

1

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

It may not look like it, but we're professionals.

2

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

Do us a favor.

3

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

Don't try this at home!

4

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

Whoa!

5

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

On this episode of Mythbusters...

6

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

Jamie, don't jump. You have so much to live for.

7

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

Adam and Jamie take out the trash.

8

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

Those things will get you.

9

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

Ow!

10

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

As they test the movie-nith of a dumpster diving escape.

11

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

A perfect hit!

12

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

And find out if legging it after a trash landing is legit.

13

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

Nice job.

14

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

Thank you.

15

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

Meanwhile, Carrie, Tori and Grant go off the deep end.

16

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

With an old-time diving myth.

17

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

Time to go diving.

18

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

Could an air supply failure up top...

19

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

You're kidding me. This is working?

20

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

Spell a spectacular squeeze and certain death down below.

21

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

Look at where it's at!

22

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

Who are the Mythbusters?

23

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

Adam Savage.

24

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

I feel perfectly normal.

25

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

And Jamie Heinemann.

26

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

Payne is your friend.

27

00:01:04,000 --> 00:01:09,000

Between them more than 30 years of special effects experience.

28

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

Joining them...

29

00:01:11,000 --> 00:01:12,000

Grant Imahara.

30

00:01:12,000 --> 00:01:13,000

Hurry!

31

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

Carrie Byron.

32

00:01:14,000 --> 00:01:18,000

And I'm starting to get the idea that this shouldn't be done inside.

33

00:01:18,000 --> 00:01:19,000

Tori Bellegi.

34

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

Eek!

35

00:01:20,000 --> 00:01:22,000

And featuring Jesse Cohn.

36

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

That was awesome!

37

00:01:23,000 --> 00:01:25,000

They don't just tell the Myths.

38

00:01:25,000 --> 00:01:30,000

They put them to the test.

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

First up, Adam and Jamie dive into a film fable.

40

00:01:42,000 --> 00:01:45,000

So here you have a movie metaphor.

41

00:01:45,000 --> 00:01:47,000

I do, old beam.

42

00:01:47,000 --> 00:01:50,000

It seems that within the logic of an action movie.

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

Any building can be escaped from by handily jumping into a dumpster park next to it.

44

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

Hop out, dust yourself off and walk away unharmed.

45

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

Well that sounds like rubbish.

46

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

It's an action movie cliché.

47

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

After a roof run around with nowhere else to go.

48

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

A dive into a dumpster equals a guaranteed getaway.

49

00:02:09,000 --> 00:02:15,000

But can you really get up and go every time after a trash landing?

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

So how's this gonna go down?

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00:02:17,000 --> 00:02:23,000

Well I figured that any line of investigation we pursue is ultimately hopefully gonna end with one of us leaping into a dumpster.

52

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

So first things first, I think we need to be trained how to fall safely.

53

00:02:28,000 --> 00:02:32,000

I think we need to call one of the stunt men we know to teach us.

54

00:02:32,000 --> 00:02:34,000

Well I guess it's time to jump right in, huh?

55

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

Alright.

56

00:02:37,000 --> 00:02:42,000

Yep, this myth can only end one way with an actual dumpster dive.

57

00:02:42,000 --> 00:02:46,000

And to make sure our mythbusters will live to bust another day,

58

00:02:46,000 --> 00:02:50,000

it's off to Treasure Island for Stunt Falling 101.

59

00:02:50,000 --> 00:02:53,000

So in our ongoing training to be action movie heroes,

60

00:02:53,000 --> 00:02:56,000

we are about to learn how to take a high fall safely.

61

00:02:56,000 --> 00:02:59,000

And this is the building we're gonna start with.

62

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

This is the airbag that's gonna break our fall.

63

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

And this...

64

00:03:05,000 --> 00:03:07,000

is the guy that's gonna train us.

65

00:03:07,000 --> 00:03:11,000

That's Randy Lam, stunt coordinator and fall guide.

66

00:03:12,000 --> 00:03:14,000

This is cool isn't it?

67

00:03:14,000 --> 00:03:18,000

As Jamie said, they're not starting on the dumpsters just yet.

68

00:03:18,000 --> 00:03:20,000

First, there's this.

69

00:03:22,000 --> 00:03:25,000

How does this airbag work, you ask?

70

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

Well, it's called a two-stage airbag and it works thusly.

71

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

The first stage, this top part, slows you down by popping,

72

00:03:31,000 --> 00:03:34,000

by opening through this very portal that I climbed out of.

73

00:03:34,000 --> 00:03:37,000

The second stage, that bottom layer, stops you.

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00:03:37,000 --> 00:03:39,000

It does not deflate.

75

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

And that's key because the name of this game is...

76

00:03:43,000 --> 00:03:45,000

Deceleration.

77

00:03:46,000 --> 00:03:49,000

Like they say, it's not the fall that kills you,

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00:03:49,000 --> 00:03:51,000

it's the sudden stop.

79

00:03:51,000 --> 00:03:53,000

A jump from a height onto a hard surface

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00:03:53,000 --> 00:03:56,000

will bring you to a stop very quickly.

81

00:03:56,000 --> 00:03:59,000

And it's this sudden impact that is potentially fatal.

82

00:03:59,000 --> 00:04:03,000

But landing on a soft surface maximizes deceleration,

83

00:04:03,000 --> 00:04:06,000

dissipating impact over a longer time,

84

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

reducing the risk of injury.

85

00:04:08,000 --> 00:04:11,000

Randy, falling 101, what do we have to know?

86

00:04:11,000 --> 00:04:14,000

When you jump, you want to make sure that you land flat on your back

87

00:04:14,000 --> 00:04:17,000

and use up as much volume as possible.

88

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

Awesome, can we get started?

89

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

Sure, who wants to go first?

90

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

I want to go first, is that okay if I go first?

91

00:04:23,000 --> 00:04:25,000

Can I go first? Is that cool?

92

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

Unsurprisingly, Adam is falling over himself to get started.

93

00:04:29,000 --> 00:04:31,000

Less is more.

94

00:04:31,000 --> 00:04:33,000

Yeah, it's a lot higher now.

95

00:04:33,000 --> 00:04:35,000

Here we go.

96

00:04:35,000 --> 00:04:39,000

But at a height of 13 feet, getting the technique right is vital.

97

00:04:39,000 --> 00:04:41,000

Place your left foot right here.

98

00:04:41,000 --> 00:04:43,000

Now you're going to take one giant step out

99

00:04:43,000 --> 00:04:46,000

and lay back just like you were laying into a recliner.

100

00:04:52,000 --> 00:04:54,000

Perfect.

101

00:04:55,000 --> 00:04:59,000

Wow, that's cool.

102

00:04:59,000 --> 00:05:03,000

And if at first you succeed, why not go again,

103

00:05:03,000 --> 00:05:06,000

and again, and again.

104

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

It looked like you did it perfectly.

105

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

And you got that out of his system.

106

00:05:11,000 --> 00:05:13,000

That was awesome.

107

00:05:13,000 --> 00:05:15,000

Don't look now, but there's a height of another roof of that building

108

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

and I think he's going to jump.

109

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

Jamie, don't jump, you have so much to live for.

110

00:05:24,000 --> 00:05:29,000

So, you know, it's a little bit of a jolt, but it works.

111

00:05:29,000 --> 00:05:33,000

Much better, excellent.

112

00:05:33,000 --> 00:05:35,000

I think you guys have both got this height down.

113

00:05:35,000 --> 00:05:37,000

Awesome, because I want to go higher.

114

00:05:37,000 --> 00:05:39,000

Can we go higher? Let's go.

115

00:05:39,000 --> 00:05:43,000

Yep, it's as easy as moving the airbag to a new location.

116

00:05:43,000 --> 00:05:45,000

Or is it?

117

00:05:45,000 --> 00:05:48,000

Well, we're about to bump it up a notch and make no mistake.

118

00:05:48,000 --> 00:05:51,000

When you're looking down at that bag, there's a pretty big difference

119

00:05:51,000 --> 00:05:57,000

between 13 feet and 20 feet.

120

00:05:57,000 --> 00:06:01,000

The stakes just went up, and so did my adrenaline level.

121

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

And this time, Jamie's drawn the short straw to jump first.

122

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

Ah.

123

00:06:16,000 --> 00:06:18,000

Perfect.

124

00:06:18,000 --> 00:06:20,000

How are you feeling?

