

1

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

This is a car.

2

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

And this is a car on Mythbusters.

3

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

Do not try what you're about to see at home.

4

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

We're what you call experts.

5

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

On this episode of Mythbusters,

6

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

Adam and Jayne have a heavy-hitting movie myth.

7

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

And it's a man.

8

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

Stuck between two chubby cops.

9

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

We gotta get this guy in the car right away.

10

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

He's got an accident to attend.

11

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

Could a sandwich suspect

12

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

have been a man?

13

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

No, no, no.

14

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

He's a man.

15

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

Could a sandwich suspect

16

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

survive the mother of all

17

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

truck and T-boats?

18

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

Ahhhh!

19

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

Better than a cup of coffee, isn't it?

20

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

Meanwhile, Carri-Torre and Grant

21

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

have the most exhaustive,

22

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

fuel-efficiency fable

23

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

in Mythbusters history.

24

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

Follow us for fuel savings.

25

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

Learn about hypermiling.

26

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

Could a troop of traffic tactics

27

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

shut off the engine to save some more fuel?

28

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

Really combine to double your miles per gallon.

29

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

I'm starting to get it, hypermilers.

30

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

Or is this a myth that puts the rage

31

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

in road rage?

32

00:01:06,000 --> 00:01:08,000

She just gave me the spark.

33

00:01:08,000 --> 00:01:10,000

Yeah, you hate us.

34

00:01:10,000 --> 00:01:12,000

Do you hate science?

35

00:01:12,000 --> 00:01:14,000

Who are the Mythbusters?

36

00:01:14,000 --> 00:01:16,000

Adam Savard.

37

00:01:16,000 --> 00:01:18,000

That is science.

38

00:01:18,000 --> 00:01:20,000

And Jamie Heineman.

39

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

I'm ready.

40

00:01:22,000 --> 00:01:24,000

Between them more than 30 years

41

00:01:24,000 --> 00:01:26,000

of special effects experience,

42

00:01:26,000 --> 00:01:28,000

together with Brad Himahara.

43

00:01:28,000 --> 00:01:30,000

Oh, it's burning!

44

00:01:30,000 --> 00:01:32,000

Carrie Byron.

45

00:01:32,000 --> 00:01:34,000

Always makes me feel dangerous.

46

00:01:34,000 --> 00:01:36,000

And Tori Bellachy.

47

00:01:36,000 --> 00:01:38,000

They don't just tell the myths,

48

00:01:38,000 --> 00:01:40,000

they put them to the test.

49

00:01:40,000 --> 00:01:42,000

Music plays.

50

00:01:42,000 --> 00:01:44,000

Music plays.

51

00:01:44,000 --> 00:01:46,000

Music plays.

52

00:01:46,000 --> 00:01:48,000

Music plays.

53

00:01:48,000 --> 00:01:50,000

Music plays.

54

00:01:50,000 --> 00:01:52,000

Music plays.

55

00:01:52,000 --> 00:01:54,000

Alright, Jamie, I'm going to paint you a picture

56

00:01:54,000 --> 00:01:56,000

and I want you to guess the myth.

57

00:01:56,000 --> 00:01:58,000

Are you game? I'm ready.

58

00:01:58,000 --> 00:02:00,000

Here it goes. It comes from a foreign action movie

59

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

called Head Hunters. You can't shrink a head.

60

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

No. In this movie,

61

00:02:04,000 --> 00:02:06,000

our hero is seated in the backseat of a police car.

62

00:02:06,000 --> 00:02:08,000

And he's between...

63

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

You can't drive from the backseat.

64

00:02:10,000 --> 00:02:12,000

No. Let me just get through the story.

65

00:02:12,000 --> 00:02:14,000

He is seated between two really big cops.

66

00:02:14,000 --> 00:02:16,000

And the bad guy wants to kill him so badly,

67

00:02:16,000 --> 00:02:18,000

he takes a truck

68

00:02:18,000 --> 00:02:20,000

and he P-bones the cop car

69

00:02:20,000 --> 00:02:22,000

at like full speed.

70

00:02:22,000 --> 00:02:24,000

Except that our hero survives the crash.

71

00:02:24,000 --> 00:02:26,000

Because he's protected by the padding

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00:02:26,000 --> 00:02:28,000

provided by the two big guys.

73

00:02:28,000 --> 00:02:30,000

Exactly.

74

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

In a car accident, could you be protected

75

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

by the people you are sitting between?

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

It's a movie myth that puts the wide

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

in widescreen.

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00:02:38,000 --> 00:02:40,000

Could a set of heavy set policemen

79

00:02:40,000 --> 00:02:42,000

really protect you

80

00:02:42,000 --> 00:02:44,000

from a terrifying

81

00:02:44,000 --> 00:02:46,000

truck T-bone?

82

00:02:46,000 --> 00:02:48,000

Or has this myth got

83

00:02:48,000 --> 00:02:50,000

fat chance?

84

00:02:50,000 --> 00:02:52,000

So what's the plan?

85

00:02:52,000 --> 00:02:54,000

Well, this whole myth is predicated on the idea

86

00:02:54,000 --> 00:02:56,000

that you're better off being between two big dudes

87

00:02:56,000 --> 00:02:58,000

than you are being alone.

88

00:02:58,000 --> 00:03:00,000

I think that means we should see if we can illuminate

89

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

some of those forces with a scale test.

90

00:03:02,000 --> 00:03:04,000

To see if we can collect some relative data.

91

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

Exactly.

92

00:03:06,000 --> 00:03:08,000

This is the exact make and model

93

00:03:08,000 --> 00:03:10,000

of the car that gets T-boned

94

00:03:10,000 --> 00:03:12,000

in the movie clip that we're replicating.

