

## Machine Id **C-6** Component **Diesel Engine** Fluid **CONOCO PHILLIPS GUARDOL ECT 15W40 (--- GAL)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		WC0869356	WC0899838	WC0849461
	Sample Date		Client Info		10 May 2024	26 Mar 2024	19 Oct 2023
	Machine Age	hrs	Client Info		24098	23743	23366
	Oil Age	hrs	Client Info		732	50	264
	Filter Age	hrs	Client Info		0	50	264
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	5	5	21
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	<1	0	<1
	Nickel	ppm	ASTM D5185m	>4	0	0	0
	Titanium	ppm	ASTM D5185m		82	68	68
	Silver	ppm	ASTM D5185m	>3	<1	0	0
	Aluminum	ppm	ASTM D5185m	>20	2	2	2
	Lead	ppm	ASTM D5185m	>40	1	<1	<1
	Copper	ppm	ASTM D5185m	>330	5	24	2
	Tin	ppm	ASTM D5185m		1	2	<1
	Vanadium	ppm	ASTM D5185m		1	<1	<1
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	5	7	8
	Potassium	ppm	ASTM D5185m		3	2	5
There is no indication of any contamination in the oil.	Fuel	le le	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.3	0.1	1.4
	Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.0	9.0
	Sulfation	Abs/.1mm	*ASTM D7415		19.8	19.3	21.5
	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
FLUID CONDITION	Sodium	ppm	ASTM D5185m		8	18	<1
	Boron	ppm	ASTM D5185m	85	93	110	62
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		3	32	3
	Molybdenum	ppm	ASTM D5185m		3	12	22
	Manganese	ppm	ASTM D5185m		<1	<1	<1
	Magnesium	ppm	ASTM D5185m	350	392	456	588
	Calcium	ppm	ASTM D5185m		1862	1717	1622
	Phosphorus	ppm	ASTM D5185m		1044	907	1094
	Zinc	ppm	ASTM D5185m		1176	1082	1270
	Sulfur	ppm	ASTM D5185m		4317	4219	4093
	Oxidation	Abs/.1mm	*ASTM D310311		14.8	15.0	15.4
	Base Number (BN)				8.1	9.0	7.9
		- Cr		15.0		14.0	15.0

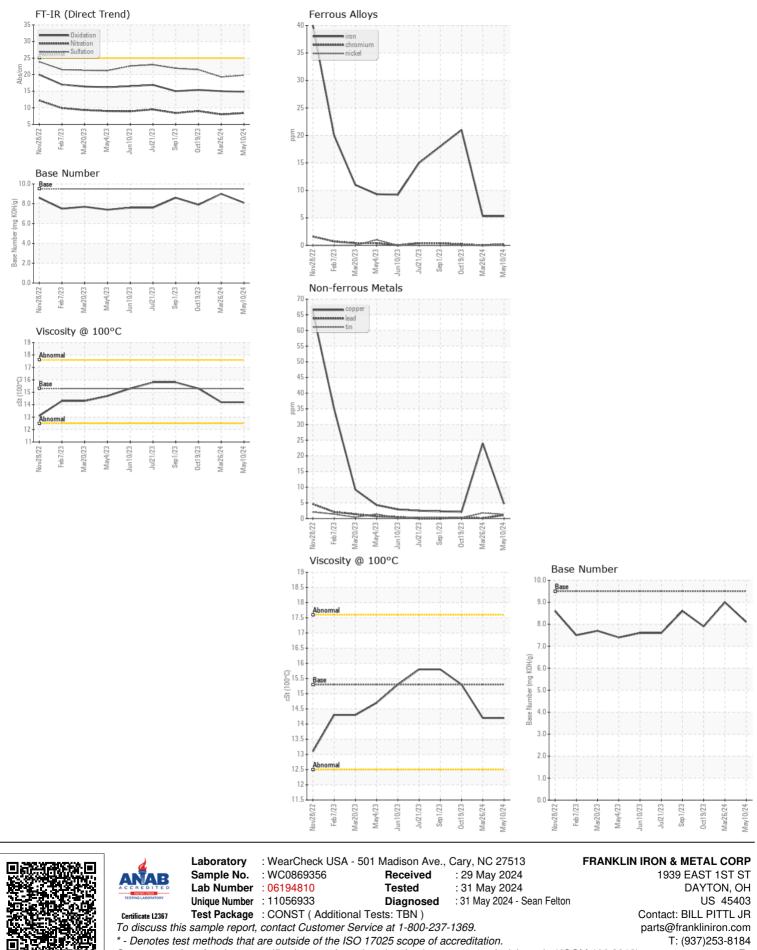
Visc @ 100°C cSt

ASTM D445 15.3

14.2

15.3

14.2



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

Contact/Location: BILL PITTL JR - FRADAY Page 2 of 2

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