

1

00:00:30,000 --> 00:00:32,000

I'm not sure if you can hear me.

2

00:00:32,000 --> 00:00:34,000

I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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00:01:02,000 --> 00:01:04,000

I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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I'm not sure if you can hear me.

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00:01:24,000 --> 00:01:26,000

I'm not sure if you can hear me.

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00:01:26,000 --> 00:01:29,000

So, Jimmy, you know how we like to use tools and materials

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00:01:29,000 --> 00:01:31,000

for purposes they were never intended for, right?

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00:01:31,000 --> 00:01:33,000

Like transforming them.

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00:01:33,000 --> 00:01:35,000

It's like second nature for us.

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00:01:35,000 --> 00:01:38,000

Well, now we have an entire episode devoted to transformers.

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00:01:38,000 --> 00:01:40,000

Well, that's cool. Like what?

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00:01:40,000 --> 00:01:43,000

Well, we got one about a guy who supposedly took some

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00:01:43,000 --> 00:01:46,000

five-gallon water cooler jugs and converted a bicycle

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00:01:46,000 --> 00:01:49,000

into a fully amphibious commute vehicle.

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00:01:49,000 --> 00:01:51,000

Sounds dubious, but fun.

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00:01:51,000 --> 00:01:54,000

But first up, we've got an amazing story about a Frenchman,

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00:01:54,000 --> 00:01:57,000

stranded in the African desert in his little French car.

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00:01:57,000 --> 00:01:59,000

This is the Citroën du Cheveau.

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00:01:59,000 --> 00:02:01,000

Except two of the wheels are busted.

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00:02:01,000 --> 00:02:05,000

He uses the remaining two wheels and rebuilds this car

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00:02:05,000 --> 00:02:10,000

into a motorcycle that he uses to ride back to civilization with.

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00:02:10,000 --> 00:02:14,000

I think we should get ourselves a 2CV and try it ourselves.

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00:02:14,000 --> 00:02:16,000

Absolutely.

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00:02:16,000 --> 00:02:20,000

It's a tall tale of French transformation.

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00:02:20,000 --> 00:02:24,000

Supposedly, using nothing but hand tools and hope,

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00:02:24,000 --> 00:02:28,000

a working motorcycle was made from a broken-down car.

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00:02:32,000 --> 00:02:35,000

But before any mechanical metamorphosis,

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00:02:35,000 --> 00:02:38,000

the guys must start out by meeting the motor car from the myth,

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00:02:38,000 --> 00:02:41,000

a 67 Citroën.

53

00:02:41,000 --> 00:02:44,000

All right. Taking up some speed here.

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00:02:44,000 --> 00:02:47,000

Oh, yeah, baby.

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00:02:48,000 --> 00:02:51,000

Whoa!

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00:02:51,000 --> 00:02:55,000

Now, this is the actual car we are going to be turning

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00:02:55,000 --> 00:02:57,000

or trying to turn into a motorcycle.

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00:02:57,000 --> 00:02:59,000

This car feels insane.

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00:02:59,000 --> 00:03:03,000

It was originally conceived by a Frenchman in Pierre-Joupe-Logers

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00:03:03,000 --> 00:03:07,000

in 1935, but went into production in 1948.

61

00:03:07,000 --> 00:03:09,000

Come on, give me all your power.

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00:03:09,000 --> 00:03:13,000

Between then and 1990, they made over 3.2 million of them.

63

00:03:13,000 --> 00:03:19,000

And it's 425 CCN and it puts out the blistering 12-horsepower.

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00:03:19,000 --> 00:03:22,000

Ladies and gentlemen, may I present to you...

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00:03:25,000 --> 00:03:28,000

The Citroën de Chavaux.

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00:03:28,000 --> 00:03:31,000

Nice dub, homie. Isn't it beautiful?

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00:03:33,000 --> 00:03:36,000

It's clearly not fast or furious,

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00:03:36,000 --> 00:03:39,000

but for this motorcycle from car conundrum...

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00:03:39,000 --> 00:03:42,000

Let's inspect, see what's going on

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00:03:42,000 --> 00:03:44,000

under the hood here.

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00:03:44,000 --> 00:03:47,000

It'll be the car's adaptability that's key.

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00:03:47,000 --> 00:03:49,000

Where's the engine?

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00:03:49,000 --> 00:03:54,000

I have to say, if ever there was a car

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00:03:54,000 --> 00:03:56,000

for turning into a motorcycle,

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00:03:56,000 --> 00:03:58,000

it is this baby right here.

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00:03:58,000 --> 00:04:01,000

And once you look under the hood, you can see why.

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00:04:01,000 --> 00:04:03,000

There's very little there.

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00:04:03,000 --> 00:04:07,000

I'm genuinely excited about getting our hands dirty in this thing

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00:04:07,000 --> 00:04:09,000

and seeing what we can make happen.

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00:04:10,000 --> 00:04:12,000

So what are you thinking?

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00:04:12,000 --> 00:04:14,000

Well, we've run it through its paces

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00:04:14,000 --> 00:04:16,000

and we know what it looks like mechanically.

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00:04:16,000 --> 00:04:18,000

I can't think of anything else except for taking this out,

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00:04:18,000 --> 00:04:21,000

stranding ourselves and see if we can turn it into a motorcycle.

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00:04:21,000 --> 00:04:23,000

Alright then. Road trip.

86

00:04:23,000 --> 00:04:24,000

Alright.

87

00:04:27,000 --> 00:04:29,000

Here we go.

88

00:04:30,000 --> 00:04:32,000

Off to Africa.

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00:04:39,000 --> 00:04:46,000

The Frenchman in the myth got stranded in Morocco.

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00:04:46,000 --> 00:04:50,000

Oh man, I think that's vultures circling overhead.

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00:04:50,000 --> 00:04:53,000

But Adam and Jamie's Saharan substitute

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00:04:53,000 --> 00:04:57,000

is a little closer to home.

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00:04:57,000 --> 00:04:59,000

Nice little workspace.

94

00:04:59,000 --> 00:05:01,000

What? Desolate? Perfect.

95

00:05:04,000 --> 00:05:06,000

Prior to this experiment,

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00:05:06,000 --> 00:05:09,000

all we know is that it's cute and it's pretty basic.

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00:05:09,000 --> 00:05:11,000

But like any normal car,

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00:05:11,000 --> 00:05:15,000

it also has four wheels and an engine under the hood and the front.

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00:05:15,000 --> 00:05:17,000

And somehow we're going to have to reconfigure it

100

00:05:17,000 --> 00:05:20,000

to where we just use two of those wheels

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00:05:20,000 --> 00:05:23,000

and all the necessary components to be able to power it

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00:05:23,000 --> 00:05:27,000

and steer it in such a way that we can drive it motorcycle fashion.

103

00:05:27,000 --> 00:05:29,000

I'm going to go grab the tool kit.

104

00:05:29,000 --> 00:05:30,000

Okay.

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00:05:30,000 --> 00:05:33,000

In the myth, the guy is stranded with nothing but a jet.

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00:05:33,000 --> 00:05:37,000

In the myth, the guy is stranded with nothing but a 2CV

107

00:05:37,000 --> 00:05:40,000

and a bunch of standard hand tools.

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00:05:40,000 --> 00:05:41,000

Alright sir.

109

00:05:41,000 --> 00:05:43,000

We've got a jack.

110

00:05:45,000 --> 00:05:46,000

Hack saw.

111

00:05:47,000 --> 00:05:49,000

And we're going to be replicating exactly that.

112

00:05:49,000 --> 00:05:52,000

Screwdrivers, C-Wrenches.

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00:05:52,000 --> 00:05:55,000

Perhaps the very first thing we're going to be testing is

114

00:05:55,000 --> 00:05:59,000

can you even take this car apart with this simplicity?

115

00:06:00,000 --> 00:06:03,000

Having so few tools would seem like a hindrance.

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00:06:03,000 --> 00:06:06,000

But with this car, maybe not.

