

1

00:00:00,000 --> 00:00:06,840

MUSIC

2

00:00:06,840 --> 00:00:11,840

Coming up, Mythbusters Revisited.

3

00:00:11,840 --> 00:00:14,340

We answer our critics and do it again.

4

00:00:14,340 --> 00:00:17,840

It's a wild ride as the Mythbusters jump headlong

5

00:00:17,840 --> 00:00:21,840

into challenging their detractors.

6

00:00:21,840 --> 00:00:25,840

Does anyone else have any suggestions?

7

00:00:26,680 --> 00:00:29,680

Was plywood builder a balsa?

8

00:00:29,680 --> 00:00:32,680

Did exploding gas tank drive you nuts?

9

00:00:32,680 --> 00:00:36,680

How about exploding cola?

10

00:00:36,680 --> 00:00:39,680

Air conditioning or even walking in the rain?

11

00:00:39,680 --> 00:00:43,680

And did blown away fall flat?

12

00:00:43,680 --> 00:00:45,680

If you were one of the critics,

13

00:00:45,680 --> 00:00:48,680

the Mythbusters are going to take you on.

14

00:00:48,680 --> 00:00:51,680

Payback time and payback some...

15

00:00:51,680 --> 00:00:54,680

Who are the Mythbusters?

16

00:00:55,520 --> 00:00:58,520

Adam Savage.

17

00:00:58,520 --> 00:01:01,520

And Jamie Heinemann.

18

00:01:01,520 --> 00:01:06,520

Between them more than 30 years special effects experience.

19

00:01:06,520 --> 00:01:11,520

They don't just tell the Myths,

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00:01:11,520 --> 00:01:15,520

they put them to the test.

21

00:01:15,520 --> 00:01:20,520

MUSIC

22

00:01:21,360 --> 00:01:25,360

MUSIC

23

00:01:25,360 --> 00:01:28,360

You know, one of the things that I appreciate most about this show

24

00:01:28,360 --> 00:01:31,360

that's different than a lot of other shows on television is that

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00:01:31,360 --> 00:01:34,360

we're willing to go back to something we've done

26

00:01:34,360 --> 00:01:36,360

and say we screwed it up.

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00:01:36,360 --> 00:01:38,360

You bet.

28

00:01:38,360 --> 00:01:41,360

The revisit episodes are among my favorite ones ever.

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00:01:41,360 --> 00:01:44,360

So what's up next?

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00:01:44,360 --> 00:01:47,360

The first one is blown away.

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00:01:47,360 --> 00:01:51,360

Does being shot really throw you back through the air?

32

00:01:51,360 --> 00:01:54,360

Not according to the Mythbusters,

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00:01:54,360 --> 00:01:57,360

but some viewers disagreed.

34

00:01:57,360 --> 00:02:01,360

The first time round, because both the pig and buster were hung from a hook,

35

00:02:01,360 --> 00:02:04,360

their center of gravity was not like a human.

36

00:02:04,360 --> 00:02:08,360

They should have been supported around their chest.

37

00:02:08,360 --> 00:02:12,360

Even though the Mythbusters showed how to do the blown away effect,

38

00:02:12,360 --> 00:02:15,360

some fans were unconvinced.

39

00:02:16,360 --> 00:02:19,360

So how are we going to set this one right?

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00:02:19,360 --> 00:02:23,360

Well, we need to come up with a different rig that will support the body

41

00:02:23,360 --> 00:02:26,360

more on its center of gravity.

42

00:02:26,360 --> 00:02:30,360

So I think we should get Tori to arrange that, and it shouldn't be that hard.

43

00:02:30,360 --> 00:02:35,360

I think we should also go to the new biggest gun we've found we have access to,

44

00:02:35,360 --> 00:02:38,360

and this time shoot them with a .50 caliber.

45

00:02:38,360 --> 00:02:41,360

Yeah, if that won't do it, then nothing's gonna...

46

00:02:41,360 --> 00:02:43,360

Well, an RPG would.

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00:02:43,360 --> 00:02:47,360

But this myth is about more conventional shootings.

48

00:02:47,360 --> 00:02:52,360

First, the build team has got to make a center of gravity rig for buster.

49

00:02:52,360 --> 00:02:54,360

They're all skin and bones.

50

00:02:54,360 --> 00:02:57,360

Tori and Grant are going to recycle the previous rig,

51

00:02:57,360 --> 00:03:00,360

but support buster in a different way.

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00:03:00,360 --> 00:03:08,360

I'm gonna extend a bar from his chest out to the original pig rig,

53

00:03:08,360 --> 00:03:12,360

and that any amount of pressure would knock him back.

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00:03:12,360 --> 00:03:17,360

Buster will now be supported at his chest, exactly where he'll get shot.

55

00:03:17,360 --> 00:03:22,360

This means all the bullets' energy will be transferred into blowing him away.

56

00:03:23,360 --> 00:03:27,360

Okay, now the question is how much force is going to take to get him off of there?

57

00:03:27,360 --> 00:03:31,360

The team need to prove that only a minimal force will knock him off,

58

00:03:31,360 --> 00:03:34,360

because if a tiny force can make him fall down,

59

00:03:34,360 --> 00:03:38,360

then a powerful bullet should send him flying back.

60

00:03:38,360 --> 00:03:40,360

You're gonna throw him over with a glove.

61

00:03:40,360 --> 00:03:43,360

Okay, try not to hurt him.

62

00:03:43,360 --> 00:03:47,360

That was rad. Maybe you should use both gloves.

63

00:03:47,360 --> 00:03:50,360

If the glove fits, throw it.

64

00:03:52,360 --> 00:03:53,360

Okay, wow.

65

00:03:53,360 --> 00:03:57,360

He needs something a little heavier, like a bolt from the blue.

66

00:03:59,360 --> 00:04:02,360

Cross the shot. That's what happens when you go...

67

00:04:02,360 --> 00:04:04,360

Good shot.

68

00:04:04,360 --> 00:04:08,360

The gloves are off, so Tori opts for a baseball instead.

69

00:04:11,360 --> 00:04:13,360

Ah! That's it.

70

00:04:13,360 --> 00:04:16,360

It's strike three for Buster.

71

00:04:16,360 --> 00:04:18,360

I just tested the rig.

72

00:04:18,360 --> 00:04:20,360

If I was able to knock the dummy off with a baseball,

73

00:04:20,360 --> 00:04:23,360

a bullet is gonna have that much more force.

74

00:04:23,360 --> 00:04:27,360

It should be able to knock it off, and then we'll be able to see if it knocks it six feet back.

75

00:04:28,360 --> 00:04:32,360

Now, Buster's got a date on the range, and he needs to look his best.

76

00:04:32,360 --> 00:04:35,360

So, Tori makes him a new head.

77

00:04:36,360 --> 00:04:39,360

While Kari carves out a bullet-proof plate,

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00:04:39,360 --> 00:04:44,360

the impenetrable steel will ensure that the bullet's full kinetic energy

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00:04:44,360 --> 00:04:48,360

will be transferred to Buster, and maybe knock him back.

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00:04:49,360 --> 00:04:54,360

If we manage to capture all of the bullet's energy on this plate,

81

00:04:54,360 --> 00:04:56,360

and Buster still doesn't get blown back,

82

00:04:56,360 --> 00:05:01,360

I think that we can positively say that this myth is completely and totally busted.

83

00:05:02,360 --> 00:05:05,360

And at the Alameda County firing range,

84

00:05:05,360 --> 00:05:08,360

it's time to put that to the test once and for all.

85

00:05:09,360 --> 00:05:12,360

Buster gets ready to stare down the barrel.

86

00:05:12,360 --> 00:05:16,360

Just like last time, he'll be shot from 22 feet.

87

00:05:16,360 --> 00:05:20,360

That's the average distance for a fatal shooting.

88

00:05:22,360 --> 00:05:26,360

With Buster on the frame, it's time for a quick demonstration.

89

00:05:26,360 --> 00:05:29,360

Just go ahead and try to hit the dummy with the bar.

90

00:05:30,360 --> 00:05:32,360

That was the slow ball.

91

00:05:32,360 --> 00:05:34,360

Alright, why don't you try?

92

00:05:36,360 --> 00:05:38,360

It was the beleti fast ball.

93

00:05:40,360 --> 00:05:41,360

Strike one.

94

00:05:42,360 --> 00:05:44,360

It looked to me like that, just knocked him straight down.

95

00:05:44,360 --> 00:05:47,360

He actually levered against his neck, and he went, kind of dropped.

96

00:05:47,360 --> 00:05:50,360

That's perfect. I mean, that's what this whole rig is designed to do.

97

00:05:50,360 --> 00:05:53,360

But Buster's not happy.

98

00:05:53,360 --> 00:05:55,360

You guys have f*****g me long enough.

99

00:05:55,360 --> 00:05:57,360

Buster's on a rampage.

100

00:05:57,360 --> 00:05:59,360

It's payback time.

101

00:05:59,360 --> 00:06:01,360

It's payback time and paybacks of...

102

00:06:02,360 --> 00:06:04,360

Forget Hannibal Lecter.

103

00:06:04,360 --> 00:06:08,360

An angry Buster is what nightmares are made of.

104

00:06:08,360 --> 00:06:11,360

You know, what's funny is that when you put this on, you can smell.

105

00:06:11,360 --> 00:06:14,360

And you get all these sense memories of blowing them up

106

00:06:14,360 --> 00:06:18,360

and dropping them off a cliff and there's a little salt water, a little rotting pig.

107

00:06:18,360 --> 00:06:21,360

It's like a trip down memory lane. You want to try?

108

00:06:21,360 --> 00:06:22,360

No, thanks.

109

00:06:23,360 --> 00:06:29,360

Before Buster faces the firing squad, he first needs his bulletproof vest.

110

00:06:30,360 --> 00:06:33,360

He's ready to take one for the team.

111

00:06:33,360 --> 00:06:35,360

And first up, it's the shotgun.

112

00:06:36,360 --> 00:06:38,360

Okay, 12 gauge, gear slug.

113

00:06:38,360 --> 00:06:40,360

At 20 feet.

114

00:06:40,360 --> 00:06:43,360

And three, two, one.

115

00:06:46,360 --> 00:06:48,360

It's head K-1.

116

00:06:48,360 --> 00:06:53,360

Well, he'd certainly be dead, but a Hollywood special this wasn't.

117

00:06:53,360 --> 00:06:55,360

He didn't fly back six feet.

118

00:06:55,360 --> 00:06:57,360

No, he just crumpled.

119

00:06:57,360 --> 00:06:58,360

He just fell right where he was.

120

00:06:58,360 --> 00:07:00,360

I mean, his feet are still exactly where they were.

121

00:07:00,360 --> 00:07:03,360

Except one leg is broken.

122

00:07:04,360 --> 00:07:08,360

Broken leg is the least of his worries, as the high speed shows.

123

00:07:08,360 --> 00:07:10,360

You see the bullet hitting.

124

00:07:10,360 --> 00:07:13,360

I can see him sliding off the rig and he's moving backwards maybe an inch.

125

00:07:13,360 --> 00:07:17,360

This is exactly what we saw the last time we did this test.

126

00:07:17,360 --> 00:07:18,360

That just got shot.

127

00:07:18,360 --> 00:07:22,360

This is the gear slug with the rig in the center of his gravity,

128

00:07:22,360 --> 00:07:25,360

just as we've been asked to do. Busted.

129

00:07:25,360 --> 00:07:27,360

Let's move to the 50 cal.

130

00:07:27,360 --> 00:07:33,360

But before the dreaded 50 caliber, the myth musters have a rather rainy revisit.

131

00:07:41,360 --> 00:07:43,360

So running in the rain.

132

00:07:43,360 --> 00:07:45,360

What could they say we got wrong on that one?

133

00:07:45,360 --> 00:07:49,360

The problem apparently is that we didn't use real rain.

134

00:07:50,360 --> 00:07:53,360

When Adam and Jamie first got soaked for science,

135

00:07:53,360 --> 00:07:58,360

they used artificial rain.

136

00:07:58,360 --> 00:08:01,360

And their results were surprising.

137

00:08:01,360 --> 00:08:05,360

Over a set distance, you get wetter in the rain if you run.

138

00:08:05,360 --> 00:08:07,360

But viewers weren't happy.

139

00:08:07,360 --> 00:08:10,360

The rain was all wrong.

140

00:08:11,360 --> 00:08:14,360

I guess we could answer this by waiting for a rainstorm

141

00:08:14,360 --> 00:08:17,360

and doing the test again, maybe even doubling the length

142

00:08:17,360 --> 00:08:21,360

of the walking and running course and run three times and walk three times

143

00:08:21,360 --> 00:08:23,360

and see what the data says.

144

00:08:24,360 --> 00:08:28,360

First things first, it's those fetish fantasies.

145

00:08:28,360 --> 00:08:31,360

Time for the boys to rubber up.

146

00:08:31,360 --> 00:08:33,360

Jamie feels really sexy.

147

00:08:33,360 --> 00:08:35,360

He wears it all the time on the weekends.

148

00:08:35,360 --> 00:08:38,360

I've come into the shop when he doesn't know anyone's here.

149

00:08:38,360 --> 00:08:40,360

So you have prancing around.

150

00:08:40,360 --> 00:08:42,360

Amazing.

151

00:08:45,360 --> 00:08:47,360

Suit it up.

152

00:08:47,360 --> 00:08:49,360

They're ready for the rain.

153

00:08:49,360 --> 00:08:52,360

And to start, they're going to walk.

154

00:08:52,360 --> 00:08:57,360

Just like in the original test, they've weighed their overalls when dry

155

00:08:57,360 --> 00:09:00,360

and will weigh them again after their soaking saunters

156

00:09:00,360 --> 00:09:03,360

to see how much rainwater they've absorbed.

157

00:09:03,360 --> 00:09:07,360

And this time, they're also doing the same with their caps.

158

00:09:07,360 --> 00:09:10,360

It's getting kind of wet.

159

00:09:11,360 --> 00:09:15,360

The rubber suits prevent their own sweat from contaminating the results.

160

00:09:18,360 --> 00:09:20,360

Whenever you take it off, you have to stick it right in.

161

00:09:20,360 --> 00:09:23,360

Adam's sudden suit gained 20 grams.

162

00:09:25,360 --> 00:09:28,360

Next up, it's convict lookalike Jamie.

163

00:09:34,360 --> 00:09:39,360

To silence the critics, the mythbusters keep walking the walk.

164

00:09:43,360 --> 00:09:45,360

It's all going swimmingly.

165

00:09:45,360 --> 00:09:50,360

But just when they're about to run, disaster strikes.

166

00:09:51,360 --> 00:09:57,360

The rain stops and the sun comes out to spoil this myth, at least for now.

167

00:09:58,360 --> 00:10:05,360

The whimsical weather has scoffered the mythbusters run versus walk revisit.

168

00:10:05,360 --> 00:10:07,360

Well, that didn't work at all.

169

00:10:07,360 --> 00:10:10,360

San Francisco's weather patterns are just a little too fickle.

170

00:10:10,360 --> 00:10:13,360

Which is why we went with manufactured rain in the first place.

171

00:10:13,360 --> 00:10:15,360

Here we are now, we're out of time.

172

00:10:15,360 --> 00:10:17,360

Sounds like we need some help.

173

00:10:17,360 --> 00:10:19,360

Tory Grant, come on.

174

00:10:19,360 --> 00:10:21,360

They got to wear the gimp suit.

175

00:10:21,360 --> 00:10:23,360

Oh yeah, these things.

176

00:10:23,360 --> 00:10:25,360

Pad via superhero.

177

00:10:27,360 --> 00:10:29,360

Do you guys wash these?

178

00:10:29,360 --> 00:10:31,360

That's alright.

179

00:10:33,360 --> 00:10:39,360

So it's down to the build team to take on the challenge of concluding this soggy saga.

180

00:10:39,360 --> 00:10:43,360

Although they're not exactly thrilled at the thought.

181

00:10:43,360 --> 00:10:45,360

Why are we doing this again?

182

00:10:45,360 --> 00:10:48,360

Didn't Jamie and Adam already do this experiment?

183

00:10:48,360 --> 00:10:50,360

Yeah, but they made the rain.

184

00:10:50,360 --> 00:10:55,360

They took a warehouse and it was all man-made, so it was really, really consistent.

185

00:10:55,360 --> 00:10:59,360

We're working with some random mother nature and see if we can get a different reading.

186

00:10:59,360 --> 00:11:01,360

So why aren't they doing it?

187

00:11:01,360 --> 00:11:03,360

Because they don't want to get wet again.

188

00:11:03,360 --> 00:11:05,360

That's my point.

189

00:11:05,360 --> 00:11:07,360

37.5.

190

00:11:07,360 --> 00:11:11,360

It's a good point, but those are your orders.

191

00:11:11,360 --> 00:11:17,360

So they mark out the 100 foot course the same length as the original experiment.

192

00:11:17,360 --> 00:11:21,360

But it's hardly raining cats and dogs.

193

00:11:21,360 --> 00:11:29,360

Let's just stay on rain watch and the minute it starts getting, we'll be ready to go get all the stuff into the point where you can just jump in the gimp suits and go for it.

194

00:11:29,360 --> 00:11:31,360

To the gimp cage.

195

00:11:37,360 --> 00:11:39,360

This is such a strange feeling.

196

00:11:39,360 --> 00:11:41,360

They don't do the sweat barrier rubber.

197

00:11:41,360 --> 00:11:43,360

Don't say anything.

198

00:11:43,360 --> 00:11:47,360

And then their pre-weight overalls.

199

00:11:47,360 --> 00:11:51,360

This time one will run and one will walk simultaneously.

200

00:11:51,360 --> 00:11:53,360

Yeah, look at you.

201

00:11:53,360 --> 00:11:55,360

So they're exposed to the same rainfall.

202

00:11:55,360 --> 00:11:57,360

All right, you ready to go to work?

203

00:11:57,360 --> 00:11:59,360

All right, who's doing what first?

204

00:11:59,360 --> 00:12:01,360

All right, we got a chart here.

205

00:12:01,360 --> 00:12:05,360

I'm walking first and you are running.

206

00:12:05,360 --> 00:12:07,360

I am running, correct.

207

00:12:07,360 --> 00:12:09,360

And go.

208

00:12:17,360 --> 00:12:19,360

And stop.

209

00:12:19,360 --> 00:12:21,360

The suits are off and weighed.

210

00:12:21,360 --> 00:12:23,360

And the result?

211

00:12:25,360 --> 00:12:33,360

Tari's gained 10 grams in his 24 second walk and Grant's went up by 8 grams in his 10 second run.

212

00:12:33,360 --> 00:12:37,360

Okay, so test number two.

213

00:12:37,360 --> 00:12:39,360

You're running, I'm walking.

214

00:12:39,360 --> 00:12:41,360

Yeah.

215

00:12:41,360 --> 00:12:43,360

Ready?

216

00:12:43,360 --> 00:12:45,360

One, two, three, go.

217

00:12:45,360 --> 00:12:47,360

And off.

218

00:12:47,360 --> 00:12:49,360

Except it's not exactly a tropical monsoon.

219

00:12:55,360 --> 00:12:59,360

With the weigh in, Tari's in for a surprise.

220

00:12:59,360 --> 00:13:03,360

It's lighter than before I went out.

221

00:13:03,360 --> 00:13:05,360

How is that possible?

222

00:13:05,360 --> 00:13:09,360

It's just not raining hard enough to overcome the margin of error.

223

00:13:09,360 --> 00:13:13,360

But then, the heavens open.

224

00:13:13,360 --> 00:13:15,360

The race is now on.

225

00:13:15,360 --> 00:13:17,360

I am walking, you're running.

226

00:13:17,360 --> 00:13:19,360

You ready?

227

00:13:19,360 --> 00:13:21,360

Ready, set, go.

228

00:13:23,360 --> 00:13:25,360

These guys are troopers.

229

00:13:25,360 --> 00:13:29,360

They're not going to let a little rain dampen their parade.

230

00:13:29,360 --> 00:13:35,360

It's a long, saturated, and sometimes miserable afternoon for Grant and Tari.

231

00:13:35,360 --> 00:13:41,360

But after four more tests, they've got enough results to satisfy their critics.

232

00:13:44,360 --> 00:13:47,360

So, how'd you guys do? Did you get a lot of runs in?

233

00:13:47,360 --> 00:13:51,360

We did six different runs, and our results actually contradicted yours.

234

00:13:51,360 --> 00:13:52,360

Really?

235

00:13:52,360 --> 00:13:55,360

Yeah, we show that the runner gets less wet than the walker.

236

00:13:55,360 --> 00:14:01,360

Yeah, in fact, on average, we found that the runner collected 4 grams less water than the walker.

237

00:14:01,360 --> 00:14:10,360

Well, you've got a larger sample size, and I guess it may be that some artifact in our artificial rain skewed the results.

238

00:14:10,360 --> 00:14:14,360

So, I'm okay with saying that this myth is actually confirmed.

239

00:14:14,360 --> 00:14:18,360

I guess it is better to run than walk in the rain.

240

00:14:18,360 --> 00:14:19,360

Good work.

241

00:14:19,360 --> 00:14:21,360

Hey, thanks.

242

00:14:35,360 --> 00:14:38,360

So, exploding cola cans.

243

00:14:38,360 --> 00:14:42,360

This is a variation on the biscuit bullet story that we did.

244

00:14:42,360 --> 00:14:44,360

Well, we already revisited that one.

245

00:14:44,360 --> 00:14:47,360

We're getting pretty postmodern now when we're revisiting a revisit.

246

00:14:47,360 --> 00:14:49,360

What did we screw up on this one?

247

00:14:49,360 --> 00:14:51,360

You mean, what did you screw up?

248

00:14:53,360 --> 00:14:58,360

The first time around, the mythbusters put dough in a hot car to watch it explode.

249

00:14:59,360 --> 00:15:02,360

Ho-ho! No!

250

00:15:02,360 --> 00:15:09,360

For the revisit, they used aerosols and cola cans, but got no pops from any soda.

251

00:15:09,360 --> 00:15:14,360

Success only came via a 300-degree oven.

252

00:15:14,360 --> 00:15:17,360

Oh, yeah!

253

00:15:18,360 --> 00:15:21,360

But Adam was just too impatient.

254

00:15:21,360 --> 00:15:24,360

He wrapped the car experiment too early.

255

00:15:25,360 --> 00:15:31,360

Cola will explode at 140 degrees, but it just takes time to get there.

256

00:15:31,360 --> 00:15:37,360

So, it is possible for a soda can to get hot enough in a car to explode.

257

00:15:37,360 --> 00:15:40,360

Miaculpa myth confirmed.

258

00:15:40,360 --> 00:15:41,360

Oh, is that it?

259

00:15:41,360 --> 00:15:42,360

Actually, no.

260

00:15:42,360 --> 00:15:46,360

We got so much response to this, one fan even wrote in and said,

261

00:15:46,360 --> 00:15:52,360

What color of car would the mythbusters recommend for them to buy to prevent this from happening?

262

00:15:52,360 --> 00:15:56,360

What will save you from those nightmare summer heat waves

263

00:15:56,360 --> 00:16:00,360

when sweat runs free like a sweeter sauna,

264

00:16:00,360 --> 00:16:05,360

and the baking tarmac turns a TV dinner into toast?

265

00:16:05,360 --> 00:16:12,360

What will relieve the endless discomfort and stop soda cans exploding?

266

00:16:12,360 --> 00:16:14,360

A white car or a black car?

267

00:16:14,360 --> 00:16:16,360

I've got two identical cars here.

268

00:16:16,360 --> 00:16:18,360

One white, one black.

269

00:16:18,360 --> 00:16:21,360

They're completely the same inside and out.

270

00:16:21,360 --> 00:16:22,360

The only difference is the color.

271

00:16:22,360 --> 00:16:25,360

We're going to leave them out in the sun all day on a beautiful sunny day

272

00:16:25,360 --> 00:16:28,360

and see which one of these heats up faster.

273

00:16:30,360 --> 00:16:32,360

Alright, the thermometers are set.

274

00:16:32,360 --> 00:16:34,360

Let's start the experiment.

275

00:16:34,360 --> 00:16:36,360

It's just gone nine o'clock.

276

00:16:36,360 --> 00:16:38,360

I'm going to check the temperatures on both the cars,

277

00:16:38,360 --> 00:16:41,360

mark them down and come back in half an hour to see if there's any change.

278

00:16:45,360 --> 00:16:47,360

This one's already 88.

279

00:16:47,360 --> 00:16:49,360

The black car's already heating up faster.

280

00:16:51,360 --> 00:16:57,360

As the sun soars in the sky, this one's going to fry all day.

281

00:17:18,360 --> 00:17:21,360

The team also add the half-inch thick steel

282

00:17:21,360 --> 00:17:27,360

so that the full force of the 50 cal is transferred to Buster's center of gravity.

283

00:17:27,360 --> 00:17:29,360

You see the 50 cal of course?

284

00:17:32,360 --> 00:17:35,360

It's like the Acme Bugs Bunny Banana Ball.

285

00:17:35,360 --> 00:17:36,360

It's huge.

286

00:17:36,360 --> 00:17:37,360

They're little missiles.

287

00:17:37,360 --> 00:17:40,360

Are we going to get a chance to shoot, I wonder?

288

00:17:40,360 --> 00:17:42,360

Actually, no.

289

00:17:42,360 --> 00:17:44,360

That honor falls to its owner, Brian.

290

00:17:44,360 --> 00:17:47,360

Even though he's yet to have a chance to shoot it.

291

00:17:47,360 --> 00:17:49,360

Why haven't you fired it yet?

292

00:17:49,360 --> 00:17:52,360

Well, it's too powerful for most of the local ranges

293

00:17:52,360 --> 00:17:56,360

and the property I have to shoot it at is a swamp for six months out of the air.

294

00:17:56,360 --> 00:17:57,360

Are you excited?

295

00:17:57,360 --> 00:17:58,360

Oh, yeah.

296

00:17:58,360 --> 00:18:00,360

It's kind of hard having this sitting at home

297

00:18:00,360 --> 00:18:03,360

and just looking at it day after day, night after night.

298

00:18:03,360 --> 00:18:05,360

Not that I really do that, but it sounds good.

299

00:18:08,360 --> 00:18:11,360

Note to self, turn down invitations to Brian's place.

300

00:18:15,360 --> 00:18:17,360

It's Buster's last stand.

301

00:18:18,360 --> 00:18:21,360

Three, two, one.

302

00:18:26,360 --> 00:18:30,360

Buster's down for the count, but he's not blown away.

303

00:18:30,360 --> 00:18:33,360

That one rattled my bones. I still feel it.

304

00:18:33,360 --> 00:18:37,360

But how much of the bullet's lethal momentum did he absorb?

305

00:18:37,360 --> 00:18:38,360

Let's see.

306

00:18:40,360 --> 00:18:43,360

The round hit Buster right at his center of gravity

307

00:18:43,360 --> 00:18:45,360

and pierced the plate.

308

00:18:45,360 --> 00:18:49,360

Look at the deformation on this. That is a lot of kinetic energy.

309

00:18:49,360 --> 00:18:51,360

But where did it end up?

310

00:18:52,360 --> 00:18:53,360

Oh my God.

311

00:18:53,360 --> 00:18:54,360

Wait.

312

00:18:54,360 --> 00:18:55,360

Lodged in his spine.

313

00:18:55,360 --> 00:18:56,360

Is that it?

314

00:18:56,360 --> 00:18:57,360

Yeah.

315

00:18:59,360 --> 00:19:04,360

Buster took the force of the 50 cal and still just slumped.

316

00:19:04,360 --> 00:19:08,360

We had 100% of the kinetic energy on Buster and he still did not fly back.

317

00:19:08,360 --> 00:19:11,360

I would say that this is busted, busted, rebusted and busted.

318

00:19:11,360 --> 00:19:13,360

Well, yeah, I'm satisfied by looking at this.

319

00:19:13,360 --> 00:19:15,360

Let's check out the high speed footage.

320

00:19:18,360 --> 00:19:21,360

He went back a full two and a half inches there.

321

00:19:21,360 --> 00:19:22,360

Yes, that.

322

00:19:22,360 --> 00:19:23,360

He's not flying back.

323

00:19:23,360 --> 00:19:24,360

No.

324

00:19:24,360 --> 00:19:25,360

No, that wasn't flying back.

325

00:19:26,360 --> 00:19:28,360

Can we put this one to bed, please?

326

00:19:28,360 --> 00:19:31,360

Does anyone else have any God's suggestions for getting this one right?

327

00:19:31,360 --> 00:19:33,360

Because I think we've got it.

328

00:19:33,360 --> 00:19:37,360

Well, you know, let's just say you don't want to get shot by a gun, you know,

329

00:19:37,360 --> 00:19:41,360

but it's not going to throw you across the room for whatever little that's worth.

330

00:19:41,360 --> 00:19:43,360

And so stop doing it in the movies.

331

00:19:43,360 --> 00:19:45,360

If it doesn't make any sense, it just looks fake.

332

00:19:45,360 --> 00:19:47,360

That's because it is.

333

00:19:47,360 --> 00:19:50,360

The fly-by-wire boys do it every time.

334

00:19:53,360 --> 00:19:59,360

But catch an older movie before this trick was invented and everyone just slumps.

335

00:19:59,360 --> 00:20:05,360

And the final nail in the coffin of this myth comes courtesy of Newton.

336

00:20:05,360 --> 00:20:10,360

His third law states that any action has an equal and opposite reaction.

337

00:20:10,360 --> 00:20:16,360

So if Buster was going to be blown away, then our sharpshooter would have to be thrown

338

00:20:16,360 --> 00:20:18,360

at equal distance backwards.

339

00:20:20,360 --> 00:20:26,360

You know, I never cease to be amazed at how riled up people get when they think we've gotten something wrong.

340

00:20:26,360 --> 00:20:32,360

And I'm glad we redid blown away, but I don't think we came up with anything too radically new with it, do you?

341

00:20:32,360 --> 00:20:36,360

No, and, you know, we, again, talked to an expert.

342

00:20:36,360 --> 00:20:44,360

We talked to a guy from the FBI that is a crime scene investigator, and he verified that this just doesn't happen.

343

00:20:44,360 --> 00:20:46,360

It's busted. It's busted again.

344

00:20:56,360 --> 00:21:03,360

The next revisit is an awesome account of amateur aviation by one hell of a lucky builder.

345

00:21:03,360 --> 00:21:12,360

When blown off the roof, he transformed a piece of plywood into a parachute and carefully touched down a few stories below.

346

00:21:12,360 --> 00:21:15,360

So plywood builder, what are the fans saying about it?

347

00:21:15,360 --> 00:21:19,360

Well, it sounds like they're saying that we didn't take into consideration updraft.

348

00:21:19,360 --> 00:21:23,360

Well, we did consider that, and we used the zipline for that.

349

00:21:23,360 --> 00:21:32,360

And it was pretty clear to me that unless you had clamps for hands, you know, that plywood was going to get ripped away with any significant wind.

350

00:21:32,360 --> 00:21:37,360

Before the zipline, Adam and Jamie first did their average Joe test.

351

00:21:37,360 --> 00:21:42,360

But Buster, armed with plywood, simply plummeted to his death.

352

00:21:47,360 --> 00:21:52,360

But when they tested the effect of wind, viewers felt the speed they reached was too slow.

353

00:21:52,360 --> 00:21:58,360

Even though at only 15 miles an hour, controlling the board was impossible.

354

00:21:58,360 --> 00:22:03,360

Oh, forget about controlling this thing. There's no control.

355

00:22:03,360 --> 00:22:10,360

I mean, I pushed my head up against it. At the peak, I could not get it. It's just like all over the place.

356

00:22:10,360 --> 00:22:11,360

So Jamie, what's the plan?

357

00:22:11,360 --> 00:22:15,360

Well, let's just keep it simple. Let's just use the back of your pickup.

358

00:22:15,360 --> 00:22:20,360

And, you know, we'll strap you in there. You'll hold on to the board and get it up to speed.

359

00:22:20,360 --> 00:22:24,360

And you want to see whether changing the angle increases the lift on the board.

360

00:22:24,360 --> 00:22:27,360

And also at what speed you can no longer hold on to the board.

361

00:22:27,360 --> 00:22:29,360

Yeah, that sounds real safe.

362

00:22:30,360 --> 00:22:36,360

They're abandoning the slow zipline test and trying to drive this myth into the ground.

363

00:22:37,360 --> 00:22:45,360

Tari's building a support system for the back of his truck, which he'll strap himself into while holding a piece of plywood above his head.

364

00:22:48,360 --> 00:22:54,360

Then Grant will put the pedal to the metal to see if Tari can get any plywood lift.

365

00:22:55,360 --> 00:22:58,360

Just hold the plywood like this. See how long I can hold on.

366

00:22:59,360 --> 00:23:03,360

All that remains is for Tari to secure it to his truck.

367

00:23:03,360 --> 00:23:10,360

It doesn't slide back from side to side. It's not sliding, but look, sliding this way. That would be a bad thing.

368

00:23:10,360 --> 00:23:15,360

That would not be so much plywood builder as the roadkill builder.

369

00:23:15,360 --> 00:23:19,360

Maybe I could just screw into the bed. It's my truck. I'm not going to do that.

370

00:23:19,360 --> 00:23:22,360

But sure enough, that's what he does.

371

00:23:22,360 --> 00:23:27,360

And for the ride of his truck, he's going to be a little bit more careful.

372

00:23:27,360 --> 00:23:30,360

And for the ride of his life, Tari heads to the airport.

373

00:23:31,360 --> 00:23:38,360

What we're looking for are two things. One, by varying the angle of attack, can he get lift?

374

00:23:38,360 --> 00:23:44,360

And two, at what speed can he no longer hold on to that sheet of plywood?

375

00:23:46,360 --> 00:23:51,360

Well, as they unload, Tari's struggling to hold on at walking pace.

376

00:23:51,360 --> 00:23:53,360

I don't know. I think this is going to hurt.

377

00:23:53,360 --> 00:23:57,360

Everything we're about to do has all the elements of disaster.

378

00:23:57,360 --> 00:24:04,360

I mean, we've got Tari, who always ends up hurting himself, and somewhat of a sketchy plan.

379

00:24:05,360 --> 00:24:10,360

But Tari seems unconcerned, even though it's his neck on the line.

380

00:24:11,360 --> 00:24:13,360

I think it's more than your neck on the line.

381

00:24:13,360 --> 00:24:18,360

Sweet. Say if they first did the party time. Who's putting it on?

382

00:24:19,360 --> 00:24:25,360

But a cup's not all he needs for this crazy stunt.

383

00:24:26,360 --> 00:24:28,360

Ready? You're going to hurt.

384

00:24:29,360 --> 00:24:31,360

Oh, dude, what are you doing?

385

00:24:35,360 --> 00:24:37,360

And I'm the mean one.

386

00:24:38,360 --> 00:24:45,360

Suit it up. Maverick Tari gets strapped in and feels the need. The need for speed.

387

00:24:45,360 --> 00:24:47,360

I'm ready. Let's go. We're going to play.

388

00:24:49,360 --> 00:24:55,360

Meanwhile, which is hotter? The white car or the black car?

389

00:24:55,360 --> 00:25:00,360

So it's 10 a.m. one hour into the experiment. The white car is at 106.

390

00:25:01,360 --> 00:25:08,360

Okay, and the black car is at 115. I'm actually amazed how fast the temperature's going up in these cars.

391

00:25:09,360 --> 00:25:15,360

Already there's a 10 degree difference, but this myth has yet to get its fingers burnt.

392

00:25:19,360 --> 00:25:24,360

So what's next?

393

00:25:24,360 --> 00:25:26,360

We get to revisit explosive decompression.

394

00:25:26,360 --> 00:25:29,360

Oh, that's one of my favorites. I thought you had really good findings on that one.

395

00:25:29,360 --> 00:25:32,360

Well, we got a lot of email to the contrary.

396

00:25:33,360 --> 00:25:42,360

Adam and Jamie thought they'd proved that a gunshot will not cause a pressurized plane to explosively decompress, as Hollywood would have his believe.

397

00:25:43,360 --> 00:25:49,360

But some fans weren't happy because the mythbusters did their tests on the ground.

398

00:25:52,360 --> 00:26:04,360

They argued that in a flying plane, the results would be different and would rush over the bullet hole and exacerbate the pressure difference, which might be enough to help rip the plane apart.

399

00:26:06,360 --> 00:26:11,360

We do have a remnant from the previous experiment, and that is a door, and it even has a hole in it.

400

00:26:11,360 --> 00:26:16,360

Ah, that'd be perfect. What we could do is build a chamber around the door, stick that in the wind tunnel, and blow some air over it.

401

00:26:16,360 --> 00:26:22,360

As long as you can clearly see whether air passing over that hole creates a significant suction.

402

00:26:23,360 --> 00:26:26,360

Tari's rescued the DC-9 Souvenir door.

403

00:26:26,360 --> 00:26:29,360

Addie's building an airtight chamber around it.

404

00:26:32,360 --> 00:26:37,360

Once it's complete, they'll fill this chamber with smoke before putting it in a wind tunnel.

405

00:26:37,360 --> 00:26:45,360

Then they'll crank up the wind to mimic air moving around a plane, and watch to see if any smoke is sucked out of the bullet hole in the door.

406

00:26:49,360 --> 00:26:51,360

It's perfect.

407

00:26:52,360 --> 00:26:58,360

With the DC-9 chamber box signed, sealed, and delivered to the wind tunnel, it's time to get smoked up.

408

00:26:59,360 --> 00:27:05,360

To make this experiment much more visual, we're going to fill Tari's acrylic box with smoke bombs.

409

00:27:05,360 --> 00:27:14,360

We've got two kinds. We've got one professional smoke cookie, and we also have a little of those cheap smoke bombs that you can get in Chinatown just for a little color.

410

00:27:16,360 --> 00:27:20,360

You can always count on Tari to bring that feminine touch to the Mythbusters.

411

00:27:24,360 --> 00:27:26,360

Well ain't that pretty?

412

00:27:27,360 --> 00:27:35,360

With the fan off, no smoke escapes, because the pressure inside and outside the box is equal.

413

00:27:36,360 --> 00:27:38,360

So what happens with the fan on?

414

00:27:39,360 --> 00:27:42,360

And look at that! It's pulling it out!

415

00:27:42,360 --> 00:27:44,360

Alright, that's cool.

416

00:27:45,360 --> 00:27:50,360

And we stop it, and the smoke stops coming out.

417

00:27:50,360 --> 00:27:52,360

So that's cool. Alright, so it's working.

418

00:27:53,360 --> 00:27:58,360

Sure enough, the wind draws the smoke out of the box. But why?

419

00:27:59,360 --> 00:28:06,360

Once we turn this fan on, air is rushing past the top of the box, right where the hole is, creating a low pressure zone.

420

00:28:06,360 --> 00:28:16,360

And since air is always going to flow from high pressure to low pressure, the smoke and air inside the box is flowing out of the box as the air rushes over it.

421

00:28:17,360 --> 00:28:23,360

But because the escaping smoke is such a pathetic trickle, the team decide to see what the airspeed is.

422

00:28:26,360 --> 00:28:29,360

Okay, we've got 4.6 miles per hour.

423

00:28:30,360 --> 00:28:31,360

It's not very fast.

424

00:28:31,360 --> 00:28:35,360

It's not very fast. The DC9, what does it have? 561 miles per hour?

425

00:28:35,360 --> 00:28:37,360

We're going to need to go a lot faster.

426

00:28:37,360 --> 00:28:39,360

I think we need some faster winds.

427

00:28:40,360 --> 00:28:42,360

TORRY

428

00:28:43,360 --> 00:28:50,360

Torry is about to see if he can soar like the plywood builder, but the Omen's are not looking good.

429

00:28:52,360 --> 00:28:57,360

Torry, you can't see it right now, but there are 3 vultures right on the runway.

430

00:28:57,360 --> 00:29:02,360

Torry's ready to find the angle of lift and maybe fly with the vultures.

431

00:29:03,360 --> 00:29:07,360

In 3, 2, 1, go!

432

00:29:10,360 --> 00:29:13,360

15, 20!

433

00:29:13,360 --> 00:29:18,360

To get lift, Torry's got to get the board above his head and angle it into the onrushing air.

434

00:29:18,360 --> 00:29:20,360

35!

435

00:29:20,360 --> 00:29:23,360

Which is being measured by this anemometer.

436

00:29:26,360 --> 00:29:30,360

But already the speed is so fast, he just can't get it up.

437

00:29:30,360 --> 00:29:32,360

There he goes, and it's off!

438

00:29:32,360 --> 00:29:36,360

45 miles an hour, he cannot hold on any longer.

439

00:29:37,360 --> 00:29:42,360

At 45 miles an hour, Torry got about as much lift as a lead balloon.

440

00:29:42,360 --> 00:29:47,360

But as they retrieved the bruised board, he's had an idea that may just help.

441

00:29:47,360 --> 00:29:49,360

Torry, what do you want to do this time?

442

00:29:49,360 --> 00:29:53,360

What I'm thinking is maybe I'll start off with the plywood above my head like this,

443

00:29:53,360 --> 00:29:58,360

and as you guys are picking up speed, I'll lower it down into the wind and see if I get any lift.

444

00:29:59,360 --> 00:30:05,360

Okay, this is test number 2 with plywood, starting in the horizontal position this time.

445

00:30:06,360 --> 00:30:08,360

Go!

446

00:30:10,360 --> 00:30:13,360

10, 15, 20!

447

00:30:13,360 --> 00:30:15,360

He dropped it at 15!

448

00:30:15,360 --> 00:30:19,360

Well, if Torry was the original plywood builder, he'd now be dead.

449

00:30:19,360 --> 00:30:21,360

Whoa, what happened?

450

00:30:21,360 --> 00:30:27,360

Well, as soon as, like I had it up here like this, as soon as it started lowering,

451

00:30:27,360 --> 00:30:31,360

gravity took over and it just like, it came down and like, chopped me.

452

00:30:32,360 --> 00:30:37,360

Torry gets further padding and is ready to shoot the breeze again.

453

00:30:37,360 --> 00:30:38,360

You ready?

454

00:30:38,360 --> 00:30:39,360

Ready!

455

00:30:40,360 --> 00:30:42,360

And Torry's motivation?

456

00:30:42,360 --> 00:30:45,360

Letting go of the board means death.

457

00:30:49,360 --> 00:30:51,360

10, 15!

458

00:30:51,360 --> 00:30:53,360

And it's gone.

459

00:30:53,360 --> 00:30:55,360

It's looking like this myth is busted.

460

00:30:55,360 --> 00:30:56,360

Again.

461

00:30:56,360 --> 00:31:01,360

Torry can't hold on, let alone get any lift at just 15 miles an hour,

462

00:31:01,360 --> 00:31:05,360

but gusts around buildings get way higher than that.

463

00:31:06,360 --> 00:31:11,360

The American Society of Civil Engineers reports that updrafts around tall buildings in U.S. cities

464

00:31:11,360 --> 00:31:13,360

can reach up to 90 miles per hour.

465

00:31:14,360 --> 00:31:16,360

May not ever look like it from down below,

466

00:31:16,360 --> 00:31:23,360

but towering skyscrapers can funnel a gentle wind at street level into a fierce gale at the top.

467

00:31:24,360 --> 00:31:28,360

90 miles per hour seems like a lot of speed

468

00:31:28,360 --> 00:31:31,360

and that would definitely give a lot of lift on a piece of plywood,

469

00:31:31,360 --> 00:31:36,360

but you have to figure the faster it's going, the harder it is to control.

470

00:31:36,360 --> 00:31:41,360

And so far, Torry can't even control it at 15 miles per hour.

471

00:31:41,360 --> 00:31:43,360

They need a new plan.

472

00:31:43,360 --> 00:31:55,360

Well, Jamie, another classic that the fans said we completely screwed up

473

00:31:55,360 --> 00:31:59,360

was when we tested the myth that it's more fuel efficient to drive with your windows down

474

00:31:59,360 --> 00:32:01,360

than with your air conditioning on full blast.

475

00:32:02,360 --> 00:32:07,360

At 55 miles an hour, the gas computer showed that AC on was more efficient.

476

00:32:08,360 --> 00:32:13,360

But in the identical car test, at 45 miles an hour,

477

00:32:13,360 --> 00:32:20,360

open windows won hands down and the mythbusters screwed up by deciding this was the accurate result.

478

00:32:21,360 --> 00:32:24,360

I'm totally surprised and I hope we've answered it once and for all.

479

00:32:25,360 --> 00:32:28,360

But it turns out both results were right.

480

00:32:28,360 --> 00:32:35,360

As you go faster, open window drag increases until you reach a speed where AC is more efficient.

481

00:32:38,360 --> 00:32:45,360

And it turns out that that crossover point is just right between our two tests at 50 miles per hour.

482

00:32:45,360 --> 00:32:50,360

So above that point, it's better to close the windows, use the AC,

483

00:32:50,360 --> 00:32:53,360

and below that point, roll your windows down, turn the AC off.

484

00:32:53,360 --> 00:32:54,360

Exactly.

485

00:33:01,360 --> 00:33:03,360

At the automobile 11.

486

00:33:03,360 --> 00:33:07,360

All right, it's one o'clock. We're four hours into the experiment.

487

00:33:07,360 --> 00:33:09,360

It's still hot as hell. What do they read?

488

00:33:09,360 --> 00:33:14,360

126 on the white car, 135 on the black.

489

00:33:15,360 --> 00:33:23,360

The black car is a whopping 135 degrees, while the white seems to have peaked almost 10 degrees lower.

490

00:33:23,360 --> 00:33:28,360

As the baking continues, Tari's got a date with a flying builder.

491

00:33:29,360 --> 00:33:36,360

The plywood builder revisit is driving Tari crazy, but luckily, Kari's had a brainwave.

492

00:33:36,360 --> 00:33:40,360

The whole problem is I'm fighting gravity the whole time.

493

00:33:40,360 --> 00:33:48,360

I think that's actually the one thing that our viewers will still contest is the fact that it's hard to hold a plywood 4x8 above your head anyway.

494

00:33:48,360 --> 00:33:52,360

So I'm thinking it would be a good idea if we could take out that variable,

495

00:33:52,360 --> 00:33:55,360

maybe make a brace on the back that you can just kind of let it rest on.

496

00:33:55,360 --> 00:33:59,360

So the only thing that you're going to be fighting is just the wind.

497

00:33:59,360 --> 00:34:02,360

By making a support, the team will eliminate gravity.

498

00:34:02,360 --> 00:34:05,360

Now, Tari won't have to hold the board.

499

00:34:05,360 --> 00:34:09,360

Instead, he'll hang underneath as he waits to get lifted up.

500

00:34:09,360 --> 00:34:11,360

This is perfect. Go!

501

00:34:14,360 --> 00:34:17,360

10, safety, 20.

502

00:34:17,360 --> 00:34:19,360

Tari's dangling beneath the board.

503

00:34:19,360 --> 00:34:23,360

And then he's lifted, but why?

504

00:34:23,360 --> 00:34:27,360

Then he's lifted, but once more, he can't hold on.

505

00:34:27,360 --> 00:34:30,360

30, go! It's done! It's done! It's done! It's done!

506

00:34:30,360 --> 00:34:32,360

That was crazy!

507

00:34:32,360 --> 00:34:35,360

Yeah!

508

00:34:35,360 --> 00:34:38,360

You got up to 39.6 miles an hour.

509

00:34:38,360 --> 00:34:41,360

After 30 miles, you just flew.

510

00:34:41,360 --> 00:34:45,360

I think that was a very accurate test, because I mean, I had all my weight.

511

00:34:45,360 --> 00:34:49,360

I was hanging on it. It actually lifted me up, but then it ripped out of my hands.

512

00:34:49,360 --> 00:34:50,360

So you lifted, but you couldn't hold on.

513

00:34:50,360 --> 00:34:51,360

I couldn't hold on?

514

00:34:51,360 --> 00:34:53,360

I think we have plywood builder down.

515

00:34:53,360 --> 00:34:55,360

I think this is beyond criticism at this point.

516

00:34:55,360 --> 00:34:58,360

We've taken out the gravity factor.

517

00:34:58,360 --> 00:35:00,360

All we're dealing with is wind, and you couldn't hold on.

518

00:35:00,360 --> 00:35:03,360

I feel like we've actually proven something here.

519

00:35:03,360 --> 00:35:04,360

So how did it go?

520

00:35:04,360 --> 00:35:06,360

It actually went really well.

521

00:35:06,360 --> 00:35:09,360

We showed that with the right angle with the plywood, you could get lifted.

522

00:35:09,360 --> 00:35:12,360

And I did actually get lifted. I just couldn't hold on to the plywood.

523

00:35:12,360 --> 00:35:15,360

That's pretty much what we determined the first time we did this test.

524

00:35:15,360 --> 00:35:19,360

We know there's going to be high speed winds at the top of reasonably tall buildings.

525

00:35:19,360 --> 00:35:22,360

We know that they're going to give some lift to the plywood,

526

00:35:22,360 --> 00:35:25,360

and a lot of the fans were right about that aspect of it.

527

00:35:25,360 --> 00:35:28,360

But really it all comes down to whether or not you can control this plywood

528

00:35:28,360 --> 00:35:31,360

and direct your flight, which you can't.

529

00:35:31,360 --> 00:35:33,360

So this one's busted again, right?

530

00:35:33,360 --> 00:35:34,360

Busted again.

531

00:35:34,360 --> 00:35:35,360

Totally busted.

532

00:35:35,360 --> 00:35:36,360

Good work.

533

00:35:36,360 --> 00:35:37,360

Thank you.

534

00:35:44,360 --> 00:35:47,360

Back at the explosive decompression revisit,

535

00:35:47,360 --> 00:35:50,360

the build team have had the wind sucked out of them.

536

00:35:51,360 --> 00:35:53,360

So how to go with the suction?

537

00:35:53,360 --> 00:35:56,360

We got a little bit of a trickle, but I mean, it wasn't a lot of suction at all.

538

00:35:56,360 --> 00:35:58,360

What was the wind speed?

539

00:35:58,360 --> 00:36:00,360

4.6 miles an hour.

540

00:36:00,360 --> 00:36:02,360

Well, there's your problem.

