



## FROM THE CEO

Since our last DRIVE newsletter, the world has fundamentally changed given the deepening crisis in Ukraine with a dreadful humanitarian crisis developing.

Let us hope that the international trade and financial sanctions already deployed together with diplomacy will bring about a swift conclusion to these atrocities.

European OEM's are assessing the impact on their extended supply chains which have been strained throughout the pandemic, the global semi-conductor shortfalls and also inflationary pressures on raw materials coupled with extended lead-times. WAF members continue to provide invaluable and timely intelligence for all our key stakeholders highlighting expected production stoppages, so we encourage you to read our exclusive virtual round table reports.

On a positive note, we are delighted to announce that the Welsh Government has commissioned WAF to undertake a scoping project across Wales to identify and consolidate net zero emission mobility competence that can be showcased on the international stage.

Our sector continues to transition at pace and several WAF members are already actively engaged in developing new innovative technologies and products to take advantage of future market opportunities. To ensure that we are fully aware of your capabilities in this new domain that covers all mobility solutions, please ensure that you contact our Future Mobility Manager, **Richard Leonard** [Richard.leonard@welshautomotiveforum.co.uk](mailto:Richard.leonard@welshautomotiveforum.co.uk).

We hope you enjoy this month's DRIVE content and look forward to seeing you in person very soon at our remaining regional events. In the meantime, our thoughts and prayers are with all those families who continue to be impacted by the war in Ukraine.



## UPCOMING EVENTS



As already announced, WAF has restarted its highly popular, beneficial, informative, and informal regional meetings with the first successful interactive event held at the Advanced Manufacturing Research Centre (AMRC) Cymru on 6<sup>th</sup> April.

At our regional events, WAF will outline its business plan, strategy and vision. We will hear from our sector analyst Ian Henry as well as our hosts and sponsors, and delegates will participate in an interactive workshop. A site tour will also be included. The Aston Martin event is scheduled for 12<sup>th</sup> May with the Meritor event taking place the following week on 18<sup>th</sup> May.



## WHAT'S NEW!!

As part of our ongoing work to help connect WAF members we will launch a new section within the newsletter dedicated to our Members.

This **Members Section** will be dedicated to members who wish to promote their business, showcase what services they offer aimed at giving that all important insight to your businesses whilst increasing the potential to increase sales.

This section could include a selection of photos showing your capabilities, maybe an interview covering a more in depth insight about your business, it could outline a project or opportunity where your looking to localise supply or even an opportunity to celebrate good news on key investments delivered to further enhance your offerings within the sector.

If you would like to secure a space in the next WAF newsletter then please contact us [deborah.stewart@welshautomotiveforum.co.uk](mailto:deborah.stewart@welshautomotiveforum.co.uk) and we'll be happy to support.



## MEMBERS' UPDATE

The Mid-Wales Automotive Sector has received a big boost with parts manufacturer [Marrill Group](#) locating at Llanfyllin, Montgomeryshire, north-west of Welshpool.

The 50-year-old company offers clients a tooling design and manufacturing service as well as in-house pressing, laser cutting, robot weld and fabrication.

12 months of talks with Welsh Government has secured 102 jobs at the former Stadco site and seen the installation of a new 2,500tonnes press with help from a £700,000 grant, which will lead to more business and jobs. The deal also gives Marrill a five-year option to purchase the site.



**TEAM Precision** were approached by **Volta Trucks** back in mid-2021 to support DV pre-production build of their Zero truck.

"The build went well and as a result, we were recently awarded the series production volume. While some of the logistics routings for some of the parts are still to be confirmed, we will be supplying 43-part numbers in total, some will be supplied directly to Volta Manufacturing in Steyr, Austria and some to a tier 1 partner of ours.

The parts awarded are all tubes to be used for cooling. We are thrilled to be supporting Volta and look forward to the release of the 16t and 18t trucks".

