

1

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

We're starting without you, Jamie.

2

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

Jamie, I'm going to get right to the point.

3

00:01:22,000 --> 00:01:29,000

The goal of this episode is for you and I to destroy two cars in a way that we've never done before.

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00:01:30,000 --> 00:01:38,000

So what's your pick?

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00:01:38,000 --> 00:01:42,000

There is a story that's been on our list for a long time. I've always wanted to test it.

6

00:01:42,000 --> 00:01:48,000

The myth is that a standard household vacuum cleaner has enough suction to lift a car.

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00:01:48,000 --> 00:01:50,000

Come on, baby!

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00:01:50,000 --> 00:01:54,000

Well, I'm dubious, but it sounds like fun.

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00:01:54,000 --> 00:01:55,000

What are you going to do?

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00:01:55,000 --> 00:02:00,000

Well, you know, I've always wanted to do something that I call pancaking a car.

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

It involves using explosives to perfectly flatten a car.

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00:02:05,000 --> 00:02:09,000

So using the power of explosives to do work rather than just gratuitously?

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00:02:09,000 --> 00:02:11,000

That's always floated in my boat in the past.

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00:02:11,000 --> 00:02:12,000

Well, have at it!

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00:02:12,000 --> 00:02:15,000

Explosions.

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00:02:15,000 --> 00:02:17,000

Detonations.

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00:02:17,000 --> 00:02:20,000

Here comes the shock wave.

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00:02:20,000 --> 00:02:23,000

Or just blowing crap up.

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00:02:23,000 --> 00:02:30,000

It's the science of C4 that gets Jamie jazzed.

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00:02:30,000 --> 00:02:39,000

But can you really harness the brawn of a boom to completely crush a car?

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00:02:39,000 --> 00:02:46,000

Well, in this final season special, Jamie's starting his story in scale, but not with this.

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00:02:46,000 --> 00:02:51,000

So if we're going to do a scale down attempt at crushing a car, we could use a nice little model like this one.

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00:02:51,000 --> 00:02:54,000

This is Dicast Zinc and it's 1-12th scale.

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00:02:54,000 --> 00:03:00,000

The problem is if you measure the thinnest parts of it, you get about a 1-16th of an inch.

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

And 1-12th scale, 1-16th of an inch times 12, you get 3-4th of an inch.

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00:03:05,000 --> 00:03:10,000

I don't know any passenger vehicles that have 3-4-inch thick steel walls on them.

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00:03:10,000 --> 00:03:16,000

So what we're going to do instead is use something like this can here, which has very thin sheet steel.

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00:03:16,000 --> 00:03:21,000

And we'll make something that may not look as good, but it'll crush a lot more realistically.

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00:03:21,000 --> 00:03:26,000

If this was Adam's story, his scale cars would be captivating.

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00:03:26,000 --> 00:03:27,000

I think that's great.

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00:03:27,000 --> 00:03:33,000

But Jamie's always preferred a more practical approach, where substance surpasses style.

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00:03:33,000 --> 00:03:35,000

This is actually working.

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00:03:35,000 --> 00:03:39,000

And in this case, by using simple steel cans for the body.

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00:03:39,000 --> 00:03:40,000

Sure.

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00:03:40,000 --> 00:03:43,000

And steel piping for the wheels and engine.

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00:03:43,000 --> 00:03:48,000

He is able to scale a car's strength surprisingly well.

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00:03:48,000 --> 00:03:49,000

Well, there you have it.

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00:03:49,000 --> 00:03:52,000

I've got a sort of unibody sheet metal structure.

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00:03:52,000 --> 00:03:55,000

I've got four wheels and I've got an engine block.

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00:03:55,000 --> 00:03:58,000

Now, all of these things will crush differently.

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

The sheet metal being the weakest, the wheels being next, and then the engine block being the sturdiest.

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00:04:03,000 --> 00:04:10,000

Hopefully we'll be able to overcome the differences in those things and still end up with a flat thing.

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00:04:14,000 --> 00:04:19,000

Well, to find out the guys head once again to their home away from home.

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00:04:20,000 --> 00:04:25,000

This is the Alameda County Sheriff's Department bomb range in Dublin, California.

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00:04:25,000 --> 00:04:29,000

It is the most important location in Mythbusters history.

46

00:04:34,000 --> 00:04:39,000

I've spent literal months on this location when you tally up all the location days.

47

00:04:39,000 --> 00:04:42,000

I've spent more time on this location than I spent learning typing in high school.

48

00:04:42,000 --> 00:04:45,000

And typing is the most important thing I learned in high school.

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00:04:45,000 --> 00:04:54,000

And so it's fitting that our last explosion, our last experiment here, should be Jamie's choice to do work with explosives instead of just destructing.

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00:04:56,000 --> 00:05:00,000

And to do just that, time to level out our work area.

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

Jamie's starting with some pre-proof of concept preparation.

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

Look at him, a man in his element.

53

00:05:07,000 --> 00:05:10,000

He's building a kind of car sandwich.

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00:05:10,000 --> 00:05:17,000

A steel plate is the base, then his small scale car, then more steel on top.

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00:05:17,000 --> 00:05:19,000

But what's the next ingredient?

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00:05:19,000 --> 00:05:24,000

This is next. It's called data sheet. It's a high explosive in sheet form.

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00:05:24,000 --> 00:05:26,000

We put this on top of our steel plate.

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00:05:26,000 --> 00:05:30,000

Okay, that ought to work. And it goes kaboom.

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00:05:30,000 --> 00:05:39,000

Yep, by adding a four-mil layer of data sheet, Jamie's hoping to force the upper steel plate down to completely crush his scale car.

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00:05:39,000 --> 00:05:47,000

Fire the hole! Fire the hole! Fire the hole!

61

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

Here we go.

62

00:05:50,000 --> 00:05:58,000

Okay, single layer of data sheet in three, two, one.

63

00:05:58,000 --> 00:06:02,000

Yeah, that's aggressive.

64

00:06:02,000 --> 00:06:07,000

That's got a real ring to it. I felt the walls of this thing vibrate.

65

00:06:07,000 --> 00:06:09,000

Yeah, let's go check it out.

66

00:06:09,000 --> 00:06:10,000

All right.

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00:06:10,000 --> 00:06:17,000

The data sheet sure packed a punch, but has it created a small-scale crush?

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00:06:17,000 --> 00:06:23,000

That looks like a positive result there, Mr. Heidemann.

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00:06:23,000 --> 00:06:26,000

That's like one of the wheels right there.

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00:06:26,000 --> 00:06:27,000

Yeah.

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00:06:27,000 --> 00:06:28,000

And...

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00:06:28,000 --> 00:06:29,000

That's the engine.

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00:06:29,000 --> 00:06:30,000

The engine.

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00:06:30,000 --> 00:06:34,000

Did you expect such a spectacular result on the first try?

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00:06:34,000 --> 00:06:40,000

No, actually. I'm actually a little speechless.

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00:06:40,000 --> 00:06:46,000

At a little under an inch thick, the car's been crushed to one-fifth its original size.

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00:06:46,000 --> 00:06:50,000

So, is it already time to go full-scale?

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00:06:50,000 --> 00:06:54,000

Jamie came here with a goal to flatten the car.

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00:06:54,000 --> 00:06:59,000

And for my money, it looks like he achieved it on the very first try, but he's here at the bomb range,

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00:06:59,000 --> 00:07:03,000

he's got a bunch of analogs. My guess is, I don't know, maybe he's going to start stacking them

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00:07:03,000 --> 00:07:08,000

and trying to see optimal relationships between weight and explosives,

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00:07:08,000 --> 00:07:12,000

or maybe we're all just going to go home. I'm actually not sure at this point.

83

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

Oh, we're not going home. I can tell you that much.

84

00:07:14,000 --> 00:07:15,000

Oh, come on!

85

00:07:15,000 --> 00:07:21,000

This was a lovely first attempt, but when we scale this up to a full-sized car,

86

00:07:21,000 --> 00:07:26,000

it's going to be a lot bigger of an experiment, a lot more time and difficulty.

87

00:07:26,000 --> 00:07:31,000

So, I want to learn everything I can about the dynamics of what happened here before we go there.

88

00:07:31,000 --> 00:07:35,000

In other words, small scale's not over yet.

89

00:07:35,000 --> 00:07:38,000

Whoa! I don't think they've landed yet.

90

00:07:39,000 --> 00:07:45,000

But first, it's time for Adam's destructive denouement.

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00:07:45,000 --> 00:07:51,000

It's a nice little bit of symmetry in this episode, and you're happy trying to make a car as low into the ground as possible, and in my half...

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00:07:51,000 --> 00:07:53,000

You're trying to lift a car up as high as possible.

93

00:07:53,000 --> 00:07:54,000

Exactly.

94

00:07:54,000 --> 00:07:55,000

With a vacuum.

95

00:07:55,000 --> 00:08:02,000

Yes. Now, I figure that the trick to this is to make the mother of all attachments to increase the surface area of the vacuum cleaner's input

96

00:08:02,000 --> 00:08:07,000

so that the amount of such an eye create exceeds the weight of the car, and thus I can get it off the ground.

97

00:08:07,000 --> 00:08:12,000

So, what you're trying to say is that as far as the attachment goes, size matters.

98

00:08:12,000 --> 00:08:13,000

Indeed it does.

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00:08:15,000 --> 00:08:23,000

Throughout Mythbusters history, vacuum cleaners have been blown up, turned into jet engines,

100

00:08:23,000 --> 00:08:28,000

didn't really jet across the room, and had the chance to bite back.

101

00:08:28,000 --> 00:08:29,000

I got this!

102

00:08:29,000 --> 00:08:30,000

You guys are suck-bleeding.

103

00:08:30,000 --> 00:08:35,000

But can a single vacuum really have enough suck to lift a car?

104

00:08:35,000 --> 00:08:38,000

Yeah!

105

00:08:39,000 --> 00:08:45,000

To find out if this impossible-sounding tall tail can be true, the guys are starting small...

106

00:08:45,000 --> 00:08:50,000

...with a standard vacuum and hose trying to lift a five-pound weight.

107

00:08:50,000 --> 00:08:54,000

Which, eventually, it does.

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00:08:54,000 --> 00:08:58,000

Okay, so that's just barely enough to hold on to that five-pound.

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00:08:58,000 --> 00:08:59,000

It is.

110

00:08:59,000 --> 00:09:04,000

We just shown that this common vacuum cleaner is able to lift a five-pound weight on the end of its hose.

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00:09:04,000 --> 00:09:08,000

Now, the surface area on the end of the hose is 1.75 inches.

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

So, doing the math, that means that it's pulling about 2.8 pounds per square inch.

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00:09:14,000 --> 00:09:18,000

So, how are we going to lift a car that weighs 2,600 pounds?

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00:09:18,000 --> 00:09:20,000

Well, all you need is more square inches.

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00:09:20,000 --> 00:09:29,000

In fact, if we have up to about a thousand square inches of suction area on the car, we should be able to lift it, in theory.

116

00:09:30,000 --> 00:09:37,000

The mythbusters are banking on the idea that the relationship between lift and surface area is linear.

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00:09:37,000 --> 00:09:48,000

Meaning if one square inch can lift 2.8 pounds, a single vacuum with a 1,000 square inch footprint should be able to lift a car.

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00:09:48,000 --> 00:09:53,000

But to test that crazy concept, the guys must next up the ante...

119

00:09:53,000 --> 00:09:57,000

...by building a larger-than-life vacuum attachment.

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00:09:57,000 --> 00:09:59,000

This is one of the stranger things we've built.

121

00:09:59,000 --> 00:10:04,000

At eight inches in diameter, it should put their previous test in the shade.

122

00:10:04,000 --> 00:10:06,000

I hope that works.

123

00:10:06,000 --> 00:10:11,000

But so that it still fits the vacuum cleaner, Janie is building a manifold.

124

00:10:11,000 --> 00:10:12,000

There we go.

125

00:10:12,000 --> 00:10:16,000

That will link the cleaner to the cup with no loss of suction.

126

00:10:16,000 --> 00:10:18,000

All right, do it.

127

00:10:18,000 --> 00:10:21,000

The question is, will it work?

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00:10:21,000 --> 00:10:23,000

All right, so here is a proof of concept.

129

00:10:23,000 --> 00:10:29,000

This is the PVC pipe cap that we put a gasket on, and here is the hose through which we'll be pulling our vacuum.

130

00:10:29,000 --> 00:10:36,000

Ah, the vacuum here is the household vacuum that we are going to use in order to adapt from this to this.

131

00:10:36,000 --> 00:10:42,000

Janie has built a manifold, so the manifold is going to go in there, and then that goes in there.

132

00:10:42,000 --> 00:10:48,000

And I've got a 50-pound weight to try and lift.

133

00:10:50,000 --> 00:10:52,000

Let's see if this works.

134

00:10:53,000 --> 00:10:55,000

Hey!

135

00:10:56,000 --> 00:10:58,000

Nice!

136

00:10:58,000 --> 00:11:03,000

In theory, I think this should be able to hold more than twice that.

137

00:11:03,000 --> 00:11:05,000

That's a lot of force. Don't feel it.

138

00:11:05,000 --> 00:11:10,000

Incredibly, their vacuum rig is lifting the 50 pounds with room to spare.

139

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

That is awesome!

140

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

At least until they pull the plug.

141

00:11:18,000 --> 00:11:19,000

So what's next?

142

00:11:19,000 --> 00:11:27,000

So, Jamie and I did a proof of concept, 8-inch PVC cup, and it works so well, this is going to be our method for lifting the car.

143

00:11:27,000 --> 00:11:28,000

Why reinvent the wheel?

144

00:11:28,000 --> 00:11:30,000

So, graphics, help me out.

145

00:11:30,000 --> 00:11:32,000

First up, give me a car.

146

00:11:32,000 --> 00:11:36,000

So our plan is to build 40 more suction cups just like the one we just made.

147

00:11:36,000 --> 00:11:39,000

We'll position them on the roof, the trunk, and the hood.

148

00:11:39,000 --> 00:11:45,000

From each one, we'll come a tube that will join to a kind of mega-manifold that will be attached directly to our single vacuum cleaner.

149

00:11:45,000 --> 00:11:51,000

Also from each cup will be a piece of threaded steel rod that will link to a support structure that will hang above it.

150

00:11:51,000 --> 00:11:58,000

We'll turn the vacuum on, then we'll lift up the steel structure with the crane, and either the car will lift up or pop, pop, pop, pop.

151

00:11:58,000 --> 00:12:02,000

The suction cups will all decouple, and the car will not get off the ground.

152

00:12:02,000 --> 00:12:05,000

The one thing I can tell you for sure is that this ain't gonna suck.

153

00:12:05,000 --> 00:12:07,000

Get it? Ain't gonna suck?

154

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

Coming up, pancake car goes large.

155

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

And car lift goes bad.

156

00:12:17,000 --> 00:12:19,000

Rats, rats, rats.

157

00:12:25,000 --> 00:12:27,000

Oh my God!

158

00:12:29,000 --> 00:12:34,000

Since 2002, the mythbusters have become connoisseurs of car crashes.

159

00:12:36,000 --> 00:12:39,000

A concept Jamie's about to take to the max.

160

00:12:39,000 --> 00:12:41,000

What can you say?

161

00:12:42,000 --> 00:12:49,000

He's testing whether full-on explosives can ever flatten a full-sized car.

162

00:12:50,000 --> 00:12:53,000

But after a stellar small-scale start...

163

00:12:55,000 --> 00:12:57,000

Mr. Heidemann is laughing, that's a good thing.

164

00:12:57,000 --> 00:13:00,000

Jamie's not ramping up right away.

165

00:13:00,000 --> 00:13:02,000

A little speechless.

166

00:13:02,000 --> 00:13:07,000

Because he wants to try to compress a second small-scale car even more.

167

00:13:08,000 --> 00:13:13,000

For this next shot, we're gonna have a sheet of steel underneath the car like we did before.

168

00:13:13,000 --> 00:13:18,000

The car, another sheet of steel like we did before with the data sheet on top.

169

00:13:18,000 --> 00:13:22,000

But then three sheets of steel on top of the explosive.

170

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

And so we'll see whether we get any more aggressive compression of the car.

171

00:13:26,000 --> 00:13:28,000

Looks good to me.

172

00:13:28,000 --> 00:13:32,000

The theory is that the top layers of steel will provide extra resistance

173

00:13:32,000 --> 00:13:35,000

that will force more of the blast wave into the car.

174

00:13:35,000 --> 00:13:38,000

But there's an added risk to this test.

175

00:13:39,000 --> 00:13:44,000

On this blast, we're likely to get some plates of steel flying very, very high in the sky.

176

00:13:44,000 --> 00:13:46,000

Hopefully straight up.

177

00:13:50,000 --> 00:13:52,000

Okay, three plates of steel on top.

178

00:13:52,000 --> 00:13:57,000

And three, two, one.

179

00:13:59,000 --> 00:14:00,000

Whoa!

180

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

I don't think they've landed yet.

181

00:14:11,000 --> 00:14:13,000

There, one of them just landed.

182

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

Oh my gosh.

183

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

It landed up on the hill there.

184

00:14:21,000 --> 00:14:24,000

With all the steel safely returned to earth,

185

00:14:24,000 --> 00:14:28,000

the guys go in for a closer look to find a car that is flatter.

186

00:14:28,000 --> 00:14:31,000

But isn't what the Heinemann had hoped for.

187

00:14:32,000 --> 00:14:34,000

That right there is the engine.

188

00:14:34,000 --> 00:14:39,000

That used to be about a three inch long heavy-walled aluminum tube.

189

00:14:39,000 --> 00:14:42,000

And now it's not just been flattened.

190

00:14:42,000 --> 00:14:44,000

It's been melted.

191

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

I gotta say, I think it's too much.

192

00:14:46,000 --> 00:14:48,000

It's almost like it burned it.

193

00:14:49,000 --> 00:14:53,000

Test 2's extra downforce did crush the car more than test 1.

194

00:14:53,000 --> 00:14:57,000

But because it also caused more breakage, Jamie's not satisfied.

195

00:15:01,000 --> 00:15:04,000

Hey Jamie, I found the plates. They're right here.

196

00:15:05,000 --> 00:15:06,000

Cool.

197

00:15:07,000 --> 00:15:12,000

So next, Jamie sets up his sandwich with dead ashit on both sides of the steel

198

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

to pancake it in both directions.

199

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

Oh yeah, that's perfect.

200

00:15:16,000 --> 00:15:18,000

Okay, going for the glory.

201

00:15:18,000 --> 00:15:22,000

Double-sided shot in three, two, one.

202

00:15:24,000 --> 00:15:25,000

Whoa.

203

00:15:29,000 --> 00:15:30,000

Whoa is right.

204

00:15:32,000 --> 00:15:38,000

As this test gives the worst result of all, with the car neither flat nor whole.

205

00:15:38,000 --> 00:15:43,000

Pretty interesting, sort of a shape, but that wasn't a successful shot at all.

206

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

So, what's next?

207

00:15:50,000 --> 00:15:52,000

Well, sometimes simpler is better.

208

00:15:52,000 --> 00:15:54,000

And the very first shot that we did was the simplest.

209

00:15:54,000 --> 00:15:59,000

It just had the car, the plate on top of it, and explosives on top of that.

210

00:15:59,000 --> 00:16:03,000

And the way I see it, we can run the test again.

211

00:16:03,000 --> 00:16:05,000

We put a little more explosives on the top.

212

00:16:05,000 --> 00:16:07,000

We should get a little bit more crush.

213

00:16:08,000 --> 00:16:09,000

Maybe.

214

00:16:09,000 --> 00:16:15,000

Yep, Jamie's coming full circle with a repeat of test 1, but with 50% more explosive.

215

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

How's that look?

216

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

Will this finally give him the crush he's craving?

217

00:16:20,000 --> 00:16:26,000

Six mil on top of the plate in three, two, one.

218

00:16:28,000 --> 00:16:29,000

Yeah.

219

00:16:33,000 --> 00:16:34,000

Let's go see what we got.

220

00:16:36,000 --> 00:16:38,000

It's the biggest thud of the day.

221

00:16:41,000 --> 00:16:42,000

But did it work?

222

00:16:47,000 --> 00:16:51,000

I'm kind of liking this.

223

00:16:51,000 --> 00:16:56,000

It certainly got squashed a lot more aggressively than the first shot.

224

00:16:56,000 --> 00:17:04,000

It has completely collapsed the engine block of the car, but then it's in place, which I like.

225

00:17:04,000 --> 00:17:07,000

It's kind of fused that to the rest of the body.

226

00:17:07,000 --> 00:17:09,000

So, I think it's going to work.

227

00:17:09,000 --> 00:17:16,000

It's been a blast, but finally we have not just a happy Heinemann, but a plan for full scale.

228

00:17:16,000 --> 00:17:21,000

A real car sandwich with a monster load of explosives on top.

229

00:17:21,000 --> 00:17:22,000

Well, that was fun.

230

00:17:22,000 --> 00:17:24,000

Have you got all the information you need?

231

00:17:24,000 --> 00:17:26,000

Yeah, I think we're ready to scale it up.

232

00:17:26,000 --> 00:17:27,000

Let's go to the big time.

233

00:17:27,000 --> 00:17:29,000

What could possibly go wrong?

234

00:17:34,000 --> 00:17:38,000

Meanwhile, back at the car, we're going to be able to see the car.

235

00:17:38,000 --> 00:17:47,000

Meanwhile, back at car lift HQ, Adam and Jamie are halfway through one of the strangest builds of this final season.

236

00:17:47,000 --> 00:17:49,000

That ought to work nicely.

237

00:17:49,000 --> 00:17:58,000

They're constructing a Dr. Octopus style vacuum cleaner to find out if a single household vacuum with 48 inch suction cups

238

00:17:58,000 --> 00:18:04,000

cruising right along can suck enough to lift a car clean off the ground.

239

00:18:04,000 --> 00:18:08,000

And while it's not all been plain sailing, that one looks...

240

00:18:08,000 --> 00:18:09,000

Oh!

241

00:18:09,000 --> 00:18:10,000

Bleep!

242

00:18:11,000 --> 00:18:12,000

Broke it!

243

00:18:12,000 --> 00:18:15,000

It's not long before they're ready to head for the hills.

244

00:18:15,000 --> 00:18:16,000

Nice.

245

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

This is where we are going to raise our car with a vacuum, theoretically.

246

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

I'm standing on Treasure Island in San Francisco Bay.

247

00:18:26,000 --> 00:18:28,000

We have done many myths out here.

248

00:18:28,000 --> 00:18:30,000

We've jumped off of buildings.

249

00:18:31,000 --> 00:18:33,000

We've driven through glass.

250

00:18:33,000 --> 00:18:35,000

Oh, it's about to happen!

251

00:18:36,000 --> 00:18:39,000

Heck, we've even sailed a duct tape boat right out here.

252

00:18:39,000 --> 00:18:40,000

Yeehaw!

253

00:18:40,000 --> 00:18:47,000

Today, we're going to attach a whole bunch of suction cups to a car and try and lift it with a single vacuum cleaner.

254

00:18:48,000 --> 00:18:52,000

To do that, the guys must first reassemble their rig.

255

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

It's going to take a while.

256

00:18:54,000 --> 00:19:00,000

Step one, one down, is for Adam to attach the 40 suction cups to the steel frame.

257

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

Yeehaw!

258

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

Like that.

259

00:19:03,000 --> 00:19:04,000

That's going to be great.

260

00:19:04,000 --> 00:19:07,000

Then they secure the vacuum cleaner itself.

261

00:19:07,000 --> 00:19:08,000

That's what you had in mind?

262

00:19:08,000 --> 00:19:09,000

Yeah, something like that.

263

00:19:10,000 --> 00:19:13,000

Before wiring in 400 feet of hosing.

264

00:19:13,000 --> 00:19:17,000

It's spaghetti, man.

265

00:19:17,000 --> 00:19:20,000

Next comes the midpoint recap.

266

00:19:20,000 --> 00:19:25,000

This vacuum cleaner right here, powered by 110 volts of AC, is the nerve center of our operation.

267

00:19:25,000 --> 00:19:28,000

It starts out by distributing its suck through this hose.

268

00:19:28,000 --> 00:19:30,000

Which connects to this manifold.

269

00:19:30,000 --> 00:19:34,000

It distributes out through these yellow spaghetti hoses to all 40 of our cups,

270

00:19:34,000 --> 00:19:38,000

hopefully distributing enough vacuum power to lift our car.

271

00:19:38,000 --> 00:19:40,000

What could possibly go wrong?

272

00:19:41,000 --> 00:19:44,000

Next, the guys bring in their 2600 pound car.

273

00:19:44,000 --> 00:19:47,000

Never has Mythbusters attempted to suck so hard.

274

00:19:48,000 --> 00:19:51,000

And lower the suction cup system directly on top.

275

00:19:51,000 --> 00:19:53,000

Can we have some dramatic music, please?

276

00:19:59,000 --> 00:20:01,000

It was much better, thank you.

277

00:20:02,000 --> 00:20:04,000

Yeah, a little bit more.

278

00:20:04,000 --> 00:20:06,000

Stop.

279

00:20:07,000 --> 00:20:10,000

Last but not least is the crane.

280

00:20:10,000 --> 00:20:13,000

And then, it's go time.

281

00:20:13,000 --> 00:20:16,000

Alright, you ready to turn it on and do this thing for real?

282

00:20:16,000 --> 00:20:18,000

There we go.

283

00:20:18,000 --> 00:20:21,000

Alright, let's get them all sucked down.

284

00:20:21,000 --> 00:20:25,000

Remember, it's the crane that will be lifting the steel cradle.

285

00:20:25,000 --> 00:20:27,000

It's all good.

286

00:20:27,000 --> 00:20:28,000

The trunk's good.

287

00:20:28,000 --> 00:20:31,000

But it's the vacuum that will be sucking the cradle to the car.

288

00:20:31,000 --> 00:20:33,000

Gently up, let's go.

289

00:20:38,000 --> 00:20:40,000

Come on, baby.

290

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

Come on.

291

00:20:46,000 --> 00:20:48,000

Ah!

292

00:20:48,000 --> 00:20:50,000

Rats, rats, rats!

293

00:20:50,000 --> 00:20:53,000

So near yet so far.

294

00:20:53,000 --> 00:20:58,000

It looked like they were going to get lift until a conscious uncoupling occurred.

295

00:20:58,000 --> 00:21:00,000

And Adam knows why.

296

00:21:00,000 --> 00:21:07,000

Alright, we've run into a snag and it seems to be that our hood is buckling too much for our suction cups to maintain their hold.

297

00:21:07,000 --> 00:21:10,000

So we're going to reduce the number of suction cups on the hood.

298

00:21:10,000 --> 00:21:15,000

We have great suction on all 15 on the top of the car and all 9 on the rear of the car.

299

00:21:15,000 --> 00:21:20,000

With those plus 4 or 5 on the hood, we're still in the zone of liftability.

300

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

We're going to keep going.

301

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

Still to come.

302

00:21:23,000 --> 00:21:24,000

Car lift.

303

00:21:24,000 --> 00:21:25,000

Come on, baby.

304

00:21:25,000 --> 00:21:27,000

Goes from bad to worse.

305

00:21:27,000 --> 00:21:28,000

Oh!

306

00:21:28,000 --> 00:21:29,000

It's that hood.

307

00:21:29,000 --> 00:21:31,000

The hood is boning us.

308

00:21:31,000 --> 00:21:33,000

And pancake car goes.

309

00:21:42,000 --> 00:21:47,000

To find out if a humble vacuum cleaner really has enough suck to lift a car,

310

00:21:47,000 --> 00:21:52,000

Adam and Jamie have created a 40 suction cup contraption.

311

00:21:52,000 --> 00:21:53,000

Come on.

312

00:21:53,000 --> 00:21:58,000

Which completely failed to fly.

313

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

Rats, rats, rats!

314

00:22:02,000 --> 00:22:06,000

So for test 2, they're realigning the cups on the hood.

315

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

Okay, so 4 across this part of the hood.

316

00:22:09,000 --> 00:22:13,000

To hopefully give them a better seal and more lift.

317

00:22:13,000 --> 00:22:15,000

Moment of truth again.

318

00:22:15,000 --> 00:22:16,000

Let's do it.

319

00:22:16,000 --> 00:22:19,000

Go, go, go, go, go, go!

320

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

Looking good.

321

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

Come on, baby.

322

00:22:27,000 --> 00:22:28,000

It's that hood.

323

00:22:28,000 --> 00:22:30,000

The hood is boning us.

324

00:22:31,000 --> 00:22:32,000

Yep.

325

00:22:32,000 --> 00:22:36,000

Like last time, the thin sheet metal of the hood is buckling under the pressure.

326

00:22:36,000 --> 00:22:40,000

And that movement causes the cups to break their seal.

327

00:22:40,000 --> 00:22:43,000

But the guys have a planned scene.

328

00:22:43,000 --> 00:22:45,000

Alright, here's the problem.

329

00:22:45,000 --> 00:22:49,000

We have what we think is enough suction in our vacuum cup machine,

330

00:22:49,000 --> 00:22:54,000

but we don't have enough structural integrity in the flimsy sheet metal hood of our car.

331

00:22:54,000 --> 00:22:55,000

Our solution?

332

00:22:55,000 --> 00:22:59,000

Cut that hood out and replace it with a piece of sheet steel.

333

00:22:59,000 --> 00:23:01,000

Wait a minute, I hear you saying,

334

00:23:01,000 --> 00:23:03,000

that's cheating, you're changing the structure of the car.

335

00:23:03,000 --> 00:23:09,000

But I remind you that the myth is that there's enough power within a normal single vacuum to lift a car.

336

00:23:09,000 --> 00:23:11,000

And that is still the myth we're testing.

337

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

We're just adding a little bit of structure.

338

00:23:13,000 --> 00:23:15,000

So it's out with the old...

339

00:23:15,000 --> 00:23:17,000

Alright, let's take it over here to this piece of steel.

340

00:23:17,000 --> 00:23:19,000

And in with the new...

341

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

A buckle-proof hood that should allow for a super seal.

342

00:23:27,000 --> 00:23:29,000

Not how to do it.

343

00:23:30,000 --> 00:23:33,000

Once lined up with the rig, first impressions are good.

344

00:23:33,000 --> 00:23:36,000

Look, I don't want to get overly confident here.

345

00:23:36,000 --> 00:23:41,000

But right away, the replacement of the hood with a flat piece of sheet steel is working magnificently.

346

00:23:41,000 --> 00:23:45,000

I've got grab on 15 suction cups up here, man.

347

00:23:45,000 --> 00:23:46,000

That's a lot.

348

00:23:47,000 --> 00:23:51,000

Confidence has been raised, but will the car follow suit?

349

00:23:51,000 --> 00:23:52,000

Dude, you ready?

350

00:23:52,000 --> 00:23:53,000

Yeah.

351

00:23:53,000 --> 00:23:55,000

How many tries have we had at this?

352

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

I don't know, I lost count.

353

00:23:56,000 --> 00:23:57,000

Yeah, me too.

354

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

Alright, let's take it up.

355

00:23:58,000 --> 00:23:59,000

Okay.

356

00:23:59,000 --> 00:24:06,000

For hopefully the last time, a single vacuum lifting an entire car.

357

00:24:07,000 --> 00:24:08,000

Come on, baby.

358

00:24:09,000 --> 00:24:10,000

Come on, baby.

359

00:24:12,000 --> 00:24:15,000

Hey! Hey, I think it's off the ground.

360

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

There it comes.

361

00:24:17,000 --> 00:24:20,000

This is going to work. It's going to work.

362

00:24:21,000 --> 00:24:22,000

Come on, baby.

363

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

Come on, yes!

364

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

Ah!

365

00:24:25,000 --> 00:24:27,000

What, what, what, what, what?

366

00:24:28,000 --> 00:24:30,000

It was an inch.

367

00:24:30,000 --> 00:24:31,000

It was an inch?

368

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

On the front wheel.

369

00:24:32,000 --> 00:24:34,000

On the front wheel, before failure.

370

00:24:35,000 --> 00:24:39,000

Yes! Yes! Yes! Yes! Yes!

371

00:24:39,000 --> 00:24:41,000

I'm calling it.

372

00:24:41,000 --> 00:24:43,000

I'm like, it lifted the car off the ground.

373

00:24:43,000 --> 00:24:44,000

One inch?

374

00:24:44,000 --> 00:24:45,000

Yeah.

375

00:24:45,000 --> 00:24:46,000

Okay.

376

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

Maybe not stably, but yeah.

377

00:24:49,000 --> 00:24:50,000

Come on, yes!

378

00:24:50,000 --> 00:24:51,000

Ah!

379

00:24:52,000 --> 00:24:58,000

Our last attempt with the octopus was the one that Jamie and I felt strongest had the highest chance for success.

380

00:24:58,000 --> 00:25:02,000

We know from our math that we have enough suction to lift this car.

381

00:25:02,000 --> 00:25:04,000

In theory, it's possible.

382

00:25:04,000 --> 00:25:09,000

In practice, it turned out not to be possible.

383

00:25:11,000 --> 00:25:13,000

Nope, I think that the octopus is dead.

384

00:25:13,000 --> 00:25:16,000

We have proven that this cannot work.

385

00:25:16,000 --> 00:25:21,000

We need to implement some other solution to distribute the vacuum spower and lift this car.

386

00:25:21,000 --> 00:25:24,000

After some spectacular small scale tests...

387

00:25:29,000 --> 00:25:34,000

Pancake car is going supersized.

388

00:25:39,000 --> 00:25:41,000

Absolutely beautiful.

389

00:25:42,000 --> 00:25:46,000

For pancaking a car, we're going to need a lot of explosives.

390

00:25:46,000 --> 00:25:47,000

I mean, a lot.

391

00:25:47,000 --> 00:25:49,000

And that's where this place comes in.

392

00:25:49,000 --> 00:25:55,000

I'm standing up on the mountain at New Mexico Tech, one of our all-time favorite Mythbuster partnerships.

393

00:25:55,000 --> 00:25:57,000

They have everything we need.

394

00:25:57,000 --> 00:26:00,000

This is our pancake car, one-stop shop.

395

00:26:02,000 --> 00:26:04,000

When it comes to spectacular destruction,

396

00:26:05,000 --> 00:26:07,000

NMT is second to none.

397

00:26:07,000 --> 00:26:11,000

In three, two, one.

398

00:26:15,000 --> 00:26:16,000

Wow!

399

00:26:16,000 --> 00:26:18,000

But to see if explosives can crush a car,

400

00:26:20,000 --> 00:26:22,000

Jamie's got his wheels ready to go.

401

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

This is the car we're going to use.

402

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

Now, normally, I appreciate and respect Russian engineering

403

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

because it tends to be simple, rugged, and dependable.

404

00:26:32,000 --> 00:26:35,000

This is not an example of that kind of engineering.

405

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

Quite possibly one of the worst cars ever manufactured.

406

00:26:38,000 --> 00:26:40,000

It's going to be with a certain amount of glee

407

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

that I remove this car permanently from the road.

408

00:26:45,000 --> 00:26:48,000

The car may look decrepit, but it is in full working order.

409

00:26:50,000 --> 00:26:53,000

All it lacks is a Mythbuster's paint job.

410

00:26:55,000 --> 00:26:57,000

Look, I recognize it's not pretty,

411

00:26:57,000 --> 00:27:01,000

but then nothing that's about to happen to this car is going to be pretty.

412

00:27:05,000 --> 00:27:08,000

Now, the goal here is to turn our car into a perfectly flat plate,

413

00:27:08,000 --> 00:27:10,000

just like we did in our small-scale experiments.

414

00:27:10,000 --> 00:27:13,000

And to do that, we've got two massive steel plates,

415

00:27:13,000 --> 00:27:15,000

one that's embedded in the ground,

416

00:27:15,000 --> 00:27:18,000

one that is suspended overhead off of this gantry.

417

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

It weighs 7,000 pounds,

418

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

and we're going to put explosives on top of that.

419

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

It's going to come down on our unsuspecting car like a freight train.

420

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

That's the theory.

421

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

And before long, the 7,000-pound plate is up and running.

422

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

That's a beautiful thing.

423

00:27:37,000 --> 00:27:41,000

Secure it to the gantry, courtesy of six breakaway straps.

424

00:27:43,000 --> 00:27:46,000

Okay, now you can sort of see how this is all coming together.

425

00:27:46,000 --> 00:27:48,000

We've got our plate in place.

426

00:27:48,000 --> 00:27:50,000

We've got the car that's going to go underneath.

427

00:27:50,000 --> 00:27:52,000

Explosives on top.

428

00:27:52,000 --> 00:27:54,000

Bob's your uncle.

429

00:27:54,000 --> 00:27:56,000

With that, it's time to position the car.

430

00:27:56,000 --> 00:27:58,000

First, with a forklift.

431

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

Like a surgeon.

432

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

Now, don't scratch it.

433

00:28:01,000 --> 00:28:03,000

And then, by hand.

434

00:28:04,000 --> 00:28:06,000

How's that?

435

00:28:06,000 --> 00:28:07,000

A little bit more.

436

00:28:07,000 --> 00:28:08,000

All right.

437

00:28:10,000 --> 00:28:12,000

There we go. Cool.

438

00:28:15,000 --> 00:28:18,000

That just leaves the explosives.

439

00:28:18,000 --> 00:28:21,000

All 1,000 pounds of it.

440

00:28:21,000 --> 00:28:24,000

That is a lot of boom.

441

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

Gently up. Let's go.

442

00:28:30,000 --> 00:28:31,000

At Treasure Island.

443

00:28:31,000 --> 00:28:32,000

Come on, baby.

444

00:28:32,000 --> 00:28:37,000

Adam and Jamie's lift-a-car suction rig has sucked.

445

00:28:37,000 --> 00:28:40,000

Press. What happened?

446

00:28:40,000 --> 00:28:44,000

So it's back to the shop and back to the drawing board.

447

00:28:44,000 --> 00:28:47,000

So, just to recap, and you saw this,

448

00:28:47,000 --> 00:28:50,000

our previous method was what we call the octopus arm method

449

00:28:50,000 --> 00:28:55,000

and involved many different caps distributed across the whole of the car.

450

00:28:55,000 --> 00:28:59,000

And that turned out to be completely 100% wrong.

451

00:28:59,000 --> 00:29:02,000

So, now we are going with a method we call the box method.

452

00:29:02,000 --> 00:29:04,000

I don't know how do we come up with these names,

453

00:29:04,000 --> 00:29:07,000

but it's just a gift we have.

454

00:29:07,000 --> 00:29:10,000

Instead of 40 points of failure, we now have three.

455

00:29:10,000 --> 00:29:14,000

Three big, sturdy wooden boxes made out of plywood,

456

00:29:14,000 --> 00:29:17,000

sealed with a gasket between them and the car.

457

00:29:17,000 --> 00:29:20,000

We pull a vacuum from them with a manifold.

458

00:29:20,000 --> 00:29:22,000

I think this is going to work.

459

00:29:22,000 --> 00:29:23,000

We're going to build some boxes.

460

00:29:23,000 --> 00:29:25,000

We're going to lift this car.

461

00:29:25,000 --> 00:29:28,000

So, it's out with the octopus.

462

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

And in with three boxes that will still be powered by a single vacuum cleaner.

463

00:29:33,000 --> 00:29:37,000

This plywood right here is one of my favorite building materials.

464

00:29:37,000 --> 00:29:40,000

We refer to it as fin ply because it's made in Finland.

465

00:29:40,000 --> 00:29:45,000

And it's a birch ply that has many more laminations than normal plywood.

466

00:29:45,000 --> 00:29:50,000

It's about twice as heavy and twice as strong.

467

00:29:50,000 --> 00:29:52,000

To give this design the best chance,

468

00:29:52,000 --> 00:29:56,000

Jamie's making each box as big as possible.

469

00:29:56,000 --> 00:29:57,000

Let's start.

470

00:29:57,000 --> 00:30:01,000

He's also contouring them to precisely fit the car's shape.

471

00:30:01,000 --> 00:30:02,000

Looks good.

472

00:30:02,000 --> 00:30:06,000

And last but not least, he's laying in a rubber gasket

473

00:30:06,000 --> 00:30:08,000

that should form a leak-proof seal.

474

00:30:08,000 --> 00:30:10,000

That all looks just about perfect.

475

00:30:10,000 --> 00:30:14,000

And once the seal is set, the guys double check the fit.

476

00:30:14,000 --> 00:30:15,000

Lovely.

477

00:30:15,000 --> 00:30:18,000

And their confidence is back with a bang.

478

00:30:18,000 --> 00:30:24,000

These boxes are best to be thought of as the workers we are using to lift the car.

479

00:30:24,000 --> 00:30:26,000

So far here, all three boxes are saying,

480

00:30:26,000 --> 00:30:28,000

hell yeah, I can lift that car.

481

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

But we've been here before.

482

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

All 40 of our suction cups were all like, totally easy, man.

483

00:30:33,000 --> 00:30:34,000

We can lift that car.

484

00:30:34,000 --> 00:30:35,000

And they totally couldn't.

485

00:30:35,000 --> 00:30:38,000

So even though the math says that these are working beautifully

486

00:30:38,000 --> 00:30:41,000

and they should lift the car,

487

00:30:41,000 --> 00:30:44,000

I still see many ways in which this could go south.

488

00:30:44,000 --> 00:30:50,000

Well, to find out, it's back to Treasure Island for some predictable preparation.

489

00:30:50,000 --> 00:30:52,000

Looks really nice.

490

00:30:52,000 --> 00:30:55,000

First, the guys position the steel cradle above the car.

491

00:30:55,000 --> 00:30:57,000

I think that looks good.

492

00:30:57,000 --> 00:30:59,000

It's right over the rear view mirror.

493

00:30:59,000 --> 00:31:01,000

Then they add the boxes to the trunk.

494

00:31:01,000 --> 00:31:02,000

A little more.

495

00:31:02,000 --> 00:31:03,000

Perfect.

496

00:31:03,000 --> 00:31:04,000

Roof.

497

00:31:04,000 --> 00:31:06,000

Yeah, that's tight.

498

00:31:06,000 --> 00:31:07,000

Add hood.

499

00:31:07,000 --> 00:31:08,000

Nice.

500

00:31:08,000 --> 00:31:11,000

Next, they secure the boxes to the cradle.

501

00:31:11,000 --> 00:31:13,000

I think we're good.

502

00:31:13,000 --> 00:31:15,000

With that, the guys bring in the crane.

503

00:31:15,000 --> 00:31:17,000

That's good.

504

00:31:17,000 --> 00:31:21,000

Before Adam adds the vital ingredient, the vacuum cleaner.

505

00:31:21,000 --> 00:31:25,000

It's time to bring the vacuum back into this equation.

506

00:31:25,000 --> 00:31:28,000

I think that's a lovely place for it, don't you?

507

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

The boxes are the crucial change to this test.

508

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

I think we're really close.

509

00:31:33,000 --> 00:31:37,000

But to help see if they're working, the guys have added pressure gauges

510

00:31:37,000 --> 00:31:41,000

to assess the suction before the crane starts to lift.

511

00:31:41,000 --> 00:31:43,000

So is this going to work?

512

00:31:43,000 --> 00:31:47,000

Well, our three boxes have a total surface area of 4,000 square inches.

513

00:31:47,000 --> 00:31:52,000

We've shown that the vacuum cleaner can lift 2.8 pounds with one square inch.

514

00:31:52,000 --> 00:31:57,000

Now, that gives us a total theoretical lifting capability of 11,000 pounds.

515

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

That's over four times the weight of our car.

516

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

But as we showed earlier, it may not all be just about the math.

517

00:32:04,000 --> 00:32:10,000

No, it's also about the rig, the seals, and that crumpling metal of the car.

518

00:32:10,000 --> 00:32:15,000

Starting the vacuum in three, two, one.

519

00:32:15,000 --> 00:32:19,000

But with the vacuum on, the news is good.

520

00:32:19,000 --> 00:32:20,000

It's climbing.

521

00:32:20,000 --> 00:32:21,000

It's climbing?

522

00:32:21,000 --> 00:32:22,000

Yeah.

523

00:32:22,000 --> 00:32:23,000

Yes!

524

00:32:23,000 --> 00:32:25,000

Oh, yeah, baby!

525

00:32:25,000 --> 00:32:29,000

All gauges show the boxes are sucking down with the vacuum pressure

526

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

greater than six inches of mercury.

527

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

And that means it's time to try to raise the roof.

528

00:32:36,000 --> 00:32:37,000

Let's do this.

529

00:32:37,000 --> 00:32:39,000

All right, let's take it up 18 inches.

530

00:32:39,000 --> 00:32:40,000

Okay.

531

00:32:40,000 --> 00:32:45,000

That was the hood popping.

532

00:32:45,000 --> 00:32:46,000

That's cool.

533

00:32:46,000 --> 00:32:48,000

We got pressure.

534

00:32:48,000 --> 00:32:52,000

It's a bumpy start, but as the crane takes up the slack...

535

00:32:52,000 --> 00:32:55,000

Come on, baby.

536

00:32:55,000 --> 00:32:58,000

Hold on to this car.

537

00:32:58,000 --> 00:33:00,000

The car does start to rise.

538

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

Yes, it's off the ground.

539

00:33:03,000 --> 00:33:06,000

This freaking car is off the ground!

540

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

Oh, man.

541

00:33:08,000 --> 00:33:12,000

That is freaking awesome!

542

00:33:12,000 --> 00:33:20,000

This is amazing.

543

00:33:20,000 --> 00:33:22,000

Oh, dude!

544

00:33:22,000 --> 00:33:26,000

We are lifting a car with nothing but a single vacuum.

545

00:33:26,000 --> 00:33:29,000

But the Mythbusters ain't going to leave it there.

546

00:33:29,000 --> 00:33:34,000

Dude, I hear squealing, but I say let this puppy squeal.

547

00:33:34,000 --> 00:33:36,000

He's going up whether he likes it or not.

548

00:33:36,000 --> 00:33:39,000

Because they're taking the car to the top.

549

00:33:39,000 --> 00:33:40,000

I know.

550

00:33:40,000 --> 00:33:42,000

This is freaking me out.

551

00:33:42,000 --> 00:33:45,000

Remember, the crane is lifting the steel cradle.

552

00:33:45,000 --> 00:33:48,000

Holy f***ing balls.

553

00:33:48,000 --> 00:33:49,000

There you go.

554

00:33:49,000 --> 00:33:51,000

That's about how we're feeling here.

555

00:33:51,000 --> 00:33:54,000

But it's the vacuum cleaner on its own.

556

00:33:54,000 --> 00:33:55,000

This is everybody's satisfying.

557

00:33:55,000 --> 00:33:57,000

This is how I was hoping it would be.

558

00:33:57,000 --> 00:33:59,000

That's sucking the cradle to the car.

559

00:33:59,000 --> 00:34:03,000

That is freaking awesome!

560

00:34:03,000 --> 00:34:06,000

And to prove just that, once the car is maxed out,

561

00:34:06,000 --> 00:34:09,000

Jamie's going to pull the plug on the cleaner,

562

00:34:09,000 --> 00:34:13,000

which should result in the car destruction this episode needs.

563

00:34:13,000 --> 00:34:19,000

Three, two, one.

564

00:34:19,000 --> 00:34:26,000

Oh!

565

00:34:26,000 --> 00:34:35,000

That was very satisfying.

566

00:34:35,000 --> 00:34:37,000

That was awesome.

567

00:34:37,000 --> 00:34:42,000

So, if anyone needs to lift a car with a vacuum, don't call us.

568

00:34:42,000 --> 00:34:43,000

We've done it once.

569

00:34:43,000 --> 00:34:45,000

We don't want to do it again.

570

00:34:45,000 --> 00:34:48,000

Yep, once the vacuum cleaner was switched off,

571

00:34:48,000 --> 00:34:51,000

gravity brought this myth back to earth.

572

00:34:51,000 --> 00:34:54,000

This time around, it was like clockwork.

573

00:34:54,000 --> 00:34:57,000

The boxes held, their seals held.

574

00:34:57,000 --> 00:35:00,000

The simple fact was that during the math,

575

00:35:00,000 --> 00:35:04,000

there was over 11,000 pounds of suction on that car.

576

00:35:04,000 --> 00:35:08,000

So, it was going up, at least until we pulled the plug.

577

00:35:08,000 --> 00:35:12,000

Something that you should know about me is that I love, love,

578

00:35:12,000 --> 00:35:14,000

love the car myths on Mythbusters.

579

00:35:14,000 --> 00:35:18,000

But this is my all-time favorite Mythbuster car myth.

580

00:35:18,000 --> 00:35:21,000

We actually lifted this thing with nothing but the power

581

00:35:21,000 --> 00:35:22,000

of a single vacuum cleaner.

582

00:35:22,000 --> 00:35:25,000

Next time someone tells you that Mythbusters sucks,

583

00:35:25,000 --> 00:35:27,000

tell them damn straight.

584

00:35:27,000 --> 00:35:29,000

That was beautiful. Nice work, sir.

585

00:35:29,000 --> 00:35:30,000

You too.

586

00:35:30,000 --> 00:35:31,000

Let's get out of here.

587

00:35:31,000 --> 00:35:34,000

Who would think a vacuum cleaner was hiding so much suction power?

588

00:35:34,000 --> 00:35:36,000

I know. Cool story.

589

00:35:36,000 --> 00:35:37,000

Thanks.

590

00:35:37,000 --> 00:35:43,000

Still to come.

591

00:35:43,000 --> 00:35:47,000

Pancake car gets cooked.

592

00:35:47,000 --> 00:35:51,000

Three, two, one.

593

00:35:51,000 --> 00:35:53,000

Whoa!

594

00:35:58,000 --> 00:36:03,000

After 14 years of car carnage, here's the destructive stats.

595

00:36:05,000 --> 00:36:11,000

Since 2002, the Mythbusters have destroyed almost 280 cars.

596

00:36:11,000 --> 00:36:14,000

This is why we can't have nice things.

597

00:36:14,000 --> 00:36:16,000

They've thrown 10 off of cliffs,

598

00:36:16,000 --> 00:36:20,000

crashed over 100,

599

00:36:20,000 --> 00:36:27,000

and made 48 go bye-bye with a boom.

600

00:36:27,000 --> 00:36:33,000

They've even reinvented the wheel not once.

601

00:36:33,000 --> 00:36:35,000

That actually corners fairly well.

602

00:36:35,000 --> 00:36:37,000

It does, but twice.

603

00:36:37,000 --> 00:36:41,000

Yeah! Yeah! That's it! Come on!

604

00:36:47,000 --> 00:36:54,000

Deep in the heart of the New Mexican desert,

605

00:36:54,000 --> 00:36:58,000

a dud of a car is about to get bombed.

606

00:36:58,000 --> 00:37:01,000

But will it go pancake flat?

607

00:37:01,000 --> 00:37:04,000

In our small-scale testing, we showed that a single piece of data sheet

608

00:37:04,000 --> 00:37:06,000

gave us the best result.

609

00:37:08,000 --> 00:37:10,000

I'm kind of liking this.

610

00:37:10,000 --> 00:37:12,000

Now, we're going to take a similar approach here,

611

00:37:12,000 --> 00:37:15,000

but instead of data sheet, we're going to be using Ampo.

612

00:37:15,000 --> 00:37:19,000

The reason we're using Ampo is it's actually better for performing this kind of task.

613

00:37:19,000 --> 00:37:23,000

It's a slower-moving explosive, and it pushes things better

614

00:37:23,000 --> 00:37:26,000

instead of breaking them apart, which is what we want.

615

00:37:26,000 --> 00:37:29,000

Ampo is definitely the best choice of a boom.

616

00:37:29,000 --> 00:37:34,000

And to accurately scale up, that is a lot of boom.

617

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

Jamie's using a thousand pounds of it.

618

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

Currently, Jamie is arranging 1,000 pounds of Ampo.

619

00:37:40,000 --> 00:37:44,000

That's 20 bags that weigh 50 pounds each on top of the trench plate.

620

00:37:44,000 --> 00:37:48,000

Now, the pattern that he's using is one that is invented

621

00:37:48,000 --> 00:37:53,000

so that the pulse from the explosion provides a totally universal push

622

00:37:53,000 --> 00:37:55,000

on that trench plate into the car.

623

00:37:55,000 --> 00:37:57,000

That's the theory.

624

00:37:57,000 --> 00:38:02,000

And with the last bag in place, this one-shot deal is ready to rumble.

625

00:38:02,000 --> 00:38:05,000

You know, those little bags of ketchup that you step on in the sidewalk,

626

00:38:05,000 --> 00:38:07,000

and they just go, pfft.

627

00:38:07,000 --> 00:38:10,000

That's what's going to happen here.

628

00:38:11,000 --> 00:38:15,000

Yep, it's going to be some kind of catastrophe.

629

00:38:15,000 --> 00:38:19,000

But to find out what kind, the guys head underground

630

00:38:19,000 --> 00:38:23,000

into a bomb-proof bunker, and then it's go time.

631

00:38:28,000 --> 00:38:31,000

Okay, this is pancake car.

632

00:38:31,000 --> 00:38:33,000

Full-scale test.

633

00:38:33,000 --> 00:38:39,000

Flattening a terrible car in five, four, three, two, one.

634

00:38:40,000 --> 00:38:42,000

Whoa!

635

00:38:42,000 --> 00:38:44,000

That was, uh...

636

00:38:44,000 --> 00:38:46,000

Whoo-hoo!

637

00:38:46,000 --> 00:38:48,000

That was very intense.

638

00:38:48,000 --> 00:38:49,000

That was energetic.

639

00:38:49,000 --> 00:38:50,000

Yeah.

640

00:38:50,000 --> 00:38:52,000

Oh, that's a piece of the frame.

641

00:38:52,000 --> 00:38:54,000

Wow, stuff is still falling.

642

00:38:54,000 --> 00:38:56,000

Whoo-hoo!

643

00:38:56,000 --> 00:39:00,000

Without doubt, the Anfo packed a serious punch,

644

00:39:00,000 --> 00:39:05,000

sending the three-ton steel gantry over 500 feet.

645

00:39:05,000 --> 00:39:10,000

Something that's worth seeing again, and again, and again.

646

00:39:15,000 --> 00:39:18,000

But amidst the final season spectacle,

647

00:39:18,000 --> 00:39:21,000

what's happened to the car?

648

00:39:26,000 --> 00:39:28,000

No way.

649

00:39:28,000 --> 00:39:30,000

I don't know.

650

00:39:30,000 --> 00:39:32,000

I don't know.

651

00:39:33,000 --> 00:39:36,000

No way.

652

00:39:36,000 --> 00:39:38,000

The car is gone.

653

00:39:38,000 --> 00:39:41,000

The car is gone, but that is the exact pattern

654

00:39:41,000 --> 00:39:43,000

in which you laid out the Anfo.

655

00:39:43,000 --> 00:39:44,000

Yeah.

656

00:39:44,000 --> 00:39:48,000

So it went through the top plate, through the car,

657

00:39:48,000 --> 00:39:51,000

and made a car-sized dent in the bottom.

658

00:39:51,000 --> 00:39:54,000

Well, I guess it's back to the drawing there.

659

00:39:56,000 --> 00:39:59,000

You knocked yourself out, champ.

660

00:40:00,000 --> 00:40:04,000

So we rushed up to Ground Zero hoping to find a pancake car,

661

00:40:04,000 --> 00:40:08,000

and instead found no car whatsoever.

662

00:40:08,000 --> 00:40:11,000

What seems to have happened is when we pushed the button,

663

00:40:11,000 --> 00:40:15,000

the Anfo didn't cleanly push our steel plate down and into the car.

664

00:40:15,000 --> 00:40:18,000

It punched a perfect hole through that steel plate,

665

00:40:18,000 --> 00:40:20,000

sending chunks flying hundreds of feet,

666

00:40:20,000 --> 00:40:22,000

and effectively vaporizing the car.

667

00:40:22,000 --> 00:40:26,000

The one thing it did not do was flatten the car.

668

00:40:26,000 --> 00:40:27,000

Yep.

669

00:40:27,000 --> 00:40:30,000

Instead of being a flat piece of furniture,

670

00:40:30,000 --> 00:40:33,000

the car was blown to kingdom come,

671

00:40:33,000 --> 00:40:36,000

ripped apart by the immense blast pressure

672

00:40:36,000 --> 00:40:38,000

and the top steel plate,

673

00:40:38,000 --> 00:40:41,000

which itself turned to lethal shrapnel.

674

00:40:43,000 --> 00:40:48,000

So much so that their U-Go wasn't the only car that took a hit.

675

00:40:48,000 --> 00:40:50,000

This is one of our rental cars,

676

00:40:50,000 --> 00:40:52,000

and it was parked behind our bunker,

677

00:40:52,000 --> 00:40:55,000

which is under a mountain of dirt.

678

00:40:55,000 --> 00:41:01,000

And the shockwave was enough to crack this windshield just from that.

679

00:41:01,000 --> 00:41:03,000

It was too much.

680

00:41:03,000 --> 00:41:06,000

This window, however, was not broken by a shockwave.

681

00:41:06,000 --> 00:41:08,000

It was broken by shrapnel.

682

00:41:08,000 --> 00:41:14,000

Specifically this 40-pound piece of inch-and-a-half thick steel,

683

00:41:14,000 --> 00:41:20,000

which flew probably 750, 800 feet to get here and cause this destruction.

684

00:41:25,000 --> 00:41:27,000

Clearly there's carnage inside and out,

685

00:41:27,000 --> 00:41:31,000

as the power of the boom took everyone by surprise.

686

00:41:31,000 --> 00:41:35,000

So how does that leave Jamie's car destruction dossier?

687

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

Now we could have used a thicker plate, let's say a 12-inch thick one,

688

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

but here's the thing, a plate that size is going to weigh 84,000 pounds.

689

00:41:46,000 --> 00:41:49,000

Just dropping that in the car by itself would crush the car really nicely,

690

00:41:49,000 --> 00:41:51,000

but that's not the point.

691

00:41:51,000 --> 00:41:54,000

The point was to do it with explosives.

692

00:41:54,000 --> 00:41:57,000

Now if somewhere out there there might be the right combination of steel thickness

693

00:41:57,000 --> 00:42:00,000

and quantity of explosives that would do it right,

694

00:42:00,000 --> 00:42:04,000

but at this point our best guess just didn't work at all.

695

00:42:10,000 --> 00:42:16,000

Well I tell you what, this is without a doubt the most impressive piece of shrapnel we've ever made.

696

00:42:16,000 --> 00:42:18,000

Yep, and to boot, we never have to look at that car again.

697

00:42:18,000 --> 00:42:20,000

It is done.

698

00:42:20,000 --> 00:42:22,000

Yeah, let's get out of here.