

1

00:00:00,000 --> 00:00:10,880

MUSIC

2

00:00:10,880 --> 00:00:12,880

We're starting without you, Jamie.

3

00:00:12,880 --> 00:00:13,880

TOWER

4

00:01:12,880 --> 00:01:14,880

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

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00:01:14,880 --> 00:01:18,880

The goal of this episode is for you and I to destroy two cars

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00:01:18,880 --> 00:01:21,880

in a way that we've never done before.

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00:01:36,880 --> 00:01:37,880

So what's your pick?

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00:01:37,880 --> 00:01:39,880

There is a story that's been on our list for a long time.

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00:01:39,880 --> 00:01:41,880

I've always wanted to test it.

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00:01:41,880 --> 00:01:44,880

The myth is that a standard household vacuum cleaner

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00:01:44,880 --> 00:01:47,880

has enough suction to lift a car.

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00:01:47,880 --> 00:01:49,880

Come on, baby!

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00:01:49,880 --> 00:01:52,880

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

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00:01:52,880 --> 00:01:54,880

What are you going to do?

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00:01:54,880 --> 00:01:56,880

Well, you know, I've always wanted to do something

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00:01:56,880 --> 00:01:59,880

that I call pancaking a car.

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00:01:59,880 --> 00:02:03,880

It involves using explosives to perfectly flatten a car.

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00:02:03,880 --> 00:02:06,880

So using the power of explosives to do work

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00:02:06,880 --> 00:02:08,880

rather than just gratuitously.

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00:02:08,880 --> 00:02:10,880

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

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00:02:10,880 --> 00:02:12,880

Have at it!

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00:02:40,880 --> 00:02:45,880

Jamie's starting his story in scale, but not with this.

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00:02:45,880 --> 00:02:48,880

So if we're gonna do a scaled-down attempt at crushing a car,

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00:02:48,880 --> 00:02:50,880

we could use a nice little model like this one.

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00:02:50,880 --> 00:02:53,880

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

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00:02:53,880 --> 00:02:56,880

The problem is, if you measure the thinnest parts of it,

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00:02:56,880 --> 00:02:59,880

you get about a 1-16th of an inch.

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00:02:59,880 --> 00:03:03,880

And 1-12th scale, 1-16th of an inch times 12,

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00:03:03,880 --> 00:03:05,880

you get 3-quarters of an inch.

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00:03:05,880 --> 00:03:07,880

I don't know any passenger vehicles that have

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00:03:07,880 --> 00:03:09,880

3-quarter inch thick steel walls on them.

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00:03:09,880 --> 00:03:13,880

So what we're gonna do instead is use something like this can here,

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00:03:13,880 --> 00:03:15,880

which has very thin sheet steel,

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00:03:15,880 --> 00:03:18,880

and we'll make something that may not look as good,

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00:03:18,880 --> 00:03:20,880

but it'll crush a lot more realistically.

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00:03:20,880 --> 00:03:25,880

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

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00:03:25,880 --> 00:03:26,880

I think that's great.

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00:03:26,880 --> 00:03:29,880

But Jamie's always preferred a more practical approach,

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00:03:29,880 --> 00:03:32,880

where substance surpasses style.

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00:03:32,880 --> 00:03:34,880

This is actually working.

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00:03:34,880 --> 00:03:38,880

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

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00:03:38,880 --> 00:03:39,880

Sure.

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00:03:39,880 --> 00:03:42,880

...and steel piping for the wheels and engine,

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00:03:42,880 --> 00:03:47,880

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

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00:03:47,880 --> 00:03:48,880

Well, there you have it.

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00:03:48,880 --> 00:03:51,880

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

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00:03:51,880 --> 00:03:54,880

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

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00:03:54,880 --> 00:03:57,880

Now, all of these things will crush differently.

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00:03:57,880 --> 00:04:00,880

The sheet metal being the weakest, the wheels being next,

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00:04:00,880 --> 00:04:02,880

and then the engine block being the sturdiest.

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00:04:02,880 --> 00:04:06,880

Hopefully, we'll be able to overcome the differences in those things

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00:04:06,880 --> 00:04:09,880

and still end up with a flat thing.

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00:04:13,880 --> 00:04:18,880

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

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00:04:19,880 --> 00:04:24,880

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

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00:04:24,880 --> 00:04:28,880

It is the most important location in Mythbusters history.

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00:04:29,880 --> 00:04:35,880

I've spent literal months on this location

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00:04:35,880 --> 00:04:37,880

when you tally up all the location days.

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00:04:37,880 --> 00:04:41,880

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

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00:04:41,880 --> 00:04:43,880

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

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00:04:43,880 --> 00:04:47,880

And so it's fitting that our last explosion, our last experiment here,

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00:04:47,880 --> 00:04:52,880

should be Jamie's choice to do work with explosives instead of just distracting.

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00:04:52,880 --> 00:04:56,880

And to do just that,

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00:04:56,880 --> 00:04:58,880

time to level out our work area.

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00:04:58,880 --> 00:05:02,880

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

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00:05:02,880 --> 00:05:06,880

Look at him, a man in his element.

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00:05:06,880 --> 00:05:09,880

He's building a kind of car sandwich.

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00:05:09,880 --> 00:05:15,880

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

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00:05:15,880 --> 00:05:18,880

But what's the next ingredient?

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00:05:18,880 --> 00:05:20,880

This is next. It's called data sheet.

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00:05:20,880 --> 00:05:23,880

It's a high explosive in sheet form.

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00:05:23,880 --> 00:05:26,880

We put this on top of our steel plate.

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00:05:26,880 --> 00:05:28,880

Okay, that ought to work.

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00:05:28,880 --> 00:05:29,880

And it goes kaboom.

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00:05:29,880 --> 00:05:32,880

Yep, by adding a four-mil layer of data sheet,

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00:05:32,880 --> 00:05:38,880

Jamie's hoping to force the upper steel plate down to completely crush his scale car.

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00:05:39,880 --> 00:05:46,880

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

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00:05:46,880 --> 00:05:48,880

Here we go.

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00:05:50,880 --> 00:05:57,880

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

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00:05:58,880 --> 00:06:01,880

Yeah, that's aggressive.

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00:06:01,880 --> 00:06:03,880

That's got a real ring to it.

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00:06:03,880 --> 00:06:06,880

I felt the walls of this thing vibrate.

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00:06:06,880 --> 00:06:08,880

Yeah, let's go check it out.

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00:06:10,880 --> 00:06:13,880

The data sheet sure packed a punch,

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00:06:13,880 --> 00:06:16,880

but has it created a small-scale crush?

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00:06:16,880 --> 00:06:20,880

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

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00:06:22,880 --> 00:06:25,880

That's like one of the wheels right there.

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00:06:25,880 --> 00:06:27,880

And...

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00:06:27,880 --> 00:06:28,880

That's the engine.

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00:06:28,880 --> 00:06:29,880

The engine.

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00:06:29,880 --> 00:06:33,880

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

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00:06:33,880 --> 00:06:38,880

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

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00:06:39,880 --> 00:06:45,880

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

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00:06:45,880 --> 00:06:49,880

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

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00:06:49,880 --> 00:06:52,880

Jamie came here with a goal to flatten the car.

