FAST & FURIOUS™

71

Build the Legendary DODGE CHARGER R/T



UNIVERSAL

FANHOME

DODGE
OFFICIAL LICENSED PRODUCT

71_FF_TECNOLOGIAS_SCATPACK_UK.indd 1 31/1/22 9:46

FAST & FURIOUS

Build the Legendary DODGE CHARGER R/T



United Kingdom
Published by De Agostini UK Ltd c/o Royds Withy King, 69 Carter Lane, London EC4V 5EQ

USA
Published by De Agostini Publishing USA, Inc. c/o Becker, Glynn, Muffly, Chassin & Hosinski LLP, 299 Park Avenue, New York, New York 10171

ISBN: 978-1-4439-5214-9
FFN71: 22 01 12

ISSN 2631-9799 (Print)
ISSN 2732-4583 (Online)

Picture credits: NBCUniversal Archive; FCA Archives; BMW Media; Marco Boccolini

Fast & Furious Franchise © 2022 Universal City Studios LLC.
All Rights Reserved.

Dodge, HEMI and related logos, vehicle model names and trade dress are trademarks of FCA US LLC and used under license by Premium and Collectibles Trading Co. Ltd. ©2022 FCA US LLC.

Printed in Poland

CUSTOMER SERVICES
United Kingdom
Call 020 3991 1199 or email support@uk.fanhome.com or ask your newsagent to reserve future issues for you to collect.

USA
Call 1-800-978-1455 or email support@usa.fanhome.com

The price of this issue includes the magazine and the attached pieces for model assembly.

TO OUR READERS
The publisher reserves the right to modify any components as required during the course of the collection. Not suitable for children under the age of 14. This product is not a toy and is not designed or intended for use in play. The collection is complete in 110 parts. Items may vary from those shown.

WARNING
Any reproduction, even partial, of the contents of the magazine is prohibited without permission from the Publisher. the model and the magazine that accompanies it are strictly for private use, and within the family, in accordance with Article L122 - 5 10 of the Code of Intellectual Property. Any reproduction other than that provided for in Article L122 - 5 20 of the Intellectual Property Code is prohibited. The magazine and/or elements of the collection may not be distributed, loaned, resold, rented or exploited for commercial purposes. All rights reserved.

The driving sequences in the Fast & Furious motion pictures were filmed with professional stunt drivers, under carefully-controlled conditions, for entertainment purposes only. No attempt should be made to duplicate any of the racing activities or sequences depicted therein. Universal neither condones nor endorses the use of this or any related product in any manner whatsoever other than in strict accordance with applicable federal, state and local laws and speed limits.



NEW TECHNOLOGIES

The way the franchise has developed has not only affected the characters or the kind of cars that have been appearing in it. Some other elements too, like the new technologies, have gradually become more important in the plots of the movies, especially since the release of *Fast & Furious 6*.

A clear example of the importance that technology has been gaining in the franchise is symbolised by Tej Parker. In *2 Fast 2 Furious* he was presented to the audience as the scruffy owner of a garage, when what he really did was organise races; by the time he returned to the franchise in *Fast Five*, however, he had evolved to become a sophisticated expert in the new technologies. In the first *Fast & Furious* films, the pulsating street races left little room for the new technologies, apart from the ingenious devices that some of the cars used for the races. But all that soon changed.

NIGHTSHADE

Fast & Furious 6 marked a turning point in the importance that the new technologies were beginning to have in the franchise's plot development. Luke Hobbs turns to Dominic Toretto, asking him to get his team together one more time to help him capture a former special operations commander called Owen Shaw. But why is it so vital to arrest this man? Because all of Hobbs's leads make him suspect that Shaw's men are building a Nightshade device, a kind of intelligent bomb designed to block the military operations networks for 24 hours.

In *The Fate of the Furious*, fans of the saga had the opportunity to observe how the latest technology controlled Cipher's secret hideaway.



Megan Ramsey, the creator of the Eye of God device, was one of the world's most feared computer hackers until she switched over to become part of Dominic Toretto's team.

"If you blind a soldier for a single second in the middle of a fight, he dies.

If you blind a country for 24 hours, the loss of life is unthinkable. This could be worth billions to the right buyer," warns Hobbs.

The mercenary still needs a series of essential chips to make his device, called Nightshade, work. This means Hobbs and Toretto and his team will have to work against the clock to prevent the mercenaries from achieving their aims.

THE CHASE IS ON

From the start, we can see that Tej always has with him small portable devices that allow him to make consultations and perform tracking. On this occasion, however, he will soon discover that his rivals are also experts in the use of the new technologies. For example, when he detects that the alarms have gone off in Interpol's offices and Toretto gives the order for the first pursuit of Owen Shaw's men to begin, Tej and his buddy Roman are put out of action the moment their vehicles are attacked by some chips controlled by their adversaries, who have no trouble using the latest technological advances to execute their plans.

To confront such well-prepared enemies, the team makes outstanding use of technology in Toretto's base camp in London. There we see giant screens with the descriptions of Shaw and his henchmen, as well as computers, transmitters, and radio equipment. When Tej gets behind the controls of all this machinery he is able to work like a real detective and he finds leads to help close the net on the mercenaries.

The strange thing is that the enemy also has a headquarters from where to analyse their pursuers' weak points. In Shaw's hideout there are also lots of screens, histories and photographs, some of which really grab the attention of Letty, whose amnesia is preventing her from remembering her past with Toretto.

Throughout the movie, our heroes play a game of cat and mouse with Shaw and his team to prevent Nightshade from becoming a reality. They eventually succeed after having to take part in a thrilling chase in an airbase that, despite putting an end to the mercenary's adventures, will have tragic consequences for Toretto's team.

