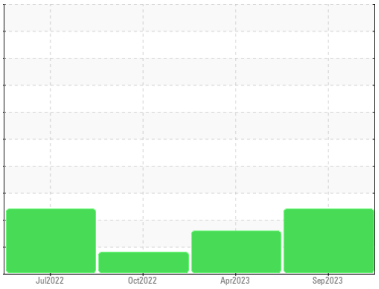
PROBLEM SUMMARY

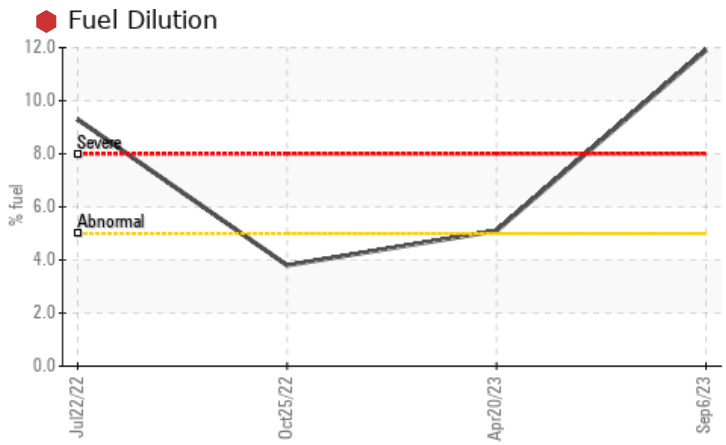
Sample Rating Trend

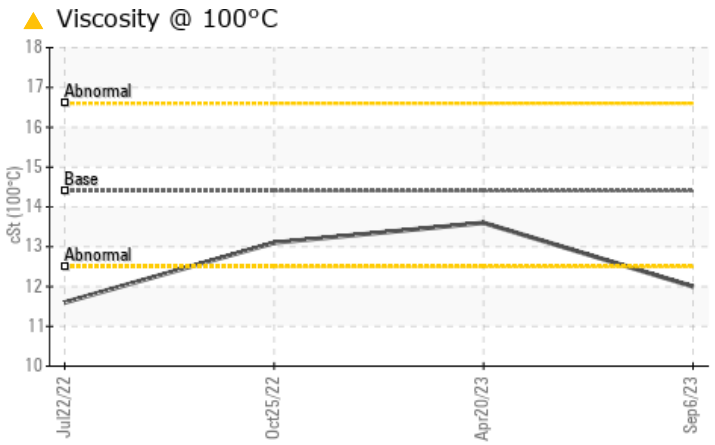


FUEL

Machine Id
7718
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	MARGINAL
Fuel	%	ASTM D3524	>5	**11.9**	5.1	3.8
Visc @ 100°C	cSt	ASTM D445	14.4	**12.0**	13.6	13.1

Customer Id: TOWCHANC
Sample No.: WC0844986
Lab Number: 05963297
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

20 Apr 2023 Diag: Wes Davis

SOOT

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is a moderate amount of fuel present in the oil. Light concentration of carbon/soot present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

view report

25 Oct 2022 Diag: Don Baldridge

FUEL

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Light fuel dilution occurring. 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.

view report

22 Jul 2022 Diag: Jonathan Hester

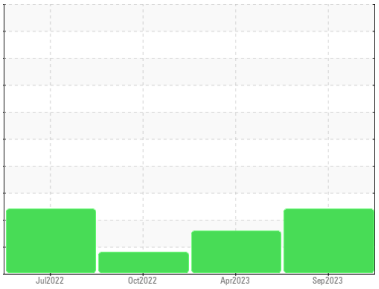
FUEL

We advise that you check the fuel injection system. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
7718
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a high amount of fuel present in the oil.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0844986**	WC0810338	WC0744304
Sample Date		Client Info		**06 Sep 2023**	20 Apr 2023	25 Oct 2022
Machine Age	mls	Client Info		**229239**	223801	212500
Oil Age	mls	Client Info		**0**	0	6000
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	MARGINAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**60**	51	27
Chromium	ppm	ASTM D5185m	>20	**2**	1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	2
Aluminum	ppm	ASTM D5185m	>20	**5**	3	5
Lead	ppm	ASTM D5185m	>40	**<1**	<1	0
Copper	ppm	ASTM D5185m	>330	**2**	4	1
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**7**	11	20
Barium	ppm	ASTM D5185m	10	**2**	0	0
Molybdenum	ppm	ASTM D5185m	100	**72**	76	64
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	450	**370**	497	478
Calcium	ppm	ASTM D5185m	3000	**1641**	1844	1520
Phosphorus	ppm	ASTM D5185m	1150	**939**	1128	973
Zinc	ppm	ASTM D5185m	1350	**1163**	1373	1170
Sulfur	ppm	ASTM D5185m	4250	**3033**	3778	4110

