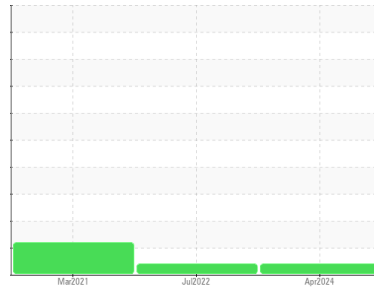




# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Machine Id

**30-46**

Component

**Diesel Engine**

Fluid

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

### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0750277</b>	WC0619343	WC0548935
Sample Date	Client Info			<b>06 Apr 2024</b>	22 Jul 2022	24 Mar 2021
Machine Age	hrs	Client Info		<b>4803</b>	4507	4203
Oil Age	hrs	Client Info		<b>0</b>	4203	250
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>19</b>	11	7
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	3	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Antimony	ppm	ASTM D5185m		<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	85	<b>35</b>	90	75
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>27</b>	2	1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	350	<b>759</b>	693	722
Calcium	ppm	ASTM D5185m	1800	<b>1261</b>	1428	1319
Phosphorus	ppm	ASTM D5185m	1000	<b>1008</b>	1029	1027
Zinc	ppm	ASTM D5185m	1100	<b>1132</b>	1189	1106
Sulfur	ppm	ASTM D5185m	3500	<b>3684</b>	4310	3034

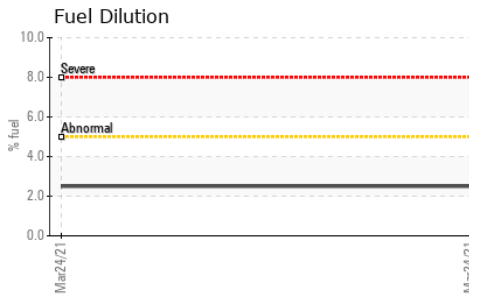
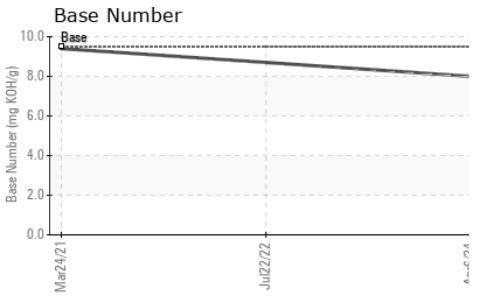
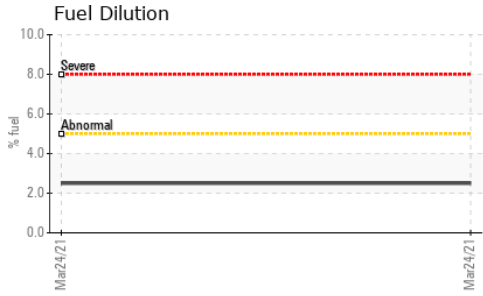
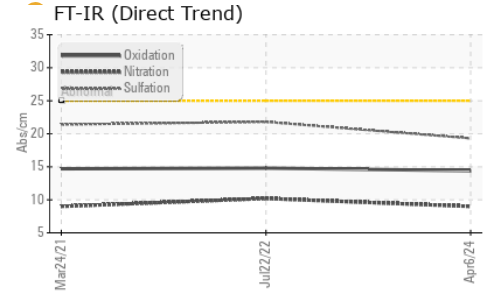
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	4
Sodium	ppm	ASTM D5185m		<b>3</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	15
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	▲ 2.5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	10.2	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.3</b>	21.8	21.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.4</b>	14.8	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	<b>8.0</b>	8.7	9.4



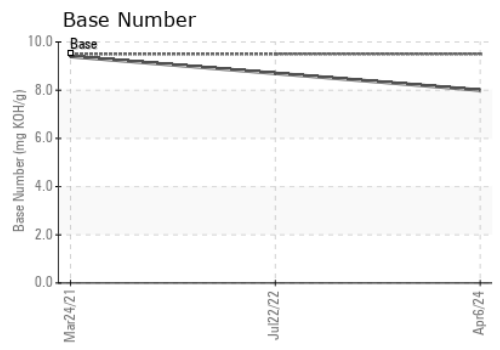
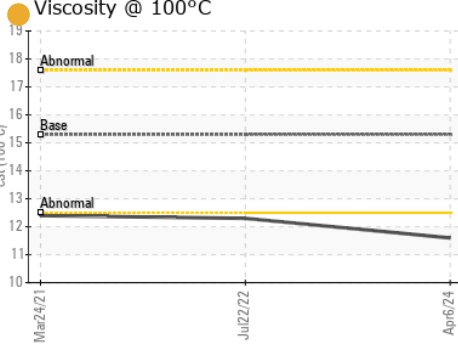
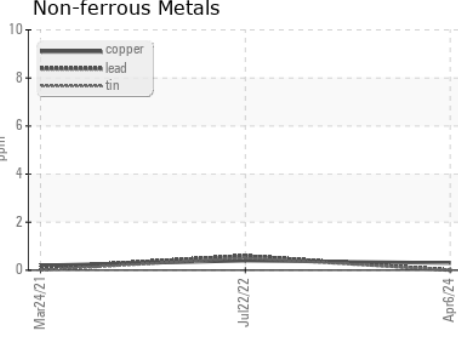
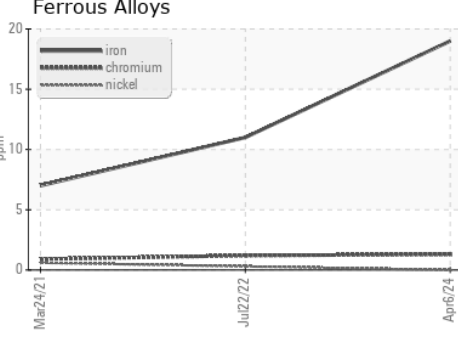
# OIL ANALYSIS REPORT



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	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.3	● 11.6	● 12.3	● 12.4

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0750277      **Received** : 12 Apr 2024  
**Lab Number** : 06148025      **Tested** : 16 Apr 2024  
**Unique Number** : 10978103      **Diagnosed** : 16 Apr 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**MANHATTAN ROAD AND BRIDGE**  
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 TULSA, OK  
 US 74146  
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 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)