

1

00:00:00,000 --> 00:00:03,540

on this episode of myth busters.

2

00:00:05,040 --> 00:00:06,540

You're up your ears.

3

00:00:08,640 --> 00:00:12,380

Kind of wake up in the morning and button up your bulletproof

4

00:00:12,480 --> 00:00:16,780

best protecting for 2 years because there's guns galore and

5

00:00:16,880 --> 00:00:18,460

big audio dynamite.

6

00:00:20,560 --> 00:00:24,160

Adam and Jamie asked can a sonic break glass.

7

00:00:24,160 --> 00:00:29,600

Then carry grant and Tory fire up a film fable to find out if

8

00:00:29,700 --> 00:00:31,400

you can bend bullets.

9

00:00:32,300 --> 00:00:37,240

So duck and cover because this is going to be fast loud and

10

00:00:37,340 --> 00:00:38,140

lethal.

11

00:00:38,240 --> 00:00:39,280

You got it.

12

00:00:39,380 --> 00:00:40,380

You got it.

13

00:00:40,480 --> 00:00:41,380

Come on.

14

00:00:41,480 --> 00:00:42,380

Stay with us.

15

00:00:42,480 --> 00:00:43,980

Who are the myth busters?

16

00:00:44,080 --> 00:00:45,580

Adam Savage.

17

00:00:45,680 --> 00:00:47,220

I'm ready to go man.

18

00:00:47,320 --> 00:00:49,060

And Jamie is the best.

19

00:00:49,160 --> 00:00:50,620

Adam is the best.

20

00:00:50,720 --> 00:00:52,120

Adam is the best.

21

00:00:52,180 --> 00:00:53,520

I'm ready to go man.

22

00:00:53,620 --> 00:00:57,520

And Jamie high to make like a wet t-shirt contest between them

23

00:00:57,620 --> 00:01:00,660

more than 30 years of special effects experience.

24

00:01:00,760 --> 00:01:04,100

Wow joining them.

25

00:01:04,200 --> 00:01:05,560

Carrie Byron.

26

00:01:05,660 --> 00:01:09,600

Grant in a horror.

27

00:01:09,700 --> 00:01:12,040

Tory Boley cheat.

28

00:01:12,140 --> 00:01:14,240

They don't just tell them this.

29

00:01:14,340 --> 00:01:16,180

They put them to the test.

30

00:01:22,120 --> 00:01:23,120

All right.

31

00:01:23,220 --> 00:01:25,220

I hear this one's a loud one.

32

00:01:25,320 --> 00:01:26,420

What's the story?

33

00:01:26,520 --> 00:01:27,520

Sonic Boom.

34

00:01:27,620 --> 00:01:28,520

What's that?

35

00:01:28,620 --> 00:01:29,520

Sonic Boom.

36

00:01:29,620 --> 00:01:31,060

What about a sonic boom?

37

00:01:31,160 --> 00:01:33,200

Sonic Boom breaks glass.

38

00:01:33,300 --> 00:01:35,360

Well sure sonic boom can break glass.

39

00:01:35,460 --> 00:01:39,500

The fans are saying that any sonic boom breaks any glass.

40

00:01:39,600 --> 00:01:41,940

Windows, glasses, you name it.

41

00:01:42,040 --> 00:01:43,740

That sounds like fun.

42

00:01:43,840 --> 00:01:46,940

Well the best part is that we get to ride in a jet.

43

00:01:47,040 --> 00:01:48,740

You want to look at the jet.

44

00:01:48,840 --> 00:01:50,520

You want to look at the jet.

45

00:01:50,540 --> 00:01:53,180

You want to lay down to bet.

46

00:01:53,280 --> 00:01:54,520

Where are you going?

47

00:01:54,620 --> 00:01:55,420

Dude.

48

00:01:58,180 --> 00:02:02,860

When something this noisy goes faster than the speed of sound,

49

00:02:02,960 --> 00:02:08,360

the sonic boom created is a powerful and visceral experience.

50

00:02:08,460 --> 00:02:12,840

The question is can any old sonic boom really break glass?

51

00:02:12,940 --> 00:02:16,100

And for answers, the guys are going to fly with the world

52

00:02:16,200 --> 00:02:18,940

famous Blue Angels.

53

00:02:19,700 --> 00:02:20,900

Dude, come on back.

54

00:02:21,000 --> 00:02:21,900

I was just kidding.

55

00:02:22,000 --> 00:02:23,600

I want to hear all about these jets.

56

00:02:23,700 --> 00:02:25,100

It's not just about the jets.

57

00:02:25,200 --> 00:02:27,740

The myth is that any sonic boom can break glass.

58

00:02:27,840 --> 00:02:31,740

And you and I both know that bullets go supersonic sometimes.

59

00:02:31,840 --> 00:02:33,980

You're suggesting we start with guns and glass.

60

00:02:34,080 --> 00:02:35,020

Exactly.

61

00:02:35,120 --> 00:02:35,880

I love it.

62

00:02:35,980 --> 00:02:36,880

And then we go for the jet.

63

00:02:36,980 --> 00:02:37,880

Can I fly in the jet please?

64

00:02:37,980 --> 00:02:39,180

Can I be the one that flies in the jet?

65

00:02:39,280 --> 00:02:40,820

Why should you get to fly in the jet?

66

00:02:40,920 --> 00:02:43,720

Because I'm going to be funnier on camera in the jet?

67

00:02:43,820 --> 00:02:44,860

Well, OK.

68

00:02:44,960 --> 00:02:46,860

You need to log some training hours first,

69

00:02:46,880 --> 00:02:48,480

because we need to know that you can handle it

70

00:02:48,580 --> 00:02:50,320

before you go supersonic.

71

00:02:50,420 --> 00:02:51,720

Oh, this is so cool.

72

00:02:51,820 --> 00:02:55,260

I'm going to go get the jet with my gun.

73

00:02:55,360 --> 00:02:58,960

But before the guys bring out the big guns to test the bullets,

74

00:02:59,060 --> 00:03:03,200

it's off to the Naval Air Facility at El Centro California,

75

00:03:03,300 --> 00:03:05,040

the winter home of the Blue Angels.

76

00:03:07,940 --> 00:03:11,880

They've kindly allowed Adam to join one of their subsonic training

77

00:03:11,980 --> 00:03:15,620

sessions so that he can qualify for the supersonic test

78

00:03:15,680 --> 00:03:17,380

flights later on.

79

00:03:17,480 --> 00:03:22,120

Adam's going to be going up in a Boeing FAA-18 Hornet.

80

00:03:22,220 --> 00:03:25,820

The FAA stands for Fighter Attack.

81

00:03:25,920 --> 00:03:35,200

And their twin engines put out a total of 32,000 pounds of thrust,

82

00:03:35,300 --> 00:03:39,400

which propels them up to about 1,400 miles per hour,

83

00:03:39,500 --> 00:03:43,480

or just under twice the speed of sand.

84

00:03:43,540 --> 00:03:46,780

But first, Adam is getting a brief briefing

85

00:03:46,880 --> 00:03:49,640

at a crash course in combating G forces.

86

00:03:49,740 --> 00:03:51,240

A negative G is like a roller coaster.

87

00:03:51,340 --> 00:03:52,280

It's a lightheadedness.

88

00:03:52,380 --> 00:03:53,580

The stomach feels like it's coming up.

89

00:03:56,380 --> 00:03:59,180

To combat that, all we're going to do is take long, deep breaths.

90

00:03:59,280 --> 00:04:01,860

And that helps with the nausea.

91

00:04:01,960 --> 00:04:03,960

Positive Gs are the ones that make it feel like there's

92

00:04:04,060 --> 00:04:07,360

an elephant sitting on your chest.

93

00:04:07,460 --> 00:04:09,400

When he's in the maneuver, it's going to force all the blood

94

00:04:09,500 --> 00:04:11,500

from your upper body down into your toes.

95

00:04:11,600 --> 00:04:12,700

And you want to combat that.

96

00:04:12,720 --> 00:04:15,860

The way that we do that is the anti-G strain maneuver.

97

00:04:15,960 --> 00:04:17,360

And it's going to look something like this.

98

00:04:17,460 --> 00:04:18,260

Hey.

99

00:04:18,360 --> 00:04:19,760

Hey.

100

00:04:19,860 --> 00:04:20,760

Hey.

101

00:04:20,860 --> 00:04:21,700

Hey.

102

00:04:21,800 --> 00:04:22,800

Hey.

103

00:04:22,900 --> 00:04:24,400

If you start seeing yourself going to G-LOC,

104

00:04:24,500 --> 00:04:26,100

you'll start to see this gray tunnel.

105

00:04:26,200 --> 00:04:27,100

Hey.

106

00:04:27,200 --> 00:04:28,680

It's going to look like it's going to start closing in on you,

107

00:04:28,780 --> 00:04:29,640

closing in on you.

108

00:04:29,740 --> 00:04:31,040

Hey.

109

00:04:31,140 --> 00:04:33,420

If you don't fight it, it'll go from gray to black,

110

00:04:33,520 --> 00:04:35,020

and you'll pass out.

111

00:04:35,120 --> 00:04:38,880

Undeterred by that possibility, let's go fly.

112

00:04:38,980 --> 00:04:41,780

Our excited little jet fighter rookie.

113

00:04:41,840 --> 00:04:43,800

Right here, these are the yellow and black handles.

114

00:04:43,900 --> 00:04:47,280

That's the ejection handles, hands off at all times.

115

00:04:47,380 --> 00:04:52,240

Gets all set and seated ready for his training ride.

116

00:04:52,340 --> 00:04:54,880

Let me just call up tower here and see what you can take off.

117

00:04:54,980 --> 00:04:56,180

OK.

118

00:04:56,280 --> 00:04:59,920

Adam in Blue Angel number seven is ready for the experience

119

00:05:00,020 --> 00:05:01,020

of a lifetime.

120

00:05:01,120 --> 00:05:02,920

There's a little tower.

121

00:05:03,020 --> 00:05:04,360

About 20 knots.

122

00:05:04,460 --> 00:05:05,700

There they go.

123

00:05:05,800 --> 00:05:09,700

And they call this a job.

