



Transportation  
Safety Board  
of Canada

Bureau de la sécurité  
des transports  
du Canada



# Presentation to CARS 2014 Lac-Mégantic derailment

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Canada

# Outline

- About the TSB
- What happened that night?
- TSB recommendations
- What needs to change?
- Conclusions



# About the TSB

**Mission:** To advance transportation safety in the marine, pipeline, rail, and air modes of transportation that are under federal jurisdiction by:

- conducting independent investigations
- identifying safety deficiencies
- identifying causes and contributing factors
- making recommendations
- making our reports public



# The accident



# Lac-Mégantic

*July 2013*

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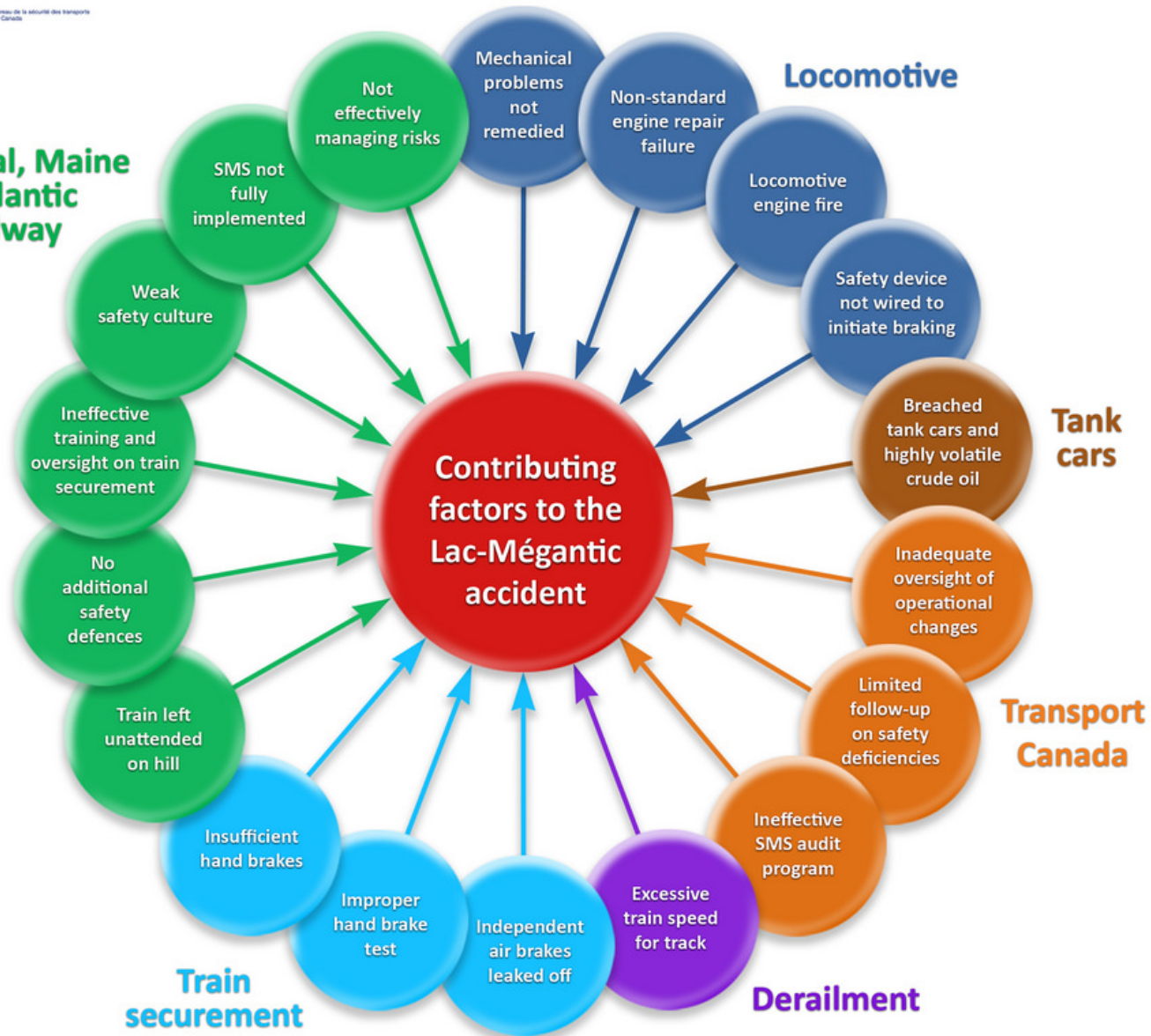


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## Montreal, Maine & Atlantic Railway

