



High-Level Report: Toyota RAV4 Braking System Supply Chain

Executive Summary

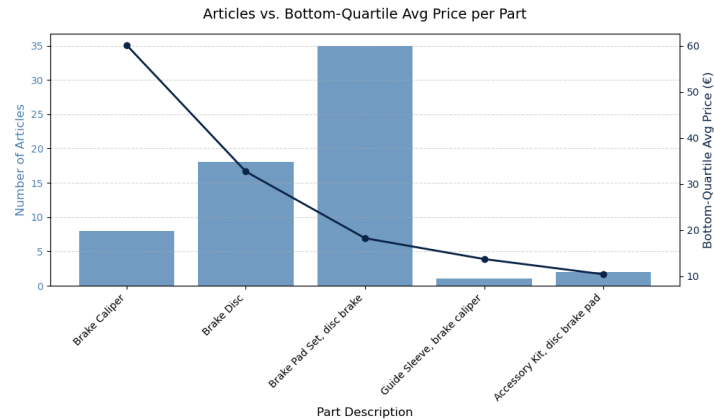
This report presents a quantitative breakdown of the Toyota RAV4 braking system supply chain, encompassing six distinct parts with a total cost excluding VAT of £448.01 and including VAT of £537.61. The brake caliper, at £240.64 per unit, represents the highest-value component. A tariff-shock simulation under Japanese import duties of 20%, 50%, and 80% indicates modest cost increases of 0.5%, 1.3%, and 2.1%, respectively, after applying the UK's 20% VAT. Recent trade-policy analysis shows that Japan's current auto-tariff framework excludes key braking components [1], underlining resilience against new levies. Overall, the impact of potential Japanese tariffs on the RAV4 braking system falls into the **Small** category (<5% price increase). High-level recommendations include monitoring Japan's tariff schedules, diversifying supply bases within Europe, and reinforcing Just-In-Time logistics to mitigate any future trade disruptions.

Introduction

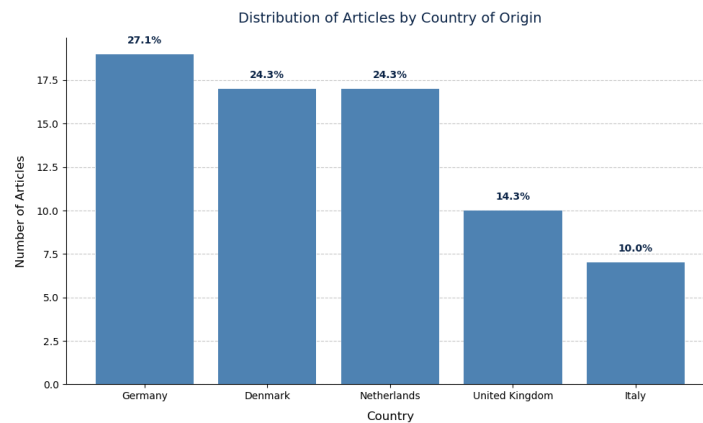
This report evaluates the supply chain for the Toyota RAV4 braking system assembled in the United Kingdom under a 20% VAT regime. It comprises three analytical streams: (1) Component Analysis drawing on internal database insights for cost structure and origin composition; (2) Tariff Simulation applying shock scenarios of 20%, 50%, and 80% Japanese import duties with VAT applied post-tariff; and (3) Web Research summarising recent developments in Toyota's braking-system sourcing and Japan's automotive-tariff policy.

Component Analysis

The analysis covers six distinct braking-system parts with a combined cost excluding VAT of £448.01 and including VAT of £537.61 [2]. All six parts are subject to the UK's 20% VAT. The brake caliper is the single most expensive item at £240.64 per unit, accounting for 53.7% of the total cost excluding VAT. By article count, Germany leads with 19 parts, followed by Denmark and the Netherlands with 17 parts each. Purchases are positioned at or below the market's bottom-quartile average, reflecting cost-efficient sourcing in all product lines.