124

00:05:09,720 --> 00:05:11,120

There's 80 knots.

125

00:05:11,220 --> 00:05:14,120

100.

126

00:05:14,220 --> 00:05:15,120

There we go.

127

00:05:15,220 --> 00:05:17,000

It's 240.

128

00:05:17,100 --> 00:05:19,460

230.

129

00:05:19,560 --> 00:05:20,460

280.

130

00:05:20,560 --> 00:05:21,260

Ready to go flying?

131

00:05:21,360 --> 00:05:21,860

I am.

132

00:05:21,960 --> 00:05:22,160

Ready.

133

00:05:22,260 --> 00:05:22,960

Hit it.

134

00:05:23,060 --> 00:05:23,460

Woo!

135

00:05:29,060 --> 00:05:30,100

Oh.

136

00:05:30,200 --> 00:05:31,100

Man, we're flying.

137

00:05:31,200 --> 00:05:33,940

Oh, holy crap.

138

00:05:34,040 --> 00:05:35,900

At one point, they were going along the runway,

139

00:05:36,000 --> 00:05:39,680

and then all of a sudden, they were going straight up.

140

00:05:39,780 --> 00:05:41,580

Coming up to 2,000 feet.

141

00:05:41,680 --> 00:05:42,680

Wow.

142

00:05:42,780 --> 00:05:45,580

We've had six years of doing incredible, life changing

143

00:05:45,680 --> 00:05:47,980

kind of crazy crap on this show.

144

00:05:48,080 --> 00:05:49,120

And that takes the cake.

145

00:05:49,220 --> 00:05:51,680

That's the best thing I've ever done.

146

00:05:51,780 --> 00:05:53,420

It's kind of just a way to see the world upside down

147

00:05:53,520 --> 00:05:54,820

as we cruise on out.

148

00:05:54,920 --> 00:05:55,920

Wow.

149

00:05:56,020 --> 00:05:57,620

That's intense.

150

00:05:57,720 --> 00:05:59,460

I mean, it is absolutely like every special effects

151

00:05:59,560 --> 00:06:00,520

film you've ever seen.

152

00:06:00,620 --> 00:06:02,060

It's that cool.

153

00:06:02,160 --> 00:06:03,760

Wow, this is awesome.

154

00:06:03,860 --> 00:06:04,760

Ha ha ha.

155

00:06:09,700 --> 00:06:11,700

Ha ha ha.

156

00:06:11,800 --> 00:06:13,700

Ha ha ha.

157

00:06:13,800 --> 00:06:14,700

Ha ha ha.

158

00:06:14,800 --> 00:06:15,700

Ha ha ha.

159

00:06:15,800 --> 00:06:16,700

Ha ha ha.

160

00:06:16,800 --> 00:06:18,280

OK, so what's with the hardware?

161

00:06:18,380 --> 00:06:20,380

Well, we have a new movie myth that has mythbusters

162

00:06:20,480 --> 00:06:21,780

written all over it.

163

00:06:21,880 --> 00:06:23,120

And since this movie's come out, we

164

00:06:23,220 --> 00:06:25,020

have been inundated with requests to do it.

165

00:06:25,120 --> 00:06:27,980

In fact, it is the most requested myth of the year.

166

00:06:28,080 --> 00:06:29,720

You're talking about the movie Wanted, right?

167

00:06:29,820 --> 00:06:30,820

Exactly.

168

00:06:30,920 --> 00:06:33,420

And in that movie, a secret society of assassins

169

00:06:33,520 --> 00:06:35,600

shares the ability to curve a bullet.

170

00:06:35,700 --> 00:06:36,700

That's right.

171

00:06:36,800 --> 00:06:38,260

Just with a little bit of a flick of the gun,

172

00:06:38,320 --> 00:06:40,160

you can curve the bullet around an obstacle

173

00:06:40,260 --> 00:06:41,760

and hit your target.

174

00:06:41,860 --> 00:06:43,000

Oh.

175

00:06:43,100 --> 00:06:44,160

This should be fun.

176

00:06:44,260 --> 00:06:46,000

Psh, a really dangerous.

177

00:06:46,100 --> 00:06:47,440

Do I get a play gun, too?

178

00:06:47,540 --> 00:06:48,340

When we're done.

179

00:06:51,440 --> 00:06:54,140

When your target's hidden behind a side of pork

180

00:06:54,240 --> 00:06:58,880

and Angelina Jolly, what's a secret assassin to do?

181

00:06:58,980 --> 00:07:00,680

Shoot the target.

182

00:07:00,780 --> 00:07:03,580

Well, supposedly, with a swing of the arm

183

00:07:03,680 --> 00:07:06,720

and a flick of the wrist in obligatory action movie

184

00:07:06,740 --> 00:07:10,620

Slow Motion, the bullet curves around the obstacle,

185

00:07:10,720 --> 00:07:11,620

saving your bacon.

186

00:07:14,220 --> 00:07:15,620

OK, so how do you want to test this?

187

00:07:15,720 --> 00:07:16,820

I say we just go for it.

188

00:07:16,920 --> 00:07:17,820

Psh.

189

00:07:17,920 --> 00:07:18,920

Exactly.

190

00:07:19,020 --> 00:07:20,360

I mean, in the movie, James McEvoy

191

00:07:20,460 --> 00:07:22,960

was able to curve a bullet after only a few tries

192

00:07:23,060 --> 00:07:26,240

with minimal training, which makes us perfectly qualified.

193

00:07:26,340 --> 00:07:27,240

OK.

194

00:07:27,340 --> 00:07:30,200

But let's say on the off chance that none of us

195

00:07:30,300 --> 00:07:33,640

are fifth generation secret superhuman assassins,

196

00:07:33,740 --> 00:07:35,780

maybe we could break it down, look at the rifling,

197

00:07:35,840 --> 00:07:38,000

aerodynamics, and I don't know, throwing a robot

198

00:07:38,100 --> 00:07:38,940

for good measure.

199

00:07:39,040 --> 00:07:40,240

OK, you got a point there.

200

00:07:40,340 --> 00:07:41,240

What's wrong?

201

00:07:41,340 --> 00:07:42,340

You guys feeling ballistically challenged?

202

00:07:42,440 --> 00:07:43,640

I say we just let our cold blood

203

00:07:43,740 --> 00:07:46,680

into assassins and steaks take over.

204

00:07:46,780 --> 00:07:48,080

OK.

205

00:07:48,180 --> 00:07:51,020

How about you hand me the gun, and then we'll go with that plan?

206

00:07:51,120 --> 00:07:52,660

How about you get your own gun?

207

00:07:52,760 --> 00:07:53,860

Just give me the gun.

208

00:07:53,960 --> 00:07:54,760

Nope.

209

00:07:54,860 --> 00:07:56,720

All right.

210

00:07:56,820 --> 00:07:59,260

And the location for our gun toting trio

211

00:07:59,360 --> 00:08:01,460

to potentially bend their bullets

212

00:08:01,560 --> 00:08:05,360

is deep in the heart of wine country?

213

00:08:06,220 --> 00:08:08,980

Napa Valley, Northern California.

214

00:08:09,080 --> 00:08:11,220

So to start out testing our curving bullet myth,

215

00:08:11,320 --> 00:08:13,020

we're actually going to try it ourselves.

216

00:08:13,120 --> 00:08:18,660

But because this involves swinging a live gun around,

217

00:08:18,760 --> 00:08:20,760

we need a lot of open space.

218

00:08:20,860 --> 00:08:24,000

OK, so for our first test, we just need to control, well,

219

00:08:24,100 --> 00:08:25,800

target practice to make sure we can all hit the target.

220

00:08:25,900 --> 00:08:27,440

Yeah, because there's no point curving a bullet

221

00:08:27,540 --> 00:08:28,440

if we can't hit our target.

222

00:08:28,540 --> 00:08:29,340

Yeah.

223

00:08:29,440 --> 00:08:30,440

Sounds good.

224

00:08:30,540 --> 00:08:34,840

And it looks like I'm the first target.

225

00:08:34,900 --> 00:08:37,260

So our trio of would-be assassins

226

00:08:37,360 --> 00:08:40,800

select their weapons, line up, and let loose.

227

00:08:40,900 --> 00:08:41,700

Let her have it, Carrie.

228

00:08:50,800 --> 00:08:52,540

Look at that, four in the black.

229

00:08:59,640 --> 00:09:01,340

Love that smell.

230

00:09:01,440 --> 00:09:02,780

Well, it looks like we're all hitting the target.

231

00:09:02,820 --> 00:09:05,320

You guys ready to start curving bullets?

232

00:09:05,420 --> 00:09:06,220

Sure.

233

00:09:06,320 --> 00:09:07,520

Let's do it.

234

00:09:07,620 --> 00:09:12,020

And first up is Grant, who volunteered

235

00:09:12,120 --> 00:09:15,420

to put in a few extra hours studying Angelina Jolie's

236

00:09:15,520 --> 00:09:16,660

technique.

237

00:09:16,760 --> 00:09:18,760

I think you must have been practicing in the mirror.

238

00:09:18,860 --> 00:09:20,560

You've got some moves.

239

00:09:20,660 --> 00:09:22,300

It's kind of like an aerobics workout.

240

00:09:33,240 --> 00:09:34,180

Just back and forth.

241

00:09:34,280 --> 00:09:36,880

Didn't get it on the first one.

242

00:09:36,980 --> 00:09:45,880

But neither Grant Himahara nor Tori Belachy got it at all.

243

00:09:45,980 --> 00:09:46,820

It's really interesting.

244

00:09:46,920 --> 00:09:49,360

It happens very fast.

245

00:09:49,460 --> 00:09:51,260

The characters in the movie have this ability

246

00:09:51,360 --> 00:09:52,700

to speed up their heartbeat.

247

00:09:52,800 --> 00:09:55,400

And it makes everything else slow down.

248

00:09:55,500 --> 00:09:57,140

Apparently, I don't have that ability.

249

00:09:57,240 --> 00:09:58,160

It just goes, boom, boom.

250

00:09:58,260 --> 00:10:01,000

And then it's gone.

251

00:10:01,460 --> 00:10:03,800

Next up is Carrie and Cole.

252

00:10:03,900 --> 00:10:07,300

As I am six months pregnant, I will be wearing a bulletproof

253

00:10:07,400 --> 00:10:09,400

vest protecting fortuitous.

254

00:10:15,500 --> 00:10:19,740

As I suspected, I don't have superhuman strength,

255

00:10:19,840 --> 00:10:22,320

abilities, or shooting capabilities.

256

00:10:22,420 --> 00:10:23,220

What are you going to do?

257

00:10:23,320 --> 00:10:25,620

I'm just a regular girl.

258

00:10:25,720 --> 00:10:27,920

With none of our gung-ho gun slingers

259

00:10:28,020 --> 00:10:30,920

coming close to the target, never mind curving it.

260

00:10:31,020 --> 00:10:32,620

But if you're not wearing a bullet,

261

00:10:32,720 --> 00:10:35,200

it's quite clear that imitating the movie

262

00:10:35,300 --> 00:10:38,760

just isn't going to cut it.

263

00:10:38,860 --> 00:10:43,100

Coming up, Adam gets to terra firmer.

264

00:10:43,200 --> 00:10:44,100

There we go.

265

00:10:44,200 --> 00:10:45,140

Weighing a lot less.

266

00:10:45,240 --> 00:10:46,100

Two.

267

00:10:51,940 --> 00:10:52,740

Pretty quiet.

268

00:10:52,840 --> 00:10:53,640

I am ready.

269

00:10:53,740 --> 00:10:54,580

Hit it.

270

00:10:54,580 --> 00:11:00,920

To find out if the energy from a sonic boom can break glass,

271

00:11:01,020 --> 00:11:02,380

holy crap.

272

00:11:02,480 --> 00:11:05,380

Adam and Jamie have recruited the Blue Angels.

273

00:11:05,480 --> 00:11:06,480

Take a deep breath.

274

00:11:06,580 --> 00:11:06,980

Ready.

275

00:11:07,080 --> 00:11:08,160

Hit it.

276

00:11:08,260 --> 00:11:11,060

The US Navy's flight demonstration squadron,

277

00:11:11,160 --> 00:11:13,000

specifically potted Lieutenant Ben Wallborn,

278

00:11:13,100 --> 00:11:15,000

hold on up to 5G.

279

00:11:15,100 --> 00:11:16,500

We got 5G in 5 and a half.

280

00:11:16,600 --> 00:11:19,540

Is taking Adam for a training flight in preparation

281

00:11:19,640 --> 00:11:21,500

for supersonic testing.

282

00:11:21,600 --> 00:11:23,300

Wow, it's a little of the great tunnel there.

283

00:11:23,400 --> 00:11:24,200

Yeah.

284

00:11:24,960 --> 00:11:26,660

Depending on what the jet's doing,

285

00:11:26,760 --> 00:11:28,160

Adam's either going to be weightless

286

00:11:28,260 --> 00:11:32,260

or he's going to be experiencing about 7 and 1 half Gs,

287

00:11:32,360 --> 00:11:37,500

which means that he'll feel like he weighs 1,400 pounds,

288

00:11:37,600 --> 00:11:39,940

kind of like having an elephant on his chest.

289

00:11:40,040 --> 00:11:43,040

Now, if he follows his anti-blackout techniques

290

00:11:43,140 --> 00:11:45,480

that he was taught about in our safety briefing,

291

00:11:45,580 --> 00:11:47,680

he shouldn't pass out.

292

00:11:47,780 --> 00:11:48,820

Come on, stick with me, Adam.

293

00:11:48,920 --> 00:11:49,520

You got it.

294

00:11:49,620 --> 00:11:50,080

You got it.

295

00:11:50,180 --> 00:11:50,680

Come on.

296

00:11:50,780 --> 00:11:51,320

Stay with us.

297

00:11:51,420 --> 00:11:53,060

Stay with us.

298

00:11:53,160 --> 00:11:53,620

We got it.

299

00:11:53,640 --> 00:11:54,120

Come back.

300

00:11:57,480 --> 00:11:58,080

You with me?

301

00:11:58,180 --> 00:11:58,880

I'm with you.

302

00:11:58,980 --> 00:12:00,620

I almost probably passed out there in a second.

303

00:12:00,720 --> 00:12:05,120

But given his past history, I think he's going to spew.

304

00:12:05,220 --> 00:12:06,660

I'm starting to feel a little nauseous.

305

00:12:06,760 --> 00:12:08,000

I think I may throw up.

306

00:12:08,100 --> 00:12:09,620

All right, you got the bag back there.

307

00:12:09,720 --> 00:12:10,200

Hold on.

308

00:12:13,560 --> 00:12:17,440

Incredibly, despite blowing chunks on several occasions,

309

00:12:17,540 --> 00:12:21,640

the experience still blew Adam's mind.

310

00:12:21,740 --> 00:12:23,200

There were two kind of mind blowing things

311

00:12:23,260 --> 00:12:24,200

about that experience.

312

00:12:24,300 --> 00:12:26,900

One is that while I am using every ounce of strength

313

00:12:27,000 --> 00:12:30,400

that energy I have just to keep from passing out,

314

00:12:30,500 --> 00:12:32,200

Lieutenant Walborn is going through everything

315

00:12:32,300 --> 00:12:34,100

that I'm going through, except for these piloting

316

00:12:34,200 --> 00:12:37,440

a \$50 million plane going through these motions

317

00:12:37,540 --> 00:12:40,780

and talking to me all the time.

318

00:12:40,880 --> 00:12:43,320

The second one is that even though I passed out,

319

00:12:43,420 --> 00:12:46,480

even though I threw up, even though my dignity is,

320

00:12:46,580 --> 00:12:49,180

or lack thereof, is on display for telepathy,

321

00:12:49,280 --> 00:12:50,960

it didn't attract an experience at all.

322

00:12:54,160 --> 00:12:56,660

Dude!

323

00:12:56,760 --> 00:12:59,460

We have fired a whole crapload of rockets on this showbook.

324

00:12:59,560 --> 00:13:01,800

We've never ridden that much.

325

00:13:01,900 --> 00:13:02,700

Ready, hit it.

326

00:13:07,300 --> 00:13:08,040

And we're flying.

327

00:13:08,140 --> 00:13:09,900

Holy crap.

328

00:13:10,000 --> 00:13:11,280

That thing is fast.

329

00:13:11,380 --> 00:13:12,080

It is pretty fast.

330

00:13:12,180 --> 00:13:13,340

We did that vertical takeoff.

331

00:13:13,440 --> 00:13:15,940

We were going about 30,000 feet per minute climb rate up there.

332

00:13:16,040 --> 00:13:17,420

Did you break the speed of sound?

333

00:13:17,520 --> 00:13:18,380

No, I did not.

334

00:13:18,480 --> 00:13:19,280

But you can, right?

335

00:13:19,380 --> 00:13:21,020

You guys break the sound barrier all the time.

336

00:13:21,120 --> 00:13:22,880

Yes, but never in an air show.

337

00:13:22,900 --> 00:13:25,700

The FAA prohibits flying supersonic over populated areas.

338

00:13:25,800 --> 00:13:28,080

In order to fly supersonic, we'll go out to restricted zones

339

00:13:28,180 --> 00:13:30,340

or at least 30 miles off the shore.

340

00:13:30,440 --> 00:13:32,540

Are you ready to bark at the speed of sound?

341

00:13:32,640 --> 00:13:33,440

All right.

342

00:13:33,540 --> 00:13:34,640

Where do we stand?

343

00:13:34,740 --> 00:13:35,980

Well, you blew chunks.

344

00:13:36,080 --> 00:13:38,080

You passed out a bunch of times.

345

00:13:38,180 --> 00:13:40,180

You're cleared to fly.

346

00:13:40,280 --> 00:13:41,880

So I get to fly supersonic now?

347

00:13:41,980 --> 00:13:43,420

Well, hold on a second there, cowboy.

348

00:13:43,520 --> 00:13:45,820

Remember, we were going to start with sonic booms

349

00:13:45,920 --> 00:13:47,020

from guns first.

350

00:13:47,120 --> 00:13:48,020

All right.

351

00:13:48,120 --> 00:13:49,660

I've got a table full of glassware.

352

00:13:49,760 --> 00:13:51,860

I've got a .50 caliber rifle.

353

00:13:51,940 --> 00:13:52,860

We're good to go.

354

00:13:52,960 --> 00:13:53,980

That sounds like a perfect day.

355

00:13:54,080 --> 00:13:55,880

Let's do it.

356

00:13:55,980 --> 00:14:00,860

So while Adam gets busy with the corridor of glassware,

357

00:14:00,960 --> 00:14:03,420

Heinemann is handling the hardware.

358

00:14:03,520 --> 00:14:06,800

If you're not aware of the .50 caliber is the big gun.

359

00:14:06,900 --> 00:14:09,800

There's not really anything that a civilian can get a hold of

360

00:14:09,900 --> 00:14:12,300

that's any bigger or more powerful than this.

361

00:14:12,400 --> 00:14:14,400

It kind of puts a smile on your face

362

00:14:14,500 --> 00:14:16,800

if you're a gun enthusiast.

363

00:14:16,900 --> 00:14:19,980

And the peaceful pastoral location

364

00:14:20,100 --> 00:14:23,600

that's about to be interrupted by the sound of violence

365

00:14:23,700 --> 00:14:26,900

is a familiar scene to the Mythbusters team.

366

00:14:27,000 --> 00:14:29,780

This bucolic setting is, in fact, the Shabo Gun Ranch.

367

00:14:29,880 --> 00:14:31,780

And we've shot many bullet-related myths here,

368

00:14:31,880 --> 00:14:35,140

including Sniper Scope and a couple of what

369

00:14:35,240 --> 00:14:37,940

is bulletproof episodes.

370

00:14:38,040 --> 00:14:40,940

Today, we want to find out if one of these

371

00:14:41,040 --> 00:14:43,640

can break one of these.

372

00:14:43,740 --> 00:14:47,520

But not by hitting it, merely by passing by.

373

00:14:47,560 --> 00:14:50,060

Yes, today is all about the Sonic Boom.

