



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**[BOSTON]**  
 Machine Id  
**ALSTOM CL261 C012 - 2004**  
 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>WC0673235</b>	---	---
Sample Date	Client Info		<b>11 Nov 2023</b>	---	---
Machine Age	hrs Client Info		<b>0</b>	---	---
Oil Age	hrs Client Info		<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m	>200	<b>114</b>	---	---
Chromium	ppm ASTM D5185m	>10	<b>&lt;1</b>	---	---
Nickel	ppm ASTM D5185m	>10	<b>&lt;1</b>	---	---
Titanium	ppm ASTM D5185m		<b>0</b>	---	---
Silver	ppm ASTM D5185m		<b>0</b>	---	---
Aluminum	ppm ASTM D5185m	>25	<b>3</b>	---	---
Lead	ppm ASTM D5185m	>50	<b>2</b>	---	---
Copper	ppm ASTM D5185m	>200	<b>53</b>	---	---
Tin	ppm ASTM D5185m	>10	<b>&lt;1</b>	---	---
Vanadium	ppm ASTM D5185m		<b>0</b>	---	---
Cadmium	ppm ASTM D5185m		<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m		<b>&lt;1</b>	---	---
Barium	ppm ASTM D5185m		<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m		<b>0</b>	---	---
Manganese	ppm ASTM D5185m		<b>1</b>	---	---
Magnesium	ppm ASTM D5185m		<b>1</b>	---	---
Calcium	ppm ASTM D5185m		<b>4</b>	---	---
Phosphorus	ppm ASTM D5185m		<b>363</b>	---	---
Zinc	ppm ASTM D5185m		<b>124</b>	---	---
Sulfur	ppm ASTM D5185m		<b>3042</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m	>50	<b>18</b>	---	---
Sodium	ppm ASTM D5185m		<b>11</b>	---	---
Potassium	ppm ASTM D5185m	>20	<b>0</b>	---	---

## FLUID DEGRADATION

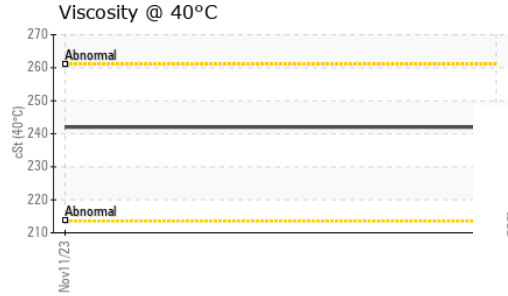
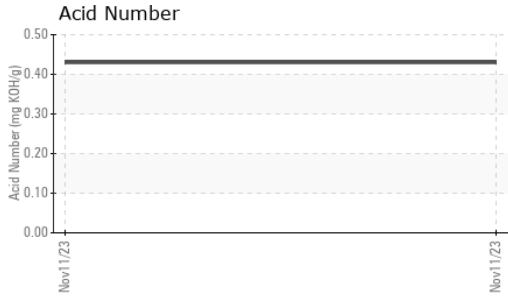
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045		<b>0.43</b>	---	---

## VISUAL

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



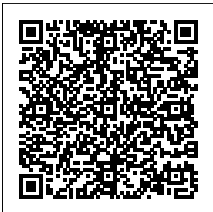
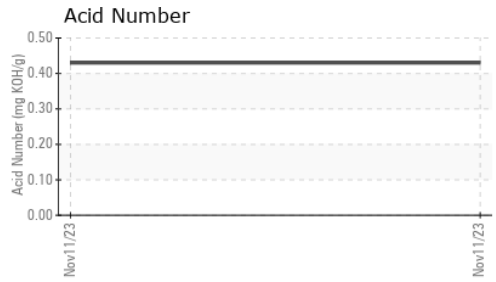
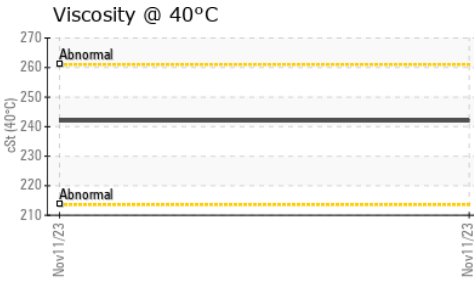
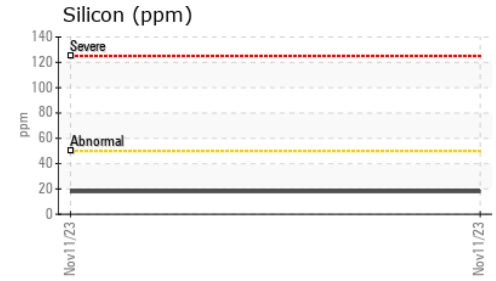
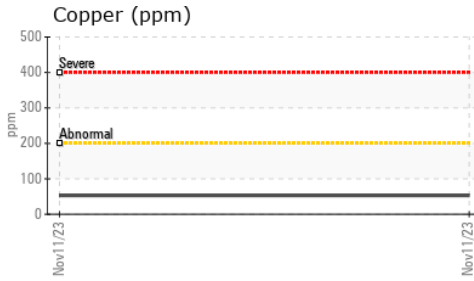
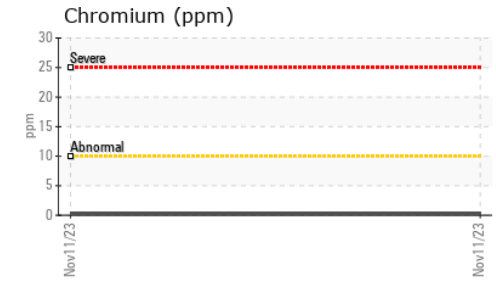
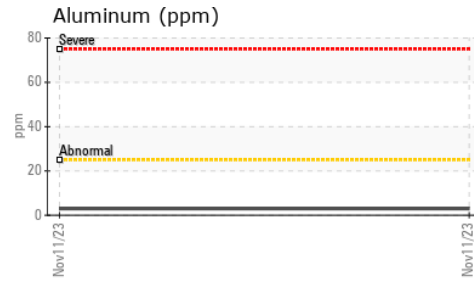
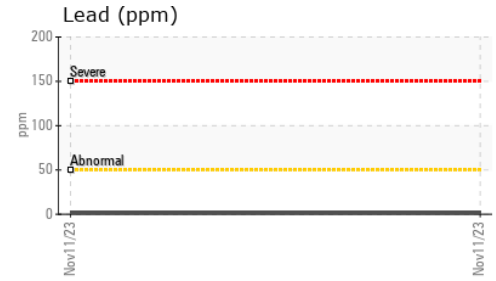
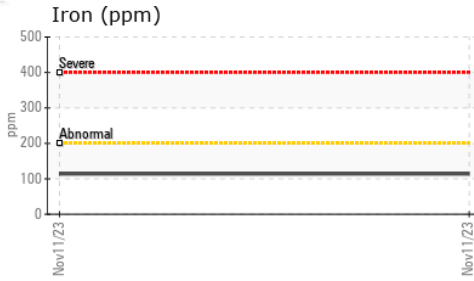
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	<b>242</b>	---	---

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0673235 **Received** : 17 Nov 2023  
**Lab Number** : 06011041 **Diagnosed** : 20 Nov 2023  
**Unique Number** : 10750185 **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: