

# SPECIALIST CAR MANUFACTURING A UNIQUELY BRITISH SUCCESS STORY



THE SOCIETY OF  
MOTOR MANUFACTURERS  
AND TRADERS LIMITED

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SMMT is one of the largest and most influential trade associations in the UK. It supports the interests of the UK automotive industry at home and abroad, promoting its position to government, stakeholders and the media.

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**The UK is home to more specialist car manufacturers than any other country, including some of the world's most iconic and prestigious brands. These marques boast a strong brand heritage, enviable motorsport pedigree and display a world-leading use of innovative new technologies.**

This report highlights the importance of this diverse, dynamic and unique part of the UK automotive industry and its significant contribution to UK plc. Producing an array of vehicles from luxury limousines and high-class sports cars to hearses and adapted vehicles, these companies create employment opportunities within their facilities as well as across the hundreds of local companies they source from.

Specialist car manufacturers are at the leading edge of product design and innovation, in particular the development of lightweight vehicles, advanced aerodynamics and highly efficient drivetrain technologies. They employ highly skilled and highly valuable engineers who lead exciting new projects and the development of cutting-edge products. Furthermore, vehicles produced in low volumes are often high value commodities designed, engineered and built in the UK but with a strong export focus, creating an important revenue stream for the UK.

SMMT has taken this opportunity to demonstrate the value of this unique section of our industry, highlighting some of the challenges these companies face and, importantly, the opportunities for growth that can be achieved with industry, government and other stakeholders working together to support a world-renowned British success story.

Paul Everitt  
Chief Executive,  
Society of Motor Manufacturers and Traders

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### Economic impact of specialist car manufacturers

It is estimated that there are more than 100 specialist vehicle manufacturers operating across the UK, ranging from small operations producing just a handful of cars per year to global brands such as Aston Martin, Bentley, Lotus, McLaren and Rolls-Royce.

Specialist, low volume manufacturing is often associated with sports cars, but while the UK does have a particular strength in this area, small city cars, taxis, accessible and adapted vehicles, hearses, limousines and motorhomes are also made in the UK, highlighting the diversity of the products available.

Specialist vehicle manufacturing can be cyclical and, due to the discretionary nature of the purchase of many of its products, demand can be heavily impacted by global economic market trends. Among SMMT members, output fell during the recession but volumes have grown on the back of new entrants to the market, increasing overseas demand and new model development.

Members of SMMT's Low Volume Manufacturers' Group, approximately 20 of the largest specialist vehicle manufacturers in the UK, collectively:

- **Employ some 10,000 staff, including highly skilled designers, engineers and craftsmen.**
- **Produce around 25,000 vehicles each year.**
- **Had a combined turnover of almost £2.5 billion in 2011.**

While their output represents around 2% of the UK's annual vehicle production, specialist manufacturers tend to have a higher unit value, more than five times the national average.

Around 70% of low volume manufacturers' output is exported – for some it is over 85%, with exports mainly destined for China, the Middle East, the US and, increasingly, Eastern Europe, positively contributing to the UK's balance of trade.

On average 65% of the components used to manufacture a specialist car are sourced in the UK, and this figure rises to 95% if components from the rest of Europe are included. Low volume manufacturers are important buyers within their local supply chains.

Specialist car manufacturers on average reinvest approximately 12.5% of their turnover into R&D, displaying their high level of commitment to future products and effort to ensure they maintain their reputation for world-leading products in the global market.



### Aston Martin

Founded in 1913, Aston Martin has transformed from a small-scale manufacturer of specialist sports cars to one of the world's best-known luxury brands, boasting its strongest ever line-up, from the One-77 supercar to the luxury city car, the Cygnet. Using a highly skilled workforce, all Aston Martins are designed, engineered and manufactured by hand at the company's global headquarters in Gaydon, Warwickshire.



### Bentley Motors

Bentley Motors is one of the most famous automotive brands in the world and a symbol of British automotive excellence. Founded by W.O. Bentley in 1919, the company now directly employs around 4,000 people in Crewe, home to all its operations including design, R&D, engineering and production. It is the third largest R&D investor in the UK's automotive sector and the 18th largest nationally. Bentley exports over £500m worth of goods every year to established markets, as well as emerging markets such as China and South America.



### Caterham

Caterham acquired the rights to produce the Lotus Seven in 1973, and the subsequently named Caterham Super Seven is still in production today having undergone continuous development. Caterham runs the 'Sevens for Schools' project, which enables students to build a car at their school, learning about engineering first hand and using their skills in physics, maths and business studies.

### McLaren Automotive

The company opened the McLaren Production Centre in Woking, Surrey, in 2011 to manufacture the new MP4-12C supercar. The MP4-12C features the Carbon Monocell, which McLaren says has industrialised the production process for carbon chassis designs and could kick-start an era of this technology being used in mainstream production cars. The latest McLaren features advanced aerodynamics and has one of the most powerful, yet fuel efficient, engines on the market.



### Morgan

Morgan is one of the oldest car manufacturers in existence having produced vehicles since 1909. The privately-owned company manufactures handmade, coach-built sports cars like the iconic Plus 4 and Plus 8, as well as the Aero series and now the 3-Wheeler. Despite being steeped in tradition, Morgan exploits new and advanced drivetrain technologies, demonstrated most recently in the Plus E, an electric car combining a Zytec electric motor, lightweight aluminium chassis and familiar sports car design



### Radical

Founded in 1996, Radical is now the second largest race car manufacturer in the world. Radical makes a lightweight sports car that utilises superbike technology. It holds the lap record for a road legal car around Germany's famous Nordschleife track – a marker that has stood for nearly three years. Launched in 2011, the SR3 SL is the company's first fully type approved road car; a lightweight and aerodynamically advanced two-seat sports car using an efficient 300bhp Ford EcoBoost engine.



