/base >25 >20 limit/base >3	current 44 0 1 <1 725 1214 969 1202 3595 current 8 1 1 current 0.3	history1 32 0 12 <1 767 1427 1071 1261 4371 history1 14 3 4 history1 0.4	30 0 30 <1 840 1290 1057 1223 4074 history2 12 <1 <1 history2 0.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	350 1800 1000 1100 3500 limit/base >25 >20	current 44 0 1 <1 725 1214 969 1202 3595 current 8 1 1 current 0.3 9.6	history1 32 0 12 <1 767 1427 1071 1261 4371 history1 14 3 4 history1 0.4 11.1	30 0 30 <1 840 1290 1057 1223 4074 history2 12 <1 <1 history2 0.2 9.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	350 1800 1000 1100 3500 limit/base >25 >20 limit/base >3 >20 >30	current 44 0 1 <1 725 1214 969 1202 3595 current 8 1 1 current 0.3 9.6 20.2	history1 32 0 12 <1 767 1427 1071 1261 4371 history1 14 3 4 history1 0.4 11.1 22.2	30 0 30 <1 840 1290 1057 1223 4074 history2 12 <1 <1 history2 0.2 9.6 20.9



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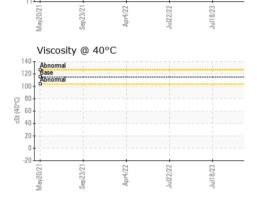
OIL ANALYSIS REPORT

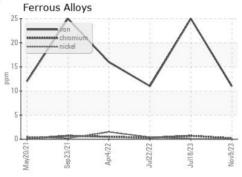


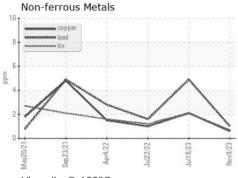
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

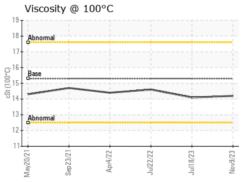
FLUID PROPERI	IIES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	15.3	14.2	14.1	14.6

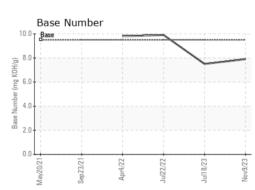
GRAPHS















Certificate L2367

Laboratory Sample No.

Lab Number Unique Number

: WC0836129 : 06008809 : 10742571

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

: 15 Nov 2023 : 18 Nov 2023 Diagnostician : Don Baldridge

Test Package : CONST (Additional Tests: KV40, TBN) 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

5601 S 122ND E AVE TULSA, OK US 74146

Contact: BEN CALDWELL kevin.marson@wearcheck.com

T: (918)728-5749