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Tariff Impact Analysis on Automakers in the United States

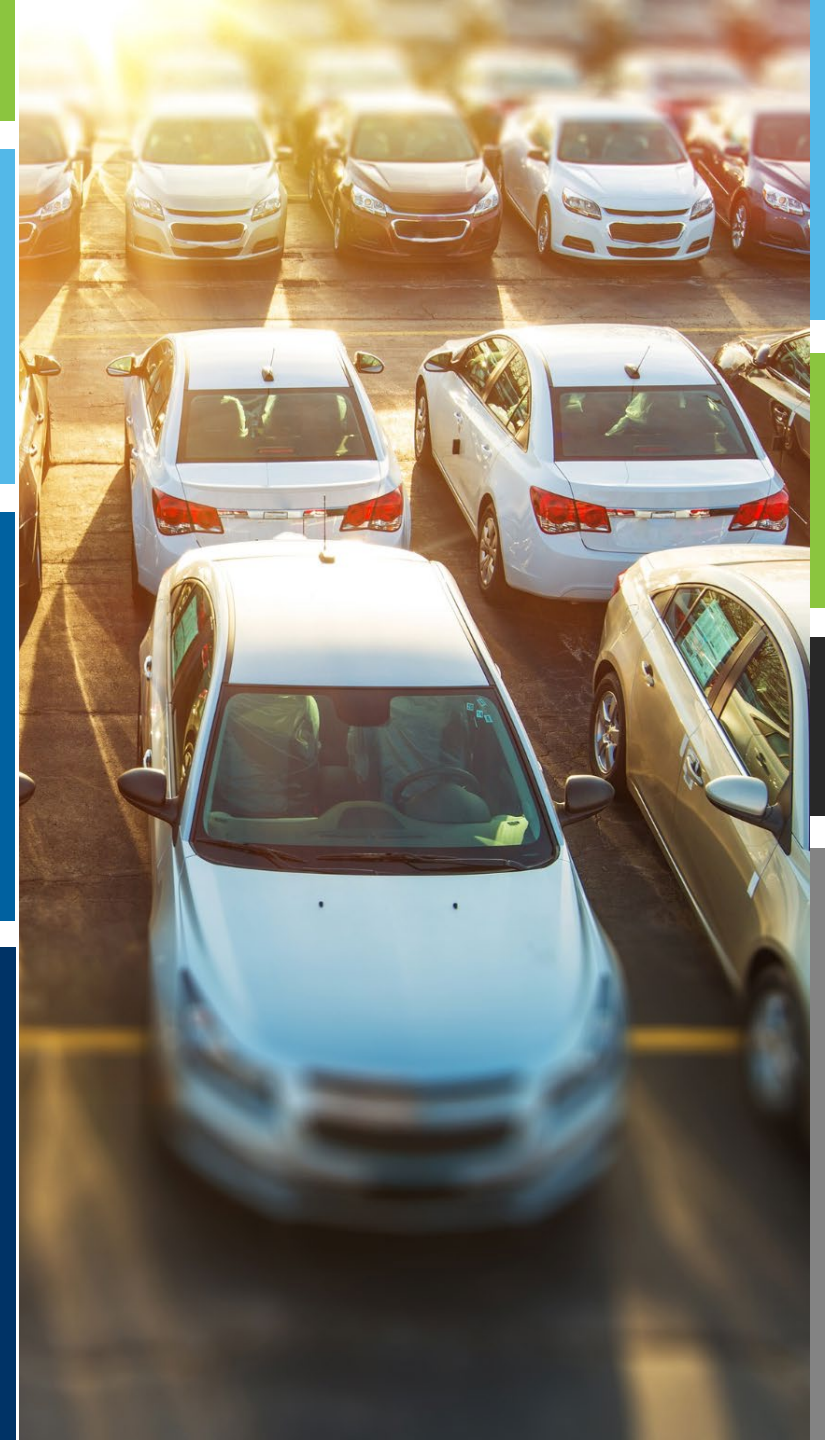
25% Tariffs – Imported Auto Parts and Light Vehicles

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What impact will a 25% tariff on imported parts and light vehicles have on the US auto industry overall?