## Innovation by specialist car manufacturers

Specialist car manufacturers have a strong track record of innovation in the automotive industry and are well known for creating performance improvements that can help in the development of more efficient and sustainable mainstream products. Zytec Automotive, for example, was the first competitor to race a hybrid car at the Le Mans 24 hour endurance race and is now providing electric propulsion technologies to niche and mainstream manufacturers alike. Allied Vehicles is developing new electric vehicles and is already the largest manufacturer of accessible vehicles in the UK, enabling mobility to thousands of people with disabilities. And British niche innovator Gordon Murray Design has developed a highly efficient production process called iStream, in which all major components are fitted to a chassis before a pre-painted body is attached – this process won the SMMT’s inaugural Award for Automotive Innovation in 2010.

## Positively contributing to developing the automotive industry

Specialist car manufacturers bring diversity to the automotive sector. They supply models to meet the demands of specific niche markets, are renowned innovators and provide a beneficial halo effect to the wider UK automotive industry. While often competing against volume producers, low volume manufacturers are successful in delivering innovative and customised solutions that meet particular market preferences across the globe.

Many sports car manufacturers have moved from race tracks to road cars. Three – Caterham, Lotus and McLaren – are currently involved in Formula 1, while other companies participate in other forms of motorsport. Safety and performance developments for the track are often transferred to the road.

Specialist car manufacturers are often pioneers of innovative technologies, notably light-weighting, advanced aerodynamics and providing enhanced performance through continuous drivetrain development. Examples of cutting edge solutions include McLaren’s Carbon Monocell, Lotus’ lightweight bonded aluminium chassis, as well as electric vehicles from Allied Vehicles, Morgan, Westfield and Zytec. These innovations can be transferred across to volume vehicles to help the wider automotive sector become more efficient, and several specialist manufacturers, notably Lotus, also offer engineering capability to help volume manufacturers develop and enhance their own products.



## Opportunities and challenges to further growth

Specialist car manufacturers make an important contribution to the UK economy as well as the development of the wider market. These manufacturers have strong growth ambitions, and continued export success will be critical to achieving this. Policy makers can also support this growth.

### Access to finance

Niche manufacturers are by their nature smaller businesses. While this brings flexibility and adaptability, it can mean product life-cycles have to be extended beyond those of mainstream manufacturers in order to recoup investment costs. Issues around cash flow, access to credit and skilled staff are of key importance. Ensuring that specialist manufacturers have the required knowledge and access to funding, grants and other support mechanisms would further enable these companies to prosper.

### Type approval and international harmonisation of regulations

The industry welcomed the introduction of EC Small Series Type Approval (ECSSTA), which enables low volume vehicles made in the UK to be sold across the EU market. The ECSSTA is currently being reviewed and should be developed to ensure low volume manufacturers remain competitive in the European Market. Industry believes that vehicles for the disabled should also be allowed to be type approved using ECSSTA, to give them better access to the European market.

Further progress in international harmonisation and mutual recognition of regulations and type approval processes would cut costs and complexity and open up greater opportunities in key markets. For example, the EU should recognise US certification and ensure acceptance of ECSSTA by Switzerland.

### CO<sub>2</sub> and noise regulations

The EC New Car CO<sub>2</sub> Regulation derogation allows independent low volume manufacturers to be set specific emissions targets in line with their individual technological and economic potential. The derogation is important as it recognises that low volume manufacturers, whilst driving down emissions through advanced engineering and technology, do not have the resources or the spread of models like volume manufacturers to use fleet averaging to meet CO<sub>2</sub> targets.

The continuation of the New Car CO<sub>2</sub> Regulation derogation in the years ahead is important to ensure specialist producers remain competitive and provides a model for other areas of environmental legislation such as noise. European legislation needs to be designed with both volume and specialist manufacturers in mind to maintain market diversity and, based on a proper impact assessment, it should reflect the limited environmental impact that many specialist products have, given their lower volumes and very low mileage.

### Summary

The low volume manufacturing sector is already delivering for the UK and wider automotive industry, and with further support and simplified regulations the sector will continue to thrive, providing consumers with innovative, focused and competitive products.

# UK specialist manufacturers

Delivering innovative, cutting-edge and diverse vehicles to global markets.

1. Allied Vehicles Limited
2. Aston Martin Lagonda Limited
3. Axon Automotive Limited
4. Bentley Motors Ltd
5. Caterham Cars Limited
6. Dare (UK) Limited
7. Gordon Murray Design Limited
8. London Taxis International Limited (LTI)
9. Lotus Cars Limited
10. Lotus Engineering Limited
11. McLaren Automotive Limited
12. Morgan Motor Company Limited
13. Potenza Sports Cars Limited
14. Rolls-Royce Motor Cars Limited
15. SAIC Motor UK Technical Centre Limited
16. Tata Motors European Technical Centre Plc
17. The Lightning Car Company Ltd
18. Zytec Automotive Limited



## SMMT's specialist vehicle manufacturers\*:

- Have a combined annual turnover of almost £2.5 billion.
- Employ some 10,000 staff directly.
- Produce around 25,000 vehicles a year.
- Export 70% of their production volumes, contributing to the UK's balance of trade, increasing to 85% and more for Bentley Motors and Rolls-Royce Motor Cars.
- Up to 65% of a typical specialist car is made with components sourced from the UK.
- Spend 12.5% of their turnover on R&D.

\* All data represents the specialist vehicle manufacturers within SMMT membership only.