374

00:14:50,160 --> 00:14:51,560

Let's talk Sonic Booms.

375

00:14:51,660 --> 00:14:53,520

The first thing you need to know is that sound travels

376

00:14:53,620 --> 00:14:56,520

at 761 miles per hour at sea level.

377

00:14:56,620 --> 00:14:59,360

This bullet goes supersonic when it's fired.

378

00:14:59,460 --> 00:15:02,440

And it goes about 1984 miles per hour.

379

00:15:02,540 --> 00:15:05,140

And what is happening is that there's a shock wave created

380

00:15:05,240 --> 00:15:07,740

by a kind of a conical wall of sound

381

00:15:07,840 --> 00:15:10,640

trailing behind the bullet as it's going through the air.

382

00:15:10,740 --> 00:15:14,880

And when that wall of sound actually crosses a person,

383

00:15:14,900 --> 00:15:17,680

the person experiences that as a sonic boom.

384

00:15:17,780 --> 00:15:20,420

You can think of this kind of like a boat on the water.

385

00:15:20,520 --> 00:15:23,140

And the boat is leaving a wake behind it.

386

00:15:23,240 --> 00:15:25,920

And you're like a dingy kind of floating nearby.

387

00:15:26,020 --> 00:15:28,680

And when the wake passes across you,

388

00:15:28,780 --> 00:15:31,520

you start to react to it.

389

00:15:31,620 --> 00:15:34,200

Now, what we're doing here is seeing

390

00:15:34,300 --> 00:15:37,660

what glass will do when that pressure wave goes

391

00:15:37,760 --> 00:15:38,460

through the glass.

392

00:15:38,560 --> 00:15:39,760

Will it break it?

393

00:15:39,860 --> 00:15:40,960

We're going to find out.

394

00:15:41,060 --> 00:15:41,760

Next.

395

00:15:41,860 --> 00:15:42,900

Your fly's down.

396

00:15:43,000 --> 00:15:43,840

Check.

397

00:15:43,900 --> 00:15:47,300

Our trio of gunslingers ramp it up with a robot.

398

00:15:47,400 --> 00:15:52,100

And Adam and Jamie, let loose the big gun.

399

00:15:52,200 --> 00:15:53,540

That is a hell of a thug.

400

00:15:57,140 --> 00:15:59,780

Now for some insider info, proudly brought to you

401

00:15:59,880 --> 00:16:01,720

by Miller Lite.

402

00:16:01,820 --> 00:16:05,120

The most common sonic boom of all is thunder,

403

00:16:05,220 --> 00:16:08,520

created by the rapid expansion of air when lightning strikes.

404

00:16:14,600 --> 00:16:17,900

It's a filmic fable that has the myth buster message

405

00:16:18,000 --> 00:16:20,700

boards in a spin.

406

00:16:20,800 --> 00:16:23,440

Can you really bend it like Brangelina?

407

00:16:26,780 --> 00:16:31,620

Well, so far, despite the team's best efforts,

408

00:16:31,720 --> 00:16:35,320

there's been no sign of a bullet bending shot.

409

00:16:35,420 --> 00:16:36,920

That's looking pretty straight to me.

410

00:16:37,020 --> 00:16:38,320

It doesn't look like it's curving at all.

411

00:16:38,420 --> 00:16:40,760

So what are you going to miss?

412

00:16:40,820 --> 00:16:45,260

Fact is, most of their shots went nowhere near the target.

413

00:16:45,360 --> 00:16:49,160

Little early on the draw.

414

00:16:49,260 --> 00:16:51,460

So to test this properly, they need

415

00:16:51,560 --> 00:16:55,840

to match the movie character's superhuman speed, strength,

416

00:16:55,940 --> 00:16:58,200

and accuracy.

417

00:16:58,300 --> 00:17:00,440

So needless to say, we failed miserably

418

00:17:00,540 --> 00:17:02,180

at trying to curve the bullet ourselves.

419

00:17:02,280 --> 00:17:02,980

But you know what?

420

00:17:03,080 --> 00:17:04,240

We're only human.

421

00:17:04,340 --> 00:17:07,480

And the characters in Wanted have superhuman abilities.

422

00:17:07,580 --> 00:17:10,080

So that's why we're resurrecting this.

423

00:17:10,140 --> 00:17:12,900

It's a sword swinging robot.

424

00:17:13,000 --> 00:17:16,580

It came a bat swinging robot.

425

00:17:16,680 --> 00:17:19,380

Then became a hat swinging robot.

426

00:17:19,480 --> 00:17:22,420

And it's about to become a bullet curving robot.

427

00:17:22,520 --> 00:17:24,860

It can swing its arm at superhuman speeds.

428

00:17:24,960 --> 00:17:26,820

And what's more, it can fire the gun

429

00:17:26,920 --> 00:17:29,760

at precisely the moment we wanted to.

430

00:17:29,860 --> 00:17:32,260

Take off some of the rust, change it around,

431

00:17:32,360 --> 00:17:34,000

and we're good to go.

432

00:17:34,100 --> 00:17:35,400

Going down.

433

00:17:35,500 --> 00:17:37,300

We need a completely controlled environment

434

00:17:37,400 --> 00:17:39,000

to test our crazy gunsling and rig.

435

00:17:39,020 --> 00:17:40,920

So we've come down to the South San Francisco Police

436

00:17:41,020 --> 00:17:41,960

Department.

437

00:17:42,060 --> 00:17:44,860

They have a firing range, and they're going to let us use it.

438

00:17:44,960 --> 00:17:47,300

And while Grant gets ready for action,

439

00:17:47,400 --> 00:17:51,940

Tori and Carrie prepare to get the results down on paper.

440

00:17:52,040 --> 00:17:53,980

We need to find out whether or not these bullets are curving.

441

00:17:54,080 --> 00:17:56,280

But in order to do that, we need to be able to track

442

00:17:56,380 --> 00:17:57,740

the path of our bullets.

443

00:17:57,840 --> 00:18:00,780

So we've set up five frames of paper down the gun range,

444

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

eight feet apart.

445

00:18:01,980 --> 00:18:03,320

That way, when the gun goes off, the bullet

446

00:18:03,420 --> 00:18:05,880

will punch a hole in each one of those sheets of paper.

447

00:18:05,980 --> 00:18:06,760

Science is a body.

448

00:18:09,020 --> 00:18:10,700

Now, if the bullets are flying straight,

449

00:18:10,800 --> 00:18:12,260

those holes should all line up.

450

00:18:12,360 --> 00:18:14,860

And we should be able to see that by pointing a laser pointer

451

00:18:14,960 --> 00:18:15,860

down the hole.

452

00:18:15,960 --> 00:18:17,600

Hey, it works.

453

00:18:17,700 --> 00:18:19,700

Now, if those holes are not lining up,

454

00:18:19,800 --> 00:18:22,400

then we're curving bullets.

455

00:18:22,500 --> 00:18:24,780

So the first test up is at regular human speed.

456

00:18:24,880 --> 00:18:26,780

Now, I know we've already done this test ourselves,

457

00:18:26,880 --> 00:18:28,920

which qualifies as human speed.

458

00:18:29,020 --> 00:18:32,320

But the robot is capable of perfect execution.

459

00:18:32,420 --> 00:18:34,480

And that's what we need to do is take out any differences

460

00:18:34,580 --> 00:18:38,260

in our timing or our aim and do it perfectly.

461

00:18:38,320 --> 00:18:40,660

Normally, here on Mythbusters, we're pretty safety conscious.

462

00:18:40,760 --> 00:18:42,160

But on this experiment in particular,

463

00:18:42,260 --> 00:18:45,460

because we've got a gun going a full 360 degrees around,

464

00:18:45,560 --> 00:18:47,460

we have an extra set up for caution.

465

00:18:47,560 --> 00:18:50,600

Exhaust valves open, open, open.

466

00:18:50,700 --> 00:18:51,600

Check.

467

00:18:51,700 --> 00:18:54,060

And because Tori and I are going to be in the danger zone here,

468

00:18:54,160 --> 00:18:56,740

we're wearing full bulletproof right here.

469

00:18:56,840 --> 00:18:58,580

We're turning elbow to hum.

470

00:18:58,680 --> 00:19:00,100

Hand is in.

471

00:19:00,200 --> 00:19:01,980

Trigger cylinder is out.

472

00:19:02,080 --> 00:19:03,840

You ready to load the gun?

473

00:19:03,940 --> 00:19:04,580

Almost.

474

00:19:04,680 --> 00:19:05,720

Check.

475

00:19:05,820 --> 00:19:07,320

10 more steps.

476

00:19:07,420 --> 00:19:07,980

Damn.

477

00:19:08,000 --> 00:19:10,580

Secondly, I've got a 25 point checklist

478

00:19:10,680 --> 00:19:13,780

to make sure that we can load and discharge the weapon safely.

479

00:19:13,880 --> 00:19:14,480

OK.

480

00:19:14,580 --> 00:19:15,680

Your fly's down.

481

00:19:15,780 --> 00:19:16,580

Check.

482

00:19:16,680 --> 00:19:17,780

That ought to cover it.

483

00:19:17,880 --> 00:19:18,280

Here we go.

484

00:19:18,380 --> 00:19:20,720

We are loading the gun.

485

00:19:20,820 --> 00:19:21,680

All right.

486

00:19:21,780 --> 00:19:23,060

We are loaded and hot.

487

00:19:23,160 --> 00:19:23,560

OK.

488

00:19:23,660 --> 00:19:25,360

Pull the elbow pin.

489

00:19:25,460 --> 00:19:26,160

Pin pulled.

490

00:19:26,260 --> 00:19:27,260

Pressurizing the shoulder.

491

00:19:31,060 --> 00:19:33,160

Smell good, man.

492

00:19:33,260 --> 00:19:33,700

Ready?

493

00:19:33,800 --> 00:19:34,400

Ready.

494

00:19:34,500 --> 00:19:35,200

Take the pin pulled.

495

00:19:35,300 --> 00:19:35,900

Let's go.

496

00:19:36,000 --> 00:19:37,000

Get out of here.

497

00:19:37,060 --> 00:19:38,000

OK.

498

00:19:38,100 --> 00:19:39,720

This is going to be human speed.

499

00:19:39,820 --> 00:19:41,020

Here we go.

500

00:19:41,120 --> 00:19:42,860

Three, two, one.

501

00:19:48,560 --> 00:19:50,300

I can see two and three.

502

00:19:50,400 --> 00:19:52,400

Remember, if the bullet did curve.

503

00:19:52,500 --> 00:19:54,000

Fourth, we got all five frames.

504

00:19:54,100 --> 00:19:55,240

That was a good test.

505

00:19:55,340 --> 00:19:57,480

The holes in the five sheets of paper,

506

00:19:57,580 --> 00:20:00,580

the physical evidence of the bullet's trajectory,

507

00:20:00,680 --> 00:20:01,440

won't line up.

508

00:20:01,540 --> 00:20:02,680

I use the laser.

509

00:20:02,780 --> 00:20:04,620

And lined with the hole.

510

00:20:04,720 --> 00:20:05,880

Can you see it all the way?

511

00:20:05,940 --> 00:20:08,300

Science is so unforgiving.

512

00:20:08,400 --> 00:20:09,640

The bullet didn't curve.

513

00:20:09,740 --> 00:20:11,380

We could see the laser down at this end.

514

00:20:14,680 --> 00:20:16,380

Now for us, this confirms that human speed

515

00:20:16,480 --> 00:20:18,480

is not going to curve a bullet.

516

00:20:18,580 --> 00:20:19,680

We did it ourselves.

517

00:20:19,780 --> 00:20:20,920

We tried it with the robot.

518

00:20:21,020 --> 00:20:22,580

Now it's time to ramp it up and see

519

00:20:22,680 --> 00:20:24,560

if superhuman strength is going to curve it.

520

00:20:30,160 --> 00:20:33,500

Can a sonic boom from a bullet break glass?

521

00:20:33,600 --> 00:20:35,100

All right.

522

00:20:35,160 --> 00:20:37,760

Adam and Jamie are about to find out.

523

00:20:37,860 --> 00:20:38,720

Right, little bullet.

524

00:20:38,820 --> 00:20:40,760

Here is your motivation.

525

00:20:40,860 --> 00:20:42,100

Here's how it's going to work.

526

00:20:42,200 --> 00:20:44,360

We're going to put you down the barrel of this.

527

00:20:44,460 --> 00:20:46,140

And then Jamie, I know how you like Jamie,

528

00:20:46,240 --> 00:20:47,400

is going to pull the trigger.

529

00:20:47,500 --> 00:20:49,940

Sonic boom from 7 and 1 half inches.

530

00:20:50,040 --> 00:20:52,240

At that point, I would really appreciate it

531

00:20:52,340 --> 00:20:55,280

if you used all your gas at the expanding in that direction

532

00:20:55,380 --> 00:20:58,020

to start traveling down this way towards the glass.

533

00:20:58,120 --> 00:20:59,120

Right.

534

00:20:59,220 --> 00:21:01,780

About 1,984 miles per hour.

535

00:21:01,880 --> 00:21:03,160

And three.

536

00:21:03,220 --> 00:21:05,420

I'd like you there to travel down the middle part

537

00:21:05,520 --> 00:21:07,860

of the glass, past the glass, past the glass where

538

00:21:07,960 --> 00:21:09,720

the light bulbs the wine bottle.

539

00:21:09,820 --> 00:21:10,920

Two.

540

00:21:11,020 --> 00:21:13,920

And then if you feel like it, if the physics are right

541

00:21:14,020 --> 00:21:15,560

and you're in the mood and you'd

542

00:21:15,660 --> 00:21:17,900

like to break some glass with your sonic boom,

543

00:21:18,000 --> 00:21:19,760

you go right ahead.

544

00:21:19,860 --> 00:21:20,260

One.

545

00:21:24,200 --> 00:21:26,940

That is a hell of a thud.

546

00:21:27,040 --> 00:21:31,640

A thud Adam and Jamie could feel through the air.

547

00:21:31,700 --> 00:21:35,860

But a thud for which the glassware didn't care.

548

00:21:35,960 --> 00:21:37,800

It all looks pristine.

549

00:21:37,900 --> 00:21:39,900

It does.

550

00:21:40,000 --> 00:21:41,540

Dude, you can see the bullet.

551

00:21:41,640 --> 00:21:44,240

That's awesome.

552

00:21:44,340 --> 00:21:46,340

Shockwave was following behind it.

553

00:21:46,440 --> 00:21:47,840

If we were going to see anything,

554

00:21:47,940 --> 00:21:49,340

it would probably be starting to happen now.

555

00:21:49,440 --> 00:21:50,980

I don't see any movement.

556

00:21:51,080 --> 00:21:53,680

I can't believe from the thud I feel from firing the weapon

557

00:21:53,780 --> 00:21:57,320

that I don't see a single anything.

558

00:21:57,420 --> 00:21:58,920

I think we've got to push way in.

559

00:21:59,020 --> 00:21:59,920

I do too.

560

00:22:00,300 --> 00:22:03,040

Let's say four inches apart, two inches each from the bullet.

561

00:22:03,140 --> 00:22:03,840

Sounds good.

562

00:22:03,940 --> 00:22:05,140

All right.

563

00:22:05,240 --> 00:22:09,380

Based on the fact that we didn't see any reaction before,

564

00:22:09,480 --> 00:22:10,880

I don't think it's going to break.

565

00:22:10,980 --> 00:22:12,180

Two inches from center.

566

00:22:12,280 --> 00:22:14,720

In, three, two, one.

567

00:22:19,780 --> 00:22:22,320

As the high speed illustrates, there wasn't even

568

00:22:22,420 --> 00:22:24,620

the slightest tremor.

569

00:22:24,720 --> 00:22:26,520

I don't see any.

570

00:22:26,620 --> 00:22:29,620

I got to say, I mean, if a bullet passed that close to me,

571

00:22:29,620 --> 00:22:30,920

I'd be scared to death.

572

00:22:31,020 --> 00:22:34,960

And those glasses, it's like nothing's happening.

573

00:22:35,060 --> 00:22:38,460

Which is enough evidence to convince our Hirsut Hujir.

574

00:22:38,560 --> 00:22:39,800

At this point, I don't think the bullet's

575

00:22:39,900 --> 00:22:41,100

going to break the glass.

576

00:22:41,200 --> 00:22:43,600

Add with a glass lined up just half an inch

577

00:22:43,700 --> 00:22:47,740

from the center line, contact with the banana sized 50 caliber

578

00:22:47,840 --> 00:22:51,280

bullet is a distinct possibility.

579

00:22:51,380 --> 00:22:54,680

Three, two, one.

580

00:23:00,620 --> 00:23:03,420

I don't think that was a shock wave.

581

00:23:03,520 --> 00:23:05,220

Me neither.

582

00:23:05,320 --> 00:23:06,320

Me too.

583

00:23:06,420 --> 00:23:09,820

That looked to be a direct hit on the wrist.

584

00:23:09,920 --> 00:23:10,960

See that right there?

585

00:23:11,060 --> 00:23:11,920

That's not a sonic boom.

586

00:23:12,020 --> 00:23:13,020

That's a bullet hit.

587

00:23:13,120 --> 00:23:15,060

That's where the bullet contacted the frame,

588

00:23:15,160 --> 00:23:16,360

started shattering glass.

589

00:23:16,460 --> 00:23:18,600

And the glass itself, traveling with the bullet

590

00:23:18,700 --> 00:23:21,740

all the way down the corridor, tearing crap up as it went.

591

00:23:21,840 --> 00:23:24,440

Yeah, the rest of this is from the shrapnel probably, huh?

592

00:23:24,540 --> 00:23:25,340

Yeah.

593

00:23:29,680 --> 00:23:30,620

Where do we stand?

594

00:23:30,720 --> 00:23:33,280

All right, well, at no distance where the bullet passed

595

00:23:33,380 --> 00:23:37,020

by the glass, did we get any movement from the glass.

596

00:23:37,120 --> 00:23:38,020

Check.

597

00:23:38,120 --> 00:23:40,220

At this point, we don't have any evidence

598

00:23:40,320 --> 00:23:42,120

that a sonic boom, at least when coming off a bullet,

599

00:23:42,220 --> 00:23:45,100

has any significant effect on any thickness of glass.

600

00:23:45,200 --> 00:23:45,800

Check.

601

00:23:45,900 --> 00:23:49,000

King to pawn four.

602

00:23:49,100 --> 00:23:50,640

Check.

603

00:23:50,740 --> 00:23:54,280

So this part of the myth, a sonic boom from a bullet breaking

604

00:23:54,380 --> 00:23:57,840

glass is, like Adam's glass corridor,

605

00:23:57,900 --> 00:23:59,800

well and truly busted.

606

00:23:59,900 --> 00:24:03,700

After the break, it's time to go supersonic.

607

00:24:03,800 --> 00:24:06,900

But will it break glass?

608

00:24:07,000 --> 00:24:11,040

And Carrie Granton Tory gear up the gunslinger.

609

00:24:11,140 --> 00:24:12,680

Does superhuman speed.

610

00:24:12,780 --> 00:24:13,620

Center shot.

611

00:24:22,620 --> 00:24:25,420

Adam and Jamie now know that the sonic shock wave

612

00:24:25,480 --> 00:24:28,380

from a passing bullet, if they even create one,

613

00:24:28,480 --> 00:24:31,340

doesn't break glass.

614

00:24:31,440 --> 00:24:34,380

So really, their best bet is the jet.

615

00:24:34,480 --> 00:24:36,420

And back at the Naval Air Facility,

616

00:24:36,520 --> 00:24:41,560

Adam is all set to break the sound barrier for science.

617

00:24:41,660 --> 00:24:42,800

Strap in.

618

00:24:42,900 --> 00:24:46,840

It's time to go supersonic.

619

00:24:46,940 --> 00:24:52,140

Meanwhile, 55 miles away in Yuma, Arizona.

620

00:24:52,240 --> 00:24:54,300

Oh, there's a hissing sound.

621

00:24:54,400 --> 00:24:55,300

Uh-oh.

622

00:24:55,300 --> 00:24:58,460

Jamie is preparing a glass menagerie for Adam's

623

00:24:58,560 --> 00:25:00,460

supersonic flybys.

624

00:25:00,560 --> 00:25:02,360

If you happen to have a supersonic jet,

625

00:25:02,460 --> 00:25:04,300

you can't just go flying around anywhere

626

00:25:04,400 --> 00:25:06,100

you want creating sonic boom.

627

00:25:06,200 --> 00:25:09,240

You've got to come to a place like this, Marine Corps Air

628

00:25:09,340 --> 00:25:12,880

Station Yuma, which is one of the few places you can legally

629

00:25:12,980 --> 00:25:13,640

do that.

630

00:25:13,740 --> 00:25:16,440

That's why we're here.

631

00:25:16,540 --> 00:25:19,480

Mythbusters, Blue Angels, test site.

632

00:25:19,580 --> 00:25:20,380

Plenty of space.

633

00:25:20,400 --> 00:25:22,600

It's nice, shrubbery.

634

00:25:22,700 --> 00:25:26,440

Probably quite a few rattlers, but we can build a house here.

635

00:25:32,540 --> 00:25:33,880

I don't know how to do it.

636

00:25:33,980 --> 00:25:37,680

And there's a glass window in it.

637

00:25:37,780 --> 00:25:39,880

Yeah, it's all real glass.

638

00:25:39,980 --> 00:25:43,820

And what we need now is a rundown of the test protocol.

639

00:25:43,920 --> 00:25:45,320

OK, buddy.

640

00:25:45,420 --> 00:25:46,320

Here's the deal.

641

00:25:46,420 --> 00:25:47,320

Pay attention.

642

00:25:50,420 --> 00:25:52,720

We're here to see if we can break some glass with a sonic

643

00:25:52,820 --> 00:25:53,720

boom.

644

00:25:53,820 --> 00:25:57,260

So Adam's up in the sky in an FAA team hornet.

645

00:25:57,360 --> 00:25:59,660

He's coming in at supersonic speeds.

646

00:25:59,760 --> 00:26:02,760

He's going to get lower and lower with each pass.

647

00:26:02,860 --> 00:26:06,300

With Adam just moments away, the final piece of the prep

648

00:26:06,400 --> 00:26:11,140

puzzle can be put into place for the first test run.

649

00:26:11,240 --> 00:26:14,040

We need to make sure we get a direct flyover from the jets.

650

00:26:14,140 --> 00:26:16,240

So how do you do that?

651

00:26:16,340 --> 00:26:18,220

Well, they're going to put out some smoke

652

00:26:18,320 --> 00:26:19,820

so that we can see where they're at.

653

00:26:19,860 --> 00:26:21,560

We'll go ahead and put our smoke on right now.

654

00:26:21,660 --> 00:26:24,160

Smoke on.

655

00:26:24,260 --> 00:26:26,120

Oh, there they are.

656

00:26:26,220 --> 00:26:28,260

And then we're going to signal them with a mirror

657

00:26:28,360 --> 00:26:30,200

so they know right where to fly the jet.

658

00:26:30,300 --> 00:26:32,900

7, PAO, ready for 8,000 foot pass.

659

00:26:33,000 --> 00:26:36,100

We just got word from JVC that they are ready and waiting for us.

660

00:26:36,200 --> 00:26:38,740

And we are just about to bypass them

661

00:26:38,840 --> 00:26:43,380

and faster than the speed of sound at 8,000 feet.

662

00:26:43,480 --> 00:26:45,040

Here we go.

663

00:26:45,140 --> 00:26:47,180

That's the cue for Lieutenant Walborn

664

00:26:47,200 --> 00:26:51,480

to do the jet fighter equivalent of putting his foot down.

665

00:26:51,580 --> 00:26:52,780

There goes the afterburners.

666

00:26:52,880 --> 00:27:00,880

Mach 0.85, Mach 0.9, Mach 1, Mach 1.03.

667

00:27:00,980 --> 00:27:04,380

And because Mach 1 is the speed of sound,

668

00:27:04,480 --> 00:27:07,460

Adam Savage is now supersonic.

669

00:27:07,560 --> 00:27:08,920

Wow.

670

00:27:09,020 --> 00:27:12,360

Mach 1.06.

671

00:27:12,460 --> 00:27:14,660

So as they pass directly overhead,

672

00:27:14,760 --> 00:27:16,460

they've got the speed they need.

673

00:27:16,480 --> 00:27:18,960

But with the test side a speck in the distance,

674

00:27:19,060 --> 00:27:22,720

the impact on the ground is distinctly underwhelming.

675

00:27:22,820 --> 00:27:24,060

Was that supersonic?

676

00:27:24,160 --> 00:27:24,860

Yes.

677

00:27:24,960 --> 00:27:26,060

That was no boom.

678

00:27:26,160 --> 00:27:27,160

That was nothing.

679

00:27:27,260 --> 00:27:29,160

And we're slowing down.

680

00:27:29,260 --> 00:27:31,160

Back down to Mach 0.98.

681

00:27:31,260 --> 00:27:33,200

Ah, so good.

682

00:27:33,300 --> 00:27:35,700

I've heard them louder than that going over my house.

683

00:27:35,700 --> 00:27:39,300

Carrie Granitore have discovered that if you simply mimic the movie

684

00:27:39,400 --> 00:27:43,740

wanted, you won't bend bullets.

685

00:27:43,840 --> 00:27:48,080

They've even built a deadly accurate gun slinging robot,

686

00:27:48,180 --> 00:27:53,580

given it the exact same sidearm action as the myth.

687

00:27:53,680 --> 00:27:57,180

And they've also built a gun slinging robot.

688

00:27:57,280 --> 00:27:59,760

And they've also built a gun slinging robot.

689

00:27:59,860 --> 00:28:02,160

And they've built a gun slinging robot.

690

00:28:02,220 --> 00:28:04,620

And they've built a gun slinging robot.

691

00:28:04,720 --> 00:28:08,420

That was the exact same sidearm action as the myth.

692

00:28:08,520 --> 00:28:11,300

And still failed to get anything but a straight shooter.

693

00:28:11,400 --> 00:28:12,960

The bullet didn't curve.

694

00:28:13,060 --> 00:28:15,260

So next up, they're raising the bar

695

00:28:15,360 --> 00:28:16,800

and ramping up the robot.

696

00:28:16,900 --> 00:28:18,600

So the great thing about this test

697

00:28:18,700 --> 00:28:21,040

is that the characters are superhuman, not supernatural.

698

00:28:21,140 --> 00:28:22,940

I mean, they're not vampires.

699

00:28:23,040 --> 00:28:24,180

They don't use magic.

700

00:28:24,280 --> 00:28:26,840

They don't have telekinetic powers to curve the bullet.

701

00:28:26,940 --> 00:28:30,240

All it is is superhuman speed and strength.

702

00:28:30,240 --> 00:28:33,680

celebrated the rig to twice what a normal human can do.

703

00:28:33,680 --> 00:28:35,760

Loading the gun with the live round.

704

00:28:35,760 --> 00:28:37,040

Twice as fast.

705

00:28:37,040 --> 00:28:39,320

We'll see how that goes.

706

00:28:39,320 --> 00:28:40,160

Ready?

707

00:28:41,680 --> 00:28:44,800

All right, live round at superhuman speed.

708

00:28:44,800 --> 00:28:45,640

You ready?

709

00:28:45,640 --> 00:28:46,560

Let's get it on.

710

00:28:46,560 --> 00:28:47,920

Here we go, you guys.

711

00:28:47,920 --> 00:28:50,680

In three, two, one.

712

00:28:50,680 --> 00:28:55,040

Ah, center shot.

713

00:28:55,040 --> 00:28:58,200

And the paper trail once again neatly illustrates

714

00:28:58,200 --> 00:29:00,800

the path of the projectile.

715

00:29:00,800 --> 00:29:02,080

Three to the second frame.

716

00:29:02,080 --> 00:29:03,480

Yeah, third.

717

00:29:03,480 --> 00:29:05,040

Yes.

718

00:29:05,040 --> 00:29:07,200

Fourth and the fifth frame.

719

00:29:07,200 --> 00:29:08,280

This is a good test.

720

00:29:08,280 --> 00:29:09,680

Let's check the alignment.

721

00:29:09,680 --> 00:29:11,320

OK.

722

00:29:11,320 --> 00:29:14,200

You see the laser?

723

00:29:14,200 --> 00:29:15,560

I see the laser.

724

00:29:15,560 --> 00:29:19,680

Despite flicking the robotic arm around at superhuman speeds,

725

00:29:19,680 --> 00:29:21,360

when the bullet leaves the barrel,

726

00:29:21,360 --> 00:29:23,320

it leads in a straight line.

727

00:29:23,320 --> 00:29:26,840

And that leaves this part of the story done and busted.

728

00:29:28,200 --> 00:29:29,200

I know what you're thinking.

729

00:29:29,200 --> 00:29:31,640

You're sitting at home thinking, ah, the Mythbusters gave up

730

00:29:31,640 --> 00:29:32,200

too soon.

731

00:29:32,200 --> 00:29:33,720

It was only one shot.

732

00:29:33,720 --> 00:29:35,560

But look, here's the reality.

733

00:29:35,560 --> 00:29:38,600

This robot's capable of swinging its arm harder and faster

734

00:29:38,600 --> 00:29:42,520

than a major league hitter.

735

00:29:42,520 --> 00:29:46,160

Maybe if I saw 3 quarters of an inch, half an inch,

736

00:29:46,160 --> 00:29:47,920

maybe even a quarter of an inch, it

737

00:29:47,920 --> 00:29:49,440

would be worth continuing on.

738

00:29:49,440 --> 00:29:50,760

But you know what?

739

00:29:50,760 --> 00:29:54,040

We're not seeing any deviation at all.

740

00:29:54,040 --> 00:29:55,360

It's time to move on.

741

00:29:55,360 --> 00:29:56,160

Next.

742

00:29:56,160 --> 00:29:58,120

Lock 1.03.

743

00:29:58,120 --> 00:29:59,920

Oh, we are heading straight for them.

744

00:29:59,920 --> 00:30:02,520

The guys ramp it up by bringing it down.

745

00:30:02,520 --> 00:30:04,000

Oh, no.

746

00:30:04,000 --> 00:30:09,040

And our gunslingers finally get a bullet off the straight

747

00:30:09,040 --> 00:30:10,040

and narrow.

748

00:30:10,040 --> 00:30:11,040

That was incredible.

749

00:30:11,040 --> 00:30:12,520

What the heck happened?

750

00:30:18,600 --> 00:30:20,440

Lock 1.06.

751

00:30:20,440 --> 00:30:25,240

So far, supersonic savage has completed one 8,000 feet

752

00:30:25,280 --> 00:30:26,640

supersonic boom fly by.

753

00:30:26,640 --> 00:30:31,520

Well, that was 8,000 feet, and it was 1.06 mark.

754

00:30:31,520 --> 00:30:33,760

That was nothing.

755

00:30:33,760 --> 00:30:36,600

But they're not done yet.

756

00:30:36,600 --> 00:30:39,960

This time, they're wrapping it up by bringing it down.

757

00:30:39,960 --> 00:30:42,800

We are banking into position, getting the 2,000 feet

758

00:30:42,800 --> 00:30:48,720

elevation in order to do another supersonic pass.

759

00:30:48,720 --> 00:30:51,320

Sonic boom from 2,000 feet.

760

00:30:51,320 --> 00:30:54,160

Well, that's a lot closer than 8,000.

761

00:30:54,200 --> 00:30:56,280

So it might do it.

762

00:30:56,280 --> 00:30:58,120

All right, we are accelerating.

763

00:30:58,120 --> 00:31:02,600

Lock 1.03.

764

00:31:02,600 --> 00:31:07,320

We are heading straight for the 2,000 feet and Lock 1.07.

765

00:31:07,320 --> 00:31:08,920

It seems so peaceful.

766

00:31:08,920 --> 00:31:12,600

Adam flying overhead at the speed of sound, and then.

767

00:31:15,480 --> 00:31:17,000

Wow.

768

00:31:17,000 --> 00:31:18,680

That was something.

769

00:31:18,680 --> 00:31:19,920

I call that bullseye.

770

00:31:20,160 --> 00:31:23,640

Ha ha ha ha.

771

00:31:23,640 --> 00:31:27,240

It's a classic sonic boom, and a classic illustration

772

00:31:27,240 --> 00:31:29,440

of the difference between the speed of light

773

00:31:29,440 --> 00:31:32,040

and the speed of sound.

774

00:31:32,040 --> 00:31:36,720

You see the supersonic jet fly by in silence,

775

00:31:36,720 --> 00:31:43,200

then the sound moving at 761 miles per hour catches up.

776

00:31:44,160 --> 00:31:45,160

Yes.

777

00:31:48,160 --> 00:31:52,600

But the big question is, did it do any actual damage?

778

00:31:52,600 --> 00:31:53,680

Nothing.

779

00:31:53,680 --> 00:31:55,240

It's all intact.

780

00:31:55,240 --> 00:31:59,280

So it's a question of how low can you legally go?

781

00:31:59,280 --> 00:32:02,280

Like some kind of supersonic limbo dance,

782

00:32:02,280 --> 00:32:04,640

the guys bring it down one more notch.

783

00:32:04,640 --> 00:32:05,640

Here we go.

784

00:32:05,640 --> 00:32:06,720

We're commencing the 500 foot run.

785

00:32:06,720 --> 00:32:08,120

We're accelerating now.

786

00:32:08,120 --> 00:32:09,400

We got to see some broken glass.

787

00:32:09,400 --> 00:32:14,120

OK, he just came over the horizon.

788

00:32:14,120 --> 00:32:15,120

500 feet.

789

00:32:15,120 --> 00:32:16,120

Lock 1.03.

790

00:32:16,120 --> 00:32:20,120

Oh, we are heading straight for it.

791

00:32:20,120 --> 00:32:22,120

It has to feel like 500 feet.

792

00:32:22,120 --> 00:32:23,120

It feels like 50.

793

00:32:23,120 --> 00:32:24,120

Lock 1.05.

794

00:32:24,120 --> 00:32:27,120

Oh, I can code right there.

795

00:32:27,120 --> 00:32:29,120

This one's for the money.

796

00:32:29,120 --> 00:32:30,120

Oh, no.

797

00:32:35,120 --> 00:32:36,120

Wow.

798

00:32:36,120 --> 00:32:38,120

Ha ha ha.

799

00:32:38,120 --> 00:32:41,760

That was loud.

800

00:32:41,760 --> 00:32:42,760

Really loud.

801

00:32:42,760 --> 00:32:47,760

But despite the powerful ground level experience,

802

00:32:47,760 --> 00:32:56,360

the myth that a sonic boom equals shattered glass is looking busted.

803

00:32:56,360 --> 00:33:01,760

Not one single item of glassware was even splintered.

804

00:33:01,760 --> 00:33:03,320

No broken glass.

805

00:33:03,320 --> 00:33:05,000

Not looking good at this point.

806

00:33:05,000 --> 00:33:09,800

Not at this geographical point, but a few hundred feet away at base camp,

807

00:33:09,800 --> 00:33:11,760

the team make an interesting discovery.

808

00:33:11,760 --> 00:33:12,760

Hey Pete.

809

00:33:12,760 --> 00:33:13,760

Hey Jamie.

810

00:33:13,760 --> 00:33:14,760

What do you got?

811

00:33:14,760 --> 00:33:17,280

Well, what happened was on the 500 foot pass,

812

00:33:17,280 --> 00:33:19,320

the sonic boom ripped through this trailer,

813

00:33:19,320 --> 00:33:22,760

opened up all the cabinets and came out right here on the skylight

814

00:33:22,760 --> 00:33:24,280

and blew it completely off.

815

00:33:24,280 --> 00:33:30,240

Yep, just like a popped up on a soda can.

816

00:33:30,240 --> 00:33:32,720

Little known facts about flying with the Blue Angels number 32.

817

00:33:32,760 --> 00:33:35,040

The lower most pocket of your flight suit is left unzipped

818

00:33:35,040 --> 00:33:38,240

so that you could put your used and sealed air sickness bags

819

00:33:38,240 --> 00:33:40,080

right there while you're flying.

820

00:33:40,080 --> 00:33:41,080

Want to see more?

821

00:33:41,080 --> 00:33:43,320

Log on to [discovery.com slash mythbusters](http://discovery.com/slash/mythbusters)

822

00:33:43,320 --> 00:33:46,560

where we've put a direct cut of my entire flight with the Blue Angels

823

00:33:46,560 --> 00:33:49,560

for your enjoyment and my humiliation.

824

00:34:02,720 --> 00:34:03,720

Nothing!

825

00:34:03,720 --> 00:34:07,720

This is more fake film physics.

826

00:34:07,720 --> 00:34:10,720

Whoa, whoa, whoa, we can't go busing this myth yet.

827

00:34:10,720 --> 00:34:13,720

I mean they did have a cool collection of customized guns.

828

00:34:13,720 --> 00:34:15,720

And special engraved bullets.

829

00:34:15,720 --> 00:34:17,720

Okay, I see where you're going with this.

830

00:34:17,720 --> 00:34:20,720

Maybe it's not just the sidearm flick that gives us the curing bullet.

831

00:34:20,720 --> 00:34:23,720

Exactly, maybe it's a function of altering the bullets and guns themselves

832

00:34:23,720 --> 00:34:24,720

that's giving the bullets that curve.

833

00:34:24,720 --> 00:34:26,720

Yeah, I mean it seems logical.

834

00:34:26,720 --> 00:34:28,720

You change the surface of the bullet or its balance,

835

00:34:28,720 --> 00:34:29,720

that could affect the trajectory.

836

00:34:29,720 --> 00:34:30,720

Okay, but what about the gun?

837

00:34:30,720 --> 00:34:33,720

Well, the main thing that makes the bullet go straight is the rifling in the barrel.

838

00:34:33,720 --> 00:34:37,720

Yeah, the helical grooves cause the bullet to go into a self-stabilizing spiral.

839

00:34:37,720 --> 00:34:40,720

So I guess the next step, take the rifling out of the gun,

840

00:34:40,720 --> 00:34:42,720

alter the bullets and see if we get a curve.

841

00:34:43,720 --> 00:34:46,720

So in their final bid to bend the bullet,

842

00:34:46,720 --> 00:34:50,720

Carrie takes on the task of smoothing out the gun barrel's rifling.

843

00:34:50,720 --> 00:34:51,720

That should do it.

844

00:34:51,720 --> 00:34:53,720

We have a smooth barrel.

845

00:34:53,720 --> 00:34:59,720

Meanwhile, Tori has been attempting to upset the bullet's finally balanced aerodynamics.

846

00:34:59,720 --> 00:35:00,720

Now the three sets of bullets are done.

847

00:35:00,720 --> 00:35:03,720

The first set, I've changed just the aerodynamics of the bullet

848

00:35:03,720 --> 00:35:08,720

and the way I've done that is I've taken a hacksaw and cut grooves along one side of the bullet.

849

00:35:08,720 --> 00:35:11,720

The other set, what I've done is I've changed the weight

850

00:35:11,720 --> 00:35:14,720

and the way I've done this is I've drilled out half of the bullet

851

00:35:14,720 --> 00:35:15,720

and then I filled it with carb body filler.

852

00:35:15,720 --> 00:35:17,720

So that way it's unbalanced.

853

00:35:17,720 --> 00:35:20,720

Now finally, the third set of bullets I've incorporated both

854

00:35:20,720 --> 00:35:21,720

where I've drilled out half the bullet.

855

00:35:21,720 --> 00:35:25,720

This way it is no longer balanced and it's no longer aerodynamic.

856

00:35:25,720 --> 00:35:28,720

Add with the ammo altered and their gun barrel smooth.

857

00:35:28,720 --> 00:35:30,720

I'm gonna make some arrests.

858

00:35:30,720 --> 00:35:33,720

It's back to the South San Francisco Police Department.