541

00:36:02,360 --> 00:36:06,360

Well, it sounds to me like you need to get it going as fast as you can in the shop

542

00:36:06,360 --> 00:36:10,360

with what we have around here, and try to get at least three data points.

543

00:36:10,360 --> 00:36:15,360

So we can see if there is any correlation between outside wind speed and suction.

544

00:36:16,360 --> 00:36:20,360

Will air speeding over the bullet hole increase the pressure difference

545

00:36:20,360 --> 00:36:22,360

to cause explosive decompression?

546

00:36:22,360 --> 00:36:24,360

Time to collect some data.

547

00:36:26,360 --> 00:36:32,360

For data point one, Grant adds some streamlined acrylic to get the max speed from their fan.

548

00:36:34,360 --> 00:36:40,360

Meanwhile, Carrie's made a barometer to tell the pressure difference the wind is causing.

549

00:36:40,360 --> 00:36:49,360

Each inch that the water moves represents a 0.03613 difference in PSI.

550

00:36:50,360 --> 00:36:56,360

The fans on, and thanks to Grant's efforts, the wind speed is five times faster.

551

00:36:56,360 --> 00:36:59,360

Wind speed 19.1.

552

00:36:59,360 --> 00:37:01,360

Are you seeing any change?

553

00:37:01,360 --> 00:37:06,360

It's a tiny, tiny little change on market.

554

00:37:07,360 --> 00:37:12,360

So the difference in pressure is 0.002 PSI.

555

00:37:12,360 --> 00:37:14,360

That's not very much.

556

00:37:14,360 --> 00:37:17,360

No, I think Adam's had more explosive farts than that.

557

00:37:17,360 --> 00:37:25,360

They need faster wind again, so they resurrect a precious blast from the past, Adam and Jamie's Jetpack.

558

00:37:26,360 --> 00:37:35,360

If there is one scratch, one out of place bolt on this Jetpack, Jamie and Adam will lock us in a closet for the rest of the season.

559

00:37:35,360 --> 00:37:37,360

Here we go. Ready? Coming down.

560

00:37:38,360 --> 00:37:42,360

It's the moment of truth. One scratch, and they're off the team.

561

00:37:46,360 --> 00:37:49,360

The eagle has landed.

562

00:37:49,360 --> 00:37:51,360

And she landed.

563

00:37:53,360 --> 00:38:02,360

With the Jetpack ready to blast the wind tunnel, the team attach a zinc fuselage extension to make the air flow more like that of a flying plane.

564

00:38:03,360 --> 00:38:07,360

In three, two, one.

565

00:38:12,360 --> 00:38:15,360

In three, two, one.

566

00:38:17,360 --> 00:38:21,360

The Jetpack was never famous for being the most reliable machine.

567

00:38:24,360 --> 00:38:26,360

Hate gasoline engines.

568

00:38:27,360 --> 00:38:30,360

Maybe priming the carburetors will help.

569

00:38:31,360 --> 00:38:35,360

If it doesn't work now, Jamie will be far from happy.

570

00:38:36,360 --> 00:38:40,360

Ready? In three, two, one.

571

00:38:44,360 --> 00:38:46,360

She's away.

572

00:38:48,360 --> 00:38:50,360

But she's disappointingly weak.

573

00:38:51,360 --> 00:38:56,360

Even at full throttle, the wind speed over the bullet hole only reaches 38 miles an hour.

574

00:38:57,360 --> 00:39:05,360

And the barometer, it moves half an inch. That's a Feeble 0.02 psi. Hardly ear-popping stuff.

575

00:39:06,360 --> 00:39:11,360

It's not even close to the cruising 561 miles that we need to get to.

576

00:39:11,360 --> 00:39:15,360

I mean, we could probably get faster speeds if we strap this into somebody's truck.

577

00:39:18,360 --> 00:39:20,360

No sooner said than done.

578

00:39:21,360 --> 00:39:27,360

For data 0.3, after Tori's attached the rig to his truck, he'll hit the freeway fast.

579

00:39:27,360 --> 00:39:30,360

But, of course, he'll keep it legal.

580

00:39:31,360 --> 00:39:37,360

I don't think we're going to be able to drive, you know, like the 90 or 100 miles an hour that I wanted to,

581

00:39:37,360 --> 00:39:39,360

because it's not legal.

582

00:39:39,360 --> 00:39:45,360

But, you know, we'll be able to get it up there, maybe 65, maybe a go a little bit over 65.

583

00:39:46,360 --> 00:39:48,360

The team hit the road.

584

00:39:48,360 --> 00:39:52,360

As they look for a section of flat, empty freeway where they can do their test,

585

00:39:52,360 --> 00:39:55,360

Carrie's getting road rage.

586

00:39:55,360 --> 00:39:59,360

Ooh, don't you know we're doing important scientific work here?

587

00:40:00,360 --> 00:40:04,360

Her backseat driving does the trick, and Tori opens up the gas.

588

00:40:05,360 --> 00:40:07,360

Okay, I'm going up to 65. Here we go.

589

00:40:08,360 --> 00:40:12,360

Airflow reading 65, scooping in to 70.

590

00:40:12,360 --> 00:40:17,360

And the barometer is reading an inch, two, an inch and a half.

591

00:40:17,360 --> 00:40:23,360

Their third piece of data, 1.5 inches, 0.05 psi.

592

00:40:24,360 --> 00:40:27,360

We go up to 85. Let's do 85.

593

00:40:27,360 --> 00:40:28,360

Yeah!

594

00:40:28,360 --> 00:40:32,360

Time to call it a day before Tori does anything he might regret.

595

00:40:33,360 --> 00:40:34,360

So what'd you get?

596

00:40:34,360 --> 00:40:40,360

We did manage to get three data points, and they do show a correlation between wind speed and suction at the hole.

597

00:40:40,360 --> 00:40:45,360

Basically, because the wind increases, so does the suction, but the suction is still really tiny.

598

00:40:45,360 --> 00:40:54,360

I've done the math on this, and a bullet-sized hole at altitude traveling at 500 miles per hour would only generate about 1.4 psi.

599

00:40:54,360 --> 00:40:57,360

If you add that onto the pressure differential that you and Adam already tested...

600

00:40:57,360 --> 00:40:59,360

Which was about 8.5 psi.

601

00:40:59,360 --> 00:41:03,360

Even that still wouldn't be enough to cause explosive decompression.

602

00:41:03,360 --> 00:41:04,360

That means it's busted.

603

00:41:04,360 --> 00:41:05,360

Again.

604

00:41:05,360 --> 00:41:06,360

Again.

605

00:41:11,360 --> 00:41:18,360

In the car park cook-off, there's been a devastating technical fault.

606

00:41:19,360 --> 00:41:22,360

Carrie, what's wrong with that clock? It's not moving.

607

00:41:22,360 --> 00:41:24,360

I think the sun fried it.

608

00:41:24,360 --> 00:41:27,360

It's so hot, it melted the clock.

609

00:41:27,360 --> 00:41:30,360

Luckily, they've got an emergency replacement.

610

00:41:32,360 --> 00:41:34,360

What did the temperatures say?

611

00:41:34,360 --> 00:41:37,360

White car maintaining at 126.

612

00:41:37,360 --> 00:41:40,360

Black car 131.

613

00:41:40,360 --> 00:41:48,360

And as the sun crawls across the sky, the team keep toiling until the shadows start to lengthen.

614

00:41:48,360 --> 00:41:51,360

Okay, final half hour. What are the temperatures?

615

00:41:51,360 --> 00:42:00,360

Alright, Carrie. The white car is at 115 degrees, and the black car is at 120 degrees.

616

00:42:00,360 --> 00:42:05,360

The last temperatures are in. Time for some conclusions.

617

00:42:06,360 --> 00:42:11,360

We kind of figured the black car would get hotter, and it did, and it stayed hotter than the white car throughout the day.

618

00:42:11,360 --> 00:42:15,360

So, 10 degrees hotter, stays hotter longer.

619

00:42:15,360 --> 00:42:18,360

What do you buy? A white car or a black car?

620

00:42:18,360 --> 00:42:21,360

Well, if you're concerned about heat, you should buy the white car.

621

00:42:21,360 --> 00:42:24,360

Definitely. You should get a white car.

622

00:42:36,360 --> 00:42:45,360

This one's relative to a story we did earlier called Car Capers, where we were shooting a gas tank with a rifle and trying to make it explode.

623

00:42:45,360 --> 00:42:52,360

And that did not happen. However, we got grief from viewers saying, well, you should have used a tracer round that had set off the gas tank.

