BUILD THE

BACK TO THE FUTURE™ DELOREAN

ISSUE 04







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BUILD THE ICONIC 80s TIME MACHINE IN 1:8 SCALE

UNIVERSAL

BUILD THE

BACK TO THE FUTURE™ DELOREAN

ISSUE 04





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Managing Editor: Ben Robinson
Art Editor: James King
Writer: Kieran Grant

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YOUR CAR PARTS

With this issue you receive the Mr. Fusion chamber, reactor disc elements and bodywork.



4-L MR FUSION CHAMBER



4-K MR FUSION CHAMBER



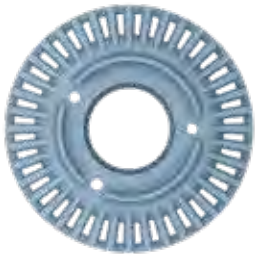
4-D REACTOR DISC 4



4-C REACTOR DISC 3



4-B REACTOR DISC 2



4-A REACTOR DISC 1



4-M MR FUSION

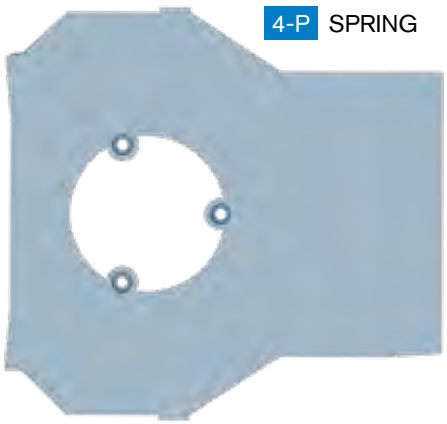


4-J MR FUSION



4-F MR FUSION HATCH

4-E MR FUSION CHAMBER



4-O BODYWORK



CP 6 X SCREWS



AP 18 X SCREWS



4-N MR FUSION LID



4-H HINGE



4-G HINGE



4-I HINGE



4-P SPRING



4-P SPRING

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DRIVE TIME



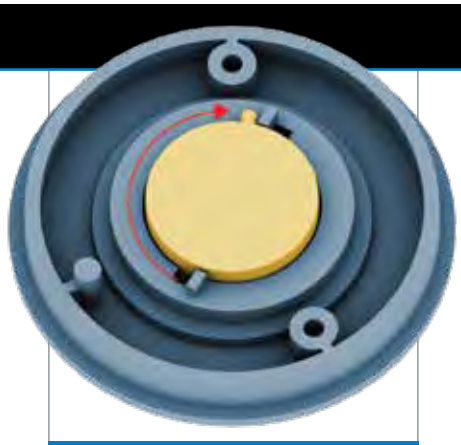
Mr. Fusion is the latest in fuel technology – and it's time to add it to your model.

The latest part of your build-up DeLorean model is the Mr. Fusion fuel processor that Doc Brown adds to the time machine for the final scene of *Back to the Future*. It also includes the reactor disc seen in the rest of the film.

THE REACTOR



STEP 1 ›› Fit the yellow part 4-C into the centre of part 4-B so that it clicks lightly into place.



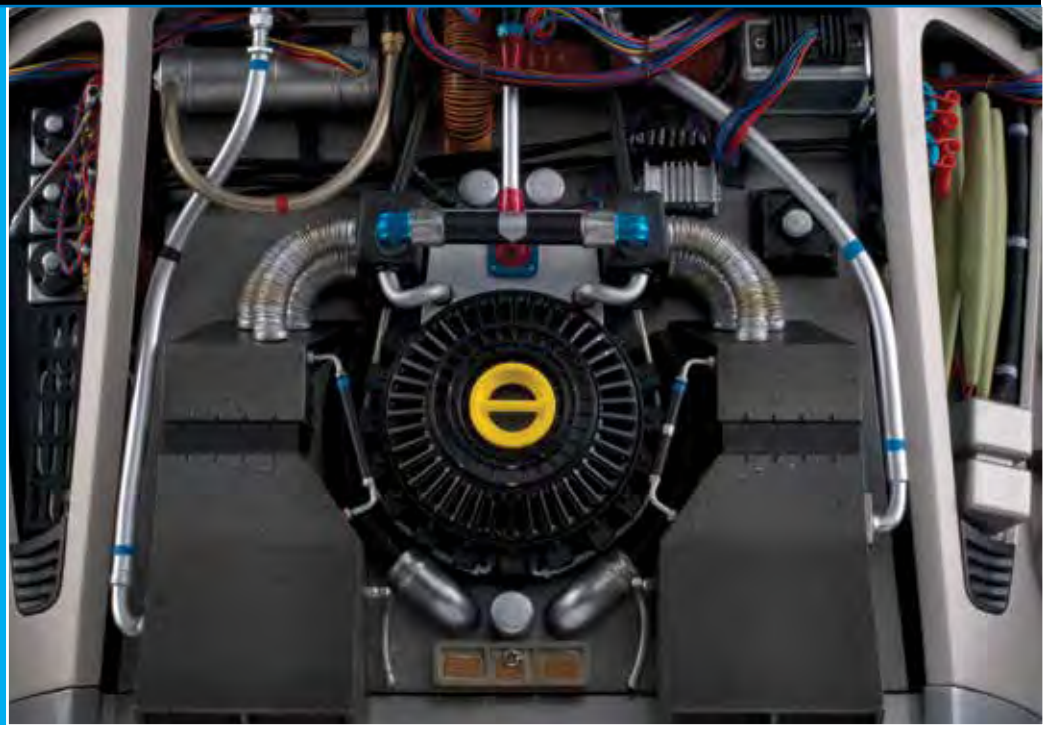
STEP 2 ›› Turn 4-C clockwise in its position so that it locks into position within part 4-B.



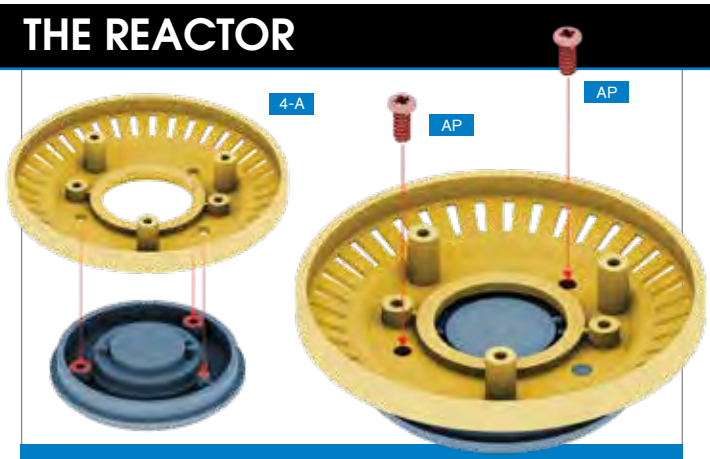
This is what the assembled piece should look like.

THE PLUTONIUM FACTOR

In the first *Back to the Future* film, Marty discovers that Doc's time machine runs on plutonium. A radioactive chemical element, plutonium was used by the Manhattan Project scientists who developed nuclear weapons during World War II, specifically the atomic bomb that was dropped on Nagasaki in 1945. It was a highly dangerous – and valuable – substance, and in the film Doc steals some from a group of Libyan terrorists on the pretence of helping them create a nuke of their own. He inserts the stolen fuel rods into a specially constructed tubular unit in the back of the DeLorean – and the yellow disc seen on your model is the top of this plutonium canister. The canister top is later obscured by the addition of the Mr. Fusion fuel-processing system.



THE REACTOR

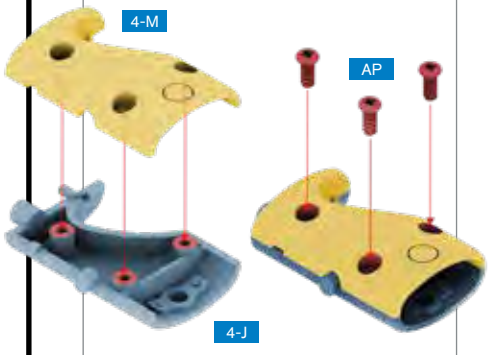


STEP 3 ›› Lay Reactor Disc 3 (4-C) on top of the assembled part, taking care to line up the corresponding holes, and fix into position with two AP screws.

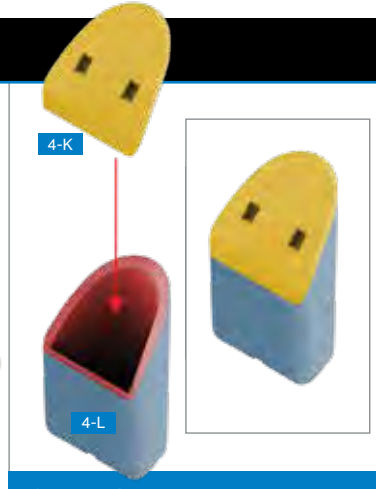


STEP 4 ›› Fix the transparent reactor component (4-D) to the centre of the disc using two AP screws.