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00:06:06,000 --> 00:06:08,000

How's this held on there?

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00:06:08,000 --> 00:06:09,000

Oh.

119

00:06:13,000 --> 00:06:15,000

Well that's a nice start.

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00:06:15,000 --> 00:06:18,000

If the whole car is like that, then we're on free.

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00:06:18,000 --> 00:06:21,000

Once the hood's literally been slid off.

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00:06:21,000 --> 00:06:24,000

Adam, it looks like all this stuff comes off that way.

123

00:06:24,000 --> 00:06:25,000

No way.

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00:06:25,000 --> 00:06:27,000

It's soon joined by the doors.

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00:06:28,000 --> 00:06:30,000

Who built this thing?

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00:06:30,000 --> 00:06:32,000

Next, come the seats.

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00:06:32,000 --> 00:06:35,000

Now we've got a place to sit and have some lunch.

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00:06:35,000 --> 00:06:38,000

Also without any tools being touched at all.

129

00:06:39,000 --> 00:06:40,000

Wow.

130

00:06:40,000 --> 00:06:43,000

And while a few parts do need a helping hand.

131

00:06:43,000 --> 00:06:46,000

I've already got the bumper half off.

132

00:06:46,000 --> 00:06:48,000

Ho, ho, ho.

133

00:06:48,000 --> 00:06:50,000

There we go.

134

00:06:50,000 --> 00:06:53,000

Mostly it's a case of unlock and unload.

135

00:06:53,000 --> 00:06:57,000

I've never worked on a vehicle anything close to this.

136

00:06:57,000 --> 00:07:00,000

This is so basic.

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00:07:00,000 --> 00:07:02,000

It's actually quite wonderful.

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00:07:02,000 --> 00:07:04,000

Taking just 60 minutes.

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00:07:04,000 --> 00:07:05,000

Nice.

140

00:07:05,000 --> 00:07:07,000

It is an encouraging start.

141

00:07:07,000 --> 00:07:11,000

But stripping back the car was never going to be the tough task.

142

00:07:11,000 --> 00:07:12,000

OK.

143

00:07:12,000 --> 00:07:14,000

All right.

144

00:07:16,000 --> 00:07:18,000

Yeah.

145

00:07:18,000 --> 00:07:20,000

That's what I'm talking about.

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00:07:20,000 --> 00:07:24,000

That belongs to transforming what's left into a motorcycle.

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00:07:24,000 --> 00:07:28,000

Now we rocketed through removing all the stuff that we didn't need.

148

00:07:28,000 --> 00:07:32,000

But at this point, taking it the rest of the way,

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00:07:32,000 --> 00:07:37,000

actually removing two of the wheels and making it into something like a motorcycle.

150

00:07:37,000 --> 00:07:40,000

I don't have a clue how we're going to do it.

151

00:07:40,000 --> 00:07:43,000

Without doubt, there's a lot to do.

152

00:07:44,000 --> 00:07:46,000

Ah.

153

00:07:49,000 --> 00:07:52,000

So let's cut to the other chase.

154

00:08:03,000 --> 00:08:06,000

So tell me about this amphibious bicycle.

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00:08:06,000 --> 00:08:09,000

Well, according to the pictures we've got, and we have a bunch of them,

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00:08:09,000 --> 00:08:14,000

all it takes is eight of these guys and a simple spiel structure

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00:08:14,000 --> 00:08:18,000

to turn a bicycle into effectively a paddle wheeled boat.

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00:08:18,000 --> 00:08:22,000

So you want to replicate what you see in those photos and see if it works.

159

00:08:22,000 --> 00:08:24,000

That is exactly what I want to do.

160

00:08:24,000 --> 00:08:25,000

Cool.

161

00:08:27,000 --> 00:08:33,000

Crossing one of these with one of these may seem a little far out.

162

00:08:33,000 --> 00:08:38,000

Yet in the Far East, that's supposedly what this invention has done.

163

00:08:38,000 --> 00:08:42,000

Unless it's a case of Photoshop fakery.

164

00:08:46,000 --> 00:08:49,000

So there's a lot of steps to this process.

165

00:08:49,000 --> 00:08:53,000

The first and foremost being that there will be paddles on this back wheel

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00:08:53,000 --> 00:08:55,000

that allow it to propel forward.

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00:08:55,000 --> 00:08:59,000

But the paddles require a fair bit of rejiggering of the frame of the bike

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00:08:59,000 --> 00:09:03,000

in order to accommodate the effectively wider back wheel.

169

00:09:03,000 --> 00:09:07,000

With the paddle wheel five inches fuller than its regular counterpart.

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00:09:07,000 --> 00:09:10,000

All right, here comes the part that'll make you cringe.

171

00:09:10,000 --> 00:09:13,000

Adam first removes the rear of the frame.

172

00:09:15,000 --> 00:09:22,000

Before welding a wider version in its place, using exactly the same bracing as in the photos.

173

00:09:22,000 --> 00:09:24,000

It's not pretty, but it'll do.

174

00:09:24,000 --> 00:09:27,000

Next, Adam reinvents the wheel.

175

00:09:27,000 --> 00:09:31,000

As he secures the 12 aluminum paddles,

176

00:09:32,000 --> 00:09:36,000

but that was riveting directly to the spokes.

177

00:09:36,000 --> 00:09:37,000

Come on.

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00:09:37,000 --> 00:09:38,000

Come on.

179

00:09:38,000 --> 00:09:40,000

Last bit. Last bit.

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00:09:40,000 --> 00:09:41,000

Let's all cooperate.

181

00:09:41,000 --> 00:09:42,000

Got it.

182

00:09:42,000 --> 00:09:43,000

Yeah.

183

00:09:43,000 --> 00:09:47,000

And when the new drive wheel fits like a glove.

184

00:09:51,000 --> 00:09:53,000

It's totally working.

185

00:09:53,000 --> 00:09:55,000

It's time to get buoyant.

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00:09:55,000 --> 00:09:59,000

Now the way this bike achieves its amphibious nature is with these

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00:09:59,000 --> 00:10:01,000

five gallon drinking water jugs,

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00:10:01,000 --> 00:10:03,000

which I have been mounted to the steel frame of the bicycle.

189

00:10:03,000 --> 00:10:06,000

And I'm going to do it with these pieces of strap steel.

190

00:10:06,000 --> 00:10:10,000

I'm about to roll them in a machine called a roll.

191

00:10:14,000 --> 00:10:17,000

Despite adding a large amount of steel.

192

00:10:17,000 --> 00:10:19,000

Beautiful.

193

00:10:19,000 --> 00:10:22,000

For both the straps and the bottle jug frame.

194

00:10:22,000 --> 00:10:25,000

Oh my gosh. This is a heavy bike now.

195

00:10:25,000 --> 00:10:27,000

Oh my God.

196

00:10:27,000 --> 00:10:33,000

The bike should stay afloat because each jug can support 40 pounds.

197

00:10:34,000 --> 00:10:36,000

And with eight jugs in total.

198

00:10:36,000 --> 00:10:41,000

This is the part of any project where I get genuinely kind of excited and thrilled.

199

00:10:41,000 --> 00:10:46,000

The overall buoyancy should be plenty enough to support rider and rig.

200

00:10:46,000 --> 00:10:51,000

There it is. Ladies and gentlemen, the ugliest bike in all of creation.

201

00:10:51,000 --> 00:10:55,000

Now it should have some nuts that lock these from the upright position

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00:10:55,000 --> 00:10:57,000

so you can ride around.

203

00:10:57,000 --> 00:11:03,000

Then when you get to the water, you simply lower them down.

204

00:11:03,000 --> 00:11:06,000

And you're ready to ride on the water.

205

00:11:06,000 --> 00:11:11,000

This might just be an amphibious bicycle.

206

00:11:12,000 --> 00:11:17,000

It may be a dead ringer for the photos, but down at the pool.

207

00:11:17,000 --> 00:11:21,000

So what kind of job do you imagine that's an appropriate outfit for?