125

00:06:20,000 --> 00:06:22,000

That was no worse than the smaller one.

126

00:06:22,000 --> 00:06:24,000

Cool, my turn.

127

00:06:29,000 --> 00:06:31,000

Perfect.

128

00:06:32,000 --> 00:06:34,000

Perfect.

129

00:06:34,000 --> 00:06:36,000

Nice job.

130

00:06:36,000 --> 00:06:37,000

How'd that feel?

131

00:06:37,000 --> 00:06:39,000

It felt great.

132

00:06:39,000 --> 00:06:43,000

And now that both the guys have mastered the art of falling from a great height,

133

00:06:43,000 --> 00:06:45,000

they can get their hands dirty.

134

00:06:45,000 --> 00:06:47,000

I think I'm getting this done.

135

00:06:47,000 --> 00:06:48,000

I think you are.

136

00:06:48,000 --> 00:06:49,000

What's next?

137

00:06:49,000 --> 00:06:51,000

You're going to love this.

138

00:06:56,000 --> 00:07:00,000

Now from high diving to deep sea diving.

139

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

Before the days of scuba diving, divers would go down in those old suits

140

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

with those brass helmets just like this, right?

141

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

Sure.

142

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

They would pressurize their suit using a compressor on a boat at the surface.

143

00:07:11,000 --> 00:07:13,000

To counteract the external water pressure.

144

00:07:13,000 --> 00:07:14,000

Exactly.

145

00:07:14,000 --> 00:07:16,000

Well, that sounds like an accident waiting to happen.

146

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

And that's what this myth is about.

147

00:07:18,000 --> 00:07:21,000

If that compressor were to stop or the air hose were to get cut,

148

00:07:21,000 --> 00:07:24,000

that diver would come to a grisly end.

149

00:07:24,000 --> 00:07:27,000

Yeah, without the high pressure air helping to keep the suit inflated,

150

00:07:27,000 --> 00:07:29,000

it would simply crush under the weight of all the water.

151

00:07:29,000 --> 00:07:30,000

That's right.

152

00:07:30,000 --> 00:07:33,000

And the pressure would change so suddenly, it would be so dramatic,

153

00:07:33,000 --> 00:07:36,000

that it would literally squish the diver into the helmet.

154

00:07:37,000 --> 00:07:38,000

Sick.

155

00:07:38,000 --> 00:07:39,000

I love it.

156

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

Yep, according to this macabre maritime myth,

157

00:07:43,000 --> 00:07:46,000

early deep sea diving suits had a flaw,

158

00:07:46,000 --> 00:07:51,000

whereby a failure in the air supply could cause a drastic depressurization.

159

00:07:51,000 --> 00:07:57,000

But could the pressure differential really put the squeeze on an entire human body?

160

00:07:57,000 --> 00:07:59,000

Or is this a load of pulp fiction?

161

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

So how do we test this?

162

00:08:01,000 --> 00:08:04,000

Well, ultimately I think we need to build one of these suits,

163

00:08:04,000 --> 00:08:07,000

put a human analog in it, drop it to the bottom of the ocean,

164

00:08:07,000 --> 00:08:09,000

cut the line and see what happens.

165

00:08:09,000 --> 00:08:10,000

See if we get instant sausages.

166

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

Or whatever.

167

00:08:12,000 --> 00:08:14,000

Okay, before we do all that, I think we need to do two things.

168

00:08:14,000 --> 00:08:16,000

We need to go talk to an expert,

169

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

and we need to do a few proof of concept tests.

170

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

And at San Francisco Maritime National Historical Park,

171

00:08:22,000 --> 00:08:26,000

ex-navy diver Mike Ward is just the expert Carrie needs.

172

00:08:27,000 --> 00:08:29,000

So what kind of diving were these suits used for?

173

00:08:29,000 --> 00:08:32,000

They were used for salvage diving,

174

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

mariculture diving, sea harvesting, construction.

175

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

They were used for virtually every kind of diving.

176

00:08:39,000 --> 00:08:43,000

This was the very first real type of commercial diving suit.

177

00:08:43,000 --> 00:08:45,000

How deep do they go?

178

00:08:45,000 --> 00:08:47,000

Down to 300 feet on average.

179

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

300 feet is quite a depth,

180

00:08:49,000 --> 00:08:51,000

but as Mike explains how the suit works,

181

00:08:51,000 --> 00:08:54,000

there's one feature that's troubling Carrie.

182

00:08:54,000 --> 00:08:56,000

The non-return valve.

183

00:08:56,000 --> 00:08:58,000

In the event that the hose gets cut,

184

00:08:58,000 --> 00:09:03,000

the pressure differential automatically forces the valve shut.

185

00:09:03,000 --> 00:09:05,000

It doesn't allow anything to go up the umbilical.

186

00:09:05,000 --> 00:09:08,000

You need a dive suit without a non-return valve

187

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

for this myth to be possible.

188

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

I would test it as though the non-return valve

189

00:09:12,000 --> 00:09:13,000

wasn't working right.

190

00:09:13,000 --> 00:09:15,000

A lot of times divers wouldn't do the maintenance.

191

00:09:15,000 --> 00:09:18,000

The valve would get stuck and that would cause the failure.

192

00:09:18,000 --> 00:09:21,000

So according to our dive master,

193

00:09:21,000 --> 00:09:24,000

the particulars of this myth are positively plausible.

194

00:09:25,000 --> 00:09:28,000

Which means it's time to get down to business.

195

00:09:28,000 --> 00:09:29,000

As always on MythBusters,

196

00:09:29,000 --> 00:09:32,000

we're going to start out in the small scale.

197

00:09:32,000 --> 00:09:34,000

Basically I'm going to make a tiny little diver

198

00:09:34,000 --> 00:09:35,000

that we can do some experiments on

199

00:09:35,000 --> 00:09:37,000

and find out what kind of effect suction

200

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

really is going to have

201

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

and let us design our big experiment.

202

00:09:40,000 --> 00:09:43,000

And as Carrie's voodoo diver takes shape,

203

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

it's clear who the sacrificial mini-me will be.

204

00:09:47,000 --> 00:09:50,000

The diver is becoming a little grand.

205

00:09:50,000 --> 00:09:52,000

Carrie's sculpture turned out great.

206

00:09:52,000 --> 00:09:53,000

It looks just like Grant.

207

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

But in order to test the small scale,

208

00:09:55,000 --> 00:09:57,000

I need to turn this clay figure

209

00:09:57,000 --> 00:09:58,000

into a ballistics gel figure

210

00:09:58,000 --> 00:10:00,000

wearing a watertight diving suit.

211

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

Now the way I'm going to do that is

212

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

I'm going to make a plaster mold of the sculpture.

213

00:10:07,000 --> 00:10:08,000

Hey look at that.

214

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

It's like Han Solo frozen in carbonite.

215

00:10:11,000 --> 00:10:13,000

That way I'll have two halves of a mold

216

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

that I can paint in latex and cloth.

217

00:10:15,000 --> 00:10:17,000

So that way it will be both watertight

218

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

and it will be durable.

219

00:10:23,000 --> 00:10:25,000

Once the latex is dry,

220

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

I'll put the two halves together

221

00:10:27,000 --> 00:10:30,000

and then I'll fill the whole thing up with ballistics gel.

222

00:10:31,000 --> 00:10:33,000

Once the ballistics gel sets,

223

00:10:33,000 --> 00:10:34,000

I'll be able to open up the mold

224

00:10:34,000 --> 00:10:37,000

and what I'll be left with is a mini-Grant diver

225

00:10:37,000 --> 00:10:41,000

made out of ballistics gel in a watertight diving suit.

226

00:10:44,000 --> 00:10:46,000

Oh look at that.

227

00:10:46,000 --> 00:10:48,000

Look his little suits there.

228

00:10:48,000 --> 00:10:49,000

It's loose on his body.

229

00:10:49,000 --> 00:10:50,000

That's perfect.

230

00:10:50,000 --> 00:10:51,000

It'll fill right up there.

231

00:10:51,000 --> 00:10:53,000

This is going to be perfect.

232

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

I got to do a little bit of repair work on the seams,

233

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

but we're good to go.

234

00:10:57,000 --> 00:10:58,000

It's going to work.

235

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

Now all he needs is a helmet.

236

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

Which is exactly what his life-size namesake is working on.

237

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

Now this is an old-timey dive helmet

238

00:11:06,000 --> 00:11:08,000

similar to the one they describe in the myth.

239

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

And I'm going to be simulating it

240

00:11:10,000 --> 00:11:13,000

using this clear acrylic.

241

00:11:13,000 --> 00:11:16,000

And I've chosen this so that if we do in fact

242

00:11:16,000 --> 00:11:17,000

see a squeeze like in the myth

243

00:11:17,000 --> 00:11:19,000

that goes up into the helmet,

244

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

we'll have a full 360 view

245

00:11:22,000 --> 00:11:23,000

so that we won't miss anything.

246

00:11:23,000 --> 00:11:25,000

And the finishing touch?

247

00:11:25,000 --> 00:11:28,000

A gauge to keep an eye on the pressure inside the suit

248

00:11:28,000 --> 00:11:31,000

once they throw him in at the deep end.

249

00:11:33,000 --> 00:11:37,000

Later, can you flee the scene after a trash landing?

250

00:11:38,000 --> 00:11:41,000

But first, coming up on Mythbusters,

251

00:11:41,000 --> 00:11:44,000

will we squish this mini-diver's body into his helmet?

252

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

The Mythbusters are taking a dive

253

00:11:53,000 --> 00:11:56,000

with the movie myth of a dumpster escape.

254

00:11:56,000 --> 00:11:59,000

And after a crash course in falling...

255

00:11:59,000 --> 00:12:02,000

It's like your ass is one with the target.

256

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

They're ready to talk trash.

257

00:12:05,000 --> 00:12:10,000

According to Hollywood, any dumpster is a guaranteed getaway.

258

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

But what exactly will you find inside one?

259

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

This looks like the place.

260

00:12:15,000 --> 00:12:16,000

Look at all these dumpsters.

261

00:12:17,000 --> 00:12:20,000

We've come to the natural habitat of the dumpster

262

00:12:20,000 --> 00:12:22,000

waste management facility,

263

00:12:22,000 --> 00:12:25,000

and we've got our pick to look for.

264

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

To find out if here, in the real world,

265

00:12:27,000 --> 00:12:31,000

a dumpster is the soft landing this myth suggests.

266

00:12:35,000 --> 00:12:38,000

Looks like all cardboard, but I see some wood

267

00:12:38,000 --> 00:12:40,000

and some rebar down there.

268

00:12:40,000 --> 00:12:41,000

Rebar?

269

00:12:41,000 --> 00:12:44,000

And after a savage scavenge,

270

00:12:44,000 --> 00:12:48,000

it's clear a fall into this dumpster will be anything but soft.

271

00:12:48,000 --> 00:12:50,000

There's all wood under here.

272

00:12:50,000 --> 00:12:52,000

This dumpster is deadly.

273

00:12:52,000 --> 00:12:56,000

So they move on to two more dumpsters picked at random.

274

00:12:56,000 --> 00:13:01,000

All this blue stuff says to me, hospital waste.

275

00:13:01,000 --> 00:13:05,000

I kind of don't want to mess around with this one too much.

276

00:13:05,000 --> 00:13:08,000

You gave me the choice of jumping in to a dumpster

277

00:13:08,000 --> 00:13:11,000

full of hospital waste or dealing with the bad guys?

278

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

I'm going to think pretty carefully about dealing with the bad guys.

279

00:13:19,000 --> 00:13:21,000

Hey, that's kind of neat.

280

00:13:21,000 --> 00:13:23,000

Open cardboard boxes.

281

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

Except again, there's this hidden stuff in there like those pallets.

282

00:13:28,000 --> 00:13:30,000

Plus, the deeper into the dumpster they dig,

283

00:13:30,000 --> 00:13:32,000

you've got to aim away from the pallets.

284

00:13:32,000 --> 00:13:34,000

Those things will get you.

285

00:13:34,000 --> 00:13:36,000

The worse the news.

286

00:13:36,000 --> 00:13:40,000

This is clearly one of those situations where you can't judge a book by its cover.

287

00:13:40,000 --> 00:13:43,000

You're on top of the building looking down into the dumpster.

288

00:13:43,000 --> 00:13:46,000

It looks nice and soft, but you don't know what's underneath it.

289

00:13:46,000 --> 00:13:48,000

You could be in for a nasty surprise.

290

00:13:48,000 --> 00:13:51,000

For soft landings, there's zero for three.

291

00:13:51,000 --> 00:13:56,000

But if any dumpster meets the cushioning criteria, Kevin Floyd will know about it.

292

00:13:56,000 --> 00:14:01,000

Do you ever have dumpsters come in that just have a bunch of soft stuff inside?

293

00:14:01,000 --> 00:14:03,000

Occasionally.

294

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

When we get about 10 to 12,000 loads a year,

295

00:14:05,000 --> 00:14:09,000

maybe one or two a month would come like that.

296

00:14:09,000 --> 00:14:13,000

What I can think of is items from a factory with foam.

297

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

That'd be a nice soft loading.

298

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

But for the most part, it's mostly mixed like what you see.

299

00:14:18,000 --> 00:14:21,000

Well, I think our path is pretty clear.

300

00:14:21,000 --> 00:14:23,000

Yeah. Down.

301

00:14:23,000 --> 00:14:28,000

So after their excursion to Dumpsterville, what have they learned?

302

00:14:28,000 --> 00:14:32,000

Well, you know, jumping into any old dumpsters, not a good idea.

303

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

You never know what you're going to get.

304

00:14:34,000 --> 00:14:36,000

I mean, it could be really dangerous.

305

00:14:36,000 --> 00:14:38,000

It's not looking good for the myth.

306

00:14:38,000 --> 00:14:40,000

By the same token, you could get lucky.

307

00:14:40,000 --> 00:14:44,000

I mean, for all you know, you could be jumping into the dumpster of a pillow factory.

308

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

I think we should narrow down the field to choose an ideal material,

309

00:14:48,000 --> 00:14:51,000

a best case scenario, and fall into that.

310

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

And see if it's possible.

311

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

Exactly.

312

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

Works for me.

313

00:14:54,000 --> 00:14:59,000

And courtesy of Garbage Guru Kevin, they've assembled four likely suspects.

314

00:14:59,000 --> 00:15:03,000

What we're going to do with each of our materials is we're going to put them in a stack,

315

00:15:03,000 --> 00:15:05,000

and I'm basically going to jump up.

316

00:15:05,000 --> 00:15:07,000

We use the high speed camera to analyze my jumps.

317

00:15:07,000 --> 00:15:10,000

And for those of you playing at home, what we're looking for is the material

318

00:15:10,000 --> 00:15:16,000

that decelerates me the best, that slows my descent better than all of the others.

319

00:15:16,000 --> 00:15:19,000

That's the one we're going to use for our final test.

320

00:15:19,000 --> 00:15:21,000

First up, potential filler number one.

321

00:15:21,000 --> 00:15:23,000

Cardboard boxes.

322

00:15:23,000 --> 00:15:26,000

We've used them before on the show for safety.

323

00:15:26,000 --> 00:15:28,000

And they do crush.

324

00:15:28,000 --> 00:15:32,000

You find them everywhere in dumpsters, so they might be just the thing for our test.

325

00:15:32,000 --> 00:15:33,000

Right.

326

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

It wasn't as spectacular as I was afraid it would be.

327

00:15:40,000 --> 00:15:43,000

It did collapse, and it did soften your landing, didn't it?

328

00:15:43,000 --> 00:15:45,000

Yeah, it certainly did.

329

00:15:45,000 --> 00:15:47,000

And alternative number two.

330

00:15:47,000 --> 00:15:48,000

Shredded paper.

331

00:15:48,000 --> 00:15:51,000

Not supposed to be finding it in a dumpster because it was supposed to recycle it,

332

00:15:51,000 --> 00:15:53,000

but it could happen.

333

00:15:53,000 --> 00:15:55,000

Three, two, one.

334

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

Dumpster option number three.

335

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

Packs.

336

00:16:01,000 --> 00:16:05,000

If they use them to protect objects inside a box from shock,

337

00:16:05,000 --> 00:16:08,000

they ought to work to protect us from shock.

338

00:16:08,000 --> 00:16:13,000

It's sort of a neater stack, but I don't know whether it's going to crush as much as the boxes did.

339

00:16:13,000 --> 00:16:15,000

Well, let's see.

340

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

They're bad, really.

341

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

And the final contender.

342

00:16:22,000 --> 00:16:23,000

Foam rubber.

343

00:16:23,000 --> 00:16:27,000

Any place that makes upholstery products is going to have foam cutoffs.

344

00:16:27,000 --> 00:16:32,000

If it's good enough to sit on or sleep on, my guess is that it's good enough to jump into.

345

00:16:35,000 --> 00:16:38,000

Ooh, that was nice.

346

00:16:38,000 --> 00:16:40,000

That definitely compressed more.

347

00:16:40,000 --> 00:16:43,000

It compressed more. It was a nice, soft landing.

348

00:16:43,000 --> 00:16:48,000

And after taking a look at the high speeds, it's clear the slowest landing was the foam.

349

00:16:48,000 --> 00:16:53,000

Compared to the other materials, it brought Adam to a stop in double the time,

350

00:16:53,000 --> 00:16:57,000

meaning it put the least impact on his body.

351

00:16:57,000 --> 00:17:00,000

For my money, I think we're agreed it's the foam.

352

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

Yeah. Foam rubber's our winner.

353

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

Not only did it give us the softest landing, but it seemed to be the most reliable,

354

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

the least likely to kind of move out of our way when we jumped into it.

355

00:17:10,000 --> 00:17:13,000

So that's what we're going to be filling our dumpster with.

356

00:17:16,000 --> 00:17:19,000

In this old time diving disaster myth,

357

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

an air supply failure puts the squeeze on an entire diver.

358

00:17:23,000 --> 00:17:28,000

So could a mistake up top mean death down below?

359

00:17:28,000 --> 00:17:33,000

To find out, the team has found the perfect location.

360

00:17:35,000 --> 00:17:37,000

With an added bonus.

361

00:17:37,000 --> 00:17:39,000

That is so cool.

362

00:17:39,000 --> 00:17:43,000

And after they're brushed with the life aquatic, it's down to business.

363

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

We're at Six Flags Discovery Kingdom in Vallejo, where they have a diving tank

364

00:17:46,000 --> 00:17:48,000

that's deeper than any pool we can find.

365

00:17:48,000 --> 00:17:52,000

So we figured this is the best place for us to do all of our small scale testing.

366

00:17:52,000 --> 00:17:55,000

He survived the trip.

367

00:17:55,000 --> 00:17:57,000

Oh, cool. You painted him red.

368

00:17:57,000 --> 00:18:01,000

Yeah, that way if something does happen, we'll be able to see if his body does get sucked up into the helmet.

369

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

To test this myth, Torey's going to take our diver down to the bottom of the pool.

370

00:18:08,000 --> 00:18:10,000

Grant and I are going to be at the top monitoring.

371

00:18:10,000 --> 00:18:13,000

Shut down the compressor. See what happens.

372

00:18:13,000 --> 00:18:17,000

Well, what should happen is a drastic pressure differential.

373

00:18:17,000 --> 00:18:22,000

As the diver descends, the compressed air counteracts the pressure of the water outside.

374

00:18:22,000 --> 00:18:26,000

However, when the air supply is cut, the balance is lost,

375

00:18:26,000 --> 00:18:30,000

and the force of the water pushes in on the soft suit.

376

00:18:30,000 --> 00:18:37,000

But at only 15 feet under, will the water pressure be enough to squish the tiny diver into his helmet?

377

00:18:37,000 --> 00:18:40,000

The team is skeptical.

378

00:18:40,000 --> 00:18:45,000

My feeling is, since the gelatin is the same density as water, since it's basically made up of water,

379

00:18:45,000 --> 00:18:47,000

I don't think we're going to see much happen.

380

00:18:47,000 --> 00:18:50,000

Even though the gelatin is much softer than the human body,

381

00:18:50,000 --> 00:18:54,000

I still have a really hard time believing that we're going to get the kind of pressure it's going to take

382

00:18:54,000 --> 00:18:56,000

to push the body up into the helmet.

383

00:18:56,000 --> 00:18:59,000

But that's why we do small scale testing.

384

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

So to put the theory to the test...

385

00:19:02,000 --> 00:19:04,000

Okay, pressurizing the suit.

386

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

Torey takes the diver to the deep end.

387

00:19:07,000 --> 00:19:11,000

And Carrie and Grant pull the proverbial plug.

388

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

Okay, compressor failure in three, two, one.

389

00:19:18,000 --> 00:19:25,000

Torey's pressure is quickly squeezing the suit against the gelatin.

390

00:19:25,000 --> 00:19:27,000

That's good, we know.

391

00:19:27,000 --> 00:19:30,000

Torey is actually squishing the body into the helmet.

392

00:19:30,000 --> 00:19:33,000

You're kidding me, this is working?

393

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

Squishing that part around his neck!

394

00:19:40,000 --> 00:19:48,000

Even at a depth of only 15 feet, the pressure differential squeezes mini diver Imahara like a tube of toothpaste.

395

00:19:50,000 --> 00:19:51,000

Totally worked!

396

00:19:51,000 --> 00:19:54,000

It smashed the body into the helmet.

397

00:19:54,000 --> 00:19:55,000

Oh my god.

398

00:19:55,000 --> 00:19:56,000

Awesome.

399

00:19:56,000 --> 00:19:58,000

Look at his freaking red gauge.

400

00:19:58,000 --> 00:20:03,000

And that incredible result as the team eating their words.

401

00:20:03,000 --> 00:20:05,000

It worked, it actually worked.

402

00:20:05,000 --> 00:20:09,000

The water pressure was enough to compress the suit and squish the body into the helmet.

403

00:20:09,000 --> 00:20:12,000

Nobody expected that, but I love it when we're wrong.

404

00:20:12,000 --> 00:20:14,000

I think we have a perfect proof of concept here.

405

00:20:14,000 --> 00:20:16,000

We can totally move on to the large scale.

406

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

I'm calling it coolest small scale ever.

407

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

Totally.

408

00:20:21,000 --> 00:20:24,000

Next up, things get a little creepy.

409

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

It's light!

410

00:20:25,000 --> 00:20:28,000

As the team goes all out for the squeeze.

411

00:20:28,000 --> 00:20:30,000

I'm a cage dancer, yeah.

412

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

Carrie, Torey and Grant have put the squeeze on their ballistics gel diver.

413

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

I really wish they'd stop it.

414

00:20:42,000 --> 00:20:45,000

And now I'm excited to try something.

415

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

Yeah!

416

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

But that was just the beginning.

417

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

That was awesome.

418

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

Yeah, I've always wanted to kiss a dolphin.

419

00:20:52,000 --> 00:20:54,000

No, not that, the experiment.

420

00:20:54,000 --> 00:20:55,000

Yeah, that was awesome.

421

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

The second we turned off the compressor, the guy really did get squished.

422

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

Yeah, but you know, there is a big difference between human flesh and that gelatin.

423

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

I mean, would that have really happened if we had a more flesh like material?

424

00:21:05,000 --> 00:21:07,000

Well, there's only one way to find out.

425

00:21:07,000 --> 00:21:08,000

We go full scale.

426

00:21:08,000 --> 00:21:09,000

Who's in?

427

00:21:09,000 --> 00:21:10,000

I'm in.

428

00:21:10,000 --> 00:21:12,000

Actually, no.

429

00:21:12,000 --> 00:21:16,000

As you can see, I'm about to bring a mini myth buster into this world any moment now.

430

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

So, I've got a replacement for you and she's going to be great.

431

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

But I'll see you guys in a few episodes.

432

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

Bye, Carrie.

433

00:21:22,000 --> 00:21:23,000

Bye, Carrie. Good luck.

434

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

Hi, guys.

435

00:21:24,000 --> 00:21:26,000

Whoa, what are you, a ninja?

436

00:21:26,000 --> 00:21:27,000

Kinda. I'm Jesse.

437

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

Hi, Jesse.

438

00:21:28,000 --> 00:21:30,000

Well, welcome aboard. I hope you don't get seasick.

439

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

Nah, I'm good. So what's the plan for the squeeze?

440

00:21:33,000 --> 00:21:35,000

Well, we're going to go full scale.

441

00:21:35,000 --> 00:21:37,000

And for that, we need a genuine Mark V dive suit.

442

00:21:37,000 --> 00:21:39,000

We're going to take it all the way down to 300 feet.

443

00:21:39,000 --> 00:21:42,000

Yeah, and considering no one wants to volunteer for this one,

444

00:21:42,000 --> 00:21:44,000

we're going to make a human analog at a pork.

445

00:21:44,000 --> 00:21:45,000

Sick.

446

00:21:45,000 --> 00:21:48,000

Did Carrie warn you about some of the weird things we do on this show?

447

00:21:48,000 --> 00:21:50,000

Yeah, maybe not this weird, but I'm in.

448

00:21:50,000 --> 00:21:52,000

Cool. Speaking of weird.

449

00:21:52,000 --> 00:21:54,000

Now in order to go full scale on this one,

450

00:21:54,000 --> 00:21:57,000

we're going to need something more human-like.

451

00:21:57,000 --> 00:21:59,000

So I give you...

452

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

Meat man.

453

00:22:01,000 --> 00:22:04,000

Things are going to get creepy around here.

454

00:22:04,000 --> 00:22:07,000

Yeeah, yeeah.

455

00:22:08,000 --> 00:22:12,000

Actually, it's going to get creepy in a freezer truck.

456

00:22:15,000 --> 00:22:17,000

So what I have here is a bunch of pork,

457

00:22:17,000 --> 00:22:19,000

which I've had the butchers keep the skin on.

458

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

This is the meat that I'm going to wrap around the plastic skeleton

459

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

in order to make my meat man.

460

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

This is going to be so gross.

461

00:22:28,000 --> 00:22:31,000

All right, this part might be a little gross.

462

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

But luckily for our squeamish viewers,

463

00:22:38,000 --> 00:22:42,000

that ain't the only way they're making this test more authentic.

464

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

This is an honest to goodness commercial dive helmet,

465

00:22:45,000 --> 00:22:47,000

just like the one in the myth.

466

00:22:47,000 --> 00:22:50,000

I'm going to clean up the viewport so we can see inside,

467

00:22:50,000 --> 00:22:53,000

change out the valves, and we should be good to go.

468

00:22:57,000 --> 00:22:59,000

A little help.

469

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

Modifications complete.

470

00:23:02,000 --> 00:23:05,000

Grant puts the entire ensemble together for a dry run.

471

00:23:05,000 --> 00:23:09,000

And to control the flow of air, he's whipped up this.

472

00:23:09,000 --> 00:23:13,000

The idea with the manifold is that we are simulating

473

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

cutting the line without actually physically cutting the line.

474

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

The air from the compressor comes in through here,

475

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

goes out to the suit here.

476

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

When I want to simulate the cut, blow open the dump valve,

477

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

and everything goes...

478

00:23:29,000 --> 00:23:31,000

Yeah, that's good.

479

00:23:31,000 --> 00:23:34,000

I'm going to cut off the main air supply,

480

00:23:36,000 --> 00:23:38,000

and put on my ear protection.

481

00:23:39,000 --> 00:23:41,000

Okay, everybody ready? Here we go.

482

00:23:41,000 --> 00:23:44,000

In three, two, one.

483

00:23:47,000 --> 00:23:50,000

Barely a breeze, but that's exactly what's supposed to happen.

484

00:23:50,000 --> 00:23:52,000

Right, Grant?

485

00:23:52,000 --> 00:23:54,000

One second.

486

00:23:54,000 --> 00:23:57,000

Well, it is venting, which is good news.

487

00:23:57,000 --> 00:24:00,000

I think the thing is, there wasn't much pressure in there to begin with,

488

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

only maybe 5 psi.

489

00:24:02,000 --> 00:24:05,000

And the pressure on the outside is zero.

490

00:24:05,000 --> 00:24:07,000

It's just regular atmospheric pressure.

491

00:24:07,000 --> 00:24:10,000

So, when we get down to 300 feet,

492

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

there'll be a tremendous amount of pressure on the outside,

493

00:24:13,000 --> 00:24:15,000

pushing into exhausts.

494

00:24:15,000 --> 00:24:19,000

Hopefully, that will generate the squeeze that we're looking for.

495

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

Absolutely, because although there's no pressure acting on the suit top side,

496

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

at 300 feet below the surface,

497

00:24:26,000 --> 00:24:31,000

there'll be 135 pounds of water pressure per every square inch.

498

00:24:31,000 --> 00:24:33,000

That's the theory.

499

00:24:33,000 --> 00:24:36,000

But how are they going to film the experiment 300 feet under?

500

00:24:37,000 --> 00:24:40,000

Alright, now, light and motion has hooked us up with the state-of-the-art

501

00:24:40,000 --> 00:24:42,000

underwater camera housing,

502

00:24:42,000 --> 00:24:44,000

so we can capture all of the action.

503

00:24:44,000 --> 00:24:48,000

Now, it's my job to make sure that all of them are mounted safely and securely,

504

00:24:48,000 --> 00:24:52,000

which is going to require a little bit of welding and some modifications.

505

00:24:53,000 --> 00:24:58,000

As well as the cameras, the cage will secure the diver for his descent into the deep.

506

00:24:58,000 --> 00:25:01,000

Bad piece of cross-members.

507

00:25:01,000 --> 00:25:03,000

And while Jesse welds,

508

00:25:03,000 --> 00:25:07,000

Tori has spent far too much time alone in the ice truck.

509

00:25:07,000 --> 00:25:12,000

It's alive!

510

00:25:13,000 --> 00:25:15,000

Neat Man is almost done.

511

00:25:15,000 --> 00:25:17,000

Okay, I know what you're saying.

512

00:25:17,000 --> 00:25:20,000

He's looking a little freaky, and there's probably a bunch of you out there saying,

513

00:25:20,000 --> 00:25:22,000

why in the heck are you doing this?

514

00:25:22,000 --> 00:25:24,000

Why are you sewing a bunch of meat together on a skeleton?

515

00:25:24,000 --> 00:25:26,000

Are you trying to freak us out?

516

00:25:26,000 --> 00:25:29,000

Well, no, what I am trying to do is make a human analog.

517

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

With this, I have actual muscle tissue.

518

00:25:32,000 --> 00:25:33,000

I have fat. I have skin.

519

00:25:33,000 --> 00:25:37,000

I mean, this is as close to using a human being without actually using a human being.

520

00:25:37,000 --> 00:25:40,000

So, I'm freaking a few of you out.

521

00:25:40,000 --> 00:25:42,000

I'm sorry.

522

00:25:42,000 --> 00:25:44,000

Science isn't always pretty.

523

00:25:45,000 --> 00:25:50,000

Not pretty, but Neat Man will be the best possible human analog for the test.

524

00:25:51,000 --> 00:25:56,000

I present to you, my creation, Neat Man!

525

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

Oh, almost threw up.

526

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

That's gross.

527

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

And while he stays on ice,

528

00:26:05,000 --> 00:26:08,000

a similar size stand-in

529

00:26:08,000 --> 00:26:11,000

steps up to test Jesse's cage rig.

530

00:26:12,000 --> 00:26:14,000

Like a cage dancer.

531

00:26:14,000 --> 00:26:15,000

Should we go to lunch?

532

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

Yeah.

533

00:26:16,000 --> 00:26:17,000

Good job.

534

00:26:17,000 --> 00:26:18,000

Get me out of here.

535

00:26:18,000 --> 00:26:19,000

Thanks for your help.

536

00:26:19,000 --> 00:26:21,000

Oh, totally not cool.

537

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

So not cool.

538

00:26:25,000 --> 00:26:28,000

Coming up, Buster hits a foam run.

539

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

Three, two, one.

540

00:26:30,000 --> 00:26:32,000

What will he survive?

541

00:26:34,000 --> 00:26:37,000

Don't try anything you see on the show at home.

542

00:26:37,000 --> 00:26:39,000

Wear what you call experts.

543

00:26:42,000 --> 00:26:43,000

Dumpster diving.

544

00:26:43,000 --> 00:26:45,000

It's a convenient cliché.

545

00:26:45,000 --> 00:26:49,000

The good guy always jumps, lands, and makes his getaway.

546

00:26:49,000 --> 00:26:52,000

But that's not looking likely.

547

00:26:52,000 --> 00:26:54,000

So, dumpster diving Hollywood style.

548

00:26:54,000 --> 00:26:57,000

We know that you can survive a fall from a reasonably high height.

549

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

You've got the right technique, and your landing is soft enough.