CAR Estimated 25% Tariff Impact on Imported Parts and Light Vehicles:



Cost impact on all*
automakers in the US (\$USD)

**\$107.7
Billion***

All vehicles impacted
(Unit Volume)

**17.7 Million
Units***

25% tariff applied on all non-U.S. parts content and all imported vehicles regardless of country of origin

**Based on 2024 volumes. Includes all US vehicle production (10.2 M) and imports (7.5M)*

CAR Estimated 25% Tariff Impact on D3 Imported Parts & Light Vehicles:



Cost impact on D3
Automakers in the US (\$USD)

**\$41.7
Billion***

D3 vehicles impacted
(Unit Volume)

**6.8 Million
Units***

25% tariff applied on all non-U.S. parts content and all imported vehicles regardless of country of origin

**Based on 2024 volumes. Includes D3 US vehicle production (4.6M) and imports (2.2M)*

Sources: CAR analysis of MY 2023-2025 AALA figures, CY 2024 import sales and U.S. production data (GlobalData), Cox Automotive, Census Bureau, and the U. S. Bureau of Economic Analysis (BEA)
Note: Combined estimated cost impacts on imported parts and light vehicle production (imported vehicles and U.S.-produced). Cost impact likely understated because analysis ignores tariffs on cross-border parts trade, steel and aluminum (inputs) tariff of 25%, and affected auto dealer parts (excludes after-market parts). Analysis also does not include impacts on consumer pricing, automaker profits, or vehicle demand. Analysis was conducted on March 28, 2025. Detroit 3 (D3) automakers include Ford Motor Company, General Motors, and Stellantis.

What impact will a 25% tariff on imported parts and light vehicles have on the US auto industry & D3?

Estimated Impact: US Auto Industry (including D3 Automakers)

Tariff (regardless of Country of Origin)	25%
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US Auto Industry: Imported Auto Parts (US-Produced Vehicles) Impact	
2024 Production	10.2 million
Average Tariff Cost per Vehicle	\$ 4,239
Total Cost of Tariff, US LV Production	\$ 43.0 billion

US Auto Industry: US Light Vehicle Imports Impact	
2024 US Imported Vehicle Sales (includes Canada + MX)	7.5 million
Average Tariff Cost per Vehicle	\$ 8,722
Total Cost of Tariff, US LV Imports	\$ 64.7 billion

US Auto Industry: Total Cost Increase	
Increased Production Cost (Imported Parts)	\$ 43.0 billion
Increased Imported Vehicle Cost	\$ 64.7 billion
Total Increased Cost	\$ 107.7 billion

25% tariff applied on all non-U.S. parts content and all imported vehicles regardless of country of origin

Estimated Impact: Detroit 3 (D3) Automakers

Tariff (regardless of Country of Origin)	25%
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Detroit 3 Automakers: Imported Auto Parts (US-Produced Vehicles) Impact	
2024 Production	4.6 million
Average Tariff Cost per Vehicle	\$ 4,911
Total Cost of Tariff, US LV Production	\$ 22.5 billion

Detroit 3 Automakers: US Light Vehicle Imports Impact	
2024 US Imported Vehicle Sales (includes Canada + MX)	2.2 million
Average Tariff Cost per Vehicle	\$ 8,641
Total Cost of Tariff, US LV Imports	\$ 19.2 billion

Detroit 3 Automakers: Total Cost Increase	
Increased Production Cost (Imported Parts)	\$ 22.5 billion
Increased Imported Vehicle Cost	\$ 19.2 billion
Total Increased Cost	\$ 41.7 billion

25% tariff applied on all non-U.S. parts content and all imported vehicles regardless of country of origin

Source: AALA, BEA, Census Bureau, BofA & Intellicosting LLC, GlobalData, Cox Automotive, and CAR analysis.
Notes: Figures are rounded; likely underestimates tariff cost impacts resulting from cross-border trade, 25% tariffs on imported steel and aluminum, as well as additional dealership costs related to imported parts; excludes select models with insufficient data, and includes MY 2023-MY2024 AALA data when MY 2025 data is missing. D3 includes Ford Motor Company, GM, and Stellantis.

Key Assumptions & Impact

Assumptions:

- Market: All light-duty vehicles produced and sold in the USA.
- Tariffs: 25% tariff applied to all non-U.S. parts content and all imported vehicles regardless of country of origin. Excludes all reciprocal tariffs.
- Data: Production and sales data, 2024.
- Sources: Publicly available and subscription-only* data.