208

00:11:21,000 --> 00:11:24,000

Will it be sing or swim?

209

00:11:37,000 --> 00:11:40,000

6,000 miles from Morocco.

210

00:11:40,000 --> 00:11:43,000

I think I was supposed to turn off earlier.

211

00:11:43,000 --> 00:11:48,000

And Adam and Jamie's motorbike from motor car has started well.

212

00:11:48,000 --> 00:11:52,000

I love it.

213

00:11:52,000 --> 00:11:55,000

Now you love this suspension.

214

00:11:55,000 --> 00:12:00,000

But as deconstruction turns to construction, the guy's progress stalls.

215

00:12:00,000 --> 00:12:03,000

The challenge is fairly significant.

216

00:12:03,000 --> 00:12:07,000

We've got this heavy thing, an engine, which weighs hundreds of pounds.

217

00:12:07,000 --> 00:12:11,000

And it's meant to drive two wheels that are way off-center to the engine.

218

00:12:11,000 --> 00:12:15,000

But on a motorcycle, the engine needs to be in the center of gravity.

219

00:12:15,000 --> 00:12:19,000

So we have to figure out some way to get the engine as close to center as possible

220

00:12:19,000 --> 00:12:22,000

while still driving a wheel so we have power.

221

00:12:22,000 --> 00:12:26,000

And how that's going to work, I have no idea.

222

00:12:27,000 --> 00:12:29,000

There's two key conundrums.

223

00:12:29,000 --> 00:12:32,000

How to provide power to a central drive wheel,

224

00:12:32,000 --> 00:12:35,000

and how to do that without moving the engine.

225

00:12:35,000 --> 00:12:42,000

So, sir, I guess it's time to start talking about how we're going to get this thing balanced on a single line.

226

00:12:42,000 --> 00:12:44,000

I know.

227

00:12:44,000 --> 00:12:51,000

I'd love to leave the engine where it's at and have like a wheel there and a wheel here.

228

00:12:51,000 --> 00:12:53,000

Do you have any thoughts?

229

00:12:53,000 --> 00:12:54,000

Yeah, I do actually.

230

00:12:54,000 --> 00:12:57,000

These things here are the output shafts.

231

00:12:57,000 --> 00:12:58,000

Right.

232

00:12:58,000 --> 00:13:07,000

So if that was simply placed right on a wheel, just having that braid on a wheel,

233

00:13:07,000 --> 00:13:10,000

it could drive the wheel.

234

00:13:11,000 --> 00:13:13,000

Oh, dude, you know what I realized?

235

00:13:13,000 --> 00:13:17,000

I'd rather have the engine in the rear of the bike so we're not trying to move the whole engine.

236

00:13:17,000 --> 00:13:22,000

And that actually works with the abrasion technique because it means the engine's running in the opposite direction

237

00:13:22,000 --> 00:13:26,000

than the wheel so we can go in first gear and go that way.

238

00:13:27,000 --> 00:13:31,000

Well, where a little while ago we had no freaking idea what we're going to do now,

239

00:13:31,000 --> 00:13:36,000

at least we have a plan of attack towards investigating a possible solution.

240

00:13:36,000 --> 00:13:37,000

That feels like somewhere.

241

00:13:37,000 --> 00:13:41,000

We've got our car frame with the engine at the front and the two wheels on each side.

242

00:13:41,000 --> 00:13:48,000

We're going to start by discarding two of those wheels and reattaching the other two as close to the center line as possible.

243

00:13:48,000 --> 00:13:54,000

The wheel under the engine will be the drive wheel and we're basically going to shove it right up against the engine's output shaft

244

00:13:54,000 --> 00:13:57,000

so when the shaft spins, the wheel will also turn.

245

00:13:57,000 --> 00:14:01,000

Now, the wheel will actually be turning in the opposite direction of the output shaft,

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00:14:01,000 --> 00:14:04,000

which means that the thrust vector is reversed.

247

00:14:04,000 --> 00:14:08,000

In other words, the back of the car is going to become the front of the bike.

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00:14:08,000 --> 00:14:10,000

At least that's the theory.

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00:14:12,000 --> 00:14:13,000

Ready?

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00:14:13,000 --> 00:14:14,000

3, 2, 1.

251

00:14:14,000 --> 00:14:16,000

It's a plan that is undoubtedly complex.

252

00:14:16,000 --> 00:14:17,000

Nice.

253

00:14:17,000 --> 00:14:18,000

Excellent.

254

00:14:19,000 --> 00:14:21,000

But without access to power tools.

255

00:14:21,000 --> 00:14:22,000

Ready?

256

00:14:22,000 --> 00:14:23,000

Uh-huh.

257

00:14:25,000 --> 00:14:28,000

Having the engine stay put is imperative.

258

00:14:28,000 --> 00:14:29,000

All right.

259

00:14:30,000 --> 00:14:32,000

Want me to get this thing up and in?

260

00:14:33,000 --> 00:14:36,000

I guess now's as good of a time as any.

261

00:14:36,000 --> 00:14:40,000

And after three hours of non-trivial teamwork.

262

00:14:40,000 --> 00:14:41,000

Okay.

263

00:14:41,000 --> 00:14:42,000

3, 2, 1.

264

00:14:44,000 --> 00:14:46,000

The design is starting to take shape.

265

00:14:47,000 --> 00:14:48,000

There we go.

266

00:14:49,000 --> 00:14:50,000

Okay.

267

00:14:50,000 --> 00:14:51,000

Down.

268

00:14:51,000 --> 00:14:52,000

There we are.

269

00:14:52,000 --> 00:14:53,000

Ah, bingo.

270

00:14:53,000 --> 00:14:54,000

Bingo.

271

00:14:54,000 --> 00:14:57,000

Now we can finally explain what we've been talking about this whole time and you can see it in action.

272

00:14:57,000 --> 00:15:02,000

We've taken one of the swing arms from the back of the car and put it on the front, which is the new back of the car.

273

00:15:03,000 --> 00:15:04,000

Bear with me.

274

00:15:04,000 --> 00:15:11,000

That swing arm brings the tire underneath the frame where it is pressing into this one of the output shafts from the engine.

275

00:15:11,000 --> 00:15:15,000

Now that output shaft goes in this direction because this was the former front of the car,

276

00:15:15,000 --> 00:15:20,000

but it drives the wheel in that direction because this is the new rear of the car.

277

00:15:20,000 --> 00:15:25,000

And the groove lines up beautifully with this ridge on the output shaft.

278

00:15:25,000 --> 00:15:27,000

Will this make the bike run?

279

00:15:27,000 --> 00:15:31,000

I'm not willing to say just yet, but I'm hopeful.

280

00:15:35,000 --> 00:15:40,000

With the untested drivetrain in place, the guys move forward, literally.

281

00:15:40,000 --> 00:15:42,000

Old baby, don't fail me now.

282

00:15:42,000 --> 00:15:43,000

Here we go.

283

00:15:43,000 --> 00:15:47,000

Adams hacking through the car's rear wheel swing arm.

284

00:15:47,000 --> 00:15:49,000

Oh my God, this is like breaking out of jail.

285

00:15:51,000 --> 00:15:54,000

So that it'll hook securely onto the front of the frame.

286

00:15:54,000 --> 00:15:57,000

Ha ha ha ha ha!

287

00:15:58,000 --> 00:16:01,000

Oh my gosh, it's starting to look like a motorcycle.

288

00:16:03,000 --> 00:16:04,000

Adams right.

289

00:16:04,000 --> 00:16:11,000

What was once a sassy citron is being transformed into a Mad Max motorcycle.

290

00:16:11,000 --> 00:16:15,000

So we've managed to line things up without having to unmount the engine.

291

00:16:15,000 --> 00:16:20,000

We've got the front wheel up here and we've got our suspension system.

292

00:16:20,000 --> 00:16:28,000

All we have to do now is hook up the steering and then see how it balances and if we can control it.