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00:06:52,880 --> 00:06:55,880

And for my money, it looks like he achieved it on the very first try,

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00:06:55,880 --> 00:06:59,880

but he's here at the bomb range, he's got a bunch of analogs.

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00:06:59,880 --> 00:07:02,880

My guess is, I don't know, maybe he's going to start stacking them

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00:07:02,880 --> 00:07:06,880

and trying to see optimal relationships between weight and explosives.

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00:07:06,880 --> 00:07:08,880

Or maybe we're all just going to go home.

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00:07:08,880 --> 00:07:11,880

I'm actually not sure at this point.

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00:07:11,880 --> 00:07:13,880

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

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00:07:13,880 --> 00:07:14,880

Oh, come on!

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00:07:14,880 --> 00:07:20,880

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

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00:07:20,880 --> 00:07:25,880

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

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00:07:25,880 --> 00:07:30,880

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

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00:07:31,880 --> 00:07:34,880

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

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00:07:34,880 --> 00:07:37,880

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

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00:07:37,880 --> 00:07:44,880

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

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00:07:44,880 --> 00:07:47,880

It's a nice little bit of symmetry in this episode,

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00:07:47,880 --> 00:07:51,880

and you're happy trying to make a car as low into the ground as possible and in my house?

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00:07:51,880 --> 00:07:53,880

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

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00:07:53,880 --> 00:07:54,880

Exactly.

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00:07:54,880 --> 00:07:55,880

With a vacuum.

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00:07:55,880 --> 00:07:58,880

Yes. Now, I figure that the trick to this is to make the mother of all attachments

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00:07:58,880 --> 00:08:01,880

to increase the surface area of the vacuum cleaner's input

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00:08:01,880 --> 00:08:04,880

so that the amount of such an eye create exceeds the weight of the car,

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00:08:04,880 --> 00:08:06,880

and thus I can get it off the ground.

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00:08:06,880 --> 00:08:11,880

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

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00:08:11,880 --> 00:08:12,880

Indeed it does.

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00:08:14,880 --> 00:08:22,880

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

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00:08:22,880 --> 00:08:27,880

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

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00:08:27,880 --> 00:08:28,880

I got bit.

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00:08:28,880 --> 00:08:29,880

You guys are suck-believing.

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00:08:29,880 --> 00:08:34,880

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

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00:08:34,880 --> 00:08:36,880

Get out!

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00:08:38,880 --> 00:08:44,880

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

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00:08:44,880 --> 00:08:49,880

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

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00:08:49,880 --> 00:08:53,880

which eventually it does.

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00:08:53,880 --> 00:08:57,880

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

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00:08:57,880 --> 00:08:58,880

It is.

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00:08:58,880 --> 00:09:03,880

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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00:09:03,880 --> 00:09:07,880

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

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00:09:07,880 --> 00:09:13,880

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

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00:09:13,880 --> 00:09:17,880

So how are we going to lift a car that weighs 2600 pounds?

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00:09:17,880 --> 00:09:19,880

Well, all you need is more square inches.

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00:09:19,880 --> 00:09:25,880

In fact, if we have up to about a thousand square inches of suction area on the car,

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00:09:25,880 --> 00:09:28,880

we should be able to lift it, in theory.

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00:09:29,880 --> 00:09:36,880

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

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00:09:36,880 --> 00:09:39,880

meaning if one square inch can lift 2.8 pounds,

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00:09:39,880 --> 00:09:46,880

a single vacuum with a 1000 square inch footprint should be able to lift a car.

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00:09:46,880 --> 00:09:52,880

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

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00:09:52,880 --> 00:09:56,880

by building a larger than life vacuum attachment.

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00:09:56,880 --> 00:09:58,880

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

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00:09:58,880 --> 00:10:03,880

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

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00:10:03,880 --> 00:10:04,880

I hope that works.

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00:10:05,880 --> 00:10:10,880

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

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00:10:10,880 --> 00:10:11,880

There we go.

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00:10:11,880 --> 00:10:15,880

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

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00:10:15,880 --> 00:10:16,880

I'll do it.

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00:10:17,880 --> 00:10:19,880

The question is, will it work?

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00:10:20,880 --> 00:10:22,880

All right, so here is a proof of concept.

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00:10:22,880 --> 00:10:25,880

This is the PVC pipe cap that we put a gasket on,

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00:10:25,880 --> 00:10:28,880

and here is the hose through which we'll be pulling our vacuum.

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00:10:28,880 --> 00:10:33,880

Ah, the vacuum here is the household vacuum that we are going to use

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00:10:33,880 --> 00:10:35,880

in order to adapt from this to this.

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00:10:35,880 --> 00:10:40,880

Janie has built a manifold, so the manifold is going to go in there,

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00:10:40,880 --> 00:10:47,880

and then that goes in there, and I've got a 50 pound weight to try and lift.

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00:10:50,880 --> 00:10:51,880

Let's see if this works.

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00:10:53,880 --> 00:10:54,880

Hey!

160

00:10:56,880 --> 00:10:57,880

Nice!

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00:10:58,880 --> 00:11:02,880

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

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00:11:02,880 --> 00:11:03,880

That's a lot of force.

163

00:11:03,880 --> 00:11:04,880

You'll feel it.

164

00:11:04,880 --> 00:11:09,880

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

165

00:11:09,880 --> 00:11:10,880

That is awesome!

166

00:11:11,880 --> 00:11:13,880

At least until they pull the plug.

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00:11:17,880 --> 00:11:18,880

So what's next?

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00:11:18,880 --> 00:11:22,880

So, Jamie and I did a proof of concept 8 inch PVC cup,

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00:11:22,880 --> 00:11:26,880

and it works so well, this is going to be our method for lifting the car.

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00:11:26,880 --> 00:11:27,880

Why reinvent the wheel?

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00:11:27,880 --> 00:11:29,880

So graphics, help me out.

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00:11:29,880 --> 00:11:31,880

First up, give me a car.

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00:11:31,880 --> 00:11:35,880

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

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00:11:35,880 --> 00:11:38,880

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

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00:11:38,880 --> 00:11:42,880

From each one, we'll come a tube that will join to a kind of mega manifold

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00:11:42,880 --> 00:11:44,880

that will be attached directly to our single vacuum cleaner.

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00:11:44,880 --> 00:11:47,880

Also from each cup will be a piece of threaded steel rod

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00:11:47,880 --> 00:11:50,880

that will link to a support structure will hang above it.

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00:11:50,880 --> 00:11:53,880

We'll turn the vacuum on, then we'll lift up the steel structure with the crane,

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00:11:53,880 --> 00:11:57,880

and either the car will lift up or pop, pop, pop, pop, pop.

181

00:11:57,880 --> 00:12:01,880

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

182

00:12:01,880 --> 00:12:04,880

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

183

00:12:04,880 --> 00:12:06,880

Get it? Ain't gonna suck?

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00:12:08,880 --> 00:12:10,880

Coming up, pancake car goes large.

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00:12:11,880 --> 00:12:15,880

And car lift goes bad.

186

00:12:15,880 --> 00:12:17,880

Rats, rats, rats.

