



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**3234**  
Component  
**Diesel Engine**  
Fluid  
**SHELL 10W30 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0878618</b>	WC0878593	WC0822897
Sample Date		Client Info		<b>02 Mar 2024</b>	01 Dec 2023	02 Sep 2023
Machine Age	mls	Client Info		<b>400160</b>	378265	354402
Oil Age	mls	Client Info		<b>21895</b>	23863	23908
Filter Age	mls	Client Info		<b>21895</b>	23863	23908
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	13	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	2	3
Lead	ppm	ASTM D5185m	>40	<b>3</b>	3	5
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

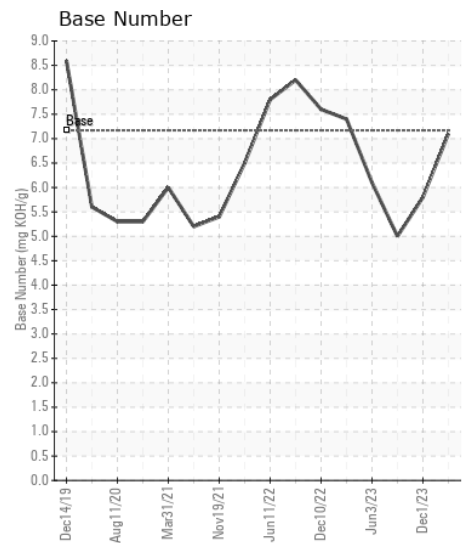
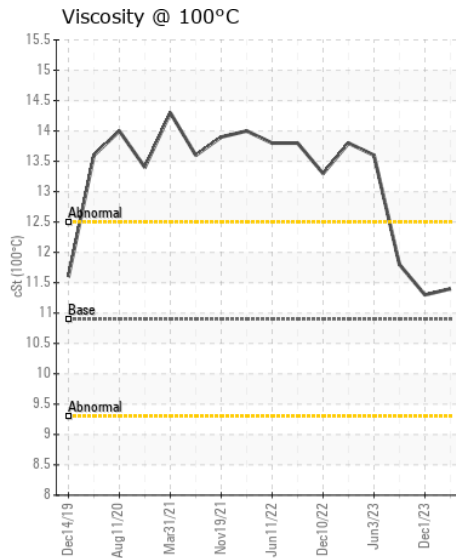
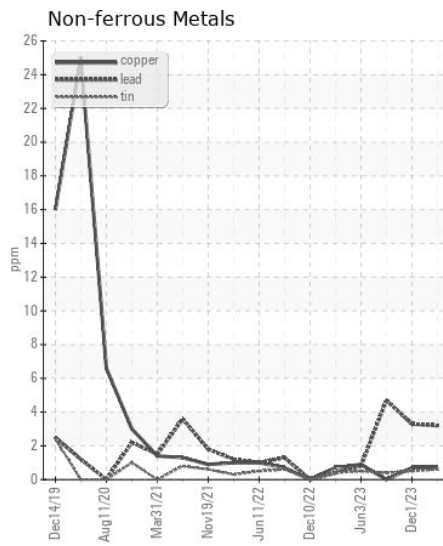
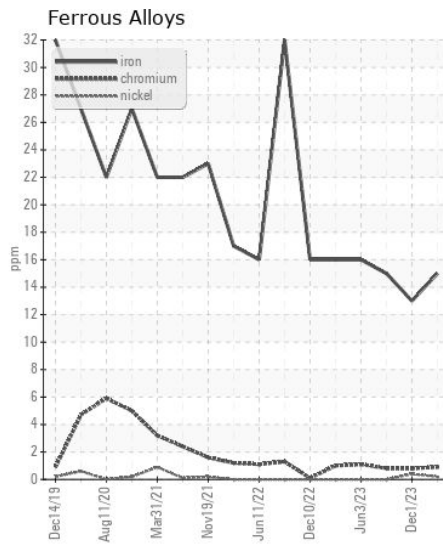
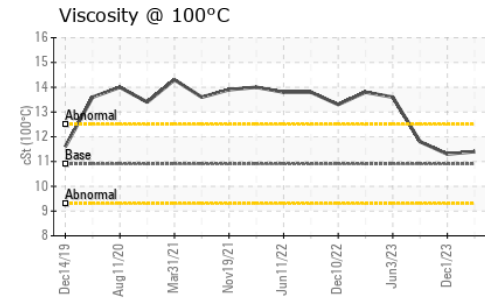
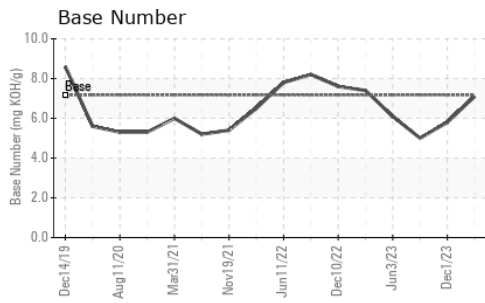
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	17
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.0</b>	9.8	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.9</b>	21.2	21.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### 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.

Sodium	ppm	ASTM D5185m		<b>2</b>	1	2
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	<1	3
Barium	ppm	ASTM D5185m		<b>0</b>	3	0
Molybdenum	ppm	ASTM D5185m		<b>65</b>	53	15
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	470	<b>1044</b>	854	72
Calcium	ppm	ASTM D5185m	1150	<b>1188</b>	1176	2224
Phosphorus	ppm	ASTM D5185m	94	<b>1154</b>	1000	866
Zinc	ppm	ASTM D5185m	1030	<b>1359</b>	1222	1075
Sulfur	ppm	ASTM D5185m		<b>3409</b>	3331	3898
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.9</b>	17.7	13.0
Base Number (BN)	mg KOH/g	ASTM D2896	7.17	<b>7.1</b>	5.8	5.0
Visc @ 100°C	cSt	ASTM D445	10.90	<b>11.4</b>	11.3	11.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0878618  
**Lab Number** : 06121478  
**Unique Number** : 10930311  
**Test Package** : FLEET  
**Received** : 18 Mar 2024  
**Tested** : 19 Mar 2024  
**Diagnosed** : 19 Mar 2024 - Wes Davis

**CARCO TRANSPORTATION**  
 3403 EAST ROOSEVELT ROAD  
 LITTLE ROCK, AR  
 US 72206  
 Contact: DENNIS CATES  
 denniscates@carcotrans.com  
 T: (800)967-0777  
 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)