293

00:16:29,000 --> 00:16:37,000

I want to break in here and also point out that in order to control, that's the gear shifter, that's the clutch, that's the brake.

294

00:16:37,000 --> 00:16:46,000

One of us, I believe, will have to be sitting facing the rear of the motorcycle in order to maintain the controls while the other is calling out what they need.

295

00:16:46,000 --> 00:16:49,000

Which is kind of how it normally works with us anyway.

296

00:16:49,000 --> 00:16:51,000

Ha ha ha ha ha!

297

00:16:52,000 --> 00:16:58,000

With one transformation coming together, how's their water bike working out?

298

00:16:59,000 --> 00:17:06,000

We're here at the Brisbane Community Pool to test out Adams' amphibious bike. It should be done by about now.

299

00:17:10,000 --> 00:17:12,000

Ha ha ha! Here I come!

300

00:17:12,000 --> 00:17:13,000

Oh my goodness.

301

00:17:13,000 --> 00:17:15,000

Yeah, isn't it pretty?

302

00:17:16,000 --> 00:17:20,000

Adams found a very careful job of replicating what we saw in the photos.

303

00:17:20,000 --> 00:17:26,000

But the thing is that he's a good 50 pounds heavier than the woman we saw floating on that bike in the water.

304

00:17:26,000 --> 00:17:29,000

I step into this bathroom and ordinary myth buster.

305

00:17:29,000 --> 00:17:40,000

And so what that means in terms of how deep the paddles on the wheel go and balance issues, just because she floated on it doesn't mean that he's going to be able to.

306

00:17:40,000 --> 00:17:44,000

I come out, super amphibious vehicle commuter myth buster.

307

00:17:45,000 --> 00:17:58,000

So, just to recap, if what is claimed in the pictures is true, this thing ought to be able to float, hold me up, move me forward on the paddles and be able to steer, all while keeping me relatively dry.

308

00:17:58,000 --> 00:17:59,000

Yeah. Alright.

309

00:17:59,000 --> 00:18:00,000

Good luck with that.

310

00:18:00,000 --> 00:18:01,000

Here goes nothing.

311

00:18:03,000 --> 00:18:04,000

Ha ha ha ha ha!

312

00:18:05,000 --> 00:18:09,000

Amphibious bike in three, two, one, go!

313

00:18:10,000 --> 00:18:12,000

Okay, it's holding me up!

314

00:18:12,000 --> 00:18:14,000

Oh, okay, here we go.

315

00:18:15,000 --> 00:18:18,000

Hey, that's not bad.

316

00:18:18,000 --> 00:18:20,000

Okay, steering, trying to steer.

317

00:18:21,000 --> 00:18:23,000

Hey, steering's not bad.

318

00:18:23,000 --> 00:18:27,000

Apart from some soggy shoes, it's a decent enough start.

319

00:18:27,000 --> 00:18:28,000

But then...

320

00:18:30,000 --> 00:18:31,000

Uh oh.

321

00:18:32,000 --> 00:18:33,000

Uh oh.

322

00:18:34,000 --> 00:18:38,000

Now I've got a little chain problem, which I've got to fix on the bike.

323

00:18:38,000 --> 00:18:39,000

Uh oh.

324

00:18:39,000 --> 00:18:41,000

Oh, oh, oh, oh, oh, oh, oh.

325

00:18:42,000 --> 00:18:50,000

Fixing this chain slip in situ is no mean feat, but Adam bends over backwards.

326

00:18:50,000 --> 00:18:51,000

Yep, what's up?

327

00:18:51,000 --> 00:18:52,000

What's up?

328

00:18:52,000 --> 00:18:53,000

Ha ha ha ha!

329

00:18:53,000 --> 00:18:54,000

Okay.

330

00:18:57,000 --> 00:18:59,000

And soon, he's riding high.

331

00:19:01,000 --> 00:19:02,000

Hey!

332

00:19:02,000 --> 00:19:03,000

This is great!

333

00:19:05,000 --> 00:19:06,000

Dude!

334

00:19:07,000 --> 00:19:09,000

I'm on an amphibious bike!

335

00:19:09,000 --> 00:19:12,000

Yeah, I'm gonna go in a circle. Here we go.

336

00:19:13,000 --> 00:19:16,000

Not exactly a tight circle, but pretty reasonable.

337

00:19:16,000 --> 00:19:19,000

That seems like it's working really well.

338

00:19:19,000 --> 00:19:24,000

Remarkably, the bike's not only buoyant, it's also got good speed and steering.

339

00:19:24,000 --> 00:19:27,000

I'm ready for my first day on the job.

340

00:19:28,000 --> 00:19:29,000

At least so far.

341

00:19:34,000 --> 00:19:37,000

I let my attention lapse for a second!

342

00:19:37,000 --> 00:19:39,000

And go right over.

343

00:19:43,000 --> 00:19:44,000

Adam's off.

344

00:19:44,000 --> 00:19:48,000

And watch more with him being unable to remount.

345

00:19:48,000 --> 00:19:52,000

Yes! Yes! Ah! Ah! Ah! Ah! Ah! Ah!

346

00:19:52,000 --> 00:19:55,000

He's effectively down for the count.

347

00:19:55,000 --> 00:19:58,000

Okay, admit defeat. I can't get back on this thing.

348

00:19:58,000 --> 00:20:00,000

We found its fatal flaw.

349

00:20:02,000 --> 00:20:06,000

This thing works surprisingly well, especially given that it's actually just improvised.

350

00:20:06,000 --> 00:20:08,000

It could use some improvements, though.

351

00:20:08,000 --> 00:20:12,000

I would say, first off, it'd be nice if you could use it without getting wet.

352

00:20:12,000 --> 00:20:16,000

Because if it's a commuter sort of thing, you don't want to have to change your clothes.

353

00:20:16,000 --> 00:20:22,000

The pontoons aren't exactly streamlined, and if they were, you'd be able to go faster with less effort.

354

00:20:22,000 --> 00:20:27,000

And then, last but not least, I would say steering also could be improved.

355

00:20:29,000 --> 00:20:31,000

Well, that went beautifully until I took my attention off it.

356

00:20:31,000 --> 00:20:34,000

Then we went over and there was no getting back on.

357

00:20:34,000 --> 00:20:37,000

But all in all, it worked surprisingly well.

358

00:20:37,000 --> 00:20:39,000

But, you know, it does give me an idea.

359

00:20:39,000 --> 00:20:40,000

What's that?

360

00:20:40,000 --> 00:20:42,000

I think I can go one better.

361

00:20:42,000 --> 00:20:44,000

By all means.

362

00:20:49,000 --> 00:20:54,000

Adam and Jamie's 2CV is undergoing a mechanical metamorphosis.

363

00:20:54,000 --> 00:20:57,000

It's starting to look like a motorcycle.

364

00:20:59,000 --> 00:21:02,000

And their next hack is the steering.

365

00:21:02,000 --> 00:21:05,000

We were thinking that we were going to have to use a tiller to steer this,

366

00:21:05,000 --> 00:21:08,000

which is basically just a long stick.

367

00:21:08,000 --> 00:21:11,000

But those are real awkward.

368

00:21:17,000 --> 00:21:18,000

Oh, it's satisfying.

369

00:21:18,000 --> 00:21:21,000

And since it has an existing steering system,

370

00:21:21,000 --> 00:21:26,000

I think I may just be able to jury-rig it to work.

371

00:21:26,000 --> 00:21:29,000

Even though now it's on the backside of the car.

372

00:21:33,000 --> 00:21:36,000

A steering wheel on a bike may be a little unusual,

373

00:21:36,000 --> 00:21:39,000

but necessity is the mother of invention.

374

00:21:41,000 --> 00:21:42,000

Let's see here.

375

00:21:45,000 --> 00:21:46,000

Jamie.

376

00:21:46,000 --> 00:21:47,000

That works great.

377

00:21:47,000 --> 00:21:51,000

It turns to the right, but it turns to the left.