859

00:35:33,720 --> 00:35:34,720

Can I get my bike back?

860

00:35:34,720 --> 00:35:35,720

Sorry.

861

00:35:37,720 --> 00:35:42,720

Inside the firing range, in order to capture the all important high speed camera shots,

862

00:35:42,720 --> 00:35:46,720

the team is reverting to a stationary shooting position.

863

00:35:46,720 --> 00:35:53,720

And first up, the team fires off a few shots with a regular gun and the altered bullet.

864

00:35:53,720 --> 00:35:57,720

But on each occasion, there was no bend to the bullet's flight path.

865

00:35:58,720 --> 00:36:02,720

But I think when we switch to the barrel that has no rifling,

866

00:36:02,720 --> 00:36:06,720

all bets are gonna be off and that bullet is gonna do whatever it wants to.

867

00:36:06,720 --> 00:36:09,720

And from the very first test with a grooved bullet...

868

00:36:09,720 --> 00:36:12,720

Okay, grooved bullet, deryveled gun.

869

00:36:13,720 --> 00:36:16,720

It's clear how important rifling is.

870

00:36:16,720 --> 00:36:17,720

Whoa!

871

00:36:17,720 --> 00:36:22,720

Look at how wild that bullet went without the rifling.

872

00:36:23,720 --> 00:36:29,720

Yep, one look at the first pane of paper and you can see the bullet must have gone through sideways.

873

00:36:29,720 --> 00:36:32,720

That was incredible.

874

00:36:32,720 --> 00:36:38,720

But despite the head over heels flight, it still traced a straight line through the air.

875

00:36:38,720 --> 00:36:39,720

Look at that.

876

00:36:39,720 --> 00:36:41,720

It's a straight path.

877

00:36:41,720 --> 00:36:51,720

And no matter how the bullet is altered, grooved, unbalanced, and a combination of both,

878

00:36:51,720 --> 00:36:54,720

the result is the same every time.

879

00:36:54,720 --> 00:36:55,720

Whoa!

880

00:36:55,720 --> 00:36:59,720

Look at how unstable the bullets are now that there's no rifling.

881

00:36:59,720 --> 00:37:00,720

Yeah, it's like going whoosh.

882

00:37:00,720 --> 00:37:02,720

But still it's not curvy.

883

00:37:02,720 --> 00:37:03,720

No.

884

00:37:03,720 --> 00:37:07,720

It's clear that the massive forward momentum of a speeding bullet...

885

00:37:07,720 --> 00:37:09,720

Yeah, straight path.

886

00:37:09,720 --> 00:37:15,720

simply overrides any minor adjustments to its aerodynamics or balance.

887

00:37:15,720 --> 00:37:19,720

So it's looking like no matter what we do, physics are working against us.

888

00:37:19,720 --> 00:37:20,720

We cannot curve a bullet.

889

00:37:20,720 --> 00:37:24,720

Doesn't matter if the barrel is rifled or not, doesn't matter if the bullets are altered or not.

890

00:37:24,720 --> 00:37:25,720

So this one's busted.

891

00:37:25,720 --> 00:37:26,720

Busted.

892

00:37:26,720 --> 00:37:27,720

Busted.

893

00:37:31,720 --> 00:37:34,720

Next, the Blue Angel.

894

00:37:34,720 --> 00:37:39,720

Give it everything they've got and get some interesting results.

895

00:37:39,720 --> 00:37:41,720

I gotta go check it out.

896

00:37:42,720 --> 00:37:43,720

Wow!

897

00:37:51,720 --> 00:37:55,720

So our 500 foot paths did not break any glass.

898

00:37:55,720 --> 00:37:56,720

Nothing.

899

00:37:56,720 --> 00:38:03,720

What's gonna happen now is I'm gonna get in a chase plane and follow Ben as he begins to do lower and lower paths over our test site.

900

00:38:03,720 --> 00:38:10,720

Also increasing his angle of attack to focus the sonic boom right on ground zero on our house.

901

00:38:10,720 --> 00:38:12,720

I swear we are incredibly close.

902

00:38:12,720 --> 00:38:20,720

So without a single sign of the mythical glass shattering result, the team is ramping it up with some fancy flying.

903

00:38:20,720 --> 00:38:24,720

This time we're coming at nose down at about five degrees.

904

00:38:24,720 --> 00:38:28,720

We think this might focus the boom a little bit more and give us what we want.

905

00:38:31,720 --> 00:38:32,720

There they are.

906

00:38:37,720 --> 00:38:39,720

Man, that's a rush.

907

00:38:39,720 --> 00:38:43,720

Before Jamie can get in and check the results, Ben blasts by...

908

00:38:46,720 --> 00:38:48,720

...twice more in quick succession.

909

00:38:51,720 --> 00:38:54,720

And this time, damage is definitely done.

910

00:38:54,720 --> 00:38:57,720

No window. I can see it from here.

911

00:38:57,720 --> 00:39:01,720

A broken window, but not exactly as per the myth.

912

00:39:01,720 --> 00:39:03,720

Oh no.

913

00:39:04,720 --> 00:39:08,720

It blew the window out of its hole, but it didn't break it.

914

00:39:10,720 --> 00:39:16,720

The three rapid-fire low-altitude supersonic flybys have clearly had an effect.

915

00:39:17,720 --> 00:39:20,720

I'm so flat-thick and I broke the door.

916

00:39:20,720 --> 00:39:25,720

But the jury is still out on whether it will specifically break glass.

917

00:39:25,720 --> 00:39:28,720

It didn't break any of the glass. It knocked it down.

918

00:39:28,720 --> 00:39:31,720

And that has got Jamie thinking.

919

00:39:31,720 --> 00:39:33,720

A sonic boom is just a pressure boom.

920

00:39:33,720 --> 00:39:36,720

We've created a lot of pressure waves on methbusters.

921

00:39:36,720 --> 00:39:40,720

We've put out fires with them. We've broken wine glasses.

922

00:39:40,720 --> 00:39:45,720

But on the other hand, we've tried to make people poop and we've tried to blow up cars with them.

923

00:39:45,720 --> 00:39:47,720

Those didn't work too well.

924

00:39:47,720 --> 00:39:52,720

Sometimes they just don't behave the way you expect, from reflections, from harmonics,

925

00:39:52,720 --> 00:39:57,720

from all sorts of subtle details that you only figure out after a lot of experimentation.

926

00:39:58,720 --> 00:40:03,720

And that further experimentation is a set of five 200-foot passes,

927

00:40:03,720 --> 00:40:10,720

which is as low as we can legally go, lower than anything seen outside the training zone.

928

00:40:11,720 --> 00:40:15,720

These things are coming in so low. We're not going to see them until they're on top of this.

929

00:40:15,720 --> 00:40:17,720

Lower hoodie now.

930

00:40:21,720 --> 00:40:23,720

Wow.

931

00:40:23,720 --> 00:40:25,720

That's intense.

932

00:40:28,720 --> 00:40:30,720

Ready, hit it.

933

00:40:42,720 --> 00:40:44,720

That kind of wakes you up in the morning.

934

00:40:47,720 --> 00:40:51,720

Well, that right there were five sonic booms hitting that house

935

00:40:51,720 --> 00:40:55,720

and the car and the glass were at 200 feet.

936

00:40:55,720 --> 00:40:57,720

I gotta go check it out.

937

00:40:58,720 --> 00:41:00,720

What the heck?

938

00:41:00,720 --> 00:41:02,720

Nothing.

939

00:41:02,720 --> 00:41:05,720

Like the glassware, the car escaped unscathed.

940

00:41:06,720 --> 00:41:10,720

Well, it didn't break it, but it knocked off the rearview mirror.

941

00:41:10,720 --> 00:41:15,720

Well, almost. But over at the house, it's a whole different story.

942

00:41:20,720 --> 00:41:22,720

That's what I'm talking about.

943

00:41:23,720 --> 00:41:25,720

That is one broken window.

944

00:41:25,720 --> 00:41:31,720

It not only broke it, but it just shattered every little bit to smithereens.

945

00:41:31,720 --> 00:41:33,720

So it can happen.

946

00:41:36,720 --> 00:41:40,720

So it is possible to break glass with a sonic boom.

947

00:41:43,720 --> 00:41:47,720

But not any old glass from any old sonic boom.

948

00:41:47,720 --> 00:41:53,720

The glassware is intact and it was the warping of the window frame that led to the only breakage.

949

00:41:56,720 --> 00:42:02,720

And let's face it, that only happened after the low altitude passes that just don't happen anywhere,

950

00:42:02,720 --> 00:42:05,720

but in these restricted training zones.

951

00:42:08,720 --> 00:42:11,720

So Tyson, I've been meaning to ask you.

952

00:42:11,720 --> 00:42:13,720

We're out here in the desert.

953

00:42:13,720 --> 00:42:15,720

You look like you just came from the laundry with that thing.

954

00:42:15,720 --> 00:42:17,720

What do you do if you spill your lunch on it?

955

00:42:17,720 --> 00:42:18,720

I don't.

956

00:42:18,720 --> 00:42:20,720

Oh, okay.

957

00:42:22,720 --> 00:42:25,720

Well, I'm looking at a broken piece of glass here, man.

958

00:42:25,720 --> 00:42:27,720

Does that mean the fans are vindicated?

959

00:42:27,720 --> 00:42:30,720

That's the only thing that the sonic boom broke.

960

00:42:30,720 --> 00:42:32,720

What about all the other glass that didn't break?

961

00:42:32,720 --> 00:42:36,720

There were car windows, there was a table full of this kind of stuff. None of it broke.

962

00:42:36,720 --> 00:42:41,720

Well, I mean, the myth clearly states that any sonic boom will break any glass,

963

00:42:41,720 --> 00:42:42,720

and apparently that didn't happen.

964

00:42:42,720 --> 00:42:47,720

And we had to fly the jet in at ridiculously low levels to make this break.

965

00:42:47,720 --> 00:42:49,720

Well, then I think the answer is pretty clear.

966

00:42:49,720 --> 00:42:50,720

It's busted.

967

00:42:50,720 --> 00:42:51,720

Totally busted.