THE GOD'S EYE

Nightshade was the first technological super-device in the franchise, but by no means the only one. In *Fast 7* and later movies, another invention to be reckoned with appeared: the God's Eye. This was the name of a computer program of incalculable value capable of using everything connected

71_FF_TECNOLOGIAS_SCATPACK_UK.indd 2 31/1/22 9:46

RICHARD ROBERTS

The highly technological setting that was seen in Toretto and his team's operations base in *Fast & Furious 6* was largely the work of Richard Roberts, a set designer whose career has gone from strength to strength in recent years. Born in the UK, Roberts began working in the film and television industry at the end of 1998. A first important step-up in his career occurred when he was given the opportunity to work on a blockbuster, *Star Wars: Episode III – Revenge of the Sith* (2005). After that, he created the sets for movies as different as *The Da Vinci Code* (2006), *Elizabeth: the Golden Age* (2007), and *Wanted* (2008). Nevertheless, he definitively established himself with the TV series *Game of Thrones*. This gave him the chance to make one of his dreams come true, working on the sixth movie in the *Fast & Furious* franchise. Since then, he seems to have become a specialist at tackling really ambitious jobs. Proof of this are the spectacular sets he had to build for *Guardians of the Galaxy* (2014), *Avengers: Age of Ultron* (2015), *Transformers: The Last Knight* (2017), *Star Wars: The Last Jedi* (2017), and *Dune* (2020).

to digital media in order to trace specific people. An individual could be tracked and located in just a few minutes thanks to the information offered simultaneously by cell phones, street cameras, computers, ATMs and traffic lights. This "all-seeing eye" was presented in the film as an absolutely revolutionary device that was terrifying the American government, because, as is usually the case, depending on who used it, or for what purpose, it could become a very dangerous weapon.

The God's Eye was a program capable of taking control of any technology that used a camera. It worked better the closer it was to the person targeted. However, it was also seen to be hugely effective when used at long range. Thanks to satellite connections, in about four minutes or less it was able to determine a person's exact position.

"I'll give you an example," the mysterious Mr. Nobody tells Dom Toretto, when he invites him to visit the Covert Operations Base in El Segundo, California. "It took us almost ten years to find Bin Laden. With this we would have found him anywhere in the world in a couple of hours. This incredible device would be catastrophic if it gets into the wrong hands."

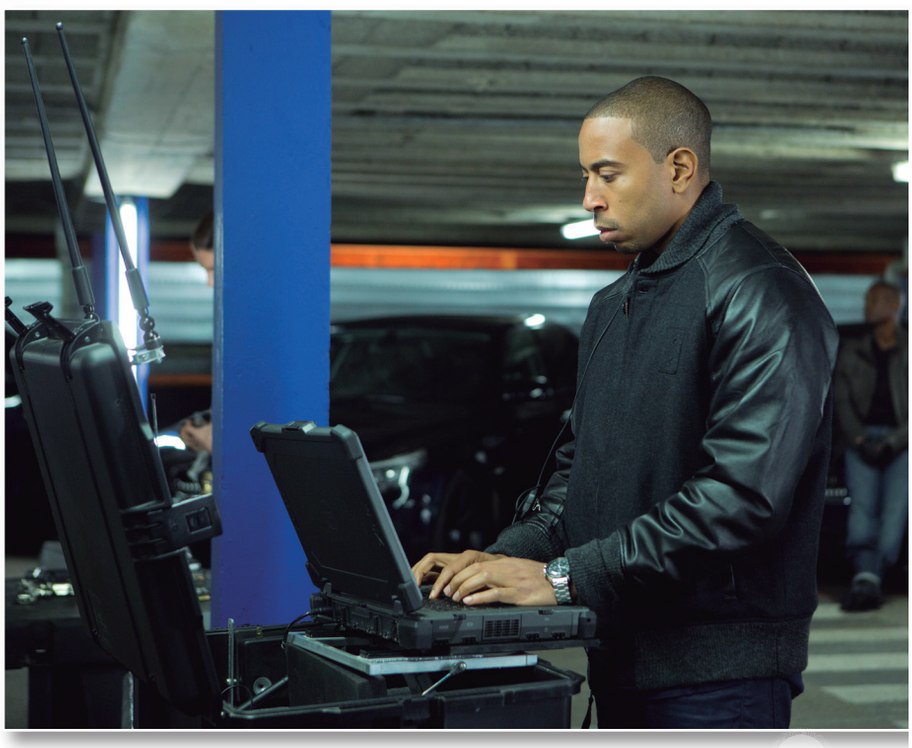
The person behind the creation of the God's Eye was one of the most fearsome and intelligent computer hackers in the world: Ramsey. However, in creating it she put her own life in danger, as she had been kidnapped by a private military organisation commanded by the terrorist Mose Jakande. After being rescued by Toretto and his crew, Ramsey joined them and put her huge knowledge of computers to good use to help in the fight against Evil.

CONTROLLING FATE

The God's Eye reappeared very powerfully in *Fate of the Furious*, perhaps the movie in the franchise where the new technologies are most visible throughout. Just as the US government feared, the powerful device ends up falling into the worst possible hands, those of a sophisticated cyber terrorist known as Cipher. This enigmatic woman came up with a scheme to coerce Dom Toretto and force him to work for her. His team were totally confused by this, looking on in disbelief as he apparently went over to the other side.

In Cipher's hands, the God's Eye could cause chaos in a city like New York, as it enabled her to manipulate the traffic lights and remotely control all the vehicles connected to the network in one way or another. In what unquestionably looked like his riskiest adventure to date, Toretto would have to use all his cunning and as usual trust his "family" to successfully negotiate such a tricky situation, caused by the pernicious use of the new technologies.

After leaving behind his past as a race promoter in Miami, Tej becomes a specialist in the use of new technology, providing high-tech solutions to Toretto and his team.



71_FF_TECNOLOGIAS_SCATPACK_UK.indd 3 31/1/22 9:46



DODGE CHALLENGER R/T SCAT PACK 2019

In the Dodge Challenger range for 2019, the brand added an R/T Scat Pack Widebody equipped with some features from the defunct Challenger Demon, among them the wide body kit. This Dodge Challenger went on to be the widest and most spectacular version in the range of this iconic new-millennium muscle car.

In 2019 the R/T Scat Pack became the most aggressive standard Dodge Challenger by adopting the wide bodywork from the defunct 2018 limited series Challenger Demon.

The Dodge Challenger R/T Scat Pack, the range's 2019 spearhead, combined the traditional atmospheric mechanics of the Dodge Challenger (6.4-litre V8 HEMI® engine giving 492hp and 644Nm of torque) with wide bodywork, a legacy of the Dodge Challenger Demon, an 850hp car capable of accelerating from 0 to 100km/h in just 2.3 seconds. The latter's wide body and its supercharged engine were inherited later by the 707hp Dodge Challenger SRT Hellcat.



On the screen of the navigation system, the driver could choose to receive different information about the car's performance.

Besides the wide bodywork, the Dodge Challenger R/T Scat Pack was given more features from the defunct Dodge Challenger Demon (this was offered only in 2018 and as a limited series). They included the 20-inch Devil wheel rims and the Launch Control, Launch Assist and Line Lock systems for achieving perfect accelerations. On the panel in the middle of the information, navigation and entertainment equipment, information was given about the car's performance. This model also had firmer suspension, with adaptive shock absorbers and improved brakes. On the outside it was noted for the hood with three air intakes inherited from the Dodge Challenger Hellcat, and the rear spoiler from the Dodge Challenger SRT Hellcat.

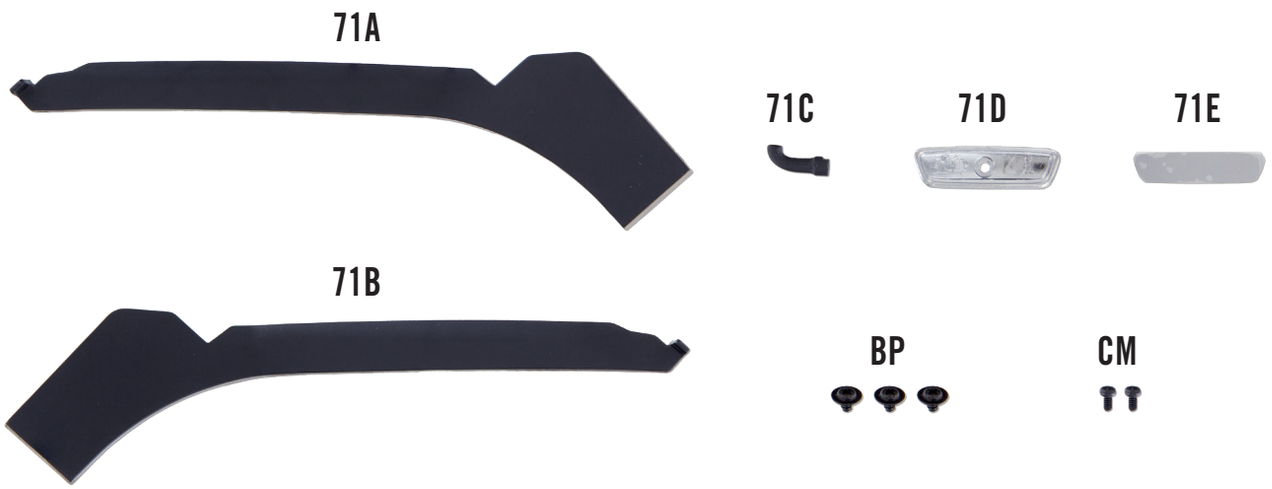
71_FF_TECNOLOGIAS_SCATPACK_UK.indd 4 31/1/22 9:46



REARVIEW MIRROR AND INTERIOR PANELS

In this assembly session you will mount the rearview mirror and the interior panels on the front mounting brackets. Follow our instructions carefully, using the illustrations to help you.

PIECES FOR THIS STAGE



71A Left front interior panel
71B Right front interior panel
71C Rearview mirror arm
71D Rearview mirror housing
71E Rearview mirror
BP Screws 1,7 × 3 × 5 mm (x 3)*
CM Screws 1,7 × 3 mm (x 2)*

* Some of the parts are spares.

Editor's note: The parts shown here may differ slightly from the parts supplied with this issue. This does not affect the quality or the assembly instructions in any way.

ASSEMBLY AREA

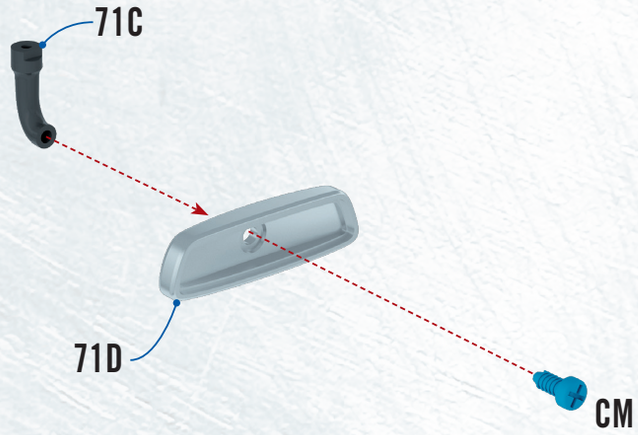


FRONT INTERIOR PARTS

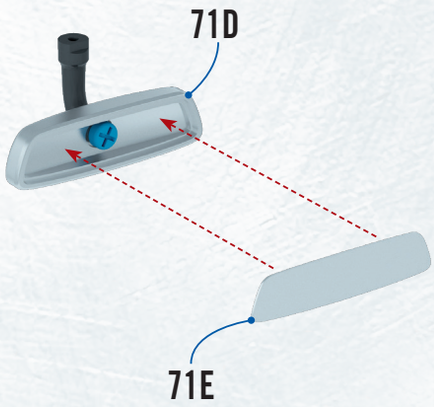
71_FF_TECNOLOGIAS_SCATPACK_UK.indd 5 31/1/22 9:47

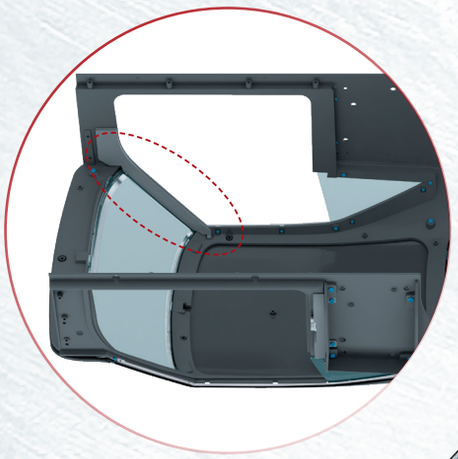
Rearview mirror and interior panels

71.1 **INSERT** the curved end of the rearview mirror arm **71C** into the back of the housing **71D** and secure the two pieces in question with a **CM** screw. ▼

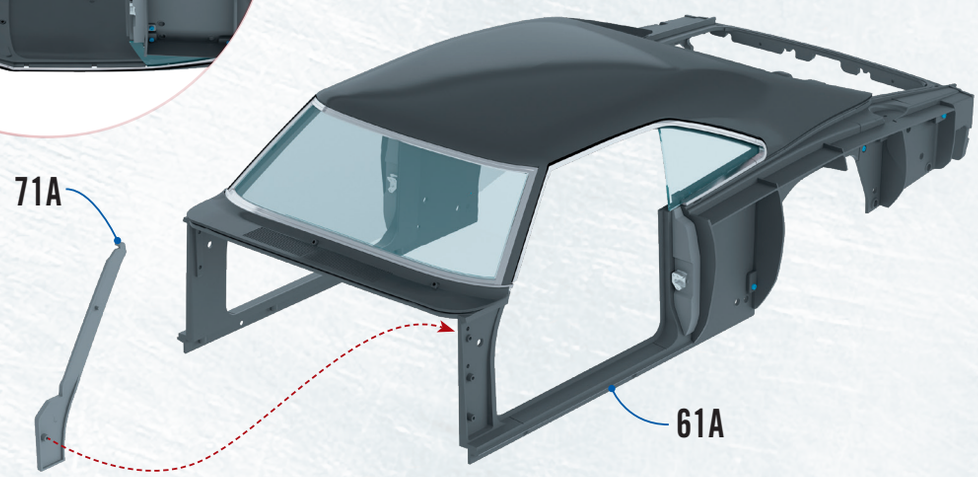


71.2 **REMOVE** the protective film from the back of the rearview mirror **71E** and stick it into the housing **71D**. ▼





71.3 **GET** the car body that you completed in assembly session 70. Find the front left mounting bracket and position, from the inside, panel **71A**, marked with the letter L. The small hole in the bottom of the panel must align with the hole in the bracket. ▼



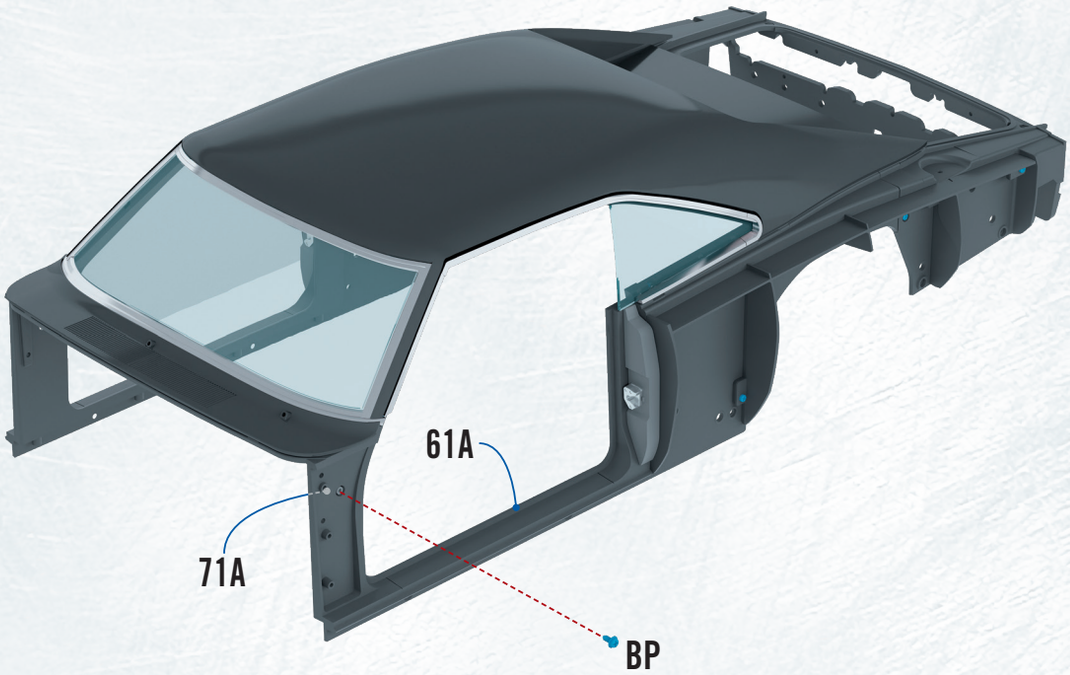
THE A-D PILLARS

In automotive bodywork, the A, B and C pillars are pairs of almost vertical supports on either side of a car between the lower bodywork and the roof. Two 'A' pillars at the front support the windscreen; two 'B' pillars in the middle section of the car sit between the front and rear side windows and support the roof, while the 'C' pillars normally support the back window. Some longer cars may also have a 'D' pillar at the rear of the vehicle.

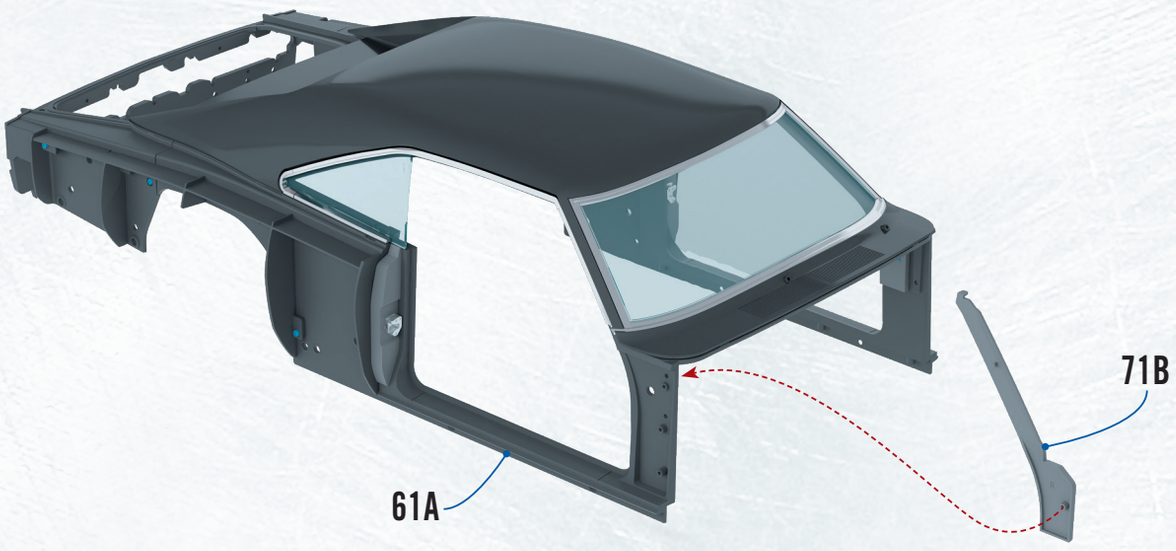
71_FF_TECNOLOGIAS_SCATPACK_UK.indd 6 31/1/22 9:47



71.4 **TO SECURE** panel **71A**, insert a **BP** screw from the outside of the bracket. ▼

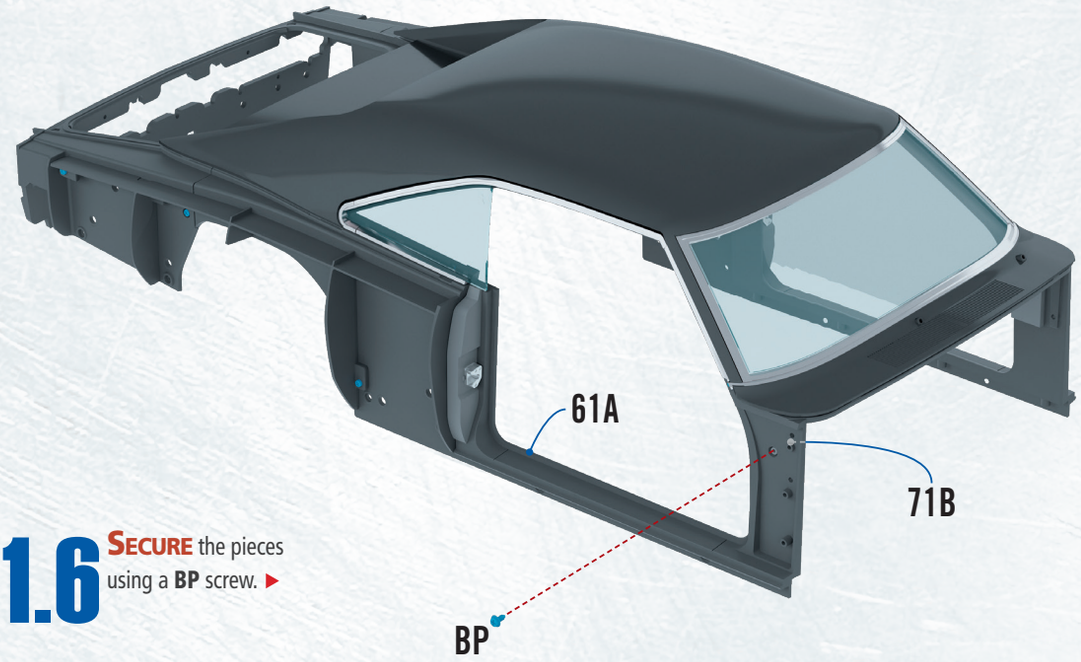


71.5 **IN THE SAME WAY,** position panel **71B** on the inner side of the bracket, as shown in the illustration. Again, ensure that the hole in the bottom of the panel is aligned with the hole in the bracket. ▼



71_FF_TECNOLOGIAS_SCATPACK_UK.indd 7 31/1/22 9:47

Rearview mirror and interior panels



71.6 **SECURE** the pieces using a **BP** screw. ▶

RESULTS OF STAGE 71



You have now assembled the rearview mirror and attached the interior panels to the front mounting brackets

71_FF_TECNOLOGIAS_SCATPACK_UK.indd 8 31/1/22 9:47

THE SECRETS OF BRAKE CALLIPERS



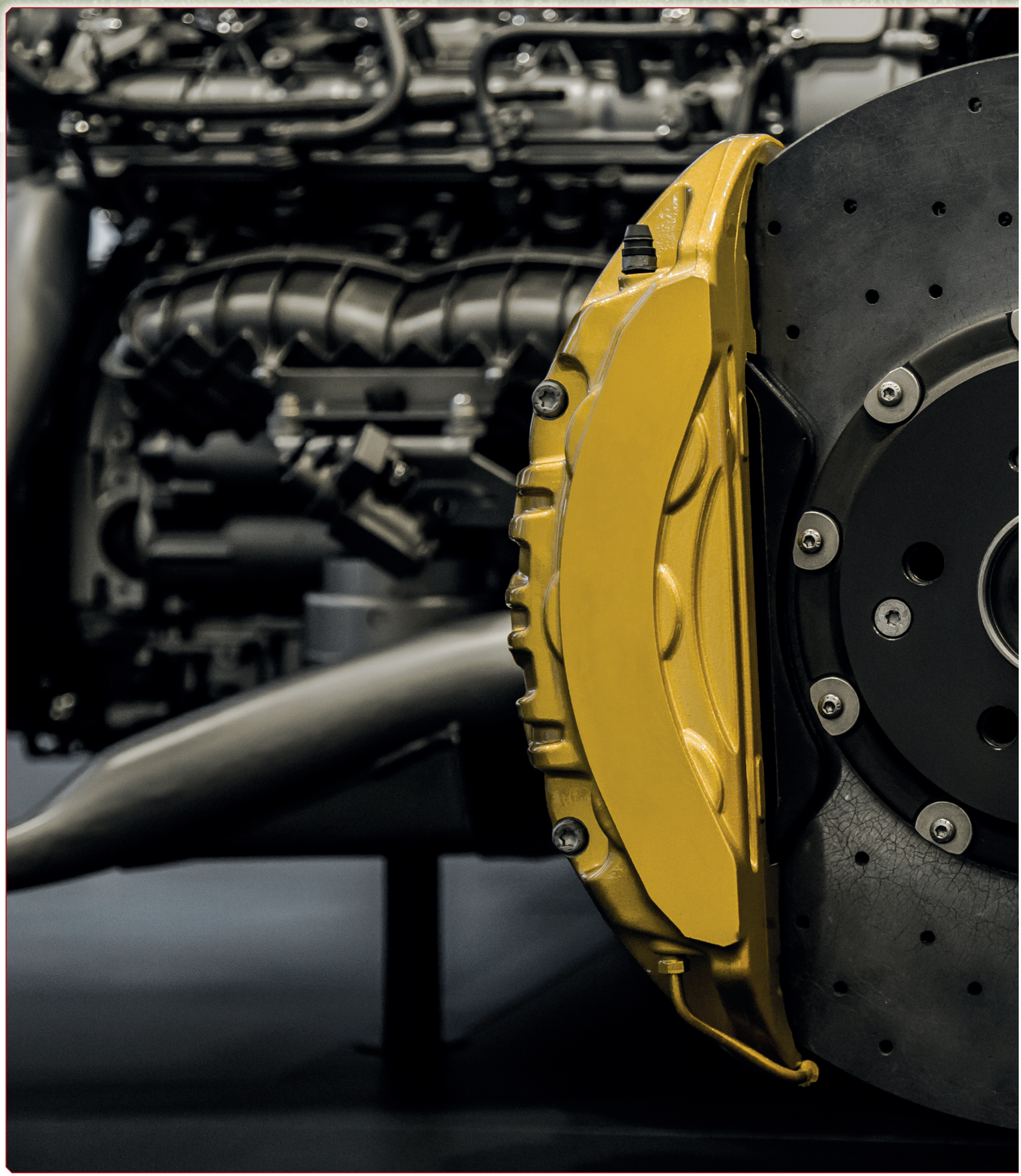
Being able to slow down quickly and in a variety of driving conditions is essential for high-performance and racing cars, and it is just as important as being able to accelerate rapidly. Today we will take a closer look at the secrets behind the construction of brake callipers.

Of course, all drivers know what the brakes are for. However, perhaps it may not be apparent to everyone that the available braking power is usually significantly higher than that of the engine power, whatever the type of car. In extreme use, the brakes convert more mechanical energy into heat per unit of time than the power train transmits to the wheels when the accelerator pedal is fully depressed. In production cars, the ratio of braking power to engine power is often in the order of 3:1. Brakes are effectively energy transformers that function thanks to friction. So how do they work?

When you press the brake pedal, the discs on each wheel are clamped between high-friction brake pads by the pistons in the brake calliper.

71_FF_TECNOLOGIAS_SCATPACK_UK.indd 9 31/1/22 9:47

The secrets of brake callipers



71_FF_TECNOLOGIAS_SCATPACK_UK.indd 10 31/1/22 9:47



Carbon-ceramic discs derive directly from the carbon discs used in Formula 1. They are used exclusively on the track due to the high minimum operating temperatures. However, there is also a road car version that can be used thanks to their effectiveness when cold. This material maintains a constant braking force even after repeated use, thanks to the excellent behaviour of the material at high temperatures.

The secrets of brake callipers

On modern cars, each wheel on the vehicle is equipped with a concentric brake disc that rotates at the same speed as the wheel. When the brake pedal is pressed, the disc is tightly clamped between two pads coated with friction material. The two pads are gripped against the disc by brake calliper pistons, which are operated by a dedicated hydraulic circuit. The wheel then transmits the braking force to the ground, thanks to the grip of the tyre. In modern Formula 1 cars, extraordinary deceleration is achievable thanks to very powerful brakes, combined with tyres with a large surface area touching the ground that gives them exceptional grip. However, an enormous amount of heat is generated by the brakes when they are fully applied, and it must be eliminated! This is dealt with in three ways: the use of suitable materials, large surface areas, and efficient ventilation of the discs. It is important to remember that the energy that is converted into heat is called kinetic energy. It is created by motion and increases with the square of the speed. This means that when you brake to stop a car moving at 200km/h, the amount of heat that is generated is four times higher (and not double) than if you brake at a speed of 100km/h. In intense use, the discs can reach very high temperatures: for example, at the end of a long descent from a mountain pass, values of over 500°C are common.

FLOATING CALLIPERS

Two types of callipers are used to clamp the disc firmly, thus stopping its rotation: they are fixed and floating (or sliding) callipers. The latter are structurally simpler, weigh less, and in particular, are much smaller. Of course, they cost less, too, and this explains their widespread use as standard on regular production cars. A fixed calliper is secured rigidly to the axle assembly and has at least two opposing pistons that force the pads against the disc. A sliding or floating calliper has pistons on the inboard side of the disc. Therefore, when the calliper acts, it must slide or "float" in order to pull the pad onto the side that is in contact with the disc. Nearly all original equipment callipers are of the floating type.

In a system with fixed callipers, not only is the mounting much more rigid but the stiffness of the calliper itself is significantly increased. This manifests itself in enhanced braking performance, pedal feel, and pad wear. When the brake is applied, the hydraulic circuit of the floating calliper is pressurised, and the piston is pushed outwards, forcing the movable brake pad against the disc. At the same time, the calliper body is pushed in the opposite direction, and in so doing, pulls the other pad against the disc. Sometimes floating callipers have two pistons, both of which are located on the same side and parallel to each other.

FIXED CALLIPERS

When you go upmarket with the performance and price of cars, and especially competition cars, fixed brake callipers are used, with opposing pistons. With this type of brake, the body of the calliper is generally divided into two symmetrical parts joined by screws and in each of which two or more pistons are housed. The callipers are rigidly fixed to the hub holder (or to the suspension element), and when the brake is activated, the disc is clamped between the two opposing pads as the latter are pushed by opposing pistons. The overall external dimensions of fixed callipers are greater than those of floating callipers. In some cases, they require a greater camber to the wheel. The pistons on both sides are hydraulically actuated, and therefore the two halves of the calliper are connected by a pressure pipe. This is especially the case with all aftermarket, oversized brake systems. Fixed callipers can have two, four, or even up to twelve pistons. The use of more than two pistons is advantageous in that it allows the use of larger pads with a greater working surface, and above all, larger-diameter discs. Often the pistons do not all have the same diameter. In order to get better distribution of the pressures on the pads, and therefore longer life and more satisfactory behaviour under certain high-speed conditions, in some cases, the first pair of pistons has a smaller diameter than the second ones.

STRUCTURES AND MATERIALS

In some cases, fixed callipers are made as a single piece, i.e. machined from a solid piece of metal. The work has to be done by craftsmen, and of course, adds to the cost. This is one of the main reasons why standard production cars do not use this sort of calliper. Fixed callipers are found mainly on high-end and performance cars. Historically, manufacturers used cast iron to make brake callipers. However, cast iron, while durable, is extremely heavy. It adds weight to the vehicle, so manufacturers began using aluminium for calliper construction. Callipers made from aluminium meet the demands of modern vehicles while reducing the weight of cast iron by about 40%. Less weight adds to fuel economy and improves ride quality. Generally, these components are obtained by casting aluminium alloy. The most common alloy contains about 5% silicon. Often, the two sides on the calliper are made by hot moulding, a more expensive process. Some specialist companies use computerised CRC machines for the precision machining of individual parts. The material, in this case, is often Ergal 55, an aluminium alloy with a considerable zinc content, also known by the abbreviation 7075. It is a material with very strong mechanical characteristics. Each piston is housed in its own cylinder with a slight diametrical clearance. The tightness is ensured by special sealing rings in synthetic rubber. Their elasticity allows the return of the piston to the rest position after the brake has ceased to operate.

71_FF_TECNOLOGIAS_SCATPACK_UK.indd 12 31/1/22 9:47

The discs

The rotating element that is integrated with the wheel, and upon which the calliper acts, is the disc. In road cars, the material used to make this component is normally grey cast iron. This is bonded with a small amount of other elements such as manganese, chromium, nickel and copper. This type of material has excellent characteristics for this type of use, including great resistance to wear, a good friction coefficient, and the ability to work at very high temperatures. Furthermore, it is low cost and has excellent castability. It allows manufacturers to create components with complex geometry, such as discs with internal ventilation passages, and reduced quantities of excess metal need to be removed by machining.

A typical brake disc consists of a braking surface and a hub for fixing it to the wheel. In production cars, these two components are usually part of the same casting. However, there are some in which the brake disc and the hub are made of two different materials and are then mechanically joined to each other. To facilitate the dissipation of heat, the discs intended for high-performance cars are generally of the self-ventilating type. They use a series of radial passages that are moulded into the disc. This increases the surface area cooled by the air and displaces the air during rotation, like a cooling fan.

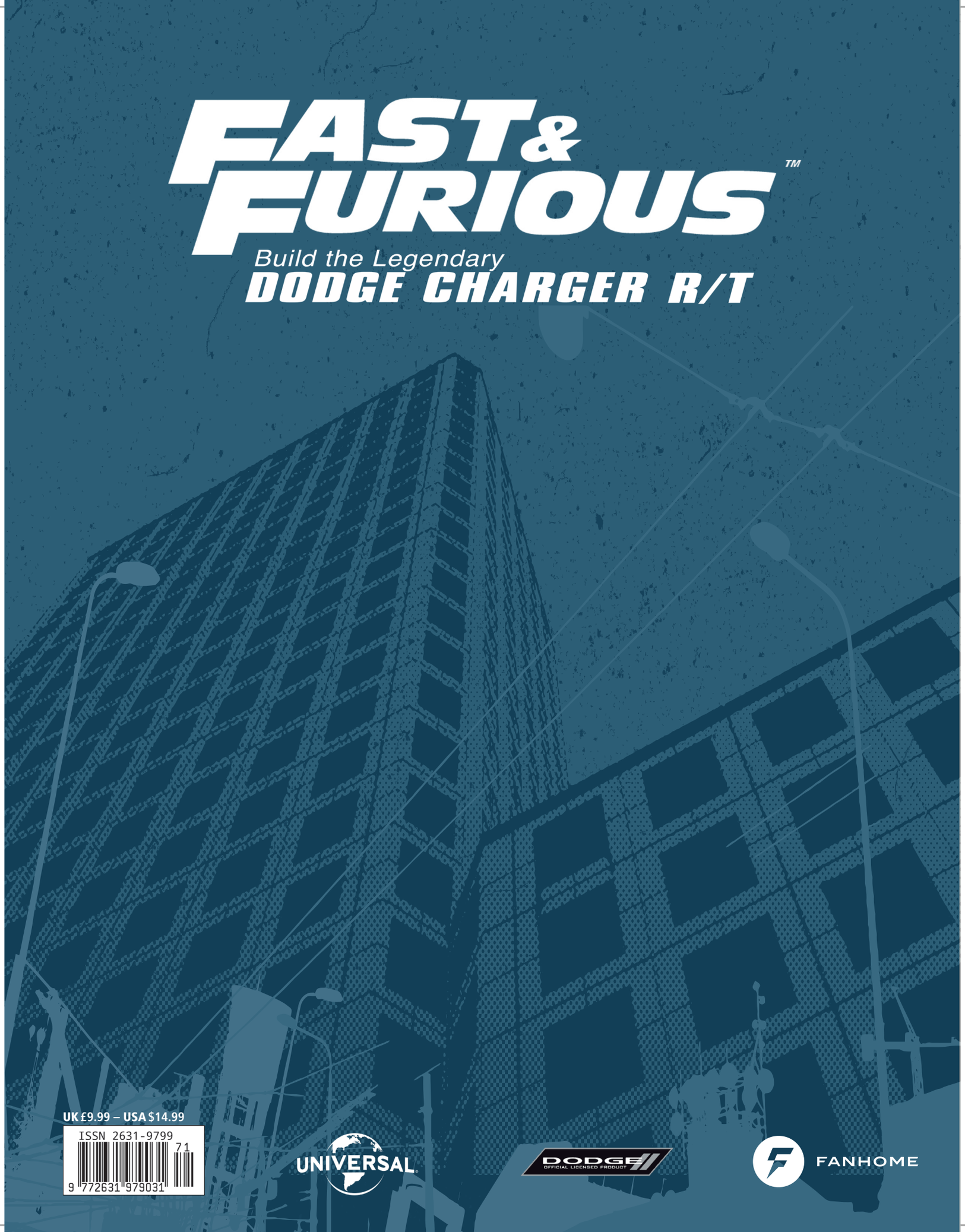
Another material used for the discs is carbon fibre. This is used, for example, in Formula 1 cars, due to its very high coefficient of friction. However, carbon fibre brakes, in addition to being prohibitively expensive for production cars, work well only after reaching a temperature above 200°C. In other words, if they are not hot, they do not "bite". Carbon-ceramic brakes are often used on super sports cars. Compared to traditional steel or cast iron discs, ceramic discs guarantee a friction coefficient about 25% higher, with 50% lower weight. They also have very high resistance to hard, aggressive braking.



71_FF_TECNOLOGIAS_SCATPACK_UK.indd 13 31/1/22 9:47

FAST & FURIOUS™

Build the Legendary DODGE CHARGER R/T



UK £9.99 – USA $14.99

ISSN 2631-9799 71

UNIVERSAL

DODGE OFFICIAL LICENSED PRODUCT

FANHOME

71_FF_TECNOLOGIAS_SCATPACK_UK.indd 14 31/1/22 9:47