378

00:21:51,000 --> 00:21:54,000

Well, so we'll just only make right-hand turns.

379

00:21:58,000 --> 00:22:01,000

Next, the guys check the engine controls.

380

00:22:01,000 --> 00:22:03,000

Clutch, brake.

381

00:22:03,000 --> 00:22:05,000

Okay, so the clutch works.

382

00:22:05,000 --> 00:22:06,000

Brake works.

383

00:22:06,000 --> 00:22:09,000

Before crossing their fingers and firing her up.

384

00:22:22,000 --> 00:22:24,000

That is badass right there.

385

00:22:24,000 --> 00:22:26,000

With the engine turning over,

386

00:22:26,000 --> 00:22:29,000

Jamie literally wires in the throttle.

387

00:22:29,000 --> 00:22:35,000

It's a little crude, but my throttle is this piece of bailing wire.

388

00:22:35,000 --> 00:22:38,000

If I put a little crimp in it like so,

389

00:22:38,000 --> 00:22:41,000

it accelerates.

390

00:22:41,000 --> 00:22:44,000

I straighten it back out and slow down.

391

00:22:48,000 --> 00:22:52,000

And with that, their motorcycle is all set.

392

00:22:53,000 --> 00:22:56,000

It's got two wheels, a unique drive system,

393

00:22:56,000 --> 00:23:00,000

gears, brakes, steering, and suspension.

394

00:23:00,000 --> 00:23:04,000

The only issue is that it takes two people to operate it.

395

00:23:04,000 --> 00:23:07,000

A driver to control steering and throttle,

396

00:23:07,000 --> 00:23:10,000

and a passenger for clutch and brakes.

397

00:23:11,000 --> 00:23:13,000

So, will it work?

398

00:23:14,000 --> 00:23:16,000

I'm going to start it up.

399

00:23:16,000 --> 00:23:17,000

Okay.

400

00:23:18,000 --> 00:23:19,000

Come on, baby.

401

00:23:20,000 --> 00:23:23,000

For run one, Jamie will drive,

402

00:23:23,000 --> 00:23:28,000

but Adam will first jog alongside, changing gear as needed.

403

00:23:28,000 --> 00:23:29,000

All right.

404

00:23:29,000 --> 00:23:30,000

Clutch in.

405

00:23:31,000 --> 00:23:32,000

First gear.

406

00:23:39,000 --> 00:23:40,000

Yeah!

407

00:23:42,000 --> 00:23:43,000

Yeah, baby!

408

00:23:44,000 --> 00:23:45,000

Yeah!

409

00:23:46,000 --> 00:23:47,000

That's a motion.

410

00:23:48,000 --> 00:23:50,000

That's a motorcycle!

411

00:23:55,000 --> 00:23:56,000

Ignition's out.

412

00:23:57,000 --> 00:23:58,000

That was pretty cool!

413

00:24:01,000 --> 00:24:04,000

Incredibly, their motorcycle did move,

414

00:24:04,000 --> 00:24:06,000

even if 30 feet wasn't very far.

415

00:24:10,000 --> 00:24:13,000

Can Jamie better that benchmark in test two?

416

00:24:14,000 --> 00:24:15,000

There we go.

417

00:24:15,000 --> 00:24:16,000

Clutch in.

418

00:24:16,000 --> 00:24:17,000

Okay.

419

00:24:17,000 --> 00:24:18,000

First gear.

420

00:24:19,000 --> 00:24:21,000

Three, two...

421

00:24:24,000 --> 00:24:25,000

Like last time...

422

00:24:27,000 --> 00:24:28,000

Yeah!

423

00:24:28,000 --> 00:24:29,000

Yeah!

424

00:24:29,000 --> 00:24:31,000

That's a motorcycle!

425

00:24:31,000 --> 00:24:32,000

Whoa!

426

00:24:32,000 --> 00:24:36,000

Jamie is in control, but just barely.

427

00:24:38,000 --> 00:24:39,000

Stop it!

428

00:24:40,000 --> 00:24:41,000

Stop!

429

00:24:42,000 --> 00:24:43,000

Brakes worked!

430

00:24:43,000 --> 00:24:45,000

Hey, I used the brakes!

431

00:24:46,000 --> 00:24:48,000

You were helping support it, though.

432

00:24:48,000 --> 00:24:50,000

Oh, yeah, I was helping support it, man.

433

00:24:50,000 --> 00:24:52,000

I'd do anything at this point.

434

00:24:54,000 --> 00:24:58,000

So the good news is that we've got steering,

435

00:24:58,000 --> 00:25:00,000

we have suspension,

436

00:25:00,000 --> 00:25:04,000

and we have an effective way of getting power to the wheels.

437

00:25:04,000 --> 00:25:05,000

Stop it!

438

00:25:06,000 --> 00:25:07,000

Stop!

439

00:25:07,000 --> 00:25:11,000

The bad news is that you have to ride this side-settle,

440

00:25:11,000 --> 00:25:15,000

combined with the fact that you've got this massively heavy weight up high,

441

00:25:15,000 --> 00:25:18,000

and you're trying to balance it off to the side,

442

00:25:18,000 --> 00:25:21,000

it's effectively impossible to ride.

443

00:25:23,000 --> 00:25:24,000

It's frustrating.

444

00:25:24,000 --> 00:25:25,000

It is!

445

00:25:25,000 --> 00:25:26,000

Because it's so beautiful!

446

00:25:26,000 --> 00:25:27,000

I know!

447

00:25:27,000 --> 00:25:29,000

This is the most beautiful thing we have ever made!

448

00:25:31,000 --> 00:25:34,000

Look, this little powder puff here is beautiful,

449

00:25:34,000 --> 00:25:36,000

and it's post-apocalyptic times five,

450

00:25:36,000 --> 00:25:40,000

but what it's not is a viable motorcycle.

451

00:25:41,000 --> 00:25:44,000

This is not the device that's going to get you 20 kilometers

452

00:25:44,000 --> 00:25:47,000

from the middle of nowhere and into civilization.

453

00:25:49,000 --> 00:25:51,000

Yep, to get out of dodge,

454

00:25:52,000 --> 00:25:54,000

they're going to need a plan B.

455

00:25:58,000 --> 00:25:59,000

At the pool.

456

00:25:59,000 --> 00:26:00,000

Dude!

457

00:26:01,000 --> 00:26:02,000

I'm on an amphibious bike!

458

00:26:02,000 --> 00:26:07,000

The guys have proved this water bottle bicycle is no Photoshop fake.

459

00:26:07,000 --> 00:26:08,000

This is great!

460

00:26:10,000 --> 00:26:13,000

But with clear room for improvement,

461

00:26:15,000 --> 00:26:17,000

Jamie wants to see if he can go one better.

462

00:26:18,000 --> 00:26:23,000

I'm going to be using the exact same frame that Adam used on his amphibious bicycle.

463

00:26:23,000 --> 00:26:24,000

Time to get to work.

464

00:26:26,000 --> 00:26:27,000

With a clean slate,

465

00:26:27,000 --> 00:26:33,000

can Jamie scratch-build a water bike where failure is not an option?

466

00:26:33,000 --> 00:26:34,000

We'll go.

467

00:26:35,000 --> 00:26:38,000

To find out, he's starting like Adam with the drive system.

468

00:26:39,000 --> 00:26:40,000

It'll work.

469

00:26:40,000 --> 00:26:43,000

But instead of 12 paddles, he's adding 20.

470

00:26:45,000 --> 00:26:46,000

Love that tool.

471

00:26:46,000 --> 00:26:49,000

For more power and more control.

472

00:26:50,000 --> 00:26:51,000

Let's see how this looks.

473

00:26:52,000 --> 00:26:55,000

Oh, it's perfect.

474

00:26:58,000 --> 00:27:02,000

For buoyancy, he's ditching the simplicity of the water jugs

475

00:27:02,000 --> 00:27:05,000

and going for some high-tech hydroform.

