FAST & FURIOUS™

7

Build the Legendary DODGE CHARGER R/T



UNIVERSAL

FANHOME

DODGE

FAST & FURIOUS

Build the Legendary
DODGE CHARGER R/T





NITROUS OXIDE
A BLAST OF SPEED

When the cars are racing neck and neck at full throttle, the option exists of pushing the magic button and activating the nitrous oxide. Seemingly rocket-powered, the vehicle accelerates in a matter of seconds. It is an experience only suitable for cool-headed experienced drivers.

At the start of *The Fast and the Furious*, we see Brian putting his Mitsubishi Eclipse through its paces in the deserted car park of the Dodger Stadium in Los Angeles. Although the audience may think that the car is performing fantastically, he thinks it could do a lot better. Therefore, when shortly afterwards he enters the car spares shop, The Racer's Edge, where he supposedly works, he tells Harry the owner: "I need nitrous. My car topped out at 225km/h this morning." To which his boss replies: "No. Amateurs don't use nitrous oxide. You've a heavy foot. You'll blow yourself to pieces."

Brian gets his way and turns up at his first street race with two bottles of nitrous on the back of his car. Before taking on the legendary Dom Toretto, the racers take a look at the engine in the newcomer's car and one of them, Edwin, says: "You've got enough nitrous oxide to blow up a federal building."

NITROUS GOES INTO ACTION

Just before the start of the race, Brian activates a mechanism and a small computer comes out of the dashboard that indicates the vehicle's levels. At the same time, Toretto is also preparing his nitrous bottles, which are installed in a compartment hidden in the co-driver's seat.

The cars move off and due to his lack of experience Brian starts so badly that he ends up in last place. In order to overtake his rivals, he doesn't hesitate to use his first bottle of nitrous. When he activates it, the outside world shoots by like a smear of color, and this enables him to overtake all of them, except for Toretto, whose Mazda RX-7 stays out in front.

When the finish line is near, and despite forcing the engine quite a bit, Brian decides to take a gamble and activates his second bottle of nitrous. But Toretto, who is not easy to surprise, holds off the attack and activates his own nitrous, managing to be first across the line by a few metres.

In quarter-mile races, the use of nitrous oxide is widespread. It is a risky but effective technique that makes it possible to accelerate to very high speeds in just a few seconds.

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: 978-1-4439-5150-0
FFN07: 20 10 21

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

Picture credits: Picture credits: NBCUniversal Archive; Shutterstock; FCA Archive; Alamy; Brian Snelson / CC BY-SA 2.0; Phoenician Patriot / CC BY-SA 3.0; Joost J. Bakker / CC BY-SA 2.0; Danemroberts / CC BY-SA 3.0; WillArlenNess / CC BY-SA 4.0; Cullen328 / CC BY-SA 4.0; ZeroXero / CC BY-SA 3.0

Fast & Furious Franchise © 2020 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. ©2020 FCA US LLC.

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.

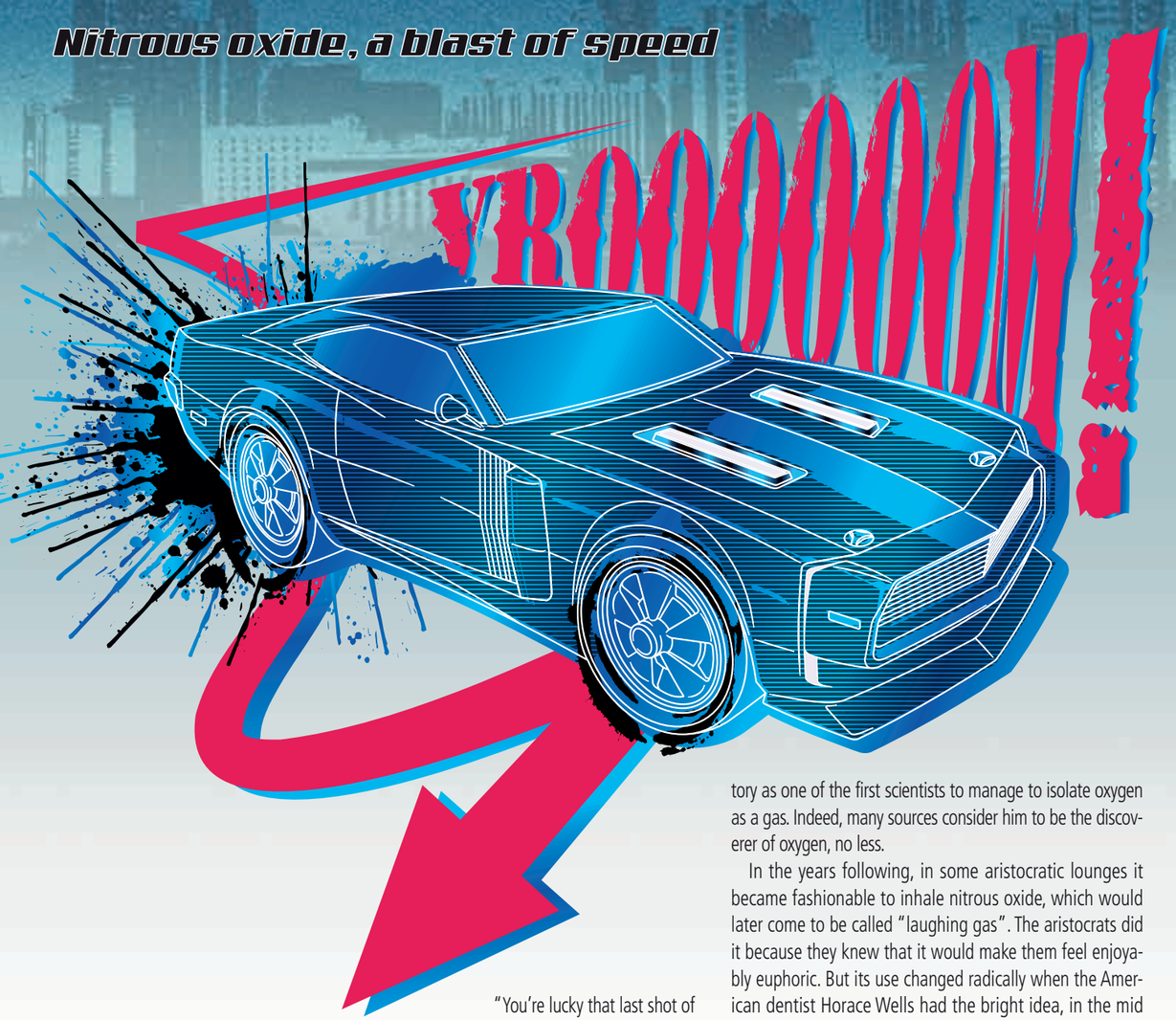
USA
Call 1-800-978-1455 or email support@usa.fanhome.com

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.



"You're lucky that last shot of nitrous oxide didn't blow the welds," Dom tells Brian later, worried when he sees what state the car is in that he has just won from him in the race.

WHAT IS NITROUS?

In the *Fast & Furious* franchise, nitrous has become a regular feature. It is even present in many dialogues in the screenplay, like the one between Sgt Tanner, of the Los Angeles Police Department, and Brian, when he warns him that, "Toretto's got nitrous oxide in his blood and a gas tank for a brain. Do not turn your back on him."

We can all see that nitrous plays an essential part in street racing, making it possible to give a car's engine an extra boost, but what else do we know?

"Toretto's has nitrous oxide in his blood."

Sergeant Tanner

Nitrous oxide as we know it today was discovered in 1771 by a British philosopher and chemist called Joseph Priestley, when he heated ammonium nitrate in the presence of iron. Rather than for this discovery, Priestley would go down in history as one of the first scientists to manage to isolate oxygen as a gas. Indeed, many sources consider him to be the discoverer of oxygen, no less.

In the years following, in some aristocratic lounges it became fashionable to inhale nitrous oxide, which would later come to be called "laughing gas". The aristocrats did it because they knew that it would make them feel enjoyably euphoric. But its use changed radically when the American dentist Horace Wells had the bright idea, in the mid 19th century, of using it as an anaesthetic in dentistry.

ITS USE IN ENGINES

Nitrous oxide was not used in engines until the outbreak of the Second World War. It was then when some engineers began to test its effects for boosting the power of fighter planes' engines. Nevertheless, the appearance of the jet engine made nitrous oxide in planes obsolete.

Some time later, the effects of nitrous were again tested on engines, this time of racing cars. Breakdowns and accidents kept on happening and so the results were not too satisfactory until, in the 1970s, drivers Mike Thermos and Dale Vaznaian found a way to use nitrous in vehicles that was risk free. Both of them in fact founded a company based on this application: Nitrous Oxide Systems (NOS).

For a while, incorporating a nitrous oxide system in a car seemed something reserved for only the most experienced drivers who were looking to give their pony cars equipped with V8 engines an extra boost. Things soon changed however. Jason Bruce, who was NOS's head of marketing, saw that "nitrous has experienced huge growth in the compact sports car market. In recent years its use among ordinary drivers has increased hugely, due in large part to the first *Fast & Furious* movie."

HOW DOES IT WORK?

Nitrous oxide is a pressurised liquid that, when it enters the engine's cylinders, causes a chemical reaction that increases the vehicle's power. Therefore, adding a nitrous kit to a properly conditioned car makes it possible to gain horsepower without having to modify the engine.

Thanks to some sequences in the *Fast & Furious* franchise we have had the chance to see the effect of nitrous on an engine. To activate the process, first you have to push the button that can be set on either the dashboard or the steering wheel itself. When the valves that liberate the nitrous oxide are triggered, it travels to the cylinders, where it mixes with two more elements: oxygen and the fuel. Due to the high temperature of the engine, the chemical components of the nitrous (two nitrogen atoms and one of oxygen) separate. This causes a sudden increase of oxygen in the cylinders and allows the combustion to take the form of a more violent explosion. This chemical reaction makes the pistons move more quickly and the car gains a massive amount of speed.

Generally speaking, a conventional vehicle can stand an additional increase of about 75hp without any problem. When the increase exceeds this amount, it can put the car at risk. The improper use of nitrous oxide, or its use in cars that are not conditioned, may cause various problems in the vehicle: from the pistons melting in a matter of seconds to the engine revving faster than it is able. Explosions and fires are, however, more frequent in the movies than in real life.

AT FULL SPEED

Despite the fact that nitrous oxide is basically used in engines to achieve more power, in the world of *Fast & Furious* we have been able to see that it also has other curious purposes. For example, in *2 Fast 2 Furious*, Brian used it to be able to jump across a bridge, while Roman used it as a propellant for his ejector seat. And in *Furious 7*, Toretto activated it to neutralise the helicopter of the evil Moses Jakande.

In any case, the use of nitrous oxide should only be done by a trained professional on a closed road. One must be cool-headed enough to activate it at just the right moment. Because, as we saw in *The Fast and the Furious*, pushing the nitrous button too early can ruin anyone's life. If you're not convinced, just ask poor Jesse the mechanic, who lost to Johnny Tran in the Race Wars after betting ownership of his beloved Volkswagen Jetta.

Kevin Kavanaugh

Considered to be one of the most competent art directors and production designers in Hollywood, Kevin Kavanaugh had the chance to leave his mark on the Fast & Furious franchise. After spending his childhood in California and graduating from San Francisco State University, he began working at American Zoetrope studios in order to learn the job from one of the greats, the popular director Francis F. Coppola. In his years as a trainee, he had the opportunity to see how productions like *The Godfather Part III* or *Bram Stoker's Dracula* were put together. Some years later, after debuting as art director on *Mission: Impossible II*, he had to put all his knowledge to the test to take charge of the art direction on *The Fast and the Furious*, along with his Austrian colleague Waldemar Kalinowski, who was the movie's visual designer. Both made an enormous effort to achieve the exciting hyper-realistic image that director Rob Cohen was looking to give the streets of Los Angeles. His excellent work on this and other subsequent movies has enabled Kavanaugh to head the production departments of movies of the calibre of *The Dark Knight Rises*, *John Wick: Chapter 2*, *Only the Brave*, and *Sicario: Day of the Soldado*.



The interiors of the cars are suitably prepared, with buttons on the steering wheel or the dashboard, so that the nitrous oxide can be activated at the right moment in the race.

A 1970 Dodge Challenger fitted with one of the optional fibreglass bonnets with a prominent air intake for the 7-liter HEMI® engine. The matt black paint on the bonnet avoided reflections inside the car.

DODGE CHALLENGER R/T

Almost the twin brother of the Plymouth Barracuda, after 1970 the Dodge Challenger completed the wide range of Dodge muscle cars and competed directly with huge sellers like the Chevrolet Camaro and the Ford Mustang. The R/T version could be fitted with the V8 HEMI® engines derived from the ones used in competition.

The famous R/T initials (Road and Track) on the grill.



The Dodge Challenger had a new platform launched by the Chrysler Group in 1970. The engineers extended the distance between the axles by 5 centimeters to offer more comfortable rear seats than those in the Plymouth Barracuda. It was launched in two versions: the basic one, with six cylinder in-line engines and V8 of up to 6.2 liters, and the R/T, standing for Road & Track. Dodge supplied different engines for this version, including the 7-litre HEMI® derived from the ones used by Dodge vehicles in Nascar, giving 390hp.

The changes to the R/T version were not limited to an engine with greater horsepower. To adapt the chassis to the increased power of the HEMI®, the R/T model had more stable suspension, with more robust rear springs and new geometry for the rear axle, as well as more powerful brakes, with disks instead of drums on the front wheels. And a large air intake scoop was moulded into the optional matte-black fibreglass bonnet.

The Dodge Challenger was initially very successful, with 70,000 units sold in 1970. Nevertheless, the muscle car market went into decline and so this car ceased to be made from 1974.

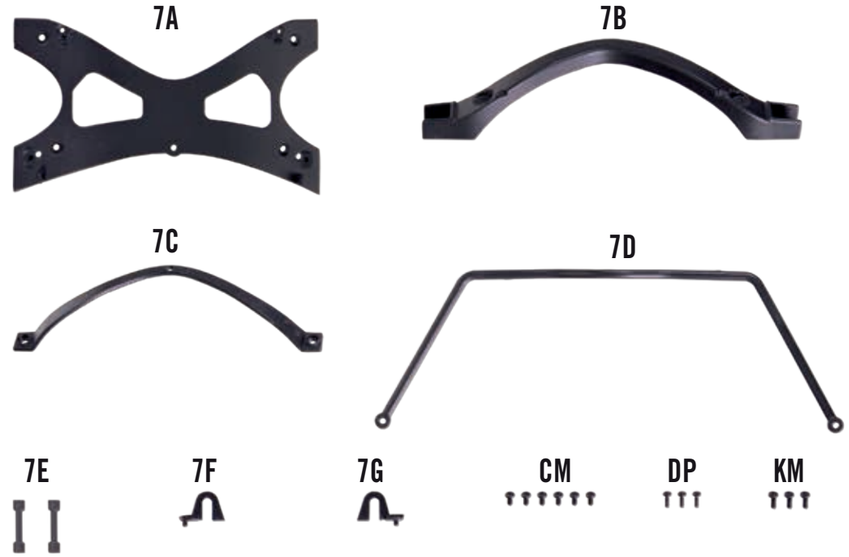


ELEMENTS OF THE FRONT SECTION OF THE CHASSIS (II)

In this session you will mount the chassis K-member and the stabiliser bar onto the chassis.

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.

PIECES FOR THIS STAGE



7A	Chassis K-member	7F	Left front anti-roll bar bracket
7B	Front chassis crossmember 2	7G	Right front anti-roll bar bracket
7C	Crossmember cover 2	CM	Screw 1,7 × 3 mm, (x 6)*
7D	Front anti-roll bar	DP	Screw 1,5 × 4 mm, (x 3)*
7E	Front anti-roll bar end links (x 2)	KM	Screw 1,7 × 4 mm, (x 3)*

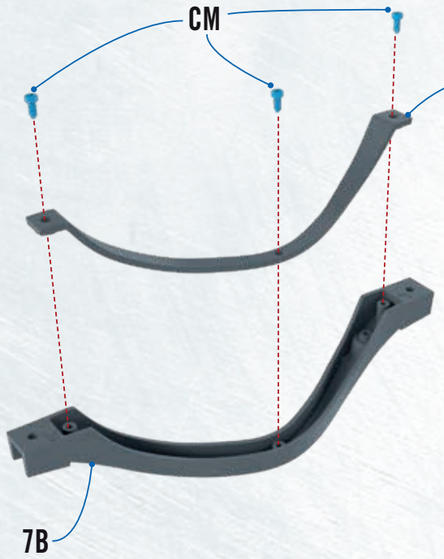
* Some of the parts are spares.

ASSEMBLY AREA

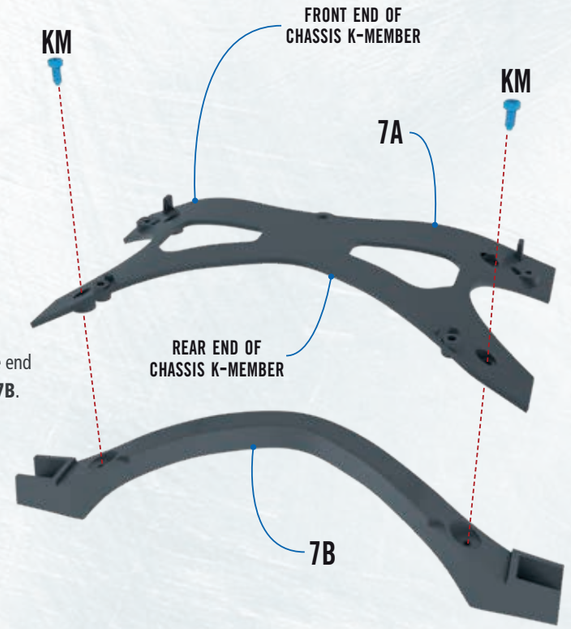


FRONT SECTION OF THE CHASSIS

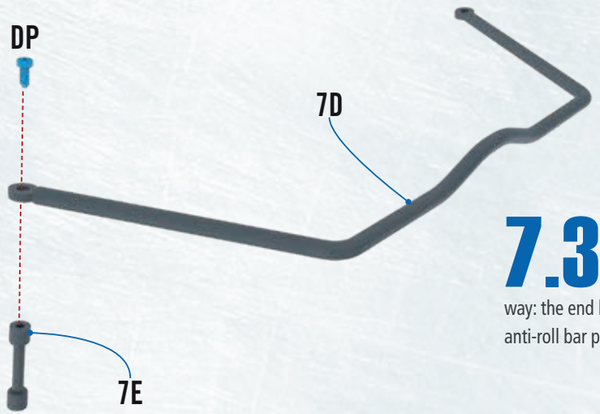
Elements of the front section of the chassis (II)



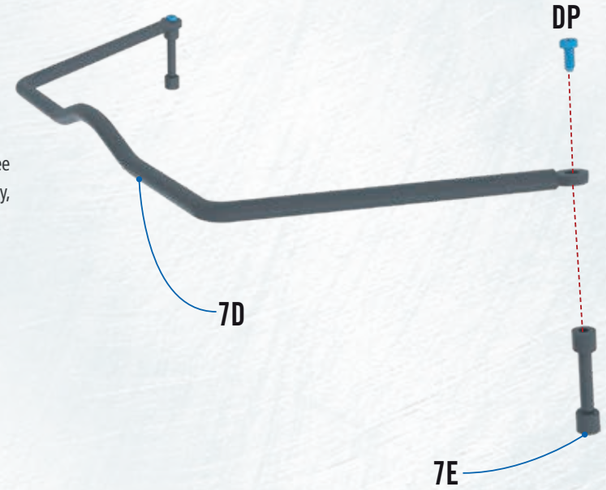
7.1 **JOIN** the crossmember cover **7C** and the chassis crossmember **7B** with three **CM** screws as shown in the picture. ◄



7.2 **ALIGN** the rear end of the chassis K-member **7A** (the end without a hole in the middle) with the crossmember 2 **7B**. Join the two pieces together with two **KM** screws. ►

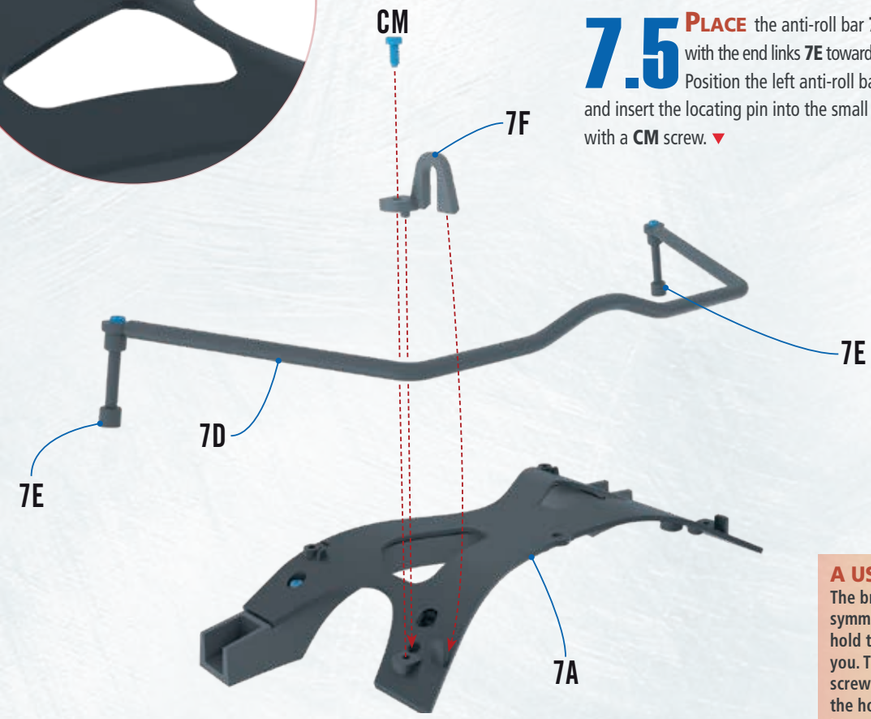


7.3 **ATTACH** one end link **7E** to one end of the anti-roll bar **7D** with a **DP** screw. Look at the illustration carefully to make sure the pieces are facing the right way: the end link points downwards, while the central curve in the anti-roll bar points upwards. ◄



7.4 **ATTACH** the other end link **7E** to the free end of the anti-roll bar **7D** in the same way, using another **DP** screw. ►





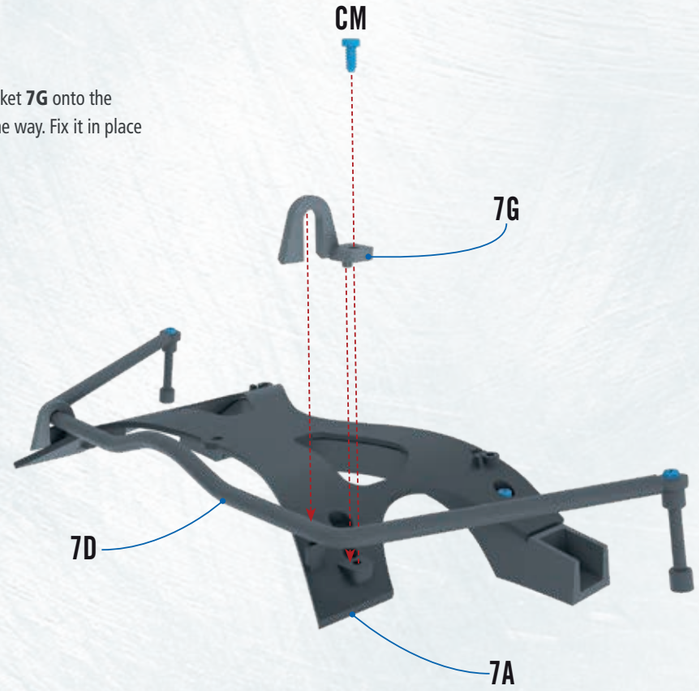
7.5 **PLACE** the anti-roll bar **7D** over the K-member **7A** with the end links **7E** towards the rear of the K-member **7A**. Position the left anti-roll bar bracket **7F** over the bar and insert the locating pin into the small hole. Fix the bracket in place with a **CM** screw. ▼

A USEFUL TIP

The brackets 7F and 7G are symmetrical. To tell them apart, hold them with the arch facing you. The left bracket 7F has the screw hole on the left, while the hole in the right bracket 7G is on the right.

Elements of the front section of the chassis (II)

7.6 **LOCATE** the right bracket **7G** onto the K-member **7A** in the same way. Fix it in place with a **CM** screw. ▶



STAGE 7 FINAL RESULT



The illustration shows the assembled K-member and front anti-roll bar built in this stage.

CHOPPERS: KINGS OF THE ROAD



Tuning is not the exclusive preserve of cars: it can also be done with two-wheeled vehicles. The customisation of motorcycles has a glorious history that began in the United States after the Second World War. Although there are many types and designs, choppers are still the best liked because they evoke an idea of freedom and non-conformity, still very much alive today.

Actor Peter Fonda riding a faithful replica of the Captain America, the motorbike that carried the passion for choppers to all four corners of the globe.

The passion for customising motorbikes took hold in the United States after the Second World War. Harley-Davidson had been supplying the army with motorcycles since 1916, and after 1945 many veterans had the chance to purchase one at a knockdown price. Huge numbers of them were produced during the war, but not so many were needed in peacetime. Men coming back from the war jumped at the chance, especially as the bikes had sentimental value. The problem was, though, that they were too heavy for everyday life and so many owners began making changes.

They had to be made lighter and more manageable. Everything that was considered superfluous was removed, for example auxiliary headlights, the rear luggage rack and



One of the Harley-Davidson models used by the American army in the Second World War. Bikes like this one were the basis for the first tuned models.

decorative features. At the same time, the preference was for shorter mudguards, smaller saddles and higher handlebars to make riding easier.



