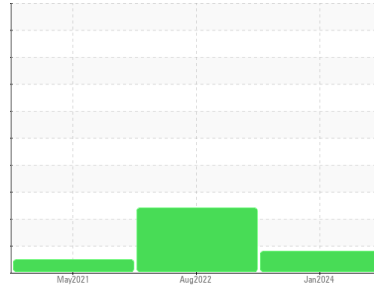




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
40-98

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0836156	WC0709444	WC0548955
Sample Date	Client Info		03 Jan 2024	17 Aug 2022	11 May 2021
Machine Age	hrs	Client Info	5084	4593	4345
Oil Age	hrs	Client Info	491	248	227
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			MARGINAL	SEVERE	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	20	43	21
Chromium	ppm	ASTM D5185m >20	<1	1	<1
Nickel	ppm	ASTM D5185m >4	0	0	<1
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	0	<1	0
Aluminum	ppm	ASTM D5185m >20	2	5	2
Lead	ppm	ASTM D5185m >40	0	<1	<1
Copper	ppm	ASTM D5185m >330	1	3	<1
Tin	ppm	ASTM D5185m >15	0	<1	<1
Antimony	ppm	ASTM D5185m	---	---	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 85	61	58	79
Barium	ppm	ASTM D5185m	0	<1	0
Molybdenum	ppm	ASTM D5185m	28	4	25
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m 350	529	541	550
Calcium	ppm	ASTM D5185m 1800	1498	1047	1508
Phosphorus	ppm	ASTM D5185m 1000	1049	828	1031
Zinc	ppm	ASTM D5185m 1100	1185	978	1191
Sulfur	ppm	ASTM D5185m 3500	3891	3041	3086

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	5	3
Sodium	ppm	ASTM D5185m	3	2	3
Potassium	ppm	ASTM D5185m >20	3	3	2
Fuel	%	ASTM D3524 >5	▲ 3.8	◆ 13.0	<1.0

INFRA-RED

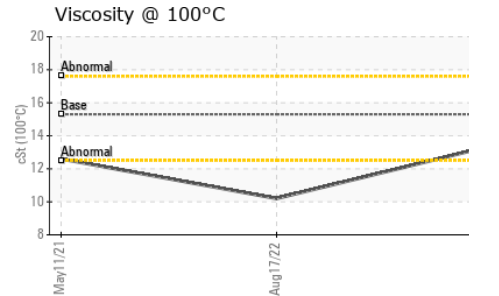
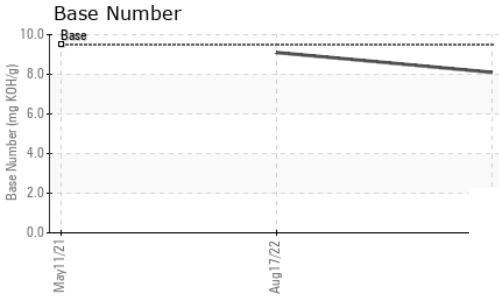
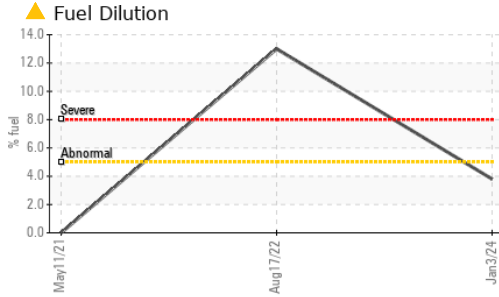
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.3	1.6	1.3
Nitration	Abs/cm	*ASTM D7624 >20	9.2	11.8	10.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.2	25.0	23.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.7	18.8	16.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.5	8.1	9.1	---



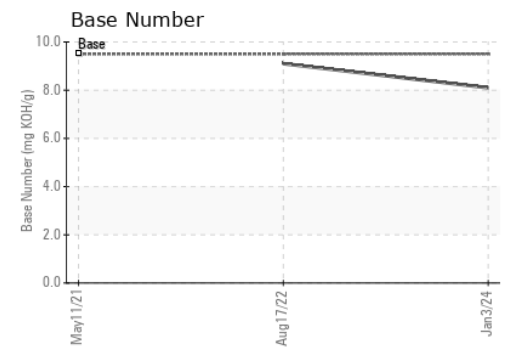
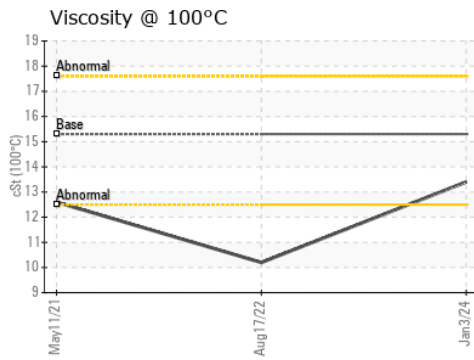
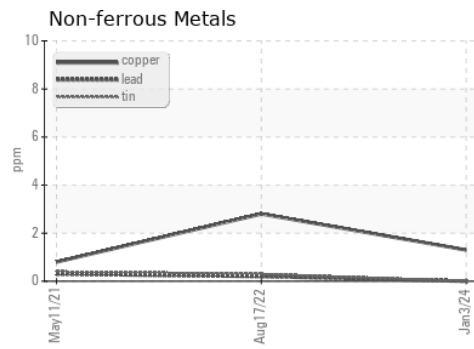
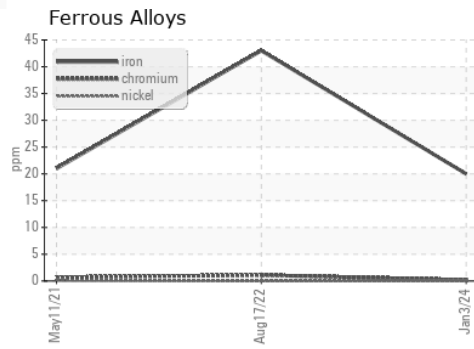
OIL ANALYSIS REPORT



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	13.4	▲ 10.2	12.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0836156 **Recieved** : 09 Jan 2024
Lab Number : 06055812 **Diagnosed** : 12 Jan 2024
Unique Number : 10821761 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

MANHATTAN ROAD AND BRIDGE
 5601 S 122ND E AVE
 TULSA, OK
 US 74146
 Contact: BEN CALDWELL
 kevin.marson@wearcheck.com
 T: (918)728-5749
 F:

Certificate L2367
 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)