476

00:27:05,000 --> 00:27:10,000

We take a piece of sheet metal and clamp it between two massive plates of steel.

477

00:27:11,000 --> 00:27:14,000

You've cut out an almond-shaped hole in the top plate

478

00:27:14,000 --> 00:27:18,000

and attached our pressure washer pump to a small hole in the bottom plate.

479

00:27:18,000 --> 00:27:20,000

Now here's the fun part.

480

00:27:20,000 --> 00:27:22,000

All we do is start the pump

481

00:27:22,000 --> 00:27:26,000

and the water pressure pushes the sheet metal out the almond-shaped hole,

482

00:27:26,000 --> 00:27:28,000

inflating it just like a balloon.

483

00:27:29,000 --> 00:27:30,000

It's perfect!

484

00:27:31,000 --> 00:27:33,000

Jamie hydroforms eight half-holes,

485

00:27:35,000 --> 00:27:37,000

which are cut to size.

486

00:27:37,000 --> 00:27:38,000

That's one.

487

00:27:38,000 --> 00:27:40,000

Before being paired together.

488

00:27:42,000 --> 00:27:46,000

The four resulting pontoons are not only super streamlined,

489

00:27:46,000 --> 00:27:47,000

that's it.

490

00:27:47,000 --> 00:27:50,000

They should be super buoyant.

491

00:27:53,000 --> 00:27:55,000

There are a number of key differences between this bike

492

00:27:55,000 --> 00:27:58,000

and the one that Adam built based on the photos.

493

00:27:58,000 --> 00:28:02,000

Now the first and most obvious one is that the pontoons are tuna-shaped

494

00:28:02,000 --> 00:28:05,000

because they should move through the water with less effort,

495

00:28:05,000 --> 00:28:07,000

as well as provide me with better steering.

496

00:28:08,000 --> 00:28:12,000

Now secondly, I've made the back pontoons able to telescope out.

497

00:28:12,000 --> 00:28:13,000

Oh yeah.

498

00:28:15,000 --> 00:28:16,000

It's perfect.

499

00:28:16,000 --> 00:28:20,000

I'm hoping that the extra foot or two that I've put on these will keep me more stable.

500

00:28:20,000 --> 00:28:21,000

Looks about right.

501

00:28:21,000 --> 00:28:23,000

And then of course, last but not least,

502

00:28:23,000 --> 00:28:25,000

I think it looks way cooler.

503

00:28:29,000 --> 00:28:31,000

Indeed, but to see if it works,

504

00:28:31,000 --> 00:28:34,000

Adam's up the ante with a head-to-head race.

505

00:28:35,000 --> 00:28:39,000

Jamie and I now intend to test our amphibious commuter bikes fully.

506

00:28:39,000 --> 00:28:41,000

That means land and sea.

507

00:28:41,000 --> 00:28:44,000

So we've come here to beautiful Horseshoe Lake in Fremont, California

508

00:28:44,000 --> 00:28:49,000

because it provides all the terrains pretty much any bicycle commuter is going to encounter.

509

00:28:49,000 --> 00:28:51,000

We've got a little bit of pavement.

510

00:28:51,000 --> 00:28:53,000

We've got some dirt roads and right down there behind me,

511

00:28:53,000 --> 00:28:57,000

a beautiful placid lake to ride our bikes upon.

512

00:28:57,000 --> 00:29:01,000

But first up, Jamie's going to test this bike and make sure it actually floats.

513

00:29:01,000 --> 00:29:04,000

Jamie positions his front pontoons in the pond.

514

00:29:04,000 --> 00:29:06,000

That's one set.

515

00:29:06,000 --> 00:29:10,000

Before spreading out the rear ones for extra stability.

516

00:29:13,000 --> 00:29:17,000

Then there's one last piece of mechanical modification.

517

00:29:17,000 --> 00:29:22,000

An electric crankshaft that lowers the paddle wheel into the water.

518

00:29:24,000 --> 00:29:25,000

Check that out.

519

00:29:27,000 --> 00:29:28,000

And before you know it,

520

00:29:28,000 --> 00:29:29,000

he's away.

521

00:29:29,000 --> 00:29:30,000

It's working.

522

00:29:33,000 --> 00:29:36,000

It's working exactly as it was designed.

523

00:29:36,000 --> 00:29:38,000

Both forwards and backwards,

524

00:29:38,000 --> 00:29:40,000

Jamie's design is looking good.

525

00:29:40,000 --> 00:29:42,000

Almost too good.

526

00:29:42,000 --> 00:29:46,000

One thing I'm wondering though is it looks like one pontoon is sinking.

527

00:29:47,000 --> 00:29:48,000

Maybe a leak.

528

00:29:53,000 --> 00:29:56,000

If the goal was to include a single-seater,

529

00:29:56,000 --> 00:29:59,000

if the goal was to improve on Adam's design,

530

00:29:59,000 --> 00:30:02,000

it's hardly mission accomplished.

531

00:30:02,000 --> 00:30:04,000

But with a competition coming up,

532

00:30:04,000 --> 00:30:07,000

Jamie's not going to abandon ship.

533

00:30:19,000 --> 00:30:25,000

The story goes that an ingenious engineer turned a motor car into a motorcycle

534

00:30:25,000 --> 00:30:27,000

to escape death in the desert.

535

00:30:29,000 --> 00:30:31,000

But Adam and Jamie's design

536

00:30:31,000 --> 00:30:34,000

Alright, civilization, here we come.

537

00:30:34,000 --> 00:30:37,000

Gained closer to causing death

538

00:30:37,000 --> 00:30:38,000

Stop that.

539

00:30:39,000 --> 00:30:40,000

Stop.

540

00:30:40,000 --> 00:30:41,000

Than preventing it.

541

00:30:42,000 --> 00:30:44,000

But all is not lost.

542

00:30:46,000 --> 00:30:48,000

Because back at the shop,

543

00:30:48,000 --> 00:30:53,000

the guys of unearth a series of photos that supposedly show the real deal.

544

00:30:54,000 --> 00:30:56,000

Oh, that's fascinating.

545

00:30:56,000 --> 00:30:58,000

Back at the start of this episode,

546

00:30:58,000 --> 00:31:02,000

Jamie and I decided to build our motorcycle without reference to these photos.

547

00:31:02,000 --> 00:31:05,000

And we did that partly because people say these are fake.

548

00:31:05,000 --> 00:31:07,000

Oh, same drive system.

549

00:31:07,000 --> 00:31:09,000

But given that our bike didn't work,

550

00:31:09,000 --> 00:31:12,000

we're now going to rebuild it to these specs.

551

00:31:12,000 --> 00:31:15,000

The engine must be reversed.

552

00:31:15,000 --> 00:31:19,000

What's interesting is that both of our design approaches,

553

00:31:19,000 --> 00:31:20,000

while incredibly similar,

554

00:31:20,000 --> 00:31:23,000

for instance, we use the exact same drive system,

555

00:31:23,000 --> 00:31:25,000

they differ in two distinct ways

556

00:31:25,000 --> 00:31:29,000

that may give his design a better chance of working than ours.

557

00:31:29,000 --> 00:31:31,000

Alright, graphics, help me out.

558

00:31:31,000 --> 00:31:33,000

So, this is our bike.

559

00:31:33,000 --> 00:31:36,000

Note the rack and pinion steering and the engine high up on the back.

560

00:31:36,000 --> 00:31:39,000

It's these that made our bike hard to balance.

561

00:31:39,000 --> 00:31:43,000

But the French guy not only replaced the steering wheel with a tiller system

562

00:31:43,000 --> 00:31:45,000

that ought to give better control,

563

00:31:45,000 --> 00:31:48,000

but he also lifted the engine up, spun it around,

564

00:31:48,000 --> 00:31:50,000

and placed it in the middle,

565

00:31:50,000 --> 00:31:54,000

giving the bike a much more easy to handle center of gravity.