Members of motorcycle clubs wear badges and insignia on their leather jackets that show they belong to a particular "tribe"

THE FIRST BIKERS APPEAR

In time, customising motorcycles ceased to be a practical necessity. It became the expression of a particular lifestyle and, above all, the difficulties men coming back from the war encountered, doing the best they could to adapt to civilian life. Bikers began to get together in groups not just because they shared the same hobby, but in order to maintain old bonds of comradeship that, with the passage of time, and driven by an increasingly rebellious spirit, gave rise to an entire counterculture. These groups turned into clubs, identified by leather jackets, tattoos and a liking for rock music.

Each club was characterised by specific decorative features. Members covered their leather jackets in studs and badges indicating that the wearer was in a club and the position they held in it. Some badges clearly stated the intention of those who wore them to remain outside or above the law.

DIFFERENT STYLES OF CUSTOMISATION

Just as with cars, there are different styles of tuning. One of the first was the one known as the bobber: an army motorcycle had everything that was not strictly necessary removed in order to reduce the weight. The rear mudguards were made as small as possible (one of the meanings of the verb "to bob" is cut, or cut back). Bobbers are in some ways the direct ancestors of choppers, also created from old army bikes, although the latter are noted for having disproportionately long front forks and higher handlebars.

CHOPPERS

It may well be the most exaggerated style of all. Choppers, similar in some ways to bobbers, have far more important modifications made to the frame and, above all, to the rake angle. The first models appeared in the 1950s in southern California, in the USA. Most of them were Harley-Davidsons fitted with Flathead, Knucklehead and Panhead engines – which could be purchased for a reasonable price in military stores, although old British Triumphs were also sought after. Over the years, Japanese motorbikes were used, such as the Honda 750-4. Whatever the make, mechanics who were chopper experts tended to choose air-cooled engines. It is almost impossible to find a bike of this kind equipped with a radiator.

To begin with, modifications were made for a very clear purpose: to improve the bikes' performance. Gradually however, changes were introduced to give them a far more striking appearance.

Their popularity grew significantly in the 1960s, not just in the USA, but in Europe as well.



THE MOST STYLISH CHOPPERS

Little by little, all these changes produced a highly codified style. Wheel and footrest sizes were increased; fuel tanks and headlights became smaller and chromed features were added. No self-respecting chopper could be seen without these.

Chrome and a striking decoration are two of the principal signs of identity of the most traditional choppers.



A 1984 creation by Arlen Ness, displayed in the Oakland Museum of California.

In the 1960s, motorbikes began to be painted in unusual colours and decorated with motifs, something previously unheard of, which expressed their owner's personality and tastes, and in some cases their membership of a specific group.

Although, as has already been said, the basic characteristics were well defined, different variations appeared all over the USA, most of them to do with the style. Choppers were still a rather minor phenomenon, although some well-known craftsmen were emerging.

Arlen Ness, born in 1939, was the first specialist in this kind of work to become justly famous in the USA, and his fame spread all over the world. Some of the most spectacular choppers in history came out of his workshop in California. Up to his death a year ago, he was still running a business with his son Cory and his nephew Zach that currently has a turnover of £13.5 million a year.

THE PHENOMENON SPREADS

Also in California, the firm Denver's Choppers, owned by Denver Mullins and Mondo Porras, launched "long bikes" on the market, choppers with incredibly long front forks that became very popular, especially in the early 1970s. Thanks to the huge success of the cult film Easy Rider in 1969, choppers became popular all over the world. This subculture, minority at the time and established in only a few very specific parts of the USA, caught on with many young people all over the world. Demand increased very significantly and specialist workshops sprang up everywhere.

Not long afterwards, before the end of the 1970s, a totally new style of motorcycles appeared: diggers. These were choppers with a tiny saddle, something that can only be achieved if the frame is modified and the rear suspension is removed. Nevertheless, to adapt them to the laws in force in many countries, in most cases a sissy bar is added, a tubular structure, generally chromed, which acts as a backrest for the pillion passenger.

The craftsman Arlen Ness, the undisputed king of choppers, sitting astride a model built in his workshops.



