



# CENTRE FORWARD

To recreate the legendary Centre Steer, you'd have to follow the original 1947 engineering processes – and you'd need a lot of determination. These US enthusiasts ticked all the boxes, says James Taylor

PHOTOS: WILLIAM SUMNER



## 'It has made me so proud'

**OWNER:** JIM MACRI

'I have to admit that I'm particularly proud of this handcrafted vehicle,' says Jim, owner of the collection that the Centre Steer has now joined (highmeadowfarmrovers.com). And so he should be too, given that all he and his team had to go on while recreating it was

nothing more than a collection of photographs and a few distant memories.

However, all that careful research was put to good use. As you can see from the photograph on the left, they didn't build just the one Centre Steer – there's a beautiful scale model as well.

It all started as far as I was concerned about three years ago. In November 2014, I received an email from Jim Macri and Glenn Parent in the US to say they were intending to recreate the legendary Centre Steer prototype, and did I have any information that might help?

I often get requests for help on historical detail, and I like to help when I can. But there was something very earnest about this one that made me take notice. So I wrote back the next day and told them what I knew – or thought I knew.

Just under three years later, in June 2017, the completed project made its public bow at the British Motorcar Festival at Bristol, Rhode Island, where it was awarded the Chairman's Trophy. Glenn and Jim had been as good as their word – and they'd kept me updated with pictures of progress and videos of test runs. So you can imagine I was pretty glad that I'd taken the trouble to reply to that first email.

### First steps

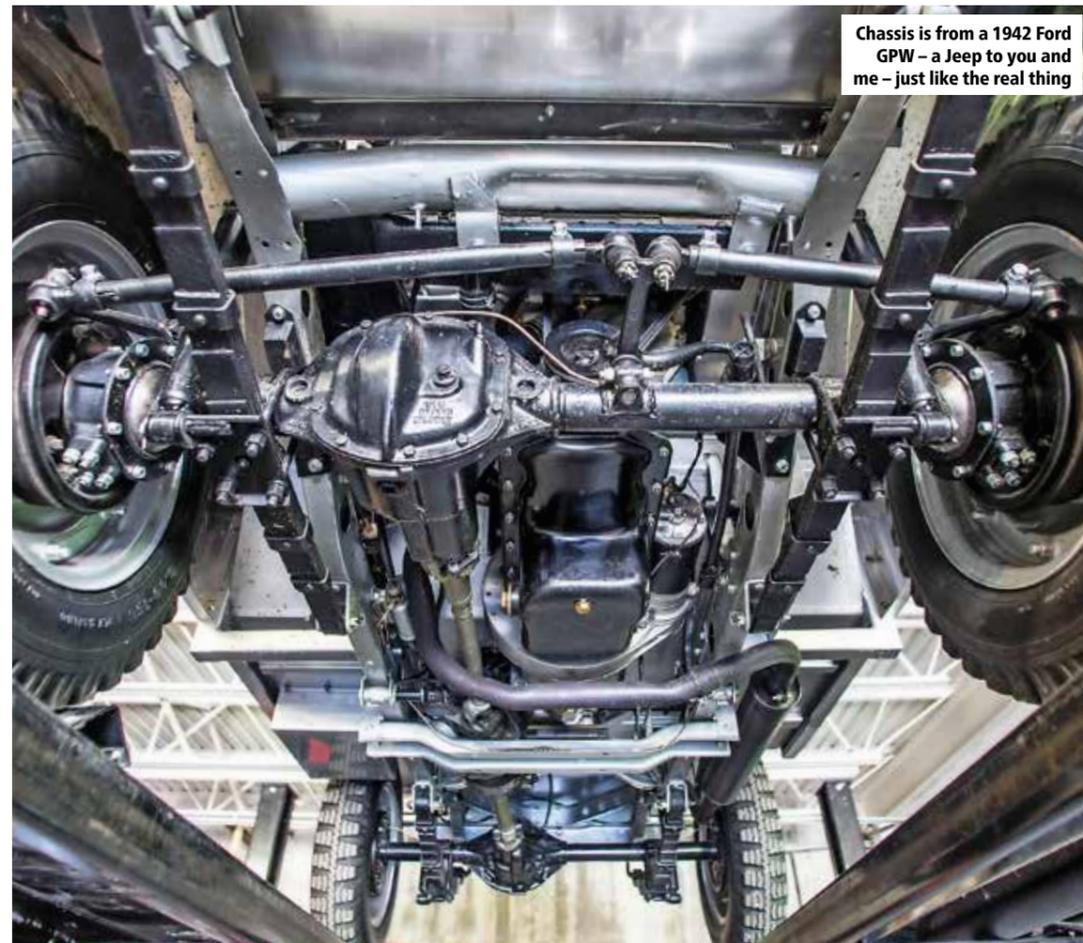
What had been going on in the meantime makes a fascinating story all of its own,

because this wasn't a rebuild or restoration – it was a recreation of something that now only exists in photos and in legend. There have been other attempts to recreate the Centre Steer, but only one was ever completed, and that's in the Dunsfold Collection. Success against all the odds? You betcha.

Once I realised that Jim and Glenn were serious, I found out a bit more about them. Glenn is 'chief technician' to Jim's enviable collection of restored Land Rovers, which are kept at his place in Vermont. It's an ideal place to keep a Land Rover collection – a relatively



Senior technician Dana Earthrowl tries it out for size around High Meadow Farm



Chassis is from a 1942 Ford GPW – a Jeep to you and me – just like the real thing

modern farmstead with plenty of undulating land to explore for a gentle drive whenever the urge occurs. You can discover more about the collection at [highmeadowfarmrovers.com](http://highmeadowfarmrovers.com) – and then you can drool over some of the Land Rovers in it too.

Back, though, to the story of the Centre Steer recreation. The way Jim tells it, they began with a lot of very thorough research. This is the way they've approached all the restorations they've done. So as a first stage they gathered together all the known photographs of the original vehicle and contacted all the people they thought may be able to help. That stage of the project must have been quite fun on its own, but of course it was vital preparation for what would come next.

The next stage was what Jim calls 'computer-assisted measurement and analysis'. That may come across as a little grand, but what it means in essence is that they analysed all those photographs to within an inch of their lives and derived measurements from them, putting all of it on to a computer database. The build of the actual vehicle would then be dependent on this.

**Powertrain hardware**

So now the scene was set for starting on the hardware, and as a first step Jim and Glenn went out and found the chassis they needed, from a 1942 Ford GPW Jeep (both Ford and Willys built the World War 2 Jeep, supposedly

to a common design but in practice with minor differences). Glenn set to work on bringing this up to standard, and on working out what modifications would be needed to accommodate the Rover parts.

The real thing (see page 116) had been powered by a prototype 10hp IOE engine, and unsurprisingly, none was to be found. Indeed, there may only ever have been one. So the solution was to use a 10hp Rover production engine instead – the engine that early versions of the Centre Steer story suggested was the one that Rover's Maurice Wilks used. It wasn't, of course: all pictures of the original vehicle show the exhaust silencer on the left, where it physically couldn't be unless the exhaust manifold was also on the left; the production engine had it on the right.

The engine they wanted, and its associated four-speed gearbox, were found in the UK by Ian Cox at Cox & Turner Engineering in Yeovil, and the same company carried out a complete overhaul before shipping these vital

components to Vermont. In the meantime, Jim and Glenn had found a correct 1942-pattern Jeep transfer box. The next stages were going to be the tricky ones. Overseen by Glenn, all these elements now had to be assembled to create the rolling chassis.

There were two major hurdles to be overcome, and these were exactly the same problems that faced Maurice Wilks and his engineers back in the autumn of 1947. First of all, the Rover gearbox had to be joined to the Jeep transfer gearbox. And secondly, the Jeep's existing steering box – on the left of the chassis, of course – had to be linked to a new steering column mounted in the centre.

The first problem was solved by designing an adaptor plate, which was then made up by Jim Geroux at Haanen Packard Machinery in Hudson Falls, New York. Jim also made up an extra gear for the output shaft of the Rover gearbox to mate with the input gear of the Jeep transfer box. The answer to the second problem was already embedded in the Centre Steer legend: it was known that the new central steering column was connected to the input of the steering box by means of a Ross chain. All that was required was to design a system that would meet that specification – and, if that were going to work reliably, it needed the close attention to detail that characterised this whole project.

Piece by piece, the rolling chassis was assembled, and Jim and Glenn found that it



Engine is a 1947 Rover 10hp type



Exhaust emerges under rear crossmember, just like the original



British made! It's a Lucas dynamo



We did that! Dana Earthrowl, Jacob Parent and Glenn Parent check it all works as it should

**'These were the same problems that faced Maurice Wilks and his engineers in the autumn of 1947'**

**'Gleaming and polished, it would be a crime to cover it in the grey paint that the real Centre Steer had'**

was important to have a bulkhead structure in place if the chain-assisted steering system were to work properly.

Strange, that... every single Land Rover utility built between 1948 and 2016 has depended on having the bulkhead correctly positioned at an early stage, even if it didn't have a central steering column!

Anyway, it was March 2016 before the chassis was ready (and tested, around High Meadow Farm) and the final stage of the project could begin. This involved sending all those careful early calculations, plus a set of pictures, to Joe Stafford, whom Jim describes as 'a remarkable English style panel-beater'. Joe operates out of Panel Craft at Bethlehem in New Hampshire, and his job was to build the bodywork from an aluminium alloy 'as close as earthly possible to Birmabright'.

And the result was truly magnificent. So magnificent in fact, that it would be a crime to cover it in the grey paint that the real Centre Steer had, so Jim and Glenn have left the finished vehicle as bare metal. Gleaming and polished, it makes the artistry inherent in this recreation all the more apparent.

So, where to from here? Well, Jim enjoys exhibiting the High Meadow Farm collection at events in the US, and so he'll be doing a lot of that. And I'd put money on him taking it out for a little drive round the farm tracks every once in a while.

Well, wouldn't you? **LRO**

## Rise and demise of the real Centre Steer

In 1947, Rover's Maurice Wilks came up with the idea of creating a light agricultural vehicle similar in concept to the Jeep. The idea was to give Rover an exportable product that would keep it in car-making at a time when the British government was allocating steel to manufacturers on the basis of their export performance. Rover's problem was that its essentially pre-war car designs weren't selling well outside the UK.

So his design used as many existing Rover car parts as possible. He was intent on driving the project through to production quickly. But Wilks wanted to see how well his idea would work, and he didn't want to wait for the first prototypes. So he built his own - what we'd now call a 'mule' because it used parts of existing models combined with elements of the proposed new one.

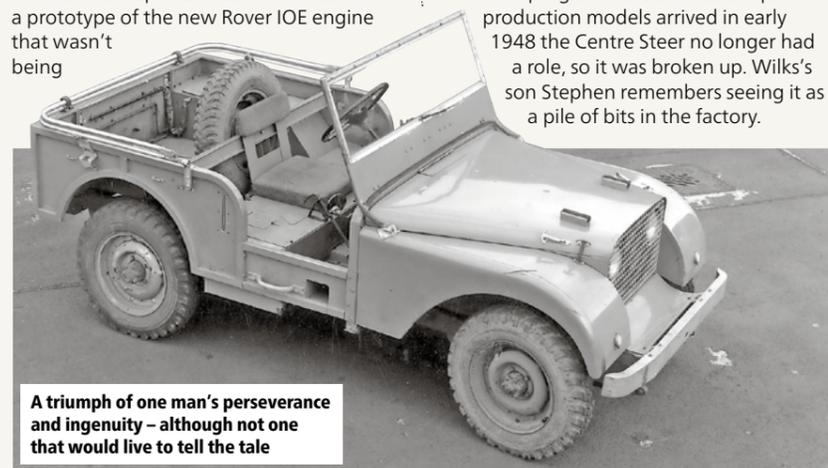
He took a Jeep chassis and commandeered a prototype of the new Rover IOE engine that wasn't being

taken forward to production. This would have become a 10hp (probably about 1400cc) if it had entered production, but Rover decided to build only a 12hp four-cylinder and a 16hp six-cylinder.

The IOE exhaust emerged on the left. On the existing production 10hp it emerged on the right - which is material to the story.

He had the vehicle built up, using the Jeep's transfer box. And he also had a bright idea: why not put the steering wheel in the middle so there would be no need to make RHD and LHD types? Well, it seemed like a good idea at the time, but some within Rover were less than impressed.

Wilks tested this mule prototype between about October 1947 and January 1948, and information gained from that fed into the mainstream Land Rover programme. But once the pre-production models arrived in early 1948 the Centre Steer no longer had a role, so it was broken up. Wilks's son Stephen remembers seeing it as a pile of bits in the factory.



**A triumph of one man's perseverance and ingenuity - although not one that would live to tell the tale**



**Pedal positions encourage a wide-leg stance!**



**Lucas trafficators, just like the original**



**Lovely instrument panel is actually clearer than the production type**



**Right, let's see if this thing runs...**



**Cross-pipe permits a side silencer, as on the original**



**1**

### TRIAL FITTING

It worked on screen; will it work in the metal?



**2**

### STEERING CHAIN

Bulkhead 'hoop' was an essential support.



**3**

### ALL TOGETHER NOW...

... and ready for the body to be built up



**4**

### BULKHEAD IN PLACE

It's been panelled, but there's no dash yet.



**5**

### YES, THAT'S A SPIRIT LEVEL

Did Rover take this much care in 1947?



**6**

### PANELS GOING ON

Hand-made and -fitted in the traditional way.