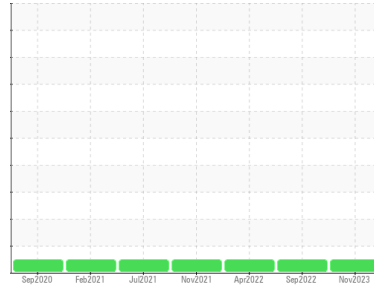




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
2110

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 5W30 (--- 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 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			WC0876679	WC0717393	WC0686133
Sample Date	Client Info			09 Nov 2023	08 Sep 2022	15 Apr 2022
Machine Age	mls	Client Info		414232	316183	262524
Oil Age	mls	Client Info		50000	100000	100000
Oil Changed	Client Info			Changed	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	29	66
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	1
Titanium	ppm	ASTM D5185m		<1	<1	2
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	2	6
Lead	ppm	ASTM D5185m	>40	<1	1	2
Copper	ppm	ASTM D5185m	>330	9	5	9
Tin	ppm	ASTM D5185m	>15	<1	<1	2
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	38	14	12
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	18	61	70
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m	450	261	1111	1242
Calcium	ppm	ASTM D5185m	3000	2154	852	1083
Phosphorus	ppm	ASTM D5185m	1150	962	979	1125
Zinc	ppm	ASTM D5185m	1350	1363	1277	1371
Sulfur	ppm	ASTM D5185m	4250	3936	2920	2797

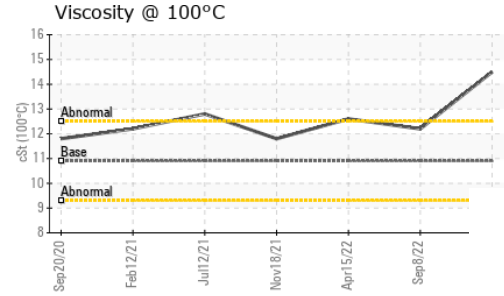
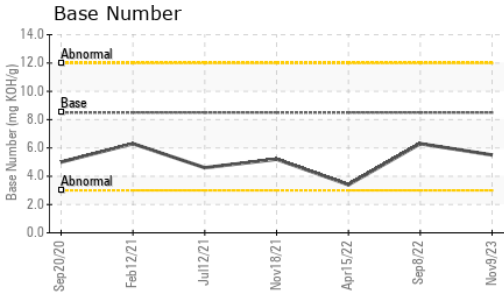
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	11	9	7
Sodium	ppm	ASTM D5185m		13	4	6
Potassium	ppm	ASTM D5185m	>20	20	5	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.6	0.9	1.4
Nitration	Abs/cm	*ASTM D7624	>20	10.0	13.0	16.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.6	27.1	33.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.1	26.9	36.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.5	6.3	3.4



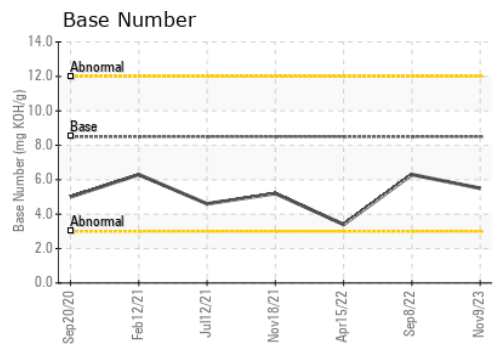
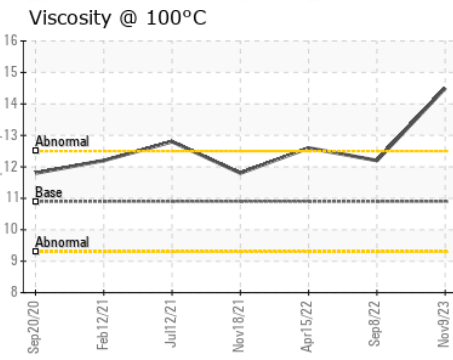
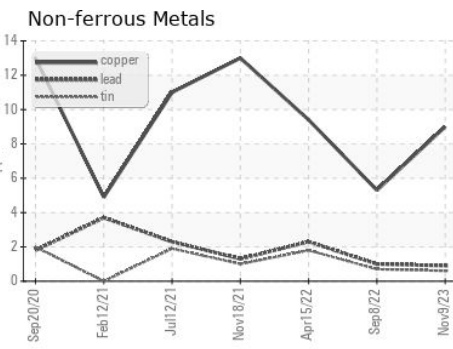
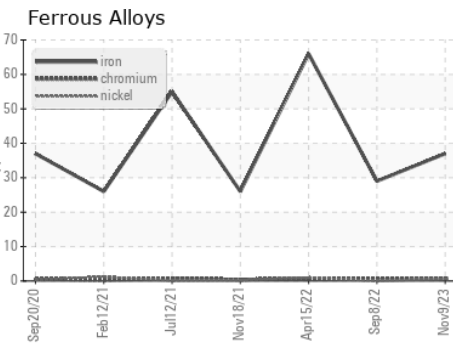
OIL ANALYSIS REPORT



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	10.9	14.5	12.2	12.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0876679 **Received** : 24 Nov 2023
Lab Number : **06017230** **Diagnosed** : 28 Nov 2023
Unique Number : 10756374 **Diagnostician** : Sean Felton
Test Package : FLEET

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 F: (336)635-1791

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)