## NEW WAF MEMBERS

**ForrestBrown** **ForrestBrown Limited**

Telephone: 0117 926 9022

Website: [www.forrestbrown.co.uk](http://www.forrestbrown.co.uk) ForrestBrown is the UK's leading specialist research and development (R&D) tax relief consultancy.

Our multi-disciplinary team is made up of qualified chartered tax advisers, accountants, lawyers, industry sector specialists with extensive automotive experience and former HMRC inspectors. We offer unmatched technical expertise and are passionate about helping innovative businesses grow.

Following a well-attended webinar last December, we look forward to meeting more WAF members in person in 2022 to explore how we can optimise R&D claims.



**H.O.S Innovations**

Telephone: 07534629801

Website: [www.hosinnovations.com](http://www.hosinnovations.com)

H.O.S Innovations is a mother company and with its subsidiary companies is bringing to the market procedures and devices to help the planet and help to stop/reduce automotive accidents.

**H.O.S will soon bring to the market:**

- S.M.Eye C.A.M which aims to overcome vehicle blind spots.
- Speed Enforcer A.C.E which aims to remotely stop high speed police pursuits as quickly and safely as possible. Also, to stop any suspected vehicle for any Lawful reason by authorised agency(s).



**Motor Design Limited**

Telephone: 01691 623305

Website: [www.motor-design.com](http://www.motor-design.com)

Motor Design Ltd is a world leader in developing advanced software and tools for electric machine design. We have been developing electric motor design software since 1998.

Our software, Motor-CAD, is recognised as the market-leading tool for rapid multiphysics simulation of electrical machines across the full torque-speed operating range. We use our expert knowledge to provide software support to electric machine designers at some of the most prestigious aerospace, automotive and industrial companies worldwide.

**Senior Flexonics**

Telephone: 01495 241500

Website: [www.seniorflexonics.co.uk](http://www.seniorflexonics.co.uk)

Senior is an international, market-leading, engineering solutions provider with 26 operating businesses in 12 countries. We design and manufacture high-technology Thermal Management and Fluid Conveyance systems for global OEMs in the aerospace, defence, land vehicle and power & energy markets. As part of Senior plc, Senior Flexonics Crumlin is a centre of engineering excellence, with a particular focus on land vehicle & hydrogen applications to support our future Net Zero economy.

**SECTOR NEWS**

**Electric vehicles now account for about a quarter of all models made in the UK, reports the Society of Motor Manufacturers and Traders.**

UK production of the latest electrified vehicles continued apace with plug-in hybrids, hybrids and battery electric cars combined representing more than a quarter (25.8%) of all production in the month, or 15,905 units.

The news comes after fresh SMMT analysis revealed some £10.8 billion has been committed to UK electric vehicle production and gigafactories since 2011.

It's a sign of opportunity despite latest production figures showing all UK car production fell 41.3% in February, down to 61,657 units, compared to 12 months earlier and when the pandemic semi-conductor parts and labour shortages were being felt along with Honda's Swindon plant closure.

In what was the weakest February for UK car-makers since 2009, production declined for both the domestic and overseas markets, down 35.8% and 41.8% respectively.

Exports accounted for more than eight in 10 cars made, with the majority of shipments (62.4%) heading into the European Union, equivalent to 31,673 units. The US, in comparison, took 11.0% of exports, and China 8.7%.

Inevitably, with the move to EVs, UK combustion engine production declined in the month and was well down 30.9% on February last year, to 117,551 units this year while annualised output fell 23.5% to 259,023 engines, comprising production for domestic and overseas markets down 38.5% and 24.3% respectively in the month.

But there was some good news in February with UK CV production rising after a disastrous February 2021, and about half was exported, mostly to the EU. This February's performance is, however, still 10.3% down on the 9,233 units built in pre-pandemic 2019.

Looking ahead to the Government's public charging network, the SMMT says this must now be prioritised.

**OEM UPDATE**

**Car-makers around the globe are reeling from the effects of sickness, shortages, shopping for parts and sanctions, writes Robin Roberts.**

Never has such a combination of factors faced the decision makers, long term planners, engineers, and financial planners of the global car industry and their very extended and extensive supply chains.