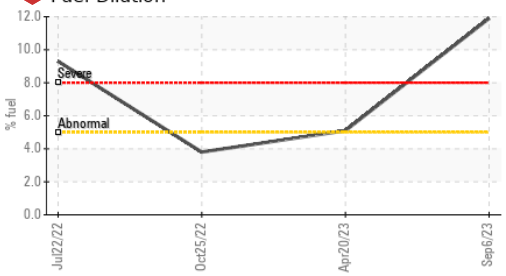
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**15**	9	7
Sodium	ppm	ASTM D5185m	>158	**46**	28	14
Potassium	ppm	ASTM D5185m	>20	**4**	6	6
Fuel	%	ASTM D3524	>5	**11.9**	5.1	3.8

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**2.2**	3.2	1.4
Nitration	Abs/cm	*ASTM D7624	>20	**14.2**	14.1	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**29.0**	29.7	22.5

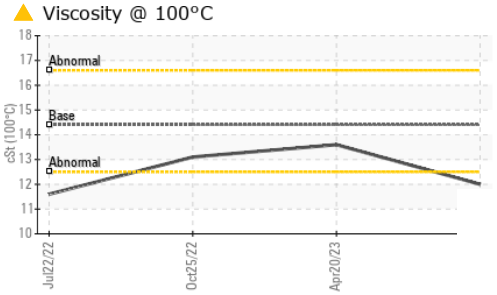
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**27.7**	23.1	16.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**6.0**	7.4	9.6

OIL ANALYSIS REPORT

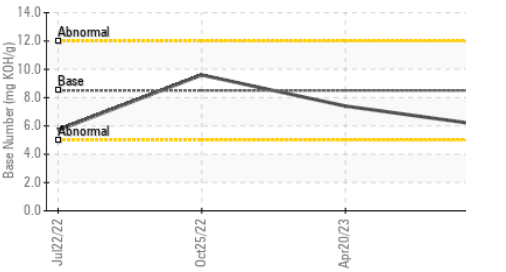
Fuel Dilution



Viscosity @ 100°C



Base Number

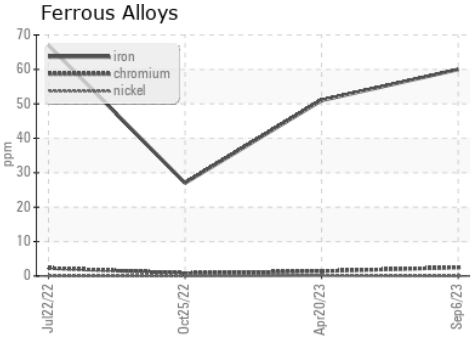


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

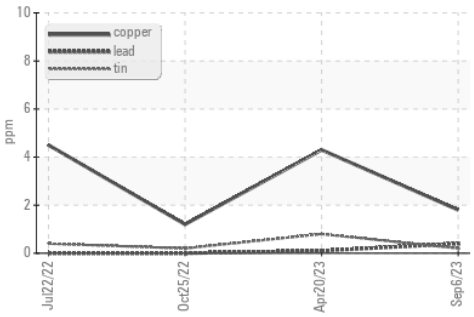
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **12.0**	13.6	13.1

GRAPHS

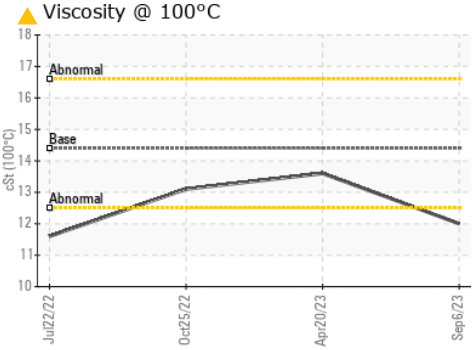
Ferrous Alloys



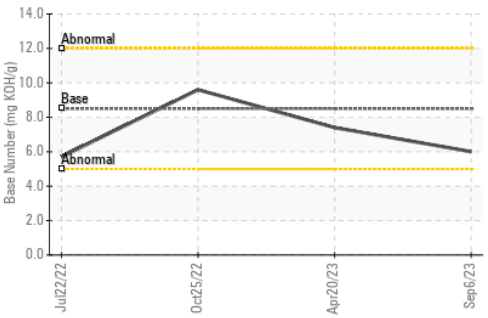
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0844986 **Received** : 28 Sep 2023
Lab Number : 05963297 **Diagnosed** : 29 Sep 2023
Unique Number : 10669848 **Diagnostician** : Don Baldridge
Test Package : FLEET (Additional Tests: PercentFuel)

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)

TOWN OF CHAPEL HILL
6900 MILLHOUSE RD
CHAPEL HILL, NC
US 27516
Contact: Lisa DePasqua
ldepasqua@townofchapelhill.org
T: (919)696-4941
F: