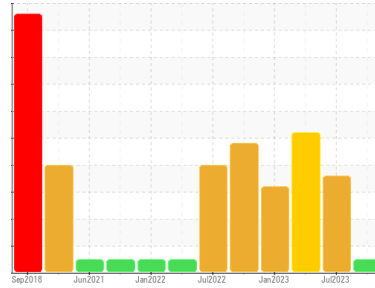




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
UTILITIES
Machine Id
CS1-GEN (S/N 3000364492)
Component
Auxiliary Power Unit Natural Gas Engine
Fluid
DIESEL ENGINE OIL SAE 5W30 (8 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination 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	WC0840389	WC0840392	WC0736983
Sample Date	Client Info	13 Nov 2023	24 Jul 2023	28 Apr 2023
Machine Age	hrs	256	245	204
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	SEVERE	SEVERE

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	6	13	11
Chromium	ppm	ASTM D5185m >4	0	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >9	1	2	1
Lead	ppm	ASTM D5185m >30	4	9	5
Copper	ppm	ASTM D5185m >35	3	7	4
Tin	ppm	ASTM D5185m >4	0	0	2
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	<1	<1	<1

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 250	137	86	104
Barium	ppm	ASTM D5185m 10	7	0	0
Molybdenum	ppm	ASTM D5185m 100	124	192	159
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m 450	502	588	529
Calcium	ppm	ASTM D5185m 3000	1089	1358	1117
Phosphorus	ppm	ASTM D5185m 1150	707	757	698
Zinc	ppm	ASTM D5185m 1350	749	918	848
Sulfur	ppm	ASTM D5185m 4250	2946	4092	4252

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >+100	8	13	12
Sodium	ppm	ASTM D5185m	0	10	13
Potassium	ppm	ASTM D5185m >20	<1	<1	3

INFRA-RED

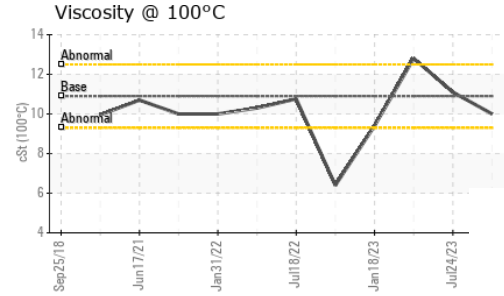
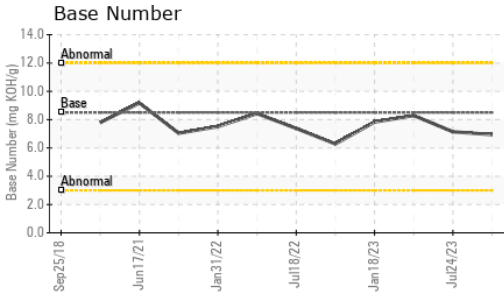
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	5.6	9.6	11.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	16.0	17.4	8.5

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	9.3	13.7	12.5
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	6.94	7.14	8.29



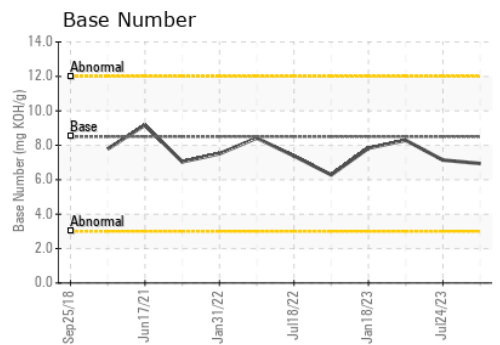
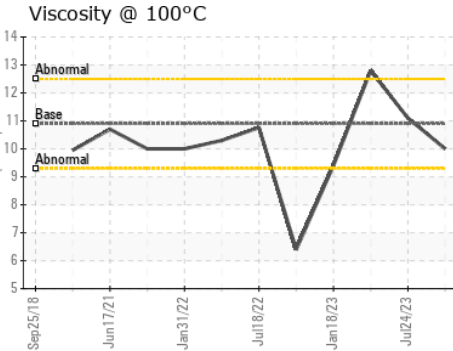
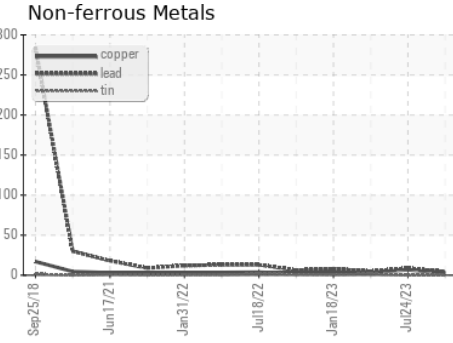
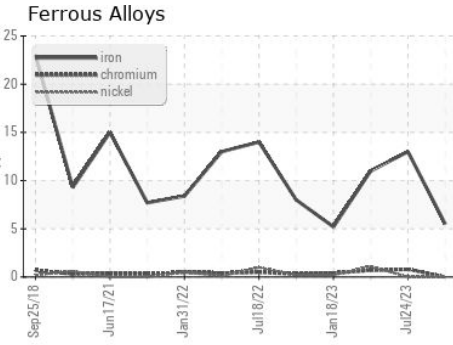
OIL ANALYSIS REPORT



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	▲ MODER
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	▲ MILKY
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	10.9	10.0	▲ 11.1	12.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0840389 **Received** : 15 Nov 2023
Lab Number : 06009159 **Diagnosed** : 17 Nov 2023
Unique Number : 10742921 **Diagnostician** : Wes Davis
Test Package : IND 2

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 MOORE, SC
 US 29369
 Contact: JAMES HARRIS
 james.harris@toraycma.com
 T:
 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)