The familiar model cycle renewals of old with five to seven years being typical was changed with the widening and accelerating introduction of electric vehicles, their powertrains, battery technology and a host of related and sometimes unrelated features including ethical sourcing of raw materials and questionable labour conditions.

Governments pressing ahead towards zero emissions added to the dilemmas of decision-making. No vehicle maker could ignore the technology tsunami tide sweeping towards them and everything it was bringing to them.

The elephant in the room which many also want to avoid is which direction should they turn; which battery technology is best and when will they grasp the nettle and consider future models using hydrogen power?

How future electricity and hydrogen is created is another subject which has to be considered by any vehicle maker which says it is going "green" but which inadvertently may be ultimately promoting a power source which is not as clean and green as many conservative-minded executives would like.

Aspects of these automotive decisions go back over two decades when the first fully electric cars started appearing in large numbers on streets but they have also been driven by the global realization that climate change is itself accelerating and more must be done sooner to save society from itself.



The approaches have been different in China, the Far East, Middle-East, Central and Western Europe, as well as America. However, decisions in one region not only apply locally but influence what is done in others, as the global web vibrates when it's touched.

Legacy car-makers have gradually divested themselves of component manufacturing and out-sourced parts procurement, often to the other side of the world where it is cheaper to make something, while the modern transport network allows them to fairly accurately calculate delivery times.

Now let's come up to date and we see the pandemic induced shortage of semi-conductors hit every car maker, the unprecedented situation in Ukraine has very severely impacted on wiring looms and is said to be taking about 15% of global car production off-line.

If they have model lines on stop until alternative sources are found for semi-conductors and harnesses then the car-makers incomes are reduced and they have reduced requirements for other non-time critical components.

It has however meant that a harness maker in Morocco, for instance, which was a legacy business from the days when French marques invested in the region, now finds it has five times as much work coming in from grateful vehicle assembly plants around the world.

There are stories of joint ventures among car-makers and also electronic industries to establish semi-conductor plants closer to their European and American vehicle production centres.

Onshoring is the modern term for localization and isn't that where the motor industry started in the late 1800s?

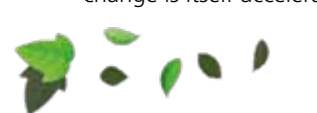
**Shining a light on EVS**

Ford has decided to split its traditional ICE design and production resources from the upcoming BEVs ranges; JLR is working towards a completely electric range over the next three years and is talking about a



NMUK

joint venture to build a gigafactory in the Midlands; Stellantis will have small cvs in Ellesmere Port and larger models in Luton but its electric car ranges will be assembled in France and Italy; Nissan looks to the North-East of England for its electric small cars and batteries BMW/ MINI and Mercedes are developing extended ranges for top models and highly equipped smaller cars; Toyota has outlined plans for 30 BEVs inside eight years; Tesla aims to build between 10 and 20 M EVs annually; Volvo & Polestar are refreshing their EV offerings and Honda has pulled out of the UK but is said to be developing an e-SUV in Japan; Lotus and Aston Martin will use advanced lithium ion cells made by Britishvolt in Northumberland which is also working on solid-state batteries; The VAG Group has developed highly adjustable ev-platforms for its Audi, Volkswagen, Skoda, SEAT, Cupra brands which will gradually



replace their current ranges and including five new battery Bentley models from 2025; Hyundai Group includes KIA and they are well advanced on their electric car programmes, but also actively pursuing hydrogen as a power source; Mazda is preparing to launch ten hybrids and three EVs essentially built on the same platform; MG will be adding to its sole ev SUV as cycles come around; Expect more to follow after the Porsche Taycan became the first ev from the overtly sporting brand, including a 911 version with batteries; Rolls-Royce will be pure EV powered by the end of this decade beginning with the Spectre.



Lotus Eletre EV unveiled

## Q1 and March over-view of new car registrations

**Car-makers are holding strong order books, but constraints on supply are preventing deliveries and a full recovery.**

That's the message from the Society of Motor Manufacturers and Traders releasing the March and Q1 registration statistics.