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00:12:28,880 --> 00:12:33,880

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

188

00:12:35,880 --> 00:12:39,880

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

189

00:12:39,880 --> 00:12:41,880

What can you say?

190

00:12:43,880 --> 00:12:48,880

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

191

00:12:50,880 --> 00:12:53,880

But after a stellar small-scale start...

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00:12:55,880 --> 00:12:57,880

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

193

00:12:57,880 --> 00:13:00,880

Jamie's not ramping up right away.

194

00:13:00,880 --> 00:13:02,880

A little speechless.

195

00:13:02,880 --> 00:13:07,880

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

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00:13:10,880 --> 00:13:14,880

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

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00:13:14,880 --> 00:13:19,880

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

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00:13:19,880 --> 00:13:23,880

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

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00:13:23,880 --> 00:13:27,880

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

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00:13:27,880 --> 00:13:29,880

Looks good to me.

201

00:13:29,880 --> 00:13:33,880

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

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00:13:33,880 --> 00:13:36,880

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

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00:13:36,880 --> 00:13:39,880

But there's an added risk to this test.

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00:13:40,880 --> 00:13:45,880

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

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00:13:45,880 --> 00:13:47,880

Hopefully straight up.

206

00:13:51,880 --> 00:13:53,880

Okay, three plates of steel on top.

207

00:13:53,880 --> 00:13:58,880

And three, two, one.

208

00:13:59,880 --> 00:14:01,880

Whoa!

209

00:14:02,880 --> 00:14:05,880

I don't think they've landed yet.

210

00:14:11,880 --> 00:14:13,880

There, one of them just landed.

211

00:14:13,880 --> 00:14:14,880

Oh my gosh.

212

00:14:14,880 --> 00:14:16,880

It landed up on the hill there.

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00:14:21,880 --> 00:14:24,880

With all the steel safely returned to earth,

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00:14:24,880 --> 00:14:28,880

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

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00:14:28,880 --> 00:14:31,880

But isn't what the Heinemann had hoped for.

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00:14:31,880 --> 00:14:33,880

That right there is the engine.

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00:14:33,880 --> 00:14:39,880

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

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00:14:39,880 --> 00:14:43,880

And now it's not just been flattened, it's been melted.

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00:14:43,880 --> 00:14:46,880

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

220

00:14:46,880 --> 00:14:48,880

It's almost like it burned it.

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00:14:48,880 --> 00:14:53,880

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

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00:14:53,880 --> 00:14:58,880

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

223

00:15:01,880 --> 00:15:05,880

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

224

00:15:05,880 --> 00:15:06,880

Cool.

225

00:15:07,880 --> 00:15:12,880

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

226

00:15:12,880 --> 00:15:15,880

to pancake it in both directions.

227

00:15:15,880 --> 00:15:16,880

Oh yeah, that's perfect.

228

00:15:16,880 --> 00:15:18,880

Okay, going for the glory.

229

00:15:18,880 --> 00:15:22,880

Double-sided shot in three, two, one.

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00:15:23,880 --> 00:15:25,880

Whoa!

231

00:15:29,880 --> 00:15:31,880

Whoa is right.

232

00:15:32,880 --> 00:15:38,880

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

233

00:15:38,880 --> 00:15:44,880

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

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00:15:47,880 --> 00:15:49,880

So, what's next?

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00:15:50,880 --> 00:15:54,880

Well, sometimes simpler is better, and the very first shot that we did was the simplest.

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00:15:54,880 --> 00:15:59,880

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

237

00:15:59,880 --> 00:16:05,880

And the way I see it, we can run the test again, and we put a little more explosives on the top.

238

00:16:05,880 --> 00:16:09,880

We should get a little bit more crush. Maybe.

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00:16:09,880 --> 00:16:15,880

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

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00:16:15,880 --> 00:16:16,880

How's that look?

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00:16:16,880 --> 00:16:20,880

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

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00:16:20,880 --> 00:16:23,880

Six mil on top of the plate.

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00:16:23,880 --> 00:16:27,880

In three, two, one.

244

00:16:28,880 --> 00:16:29,880

Yeah!

245

00:16:33,880 --> 00:16:35,880

Let's go see what we got.

246

00:16:37,880 --> 00:16:39,880

It's the biggest thud of the day.

247

00:16:42,880 --> 00:16:43,880

But did it work?

248

00:16:47,880 --> 00:16:51,880

I'm kind of liking this.

249

00:16:51,880 --> 00:16:56,880

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

250

00:16:56,880 --> 00:17:04,880

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

251

00:17:04,880 --> 00:17:10,880

It's kind of fused that to the rest of the body, so I think it's going to work.

252

00:17:11,880 --> 00:17:19,880

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

253

00:17:19,880 --> 00:17:25,880

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

254

00:17:25,880 --> 00:17:28,880

Well, that was fun. Have you got all the information you need?

255

00:17:28,880 --> 00:17:30,880

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

256

00:17:30,880 --> 00:17:31,880

Let's go to the big time.

257

00:17:31,880 --> 00:17:34,880

What could possibly go wrong?

258

00:17:35,880 --> 00:17:47,880

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

259

00:17:47,880 --> 00:17:49,880

That ought to work nicely.

260

00:17:49,880 --> 00:17:58,880

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

261

00:17:58,880 --> 00:18:03,880

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

262

00:18:04,880 --> 00:18:08,880

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

263

00:18:11,880 --> 00:18:12,880

Broke it.

264

00:18:12,880 --> 00:18:15,880

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

265

00:18:15,880 --> 00:18:16,880

Nice.

266

00:18:18,880 --> 00:18:23,880

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

267

00:18:23,880 --> 00:18:26,880

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

268

00:18:26,880 --> 00:18:27,880

We have done many myths out here.

269

00:18:27,880 --> 00:18:29,880

We've jumped off of buildings.

270

00:18:30,880 --> 00:18:32,880

We've driven through glass.

271

00:18:32,880 --> 00:18:35,880

Oh, it's about to happen. Yeah!

272

00:18:35,880 --> 00:18:39,880

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

273

00:18:39,880 --> 00:18:40,880

Yeehaw!

274

00:18:40,880 --> 00:18:46,880

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.

275

00:18:48,880 --> 00:18:52,880

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

276

00:18:52,880 --> 00:18:54,880

This is going to take a while.

277

00:18:54,880 --> 00:18:55,880

Step one.

278

00:18:55,880 --> 00:18:56,880

One down.

279

00:18:56,880 --> 00:19:00,880

Is for Adam to attach the 40 suction cups to the steel frame.

280

00:19:01,880 --> 00:19:04,880

Yeah, like that. That's going to be great.

281

00:19:04,880 --> 00:19:07,880

Then they secure the vacuum cleaner itself.

282

00:19:07,880 --> 00:19:08,880

That's what you had in mind?

283

00:19:08,880 --> 00:19:09,880

Yeah, something like that.

284

00:19:09,880 --> 00:19:13,880

Before wiring in 400 feet of hosing.

285

00:19:15,880 --> 00:19:17,880

It's spaghetti, man.

286

00:19:17,880 --> 00:19:20,880

Next comes the midpoint recap.

