

Market evolution: Spark-ignition engines (CN 8407) — 2015–2025

Introduction

The European Union's external trade in spark-ignition reciprocating or rotary internal combustion piston engines (CN 8407) between 2015 and 2025 tells a story of striking price growth, major geographical reorientation, and significant structural change within engine categories. Over the period, the EU preserved a sizeable trade surplus while absorbing dramatic shocks, notably the near-disappearance of Russia as an export destination and the post-Brexit realignment with the United Kingdom. The following three sections examine the main dynamics visible in the data, all of which can be explored via the interactive trade dashboard.

1. Diverging Trends in Value, Volume and Price: The Premiumisation of EU Engine Trade

Export and import unit values increased by more than a third, offsetting sharp volume declines

The EU's engine trade became markedly more “premium” during the decade. While export quantity fell by a quarter (–25.1 %) and import quantity by a fifth (–20.6 %), total values actually rose or held steady thanks to steep price increases. Export unit prices jumped 36.3 %, from €13 803 to €18 812, and import unit prices rose 30.8 %, from €12 675 to €16 583.

Flow	Value (first)	Value (last)	Δ Value	Quantity (first)	Quantity (last)	Δ Quantity	Unit price (first)	Unit price (last)	Δ Price
Exports	€6 254 M	€6 384 M	+2.1 %	453 096 items	339 347 items	–25.1 %	€13 803	€18 812	+36.3 %
Imports	€2 724 M	€2 831 M	+3.9 %	214 890 items	170 704 items	–20.6 %	€12 675	€16 583	+30.8 %

Source: Overall trade evolution

The EU's trade surplus remained remarkably stable at around €3.5 billion

Despite the transformation in volumes and prices, the EU's net external balance in this sector barely changed, moving from €3 530 M to €3 553 M (+0.6 %). The surplus dipped to a low of €2 523 M in 2020 but rebounded quickly, underscoring the resilience of EU engine manufacturers.

Domestic engine prices surged as the supply mix shifted towards higher-value segments

The rise in overall unit values reflects both genuine price inflation and a compositional shift towards more expensive engine categories, such as aircraft engines (CN 840710) and mid-range automotive engines (CN 840733). The analysis of product segments (Section 3) details this re-composition.

2. A New Geography of Trade: Disruption and Diversification Outside the EU

The United Kingdom and Russia collapsed as export markets, while Morocco and Mexico surged

EU export destinations underwent a dramatic reordering. Exports to the United Kingdom fell by 67.6 % (from €917 M to €297 M), and shipments to Russia collapsed by 97.2 % (from €367 M to just €10 M). In sharp contrast, exports to Morocco rocketed 375.9 % (€133 M → €633 M), and Mexico grew an impressive 62.0 % (€536 M → €868 M). The United States remained the dominant partner, holding almost steady at around €2.2 B.

Export partner	2015 (€ M)	2025 (€ M)	Change
United States	2 236	2 198	−1.7 %
Mexico	536	868	+62.0 %
Türkiye	559	687	+22.8 %
Morocco	133	633	+375.9 %
South Africa	446	645	+44.6 %
Russian Federation	367	10	−97.2 %
United Kingdom	917	297	−67.6 %

Source: Main trading partners

Import sources diversified sharply as China and Türkiye replaced traditional suppliers

On the import side, the EU reduced its reliance on historic suppliers. Imports from the United States dropped 44.2 %, from Mexico 76.1 %, and from Japan 22.2 %, while imports from the United Kingdom declined by 22.5 %. These falls were more than compensated by extraordinary growth from Türkiye (+1 143.2 %, from €29 M to €364 M) and China (+120.2 %, from €149 M to €328 M). The supplier base thus widened considerably.

