

MEMO / NOTE DE SERVICE



To /
Destinataire Mayor and Members of Council

File/N° de fichier: 22-2023

From /
Expéditeur Renée Amilcar
General Manager, Transit Services Department

Date: July 24, 2023

Subject /
Objet Line 1 Service Update

This memo is to provide an update to the Mayor and Members of Council on the current service levels, completed and planned work on the ongoing investigation, and an update on the safe resumption of service, which is expected by July 31st.

We will continue to provide further updates as they become available. A media availability will be held at 10 a.m. today, and at 4 p.m. daily for the remainder of the week.

R1 Service

- An update was sent early this morning regarding R1 service.

Ongoing investigation

The difficult decision to suspend service was made to ensure the ongoing safety of our customers and staff.

Since then, there has been important progress on all three key areas of the ongoing investigation and the suspension of service on Line 1.

The following tests have been undertaken since the temporary suspension of service:

Ongoing Investigation – Inspections			
Required Work	Purpose/Description	Latest Information	Planned Work
Prybar test	The prybar test is used to ensure the bearing hub assembly is within tolerance.	44 light rail vehicles have been checked. 6 light rail vehicles are being investigated further.	This work is complete. One vehicle that was previously out of service is in Kingston and will be completed at a later date.
Visual track inspection	The mainline infrastructure needs to be inspected for abnormalities.	A visual inspection was undertaken. No issues were identified.	This work is complete.
Rail geometry	Rail to rail measurements were undertaken to confirm adherence to maintenance tolerances.	Multiple digital <i>Geismar</i> tests were conducted.	Results being analyzed to identify any non-conformances.
Restraining Rail	Correct alignment of this safety rail is required to minimize forces on the axle hub.	Several restraining rails have been set to the optimum position.	The remaining restraining rails will be adjusted by July 30.
Failed axle hub	A tear down of the axle hub assembly will be undertaken as part of the root cause.	The failed axle hub assembly is in France with the manufacturer.	Analysis will start this week, with a report expected July 28.

Ongoing Investigation – Instrumented Bogie Tests			
Required Work	Purpose/Description	Latest Information	Planned Work
Tests with varying configurations and loads	Instrumented axles record vibrations and forces under different vehicle loading conditions, speeds, and track infrastructure configurations to check if design parameters are being exceeded.	<p>Multiple load tests were completed:</p> <ul style="list-style-type: none"> • In high temperatures. • With varying weights to the light rail vehicle. • With and without temporary speed restrictions in place. • Restraining rails set at different offsets. <p>Preliminary indications are that forces recorded are unlikely to have caused an acute failure, but repetitive loading cycles contribute to degraded performance.</p>	Detailed analysis of the data from the tests.
Vibration sensors (Smart Bugs®)	A vehicle fitted with vibration monitors is coupled to the instrumented bogie test train to gather data.	The test train was coupled with a light rail vehicle fitted with vibration sensors to complete numerous tests.	Results from tested to be analyzed.
Vibration Sensor signature	A test train equipped with vibration sensors (Smart Bugs®) is operated to determine the vibration signature of a failed hub assembly.	The test train is being configured to undertake these tests.	Test plans are being reviewed with testing expected to take place later this week.

Return to Service Plan

Line 1 service will resume when it is safe to do so.

We continue to meet with Rideau Transit Group (RTG) and Alstom to finalize a safe return to service plan that is sustainable. Our focus is ensuring the increased reliability and long-term sustainability of the system.

The Return to Service Plan has several critical activities and includes a safety letter provided by Alstom, through RTG, and a report from Texelis, the manufacturer of the axles. These documents will be reviewed by OC Transpo, in association with Transportation Resource Associates (TRA), OC Transpo's third party expert.

RETURN TO SERVICE PLAN		
Required Work (investigation)	Status	Expected Completion
Prybar Tests	44 light rail vehicles have been inspected.	Complete. The out of service vehicle in Kingston will be completed later.
Findings of the failed hub assembly from the manufacturer	The failed hub assembly has arrived in France.	Report from manufacturer by July 28.
Restraining Rail adjustments	Restraining rail adjustments are underway.	July 28
Safety note from Alstom and RTG	A draft safety note is being reviewed.	July 31
Gradual safe resumption of service.		July 31

Additionally, I am very pleased to announce that Alstom and RTG have agreed to a design modification to the wheel hub assembly. This means that Ottawa will finally have a permanent fix to this bearing issue, which will help to ensure the long-term sustainability of Line 1.

Reminder: We will continue to provide further updates as they become available. A media availability will be held at 10 a.m. today, and at 4 p.m. daily for the remainder of the week.

*Original signed by,
Renée Amilcar*

c.c.: Senior Leadership Team
Transit Services Departmental Leadership Team
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