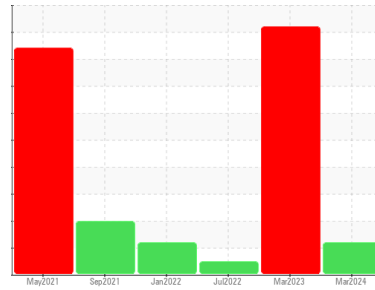




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id

80-190

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

Sodium and/or potassium levels remain elevated. Test for glycol is negative.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0766501	WC0793288	WC0619259
Sample Date	Client Info		26 Mar 2024	30 Mar 2023	22 Jul 2022
Machine Age	hrs	Client Info	7553	6814	6227
Oil Age	hrs	Client Info	7553	587	5990
Oil Changed		Client Info	Changed	Changed	Changed
Sample Status			ATTENTION	SEVERE	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	30	▲ 97	20
Chromium	ppm	ASTM D5185m	>20	1	2	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	1
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	5	3	1
Copper	ppm	ASTM D5185m	>330	7	17	14
Tin	ppm	ASTM D5185m	>15	1	1	<1
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	85	26	38	63
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		30	6	8
Manganese	ppm	ASTM D5185m		<1	2	<1
Magnesium	ppm	ASTM D5185m	350	491	789	686
Calcium	ppm	ASTM D5185m	1800	1545	1325	1273
Phosphorus	ppm	ASTM D5185m	1000	1097	1097	978
Zinc	ppm	ASTM D5185m	1100	1201	1272	1122
Sulfur	ppm	ASTM D5185m	3500	3948	4690	4091

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	11	17	7
Sodium	ppm	ASTM D5185m		20	▲ 346	12
Potassium	ppm	ASTM D5185m	>20	52	▲ 748	38
Glycol	%	*ASTM D2982		NEG	▲ 0.10	NEG

INFRA-RED

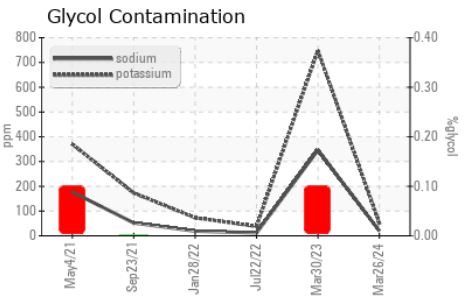
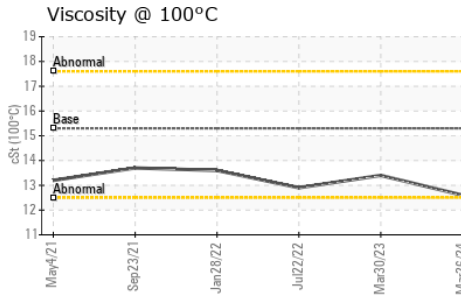
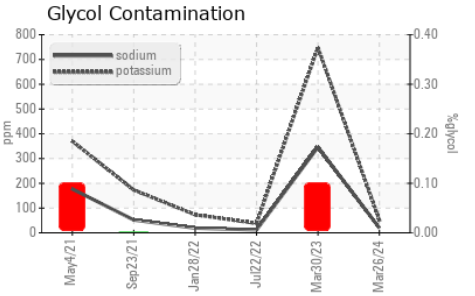
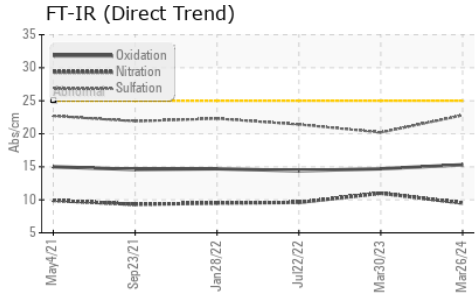
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.5	11.0	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.8	20.2	21.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	14.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	5.7	8.0	8.2



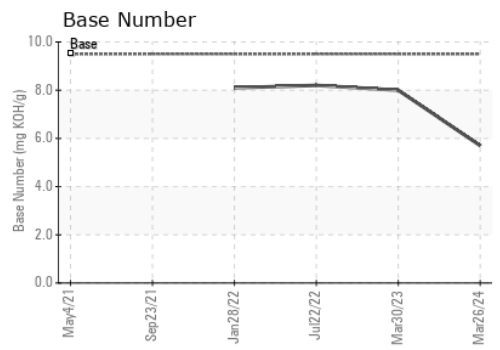
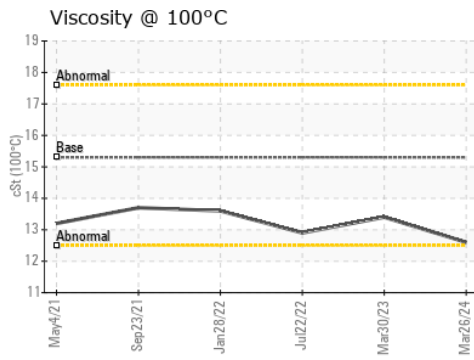
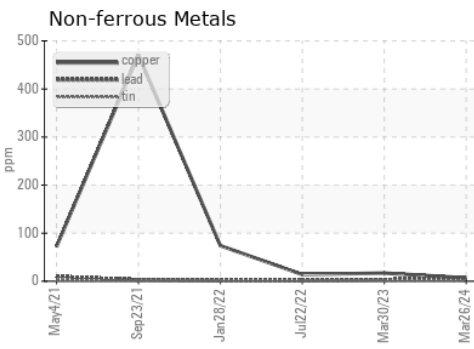
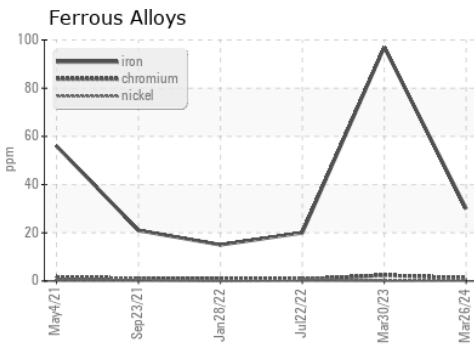
OIL ANALYSIS REPORT



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	12.6	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0766501 **Received** : 19 Apr 2024
Lab Number : 06155115 **Tested** : 24 Apr 2024
Unique Number : 10990538 **Diagnosed** : 24 Apr 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

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 TULSA, OK
 US 74146
 Contact: BEN CALDWELL
 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)