Import partner	2015 (€ M)	2025 (€ M)	Change
United Kingdom	1 054	817	–22.5 %
China	149	328	+120.2 %
Japan	506	394	–22.2 %
United States	475	265	–44.2 %
Korea, Republic of	153	143	–6.3 %
Mexico	210	50	–76.1 %
Türkiye	29	364	+1 143.2 %

Source: Main trading partners

Shock events hit key corridors, especially the UK and Moroccan markets

The data reveal several price and supply shocks. A **price shock on exports to Morocco in 2022** (+95.2 %) coincided with a 12.9-abnormality spike, tripling unit values almost overnight. Exports to the United Kingdom likewise experienced a major price shock in 2021 (+57.8 %). On the import side, UK-sourced engines saw a price shock in 2022 (+18.1 %). The most extreme event was the **supply shock in exports to Russia**: volumes fell to zero by 2025, a –97.6 % shift compared to the pre-2022 baseline. The volatility coefficients confirm that flows with the United Kingdom (CV = 0.67 for exports) and Russia (CV = 0.65) were among the most unstable.

Source: Supply shocks

3. Structural Transformation: From Bulk Engines to Specialised Powertrains

Large engines (>1 000 cm³) still dominate but lose weight to mid-range and aircraft engines

The product breakdown shows a gradual erosion of the largest engine category (CN 840734, >1 000 cm³) in both imports and exports. While it remains the principal

segment, its export value fell from €5 710 M to €4 435 M and its import value from €1 901 M to €1 683 M. The mid-range engine segment (CN 840733, 250–1 000 cm³) grew dramatically, with exports leaping from €217 M to €1 277 M and imports from €73 M to €251 M. Aircraft engines (CN 840710) also saw a remarkable export value increase, from €46 M to €228 M, driven largely by exceptionally high unit prices (€99 000 in 2015 to €286 000 in 2025).

Export segment	Description	2015 value (€ M)	2025 value (€ M)	Change
840734	>1 000 cm ³ (vehicles)	5 710	4 435	–22.3 %
840733	250–1 000 cm ³ (vehicles)	217	1 277	+488.5 %
840790	Other engines	143	429	+201.3 %
840729	Marine propulsion (excl. outboard)	89	69	–23.0 %
840721	Outboard motors	39	32	–17.3 %
840710	Aircraft engines	46	228	+391.4 %

Source: Product breakdown

EU member states show diverging specialisation, with Central Europe gaining ground

The concentration of production capabilities evolved. In 2025, the most specialised exporters were **Hungary** (RSCA 0.79), **Austria** (0.60), **Poland** (0.44), **Slovakia** (0.28) and **Germany** (0.15). Germany lost ground as a direct exporter (–30.7 %, from €3 019 M to €2 093 M), while Austria (+100.4 %) and Italy (+330.8 %) expanded their export roles dramatically. On the import side, Slovakia’s intake soared by 286.4 %, reflecting its integration into engine supply chains.

Top EU exporter	2015 (€ M)	2025 (€ M)	Change
Germany	3 019	2 093	–30.7 %
Austria	799	1 602	+100.4 %
Spain	1 001	824	–17.7 %
Italy	107	462	+330.8 %
Romania	218	335	+53.5 %
Hungary	470	253	–46.1 %
France	207	68	–67.4 %

Source: Key EU traders

Import diversification is reflected in a falling HHI, while export concentration remains stable

The Herfindahl-Hirschman Index for imports fell from 2 277 to 1 498 (–34.2 %), confirming a much more diversified supplier base. Export concentration remained almost unchanged (HHI from 1 779 to 1 736, –2.4 %), indicating that while the destinations shifted, the overall structure of export sales stayed concentrated on a few large markets.

Source: Market concentration

Conclusion

Over the 2015–2025 period, EU trade in spark-ignition engines (CN 8407) was characterised by a powerful price upswing that compensated for falling volumes, a profound redrawing of trade routes following Brexit and sanctions against Russia, and a structural pivot towards mid-range and aircraft engines. The EU preserved its surplus and diversified its import sources, while Central European member states assumed a larger role in production and exports. These dynamics point to a sector that is adapting to geopolitical pressures and evolving global demand for more specialised, higher-value engine types.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at [this address](#).