

1

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

Please, don't try anything that you're about to see us do at home.

2

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

Tori, Carrie and Grant are in over their heads as well.

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

Something feels like it's dangerous, I'm not sure exactly what yet.

4

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

Snowed under by a snowplack.

5

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

There are cursed items in the world and this is one of them.

6

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

Who are the Mythbusters?

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

Adam Savage

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

and Jamie Heineman.

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

This is gonna kill you.

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

Between them more than 30 years of special effects experience.

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

That's what I'm talking about!

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00:01:03,000 --> 00:01:05,000

Joining them, Tori Belleggi.

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00:01:05,000 --> 00:01:07,000

Very excited about this.

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00:01:07,000 --> 00:01:08,000

Carrie Byron.

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00:01:08,000 --> 00:01:09,000

Look, he cracked into his skull.

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00:01:09,000 --> 00:01:11,000

And Grant Imahara.

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00:01:11,000 --> 00:01:13,000

Don't say anything.

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00:01:13,000 --> 00:01:15,000

They don't just tell the Myths.

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00:01:16,000 --> 00:01:19,000

They put them to the test.

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00:01:27,000 --> 00:01:30,000

You care to explain what we're doing?

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00:01:30,000 --> 00:01:37,000

16 feet off the ground, standing above 9,000 gallons of swirling water and I'm in a wetsuit?

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00:01:37,000 --> 00:01:40,000

Sure, this story is called the Whirlpool of Death.

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00:01:40,000 --> 00:01:46,000

Now, this is a story that's been going on as long as man has been going to sea.

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00:01:46,000 --> 00:01:55,000

This is the mythical, hungry, evil vortex that appears in the ocean sucking boats and sailors down to Jamie Jones Locker.

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00:01:55,000 --> 00:01:56,000

That's the one?

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00:01:56,000 --> 00:01:57,000

That's the one.

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

Adam's right on the money.

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00:01:59,000 --> 00:02:03,000

Whirlpools have always been a mesmerizing maritime menace.

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00:02:03,000 --> 00:02:08,000

He might have been Lord of the Jungle, but in the face of a swirling vortex,

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00:02:08,000 --> 00:02:12,000

even the mighty Tarzan was up the creek without a paddle.

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

A canoe's one thing, but a whole ship.

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00:02:15,000 --> 00:02:21,000

In part one of this myth, Adam and Jamie will construct their own Whirlpool in a giant tank

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00:02:21,000 --> 00:02:25,000

and bid bond voyage to some scale model ships.

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00:02:25,000 --> 00:02:30,000

And in part two, they'll see what effect a Whirlpool has on a lone swimmer.

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00:02:30,000 --> 00:02:32,000

I jump in right now.

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00:02:32,000 --> 00:02:33,000

Yeah, right.

37

00:02:33,000 --> 00:02:34,000

I would.

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00:02:34,000 --> 00:02:36,000

Namely, Adam.

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00:02:36,000 --> 00:02:38,000

Go on then, let's get in.

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00:02:38,000 --> 00:02:39,000

Cold on there.

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00:02:39,000 --> 00:02:40,000

This is the end of the story.

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00:02:40,000 --> 00:02:44,000

We got a whole bunch of material to cover before we get to this.

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00:02:44,000 --> 00:02:48,000

The first thing they want to do is clap eyes on a real Whirlpool.

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

And they don't have to go very far.

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

Yeah, we're going to look for turbulence here,

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00:02:54,000 --> 00:02:57,000

which means I'm pretty sure we're going to cut to some shots of me vomiting

47

00:02:57,000 --> 00:03:00,000

while we were doing some shark week investigation.

48

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

You bet, Adam.

49

00:03:01,000 --> 00:03:06,000

We get plenty of mileage out of that queasy constitution of yours.

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00:03:09,000 --> 00:03:11,000

This time he's taken seasickness pills,

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00:03:11,000 --> 00:03:15,000

which I'm sure the boys from the Coast Guard appreciate.

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00:03:19,000 --> 00:03:23,000

So, Hector, where are we going to find a couple of currents going against each other?

53

00:03:23,000 --> 00:03:25,000

I might see some whirlpools.

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00:03:25,000 --> 00:03:29,000

Right around the South Tower right here between the Swooney and the South Tower.

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00:03:29,000 --> 00:03:30,000

And right on cue.

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00:03:30,000 --> 00:03:32,000

There's one right there.

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00:03:33,000 --> 00:03:37,000

Not just one, it's a virtual convoy of vortices,

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00:03:37,000 --> 00:03:40,000

all brought about by the bridge pylon.

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00:03:41,000 --> 00:03:46,000

The water that's directly behind the piling is moving more slowly,

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00:03:46,000 --> 00:03:50,000

and the onrushing water that's going past it is mixing with it,

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00:03:50,000 --> 00:03:52,000

and you start with swirling.

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00:03:52,000 --> 00:03:56,000

But not all whirlpools are the result of obstacles in the water.

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00:03:56,000 --> 00:04:00,000

Most oceanic whirlpools form when opposing currents meet head-on.

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

As the currents start to swirl around each other,

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00:04:03,000 --> 00:04:05,000

a vortex forms in the center,

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00:04:05,000 --> 00:04:08,000

causing the water to spiral downwards.

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00:04:08,000 --> 00:04:12,000

In some cases, the vortex can plunge hundreds of feet.

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00:04:12,000 --> 00:04:17,000

These whirlpools may not do anything but make it a little squirrely to steer this boat,

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00:04:17,000 --> 00:04:19,000

but if I was in the water with one of them,

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00:04:19,000 --> 00:04:21,000

I think I'd be in a little bit of trouble.

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00:04:21,000 --> 00:04:24,000

I don't know that it would pull me down so much,

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00:04:24,000 --> 00:04:27,000

but it'd be definitely spinning you around.

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

See, that's like six, eight feet across,

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00:04:29,000 --> 00:04:32,000

and if you were in the middle of that, you'd be kind of like...

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00:04:32,000 --> 00:04:34,000

you'd be a little upset.

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00:04:35,000 --> 00:04:38,000

And on that note, it's back to the workshop.

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00:04:39,000 --> 00:04:44,000

Well, obviously, it's easy to create a whirlpool in a cup.

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00:04:46,000 --> 00:04:48,000

Well, that would be a whirlpool.

79

00:04:48,000 --> 00:04:50,000

That would be a whirlpool.

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00:04:50,000 --> 00:04:54,000

But the question is, how do we create it full-sized?

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00:04:54,000 --> 00:04:56,000

Well, I've done it before with paddle wheel.

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

I was thinking about trying to use water jets to create a whirlpool,

83

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

and maybe even a recirculating system.

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

Okay, well, we can try both in a somewhat smaller scale

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

than the real full-sized one and see what happens.

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00:05:08,000 --> 00:05:12,000

Adam has a small pool pump and a tank with a hole at the bottom.

87

00:05:12,000 --> 00:05:16,000

When the pump is switched on, water is sucked down the hole

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00:05:16,000 --> 00:05:18,000

through the pump and recirculated.

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00:05:18,000 --> 00:05:22,000

The result? A perfect conical vortex.

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00:05:22,000 --> 00:05:24,000

Oh, look at that!

91

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

That would be a vortex.

92

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

And Adam being Adam, he can't resist staging a mock naval mishap.

93

00:05:30,000 --> 00:05:32,000

Technically, if this is a real container ship,

94

00:05:32,000 --> 00:05:37,000

this whirlpool would be well over a mile in diameter.

95

00:05:37,000 --> 00:05:41,000

Here's a little boat, unsuspecting on the high seas,

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

and... oh, no, it's a whirlpool!

97

00:05:45,000 --> 00:05:47,000

That would be bad!

98

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

So the pump works well.

99

00:05:50,000 --> 00:05:52,000

Now it's Jamie's turn.

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00:05:53,000 --> 00:05:58,000

He's got two metal paddles attached to a cordless drill motor.

101

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

330 rpm.

102

00:06:01,000 --> 00:06:04,000

The depth of the vortex is...

103

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

nine inches.

104

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

Alright, let's move up to the medium-sized level.

105

00:06:09,000 --> 00:06:11,000

I want to kick it up a notch.

106

00:06:11,000 --> 00:06:14,000

Kicking it up a notch means a larger tank,

107

00:06:17,000 --> 00:06:19,000

a larger pump,

108

00:06:19,000 --> 00:06:21,000

and larger blades on Jamie's paddle.

109

00:06:21,000 --> 00:06:25,000

But while Adam's early results are replicated perfectly...

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

14-inch vortex.

111

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

That's going all the way to the bottom, isn't it?

112

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

Going all the way to the bottom. It's a perfect vortex.

113

00:06:32,000 --> 00:06:37,000

Jamie struggles to come to grips with the increase in size and speed.

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00:06:37,000 --> 00:06:40,000

That's pretty much all the way to the bottom, and that's 15 amps.

115

00:06:40,000 --> 00:06:41,000

Okay.

116

00:06:41,000 --> 00:06:46,000

They up the ante again, this time a 50-gallon tank.

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

Once again, the pump provides an instant vortex.

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

Dude! Perfect!

119

00:06:53,000 --> 00:06:55,000

Jeez, man, it's totally full depth.

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00:06:56,000 --> 00:06:58,000

And Adam's made an intriguing discovery.

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00:06:58,000 --> 00:07:01,000

Each time they move to a larger tank,

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00:07:01,000 --> 00:07:05,000

it takes proportionally less water to maintain the whirlpool.

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00:07:05,000 --> 00:07:08,000

48 gallons total, and in order to maintain that whirlpool,

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00:07:08,000 --> 00:07:11,000

we only needed to move 25 gallons per minute.

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00:07:11,000 --> 00:07:14,000

It means that as we're getting larger,

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00:07:14,000 --> 00:07:18,000

it requires less of the total volume to maintain that whirlpool,

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00:07:18,000 --> 00:07:19,000

which is fantastic.

128

00:07:19,000 --> 00:07:22,000

On the other hand, Jamie's paddles are using more power

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00:07:22,000 --> 00:07:24,000

and threatening to take off.

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00:07:25,000 --> 00:07:28,000

We've still got a way to go. We're only at 8.5 volts.

131

00:07:28,000 --> 00:07:31,000

I'm having trouble holding onto it. I'm really using a lot of strength.

132

00:07:31,000 --> 00:07:36,000

There's no beautifully shaped vortex, just a violent churning.

133

00:07:36,000 --> 00:07:38,000

It's more of like a huge depression.

134

00:07:38,000 --> 00:07:41,000

It's like you're slinging the whole ocean outward,

135

00:07:41,000 --> 00:07:45,000

and it's not really a suction vortex.

136

00:07:45,000 --> 00:07:49,000

It's just sort of centrifugal force throwing things away from the middle.

137

00:07:49,000 --> 00:07:53,000

And between the two, I'd much rather get into the one that I made with the pump

138

00:07:53,000 --> 00:07:55,000

than get into a tank with that thing.

139

00:07:55,000 --> 00:07:58,000

Funny you should say that, Adam.

140

00:07:58,000 --> 00:08:00,000

You know, I've been thinking about this,

141

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

and I think we also need to actually test it on a full-sized person.

142

00:08:04,000 --> 00:08:06,000

What do you think?

143

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

Okay, I'll go in. I'm not going to like it, though.

144

00:08:12,000 --> 00:08:16,000

To see how much he's not going to like it, Adam makes a mini-Adam.

145

00:08:16,000 --> 00:08:18,000

So I made a scale.

146

00:08:18,000 --> 00:08:21,000

He has not scaled to wait to us, and that was actually critical.

147

00:08:21,000 --> 00:08:24,000

I wanted to see what would happen if we were totally, totally buoyant,

148

00:08:24,000 --> 00:08:27,000

like wearing life preservers in the Red Man suit.

149

00:08:27,000 --> 00:08:30,000

We drop in from the side. Whoa!

150

00:08:32,000 --> 00:08:36,000

I wouldn't be at all surprised if you didn't just pass out.

151

00:08:36,000 --> 00:08:39,000

And if you pass out and you're in that water,

152

00:08:39,000 --> 00:08:42,000

unless you're tethered, you're screwed.

153

00:08:42,000 --> 00:08:47,000

Once again, it looks like Adam will be going in over his head.

154

00:08:47,000 --> 00:08:49,000

It felt like you're hopping into a pool full of water,

155

00:08:49,000 --> 00:08:52,000

and you're hopping into a cone of water that drops down

156

00:08:52,000 --> 00:08:55,000

potentially 10 to 15 feet below you.

157

00:08:55,000 --> 00:08:58,000

That doesn't sound really pleasant.

158

00:08:58,000 --> 00:09:04,000

Still to come, it's sink or swim as Adam prepares to confront the whirlpool of death.

159

00:09:04,000 --> 00:09:05,000

Whoa!

160

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

And after the break,

161

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

Tari, Carrie and Grant take on a truck with a life of its own.

162

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

Make no mistake, this is a death trap.

163

00:09:20,000 --> 00:09:22,000

Adam, you grew up in a snowy part of the U.S., right?

164

00:09:22,000 --> 00:09:23,000

Yeah.

165

00:09:23,000 --> 00:09:25,000

So you're an expert on the snow plows?

166

00:09:25,000 --> 00:09:26,000

Sure.

167

00:09:26,000 --> 00:09:31,000

Have you ever heard of a snow plow blasting a car off the road as it passes?

168

00:09:31,000 --> 00:09:35,000

No. In the winter, that happens without any outside influence.

169

00:09:35,000 --> 00:09:40,000

Well, one of our fans on the website claims to have seen exactly that.

170

00:09:40,000 --> 00:09:45,000

Snow plow with its plow up, passing on a freeway at high speed,

171

00:09:45,000 --> 00:09:47,000

blew a car clean off the freeway.

172

00:09:47,000 --> 00:09:51,000

I'm extremely dubious.

173

00:09:51,000 --> 00:09:54,000

You can see where they're going with this one, can't you?

174

00:09:54,000 --> 00:09:56,000

They're going to get a snow plow and a car,

175

00:09:56,000 --> 00:09:59,000

have them pass head on at highway speed

176

00:09:59,000 --> 00:10:02,000

and see if the car winds up on its roof.

177

00:10:02,000 --> 00:10:08,000

It sounds simple, but this myth will push our intrepid trio to the absolute limit.

178

00:10:08,000 --> 00:10:11,000

This has been like the most troublesome myth I think we've ever done.

179

00:10:11,000 --> 00:10:14,000

And for Grant, one of the most dangerous.

180

00:10:18,000 --> 00:10:20,000

Where do you think we should start with this one?

181

00:10:20,000 --> 00:10:24,000

Well, first of all, I want to know how much energy it takes to actually flip a car.

182

00:10:24,000 --> 00:10:27,000

Ah. Yeah, that shouldn't be too hard to do.

183

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

We could take our scales so we can measure force and then pick off a few points

184

00:10:33,000 --> 00:10:37,000

and just try and pull it over with a static load.

185

00:10:37,000 --> 00:10:38,000

You volunteering your car?

186

00:10:38,000 --> 00:10:40,000

Not my car.

187

00:10:40,000 --> 00:10:42,000

Okay then, how about this one?

188

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

Tori's been scouring the car yards and this looks like it might fit the bill flip-wise.

189

00:10:48,000 --> 00:10:52,000

It has a high center of gravity, it has a short wheelbase,

190

00:10:52,000 --> 00:10:57,000

it's got a lot of surface area being so flat and it's really, really lightweight.

191

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

To find out what it takes to knock this vehicle off its tires,

192

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

Tori lassoes it, ties the rope to a force gauge and attaches that to a pickup.

193

00:11:07,000 --> 00:11:10,000

Carrie counts off the pounds to tipping point.

194

00:11:10,000 --> 00:11:16,000

500 pounds, 1000 pounds, 1000 pounds at peak time.

195

00:11:19,000 --> 00:11:22,000

Then she calculates the surface area of one side

196

00:11:22,000 --> 00:11:26,000

and works out the pressure needed to push the vehicle over.

197

00:11:26,000 --> 00:11:30,000

I've done the calculations, it's going to take point 2-1 psi to flip this car,

198

00:11:30,000 --> 00:11:31,000

that's pounds per square inch.

199

00:11:31,000 --> 00:11:33,000

They've got their test vehicle.

200

00:11:33,000 --> 00:11:36,000

The other thing they need is a snowplow.

201

00:11:36,000 --> 00:11:40,000

Tori's heard on the grapevine where they might get one for Nix.

202

00:11:40,000 --> 00:11:44,000

High in the Sierras on the California Nevada border,

203

00:11:44,000 --> 00:11:50,000

this broken down plow has sat half buried in its wintry tomb for years.

204

00:11:50,000 --> 00:11:53,000

They should never have disturbed its sleep.

205

00:11:53,000 --> 00:12:00,000

Carrie, Tori and Grant are about to face the curse of the snowplow.

206

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

No one knows for sure how long it stood dormant in that field,

207

00:12:04,000 --> 00:12:08,000

but long enough for it to become a rodent hotel.

208

00:12:08,000 --> 00:12:10,000

Don't let him bite you!

209

00:12:10,000 --> 00:12:13,000

What's that saying about rats and sinking ships?

210

00:12:13,000 --> 00:12:18,000

I feel kind of bad now. This was his home.

211

00:12:19,000 --> 00:12:25,000

Somehow they've got to get this lunk of metal moving at 70 miles an hour.

212

00:12:25,000 --> 00:12:29,000

At the moment they'd be happy if it moved at all.

213

00:12:30,000 --> 00:12:36,000

When it does get going, they'll want to know how much air pressure is coming off the plow.

214

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

So Carrie builds a pressure gauge.

215

00:12:39,000 --> 00:12:42,000

Basically it's a tube filled with colored water.

216

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

As air pushes in one end of the tube,

217

00:12:44,000 --> 00:12:50,000

the water level rises along a scale marking off air pressure in pounds per square inch.

218

00:12:50,000 --> 00:12:54,000

An anemometer will also measure wind speed.

219

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

Now as the plows not yet rolling,

220

00:12:57,000 --> 00:13:02,000

they test the gauge by bolting it to Jamie's truck and tearing off down the highway.

221

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

Surely a vehicle this big and fast generates lots of air pressure, doesn't it?

222

00:13:10,000 --> 00:13:12,000

How fast are we going?

223

00:13:12,000 --> 00:13:15,000

We're at 65 miles an hour.

224

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

65? This is where we're actually getting about a half inch reading on here, which is, you know, way less.

225

00:13:23,000 --> 00:13:28,000

Remember, it took 0.21 psi to flip the test vehicle.

226

00:13:28,000 --> 00:13:33,000

At 65 miles per hour, Jamie's truck is pushing only a sixth of that.

227

00:13:33,000 --> 00:13:36,000

So what hope does the snow plow have?

228

00:13:36,000 --> 00:13:39,000

Mr. Bellachy's already hearing alarm bells.

229

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

You know, you're driving down a two-way highway and a semi-truck flies by you

230

00:13:44,000 --> 00:13:48,000

and I've had that happen where my car feels like it's going to go off the road,

231

00:13:48,000 --> 00:13:52,000

just from the wall of air that it's pushing in front of it.

232

00:13:52,000 --> 00:13:59,000

So if I wasn't blown off the road by a semi, I don't think I would be blown off the road by a snow plow.

233

00:13:59,000 --> 00:14:03,000

We'll never know, Tori, unless you can get this one going.

234

00:14:03,000 --> 00:14:05,000

So you're just going to cut the drive shaft?

235

00:14:05,000 --> 00:14:08,000

Pretty much. All of them.

236

00:14:08,000 --> 00:14:13,000

Cutting the drive shafts will free the wheels from the rusted gearbox.

237

00:14:13,000 --> 00:14:17,000

On the next towing attempt, the plow inches forward.

238

00:14:17,000 --> 00:14:19,000

Stop! Good!

239

00:14:19,000 --> 00:14:20,000

Alright, cool.

240

00:14:20,000 --> 00:14:21,000

So it moves.

241

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

It should work.

242

00:14:22,000 --> 00:14:24,000

It works!

243

00:14:24,000 --> 00:14:26,000

Nice!

244

00:14:26,000 --> 00:14:31,000

I wouldn't get too excited, Grant. Your wheel woes ain't over yet.

245

00:14:31,000 --> 00:14:36,000

One of your wheels isn't turning. You're just sk... it's just scraping along.

246

00:14:36,000 --> 00:14:39,000

First run, top speed two miles per hour.

247

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

We traveled a total of 50 yards.

248

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

One of our tires is locked.

249

00:14:44,000 --> 00:14:48,000

And if that doesn't spin, it's going to create a lot of friction

250

00:14:48,000 --> 00:14:52,000

and it may skew the truck in one direction or the other.

251

00:14:52,000 --> 00:14:57,000

And so the wheels come off this experiment, both literally and metaphorically.

252

00:14:57,000 --> 00:15:01,000

The free plow could wind up costing them plenty.

253

00:15:04,000 --> 00:15:08,000

Ahead on Mythbusters, a strange foreboding.

254

00:15:08,000 --> 00:15:10,000

Something feels really dangerous.

255

00:15:10,000 --> 00:15:13,000

The curse of the snow plow continues.

256

00:15:13,000 --> 00:15:14,000

Alright, I've got it.

257

00:15:14,000 --> 00:15:18,000

And Adam prepares to brave the vortex.

258

00:15:22,000 --> 00:15:27,000

Adam and Jamie plan to make a whirlpool in order to see if a ship really can be sucked down

259

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

in true Hollywood special effects style.

260

00:15:31,000 --> 00:15:36,000

They also plan to throw Adam in and see if he swallowed whole.

261

00:15:36,000 --> 00:15:40,000

Now, what they'll be wanting is a whirlpool like this one.

262

00:15:40,000 --> 00:15:47,000

It's the world's largest tidal vortex and it churns the waters off Deer Island Point in Canada.

263

00:15:47,000 --> 00:15:52,000

Nicknamed Old Sal, it can reach more than 200 feet in diameter

264

00:15:52,000 --> 00:15:57,000

and has been known to swirl at a top speed of around 14 knots,

265

00:15:57,000 --> 00:16:02,000

almost three times faster than the eddies Adam and Jamie saw under the bridge.

266

00:16:02,000 --> 00:16:06,000

You know, I was concerned and wanted to make sure that our methodology for a full-scale whirlpool

267

00:16:06,000 --> 00:16:10,000

was super accurate and actually I confirmed it with a couple of experts.

268

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

Our recirculating pump method is absolutely the most accurate way to reproduce a tidal whirlpool.

269

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

Great. Well, we've got our pump and our researchers also got us a 9,000 gallon tank.

270

00:16:22,000 --> 00:16:25,000

So that should be, you know, sufficient for our needs.

271

00:16:25,000 --> 00:16:28,000

And I suppose next we need to start thinking about the boats.

272

00:16:28,000 --> 00:16:31,000

Well, we're not going to fit a real boat in there.

273

00:16:31,000 --> 00:16:34,000

So we want to try something like a container ship.

274

00:16:34,000 --> 00:16:36,000

I'm going to have to make a scale one.

275

00:16:36,000 --> 00:16:42,000

We should also make, say, something like a fishing troll or something that is smaller in real life as well.

276

00:16:42,000 --> 00:16:44,000

That sounds great.

277

00:16:44,000 --> 00:16:49,000

Suddenly, a normal day at M5 turns into Christmas morning.

278

00:16:49,000 --> 00:16:52,000

Ah, look at that.

279

00:16:52,000 --> 00:16:55,000

It's the toy every kid wants.

280

00:16:55,000 --> 00:16:57,000

A container ship.

281

00:16:57,000 --> 00:16:59,000

Gee, thanks, Dad.

282

00:16:59,000 --> 00:17:02,000

Now I can replicate international commerce.

283

00:17:02,000 --> 00:17:06,000

The container ship model is one to 550 scale.

284

00:17:06,000 --> 00:17:08,000

The model trawler is one to 50.

285

00:17:08,000 --> 00:17:10,000

Time is short.

286

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

So he calls for backup.

287

00:17:12,000 --> 00:17:15,000

We brought back Jess from the Mailbag Special.

288

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

You remember Jess?

289

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

She was one half of the girls team trying to reproduce Archimedes death ray.

290

00:17:21,000 --> 00:17:24,000

There is a fierce competition going on right now.

291

00:17:24,000 --> 00:17:28,000

And we're okay with it because we know eventually we're going to win.

292

00:17:28,000 --> 00:17:30,000

They didn't win.

293

00:17:30,000 --> 00:17:32,000

I think that they cheated.

294

00:17:32,000 --> 00:17:36,000

But it's that sort of fighting spirit they need around here.

295

00:17:36,000 --> 00:17:40,000

She's going to help me with some of this stuff to do on this boat,

296

00:17:40,000 --> 00:17:43,000

getting them leveled up and getting their displacement correct.

297

00:17:43,000 --> 00:17:46,000

So when the whirlpool is going, we have scale ships to test.

298

00:17:46,000 --> 00:17:50,000

Jess' first job, filling the hulls with lead shot,

299

00:17:50,000 --> 00:17:53,000

so the models displace a realistic amount of water.

300

00:17:53,000 --> 00:17:58,000

Unfortunately, this container ship might have to leave port without its containers.

301

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

It's just going to be too top heavy.

302

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

So I think we need to eliminate these all together.

303

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

But we should seal up this top so that it doesn't gather water.

304

00:18:09,000 --> 00:18:13,000

While Jess gets everything ship shaped,

305

00:18:13,000 --> 00:18:15,000

This is gold and purple.

306

00:18:15,000 --> 00:18:17,000

How much cooler does it get?

307

00:18:17,000 --> 00:18:20,000

Adam and Jamie are off to the local dive shop.

308

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

Hello.

309

00:18:21,000 --> 00:18:22,000

Hi, good to see you again.

310

00:18:22,000 --> 00:18:23,000

Good to see you.

311

00:18:23,000 --> 00:18:24,000

Hello.

312

00:18:24,000 --> 00:18:27,000

With Adam's planning to jump into their whirlpool of death,

313

00:18:27,000 --> 00:18:31,000

one or two safety precautions might go astray.

314

00:18:31,000 --> 00:18:38,000

And basically, it's a little tank with a purge valve in an emergency.

315

00:18:38,000 --> 00:18:42,000

You would pull off that cover, hold it up,

316

00:18:42,000 --> 00:18:46,000

put your lips around here, purge it once, and then breathe off it normally.

317

00:18:46,000 --> 00:18:47,000

Sounds easy.

318

00:18:47,000 --> 00:18:53,000

But just to make sure, Adam wants to test the emergency air tank in the dive shop training pool.

319

00:18:55,000 --> 00:18:59,000

I know there's going to be payback, but I just couldn't resist.

320

00:18:59,000 --> 00:19:02,000

Problem is you'll never know.

321

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

Okay.

322

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

Oh, thank you.

323

00:19:04,000 --> 00:19:05,000

There you go.

324

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

You're welcome.

325

00:19:06,000 --> 00:19:10,000

They want to see how long it takes Adam to get the tank to his mouth.

326

00:19:10,000 --> 00:19:12,000

Jamie plays at being a whirlpool,

327

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

pulling Adam under and spinning him around.

328

00:19:15,000 --> 00:19:18,000

Adam's a little slow on the draw.

329

00:19:18,000 --> 00:19:22,000

There was definitely a little bit of a moment of panic because he pulled me right under.

330

00:19:22,000 --> 00:19:23,000

Let's try that again.

331

00:19:23,000 --> 00:19:24,000

Okay.

332

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

The tank starts to roll, Jamie's pulling.

333

00:19:27,000 --> 00:19:28,000

Whoa.

334

00:19:30,000 --> 00:19:32,000

This time he can breathe easy.

335

00:19:33,000 --> 00:19:37,000

Coming up, the whirlpool of death gathers momentum.

336

00:19:39,000 --> 00:19:40,000

And next...

337

00:19:40,000 --> 00:19:44,000

I don't think we should get you going at 70 miles an hour with you in it.

338

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

Grant tries to tame the plow.

339

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

Please, don't try anything that you're about to see us do at home.

340

00:19:52,000 --> 00:19:53,000

Ever.

341

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

You know, considering the man hours,

342

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

wouldn't it have been a little bit cheaper to get a truck for maybe a thousand bucks

343

00:20:24,000 --> 00:20:26,000

that all the wheels roll on?

344

00:20:26,000 --> 00:20:29,000

With one of its wheels totally frozen,

345

00:20:29,000 --> 00:20:33,000

the only thing this plow's likely to flip is Tari's lid.

346

00:20:35,000 --> 00:20:40,000

Finally, after almost two days and several gallons of lube...

347

00:20:40,000 --> 00:20:41,000

Look at that.

348

00:20:42,000 --> 00:20:43,000

Hey!

349

00:20:43,000 --> 00:20:44,000

Frogger has!

350

00:20:44,000 --> 00:20:45,000

Hey!

351

00:20:45,000 --> 00:20:46,000

Check it!

352

00:20:46,000 --> 00:20:47,000

Hey!

353

00:20:47,000 --> 00:20:49,000

You got it working!

354

00:20:49,000 --> 00:20:50,000

Hooray!

355

00:20:50,000 --> 00:20:52,000

The snow plow goes.

356

00:20:52,000 --> 00:20:55,000

Question now is, will it stop?

357

00:20:55,000 --> 00:20:58,000

For this experiment, breaking will be crucial.

358

00:20:58,000 --> 00:21:02,000

Normally, the Mythbusters stop vehicles by running them into things.

359

00:21:06,000 --> 00:21:08,000

They are the collision kings.

360

00:21:09,000 --> 00:21:11,000

But not this time.

361

00:21:13,000 --> 00:21:16,000

Unlike previous episodes where, you know,

362

00:21:16,000 --> 00:21:19,000

our breaking system was, well, a crash,

363

00:21:19,000 --> 00:21:23,000

this time we just want the vehicles to pass each other

364

00:21:23,000 --> 00:21:27,000

and then be able to decelerate them after that.

365

00:21:27,000 --> 00:21:30,000

There's only one way to find out if the plow's brakes work,

366

00:21:30,000 --> 00:21:33,000

and that's to tow it along and have it go.

367

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

That someone will be Grant.

368

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

Carrie's got a bad feeling about this.

369

00:21:39,000 --> 00:21:41,000

I don't know exactly what it is about today

370

00:21:41,000 --> 00:21:43,000

and right now and what we're doing,

371

00:21:43,000 --> 00:21:45,000

but something feels like it's dangerous.

372

00:21:45,000 --> 00:21:47,000

I'm not sure exactly what yet,

373

00:21:47,000 --> 00:21:49,000

but something feels really dangerous.

374

00:21:49,000 --> 00:21:51,000

And that would be different from usual, how?

375

00:21:51,000 --> 00:21:53,000

Even though Grant will have a crash helmet

376

00:21:53,000 --> 00:21:56,000

and a safety harness, Tari's getting jittery.

377

00:21:56,000 --> 00:21:58,000

I don't think we should get you out of this.

378

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

We're not going to get you out of this.

379

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

Tari's getting jittery.

380

00:22:02,000 --> 00:22:04,000

I don't think we should get you going at 70 miles an hour

381

00:22:04,000 --> 00:22:06,000

with you in it.

382

00:22:06,000 --> 00:22:08,000

I just don't think it's safe.

383

00:22:08,000 --> 00:22:10,000

If you can't stop fast enough,

384

00:22:10,000 --> 00:22:14,000

you might take another path into this, you know, to wherever.

385

00:22:14,000 --> 00:22:18,000

For this run, they settle on a sedate 20 miles per hour.

386

00:22:18,000 --> 00:22:20,000

And they're wise to be cautious.

387

00:22:20,000 --> 00:22:24,000

Let's face it, nothing else on this relic has worked so far.

388

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

What are the odds the brakes will?

389

00:22:27,000 --> 00:22:29,000

All right, we're at 20 miles an hour.

390

00:22:29,000 --> 00:22:31,000

We're at 20 miles an hour?

391

00:22:31,000 --> 00:22:33,000

Okay, ready to break?

392

00:22:33,000 --> 00:22:38,000

Ready to break in three, two, one, and out.

393

00:22:39,000 --> 00:22:41,000

Grant stomps on the brake. Nothing.

394

00:22:41,000 --> 00:22:43,000

He yanks the emergency brake,

395

00:22:43,000 --> 00:22:46,000

but still the plow doesn't stop.

396

00:22:46,000 --> 00:22:49,000

Instead, it runs over the tow chain.

397

00:22:52,000 --> 00:22:55,000

The chain snaps and the plows off its leash.

398

00:22:56,000 --> 00:22:59,000

Lucky, it was only a slow tow.

399

00:23:03,000 --> 00:23:04,000

Okay?

400

00:23:04,000 --> 00:23:05,000

Yeah.

401

00:23:07,000 --> 00:23:09,000

That was 20 miles an hour.

402

00:23:09,000 --> 00:23:10,000

We almost killed them.

403

00:23:10,000 --> 00:23:12,000

Okay, when the chain went to the side

404

00:23:12,000 --> 00:23:13,000

and your wheel actually took it,

405

00:23:13,000 --> 00:23:16,000

it also took the entire steering rig and knocked it.

406

00:23:16,000 --> 00:23:19,000

So if you were going 70, this thing would have flipped.

407

00:23:19,000 --> 00:23:21,000

Those brakes have to work,

408

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

so it's time to wheel in some professional help.

409

00:23:24,000 --> 00:23:27,000

Snow plow experts Pat Manning and Matt Edgman

410

00:23:27,000 --> 00:23:30,000

are the guys who found the plow for us.

411

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

Things that could be wrong with it, rust, water.

412

00:23:33,000 --> 00:23:37,000

All those things can complicate something on a vehicle this old.

413

00:23:38,000 --> 00:23:40,000

Matt's more optimistic.

414

00:23:40,000 --> 00:23:43,000

He bleeds the brake system, and what do you know?

415

00:23:43,000 --> 00:23:45,000

Hey, Grant, I think it's working.

416

00:23:45,000 --> 00:23:47,000

Time to go for a ride.

417

00:23:47,000 --> 00:23:49,000

You know, we've been out here for three days.

418

00:23:49,000 --> 00:23:51,000

This would have been the fourth day.

419

00:23:51,000 --> 00:23:54,000

You guys got it working in 45 minutes.

420

00:23:54,000 --> 00:23:55,000

Oh, man!

421

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

That's fantastic.

422

00:23:56,000 --> 00:23:59,000

There's no way Grant or anyone else

423

00:23:59,000 --> 00:24:01,000

will be in either vehicle when the test happens.

424

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

So he devises a remote-controlled braking rig

425

00:24:04,000 --> 00:24:07,000

for both the plow and the target vehicle.

426

00:24:07,000 --> 00:24:09,000

When he flips a switch,

427

00:24:09,000 --> 00:24:12,000

a linear actuator presses the pedal.

428

00:24:14,000 --> 00:24:16,000

So I guess that's it.

429

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

Meanwhile, over at Whirlpool Central,

430

00:24:20,000 --> 00:24:23,000

the guys are ready to go full-scale,

431

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

breathlessly awaiting the arrival of their big tank.

432

00:24:29,000 --> 00:24:30,000

This is our tank.

433

00:24:30,000 --> 00:24:32,000

It's 9,200 gallons.

434

00:24:32,000 --> 00:24:35,000

It's 10 feet wide and 16 feet tall,

435

00:24:35,000 --> 00:24:38,000

and it was specially made just for us.

436

00:24:38,000 --> 00:24:42,000

First, Jamie cuts a hole in the bottom for the intake hose.

437

00:24:42,000 --> 00:24:46,000

The tank will have to sit above ground to leave room for the plumbing.

438

00:24:46,000 --> 00:24:49,000

It is going to weigh about 45 tons,

439

00:24:49,000 --> 00:24:52,000

and it's got to drain right out the bottom.

440

00:24:52,000 --> 00:24:55,000

And we need to have some space for that,

441

00:24:55,000 --> 00:24:57,000

but also be able to support the whole thing.

442

00:24:57,000 --> 00:25:00,000

So these railway ties are a platform for that to sit on

443

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

and also allow us to pump, recirculate the water.

444

00:25:04,000 --> 00:25:07,000

Speaking of which, here it is.

445

00:25:07,000 --> 00:25:10,000

A 200-horsepower consumption.

446

00:25:10,000 --> 00:25:13,000

A 200-horsepower construction pump

447

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

capable of moving 4500 gallons a minute.

448

00:25:16,000 --> 00:25:20,000

Which should provide enough energy to get this whole

449

00:25:20,000 --> 00:25:24,000

close to 10,000 gallons of water swirling and create a vortex.

450

00:25:24,000 --> 00:25:28,000

One anaconda-like hose will carry water away from the tank.

451

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

A second will put it back in the top.

452

00:25:31,000 --> 00:25:36,000

Soon they've got a monolithic version of Adam's Benchtop setup.

453

00:25:36,000 --> 00:25:38,000

Now, just add water.

454

00:25:41,000 --> 00:25:45,000

Myth Turn Jess fills a water truck from a hydrant.

455

00:25:45,000 --> 00:25:47,000

How do we know when it's full?

456

00:25:47,000 --> 00:25:50,000

The truck holds 2000 gallons,

457

00:25:50,000 --> 00:25:52,000

and filling it takes about 30 minutes.

458

00:25:52,000 --> 00:25:55,000

With the tank holding more than 9000 gallons,

459

00:25:55,000 --> 00:25:58,000

it'll take hours to fill.

460

00:25:58,000 --> 00:26:01,000

Even with San Francisco's weather pitching in.

461

00:26:01,000 --> 00:26:04,000

We're going to do this experiment no matter what.

462

00:26:04,000 --> 00:26:07,000

They say, hell or high water?

463

00:26:07,000 --> 00:26:09,000

Well, that's precisely what's happening here.

464

00:26:09,000 --> 00:26:13,000

Stay with us as the Whirlpool of Death swirls into action.

465

00:26:13,000 --> 00:26:15,000

Yeah!

466

00:26:15,000 --> 00:26:20,000

And next, the plow leaves tarry, carry and grant all at sea.

467

00:26:20,000 --> 00:26:23,000

Okay, I'm going to break. Three, two, one.

468

00:26:24,000 --> 00:26:28,000

The Mythbusters want to flip this vehicle using only the air pressure

469

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

coming off this snow plow.

470

00:26:30,000 --> 00:26:31,000

This is the plan.

471

00:26:31,000 --> 00:26:36,000

The plow and the flipped vehicle will each have 1500 feet of towing cable attached.

472

00:26:36,000 --> 00:26:39,000

The cable will be fed through a system of pulleys,

473

00:26:39,000 --> 00:26:43,000

which will allow the towing vehicles to move away from the track.

474

00:26:44,000 --> 00:26:48,000

These are our road barriers that we're going to be using to anchor our pulleys.

475

00:26:48,000 --> 00:26:50,000

Right now they're empty.

476

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

We're going to fill them with water, and after we're filling them with water,

477

00:26:53,000 --> 00:26:55,000

they'll weigh around 1200 pounds.

478

00:26:55,000 --> 00:26:58,000

The pulleys are strapped to the barriers and ready to go.

479

00:26:58,000 --> 00:27:01,000

But before getting the vehicles to pass,

480

00:27:01,000 --> 00:27:05,000

they've got to make sure Grant's remote braking rig can stop the plow.

481

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

We're going to hook it up to the 1500 feet of cable,

482

00:27:10,000 --> 00:27:14,000

tow it through the pulley system, and then brake,

483

00:27:14,000 --> 00:27:17,000

and pray that everything works.

484

00:27:17,000 --> 00:27:18,000

I'm ready to go. Are you ready?

485

00:27:18,000 --> 00:27:19,000

Yeah.

486

00:27:19,000 --> 00:27:20,000

Let's do it.

487

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

How confident are you in these brakes?

488

00:27:22,000 --> 00:27:24,000

Oh, you know, pretty confident.

489

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

Okay.

490

00:27:25,000 --> 00:27:28,000

Let's hope that confidence isn't misplaced.

491

00:27:28,000 --> 00:27:33,000

If the brakes don't work, the plow will plow straight into the barriers.

492

00:27:34,000 --> 00:27:39,000

Okay, Carrie, call out the miles per hour as you accelerate,

493

00:27:39,000 --> 00:27:43,000

and when you hit 70, get ready for a little bump.

494

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

Okay, rolling in three, two, one.

495

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

Carrie accelerates.

496

00:27:48,000 --> 00:27:52,000

Like some horror movie monster, the plow lurches into life.

497

00:27:55,000 --> 00:27:56,000

10 miles!

498

00:27:56,000 --> 00:27:59,000

They're aiming for 70 miles per hour,

499

00:27:59,000 --> 00:28:02,000

but the car is struggling to pull the plow up to speed.

500

00:28:02,000 --> 00:28:06,000

Carrie only reaches 40 before Grant has to brake.

501

00:28:10,000 --> 00:28:11,000

Okay, I'm going to brake.

502

00:28:11,000 --> 00:28:13,000

Three, two, one.

503

00:28:13,000 --> 00:28:14,000

Crap.

504

00:28:14,000 --> 00:28:17,000

The plow doesn't even slow down.

505

00:28:17,000 --> 00:28:20,000

Oh, no!

506

00:28:22,000 --> 00:28:23,000

Oh, man.

507

00:28:23,000 --> 00:28:26,000

Well, let's see if that would be 100% carnage.

508

00:28:26,000 --> 00:28:31,000

This is how things usually look after a Mythbusters experiment,

509

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

not before.

510

00:28:32,000 --> 00:28:35,000

I'm thinking we're going to build a wall of sandbags.

511

00:28:35,000 --> 00:28:36,000

At least...

512

00:28:36,000 --> 00:28:38,000

That might be our best bet to stop this thing.

513

00:28:38,000 --> 00:28:41,000

You mean, so you spent three days on a remote control trigger,

514

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

and we're going to put a wall of sandbags in front of it?

515

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

All right, this has been like the most troublesome myth I think we've ever done.

516

00:28:47,000 --> 00:28:51,000

The Curse of the Snow Plow Strikes Again.

517

00:28:54,000 --> 00:28:59,000

Back at the big tank, Adam's itching to know if his plan to pump-start a whirlpool

518

00:28:59,000 --> 00:29:03,000

will work in 9,000 gallons of water.

519

00:29:03,000 --> 00:29:06,000

So they fire up the pump and give it a whirl.

520

00:29:08,000 --> 00:29:10,000

Ho, ho, ho!

521

00:29:13,000 --> 00:29:14,000

Yeah!

522

00:29:16,000 --> 00:29:18,000

I guess we judged it right.

523

00:29:18,000 --> 00:29:20,000

No, that is so... oh, man!

524

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

In fact, it's working too well.

525

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

Nature's fastest vortex moves at 14 knots,

526

00:29:26,000 --> 00:29:30,000

about 42 revolutions a minute, which looks something like this.

527

00:29:32,000 --> 00:29:35,000

But remember, they've got two scale model ships.

528

00:29:35,000 --> 00:29:39,000

What happens when they scale down the whirlpool to match?

529

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

150th scale?

530

00:29:43,000 --> 00:29:46,000

That's one revolution per minute.

531

00:29:48,000 --> 00:29:50,000

Which looks like this.

532

00:29:52,000 --> 00:29:54,000

And the 1,500th scale container ship?

533

00:29:54,000 --> 00:29:58,000

That's one revolution every 10 minutes.

534

00:29:58,000 --> 00:30:01,000

Which is practically not moving at all.

535

00:30:01,000 --> 00:30:05,000

So after all that, their scale experiments simply won't work.

536

00:30:06,000 --> 00:30:09,000

But leave it to Adam to put a positive spin on things.

537

00:30:09,000 --> 00:30:13,000

So I think we look at this as a damage experiment.

538

00:30:13,000 --> 00:30:18,000

We see where the ship starts sustaining actual danger and damage of sinking.

539

00:30:18,000 --> 00:30:21,000

And then we calculate what the speed is.

540

00:30:21,000 --> 00:30:24,000

And see how that compares to real world whirlpools.

541

00:30:25,000 --> 00:30:29,000

Alright, this is our 1,500th scale container ship.

542

00:30:29,000 --> 00:30:33,000

It's actually 1,000 feet long in real life, like the ones behind me.

543

00:30:33,000 --> 00:30:35,000

Imagine this is the ocean.

544

00:30:35,000 --> 00:30:40,000

If this ship was real, it would be traveling at 230 miles per hour.

545

00:30:40,000 --> 00:30:45,000

And even then, it's not in any danger of being sucked down.

546

00:30:45,000 --> 00:30:49,000

So in terms of scale, of naturally occurring whirlpool,

547

00:30:49,000 --> 00:30:55,000

that's going 20 times faster than the fastest whirlpool ever recorded.

548

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

So it's like over 200 knots or something, right?

549

00:30:57,000 --> 00:31:01,000

Yeah, it's way off the charts.

550

00:31:01,000 --> 00:31:04,000

So now we have to find out what it would take.

551

00:31:05,000 --> 00:31:11,000

The pump roars into life, and soon a vortex of supernatural strength opens up.

552

00:31:15,000 --> 00:31:18,000

It sunk without trace, I believe, is the term.

553

00:31:18,000 --> 00:31:21,000

Well, it's down to Davy Jones' locker, isn't it?

554

00:31:21,000 --> 00:31:23,000

Alright.

555

00:31:23,000 --> 00:31:26,000

That's about like, you know, Mach 3 or something.

556

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

That whirlpool was like a half-mile in diameter.

557

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

Well, that's what it took.

558

00:31:34,000 --> 00:31:36,000

Time for boat test number two.

559

00:31:36,000 --> 00:31:40,000

Alright, so this is a 1,50th scale fishing trawler.

560

00:31:40,000 --> 00:31:44,000

In real life, it's about 70 feet long, and it's heading towards...

561

00:31:45,000 --> 00:31:50,000

That would be a pretty significant anomaly there.

562

00:31:50,000 --> 00:31:52,000

Whoa!

563

00:31:52,000 --> 00:31:54,000

Oh!

564

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

At this point, it's going about 130 knots,

565

00:31:57,000 --> 00:32:02,000

and that's not creating a vortex that's enough to suck this thing down.

566

00:32:02,000 --> 00:32:03,000

Yeah.

567

00:32:03,000 --> 00:32:08,000

That's four times, five times as fast as the fastest vortex ever recorded.

568

00:32:08,000 --> 00:32:10,000

But the trawler's not even taken on water.

569

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

Jess poses the question on everyone's lips.

570

00:32:13,000 --> 00:32:17,000

So what I want to know is how much it will take to suck this little boat down.

571

00:32:17,000 --> 00:32:20,000

Alright, well, let's start up the pump.

572

00:32:22,000 --> 00:32:28,000

This vortex would be 150 feet in diameter, moving at more than a hundred knots,

573

00:32:28,000 --> 00:32:30,000

anchors away,

574

00:32:30,000 --> 00:32:34,000

and the fishing trawler becomes catch of the day.

575

00:32:36,000 --> 00:32:39,000

Now, that is the kind of whirlpool they write about in fiction.

576

00:32:39,000 --> 00:32:45,000

Unfortunately, there's no such thing as that kind of whirlpool in that scale in the whirlpool.

577

00:32:45,000 --> 00:32:48,000

Yeah, it wouldn't even be great if it were.

578

00:32:48,000 --> 00:32:55,000

I think we've already proved that there is no vortex large enough that could suck down a ship as large as a container ship.

579

00:32:55,000 --> 00:33:04,000

If even a 70-foot-long ship, the tidal flow required to create a vortex that could suck it down is not possible on this planet.

580

00:33:04,000 --> 00:33:10,000

But don't pull the plug yet, Adam. We still have to see what the whirlpool will do to a person.

581

00:33:10,000 --> 00:33:12,000

Is everybody ready for diving?

582

00:33:12,000 --> 00:33:15,000

Troubled waters lie ahead.