550

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

But after rooting around in three random dumpsters and dumped,

551

00:27:03,000 --> 00:27:07,000

we failed to find them consistently full of soft enough stuff

552

00:27:07,000 --> 00:27:09,000

for a safe landing.

553

00:27:09,000 --> 00:27:10,000

How?

554

00:27:10,000 --> 00:27:12,000

However, after some scale tests here in the shop,

555

00:27:12,000 --> 00:27:15,000

we have chosen an ideal material to fill our dumpster with,

556

00:27:15,000 --> 00:27:19,000

and soon we're going to find out if you can survive a fall into this.

557

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

We know it's safe to fall into an airbag,

558

00:27:23,000 --> 00:27:26,000

but we don't know whether it's safe to fall into a dumpster.

559

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

That's where Buster comes in.

560

00:27:30,000 --> 00:27:32,000

Wait, we're not at that point in the story yet.

561

00:27:32,000 --> 00:27:35,000

First, we need a safety control.

562

00:27:35,000 --> 00:27:38,000

Which is why we're putting accelerometers all over Buster.

563

00:27:38,000 --> 00:27:41,000

These accelerometers will yield for us a graphical representation

564

00:27:41,000 --> 00:27:44,000

of Buster's deceleration into the airbag.

565

00:27:44,000 --> 00:27:48,000

And it is this graph against which we'll compare Buster's dumpster dive to

566

00:27:48,000 --> 00:27:49,000

to make sure it's safe.

567

00:27:49,000 --> 00:27:53,000

Buster's living up to his name as a trash test dummy.

568

00:27:53,000 --> 00:27:54,000

Now I have a plan.

569

00:27:54,000 --> 00:27:58,000

By finding out the deceleration of a safe fall into an airbag.

570

00:27:58,000 --> 00:28:01,000

Thank goodness he's got an inny and not an outy, huh?

571

00:28:01,000 --> 00:28:06,000

Then they'll compare the accelerometer data with his dive into a dumpster full of foam.

572

00:28:06,000 --> 00:28:12,000

Add with the accelerometer's in position, Buster is hoisted to 20 feet to take his dive.

573

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

You ready for this?

574

00:28:14,000 --> 00:28:15,000

Ready when you are.

575

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

All right.

576

00:28:16,000 --> 00:28:18,000

Okay, safety control.

577

00:28:18,000 --> 00:28:19,000

Dumb into airbag.

578

00:28:19,000 --> 00:28:21,000

Three, two, one.

579

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

A perfect hit.

580

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

Works for me.

581

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

Nice work, Buster.

582

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

Okay, go ahead and hook her up.

583

00:28:31,000 --> 00:28:33,000

Let's see what we got.

584

00:28:33,000 --> 00:28:36,000

And it figures that the figures are good.

585

00:28:36,000 --> 00:28:42,000

The accelerometers work like a charm and this graph right here is a safe drop into the airbag.

586

00:28:42,000 --> 00:28:45,000

Let's hope we get the same thing out of the dumpster, huh?

587

00:28:45,000 --> 00:28:46,000

Yeah.

588

00:28:46,000 --> 00:28:51,000

Yep, now the MythBusters have the data for a safe landing.

589

00:28:51,000 --> 00:28:54,000

Buster registered 11.4 Gs on that test.

590

00:28:54,000 --> 00:29:02,000

A G is one Earth's gravity, so that means that Buster weighed 11.4 times as much as he normally does when the airbag stops.

591

00:29:02,000 --> 00:29:06,000

We know that you can get up and walk away from a jump like that.

592

00:29:06,000 --> 00:29:13,000

What we need to know now is how this compares to our best case scenario, jumping into a dumpster full of foam.

593

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

This is our dumpster.

594

00:29:18,000 --> 00:29:26,000

It's empty right now, but soon we're going to fill it full of the softest stuff that we've been able to find and Buster's going to jump into it to make sure it's okay for us.

595

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

Go! Be yourself!

596

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

R2, I need you to shut down all the compactors on the detention level.

597

00:29:39,000 --> 00:29:45,000

If you got to jump into a dumpster, this right here would be what you'd call a best case real world scenario.

598

00:29:45,000 --> 00:29:49,000

But is it a best case scenario that you could walk away from?

599

00:29:49,000 --> 00:29:54,000

If Buster doesn't survive a fall into this, this movie myth is busted.

600

00:29:54,000 --> 00:29:59,000

Data collection! Dummy into foam in three, two, one!

601

00:30:03,000 --> 00:30:05,000

That looks like it's viable.

602

00:30:05,000 --> 00:30:08,000

And a closer look at the data backs Adam up.

603

00:30:08,000 --> 00:30:11,000

The foam resulted in 9.9 Gs.

604

00:30:11,000 --> 00:30:16,000

Wow, it's effectively the same, even a little more gentle with the foam.

605

00:30:16,000 --> 00:30:23,000

Yep, from 20 feet, Buster's impact into the foam was 1.5 Gs fewer than his fall into the airbag,

606

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

meaning that the foam actually worked better to maximize his deceleration and keep him from injury.

607

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

I'm pretty impressed with the foam. I'd say that that is a survivable fall.

608

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

Maybe even comfortable when the data backs it up.

609

00:30:37,000 --> 00:30:40,000

Can I be the one to do the jump? Can I do the jump in here?

610

00:30:40,000 --> 00:30:43,000

You don't have some kind of a costume, do you?

611

00:30:43,000 --> 00:30:44,000

Yeah, I do.

612

00:30:44,000 --> 00:30:45,000

I thought so.

613

00:30:45,000 --> 00:30:46,000

Can I do it?

614

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

Not so bad.

615

00:30:48,000 --> 00:30:49,000

Yes!

616

00:30:49,000 --> 00:30:51,000

Next on MythBusters.

617

00:30:51,000 --> 00:30:57,000

We're going to take this guy down 300 feet, cut his line, and see if he ends up inside his helmet.

618

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

Don't go away.

619

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

In the days before Scuba, if you wanted to descend into the deep, suits like these were your only option.

620

00:31:14,000 --> 00:31:18,000

But according to this myth, they came with a deadly drawback.

621

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

So to put the squeeze on this deep sea saga...

622

00:31:21,000 --> 00:31:24,000

Alright, let's get some meat on these bones.

623

00:31:24,000 --> 00:31:28,000

Sori, Grant, and Jesse are turning up the pressure.

624

00:31:28,000 --> 00:31:33,000

Alright, camera mounts check, diving helmet bounce check.

625

00:31:33,000 --> 00:31:39,000

300 foot umbilical check, dive suit check, helmet check.

626

00:31:39,000 --> 00:31:41,000

And finally, Meat Man is done.

627

00:31:41,000 --> 00:31:45,000

Now it's time to take all these things out to the ocean, take them down 300 feet,

628

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

and find out whether or not Meat Man will get the squeeze.

629

00:31:50,000 --> 00:31:57,000

So to do that, it's off to Santa Cruz Harbor, where the experts from North Coast divers will take them out to sea.

630

00:31:57,000 --> 00:31:59,000

So are we good to go?

631

00:31:59,000 --> 00:32:01,000

We are, conditions are perfect.

632

00:32:01,000 --> 00:32:06,000

But before they test the waters, the Wizard of Odd has to give Meat Man a heart.

633

00:32:06,000 --> 00:32:11,000

Now since the chest is the only thing that is compressible on a human being, especially in this experiment,

634

00:32:11,000 --> 00:32:13,000

it's important that we have something inside the chest cavity.

635

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

Right now, it's hollow.

636

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

So what we need to do is fill them up with some kind of organs, guts, blood.

637

00:32:19,000 --> 00:32:23,000

So that way, if we do get that squeeze, we'll be able to see it come shooting into the helmet.

638

00:32:23,000 --> 00:32:26,000

So I have some hearts, I got some livers, I have some fake blood.

639

00:32:26,000 --> 00:32:30,000

I'm going to fill up this chest, sew them back up, and then we can get them into the suit.

640

00:32:30,000 --> 00:32:34,000

I have no idea what that is, but it's going in.

641

00:32:34,000 --> 00:32:38,000

Meat Man really puts the meat in team.

642

00:32:39,000 --> 00:32:49,000

Finally, it's out to the open ocean with Meat Man safe inside his suit, at least for now.

643

00:32:49,000 --> 00:32:51,000

If you see any sharks, play dead.