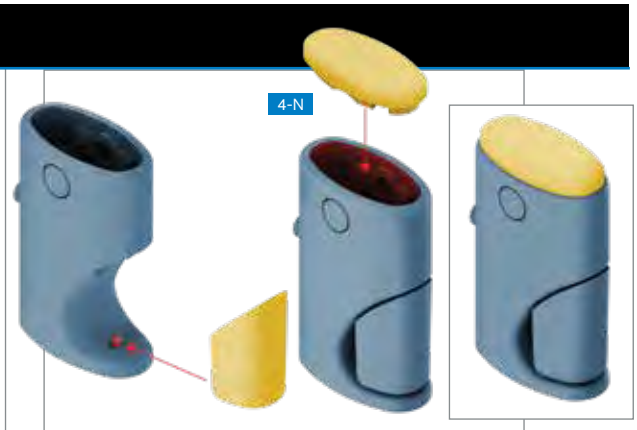
MR FUSION



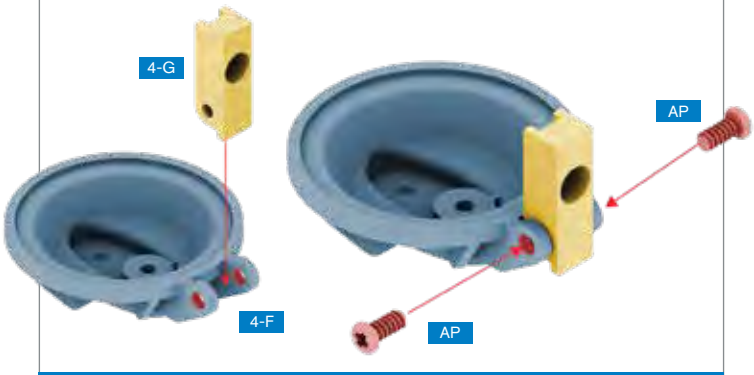
STEP 1 ›› Lay 4-M on top of 4-J to create the Mr. Fusion shell. Fix the two together with three AP screws.



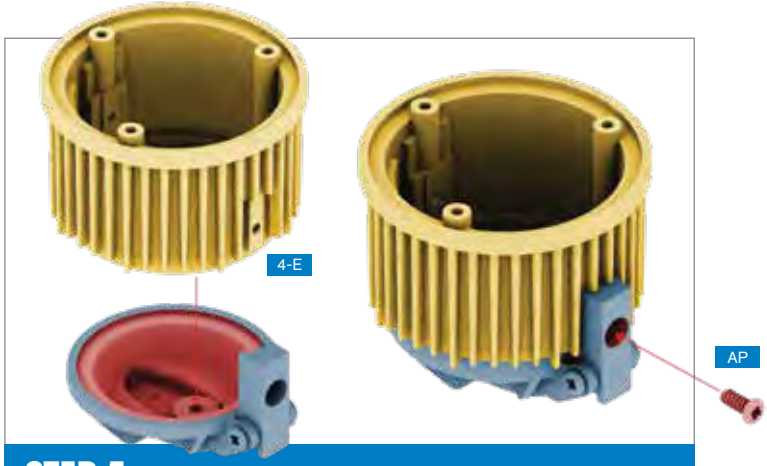
STEP 2 ›› Attach the transparent lid (4-K) to the Mr. Fusion chamber component (4-L).



STEP 3 ›› Slot the assembled transparent chamber into the corresponding gap in the shell. Then click the chamber lid (4-N) into place on top.



STEP 4 ›› Take the first part of the hinge (4-G) and attach it to the white Mr. Fusion hatch (4-F) using two AP screws. Make sure that the large circular screw-hole on the hinge is positioned as shown above.



STEP 5 ›› Fit the black Mr Fusion chamber (4-E) to the hatch and fix into position with a single AP screw.

MR FUSION

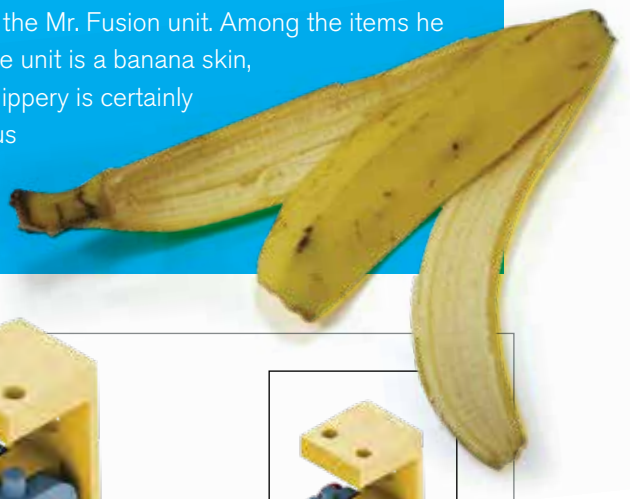


STEP 6 ›› Attach the base of the assembled Mr. Fusion shell to the hatch using a single AP screw.

RUNNING ON RUBBISH

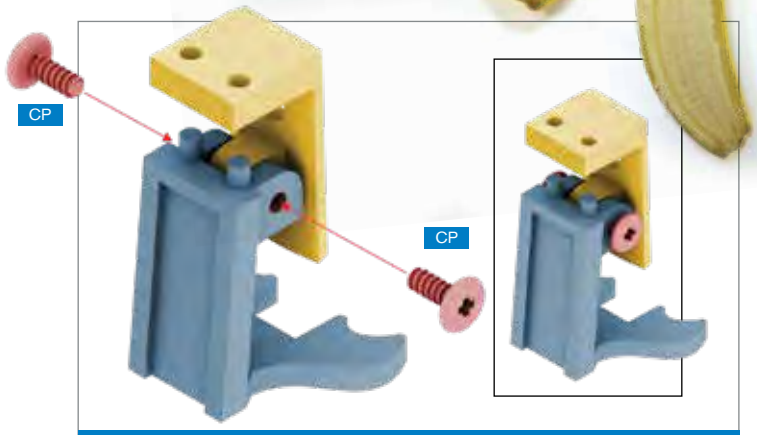
A trip to the year 2015 gives Doc Brown a few ideas about sustainable energy…

When he returns to 1985 from the future, the Doc has made some upgrades to his time machine. The car is no longer powered by plutonium, instead it runs on rubbish processed by the Mr. Fusion unit. Among the items he throws into the unit is a banana skin, which while slippery is certainly less dangerous than nuclear fission.





