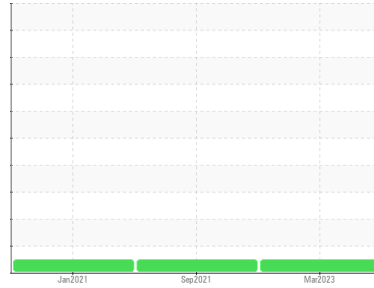




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
BAUER RTG RG-19T 4160225 (S/N 239)

Component
Diesel Engine

Fluid
SHELL ROTELLA T 15W40 (136 GAL)

DIAGNOSIS

Recommendation

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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WCMC153580	WC0602112	WCMC153570
Sample Date	Client Info			26 Mar 2023	27 Sep 2021	28 Jan 2021
Machine Age	hrs	Client Info		0	6893	6385
Oil Age	hrs	Client Info		0	250	1700
Oil Changed	Client Info			N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	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
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	37	34	59
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	<1	1
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	3	<1	0
Aluminum	ppm	ASTM D5185m	>25	7	10	9
Lead	ppm	ASTM D5185m	>40	<1	<1	2
Copper	ppm	ASTM D5185m	>330	1	2	4
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Antimony	ppm	ASTM D5185m		---	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	316	129	90	63
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<1	<1	5
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m	24	18	17	50
Calcium	ppm	ASTM D5185m	2292	2318	2338	2475
Phosphorus	ppm	ASTM D5185m	1064	999	1008	1027
Zinc	ppm	ASTM D5185m	1160	1282	1164	1164
Sulfur	ppm	ASTM D5185m	4996	4084	3170	2938

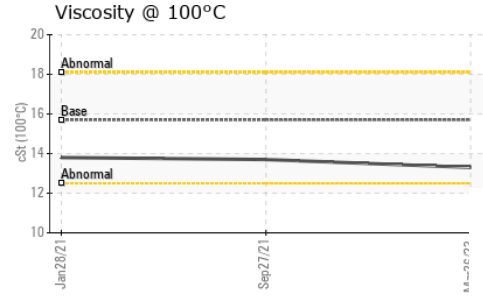
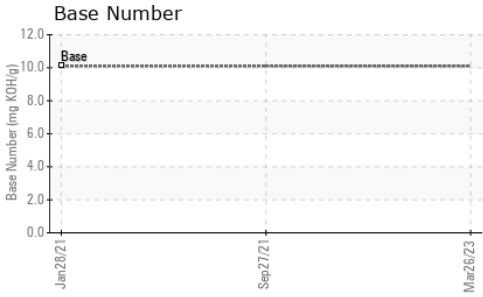
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	3	6
Sodium	ppm	ASTM D5185m		3	5	3
Potassium	ppm	ASTM D5185m	>20	8	8	9

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.2	10.1	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	23.4	25.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	19.6	22
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.5	---	---



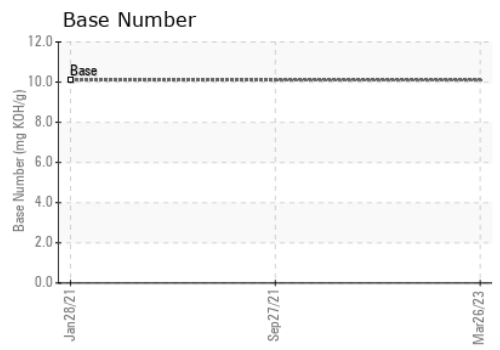
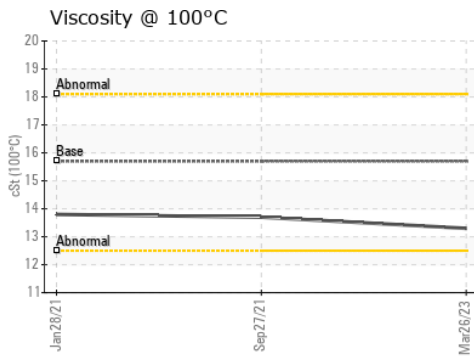
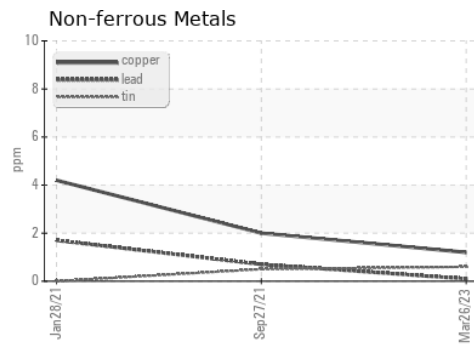
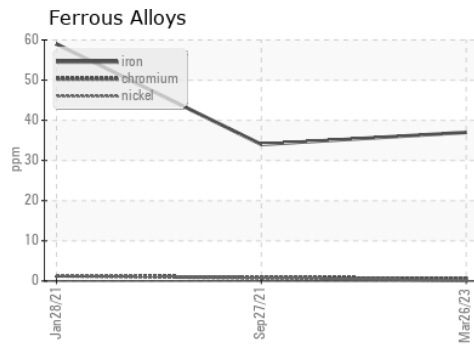
OIL ANALYSIS REPORT



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	15.7	13.3	13.7	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WCMC153580 **Received** : 27 Mar 2023
Lab Number : **05803015** **Tested** : 29 Mar 2023
Unique Number : 10400544 **Diagnosed** : 30 Mar 2023 - Angela Borella
Test Package : CONST (Additional Tests: TBN)

KELLER-NA - KERNERSVILLE
 1024 EAST MOUNTAIN ST
 KERNERSVILLE, NC
 US 27284
 Contact: KEN COOK
 KENNETH.COOK@KELLER-NA.COM
 T:
 F: (336)668-3259

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)