644

00:32:51,000 --> 00:32:53,000

And once they're in deep enough water...

645

00:32:53,000 --> 00:32:55,000

Hey Jim, how are we doing? Are we almost there?

646

00:32:55,000 --> 00:32:57,000

We're in 300 feet of water right now.

647

00:32:57,000 --> 00:32:59,000

We've got lots of deep water behind us.

648

00:32:59,000 --> 00:33:02,000

When we drift that way, we're ready to go.

649

00:33:02,000 --> 00:33:05,000

Preparation for launch begins.

650

00:33:05,000 --> 00:33:07,000

Yeah, beauty.

651

00:33:08,000 --> 00:33:13,000

Now it's not as simple as just hanging Meat Man over the side of the boat and letting him drop to 300 feet.

652

00:33:13,000 --> 00:33:20,000

As he makes his descent, the pressure pushing in on the suit goes up by .445 psi every foot.

653

00:33:20,000 --> 00:33:27,000

So in order to compensate for that, I'm going to have to add air in through this hose and push back out.

654

00:33:27,000 --> 00:33:32,000

Now I've calibrated this gauge to the approximate psi that I need versus the depth.

655

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

Okay, so we're not relying completely on Grant's math.

656

00:33:35,000 --> 00:33:39,000

We have a live video feed from an ROV that's going to be traveling around the cage.

657

00:33:39,000 --> 00:33:44,000

And we also have a live link from a camera that's already mounted on the cage as well.

658

00:33:44,000 --> 00:33:51,000

So if the suit inflates too much or too little, we should be able to see everything very easily from sitting right here.

659

00:33:51,000 --> 00:33:53,000

Okay, watch those cables over there.

660

00:33:53,000 --> 00:33:54,000

Hold it.

661

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

Drop it.

662

00:33:55,000 --> 00:33:56,000

Okay.

663

00:33:58,000 --> 00:34:02,000

And Meat Man is in the water.

664

00:34:02,000 --> 00:34:04,000

Bye-bye, Meat Man.

665

00:34:04,000 --> 00:34:06,000

Say hello to Davy Jones.

666

00:34:13,000 --> 00:34:16,000

Let's go maybe 30 feet at a time just to see what happens.

667

00:34:16,000 --> 00:34:25,000

With cameras rolling, the diver is painstakingly lowered into the drink to meet his deep sea fate.

668

00:34:25,000 --> 00:34:27,000

What's your depth, Jesse?

669

00:34:27,000 --> 00:34:28,000

31 feet.

670

00:34:28,000 --> 00:34:29,000

Copy that.

671

00:34:29,000 --> 00:34:36,000

But as they monitor his slow descent, the team is skeptical of a full body squeeze.

672

00:34:36,000 --> 00:34:42,000

I honestly think that there's going to be some juices flowing, but I don't think it's going to suck the skin off his bones.

673

00:34:42,000 --> 00:34:45,000

I don't think the whole body's going to come up.

674

00:34:45,000 --> 00:34:47,000

I mean, there's a lot of meat down there.

675

00:34:47,000 --> 00:34:49,000

I don't think all of that's going to come to hell with it.

676

00:34:52,000 --> 00:34:54,000

My calculations are correct.

677

00:34:54,000 --> 00:34:56,000

We're almost a third of the way down.

678

00:34:59,000 --> 00:35:02,000

Looks like we are right on.

679

00:35:03,000 --> 00:35:05,000

200 feet.

680

00:35:08,000 --> 00:35:12,000

Two-thirds of the way down and everything is going according to plan.

681

00:35:13,000 --> 00:35:14,000

How's he holding up?

682

00:35:14,000 --> 00:35:16,000

Yes, looks good so far.

683

00:35:17,000 --> 00:35:20,000

235 feet and it's getting really dark.

684

00:35:20,000 --> 00:35:23,000

I think I've got all those lights all over the place.

685

00:35:24,000 --> 00:35:25,000

Okay, let's drink a drink.

686

00:35:25,000 --> 00:35:27,000

Okay, stop the cage.

687

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

At that depth, there's 135 pounds of water pressure pressing on every square inch of the diving suit.

688

00:35:37,000 --> 00:35:41,000

The only thing keeping the water in bay is the compressed air.

689

00:35:41,000 --> 00:35:46,000

So, while cutting the air supply, lead to a spectacular squeeze.

690

00:35:46,000 --> 00:35:49,000

There's only one way to find out.

691

00:35:51,000 --> 00:35:53,000

All right, you guys, how's the suit holding?

692

00:35:53,000 --> 00:35:56,000

It's looking great and we are at 300 feet.

693

00:35:56,000 --> 00:35:58,000

All right, let's do it. Ready?

694

00:35:58,000 --> 00:35:59,000

Ready?

695

00:35:59,000 --> 00:36:00,000

Yeah.

696

00:36:00,000 --> 00:36:04,000

Three, two, one.

697

00:36:05,000 --> 00:36:09,000

After the break, it's the grand finale of our filmic fall fable.

698

00:36:09,000 --> 00:36:11,000

It's a long way down.

699

00:36:11,000 --> 00:36:15,000

And will an air supply failure transform Meat Man...

700

00:36:15,000 --> 00:36:17,000

Oh my God!

701

00:36:18,000 --> 00:36:20,000

Into pressed ham.

702

00:36:27,000 --> 00:36:30,000

The Mythbusters have the drop on dumpster diving.

703

00:36:30,000 --> 00:36:33,000

And now that Buster has taken the fall...

704

00:36:33,000 --> 00:36:35,000

It looks so comfortable, doesn't it?

705

00:36:35,000 --> 00:36:37,000

It's Adam's turn.

706

00:36:37,000 --> 00:36:39,000

But he's no dummy.

707

00:36:39,000 --> 00:36:45,000

If he falls short or hits the metal sides, his stuntman career is over.

708

00:36:47,000 --> 00:36:49,000

Moment of truth, huh?

709

00:36:49,000 --> 00:36:50,000

Yep.

710

00:36:50,000 --> 00:36:51,000

You ready?

711

00:36:51,000 --> 00:36:54,000

I am. It actually looks like it's going to be fun.

712

00:36:54,000 --> 00:36:57,000

Well, just remember, this is about a chase scene.

713

00:36:57,000 --> 00:36:59,000

So when you hit the foam, you can't just lie there.

714

00:36:59,000 --> 00:37:01,000

You got to get up and take off.

715

00:37:01,000 --> 00:37:04,000

That's great. Absolutely. I will do precisely that.

716

00:37:04,000 --> 00:37:06,000

That makes it even more fun.

717

00:37:06,000 --> 00:37:09,000

More fun and more complicated.

718

00:37:09,000 --> 00:37:12,000

Remember, this is all about deceleration.

719

00:37:12,000 --> 00:37:16,000

The principle is that the foam will bring Adam to a stop gradually,

720

00:37:16,000 --> 00:37:19,000

meaning he comes out injury-free.

721

00:37:19,000 --> 00:37:21,000

But so far, that's just a theory.

722

00:37:21,000 --> 00:37:24,000

A miscalculation here could spell disaster.

723

00:37:24,000 --> 00:37:26,000

Our jump height is 20 feet.

724

00:37:26,000 --> 00:37:30,000

Now, that may not sound like a whole lot, but that's a two-story house.

725

00:37:30,000 --> 00:37:33,000

And if you jump that without something soft to catch you,

726

00:37:33,000 --> 00:37:38,000

you're going to be going so fast that you're going to have some serious damage.

727

00:37:38,000 --> 00:37:40,000

It's a long way down.

728

00:37:40,000 --> 00:37:44,000

And, I mean, although we've eliminated any washing machines or anvils in there,

729

00:37:44,000 --> 00:37:47,000

it is still just a dumpster full of garbage.

730

00:37:47,000 --> 00:37:49,000

I mean, I've been trained.

731

00:37:50,000 --> 00:37:53,000

I'm no longer as scared looking over this ledge as I once was.

732

00:37:53,000 --> 00:37:56,000

And the dummy says it's going to be safe.

733

00:37:56,000 --> 00:38:00,000

So, there's nothing to do now, but go for it, bro.

734

00:38:00,000 --> 00:38:03,000

But there's no time to dwell on the danger,

735

00:38:03,000 --> 00:38:08,000

because it's lights, camera, and action.