STEP 7A ›› Clip 4-I into the red 4-H component to build the hinge, with the flat part of 4-I facing up.



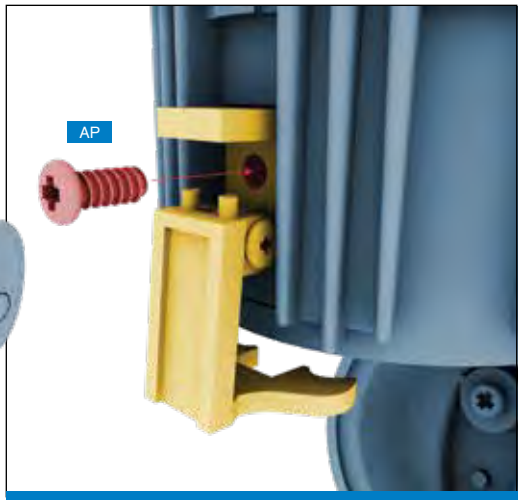
STEP 7B ›› Fix 4-H to 4-I using two CP screws.



STEP 8 ›› Ensuring that the flat end of 4-I is still facing up, click the assembled hinge into the socket on 4-E.

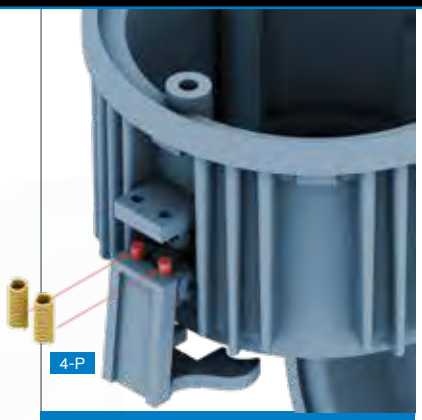


STEP 9 ›› The hinge should sit flush with the chamber so the hole in 4-I lines up with the screw-hole in 4-E.



STEP 10 ›› Fix the assembled hinge to the 4-E with a single AP screw.

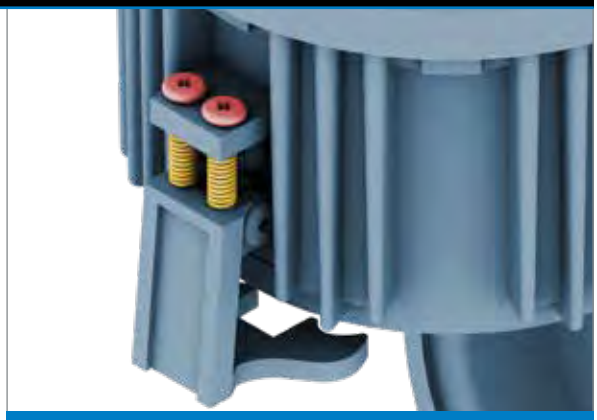
MR FUSION



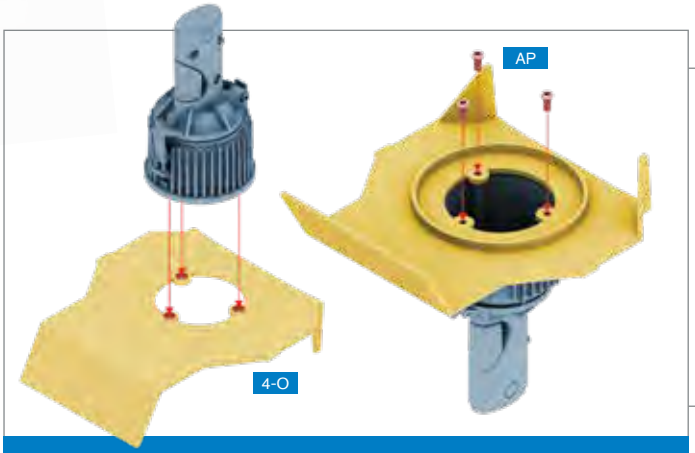
STEP 11 ›› Take the two springs (4-P) and thread them onto the two red shafts on 4-H.



STEP 12 ›› Fix the springs and the hinge into place with two CP screws through the top of 4-I.



STEP 13 ›› Test the assembled hinge to make sure that there is a smooth action with the springs.



STEP 14 ›› Align the assembled Mr. Fusion reactor with the corresponding screw holes on the bodywork panel 4-O, ensuring that the panel is the correct way up. Fix them together using three AP screws.



This is what your assembled pieces should look like.



THE REAL DOC BROWN

DESIGNING THE CAR

Once artists had visualized the DeLorean time machine, it was up to production coordinator Michael Scheffe to help bring the car to life…

In 1984, Michael Scheffe went for an interview at Steven Spielberg's production company, Amblin Entertainment. He was carrying a weighty portfolio – sketches of his designs for 'picture vehicles', a movie-industry term for cars that are made for the screen. Scheffe stopped to ask someone in the car park for a lift, and the stranger offered to take him to the Lankershim exit.



BLANK CANVAS: *An unmodified 1981 DeLorean DMC-12, the starting point for Michael Scheffe and the rest of the team.*

"What's the project?" asked the man. "*Back to the Future*," replied Scheffe. The stranger's ears pricked up. "Have you done anything like that before?" he asked. "I did a TV series called *Knight Rider*," replied Scheffe, then quickly added, "but this is a totally different kind of car."

The driver of the buggy then introduced himself as Bob Gale, writer and producer of *Back to the Future*. He was impressed with Scheffe's vision for how to build the film's DeLorean time machine. "Thank goodness I said it was nothing like *Knight Rider*," laughs Scheffe, 30 years later. "I doubt I'd have ever got that job if Bob thought I'd make Doc Brown's cobbled-together car look like some futuristic rocket."

FROM PAGE TO SCREEN

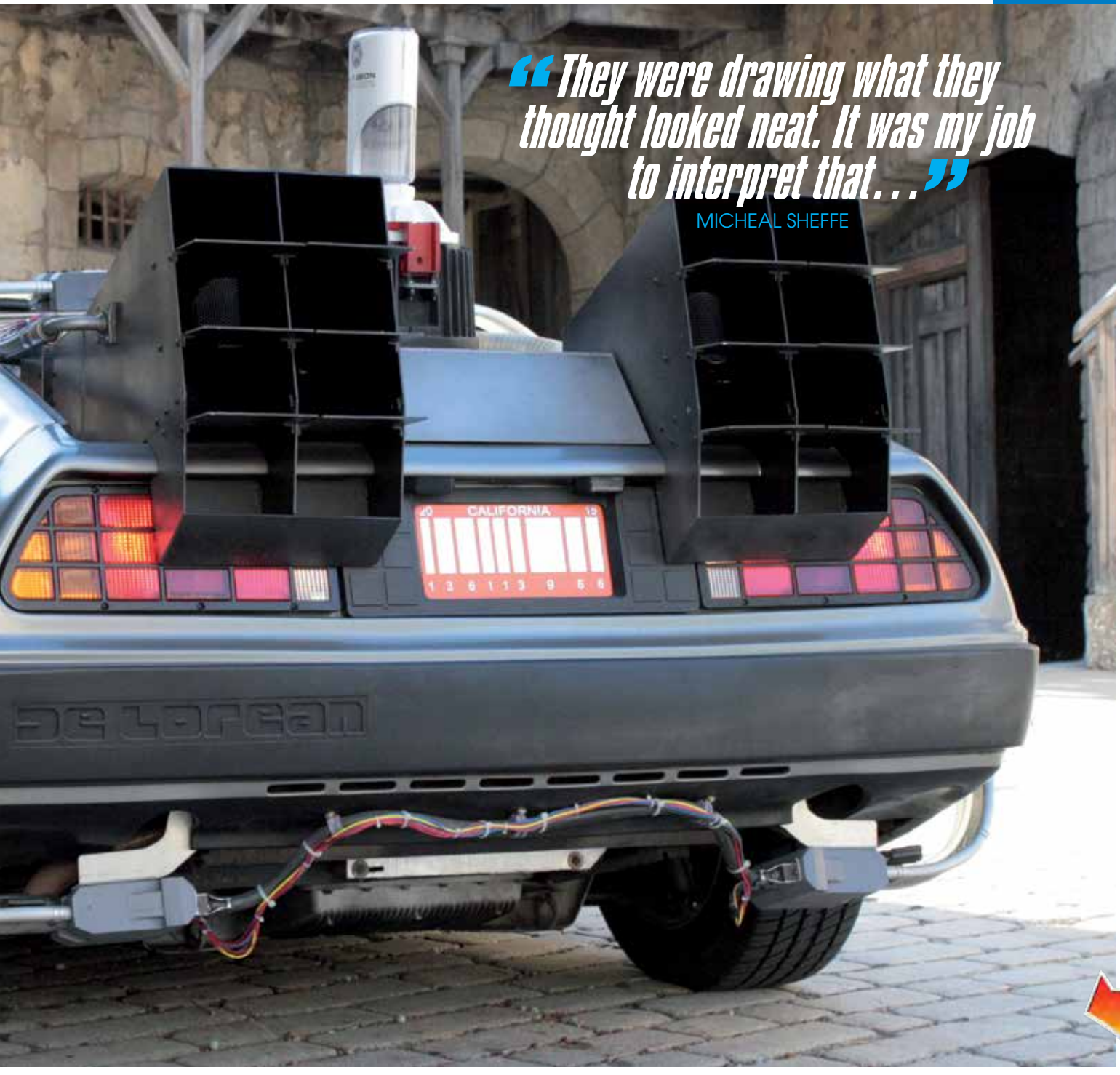
As with concept designer Ron Cobb, Michael Scheffe received a very specific title in the credits of *Back to Future*. Cobb is 'DeLorean Time-Travel Consultant' and Scheffe is 'Construction Coordinator: DeLorean'. This gives us some idea of how much effort went in to getting the film's iconic 'picture vehicle' exactly right. "Bob Gale and Robert

Zemeckis just wanted to make that film as good as they could," says Scheffe. "They were really in the trenches with the rest of us."