583

00:33:18,000 --> 00:33:21,000

This has been One Problem Plow.

584

00:33:23,000 --> 00:33:26,000

This is a cursed item.

585

00:33:26,000 --> 00:33:30,000

There are cursed items in the world, and this is one of them.

586

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

It's everything we try and do to it goes wrong.

587

00:33:33,000 --> 00:33:41,000

So far, what they do know is that the pressure needed to flip their chosen vehicle is 0.21 pounds per square inch.

588

00:33:41,000 --> 00:33:47,000

But when Carrie tested her air pressure gauge, not even Jamie's truck could push anywhere near that much.

589

00:33:47,000 --> 00:33:51,000

Desperate times call for desperate measures.

590

00:33:51,000 --> 00:33:57,000

The snow plow is kicking our butts. There's no way we're going to have time to test to see how much wind the regular plow is pushing.

591

00:33:57,000 --> 00:34:03,000

Okay, well, I say to save time from here on out, we build the largest plow we possibly can.

592

00:34:03,000 --> 00:34:09,000

I mean, something ridiculously large that's, you know, as tall as a cab, but still drivable on the road.

593

00:34:09,000 --> 00:34:12,000

If that can't flip it, nothing will.

594

00:34:12,000 --> 00:34:14,000

We had a cut to the cheese.

595

00:34:14,000 --> 00:34:15,000

I like it. Let's do that.

596

00:34:15,000 --> 00:34:21,000

The plow's been behaving like Frankenstein's monster. Now it's starting to look like it, too.

597

00:34:21,000 --> 00:34:26,000

They weld a steel frame to the existing plow and attach sheets of plywood.

598

00:34:26,000 --> 00:34:32,000

They hope the added surface area will funnel a strong enough blast of air to flip the vehicle.

599

00:34:32,000 --> 00:34:39,000

Time to see if the monster plywood plow can push enough air to flip the test vehicle.

600

00:34:39,000 --> 00:34:42,000

The metal missiles will be towed towards each other.

601

00:34:42,000 --> 00:34:52,000

For maximum safety, the cable's been threaded through a system of pulleys so the tow vehicles can head away from the track and away from danger.

602

00:34:52,000 --> 00:34:59,000

Okay, here we go. In three, two, one, go.

603

00:34:59,000 --> 00:35:06,000

The plow extension will increase drag, meaning it'll be even harder to tow the lumbering beast up to 70 miles per hour.

604

00:35:06,000 --> 00:35:10,000

Nevertheless, they gun the tow vehicles.

605

00:35:10,000 --> 00:35:13,000

There's no plow's moving. Okay, there's no plow's moving.

606

00:35:13,000 --> 00:35:15,000

And the target vehicle's moving. Great.

607

00:35:15,000 --> 00:35:16,000

Nice.

608

00:35:16,000 --> 00:35:19,000

Now there's no turning back.

609

00:35:20,000 --> 00:35:25,000

The plow hits 60 miles per hour, faster than it's ever gone before.

610

00:35:25,000 --> 00:35:33,000

Will the vehicles cross paths or crash head-on?

611

00:35:33,000 --> 00:35:38,000

They pass like jousting knights. The distance between them just a few feet.

612

00:35:38,000 --> 00:35:41,000

The target vehicle doesn't so much as tilt.

613

00:35:41,000 --> 00:35:44,000

All four wheels remain firmly on the tarmac.

614

00:35:44,000 --> 00:35:48,000

After everything that's happened, finally they have a successful test.

615

00:35:48,000 --> 00:35:53,000

Now Grant just has to bring both vehicles to a gentle start.

616

00:36:01,000 --> 00:36:03,000

Okay, total devastation.

617

00:36:03,000 --> 00:36:05,000

This looks like a bad thing, but it really isn't.

618

00:36:05,000 --> 00:36:07,000

Why is it not a bad thing?

619

00:36:07,000 --> 00:36:08,000

I'll tell you why.

620

00:36:08,000 --> 00:36:13,000

We have the snow plow driving at top speed, going across the road here,

621

00:36:13,000 --> 00:36:16,000

and the car passed it and it didn't get blown off the road.

622

00:36:16,000 --> 00:36:22,000

So we show that you cannot blow a car off the road with snow plow.

623

00:36:22,000 --> 00:36:26,000

The super plow is nothing but smashed plywood and twisted metal.

624

00:36:26,000 --> 00:36:29,000

It looks like urban destruction.

625

00:36:29,000 --> 00:36:32,000

I bet this is going to be a really good shot.

626

00:36:33,000 --> 00:36:38,000

Oh yes, Gary, it is.

627

00:36:38,000 --> 00:36:42,000

The brakes obviously failed again, or did they?

628

00:36:42,000 --> 00:36:44,000

Grant's got a confession.

629

00:36:44,000 --> 00:36:47,000

I forgot to activate the brakes.

630

00:36:47,000 --> 00:36:49,000

You didn't activate the brakes!

631

00:36:49,000 --> 00:36:52,000

Well, I activated an after-crash into the barrier.

632

00:36:55,000 --> 00:36:58,000

I knew there was something wrong because that went right through.

633

00:36:58,000 --> 00:37:00,000

Yeah, well, that was cool.

634

00:37:00,000 --> 00:37:04,000

I think that's why my snow plow looks like that.

635

00:37:04,000 --> 00:37:09,000

Strangely enough, no one appears too upset.

636

00:37:09,000 --> 00:37:11,000

I'm glad Grant didn't hit the brakes,

637

00:37:11,000 --> 00:37:14,000

because there's nothing better than seeing that truck destroyed

638

00:37:14,000 --> 00:37:16,000

because it's given us so many problems.

639

00:37:16,000 --> 00:37:17,000

I'm happy.

640

00:37:20,000 --> 00:37:21,000

What is this?

641

00:37:21,000 --> 00:37:23,000

This is the door from the snow plow.

642

00:37:23,000 --> 00:37:24,000

We decided to keep it.

643

00:37:24,000 --> 00:37:27,000

Why? I don't know, because we had so many problems with that snow plow.

644

00:37:27,000 --> 00:37:31,000

We should just melt it down, but I guess we're going to keep it as a reminder.

645

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

I take it it wasn't the easiest myth, the bust.

646

00:37:33,000 --> 00:37:36,000

No, we did everything we possibly could.

647

00:37:36,000 --> 00:37:39,000

We used an infeasibly large snow plow,

648

00:37:39,000 --> 00:37:42,000

the biggest plow that our expert concedes he'd ever seen.

649

00:37:42,000 --> 00:37:45,000

Also, we used a really small lightweight car.

650

00:37:45,000 --> 00:37:48,000

We did get the car to pass the snow plow about 4-6 feet apart.

651

00:37:48,000 --> 00:37:50,000

At 60 miles an hour, nothing happened.

652

00:37:50,000 --> 00:37:51,000

Nothing.

653

00:37:51,000 --> 00:37:52,000

It didn't flip.

654

00:37:52,000 --> 00:37:54,000

So that would make this one pretty easily...

655

00:37:54,000 --> 00:37:56,000

Busted. Busted?

656

00:37:56,000 --> 00:37:57,000

Clearly busted.

657

00:37:57,000 --> 00:38:00,000

You guys aren't looking forward to revisiting it anytime soon?

658

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

I don't think we need to.

659

00:38:02,000 --> 00:38:03,000

No.

660

00:38:03,000 --> 00:38:05,000

Don't write to Tori about this one.

661

00:38:05,000 --> 00:38:06,000

Don't do it again.

662

00:38:06,000 --> 00:38:10,000

And just to make sure the snow plow's curse is lifted forever,

663

00:38:10,000 --> 00:38:13,000

the Mythbusters take sweet revenge.

664

00:38:27,000 --> 00:38:30,000

Okay, it's over.

665

00:38:30,000 --> 00:38:32,000

It's over now.

666

00:38:32,000 --> 00:38:33,000

The curse is over.

667

00:38:33,000 --> 00:38:35,000

The curse has ended.

668

00:38:35,000 --> 00:38:37,000

That's it. No more.

669

00:38:45,000 --> 00:38:48,000

The Whirlpool of Death Myth has gone down the gurgling.

