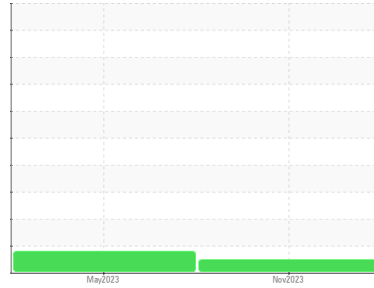




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**[BOSTON]**  
 Machine Id  
**ALSTOM C067**  
 Component  
**Front Left Gearbox**  
 Fluid  
**TOTAL CARTER SH 220 (--- 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0798973</b>	WC0781648	---
Sample Date	Client Info			<b>11 Nov 2023</b>	13 May 2023	---
Machine Age	hrs	Client Info		<b>0</b>	0	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed	Client Info			<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	<b>161</b>	▲ 224	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	2	---
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	6	---
Lead	ppm	ASTM D5185m	>50	<b>2</b>	3	---
Copper	ppm	ASTM D5185m	>200	<b>43</b>	59	---
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	<1	---
Manganese	ppm	ASTM D5185m		<b>2</b>	2	---
Magnesium	ppm	ASTM D5185m		<b>1</b>	3	---
Calcium	ppm	ASTM D5185m		<b>6</b>	11	---
Phosphorus	ppm	ASTM D5185m		<b>321</b>	360	---
Zinc	ppm	ASTM D5185m		<b>108</b>	132	---
Sulfur	ppm	ASTM D5185m		<b>2703</b>	3402	---

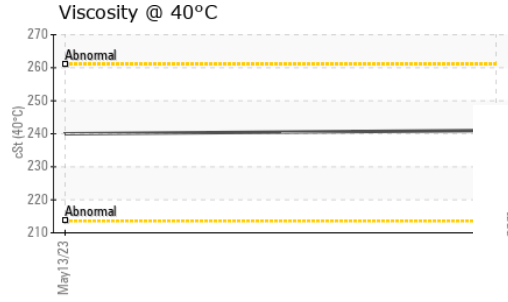
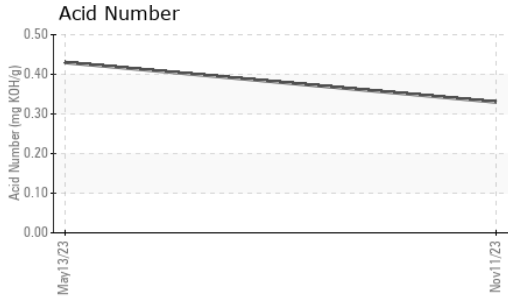
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>18</b>	31	---
Sodium	ppm	ASTM D5185m		<b>23</b>	33	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.33</b>	0.43	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---
Free Water	scalar	*Visual		<b>NEG</b>	NEG	---



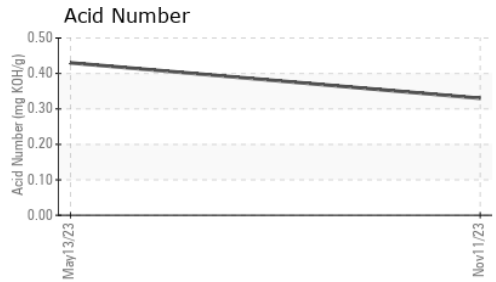
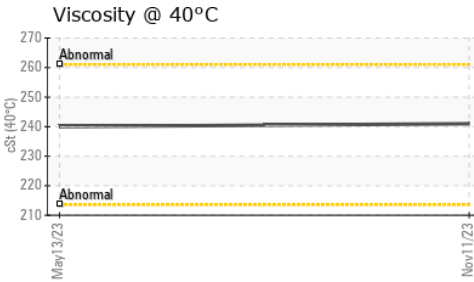
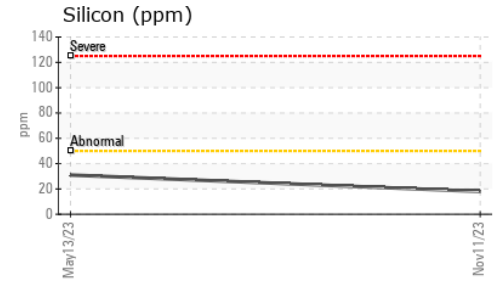
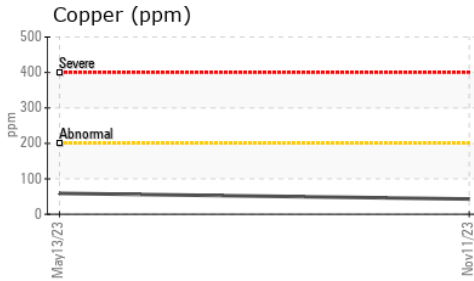
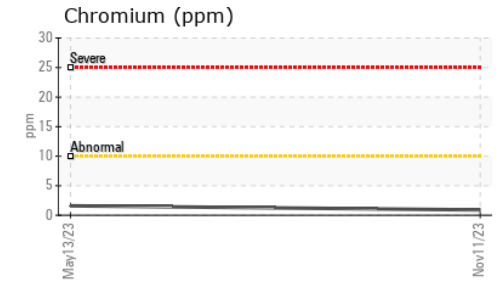
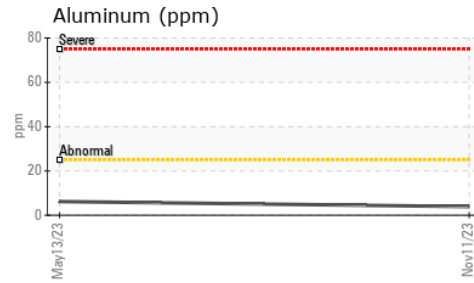
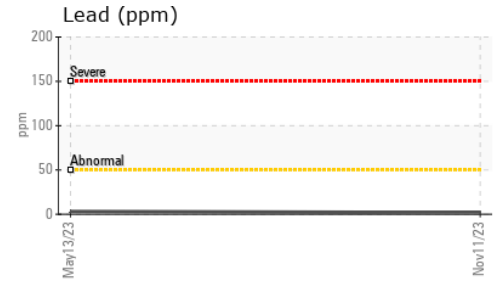
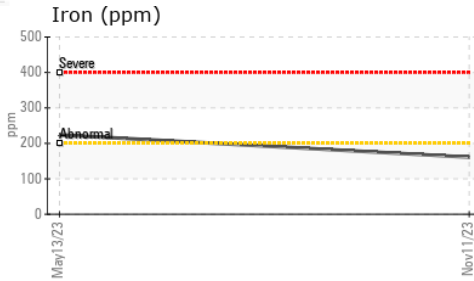
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	241	240	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0798973      **Received** : 17 Nov 2023  
**Lab Number** : 06011038      **Diagnosed** : 20 Nov 2023  
**Unique Number** : 10750182      **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

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)

**AMTRAK**  
 1401 W STREET NE, HIGH SPEED RAIL 2ND FLOOR  
 WASHINGTON, DC  
 US 20018

Contact: MICHAEL PORTER  
 michael.porter@amtrak.com

T: (202)870-1399

F: