



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
[62005761505]

Machine Id
8

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

WEAR

All component wear rates are normal.

CONTAMINATION

There is a high amount of fuel present in the oil. There is an abnormal amount of solids and carbon present in the oil.

FLUID CONDITION

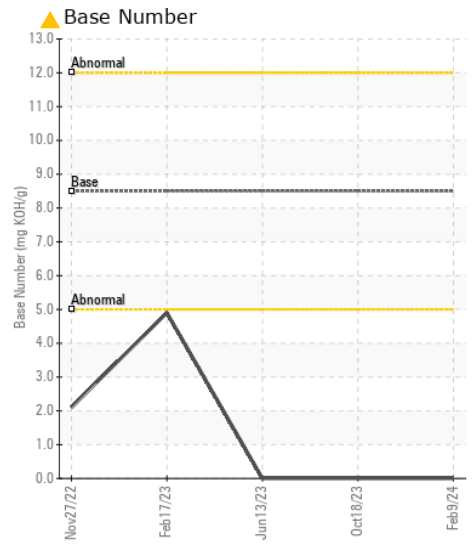
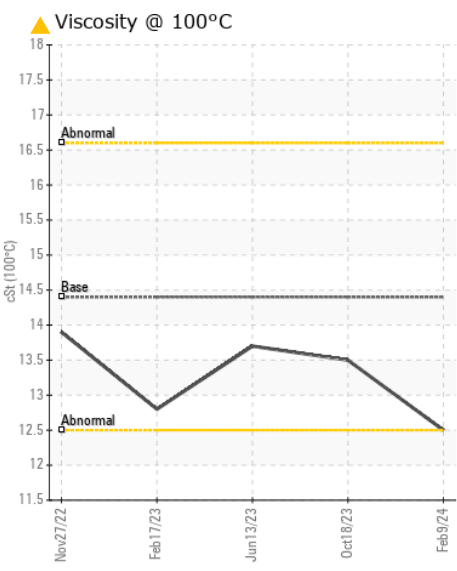
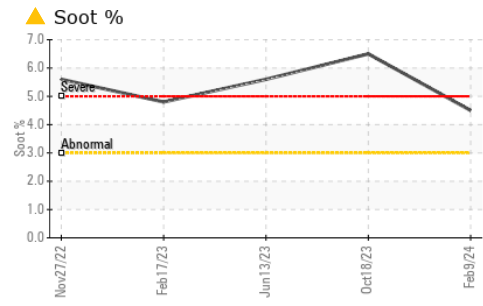
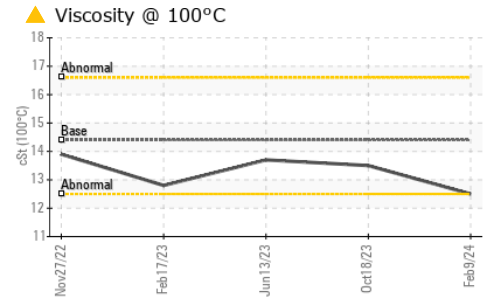
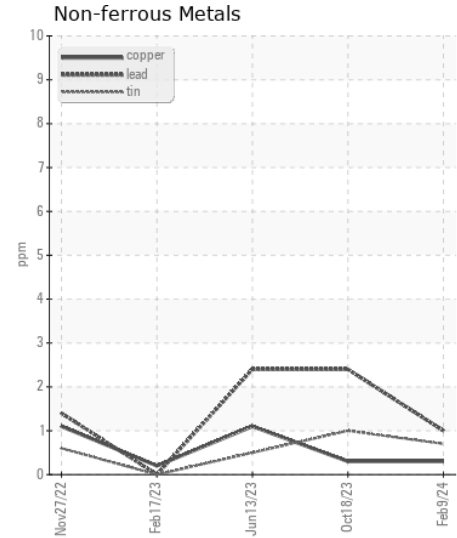
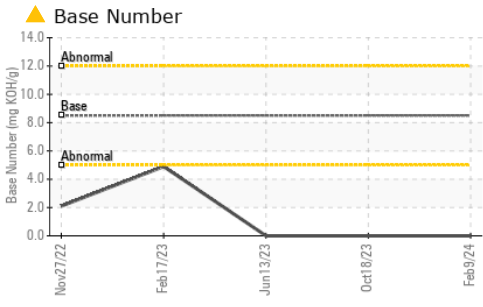
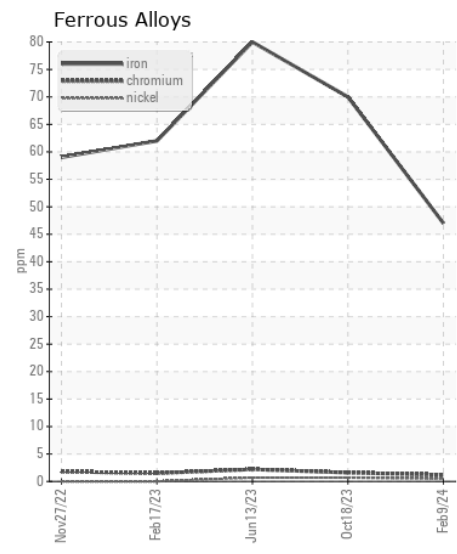
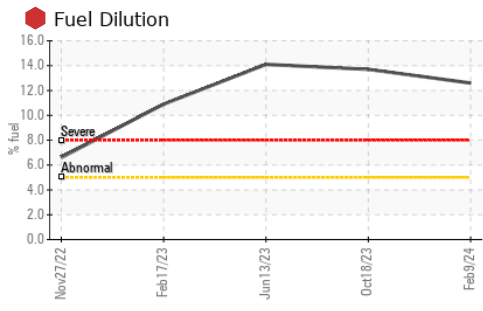
Fuel is present in the oil and is lowering the viscosity. The BN level is low.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0828068	WC0828107	WC0800007
Sample Date		Client Info		09 Feb 2024	18 Oct 2023	13 Jun 2023
Machine Age	mls	Client Info		104249	99570	94484
Oil Age	mls	Client Info		0	0	94484
Filter Age	mls	Client Info		0	0	94484
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				SEVERE	SEVERE	SEVERE