The shortage of semiconductors affects the sector globally but longer-term uncertainty remains, with the invasion of Ukraine raising risk to supply chains.

More broadly, however, economic headwinds such as rising energy costs, fuel costs, inflation and a squeeze on household incomes could impact new vehicle demand in the months ahead.

With grants for BEVs confirmed until at least next March, however, interest rates still low and electric cars benefiting from lower running costs, there are significant benefits for drivers who can order new vehicles now and are prepared to wait for delivery.

In a landmark result, Ford and Kia tied with 7.32% market share as Ford sales slipped 19.8% from the same month in 2021 while the Korean car maker enjoyed a 58.81% rise in registrations, with Toyota in third place having 6.62%, slightly down on 2021's figure.

The big winners were those who sold BEV or hybrid electric cars in their ranges with Tesla seemingly coming from nowhere to take the top two spots with the Y and 3 series models.

Exclusively electric Polestar, part of the Volvo empire of Geely, posted a 135.52% improvement with just 789 cars delivered in March, still just 0.32% of sales, although MG was the most improved with 9,367 registrations, a 3.85% a jump or 136.78% improvement.

## New light commercial vehicle (LCV) registrations fall by -27.6% in March to 40,613 units.

Registrations of large vans down -18.9%, while demand for medium-sized vans, the second biggest segment by volume, falls -27.6%.

Market ends first quarter of 2022 at -27.6% below pre-pandemic levels, as global shortage of semiconductors continues to affect supply.

## TALKING TO



### WAF Treharne Automotive Engineering

**The future of the automotive industry is inextricably bound to electromechanical systems and one Welsh Automotive Forum member is a leading player in what some users term "the dark art".**

Jason Treharne has been involved in many aspects of automotive engineering for over 20 years and has worked for a number of global motor manufacturers developing, refining and executing all aspects of diagnostics as well as writing programmes for engineers to utilise in their roles from concept to creation.

After being in-house with a handful of car-makers Jason established [Treharne Automotive Engineering](http://www.treharne-automotive-engineering.co.uk) in 2008 when he identified a gap in the sector for independent evaluation and diagnostics as the industry was beginning to look into electric cars and their powertrains.

He started with a handful of engineers with particular skills and it soon became apparent TA Engineering would need more as demand for their analytical services mushroomed with greater integration for electronics and computer software into the pure mechanical elements, and the precision of systems to handle multitudes of tasks including fuel and emissions management.

They now have almost 30 engineers working at their base outside Llanelli and also with clients at locations around the world integrated with the car-makers' and suppliers' teams.

The divisions within TA Engineering embrace automotive electronics, software development test and validation, electrical hardware and product design; while engineering services extend from production vehicle evaluation, through systems integration development to increasingly important warranty investigation and reduction. Designing out problems before they happen is a key element of TA Engineering skills.

As electric vehicle systems develop technology and different battery types are introduced, charging systems are also required to match users demands and these can introduce complex issues which need resolution.

Some early battery packs now reaching the end of their initial life and TA Engineering is looking into what further use could be made of the packs and cells so waste is minimised.

Jason is proud of what TA Engineering is doing but also critical of the public charging network for electric cars and said many more points need to be installed for a zero-emissions automotive world and if the UK is to reach the Government's declared targets by 2030.

"Depending on battery types, the current range of a little over 200 miles average will approach 400 miles in a couple of years and I can see that becoming 500 miles fairly soon," he said.

But the battery technology will not suit all vehicles and Jason believes there will also be a step change in the adoption of hydrogen as a fuel for large commercial vehicles and cites the progress being made by Hyundai Group and their trucks in Sweden as an example of what the HGV sector should be developing.

Progress never stands still and TA Engineering have developments of their own in the pipeline which will significantly increase their engineering headcount and work.

**Read more about Treharne Automotive Engineering and their business:**

<http://www.treharne-automotive-engineering.co.uk>

