



In the past few years, the materials landscape has dramatically changed to meet increasing fuel economy and environmental challenges, while maintaining or increasing safety and performance. Plans for weight reduction are already in motion at OEMs and the aluminum industry is predicting demand for automotive aluminum to double in the next decade.

AUTOMAKERS ARE LOSING WEIGHT

Automakers are implementing plans to downweight vehicles in North America, while regulators and industry experts support weight reduction as part of the solution in meeting new fuel economy and efficiency targets.

“The agencies [NHTSA and EPA] believe the overall effect of mass reduction in cars and LTVs may be close to zero and may possibly be beneficial in terms of the fleet as a whole if mass reduction is carefully applied in the future (as with careful materials substitution and other methods of mass reduction that can **reduce mass without perceptibly changing a car’s shape, functionality, or safety performance** and maintain its structural strength without making it excessively rigid).”

NHTSA/EPA Final Rule – Issued May 2010, *Federal Register* page 25383/84

- ▶ Intends to take between 250 to 750 lbs. out of each model year.
Ford Motor Company – *Bloomberg*, February 2011
- ▶ “I believe in 2015 and 2020, we will be more aluminum-intensive,” said Matthew Zaluzec, Ford Motor Co.’s manager for global materials and manufacturing research. “It may not be 100%, but it could be more than 50%.”
Ford Motor Company – *The Wall Street Journal*, March 2011
- ▶ For the past 15 years, Audi has utilized the ASF® (the aluminum-based Audi Space Frame technology) to achieve benefits of down weighting as seen in the 2011 A8, such as a 25% increase in body stiffness, while reducing weight by up to 20%.
Audi/ATG – *joint press release*, February 2011
- ▶ Expects to trim 500 lbs from light trucks by 2016 and as much as 1,000 lbs. by 2020.
General Motors – *Automotive News*, January 2011
- ▶ A goal to reduce 15% of vehicle weight.
Nissan – *Automotive News*, September 2010
- ▶ Plans to use more aluminum to cut vehicle weight.
BMW – *Reuters*, August 2010
- ▶ “In order to get there [better fuel economy], we have to downsize, down weight and use more aluminum.”
David McCurdy – *Former Alliance of Automobile Manufacturers president and CEO*
The Aluminum Association Spring Meeting, April 2010
- ▶ “Advanced materials can decouple size from mass (weight), creating important new possibilities for simultaneously improving both fuel economy and safety without compromising functionality.”
John German – *International Coalition for Clean Transportation (ICCT) (formerly of Honda)* – *Testimony to CARB*, 2010
- ▶ All future vehicles will be constructed with aluminum bodies, extending the lightweight technology from Jaguar to the rest of the vehicle line.
Jaguar Land Rover – *Autobloggreen.com*, June 2009