Iron	ppm	ASTM D5185m	>100	47	70	80
Chromium	ppm	ASTM D5185m	>20	1	2	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		64	48	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	15	9	11
Lead	ppm	ASTM D5185m	>40	1	2	2
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>25	6	5	5
Potassium	ppm	ASTM D5185m	>20	4	4	4
Fuel	%	ASTM D3524	>5	12.6	13.7	14.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	4.5	6.5	5.6
Nitration	Abs/cm	*ASTM D7624	>20	14.7	21.5	16.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.4	38.4	33.5
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

Sodium	ppm	ASTM D5185m	>158	4	5	5
Boron	ppm	ASTM D5185m	250	64	45	39
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	6	6	8
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	364	389	562
Calcium	ppm	ASTM D5185m	3000	1357	1195	1083
Phosphorus	ppm	ASTM D5185m	1150	845	792	850
Zinc	ppm	ASTM D5185m	1350	999	925	1009
Sulfur	ppm	ASTM D5185m	4250	3115	2872	2976
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8	28.3	20.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	0.0	0.0	0.0
Visc @ 100°C	cSt	ASTM D445	14.4	12.5	13.5	13.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0828068 **Received** : 14 Feb 2024
Lab Number : 06089463 **Tested** : 19 Feb 2024
Unique Number : 10876908 **Diagnosed** : 19 Feb 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: PercentFuel)

CASWELL COUNTY SCHOOL BUS
 353 COUNTY HOME ROAD
 YANCEYVILLE, NC
 US 27379
 Contact: DEBRA MOORE
 debra.moore@caswell.k12.nc.us
 T: (336)694-4116
 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)