



National Transportation Safety Board

Vehicle Factors Modification, Condition, and Maintenance

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Overview

- 2001 Ford Excursion SUV modifications
- NHTSA alterer requirements
- Ford Qualified Vehicle Modifier (QVM) guidance
- Limousine mechanical condition
- Limousine maintenance

2001 Ford Excursion Modifications

- Originally purchased in March 2001
 - Factory frame cut and additional 144 inches of frame rail added
 - Seating capacity increased from 8 to 18 occupants
 - GVWR increased from 8,600 lbs. to 13,080 lbs.

NHTSA Alterer Requirements

- All manufacturers and vehicle alterers are required to be registered with NHTSA
 - 21st Century Coachworks, company that altered the limousine, was not registered
- Alterers are required to assume legal responsibility for FMVSS certification
- Certification label must be affixed to vehicle
 - Certification label not found on involved limousine

Ford Qualified Vehicle Modifier (QVM) Program

- Ford developed QVM program in 1989
- Voluntary for modifiers and alterers
 - Multiphase approval process for manufacturers
- Ensures final product meets Ford's engineering parameters
 - 21st Century not a QVM program participant

Ford QVM Program

- Ford determines which vehicle models may be altered under the QVM program
- 2001 Excursion was an approved model
 - Ford provides alteration guidance for each model

Ford QVM Program

- Ford QVM guidance issued in July 2001
 - Limited vehicle wheelbase stretch to 120 inches
 - Limited seating to 10 occupants
 - Set maximum GVWR at 9,900 lbs.

Ford QVM Program

- Updated QVM guidance issued December 2002
 - Limited vehicle wheelbase stretch to 140 inches
 - Limited seating to 15 occupants
 - Set maximum GVWR at 11,000 lbs.
- Crash-involved limousine exceeded all three limitations

Limousine Mechanical Condition

- Limousine precrash mechanical condition poor
- NTSB investigators' access limited
 - Unable to perform component function testing
 - Visual-only brake component inspection took place 7 months after crash

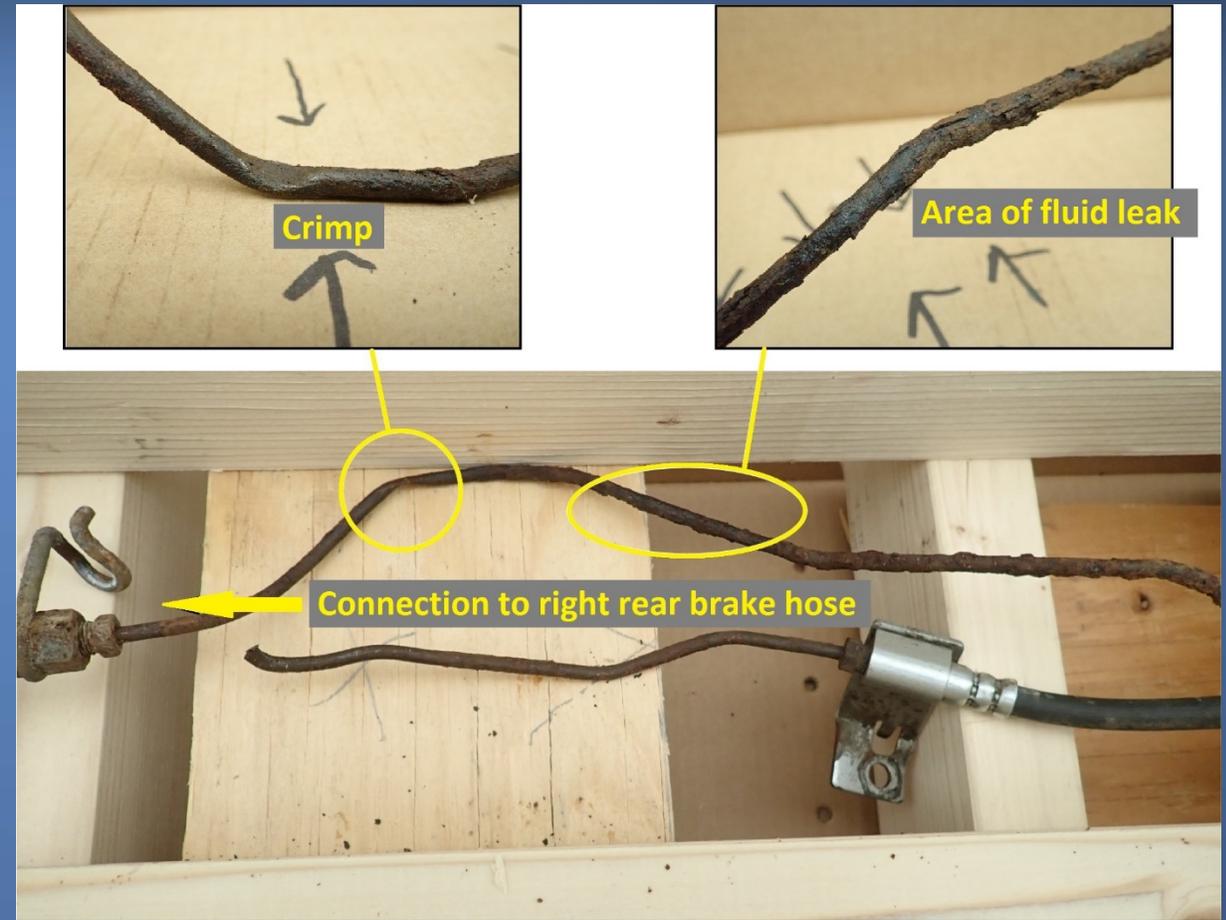
Limousine Mechanical Condition

- Brake system corroded and portions potentially unserviceable



Limousine Mechanical Condition

- Crimped rear brake line
 - Restricted flow of brake fluid
- Some areas coated in brake fluid
- Front/rear split system



Limousine Mechanical Condition

- Chassis severely corroded throughout
 - Body structural support members deteriorated
 - Floorboard rusted through



Limousine Maintenance

- No maintenance records provided to the NTSB by Prestige Limousine or NYSP
- Maintenance documents located by NTSB investigators at Mavis Discount Tire
 - Serviced four times between September 2016 and May 2018

Summary

- Limousine altered to an extent outside of manufacturer recommendations
 - Alterations performed before guidance was issued
- Alterer not registered with NHTSA
- No NHTSA-required FMVSS label was found
- Limousine in poor precrash mechanical condition and inadequately maintained