287

00:19:20,880 --> 00:19:25,880

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

288

00:19:25,880 --> 00:19:28,880

It starts out by distributing it's suck through this hose.

289

00:19:28,880 --> 00:19:30,880

Which connects to this manifold.

290

00:19:30,880 --> 00:19:35,880

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

291

00:19:35,880 --> 00:19:38,880

hopefully distributing enough vacuum power to lift our car.

292

00:19:38,880 --> 00:19:41,880

What could possibly go wrong?

293

00:19:41,880 --> 00:19:44,880

Next, the guys bring in their 2600 pound car.

294

00:19:44,880 --> 00:19:48,880

Never has Mythbusters attempted to suck so hard.

295

00:19:48,880 --> 00:19:51,880

And lower the suction cup system directly on top.

296

00:19:51,880 --> 00:19:54,880

Can we have some dramatic music, please?

297

00:19:55,880 --> 00:20:00,880

Music

298

00:20:00,880 --> 00:20:03,880

It was much better, thank you.

299

00:20:03,880 --> 00:20:05,880

Yeah, a little bit more.

300

00:20:05,880 --> 00:20:07,880

Stop.

301

00:20:07,880 --> 00:20:11,880

Last but not least is the crane.

302

00:20:11,880 --> 00:20:13,880

And then, it's go time.

303

00:20:13,880 --> 00:20:17,880

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

304

00:20:17,880 --> 00:20:18,880

There we go.

305

00:20:18,880 --> 00:20:22,880

Alright, let's get them all sucked down.

306

00:20:22,880 --> 00:20:26,880

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

307

00:20:26,880 --> 00:20:28,880

Rips all good.

308

00:20:28,880 --> 00:20:29,880

Trunks good.

309

00:20:29,880 --> 00:20:32,880

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

310

00:20:32,880 --> 00:20:35,880

Gently up, let's go.

311

00:20:35,880 --> 00:20:38,880

Hehehehehehehe.

312

00:20:38,880 --> 00:20:40,880

Come on, baby.

313

00:20:40,880 --> 00:20:43,880

Come on. Come on. Come on.

314

00:20:43,880 --> 00:20:47,880

Music

315

00:20:47,880 --> 00:20:49,880

Ahhhh!

316

00:20:49,880 --> 00:20:51,880

Rats! Rats! Rats!

317

00:20:51,880 --> 00:20:53,880

So near yet so far.

318

00:20:53,880 --> 00:20:59,880

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

319

00:20:59,880 --> 00:21:01,880

And Adam knows why.

320

00:21:01,880 --> 00:21:07,880

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.

321

00:21:07,880 --> 00:21:11,880

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

322

00:21:11,880 --> 00:21:16,880

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

323

00:21:16,880 --> 00:21:20,880

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

324

00:21:20,880 --> 00:21:22,880

We're going to keep going.

325

00:21:22,880 --> 00:21:23,880

Still to come.

326

00:21:23,880 --> 00:21:24,880

Car lift.

327

00:21:24,880 --> 00:21:25,880

Come on, baby.

328

00:21:25,880 --> 00:21:27,880

Goes from bad to worse.

329

00:21:27,880 --> 00:21:28,880

Oh!

330

00:21:28,880 --> 00:21:29,880

This is good.

331

00:21:29,880 --> 00:21:31,880

The hood is boning us.

332

00:21:31,880 --> 00:21:33,880

And pancake car goes.

333

00:21:33,880 --> 00:21:42,880

Music

334

00:21:42,880 --> 00:21:47,880

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

335

00:21:47,880 --> 00:21:48,880

Hehehehehe.

336

00:21:48,880 --> 00:21:52,880

Adam and Jamie have created a 40 suction cup contraption.

337

00:21:52,880 --> 00:21:53,880

Come on.

338

00:21:53,880 --> 00:21:55,880

Ahhhhhh!

339

00:21:55,880 --> 00:21:58,880

Which completely failed to fly.

340

00:21:58,880 --> 00:22:00,880

Rats! Rats! Rats!

341

00:22:02,880 --> 00:22:06,880

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

342

00:22:06,880 --> 00:22:09,880

Okay, so 4 across this part of the hood.

343

00:22:09,880 --> 00:22:13,880

To hopefully give them a better seal and more lift.

344

00:22:14,880 --> 00:22:17,880

Moment of truth again. Let's do it.

345

00:22:17,880 --> 00:22:20,880

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

346

00:22:22,880 --> 00:22:23,880

Looking good.

347

00:22:23,880 --> 00:22:25,880

Come on, baby.

348

00:22:25,880 --> 00:22:29,880

Music

349

00:22:29,880 --> 00:22:31,880

The hood is boning us.

350

00:22:31,880 --> 00:22:32,880

Music

351

00:22:32,880 --> 00:22:37,880

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

352

00:22:37,880 --> 00:22:40,880

And that movement causes the cups to break their seal.

353

00:22:40,880 --> 00:22:43,880

But the guys have a planned scene.

354

00:22:44,880 --> 00:22:46,880

Alright, here's the problem.

355

00:22:46,880 --> 00:22:50,880

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

356

00:22:50,880 --> 00:22:55,880

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

357

00:22:55,880 --> 00:23:00,880

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

358

00:23:00,880 --> 00:23:02,880

Wait a minute, I hear you saying.

359

00:23:02,880 --> 00:23:04,880

That's cheating. You're changing the structure of the car.

360

00:23:04,880 --> 00:23:10,880

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

361

00:23:10,880 --> 00:23:12,880

And that is still the myth we're testing.

362

00:23:12,880 --> 00:23:14,880

We're just adding a little bit of structure.

363

00:23:14,880 --> 00:23:16,880

So it's out with the old...

364

00:23:16,880 --> 00:23:18,880

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

365

00:23:18,880 --> 00:23:20,880

And in with the new...

366

00:23:24,880 --> 00:23:28,880

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

367

00:23:28,880 --> 00:23:30,880

Not how to do it.

368

00:23:31,880 --> 00:23:34,880

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

369

00:23:34,880 --> 00:23:37,880

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

370

00:23:37,880 --> 00:23:42,880

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

371

00:23:42,880 --> 00:23:45,880

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

372

00:23:45,880 --> 00:23:47,880

That's a lot.

373

00:23:47,880 --> 00:23:51,880

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

374

00:23:51,880 --> 00:23:52,880

Dude, you ready?

375

00:23:52,880 --> 00:23:53,880

Yeah.

376

00:23:53,880 --> 00:23:55,880

How many tries have we had at this?

377

00:23:55,880 --> 00:23:57,880

I don't know, I lost count.

378

00:23:57,880 --> 00:23:59,880

Yeah, me too. Alright, let's take it up.

379

00:23:59,880 --> 00:24:00,880

Okay.

380

00:24:02,880 --> 00:24:07,880

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

381

00:24:07,880 --> 00:24:09,880

Come on, baby.

382

00:24:10,880 --> 00:24:12,880

Come on, baby.

383

00:24:13,880 --> 00:24:16,880

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

384

00:24:17,880 --> 00:24:18,880

There it comes.

385

00:24:18,880 --> 00:24:21,880

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

386

00:24:22,880 --> 00:24:23,880

Come on, baby.