Scheffe had both an engineering and artistic background, learning aircraft construction before majoring in transportation design (at Art Center in Pasadena), then onto the world of film and TV. "By the time the first *Back to the Future* came around," recalls Scheffe, "I had done a lot of cheap science-fiction movies as an art director or production designer. They're generous with titles, but that basically means making working drawings for a crew and creating prototypes." He had also worked on the popular Universal Television series *Knight Rider* (1982–85), designing and creating the super-car KITT. "That show led to a lot of work, because on *Knight Rider* the car ended up looking like the concept art – and that doesn't always happen!"

When Scheffe joined the *Back to the Future* production team, Doc Brown's time machine had already been designed by Ron Cobb. "Ron's beautiful sketches contained some fantastic concepts based on the idea that you don't work against the line of the car. Illustrator Andy Probert

BACK IN TIME: *A full-scale replica of the DeLorean complete with Mr. Fusion unit and barcode numberplate.*



> "They were drawing what they thought looked neat. It was my job to interpret that..."
>
> MICHEAL SHEFFE



> "Movies are made of light, so if things light up it gives them life."
> MICHAEL SCHEFFE

Replica car not used in film

had modified those designs a bit, to fine-tune the look and shootability. Hats off to those guys – it's not like they had a warehouse of parts in front of them! They were drawing what they thought looked neat. My job was to interpret those sketches, which meant going around industrial suppliers, finding stuff and dragging it back to the workshop."

SALVAGING PARTS

"When I came on board they had already started incorporating the time-travel loops on the outside of the car," recalls Scheffe. "A really talented guy called Mike Fink began coordinating the construction – meaning, finding all the parts for the DeLorean - before going off to work on another project. So some of the car was already dressed, and they'd started bending the neon for the loops. The rear vents had been welded up by that stage. There were a lot of cooks stirring that broth – it was a big team, and credit goes to everyone."

The distinctive nuclear-reactor vents were custom made, as were the neon loops, but most of the parts used to dress the DeLorean were found items. It's not like we had the facility, or time available,



SPARE PARTS: *The production team sourced many of the time machine's most impressive features from scrapyards and industrial-salvage stores.*





Replica car not used in film

TWIN VENTS: *The two nuclear exhaust vents, which were relatively late additions to the car's design, had to be custom made. Most of the other features were repurposed 'found' items.*



BRIGHT LIGHTS: *Getting the LEDs that decorated the DeLorean's interior to show up on film was a big challenge for Scheffe and his team.*



SMALLEST DETAILS: *A lot of effort went into creating a realistic 'cockpit' for the DeLorean, including the labelling of all the car's dials.*

to fabricate every part," says Scheffe, "so anything in the sketches that looked like it could be industrial salvage we tried to source though industrial salvage! The flux capacitor, for example, was an electrical junction box." This fitted with Zemeckis and Gale's idea that Doc Brown built the car in his garage using parts bought from Radio Shack and pilfered from scrapyards.

But not everything could be hunted down and repurposed. "We had to fabricate the plutonium canister in the cylindrical housing of the nuclear reactor," remembers Scheffe. "Mike found a Dodge Polara wheel cover to go on top, but the little hatch that pops open we had to create from scratch."

LIGHT SHOW

The neon and other lights in the car proved a challenge for the team. "Mike had already put in what we called the Christmas tree," he recalls, "which was that bank of sequencing lights at the back of the cockpit, and at the time LEDs were not that bright. It was a real consideration getting them to show up on screen – you'd usually have them under a shade. It was a long time before video was used in features and film stock wasn't that sensitive, so those lights had to be really bright.

"Movies are essentially made of light, so if things light up it gives them life. If something's black it's just a hole in the image. That's why, in *Back to the Future*, we watered down the streets so the DeLorean's reflections would show up and fill the screen with colour." But creating light proved to be difficult – even dangerous. "It was a big deal to get that neon on the outside of the car," says Scheffe, "and we weren't using real neon. Those loops were powered by a 9,000-volt transformer that was running off the car battery voltage – and that made for some interesting moments on a wet morning's shoot!"

ON A JOURNEY

In a reversal of the usual process, Scheffe drew up blueprints of the time machine after it had been fully constructed and signed off by the producers. "Bob Zemeckis asked me if I'd like to create the blueprints that Doc Brown uses in the movie," says Scheffe. "That was a great privilege and a lot of fun to do. I felt very close to the Doc after that, like we'd been on a similar journey in cobbling together this mad contraption." ■

DESIGNING MR. FUSION

Michael Scheffe was the man who gave the Mr. Fusion unit its distinctive look and logo…



Scheffe had great fun inventing the Mr. Fusion Home Reactor that is added to the DeLorean in the final moments of the first *Back to the Future* movie. "I put a little Westinghouse Electric Company logo on it," recalls the designer. "It was a joke, really, but the producers obviously spoke to Westinghouse about it and they said 'Thank you so much but we're not really interested'! I later changed that to make it less obvious, and in the finished film the logo has a kind of vague W shape. So it's not a Westinghouse Mr. Fusion – but it could have been! And I sometimes wonder if Westinghouse regret turning down that opportunity, like M&Ms turned down the chance to feature their product in Spielberg's *E.T. The Extra-Terrestrial*."

