

**United States Department of
Transportation NHTSA Mass-Size-
Safety Symposium 2013**

**Washington, D. C., USA
13-14 May 2013**

ISBN: 978-1-63266-751-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2013) by National Highway Traffic Safety Administration (NHTSA)
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact National Highway Traffic Safety Administration (NHTSA)
at the address below.

National Highway Traffic Safety Administration (NHTSA)
1200 New Jersey Avenue, SE
West Building
Washington, DC 20590

Phone: (800) 934-8517
Fax: (202) 366-7078

www.nhtsa.gov

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Assessment of Vehicle Mass Reduction Feasibility, Cost and Safety Effects for CAFE and GHG Rulemaking	1
<i>Jim Tamm</i>	
An Analysis of Impact Performance and Cost Considerations for a Low Mass Multi-Material Body Structure	11
<i>Gregory E. Peterson</i>	
NHTSA's Mass/Size/Safety Workshop - Light-Duty Vehicle Technology Cost and Mass Analysis	40
<i>Greg Kolwich</i>	
Relationships Between Fatality Risk, Mass, and Footprint in Model Year 2000-2007 and in Future Passenger Cars and LTVs	58
<i>Chuck Kahane</i>	
Relationships Between Mass, Footprint, and Societal Risk in Recent Light-Duty Vehicles	69
<i>Tom Wenzel</i>	
An Assessment of the Effects of Passenger Vehicle Weight and Size on Accident and Fatality Risk Based on Data for 1991 through 2007 Model Year Vehicles	81
<i>R.M. Van Auken, J.W. Zellner</i>	
Fleet Fatality Risk Sensitivity to Vehicle Mass/Size Change - in Vehicle-to-Vehicle Crashes	102
<i>Ryan Pristow, Guy S. Nusholtz, Yibing Shi</i>	
The Relative Safety of Large and Small Passenger Vehicles	120
<i>Joe Nolan</i>	
Feasible Amount of Mass Reduction for Light Duty Vehicles for Model Years 2017-2025	137
<i>H. Singh</i>	
Honda's Study & Report on the Study Commissioned by NHTSA	175
<i>Chuck Thomas</i>	
NHTSA Mass-Size-Safety Symposium: Engineering and Market Realities	191
<i>Scott Schmidt</i>	
The Role of Body-in-White Weight Reduction in the Attainment of the 2012-2025 US EPA/NHTSA Fuel Economy Mandate	198
<i>Blake Zuidema</i>	
Lighter and Safer Cars by Design	218
<i>N/A</i>	
Entering Mainstream Automotive	235
<i>Jackie Rehkopf</i>	
Fleet Safety Evaluation Methodology: Application to Lightweight Vehicle Designs	257
<i>Stephen Ridella</i>	
Remarks Prepared for David Strickland, NHTSA Administrator NHTSA Workshop on Vehicle Mass-Size-Safety	270
<i>N/A</i>	
Author Index	