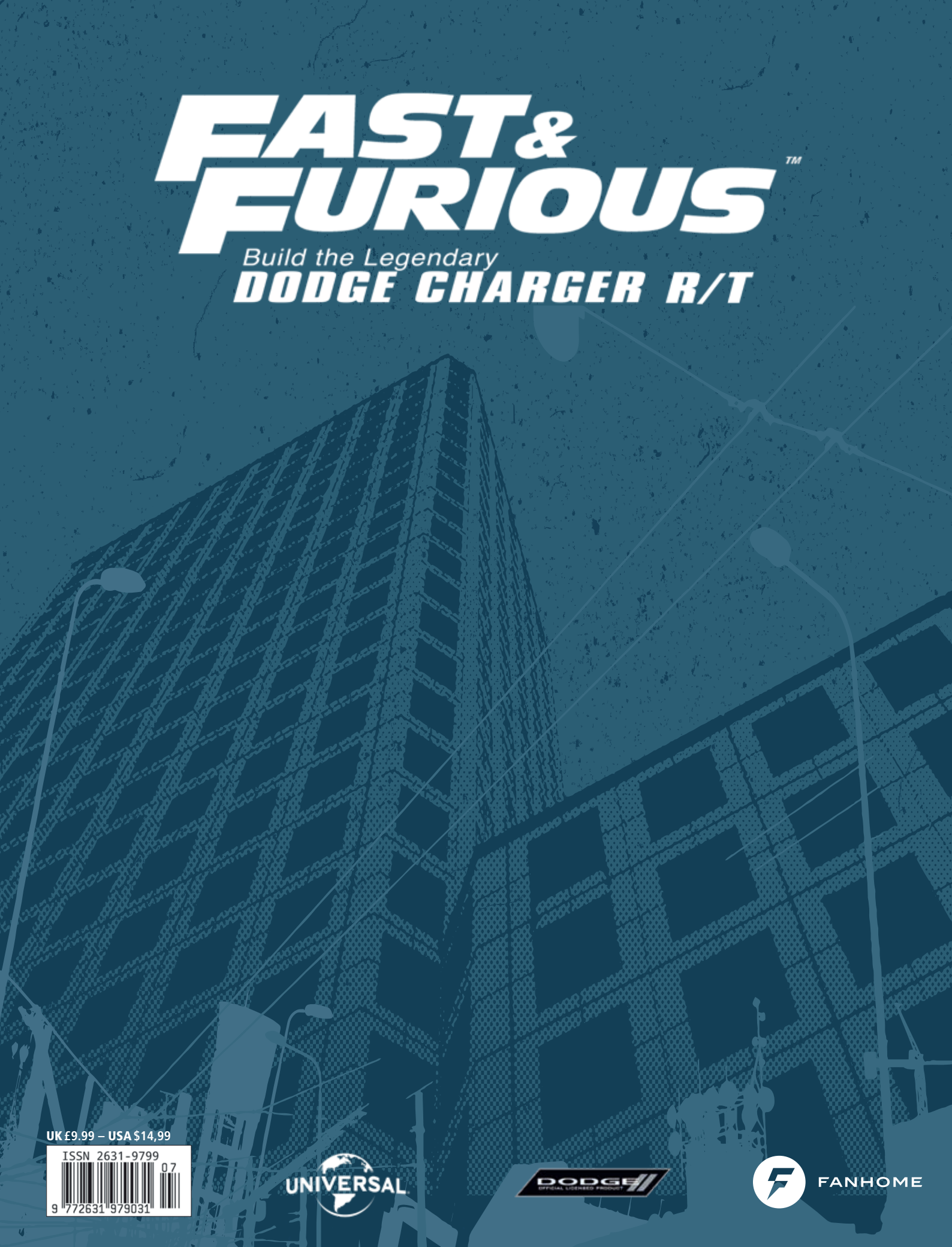
The motorcycles of Easy Rider

With the release of *Easy Rider* (1969) the chopper phenomenon spread to all parts of the world. Those outlandish-looking bikes soon became a symbol of freedom and non-conformity. The film's two main characters, Wyatt and Billy, played by Peter Fonda and Dennis Hopper respectively, ride across the USA on motorcycles nicknamed Captain America and Billy Bike. Cliff Vaughs and Ben Hardy built two models of each one based on four old Hydra-Glides – a Harley-Davidson model – that had once belonged to the police and which were purchased at an auction. Only one has survived: the Captain America that was destroyed during filming and later rebuilt. There is another identical version whose origins are still highly controversial.



FAST & FURIOUS™

Build the Legendary DODGE CHARGER R/T



UK £9.99 – USA $14,99

ISSN 2631-9799 07

9 772631 979031

UNIVERSAL

DODGE OFFICIAL LICENSED PRODUCT

FANHOME