566

00:31:54,000 --> 00:31:57,000

But there's a problem when you flip the engine to 180 degrees,

567

00:31:57,000 --> 00:32:01,000

and that is the only gear you can make the bike move forward with is reverse.

568

00:32:01,000 --> 00:32:07,000

And I don't know if the reverse gear can actually make this thing move fast enough to be stable.

569

00:32:10,000 --> 00:32:13,000

To find out, it's time to turn transformers.

570

00:32:13,000 --> 00:32:15,000

One last time.

571

00:32:15,000 --> 00:32:17,000

We don't need this anymore.

572

00:32:17,000 --> 00:32:21,000

Only now, they're not only following the Frenchman's photos,

573

00:32:21,000 --> 00:32:26,000

they're also using power tools to power through.

574

00:32:26,000 --> 00:32:29,000

We've already proven that we can put together something like this

575

00:32:29,000 --> 00:32:32,000

using only those simple tools that the guy had.

576

00:32:32,000 --> 00:32:36,000

So, this time, we're gonna use whatever we have handy here in the shop,

577

00:32:36,000 --> 00:32:38,000

and that'll just make it go quicker.

578

00:32:40,000 --> 00:32:42,000

That would have taken a while with the hacks off.

579

00:32:42,000 --> 00:32:44,000

Yeah, like a day or two.

580

00:32:45,000 --> 00:32:47,000

With a hole cut for the rear wheel,

581

00:32:47,000 --> 00:32:48,000

Look at that.

582

00:32:48,000 --> 00:32:50,000

the guys next centralize the engine.

583

00:32:50,000 --> 00:32:52,000

That looks about right.

584

00:32:52,000 --> 00:32:54,000

We can lock it down about there.

585

00:32:54,000 --> 00:32:58,000

And when Jamie adds a steering system that seems stable,

586

00:32:58,000 --> 00:32:59,000

Oh my God.

587

00:32:59,000 --> 00:33:01,000

Is it significant?

588

00:33:01,000 --> 00:33:03,000

Oh yeah, no problem.

589

00:33:05,000 --> 00:33:06,000

The guys are confident.

590

00:33:06,000 --> 00:33:08,000

I love that.

591

00:33:08,000 --> 00:33:10,000

But before this bike hits the road,

592

00:33:11,000 --> 00:33:14,000

Two others are gonna have a river race off.

593

00:33:14,000 --> 00:33:17,000

This is a tale of two bicycles.

594

00:33:17,000 --> 00:33:20,000

One is one whose design we found online and replicated it.

595

00:33:20,000 --> 00:33:23,000

It worked on the water far better than we thought it would.

596

00:33:23,000 --> 00:33:28,000

Thus, we'd like to run it through a full set of amphibious computer vehicle paces.

597

00:33:28,000 --> 00:33:29,000

Yeah!

598

00:33:29,000 --> 00:33:32,000

At the same time, that design gave Jamie some ideas

599

00:33:32,000 --> 00:33:35,000

and he thought he could improve upon the original.

600

00:33:35,000 --> 00:33:37,000

Thus, he's completed a bike.

601

00:33:37,000 --> 00:33:42,000

We're gonna run through the same paces to see if he has in fact succeeded at that task.

602

00:33:44,000 --> 00:33:46,000

Jamie's proof of concept started well.

603

00:33:46,000 --> 00:33:47,000

Ha ha!

604

00:33:47,000 --> 00:33:49,000

But ended badly.

605

00:33:52,000 --> 00:33:54,000

But a quick leak fix later,

606

00:33:54,000 --> 00:33:58,000

and Jamie's all set for a duck pond drag race.

607

00:34:01,000 --> 00:34:02,000

Alright.

608

00:34:02,000 --> 00:34:03,000

You ready?

609

00:34:03,000 --> 00:34:04,000

Yeah.

610

00:34:05,000 --> 00:34:06,000

Amphibious conversion.

611

00:34:06,000 --> 00:34:07,000

Implement!

612

00:34:10,000 --> 00:34:11,000

The rules are simple.

613

00:34:12,000 --> 00:34:15,000

The guys must transform their bikes into water mode.

614

00:34:15,000 --> 00:34:17,000

Okay, where's number one pen?

615

00:34:17,000 --> 00:34:18,000

There we go.

616

00:34:21,000 --> 00:34:23,000

Before pedaling to a buoy and back.

617

00:34:24,000 --> 00:34:25,000

There we go!

618

00:34:25,000 --> 00:34:26,000

And we're off!

619

00:34:27,000 --> 00:34:30,000

First back to the beach boasts the best design.

620

00:34:31,000 --> 00:34:33,000

Leaving Heinemann in the dust.

621

00:34:35,000 --> 00:34:40,000

I am happy to say that I handily beat Jamie in the conversion to amphibious mode.

622

00:34:40,000 --> 00:34:41,000

Ha ha ha!

623

00:34:41,000 --> 00:34:42,000

I'm way ahead!

624

00:34:43,000 --> 00:34:47,000

I was in the water a good probably 60 seconds before he was

625

00:34:47,000 --> 00:34:52,000

and pedaling furiously, as furiously as I could, towards our buoy.

626

00:34:52,000 --> 00:34:55,000

And I thought that I was gonna be able to keep up that lead.

627

00:34:55,000 --> 00:34:57,000

I would say funny things when I'm getting tired.

628

00:34:58,000 --> 00:35:02,000

But sadly, I was totally mistaken because once Jamie started pedaling,

629

00:35:02,000 --> 00:35:07,000

it was really clear that his bike was so much more hydrodynamic than mine.

630

00:35:09,000 --> 00:35:10,000

Ah, he's catching up!

631

00:35:12,000 --> 00:35:13,000

Come on!

632

00:35:14,000 --> 00:35:15,000

Come on!

633

00:35:15,000 --> 00:35:16,000

We gotta get some more raw power!

634

00:35:17,000 --> 00:35:20,000

Jamie's so much faster in the water that he quickly overtook me.

635

00:35:23,000 --> 00:35:27,000

Now, I started pedaling harder, but I was in danger of skipping my chain.

636

00:35:27,000 --> 00:35:30,000

And if I did, that was a guaranteed loss.

637

00:35:30,000 --> 00:35:32,000

Ah, I thought this was mine!

638

00:35:33,000 --> 00:35:34,000

Come on!

639

00:35:34,000 --> 00:35:36,000

Maybe I'll catch you upwind, Jamie.

640

00:35:36,000 --> 00:35:37,000

Yes!

641

00:35:38,000 --> 00:35:39,000

Here we go!

642

00:35:39,000 --> 00:35:41,000

So I had to stay slow and steady.

643

00:35:42,000 --> 00:35:46,000

Unfortunately, that didn't keep me a consistent distance behind Jamie.

644

00:35:46,000 --> 00:35:47,000

Good luck there, little buddy!

645

00:35:49,000 --> 00:35:51,000

He kept on outpacing me.

646

00:35:51,000 --> 00:35:54,000

Look, I can actually see a wake! He's leaving a wake!

647

00:35:54,000 --> 00:35:59,000

And ended up reaching the shore a good probably three or four minutes before I did.

648

00:35:59,000 --> 00:36:00,000

Ding!

649

00:36:00,000 --> 00:36:02,000

And a lot less winded.

650

00:36:02,000 --> 00:36:04,000

Worked like a champ!

651

00:36:04,000 --> 00:36:06,000

His bike won, handling.

652

00:36:07,000 --> 00:36:08,000

Ah!

653

00:36:09,000 --> 00:36:10,000

Come on!

654

00:36:10,000 --> 00:36:17,000

I'm glad this turned out the way that it did, because these shapes, even though they did take more

work, were far more streamlined,

655

00:36:17,000 --> 00:36:19,000

and it was quite easy to move it through the water.

656

00:36:20,000 --> 00:36:24,000

The amount of effort due to the size of the paddles was lower.

657

00:36:24,000 --> 00:36:26,000

It meant that I could pedal a little quicker.