LOOKING FOR DOC

It's hard to imagine anyone but Christopher Lloyd in the role of Emmett 'Doc' Brown. But how did the makers of *Back to the Future* come to cast this mercurial actor?

In Bob Gale and Robert Zemeckis's script for the first *Back to the Future* movie, the character of Doc Brown is described as "about 65. He looks like an old hippie, with shoulder-length white hair, Hawaiian shirt, faded jeans and Indian turquoise around his neck, and lively – almost wild – eyes. He's full of energy, full of life, talks fast, and is immediately likeable for his eccentricities."

So perfect is the casting of Christopher Lloyd as this wild-eyed inventor that Gale and Zemeckis's script directions read more like a description of the actor's performance. It's almost impossible to imagine anyone else playing Doc – but Lloyd wasn't the only performer considered for the role. Zemeckis and Gale had initially envisioned John Lithgow as the scientist, but when it turned out he wouldn't be available for the shoot they were forced to search for another star.

BANZAI AND BROADWAY

When producer Neil Canton joined the *Back to the Future* production team in 1984, he had just completed work on a sci-fi movie called *The Adventures of Buckaroo Banzai Across the 8th Dimension*. Coincidentally, this film starred John Lithgow as a crazed scientist – but it was another member of the cast that Canton had in mind for the role of Doc Brown: Christopher Lloyd.

At that point, 43 year-old Lloyd was probably best known to US audiences as the 'Reverend' Jim Ignatowski in the hit TV sitcom *Taxi* (1978-83), although he had also appeared in several acclaimed films – including *One Flew Over the Cuckoo's Nest* (1975) – and stage plays. Initially, he turned down



> "I knew he was the perfect Doc Brown the minute he walked into the office."
>
> ROBERT ZEMECKIS ON CHRISTOHER LLOYD

IMMORTAL CHARACTER

Christopher Lloyd has played Doc Brown several times – and not only on the big screen…

When he first signed on to play Dr. Emmett Brown in the first *Back to the Future* movie, Christopher Lloyd had no idea how popular the character would become with audiences around the world. Not only did he reprise the role in two big-screen sequels, but he also played Doc in an animated series and scenes filmed for a ride at Universal Studios Florida. He also let his voice to a CGI version of the character created for a video game.

Back to the Future for the chance to appear in an off-Broadway production, but his wife read the script and urged him to accept the part of Doc.

CONDUCTING THE UNIVERSE

"His model for creating the character was actually the conductor Leopold Stokowksi," says Bob Gale of Lloyd's approach to playing Doc Brown. "With the hair that way and the big, broad gestures – Doc Brown walks around like he's conducting the orchestra of the world. And that's what Chris drew upon."

Lloyd's highly physical interpretation of Doc Brown chimed with Michael J. Fox's energetic performance and an enduring double act was born. It really is impossible to imagine anyone else sending Marty McFly back to the future.

WHAT IF…?

In a parallel timeline, these other actors played Doc Brown instead of Christopher Lloyd.