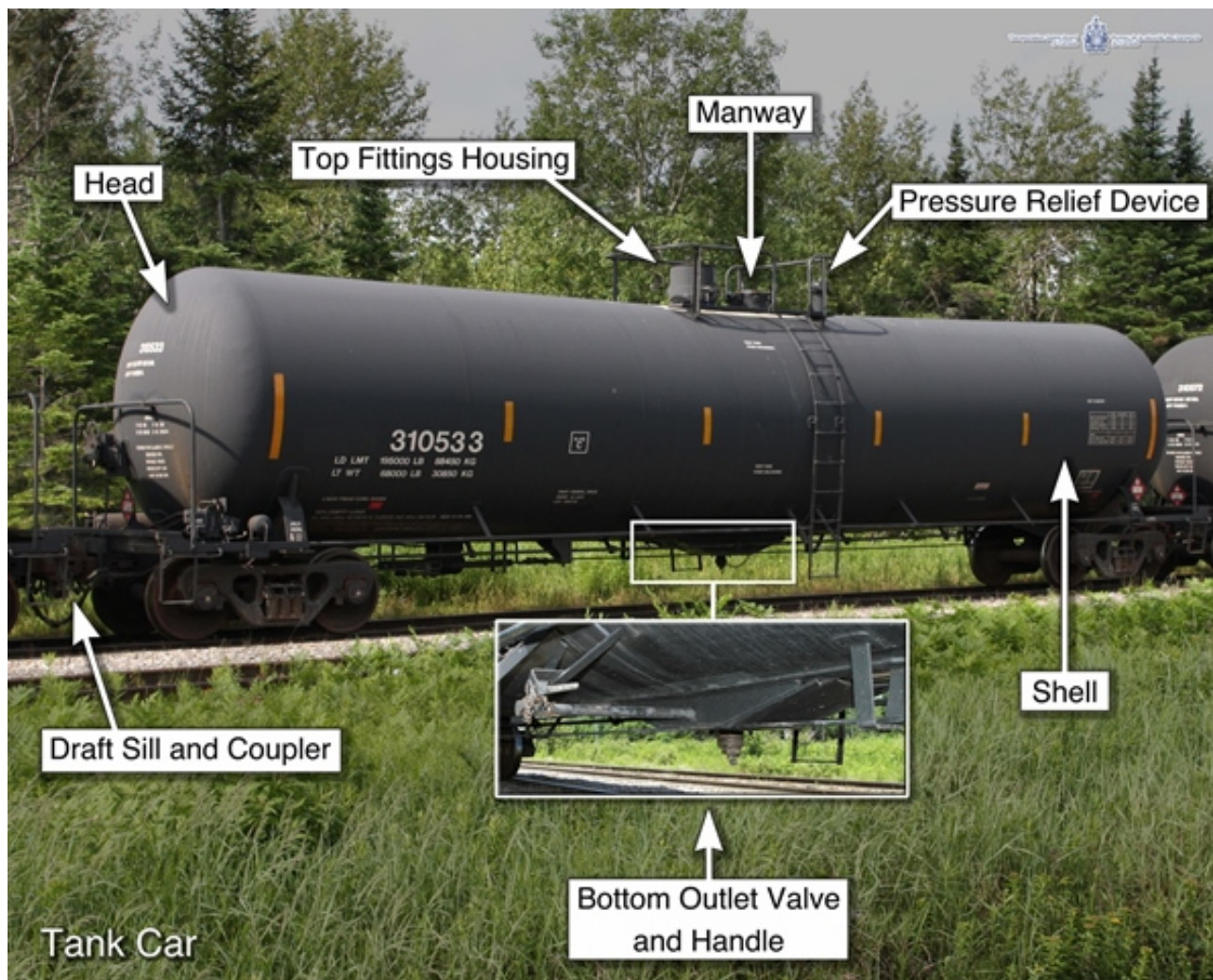


# Tank cars





# Tank cars (continued)





# TSB recommendations

Recommendation		Status
R14-03 (January 2014)	Emergency response assistance plans must be created for routes where large volumes of liquid hydrocarbons, like oil, are shipped.	Fully Satisfactory (June 2014)
R14-02 (January 2014)	Railway companies should conduct strategic route planning and enhance train operations for all trains carrying dangerous goods.	Satisfactory Intent (June 2014)
R14-01 (January 2014)	Enhanced protection standards must be put in place for Class 111 tank cars.	Satisfactory in Part (July 2014)



## TSB recommendations (continued)

Recommendation		Status
<b>R14-05 (August 2014)</b>	Transport Canada must take a more hands-on role when it comes to railways' safety management systems—making sure not just that they exist, but that they are working and that they are effective.	<b>Being assessed</b>
<b>R14-04 (August 2014)</b>	Canadian railways must put in place additional physical defences to prevent runaways.	<b>Being assessed</b>



## **“This must never happen again.”**

To prevent an accident like this from reoccurring, the combined efforts of the following parties are necessary:

- Transport Canada
- railway companies
- shippers
- tank car manufacturers
- refineries in Canada and the United States
- U.S. regulatory agencies (FRA and PHMSA)



# Since that night ...





## Conclusions

- This accident at Lac-Mégantic had 18 causes and contributing factors.
- Complex systems require more than just relying on rules-compliance; they need defences in depth.
- TSB will continue to monitor the implementation of recommendations—and report publicly on any progress.





# Questions?



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