624

00:42:52,360 --> 00:43:00,360

That's not the myth that we were busting. The myth in Hollywood is that every bullet plus any given gas tank equals an explosion or a fire.

625

00:43:01,360 --> 00:43:05,360

Adam's Hollywood effects equation was spot on.

626

00:43:07,360 --> 00:43:16,360

But when the mythbusters tried to solve it, shooting rounds into a gas tank just turned it into Swiss cheese.

627

00:43:16,360 --> 00:43:20,360

There were no sparks, no ignition, and certainly no explosion.

628

00:43:22,360 --> 00:43:27,360

If there's anything we could be faulted for, it's not doing the classic mythbusters two-prong attack on a myth.

629

00:43:27,360 --> 00:43:34,360

We did not test the results. What kind of round will you get an explosion or a fire with? And that is a tracer round.

630

00:43:34,360 --> 00:43:36,360

But aren't tracer rounds illegal?

631

00:43:36,360 --> 00:43:41,360

Indeed they are, Mom, for air. Unless that is, you have friends in the FBI.

632

00:43:41,360 --> 00:43:47,360

At Alameda County Bomb Range, their FBI friend Frank is on hand to help.

633

00:43:48,360 --> 00:43:51,360

Frank, are these our special bullets that you procured for us?

634

00:43:51,360 --> 00:43:56,360

Yes, these are .223 caliber tracer rounds.

635

00:43:56,360 --> 00:43:58,360

Well, what is it that makes them work?

636

00:43:59,360 --> 00:44:11,360

The orange tip of the bullet contains phosphorus. When the round is fired, the friction with the air makes the phosphorus burn, which is why they glow and why they could ignite a gas tank.

637

00:44:14,360 --> 00:44:16,360

So it's a good job the fire crew is here then.

638

00:44:17,360 --> 00:44:21,360

Of all the permutations, what's the worst possible case scenario for you guys?

639

00:44:21,360 --> 00:44:30,360

I think the worst possible scenario at this point due to the moderate winds and dry conditions we have, a fire starting, igniting, going over the hillside.

640

00:44:30,360 --> 00:44:34,360

So wayward bullets could spell disaster.

641

00:44:35,360 --> 00:44:36,360

I'll write that.

642

00:44:36,360 --> 00:44:38,360

Sharp shooter Jamie has clipped in.

643

00:44:42,360 --> 00:44:44,360

Okay, I'm loading.

644

00:44:46,360 --> 00:44:51,360

And he's going to start by firing a single tracer into the half filled gas tank.

645

00:44:52,360 --> 00:44:56,360

Three, two, one.

646

00:44:58,360 --> 00:44:59,360

Think you hit it?

647

00:44:59,360 --> 00:45:00,360

I don't know.

648

00:45:01,360 --> 00:45:04,360

Adam goes in to take a closer look at the damage.

649

00:45:05,360 --> 00:45:10,360

Well, he hit it. That's for sure. Right down there about seven o'clock here.

650

00:45:10,360 --> 00:45:14,360

I smell gas fumes, but obviously nothing caught on fire.

651

00:45:15,360 --> 00:45:20,360

Well, I guess what we got to do is plug these up and go for several rounds now.

652

00:45:22,360 --> 00:45:32,360

It was a direct hit, but no explosion. Grant seals the wound as Jamie gets ready to unleash this time a whole clip of bullets into the tank.

653

00:45:33,360 --> 00:45:36,360

Burn hole! Burn hole!

654

00:45:36,360 --> 00:45:39,360

Three, two, one.

655

00:45:40,360 --> 00:45:48,360

Jamie begins unloading rapid fire. Direct hit after direct hit, but no explosion.

656

00:45:51,360 --> 00:45:53,360

But then trouble.

657

00:45:55,360 --> 00:45:57,360

Did you see that tracer shot up into the field?

658

00:45:57,360 --> 00:46:00,360

Yeah, I did. Hold on a second. Smoking the grass.

659

00:46:00,360 --> 00:46:03,360

And I can see gasoline pouring out the front of the tank.

660

00:46:03,360 --> 00:46:05,360

A tracer popped up into the field.

661

00:46:06,360 --> 00:46:14,360

The range is shut down. Fire plus leaking gas, not ideal. So the fire crew get in to investigate.

662

00:46:16,360 --> 00:46:22,360

They said the worst case scenario is, grass gets on fire, grass through fence that can't be gotten through.

663

00:46:23,360 --> 00:46:26,360

Wind heading that way where vehicles can't get on.

664

00:46:26,360 --> 00:46:28,360

Worst case scenario, it happened.

665

00:46:28,360 --> 00:46:30,360

How does it seem? Seems alright?

666

00:46:30,360 --> 00:46:32,360

I don't see any smoke.

667

00:46:32,360 --> 00:46:33,360

Alright, cool.

668

00:46:33,360 --> 00:46:36,360

They're off the hook, but the myth ain't so hot.

669

00:46:36,360 --> 00:46:42,360

I've had my fun working off a full clip of incendiary rounds, of tracer rounds here.

670

00:46:42,360 --> 00:46:45,360

I say, you know, you guys pick your weapons.

671

00:46:47,360 --> 00:46:48,360

I'm all around.

672

00:46:48,360 --> 00:46:49,360

Those will be for you.

673

00:46:49,360 --> 00:46:50,360

Close up?

674

00:46:51,360 --> 00:46:52,360

Sure.

675

00:46:52,360 --> 00:46:53,360

Sweet.

676

00:46:54,360 --> 00:47:00,360

To silence the critics, they're going for broke. If this doesn't cause an explosion, nothing will.

677

00:47:01,360 --> 00:47:02,360

Okay, is everybody loaded?

678

00:47:02,360 --> 00:47:03,360

Loaded.

679

00:47:03,360 --> 00:47:06,360

Okay, safety's off, fire at will.

680

00:47:11,360 --> 00:47:16,360

It's like General Custer's last stand, but with tracer rounds.

681

00:47:17,360 --> 00:47:21,360

And the tank? Nothing. Nada. Zip.

682

00:47:21,360 --> 00:47:24,360

This myth is surely busted again.

683

00:47:24,360 --> 00:47:29,360

75 gunshots later, and the tank's got more holes than a donut shop.

684

00:47:29,360 --> 00:47:34,360

But Jamie wants to try once more with the tank further away.

685

00:47:34,360 --> 00:47:43,360

The reason being that these tracer rounds ignite from air friction and understandably, you know, they're probably not going to ignite right as they come out of the barrel.

686

00:47:43,360 --> 00:47:45,360

It may take a little distance.

687

00:47:45,360 --> 00:47:51,360

So they reposition the gunpoint another 50 feet back and top of the barrel.

688

00:47:52,360 --> 00:47:55,360

With Grant safely out of the way.

689

00:47:55,360 --> 00:47:59,360

And three, two, one.

690

00:47:59,360 --> 00:48:04,360

As the rounds fly, it's the same old story until.

691

00:48:06,360 --> 00:48:08,360

At last, we have fire.

692

00:48:10,360 --> 00:48:12,360

The high speed shows the moment of ignition.

693

00:48:12,360 --> 00:48:18,360

And who knows if the tank was not like Swiss cheese, there may have even been a fire.

694

00:48:18,360 --> 00:48:23,360

But if it was not like Swiss cheese, there may have even been an explosion.

695

00:48:23,360 --> 00:48:27,360

The tracer round will in fact ignite gasoline in the tank.

696

00:48:27,360 --> 00:48:32,360

And if you had an enclosed tank, pressure plus fire plus the correct air fuel mixture equals explosion.

697

00:48:32,360 --> 00:48:38,360

So I'd say we call this one confirmed and everyone can go home and rest easy.

698

00:48:38,360 --> 00:48:41,360

Why didn't we get an RPG?

699

00:48:41,360 --> 00:48:43,360

It would have been a lot faster.

700

00:48:43,360 --> 00:48:45,360

We'll get the next revisit.

701

00:48:45,360 --> 00:48:49,360

Someone's going to write in and say, you guys should have used an RPG because that would definitely have blown up the car.

702

00:48:49,360 --> 00:48:53,360

And then we'll go get one of those and then we'll blow up the car and then there'll be some other problem.

703

00:48:53,360 --> 00:48:55,360

And we're fine with that.

704

00:48:55,360 --> 00:48:57,360

I don't know how to actually call this one.

705

00:48:57,360 --> 00:48:59,360

We busted it the first time.

706

00:48:59,360 --> 00:49:02,360

We confirmed it the second time without somehow reversing our previous results.

707

00:49:02,360 --> 00:49:05,360

Tracer rounds will blow up a gas tank.