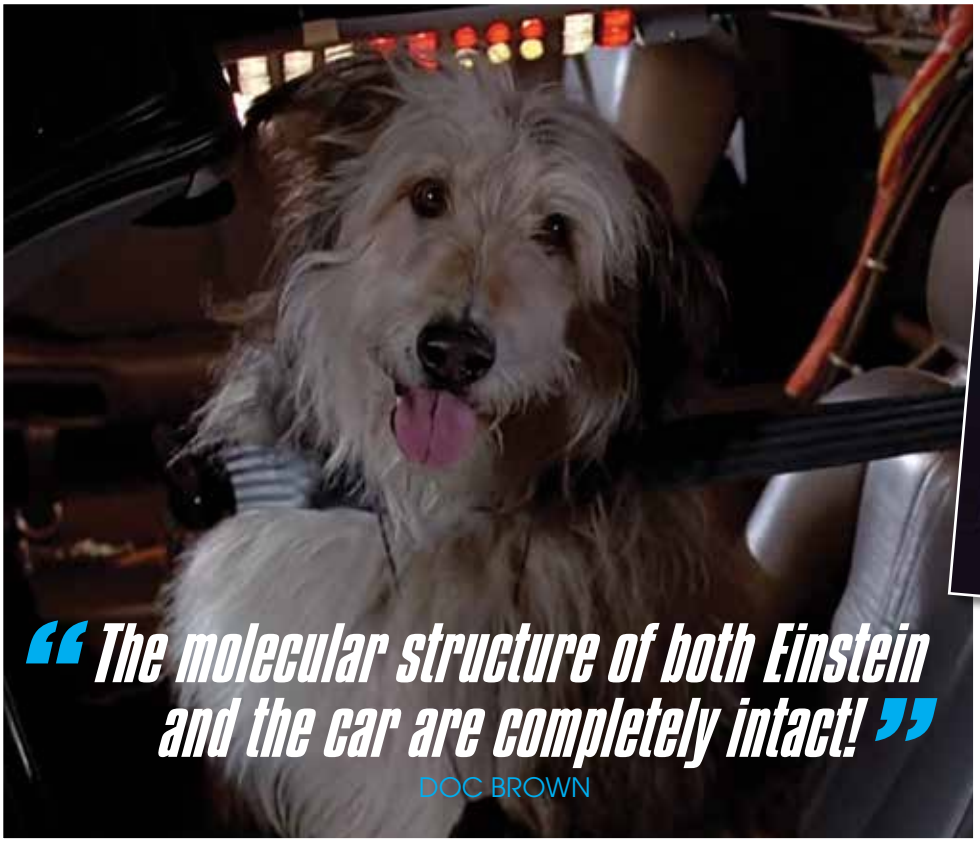
JOHN LITHGOW

An early contender for the role of Doc Brown, respected stage actor John Lithgow would become a familiar face to US movie audiences in the 1980s with his roles in* Terms of Endearment *(1983),* Twilight Zone: The Movie *(1983),* Footloose *(1984) and* Harry and the Hendersons *(1987).



JEFF GOLDBLUM

Another star of* The Adventures of Buckaroo Banzai Across the 8th Dimension *(1984), Jeff Goldblum would have been offered the part if Christopher Lloyd had decided not to accept. He would go on to play his fair share of maverick scientists, including Seth Brundle in* The Fly *(1986) and Dr. Ian Malcolm in* Jurassic Park *(1993).





FOX AND HOUND: *Michael J. Fox with his canine co-star on location for the first* Back to the Future *movie.*

EINSTEIN

'TIGER'

The first time-traveller in history wasn't Marty McFly – it was Doc Brown's faithful hound.

No self-respecting scientist would be without a dog. Why? Because they make excellent test subjects. Dr. Emmett Brown's best friend was Einstein, a dog he named after his hero, and who became the first Earthling to travel safely through the space-time continuum.

Doc kept a digital stopwatch on a chord around Einstein's neck at all times, as this made it easier for him to measure the success of his various time-travel experiments. When he demonstrated the DeLorean time machine to Marty in the parking lot of the Twin Pines Mall, he put Einstein in the passenger seat – and was overjoyed when the dog returned safely from a brief trip into the future.

When Doc decided to travel 30 years into the future and visit the America of 2015, he took Einstein with him. But when the scientist returned a few days later the dog was nowhere to be seen. Doc explained that he had left his pet in a 'suspended animation kennel'.

Einstein eventually ended up in 1885, where he accompanied the Brown family on further adventures aboard Doc's time-travelling steam train. ■

QUICK FACTS!

TWO DOGS

A dog actor called Tiger played Einstein in the first film. He had retired by the time the sequels went into production, so a dog called Freddie was hired instead.

PAST PET

When Marty travels back to 1955, he finds that Doc Brown owns another dog. This pet is not named on screen until *Part III*, when Doc refers to him as Copernicus.

DOG DOUBLE

For some long-distant shots in the Twin Pines Mall sequence, when he is seen in the DeLorean driver's seat, Einstein was played by a man in a special dog suit.

ANIMATED EINSTEIN

Einstein had a more prominant role in *Back to the Future – The Animated Series*, in which Doc gave him a pair of thought-controlled driving gloves.

NEXT ISSUE...

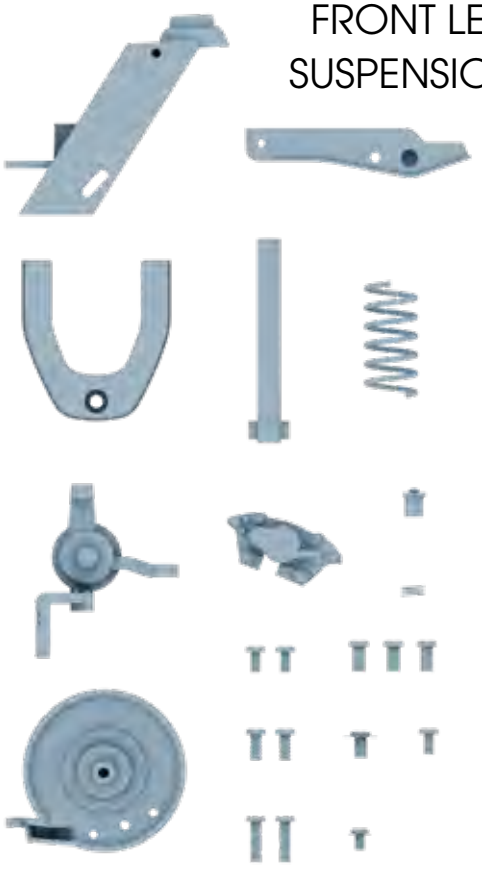
SUSPENSION

The left front suspension for your build-up DeLorean project!

In the next issue you'll receive another set of parts for your DeLorean, plus detailed step-by-step instructions telling you how to assemble them.

YOUR CAR PARTS...

FRONT LEFT SUSPENSION





LEADING LADY

How actress Lea Thompson was cast as Lorraine Baines McFly, Marty's mother.

SLICING THROUGH TIME

How the explosive time-travel sequence was created by legendary FX house Industrial Light and Magic.

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