736

00:38:19,000 --> 00:38:22,000

Getting my gun out.

737

00:38:22,000 --> 00:38:25,000

Eat your hard-out Hollywood.

738

00:38:25,000 --> 00:38:27,000

Adam nailed the dumpster dive.

739

00:38:27,000 --> 00:38:29,000

And as he makes his getaway,

740

00:38:31,000 --> 00:38:33,000

he'll live to see another day.

741

00:38:35,000 --> 00:38:37,000

Hey.

742

00:38:37,000 --> 00:38:39,000

So, how you doing?

743

00:38:39,000 --> 00:38:41,000

I'm doing good.

744

00:38:41,000 --> 00:38:43,000

I'm doing good.

745

00:38:43,000 --> 00:38:45,000

I'm doing good.

746

00:38:45,000 --> 00:38:47,000

I'm doing good.

747

00:38:47,000 --> 00:38:49,000

So, how you doing?

748

00:38:49,000 --> 00:38:51,000

I'm doing good.

749

00:38:51,000 --> 00:38:53,000

Fingers all there, everything all right?

750

00:38:53,000 --> 00:38:55,000

Yeah, a little bit of an adrenaline rush, but it worked beautifully.

751

00:38:55,000 --> 00:38:57,000

It's actually a lot softer than the airpines.

752

00:38:57,000 --> 00:38:59,000

Nice work.

753

00:38:59,000 --> 00:39:01,000

Thank you.

754

00:39:01,000 --> 00:39:03,000

And that, as they say, is a wrap.

755

00:39:03,000 --> 00:39:06,000

Well, I think the column this one's pretty clear.

756

00:39:06,000 --> 00:39:08,000

Yep, it's plausible.

757

00:39:08,000 --> 00:39:11,000

As long as the contents of the dumpster are soft enough,

758

00:39:11,000 --> 00:39:14,000

the thing is, you're not going to really know what's in there until it's too late.

759

00:39:14,000 --> 00:39:16,000

Until it's way too late.

760

00:39:16,000 --> 00:39:18,000

It's not plausible, but not recommended.

761

00:39:18,000 --> 00:39:20,000

Let's get out of here.

762

00:39:24,000 --> 00:39:26,000

You're good at dumpster diving,

763

00:39:26,000 --> 00:39:28,000

but not so good with the scissor lobe.

764

00:39:40,000 --> 00:39:42,000

You know how you have a bite of a chocolate cookie

765

00:39:42,000 --> 00:39:44,000

and you just need more?

766

00:39:44,000 --> 00:39:45,000

Sort of like mythbusters?

767

00:39:45,000 --> 00:39:48,000

But if you do want more mythbusters, that is,

768

00:39:48,000 --> 00:39:50,000

go to [discovery.com slash mythbusters](http://discovery.com/mythbusters)

769

00:39:50,000 --> 00:39:52,000

and check us out.

770

00:40:16,000 --> 00:40:20,000

The mythbusters have lowered their diver into the murky deep.

771

00:40:20,000 --> 00:40:22,000

200 feet.

772

00:40:22,000 --> 00:40:25,000

Making sure that the air pressure inside the suit

773

00:40:25,000 --> 00:40:29,000

is equal to the water pressure surrounding it.

774

00:40:29,000 --> 00:40:35,000

We are exactly 50 feet away from our final destination.

775

00:40:35,000 --> 00:40:38,000

But that's all about to change.

776

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

Okay, that's 300 feet.

777

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

Okay, stop the cage.

778

00:40:42,000 --> 00:40:45,000

Alright, you guys ready to cut the line and see what happens?

779

00:40:45,000 --> 00:40:46,000

Yeah.

780

00:40:46,000 --> 00:40:51,000

Ready in three, two, one.

781

00:41:12,000 --> 00:41:14,000

Oh, man!

782

00:41:14,000 --> 00:41:16,000

Oh, man!

783

00:41:16,000 --> 00:41:18,000

Oh, man!

784

00:41:18,000 --> 00:41:20,000

He's got it in the helmet!

785

00:41:20,000 --> 00:41:22,000

That's crazy!

786

00:41:22,000 --> 00:41:24,000

I can't believe it!

787

00:41:24,000 --> 00:41:26,000

It worked!

788

00:41:26,000 --> 00:41:29,000

Oh, my gosh!

789

00:41:29,000 --> 00:41:33,000

Yep, the effect of the cut hose was less than instantaneous,

790

00:41:33,000 --> 00:41:35,000

but once the air pressure was exhausted,

791

00:41:35,000 --> 00:41:37,000

physics took over

792

00:41:37,000 --> 00:41:40,000

and the drastic pressure differential pushed

793

00:41:40,000 --> 00:41:42,000

the meat man into his helmet

794

00:41:42,000 --> 00:41:44,000

exactly as the myth predicted.

795

00:41:44,000 --> 00:41:46,000

I don't even think we need to bring him up!

796

00:41:46,000 --> 00:41:47,000

No!

797

00:41:47,000 --> 00:41:49,000

I just left him down there!

798

00:41:49,000 --> 00:41:50,000

Wow!

799

00:41:50,000 --> 00:41:51,000

Look at that!

800

00:41:51,000 --> 00:41:52,000

That was gonna happen.

801

00:41:52,000 --> 00:41:53,000

Look at those tight glasses!

802

00:41:53,000 --> 00:41:54,000

That's amazing!

803

00:41:54,000 --> 00:41:55,000

You can't even see in the helmet anymore

804

00:41:55,000 --> 00:41:58,000

because it's covered with flesh and blood.

805

00:41:58,000 --> 00:42:00,000

Who's gonna clean the suit?

806

00:42:00,000 --> 00:42:02,000

Not it.

807

00:42:02,000 --> 00:42:04,000

And a closer inspection of our diver

808

00:42:04,000 --> 00:42:06,000

reveals the kind of damage

809

00:42:06,000 --> 00:42:09,000

135 pounds of pressure per square inch

810

00:42:09,000 --> 00:42:11,000

can do.

811

00:42:11,000 --> 00:42:14,000

Oh, wow!

812

00:42:14,000 --> 00:42:16,000

Oh, my God!

813

00:42:16,000 --> 00:42:19,000

We totally came the helmet in!

814

00:42:19,000 --> 00:42:21,000

Look at all the guts in there!

815

00:42:21,000 --> 00:42:25,000

His stomach is inside his helmet!

816

00:42:25,000 --> 00:42:28,000

Just by the sign of the helmet, look at that!

817

00:42:28,000 --> 00:42:30,000

Dude, did you imagine that, Russia?

818

00:42:30,000 --> 00:42:32,000

That is absolutely confirmed.

819

00:42:32,000 --> 00:42:33,000

No doubt about it.

820

00:42:33,000 --> 00:42:34,000

Totally confirmed.

821

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

Okay, so I definitely expected the juices to be flowing,

822

00:42:37,000 --> 00:42:39,000

but I didn't expect to see them like

823

00:42:39,000 --> 00:42:41,000

slowly rise up through the helmet.

824

00:42:41,000 --> 00:42:43,000

And then blah, where everything just

825

00:42:43,000 --> 00:42:45,000

was like an explosion inside the suit.

826

00:42:45,000 --> 00:42:49,000

Completely unexpected, but totally awesome.

827

00:42:49,000 --> 00:42:53,000

Now the name of this game is differential pressure.

828

00:42:53,000 --> 00:42:55,000

They can withstand a huge amount of pressure

829

00:42:55,000 --> 00:42:57,000

when they're equalized,

830

00:42:57,000 --> 00:42:59,000

but the second you take away all the pressure

831

00:42:59,000 --> 00:43:01,000

on the inside,

832

00:43:01,000 --> 00:43:02,000

crush.

833

00:43:02,000 --> 00:43:05,000

You can see this is what's left.

834

00:43:06,000 --> 00:43:07,000

I saw it with my own eyes.

835

00:43:07,000 --> 00:43:10,000

I still can't believe this actually happened.

836

00:43:10,000 --> 00:43:12,000

This one is completely confirmed.

837

00:43:13,000 --> 00:43:16,000

I'm sorry, Meat Man, but it was totally worth it.

838

00:43:16,000 --> 00:43:18,000

You guys ready to get out of here?

839

00:43:18,000 --> 00:43:19,000

Yeah, let's go home.

840

00:43:19,000 --> 00:43:21,000

All right, Jim, take us home!