387

00:24:23,880 --> 00:24:25,880

Come on, yes!

388

00:24:25,880 --> 00:24:26,880

Ah!

389

00:24:26,880 --> 00:24:28,880

What, what, what, what, what?

390

00:24:28,880 --> 00:24:30,880

Rocker comfort.

391

00:24:30,880 --> 00:24:31,880

It was an inch.

392

00:24:31,880 --> 00:24:32,880

It was an inch?

393

00:24:32,880 --> 00:24:33,880

On the front wheel.

394

00:24:33,880 --> 00:24:35,880

On the front wheel, before failure.

395

00:24:35,880 --> 00:24:38,880

Yes, yes, yes.

396

00:24:38,880 --> 00:24:39,880

I'm calling it.

397

00:24:39,880 --> 00:24:42,880

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

398

00:24:42,880 --> 00:24:43,880

One inch.

399

00:24:43,880 --> 00:24:44,880

Yeah.

400

00:24:44,880 --> 00:24:45,880

Okay.

401

00:24:45,880 --> 00:24:47,880

Maybe not stably, but yeah.

402

00:24:47,880 --> 00:24:48,880

Come on, yes!

403

00:24:48,880 --> 00:24:50,880

Ah!

404

00:24:50,880 --> 00:24:54,880

Our last attempt with the octopus was the one that Jamie and I felt strongest

405

00:24:54,880 --> 00:24:56,880

had the highest chance for success.

406

00:24:56,880 --> 00:25:00,880

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

407

00:25:00,880 --> 00:25:02,880

In theory, it's possible.

408

00:25:02,880 --> 00:25:07,880

In practice, it turns out that it's not going to be a success.

409

00:25:07,880 --> 00:25:10,880

It turned out not to be possible.

410

00:25:11,880 --> 00:25:12,880

Nope.

411

00:25:12,880 --> 00:25:14,880

I think that the octopus is dead.

412

00:25:14,880 --> 00:25:17,880

We have proven that this cannot work.

413

00:25:17,880 --> 00:25:20,880

We need to implement some other solution to distribute the vacuum's power

414

00:25:20,880 --> 00:25:21,880

and lift this car.

415

00:25:22,880 --> 00:25:25,880

After some spectacular small scale tests.

416

00:25:31,880 --> 00:25:34,880

Pancake car is going super sized.

417

00:25:38,880 --> 00:25:41,880

Absolutely beautiful.

418

00:25:43,880 --> 00:25:47,880

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

419

00:25:47,880 --> 00:25:49,880

I mean, a lot.

420

00:25:49,880 --> 00:25:51,880

And that's where this place comes in.

421

00:25:51,880 --> 00:25:54,880

I'm standing up on the mountain at New Mexico Tech,

422

00:25:54,880 --> 00:25:57,880

one of our all time favorite Mythbuster partnerships.

423

00:25:57,880 --> 00:25:59,880

They have everything we need.

424

00:25:59,880 --> 00:26:02,880

This is our pancake car, one stop shop.

425

00:26:03,880 --> 00:26:06,880

When it comes to spectacular destruction,

426

00:26:07,880 --> 00:26:09,880

NMT is second to none.

427

00:26:10,880 --> 00:26:14,880

In three, two, one.

428

00:26:18,880 --> 00:26:21,880

But to see if explosives can crush a car,

429

00:26:22,880 --> 00:26:25,880

Jamie's got his wheels ready to go.

430

00:26:26,880 --> 00:26:28,880

This is the car we're going to use.

431

00:26:28,880 --> 00:26:31,880

Now, normally I appreciate and respect Russian engineering

432

00:26:31,880 --> 00:26:34,880

because it tends to be simple, rugged and dependable.

433

00:26:34,880 --> 00:26:37,880

This is not an example of that kind of engineering.

434

00:26:37,880 --> 00:26:40,880

Quite possibly one of the worst cars ever manufactured.

435

00:26:40,880 --> 00:26:43,880

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

436

00:26:43,880 --> 00:26:46,880

that I removed this car permanently from the road.

437

00:26:47,880 --> 00:26:51,880

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

438

00:26:53,880 --> 00:26:55,880

All it lacks is a Mythbuster's paint job.

439

00:26:58,880 --> 00:27:00,880

Look, I recognize it's not pretty,

440

00:27:00,880 --> 00:27:03,880

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

441

00:27:05,880 --> 00:27:08,880

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

442

00:27:08,880 --> 00:27:11,880

just like we did in our small scale experiments.

443

00:27:11,880 --> 00:27:14,880

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

444

00:27:14,880 --> 00:27:16,880

one that's embedded in the ground,

445

00:27:16,880 --> 00:27:18,880

one that is suspended overhead off of this gantry.

446

00:27:18,880 --> 00:27:20,880

It weighs 7,000 pounds,

447

00:27:20,880 --> 00:27:23,880

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

448

00:27:23,880 --> 00:27:26,880

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

449

00:27:28,880 --> 00:27:30,880

That's the theory.

450

00:27:30,880 --> 00:27:35,880

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

451

00:27:35,880 --> 00:27:37,880

That's a beautiful thing.

452

00:27:37,880 --> 00:27:41,880

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

453

00:27:44,880 --> 00:27:46,880

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

454

00:27:46,880 --> 00:27:48,880

We've got our plate in place,

455

00:27:48,880 --> 00:27:50,880

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

456

00:27:50,880 --> 00:27:52,880

Explosives on top.

457

00:27:52,880 --> 00:27:54,880

Bob's your uncle.

458

00:27:54,880 --> 00:27:57,880

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

459

00:27:57,880 --> 00:27:59,880

First, with a forklift.

460

00:27:59,880 --> 00:28:01,880

Like a surgeon.

461

00:28:01,880 --> 00:28:02,880

Now don't scratch it.

462

00:28:02,880 --> 00:28:04,880

And then, by hand.

463

00:28:04,880 --> 00:28:06,880

How's that?

464

00:28:06,880 --> 00:28:08,880

A little bit more.

465

00:28:08,880 --> 00:28:10,880

All right.

466

00:28:10,880 --> 00:28:12,880

There we go. Cool.

467

00:28:15,880 --> 00:28:18,880

That just leaves the explosives.

468

00:28:18,880 --> 00:28:21,880

All 1,000 pounds of it.

469

00:28:21,880 --> 00:28:24,880

That is a lot of boom.

470

00:28:29,880 --> 00:28:31,880

Gently up. Let's go.

471

00:28:31,880 --> 00:28:38,880

At Treasure Island, Adam and Jamie's lift a car suction rig has sucked.

472

00:28:38,880 --> 00:28:41,880

Brass! What happened?

473

00:28:41,880 --> 00:28:45,880

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

474

00:28:45,880 --> 00:28:48,880

So, just to recap, and you saw this,

475

00:28:48,880 --> 00:28:51,880

our previous method was what we call the octopus arm method

476

00:28:51,880 --> 00:28:56,880

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

477

00:28:56,880 --> 00:29:00,880

And that turned out to be completely 100% wrong.

478

00:29:00,880 --> 00:29:03,880

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

479

00:29:03,880 --> 00:29:05,880

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

480

00:29:05,880 --> 00:29:08,880

but it's just a gift we have.

481

00:29:08,880 --> 00:29:12,880

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

482

00:29:12,880 --> 00:29:15,880

Three big sturdy wooden boxes made out of plywood,

483

00:29:15,880 --> 00:29:18,880

sealed with a gasket between them and the car.

484

00:29:18,880 --> 00:29:21,880

We pull a vacuum from them with a manifold.

485

00:29:21,880 --> 00:29:23,880

I think this is going to work.

486

00:29:23,880 --> 00:29:25,880

We're going to build some boxes.

487

00:29:25,880 --> 00:29:30,880

So, it's out with the octopus and in with three boxes

488

00:29:30,880 --> 00:29:34,880

that will still be powered by a single vacuum cleaner.

489

00:29:34,880 --> 00:29:37,880

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

490

00:29:37,880 --> 00:29:41,880

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

491

00:29:41,880 --> 00:29:46,880

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

492

00:29:46,880 --> 00:29:50,880

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

493

00:29:50,880 --> 00:29:53,880

To give this design the best chance,

494

00:29:53,880 --> 00:29:57,880

Jamie's making each box as big as possible.

495

00:29:57,880 --> 00:29:58,880

To start.

496

00:29:58,880 --> 00:30:02,880

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

497

00:30:02,880 --> 00:30:03,880

Looks good.

498

00:30:03,880 --> 00:30:07,880

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

499

00:30:07,880 --> 00:30:09,880

that should form a leak-proof seal.

500

00:30:09,880 --> 00:30:11,880

That all looks just about perfect.

501

00:30:11,880 --> 00:30:15,880

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

502

00:30:15,880 --> 00:30:16,880

Lovely.

503

00:30:16,880 --> 00:30:19,880

And their confidence is back with a bang.

504

00:30:19,880 --> 00:30:24,880

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

505

00:30:24,880 --> 00:30:27,880

So far here, all three boxes are saying,

506

00:30:27,880 --> 00:30:29,880

Hell yeah, I can lift that car.

507

00:30:29,880 --> 00:30:31,880

But we've been here before.

508

00:30:31,880 --> 00:30:33,880

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

509

00:30:33,880 --> 00:30:34,880

We can lift that car.

510

00:30:34,880 --> 00:30:35,880

And they totally couldn't.

511

00:30:35,880 --> 00:30:38,880

So even though the math says that these are working beautifully

512

00:30:38,880 --> 00:30:40,880

and they should lift the car,

513

00:30:40,880 --> 00:30:44,880

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

514

00:30:45,880 --> 00:30:48,880

Well, to find out, it's back to Treasure Island

515

00:30:48,880 --> 00:30:51,880

for some predictable preparation.

516

00:30:51,880 --> 00:30:52,880

Looks really nice.

517

00:30:52,880 --> 00:30:56,880

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

518

00:30:56,880 --> 00:30:57,880

I think that looks good.

519

00:30:57,880 --> 00:30:59,880

It's right over the rearview mirror.

520

00:30:59,880 --> 00:31:01,880

Then they add the boxes to the trunk.

521

00:31:01,880 --> 00:31:03,880

A little more a little top.

522

00:31:03,880 --> 00:31:04,880

Perfect.

523

00:31:04,880 --> 00:31:05,880

Roof.

524

00:31:05,880 --> 00:31:07,880

Yeah, that's tight.

525

00:31:07,880 --> 00:31:08,880

And hood.

526

00:31:08,880 --> 00:31:09,880

Nice.

527

00:31:09,880 --> 00:31:12,880

Next, they secure the boxes to the cradle.

528

00:31:12,880 --> 00:31:13,880

I think we're good.

529

00:31:13,880 --> 00:31:16,880

With that, the guys bring in the crane.

530

00:31:16,880 --> 00:31:17,880

That's good.

531

00:31:17,880 --> 00:31:21,880

Before Adam adds the vital ingredient, the vacuum cleaner.

532

00:31:21,880 --> 00:31:25,880

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

533

00:31:25,880 --> 00:31:28,880

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

534

00:31:28,880 --> 00:31:32,880

The boxes are the crucial change to this test.

535

00:31:32,880 --> 00:31:34,880

I think we're really close.

536

00:31:34,880 --> 00:31:36,880

But to help see if they're working,

537

00:31:36,880 --> 00:31:39,880

the guys have added pressure gauges to assess the suction

538

00:31:39,880 --> 00:31:41,880

before the crane starts to lift.

539

00:31:41,880 --> 00:31:43,880

So is this going to work?

540

00:31:43,880 --> 00:31:46,880

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

541

00:31:46,880 --> 00:31:47,880

square inches.

542

00:31:47,880 --> 00:31:50,880

And we've shown that the vacuum cleaner can lift 2.8 pounds

543

00:31:50,880 --> 00:31:52,880

with one square inch.

544

00:31:52,880 --> 00:31:55,880

Now, that gives us a total theoretical lifting capability

545

00:31:55,880 --> 00:31:57,880

of 11,000 pounds.

546

00:31:57,880 --> 00:32:00,880

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

547

00:32:00,880 --> 00:32:04,880

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

548

00:32:04,880 --> 00:32:08,880

No, it's also about the rig, the seals,

549

00:32:08,880 --> 00:32:10,880

and that crumpling metal of the car.

550

00:32:10,880 --> 00:32:15,880

Starting the vacuum in three, two, one.

551

00:32:15,880 --> 00:32:19,880

But with the vacuum on, the news is good.

552

00:32:19,880 --> 00:32:20,880

It's climbing.

553

00:32:20,880 --> 00:32:21,880

It's climbing?

554

00:32:21,880 --> 00:32:22,880

Yeah.

555

00:32:22,880 --> 00:32:23,880

Yes!

556

00:32:23,880 --> 00:32:25,880

Oh, yeah, baby!

557

00:32:25,880 --> 00:32:29,880

All gauges show the boxes are sucking down with a vacuum

558

00:32:29,880 --> 00:32:32,880

pressure greater than six inches of mercury.

559

00:32:32,880 --> 00:32:36,880

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

560

00:32:36,880 --> 00:32:37,880

Let's do this.

561

00:32:37,880 --> 00:32:39,880

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

562

00:32:39,880 --> 00:32:40,880

OK.

563

00:32:43,880 --> 00:32:44,880

Oh!

564

00:32:44,880 --> 00:32:46,880

That was the hood popping.

565

00:32:46,880 --> 00:32:47,880

That's cool.

566

00:32:47,880 --> 00:32:48,880

We got pressure.

567

00:32:48,880 --> 00:32:52,880

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

568

00:32:52,880 --> 00:32:54,880

Ah!

569

00:32:54,880 --> 00:32:56,880

Come on, baby.

570

00:32:56,880 --> 00:32:58,880

Hold on to this car.

571

00:32:58,880 --> 00:33:02,880

The car does start to rise.

572

00:33:02,880 --> 00:33:03,880

Yes!

573

00:33:03,880 --> 00:33:04,880

It's off the ground!

574

00:33:04,880 --> 00:33:07,880

This freaking car is off the ground!

575

00:33:08,880 --> 00:33:09,880

Oh, man.

576

00:33:09,880 --> 00:33:12,880

That is freaking awesome!

577

00:33:15,880 --> 00:33:17,880

This is amazing.

578

00:33:21,880 --> 00:33:22,880

Oh, dude!

579

00:33:22,880 --> 00:33:27,880

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

580

00:33:27,880 --> 00:33:30,880

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

581

00:33:30,880 --> 00:33:34,880

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

582

00:33:34,880 --> 00:33:36,880

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

583

00:33:36,880 --> 00:33:39,880

Because they're taking the car to the top.

584

00:33:39,880 --> 00:33:40,880

Ah!

585

00:33:40,880 --> 00:33:41,880

I know.

586

00:33:41,880 --> 00:33:42,880

This is freaking me out.

587

00:33:42,880 --> 00:33:46,880

Remember, the crane is lifting the steel cradle.

588

00:33:46,880 --> 00:33:49,880

Holy f***ing balls.

589

00:33:49,880 --> 00:33:50,880

There you go.

590

00:33:50,880 --> 00:33:52,880

That's about how we're feeling here.

591

00:33:52,880 --> 00:33:54,880

But it's the vacuum cleaner on its own.

592

00:33:54,880 --> 00:33:56,880

This is everybody's satisfying his head.

593

00:33:56,880 --> 00:33:57,880

I was hoping it would be.

594

00:33:57,880 --> 00:34:00,880

That's sucking the cradle to the car.

595

00:34:00,880 --> 00:34:02,880

That is freaking awesome!

596

00:34:04,880 --> 00:34:07,880

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

597

00:34:07,880 --> 00:34:10,880

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

598

00:34:10,880 --> 00:34:14,880

which should result in the car destruction this episode needs.

599

00:34:14,880 --> 00:34:17,880

Three, two, one!

600

00:34:20,880 --> 00:34:21,880

Oh!

601

00:34:21,880 --> 00:34:26,880

That was very satisfying.

602

00:34:26,880 --> 00:34:28,880

That was awesome!

603

00:34:28,880 --> 00:34:33,880

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

604

00:34:33,880 --> 00:34:34,880

We've done it once.

605

00:34:34,880 --> 00:34:36,880

We don't want to do it again.

606

00:34:36,880 --> 00:34:39,880

Yep, once the vacuum cleaner was switched off,

607

00:34:39,880 --> 00:34:41,880

gravity brought the car to the top.

608

00:34:41,880 --> 00:34:44,880

And the vacuum cleaner was pushed back to the top.

609

00:34:44,880 --> 00:34:47,880

And the vacuum cleaner was pushed back to the top.

610

00:34:47,880 --> 00:34:50,880

Yep, once the vacuum cleaner was switched off,

611

00:34:50,880 --> 00:34:53,880

gravity brought this myth back to Earth.

612

00:34:53,880 --> 00:34:56,880

This time around, it was like clockwork.

613

00:34:56,880 --> 00:34:59,880

The boxes held, their seals held.

614

00:34:59,880 --> 00:35:01,880

The simple fact was that during the math,

615

00:35:01,880 --> 00:35:05,880

there was over 11,000 pounds of suction on that car.

616

00:35:05,880 --> 00:35:09,880

So, it was going up, at least until we pulled the plug.

617

00:35:09,880 --> 00:35:12,880

Something that you should know about me is that

618

00:35:12,880 --> 00:35:15,880

I love, love, love the car myths on Mythbusters.

619

00:35:15,880 --> 00:35:19,880

But this is my all-time favorite Mythbuster car myth.

620

00:35:19,880 --> 00:35:22,880

We actually lifted this thing with nothing but the power

621

00:35:22,880 --> 00:35:24,880

of a single vacuum cleaner.

622

00:35:24,880 --> 00:35:26,880

Next time someone tells you that Mythbusters sucks,

623

00:35:26,880 --> 00:35:28,880

tell them damn straight.

624

00:35:28,880 --> 00:35:30,880

That was beautiful. Nice work, sir.

625

00:35:30,880 --> 00:35:31,880

You too.

626

00:35:31,880 --> 00:35:32,880

Let's get out of here.

627

00:35:32,880 --> 00:35:35,880

Who would think a vacuum cleaner was hiding so much suction power?

628

00:35:35,880 --> 00:35:37,880

I know. Cool story.

629

00:35:37,880 --> 00:35:38,880

Thanks.

630

00:35:38,880 --> 00:35:45,880

Still to come, pancake car gets cooked.

631

00:35:45,880 --> 00:35:48,880

Three, two, one.

632

00:35:48,880 --> 00:35:50,880

Whoa!

633

00:35:56,880 --> 00:36:01,880

After 14 years of car carnage, here's the destructive stats.

634

00:36:01,880 --> 00:36:05,880

Since 2000, the car has been used to make the car

635

00:36:06,880 --> 00:36:13,880

Since 2002, the Mythbusters have destroyed almost 280 cars.

636

00:36:13,880 --> 00:36:16,880

This is why we can't have nice things.

637

00:36:16,880 --> 00:36:18,880

They've thrown 10 off of cliffs,

638

00:36:18,880 --> 00:36:23,880

crashed over 100,

639

00:36:26,880 --> 00:36:30,880

and made 48 go bye-bye with a boom.

640

00:36:31,880 --> 00:36:35,880

They've even reinvented the wheel not once.

641

00:36:35,880 --> 00:36:37,880

That actually corners fairly well.

642

00:36:37,880 --> 00:36:39,880

It does, but twice.

643

00:36:39,880 --> 00:36:43,880

Yeah! Yeah! That's it. Come on!

644

00:36:53,880 --> 00:36:56,880

Deep in the heart of the New Mexican desert,

645

00:36:56,880 --> 00:37:00,880

a dud of a car is about to get bombed.

646

00:37:00,880 --> 00:37:02,880

But will it go pancake flat?

647

00:37:02,880 --> 00:37:04,880

In our small-scale testing,

648

00:37:04,880 --> 00:37:06,880

we showed that a single piece of data sheet

649

00:37:06,880 --> 00:37:08,880

gave us the best results.

650

00:37:10,880 --> 00:37:12,880

I'm kind of liking this.

651

00:37:12,880 --> 00:37:14,880

Now, we're going to take a similar approach here,

652

00:37:14,880 --> 00:37:16,880

but instead of data sheet, we're going to be using Ampo.

653

00:37:16,880 --> 00:37:19,880

The reason we're using Ampo is it's actually better

654

00:37:19,880 --> 00:37:21,880

for performing this kind of task.

655

00:37:21,880 --> 00:37:23,880

It's a slower moving explosive,

656

00:37:23,880 --> 00:37:25,880

and it pushes things better

657

00:37:25,880 --> 00:37:28,880

instead of breaking them apart, which is what we want.

658

00:37:28,880 --> 00:37:31,880

Ampo is definitely the best choice of a boom.

659

00:37:31,880 --> 00:37:33,880

And to accurately scale up,

660

00:37:33,880 --> 00:37:35,880

that is a lot of boom.

661

00:37:35,880 --> 00:37:39,880

Jamie's using a thousand pounds of it.

662

00:37:39,880 --> 00:37:42,880

Currently, Jamie is arranging 1,000 pounds of Ampo.

663

00:37:42,880 --> 00:37:46,880

That's 20 bags that weigh 50 pounds each on top of the trench plate.

664

00:37:46,880 --> 00:37:50,880

Now, the pattern that he's using is one that is invented

665

00:37:50,880 --> 00:37:52,880

so that the pulse from the explosion

666

00:37:52,880 --> 00:37:55,880

provides a totally universal push

667

00:37:55,880 --> 00:37:57,880

on that trench plate into the car.

668

00:37:57,880 --> 00:37:59,880

That's the theory.

669

00:37:59,880 --> 00:38:02,880

And with the last bag in place, this one-shot deal

670

00:38:02,880 --> 00:38:04,880

is ready to rumble.

671

00:38:04,880 --> 00:38:06,880

You know, those little bags of ketchup

672

00:38:06,880 --> 00:38:09,880

that you step on on the sidewalk, and they just go...

673

00:38:09,880 --> 00:38:11,880

That's what's going to happen here.

674

00:38:13,880 --> 00:38:16,880

Yep, it's going to be some kind of catastrophe.

675

00:38:17,880 --> 00:38:19,880

But to find out what kind,

676

00:38:19,880 --> 00:38:22,880

the guys head underground into a bomb-proof bunker.

677

00:38:22,880 --> 00:38:24,880

And then it's go time.

678

00:38:30,880 --> 00:38:32,880

Okay, this is pancake car.

679

00:38:32,880 --> 00:38:34,880

Full-scale test.

680

00:38:34,880 --> 00:38:37,880

Flattening a terrible car in five,

681

00:38:37,880 --> 00:38:43,880

four, three, two, one.

682

00:38:47,880 --> 00:38:49,880

Whoa!

683

00:38:50,880 --> 00:38:52,880

That was...

684

00:38:52,880 --> 00:38:54,880

That was very intense.

685

00:38:54,880 --> 00:38:56,880

That was energetic.

686

00:38:56,880 --> 00:38:58,880

Oh, that's a piece of the frame.

687

00:38:58,880 --> 00:39:00,880

Wow, some stuff is still falling.

688

00:39:03,880 --> 00:39:07,880

Without doubt, the Anfo packed a serious punch,

689

00:39:07,880 --> 00:39:13,880

sending the three-ton steel gantry over 500 feet in the air.

690

00:39:13,880 --> 00:39:16,880

Something that's worth seeing again,

691

00:39:16,880 --> 00:39:19,880

and again, and again.

692

00:39:24,880 --> 00:39:27,880

But amidst the final season spectacle,

693

00:39:27,880 --> 00:39:29,880

what's happened to the car?

694

00:39:35,880 --> 00:39:37,880

No way.

695

00:39:38,880 --> 00:39:40,880

The car is gone.

696

00:39:40,880 --> 00:39:42,880

The car is gone, but that is the exact pattern

697

00:39:42,880 --> 00:39:44,880

in which you laid out the Anfo.

698

00:39:44,880 --> 00:39:46,880

Yeah.

699

00:39:46,880 --> 00:39:49,880

So it went through the top plate, through the car,

700

00:39:49,880 --> 00:39:52,880

and made a car-sized dent in the bottom.

701

00:39:52,880 --> 00:39:55,880

Well, I guess it's back to the drawings.

702

00:39:58,880 --> 00:40:00,880

You knocked yourself out, champ.

703

00:40:03,880 --> 00:40:05,880

So we rushed up to ground zero,

704

00:40:05,880 --> 00:40:07,880

hoping to find a pancake car,

705

00:40:07,880 --> 00:40:11,880

and instead found no car whatsoever.

706

00:40:11,880 --> 00:40:13,880

What seems to have happened is, when we pushed the button,

707

00:40:13,880 --> 00:40:16,880

the Anfo didn't cleanly push our steel plate down

708

00:40:16,880 --> 00:40:17,880

and into the car.

709

00:40:17,880 --> 00:40:20,880

It punched a perfect hole through that steel plate,

710

00:40:20,880 --> 00:40:22,880

sending chunks flying hundreds of feet

711

00:40:22,880 --> 00:40:25,880

and effectively vaporizing the car.

712

00:40:25,880 --> 00:40:28,880

The one thing it did not do was flatten the car.

713

00:40:30,880 --> 00:40:32,880

Yep, instead of being a flat piece of furniture,

714

00:40:32,880 --> 00:40:35,880

the car was blown to kingdom come,

715

00:40:36,880 --> 00:40:39,880

ripped apart by the immense blast pressure

716

00:40:39,880 --> 00:40:41,880

and the top steel plate,

717

00:40:41,880 --> 00:40:44,880

which itself turned to lethal shrapnel.

718

00:40:46,880 --> 00:40:50,880

So much so that their U-Go wasn't the only car that took a hit.

719

00:40:51,880 --> 00:40:53,880

This is one of our rental cars,

720

00:40:53,880 --> 00:40:55,880

and it was parked behind our bunker,

721

00:40:55,880 --> 00:40:57,880

which is under a mountain of dirt.

722

00:40:58,880 --> 00:41:03,880

And the shockwave was enough to crack this windshield just from that.

723

00:41:03,880 --> 00:41:05,880

It was too much.

724

00:41:06,880 --> 00:41:08,880

This window, however, was not broken by a shockwave.

725

00:41:08,880 --> 00:41:10,880

It was broken by shrapnel.

726

00:41:11,880 --> 00:41:16,880

Specifically this 40-pound piece of inch-and-a-half thick steel,

727

00:41:16,880 --> 00:41:22,880

which flew probably 750, 800 feet to get here and cause this destruction.

728

00:41:26,880 --> 00:41:29,880

Clearly, there's carnage inside and out,

729

00:41:29,880 --> 00:41:32,880

as the power of the boom took everyone by surprise.

730

00:41:33,880 --> 00:41:37,880

So how does that leave Jamie's car destruction dossier?

731

00:41:38,880 --> 00:41:42,880

Now, we could have used a thicker plate, let's say a 12-inch thick one,

732

00:41:43,880 --> 00:41:47,880

but here's the thing, a plate that size is going to weight 84,000 pounds.

733

00:41:47,880 --> 00:41:51,880

Just dropping that in the car by itself would crush the car really nicely,

734

00:41:51,880 --> 00:41:53,880

but that's not the point.

735

00:41:53,880 --> 00:41:55,880

The point was to do it with explosives.

736

00:41:55,880 --> 00:41:58,880

Now, somewhere out there, there might be the right combination

737

00:41:58,880 --> 00:42:02,880

of steel thickness and quantity of explosives that would do it right,

738

00:42:02,880 --> 00:42:06,880

but at this point, our best guess just didn't work at all.

739

00:42:09,880 --> 00:42:17,880

Well, I tell you what, this is without a doubt the most impressive piece of shrapnel we've ever made.

740

00:42:17,880 --> 00:42:21,880

Yep, and to boot, we never have to look at that car again. It is done.

741

00:42:21,880 --> 00:42:23,880

Yeah, let's get out of here.