670

00:38:48,000 --> 00:38:51,000

Adam and Jamie have shown that no natural whirlpool

671

00:38:51,000 --> 00:38:54,000

is powerful enough to swallow a ship.

672

00:38:54,000 --> 00:38:57,000

It's down to Davy Jones' locker, isn't it?

673

00:38:57,000 --> 00:38:59,000

But how about a person?

674

00:38:59,000 --> 00:39:01,000

Well, we're about to find out.

675

00:39:01,000 --> 00:39:05,000

How many other people get a chance to jump into a huge man named Fortex?

676

00:39:05,000 --> 00:39:08,000

Don't think many are queuing up, actually, Adam.

677

00:39:08,000 --> 00:39:11,000

Is everybody ready for diving?

678

00:39:11,000 --> 00:39:15,000

As excited as he is, Adam won't just dive into the tank.

679

00:39:15,000 --> 00:39:19,000

He'll hold onto a trapeze which Jamie can raise or lower.

680

00:39:19,000 --> 00:39:21,000

Even so, it's risky.

681

00:39:21,000 --> 00:39:24,000

If Adam loses his grip and gets swallowed,

682

00:39:24,000 --> 00:39:28,000

the emergency air supply will give him just a handful of breaths.

683

00:39:29,000 --> 00:39:31,000

Alright, I'm going in.

684

00:39:31,000 --> 00:39:33,000

Alright, be careful.

685

00:39:37,000 --> 00:39:41,000

Oh, that's...this, that's a bad...

686

00:39:41,000 --> 00:39:46,000

Okay, I'm holding onto the trapeze

687

00:39:46,000 --> 00:39:49,000

and I'm really nicely buoyant

688

00:39:49,000 --> 00:39:52,000

and I'm ready for the pump.

689

00:39:52,000 --> 00:39:55,000

The water will be moving at the same speed

690

00:39:55,000 --> 00:39:59,000

as the world's fastest natural whirlpool, over 14 knots.

691

00:40:01,000 --> 00:40:03,000

Starting to form, Adam.

692

00:40:04,000 --> 00:40:06,000

Oh, that is cool!

693

00:40:06,000 --> 00:40:08,000

The Fortex gathers strength.

694

00:40:08,000 --> 00:40:11,000

Adam starts to feel suction, pulling him down.

695

00:40:11,000 --> 00:40:13,000

Back!

696

00:40:13,000 --> 00:40:14,000

Whoa!

697

00:40:14,000 --> 00:40:17,000

Oh, wow, I can totally feel it in my feet.

698

00:40:17,000 --> 00:40:19,000

That is cool!

699

00:40:19,000 --> 00:40:21,000

Woo!

700

00:40:21,000 --> 00:40:22,000

Wow!

701

00:40:22,000 --> 00:40:26,000

After less than a minute, Adam's whirlpool pirouette

702

00:40:26,000 --> 00:40:28,000

is making him giddy.

703

00:40:28,000 --> 00:40:31,000

Jamie cuts the pump before he can lose his grip.

704

00:40:33,000 --> 00:40:37,000

Adam's body slowly stops spinning, but not his head.

705

00:40:37,000 --> 00:40:39,000

Are you okay?

706

00:40:39,000 --> 00:40:42,000

Have you ever really looked at the sky?

707

00:40:43,000 --> 00:40:46,000

For my money, that was about as good as it gets

708

00:40:46,000 --> 00:40:48,000

in terms of a whirlpool.

709

00:40:48,000 --> 00:40:51,000

Well, I would agree, actually, and I would say

710

00:40:51,000 --> 00:40:53,000

that if I hadn't been tethered,

711

00:40:53,000 --> 00:40:56,000

I would definitely have been sucked down by that.

712

00:40:56,000 --> 00:41:00,000

But, so, I would say that we could conclude

713

00:41:00,000 --> 00:41:04,000

a naturally occurring whirlpool could be lethal to a swimmer,

714

00:41:04,000 --> 00:41:06,000

but not a boat.

715

00:41:06,000 --> 00:41:08,000

We didn't really see it go all the way down

716

00:41:08,000 --> 00:41:10,000

because I was kind of keeping you up out of the water.

717

00:41:10,000 --> 00:41:12,000

Do you feel comfortable with letting yourself

718

00:41:12,000 --> 00:41:15,000

be lowered a little further to where you're going

719

00:41:15,000 --> 00:41:17,000

to get your head underwater?

720

00:41:17,000 --> 00:41:19,000

Yeah, I don't feel that great.

721

00:41:19,000 --> 00:41:21,000

I feel a little queasy, but I think I can handle

722

00:41:21,000 --> 00:41:23,000

one more test.

723

00:41:23,000 --> 00:41:25,000

When Adam says he's feeling queasy,

724

00:41:25,000 --> 00:41:29,000

they should know something's up or about to be up.

725

00:41:29,000 --> 00:41:32,000

No sooner does Jamie lower the trapeze...

726

00:41:34,000 --> 00:41:36,000

Stop it!

727

00:41:36,000 --> 00:41:38,000

Stop it!

728

00:41:38,000 --> 00:41:40,000

If the experiment reaches its predictable,

729

00:41:40,000 --> 00:41:43,000

some would say inevitable, conclusion.

730

00:41:46,000 --> 00:41:49,000

Yo, Eve, oh, indeed!

731

00:41:49,000 --> 00:41:51,000

Did you get that?

732

00:41:51,000 --> 00:41:53,000

Oh, yeah, we got it.

733

00:41:53,000 --> 00:41:55,000

Well, that's great.

734

00:41:55,000 --> 00:41:57,000

Smells like pizza!

735

00:41:57,000 --> 00:41:59,000

Welcome aboard, Jess.

736

00:42:02,000 --> 00:42:04,000

Yeah!

737

00:42:04,000 --> 00:42:06,000

The moment you gave me a little slack,

738

00:42:06,000 --> 00:42:09,000

it was really, really clear that even at that slow speed,

739

00:42:09,000 --> 00:42:11,000

the force was really powerful.

740

00:42:11,000 --> 00:42:13,000

Yeah.

741

00:42:13,000 --> 00:42:15,000

I'm done with science for today.

742

00:42:15,000 --> 00:42:17,000

You don't look so good, Adam.

743

00:42:17,000 --> 00:42:20,000

No, if I hadn't been tethered to the trapeze,

744

00:42:20,000 --> 00:42:22,000

I would have totally gotten sucked down.

745

00:42:22,000 --> 00:42:24,000

Absolutely.

746

00:42:24,000 --> 00:42:26,000

The force was really shocking.

747

00:42:26,000 --> 00:42:30,000

And to boot, I was booting.

748

00:42:30,000 --> 00:42:32,000

I mean, it made me really sick.

749

00:42:32,000 --> 00:42:34,000

There's no way you'd be able to survive that.

750

00:42:34,000 --> 00:42:36,000

If you were in scuba gear,

751

00:42:36,000 --> 00:42:38,000

you'd be aspirating into your scuba gear.

752

00:42:38,000 --> 00:42:40,000

It's just...

753

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

That is a deadly thing we made.

754

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

Well, as near as I can tell,

755

00:42:44,000 --> 00:42:46,000

that was around 14 knots.

756

00:42:46,000 --> 00:42:48,000

That's close to the record speed

757

00:42:48,000 --> 00:42:51,000

that's ever been recorded in Oceanic Whirlpool.

758

00:42:51,000 --> 00:42:53,000

So where does that leave us for this myth?

759

00:42:53,000 --> 00:42:55,000

Busted, plausible or confirmed?

760

00:42:55,000 --> 00:42:57,000

Well, I would say that would be busted.

761

00:42:57,000 --> 00:42:59,000

I'd say for boats, it's busted.

762

00:42:59,000 --> 00:43:01,000

And for people, it's plausible.

763

00:43:01,000 --> 00:43:03,000

Don't go... Yeah.

764

00:43:03,000 --> 00:43:05,000

...on the water if you see a Whirlpool.

765

00:43:05,000 --> 00:43:06,000

You okay with that?

766

00:43:06,000 --> 00:43:08,000

Oh, yeah, definitely.

767

00:43:08,000 --> 00:43:10,000

Go get warm, buddy.