Impact:

- All vehicles — whether produced or sold in the U.S. — would be affected by the 25% tariffs, as no vehicles are built with 100% U.S. domestic content.
- As a result, all automakers operating in the U.S. would face increased costs due to tariffs on both imported parts used in domestic production and on imported vehicles.
- The Detroit Three automakers would bear greater overall cost increases from tariffs on imported parts — affecting domestic vehicle production — than from tariffs on their imported vehicles.
- This analysis focused on automakers as the sole point of cost impact. In CAR's view, however, the cost will likely be distributed across the broader automotive ecosystem — including suppliers, distribution channels, and ultimately the end user: the consumer or customer

CAR Background

- The Center for Automotive Research (**CAR**) is a non-profit 501(c)3 organization based in Ann Arbor, Michigan. CAR's mission is to produce independent research, convene stakeholders, and analyze critical issues facing the mobility industry and its impact on the economy and society. CAR has been an independent entity since 2003 and has a reputation for providing leading, thought-provoking, impactful research. CAR focuses on the future of automobile business, economic, manufacturing, and technology trends and helps critical stakeholders understand how the automobile industry is changing. CAR researchers are widely recognized as experts.
- CAR has decades of experience working with local, state, regional, federal government agencies and private sector leadership. CAR also has a broad range of relationships with U.S. Congressional Representatives, Senators, staff members, and White House officials. Given the significant impact on the North American and global automotive industries resulting from U.S. policy and regulatory actions, this access makes CAR a valuable partner.
- The project was commissioned by American Automakers (AAPC) but was conducted independently and reflect the views of CAR alone.
- The CAR approach, methods and analytical models, built on a set of variables and boundary conditions, are proprietary to CAR.
- CAR used publicly available data and subscription-based data in this analysis.
- The results reported in this analysis are based the U. S. tariff assumptions as of March 28, 2025. As the U.S. tariff policy and assumptions change, the underlying model variables and related boundary conditions will take on new values.

CAR Analysis: The Underlying Complexity

- The modern automotive supply chain is both global and complex, convoluting the seemingly simple question of the cost of 25% tariffs on the industry.¹
- Automakers and their suppliers are often multinational companies with facilities spread out across the world, making it difficult to discern how much of a vehicle is domestically produced.¹
- Even vehicles produced by the same automaker have different degrees of domestic (and imported) content, varying in many cases even on vehicles sharing the same underlying platform architecture, e.g., Hyundai Ioniq 5, ranging from 29% to 63% combined U.S. and Canada content ^{1,2}
- Neither the company nor country of final assembly is indicative of U.S. domestic content in a particular vehicle.¹
- Therefore, CAR developed a methodology and approach to estimate tariff content for U.S. produced vehicles with imported parts. We employed top-down and bottoms-up approaches to estimating the associated tariff impacts (\$USD) to improve accuracy.

CAR Analysis: The Underlying Complexity (Contd.)

- Estimating tariff impacts on domestically produced vehicles is **NOT** a straight-forward endeavor.
 - A U.S. domestic vehicle, comprised of 100% domestically-produced content, does **NOT** currently exist. United States-produced vehicles have foreign parts content ranging from 20% to 91%, according to American Automobile Labeling Act (AALA) data.³
- Furthermore, several data adjustments must be made to estimate 25% tariffs impact, e.g.,
 - AALA classifies U.S. and Canadian combined content as “domestic,” by law
 - CAR used AALA data as a proxy for content calculations – U.S. content (conversely ROW content) is based on automaker estimates and does not reflect actual tariff data
 - CAR utilized an “all or nothing” assumption for engines and transmissions, i.e., full content from country of origin (no partial, which would increase tariff impacts in select cases)
- CAR’s tariffs impact estimate is likely **understated** because of cross-border trade activity – common for parts but difficult to estimate on a case-by-case basis
- Cost data was not provided by automakers; CAR's economic value estimates were developed using publicly available data



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- **Technical Research** analyzes the merging of technologies such as intelligent transportation systems, connected and automated vehicle technology, propulsion, manufacturing systems, and energy infrastructure.
- **Business Research** explores the intersection of the automotive industry, economy, society, and public policy.



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