Report: U.S. Auto Industry Relies on Plastics

America's automakers cannot operate without plastics. Supporting a robust and reliable supply of plastics is critical for American auto manufacturing strength, innovation and job growth.

ACC's Chemistry and Automobiles Report *(September 2025)* **demonstrates the breadth of plastics used in today's cars and trucks to improve fuel-efficiency, performance and safety.**

Plastics Help Improve Vehicle Fuel-Efficiency

The weight of plastics used per auto reached an average of 429 pounds, an increase of 19% over a decade. Displacing heavier materials with strong yet lightweight plastics helps reduce the weight of autos.

REPORT QUOTE

- **Plastics account for over 50% of a vehicle's volume but less than 10% of its weight.** Weight reduction in automotive design is a key driver in boosting fuel efficiency, reducing emissions and lowering operating costs for motorists.
- **Average fuel efficiency (real-world miles per gallon) reached 26.9 MPG in 2023,** more than double the 1975 average.

Plastics Help Improve Vehicle Performance

The report identifies multiple components in today's autos that perform better (or even work at all!) because of plastics.

- **Advanced driver assistance systems (ADAS)**
- **Navigation systems**
- **Adaptive cruise control**
- **Infotainment systems**
- **EV batteries (and conventional ones, too)**
- **Safety glass**
- **Hoses and gaskets**
- **Frames (helping reinforcement)**
- **Tires**
- **Noise/vibration components**
- **Dozens more...**

Plastics also allow more intricate shaping of interior components (seats, arm rests, dashboards, air bags, compartments) and exterior components (bumpers, hoods, fenders, sunroofs).

These performance enhancements combine to improve dependability, aerodynamics, comfort and handling — which makes cars more fun to drive.

Plastics Help Improve Vehicle Safety

Safety advances in today's vehicles save countless lives and reduce injuries. Plastics enable air bags, seat belts and safety glass plus energy absorbing innovations such as front-end modules, modular seats and bumpers that protect people's lives every day.

REPORT QUOTE*

- **Fiber-reinforced polymer composites can absorb 4x the crush energy of steel** while polypropylene and polyurethane foams and other polymer composites provide additional impact protection.
- **The use of seat belts** (lap and shoulder belts) – which are typically made from polyester – **reduces the risk of front seat passenger deaths by 45%** in passenger cars.
- **Air bags** – which are commonly made from high-strength nylon fabric – **are credited with saving 50,457 lives** in the period from 1987 to 2017.

*According to the National Highway Traffic Safety Administration

TOP 10 STATES FOR AUTO MANUFACTURING JOBS RANKED

1. Michigan 2. Indiana 3. Ohio 4. Kentucky
5. Alabama 6. California 7. Texas
8. Missouri 9. New York 10. Mississippi

BLS DATA

America's automakers cannot operate without plastics.

AMERICA'S PLASTIC MAKERS™
MAKING SUSTAINABLE CHANGE

September 2025