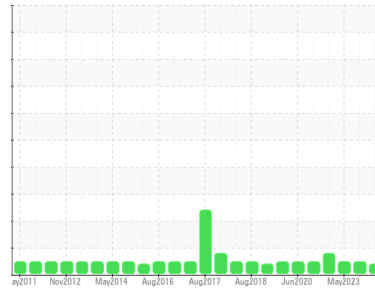




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**[BOSTON]**  
 Machine Id  
**ALSTOM R100**  
 Component  
**Gearbox**  
 Fluid  
**TOTAL CARTER SH 220 (3 GAL)**

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. 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 oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0798865</b>	WC0798795	WC0781592
Sample Date	Client Info		<b>15 May 2024</b>	12 May 2024	13 May 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	Not Chngd	N/A
Sample Status			<b>ATTENTION</b>	NORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>150</b>	132	120
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	3	3
Lead	ppm	ASTM D5185m >50	<b>&lt;1</b>	2	0
Copper	ppm	ASTM D5185m >200	<b>26</b>	37	30
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Antimony	ppm	ASTM D5185m >5	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	<1	2
Barium	ppm	ASTM D5185m	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	<1	3
Manganese	ppm	ASTM D5185m	<b>2</b>	2	2
Magnesium	ppm	ASTM D5185m	<b>0</b>	2	3
Calcium	ppm	ASTM D5185m	<b>5</b>	10	11
Phosphorus	ppm	ASTM D5185m	<b>322</b>	394	376
Zinc	ppm	ASTM D5185m	<b>75</b>	96	46
Sulfur	ppm	ASTM D5185m	<b>3900</b>	4884	5158

### CONTAMINANTS

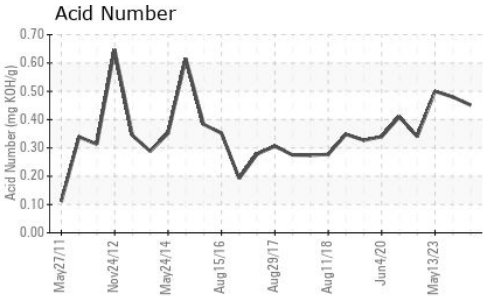
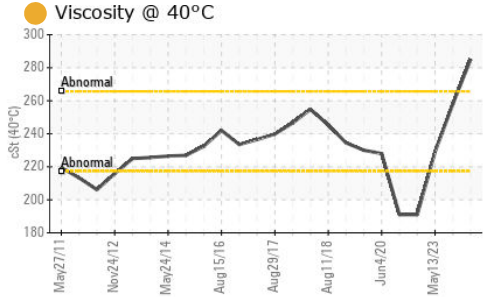
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>17</b>	20	25
Sodium	ppm	ASTM D5185m	<b>26</b>	32	32
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	<1

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.451</b>	0.48	0.50



# OIL ANALYSIS REPORT

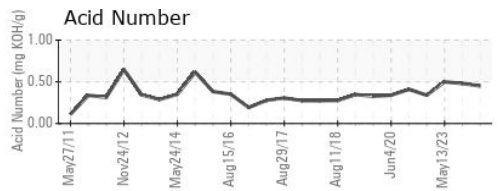
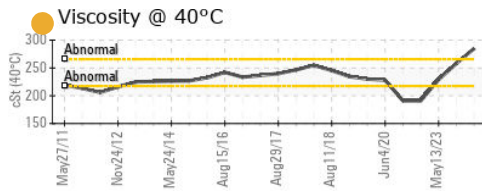
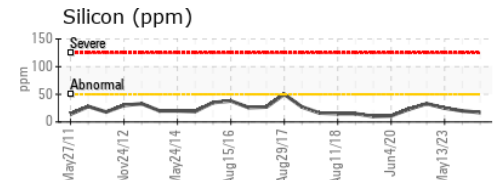
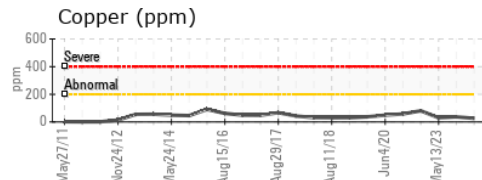
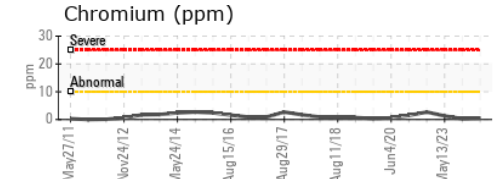
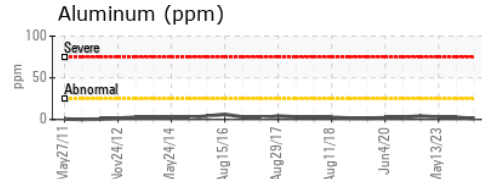
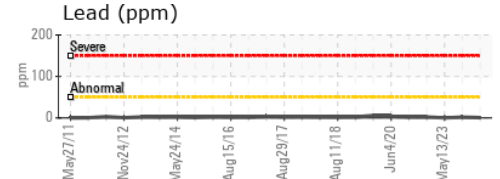
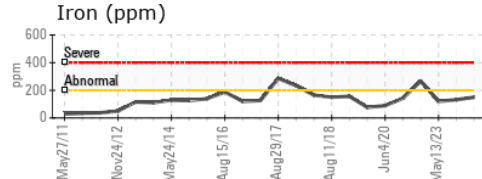


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	● 285.1	258	229

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0798865 **Received** : 11 Jun 2024  
**Lab Number** : 06207152 **Tested** : 17 Jun 2024  
**Unique Number** : 11074613 **Diagnosed** : 18 Jun 2024 - Jonathan Hester  
**Test Package** : MOB 2

**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:

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)