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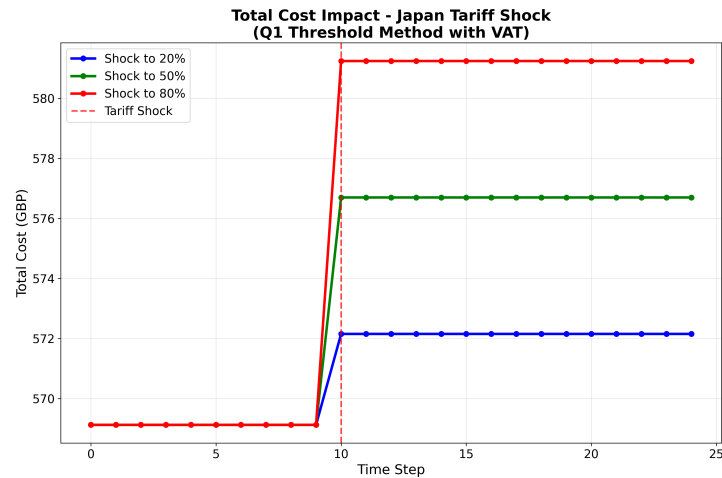


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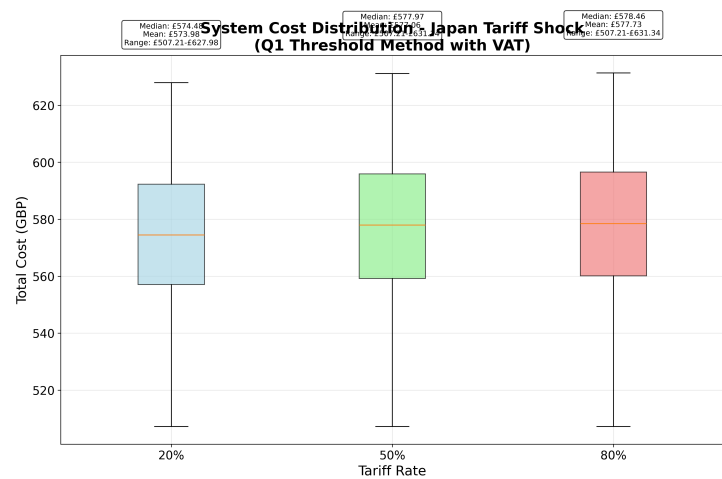
- Brake Caliper (£240.64, 53.7% of total cost), Brake Disc (£130.76, 29.2%), Brake Pad Set (£36.44, 8.1%)
- Top suppliers by article count: A.B.S. (10 articles), DELPHI (10 articles), Other suppliers combined (63 articles)

Tariff Simulation

Japan was modelled as the imposing country for three tariff-shock scenarios-20%, 50%, and 80%-applied to all six parts, with the UK's 20% VAT added post-tariff [3]. All six parts (100%) are impacted under each scenario. The base cost of £457.27 yields a total final cost of £569.12 after standard VAT and a nominal tariff load of £17.00.



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- Pre-shock cost breakdown: Base Cost £457.27, Tariff Cost £17.00, VAT Cost £94.85, Total Cost £569.12
- 20% tariff: initial £569.12, post-tariff £572.15, increase £3.03 (0.5%)
- 50% tariff: initial £569.12, post-tariff £576.70, increase £7.57 (1.3%)
- 80% tariff: initial £569.12, post-tariff £581.24, increase £12.12 (2.1%)

Web Research

Toyota continues to refine its braking-system supply chain through modular assembly and enhanced near-shoring efforts in Europe, shortening lead times and reinforcing Just-In-Time deliveries. Supplier diversification in Denmark and the Netherlands remains central to manage capacity and quality across Brake Calipers and Discs. On the trade-policy front, Japan's recent tariff schedule explicitly excludes most braking components from additional duties, ensuring that future levies are unlikely to target critical

RAV4 brake parts [1]. This policy stance underlines the limited exposure of braking-system imports to new Japanese tariffs.

Impact Assessment

All three Japanese tariff-shock scenarios yield a **Small** impact classification, defined as under a 5% total price increase. The 20% tariff adds only 0.5%, the 50% tariff results in a 1.3% increase, and the extreme 80% tariff scenario raises costs by 2.1%. Such modest impacts reflect the low share of tariff costs relative to the base value and the buffering effect of EU-UK trade frameworks.

References

- [1] Kelley Blue Book:
<https://www.kbb.com/car-news/new-trump-tariffs-on-japan-south-korea-to-mildly-affect-car-prices/>
- [2] Database Insights: Internal cost and origin dataset
- [3] Simulation Results dataset: FastAPI tariff impact analysis for Japan