658

00:36:26,000 --> 00:36:30,000

It did sling a little more water up my butt, but I'll settle for that.

659

00:36:30,000 --> 00:36:33,000

All in all, I'm pretty happy with how it behaved.

660

00:36:37,000 --> 00:36:41,000

Well, I am impressed with the design we pulled up, the internet.

661

00:36:41,000 --> 00:36:42,000

I'd say it's confirmed.

662

00:36:42,000 --> 00:36:47,000

Yeah, I'd say as well. This one worked better, but the concept is sound.

663

00:36:47,000 --> 00:36:48,000

Absolutely.

664

00:36:48,000 --> 00:36:51,000

Alright, if you don't mind, I'm going to walk back to the car.

665

00:36:51,000 --> 00:36:52,000

Okay, I'll race you.

666

00:36:52,000 --> 00:36:53,000

Okay.

667

00:36:54,000 --> 00:36:58,000

So, one tale of transformation is triumphant.

668

00:37:01,000 --> 00:37:05,000

Will their motorcycle from Motor Car make it two for two?

669

00:37:11,000 --> 00:37:17,000

You know, over the years, Jamie and I have gotten the chance to ride on some pre-unconventional vehicles.

670

00:37:17,000 --> 00:37:19,000

We've sailed in a boat made solely of duct tape.

671

00:37:19,000 --> 00:37:20,000

Yeehaw!

672

00:37:21,000 --> 00:37:25,000

Driven as sports car mounted backwards on its frame.

673

00:37:25,000 --> 00:37:28,000

Driven a truck with square wheels.

674

00:37:30,000 --> 00:37:33,000

Heck, we've even taken a ride in the mouth of a great white shark.

675

00:37:35,000 --> 00:37:39,000

How is this little puppy going to compare to that litany of amazing vehicles?

676

00:37:39,000 --> 00:37:41,000

Well, we're going to find out very soon.

677

00:37:41,000 --> 00:37:56,000

Jamie and I have been investigating a very cool story about a Frenchman who turned his car into a motorcycle to get him back to civilization.

678

00:37:56,000 --> 00:37:59,000

Now, Jamie and I turned our car into a motorcycle.

679

00:37:59,000 --> 00:38:01,000

That is badass right there.

680

00:38:01,000 --> 00:38:05,000

Except that, well, we couldn't drive it.

681

00:38:05,000 --> 00:38:06,000

Stop it!

682

00:38:07,000 --> 00:38:08,000

Stop!

683

00:38:09,000 --> 00:38:14,000

So, we've gone back to our motorcycle, reconfigured it to the Frenchman's specs,

684

00:38:14,000 --> 00:38:21,000

and now we've come back where this all began at the Alameda runway to see just how drivable this motorcycle might be.

685

00:38:24,000 --> 00:38:30,000

After a double transformation, their Mad Max motorcycle is on the final straight.

686

00:38:30,000 --> 00:38:33,000

But will it be their ticket to ride?

687

00:38:33,000 --> 00:38:35,000

Jamie's up first.

688

00:38:35,000 --> 00:38:40,000

The bike now feels much, much better, but it's either going to work or it isn't.

689

00:38:40,000 --> 00:38:43,000

Hopefully, I can bail out without breaking my legs on it.

690

00:38:43,000 --> 00:38:47,000

With stable steering and a lower center of gravity.

691

00:38:47,000 --> 00:38:48,000

Come on, baby.

692

00:38:51,000 --> 00:38:53,000

Yeah! Yeah!

693

00:38:53,000 --> 00:38:55,000

This bike should be better balanced.

694

00:38:55,000 --> 00:38:57,000

You feeling good?

695

00:38:57,000 --> 00:38:58,000

No!

696

00:38:58,000 --> 00:39:05,000

But with reverse gear, as its only option, will it go fast enough for a smooth ride?

697

00:39:05,000 --> 00:39:08,000

Here we go. Three, two, one!

698

00:39:09,000 --> 00:39:10,000

F***!

699

00:39:11,000 --> 00:39:12,000

F***!

700

00:39:16,000 --> 00:39:17,000

Woo!

701

00:39:17,000 --> 00:39:19,000

Hold on, hold on!

702

00:39:19,000 --> 00:39:21,000

Dude!

703

00:39:21,000 --> 00:39:23,000

Well, it was sort of going.

704

00:39:23,000 --> 00:39:25,000

That was going!

705

00:39:25,000 --> 00:39:31,000

But I gotta say, that was actually a pretty good RPM and it was barely enough to keep it upright.

706

00:39:31,000 --> 00:39:36,000

Well, that was your only way back to civilization. I would choose this over nothing.

707

00:39:36,000 --> 00:39:38,000

I'm not so sure.

708

00:39:38,000 --> 00:39:42,000

Despite the unstable steering, the bike is still stable.

709

00:39:42,000 --> 00:39:47,000

I'm not going to bring me back to civilization. I would choose this over nothing.

710

00:39:47,000 --> 00:39:49,000

I'm not so sure.

711

00:39:49,000 --> 00:39:56,000

Despite the unstable start, Jamie did travel a hundred feet, twice as far as his previous best.

712

00:39:56,000 --> 00:40:02,000

But with reverse gear providing little in the way of thrust, balance was still a beast.

713

00:40:03,000 --> 00:40:06,000

So it's Adam's final chance.

714

00:40:06,000 --> 00:40:10,000

With the RPM cranked to the very max...

715

00:40:10,000 --> 00:40:12,000

This thing is terrifying!

716

00:40:12,000 --> 00:40:15,000

...will he escape to victory?

717

00:40:15,000 --> 00:40:17,000

Three, two, one!

718

00:40:17,000 --> 00:40:20,000

Three, two, one!

719

00:40:45,000 --> 00:40:46,000

Wow!

720

00:40:48,000 --> 00:40:51,000

I have ridden a lot of vehicles in my life.

721

00:40:51,000 --> 00:40:56,000

This is hands down the scariest thing I've ever straddled.

722

00:40:56,000 --> 00:40:57,000

Look at it this way.

723

00:40:57,000 --> 00:41:01,000

I'm able to jump free as evidenced by the film we just got.

724

00:41:01,000 --> 00:41:07,000

But if I didn't jump free, if I got any part of me caught under this 600 pounds of steel,

725

00:41:07,000 --> 00:41:11,000

I would be seriously, seriously damaged.

726

00:41:11,000 --> 00:41:13,000

That's the definition of scary.

727

00:41:13,000 --> 00:41:17,000

With a total journey of just 150 feet,

728

00:41:19,000 --> 00:41:21,000

it's not good news for the myth.

729

00:41:21,000 --> 00:41:23,000

This one is so close.

730

00:41:23,000 --> 00:41:29,000

It's right on the knife edge between busted and plausible, but let's look at some of the parameters.

731

00:41:29,000 --> 00:41:36,000

Every two-wheel vehicle needs a certain amount of forward speed in order to stay at balance.

732

00:41:36,000 --> 00:41:42,000

And this thing, which can only run in reverse gear, remember, because of the way it's mechanically driven,

733

00:41:42,000 --> 00:41:50,000

the full throttle is going at about jogging speed, which in our tests is just not enough to keep it upright reliably.

734

00:41:50,000 --> 00:41:55,000

Look, Adam and I, between the two of us, we can pretty well drive anything that moves.

735

00:41:55,000 --> 00:42:03,000

But even in a perfectly flat surface like this, in ideal conditions, this thing is undriveable.

736

00:42:06,000 --> 00:42:11,000

Man, I went back and forth on whether this thing was going to be plausible about six different times during that story,

737

00:42:11,000 --> 00:42:14,000

but I think we agree where it ends up.

738

00:42:14,000 --> 00:42:15,000

Yeah, it's busted.

739

00:42:15,000 --> 00:42:16,000

It's totally busted.

740

00:42:16,000 --> 00:42:18,000

Well, see you back at the shop.

741

00:42:18,000 --> 00:42:19,000

All right.