95

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

I'm about to mock it up in one sixth scale

96

00:03:14,000 --> 00:03:16,000

so that we can actually see

97

00:03:16,000 --> 00:03:18,000

what's going to happen inside that car

98

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

when we hit it with a truck.

99

00:03:20,000 --> 00:03:22,000

Adam's polycarbonate compact car

100

00:03:22,000 --> 00:03:24,000

is the first of

101

00:03:24,000 --> 00:03:26,000

four things the guys need for their small scale test.

102

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

There it is.

103

00:03:32,000 --> 00:03:34,000

Second is a truck stand-in.

104

00:03:34,000 --> 00:03:36,000

And for that, Adam's got wood.

105

00:03:36,000 --> 00:03:38,000

He's building a swinging

106

00:03:38,000 --> 00:03:40,000

battering round.

107

00:03:40,000 --> 00:03:42,000

That should

108

00:03:42,000 --> 00:03:44,000

log the perfect T-bone benchmark.

109

00:03:44,000 --> 00:03:46,000

The third ingredient is easy.

110

00:03:46,000 --> 00:03:48,000

One crash test dummy.

111

00:03:48,000 --> 00:03:50,000

That's awesome.

112

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

Which just leaves the

113

00:03:52,000 --> 00:03:54,000

padded policeman.

114

00:03:54,000 --> 00:03:56,000

So my little dudes ready to go into the rig

115

00:03:56,000 --> 00:03:58,000

but I need a couple of big dudes

116

00:03:58,000 --> 00:04:00,000

to place on either side of him.

117

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

What are they going to be made of?

118

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

Well, humans are basically bags of water

119

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

and that's what my big dudes are going to be.

120

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

I'm not going to use straight water balloons though

121

00:04:08,000 --> 00:04:10,000

because I don't want them to break

122

00:04:10,000 --> 00:04:12,000

and I'd like to be kind of barrel shaped

123

00:04:12,000 --> 00:04:14,000

so I'm going to sew out of some really nice leather.

124

00:04:16,000 --> 00:04:18,000

I love the smell of leather.

125

00:04:18,000 --> 00:04:20,000

A pair of leather cylinders

126

00:04:20,000 --> 00:04:22,000

to house my water balloons in.

127

00:04:22,000 --> 00:04:24,000

That should give us a really good picture

128

00:04:24,000 --> 00:04:26,000

of what it's like to bounce around

129

00:04:26,000 --> 00:04:28,000

between a couple of big dudes.

130

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

Dude number two.

131

00:04:34,000 --> 00:04:36,000

With all the players primed, it's time to swing

132

00:04:36,000 --> 00:04:38,000

for science.

133

00:04:38,000 --> 00:04:40,000

We're going to smash our miniature car twice.

134

00:04:40,000 --> 00:04:42,000

With a dummy in it by himself

135

00:04:42,000 --> 00:04:44,000

and once with him padded by these two water balloons.

136

00:04:44,000 --> 00:04:46,000

Now we've got a sensor in here

137

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

which will record the difference

138

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

between those two impacts.

139

00:04:50,000 --> 00:04:52,000

And for impact number one, baby

140

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

Buster's flying solo.

141

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

Scaled car crash in three,

142

00:04:56,000 --> 00:04:58,000

two, one.

143

00:05:02,000 --> 00:05:04,000

That was quick.

144

00:05:04,000 --> 00:05:06,000

In real time,

145

00:05:06,000 --> 00:05:08,000

the tiny T-Bone looked okay.

146

00:05:08,000 --> 00:05:10,000

But slow down,

147

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

it was anything but

148

00:05:12,000 --> 00:05:14,000

as Buster got thrown left,

149

00:05:14,000 --> 00:05:16,000

right and center, peaking at

150

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

150 G's.

151

00:05:18,000 --> 00:05:20,000

Now it's under the padded version.

152

00:05:20,000 --> 00:05:22,000

For impact two, will the two

153

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

cop cushions lessen Buster's blow?

154

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

Alright.

155

00:05:26,000 --> 00:05:28,000

Oh no, the struct's out of control.

156

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

Here it comes. Three, two, one.

157

00:05:32,000 --> 00:05:34,000

Bam!

158

00:05:34,000 --> 00:05:36,000

First impressions are that

159

00:05:36,000 --> 00:05:38,000

the crash seemed less intense.

160

00:05:38,000 --> 00:05:40,000

Oh!

161

00:05:40,000 --> 00:05:42,000

That looks a lot better.

162

00:05:42,000 --> 00:05:44,000

Wow.

163

00:05:44,000 --> 00:05:46,000

It's like a forced bro hug.

164

00:05:48,000 --> 00:05:50,000

But what does the data say?

165

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

Our dummy experienced 30 G's from the impact

166

00:05:52,000 --> 00:05:54,000

between the two big gods.

167

00:05:54,000 --> 00:05:56,000

He experienced over five times

168

00:05:56,000 --> 00:05:58,000

that, over 150 G's

169

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

without that extra padding.

170

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

So if this actually holds up

171

00:06:02,000 --> 00:06:04,000

in the full scale,

172

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

it could work because 30 G's is

173

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

survivable.

174

00:06:08,000 --> 00:06:10,000

150 G's is not.

175

00:06:12,000 --> 00:06:14,000

Next, a myth about going the extra mile.

176

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

Alright, so you guys have your driving shoes on

177

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

because this myth is the mother

178

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

of all fuel efficiency techniques.

179

00:06:24,000 --> 00:06:26,000

It's called hypermiling.

180

00:06:26,000 --> 00:06:28,000

Oh, is that where you drive a certain way

181

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

and it gets really good gas mileage?

182

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

Oh, not just really good gas mileage.

183

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

According to this myth, there's just a few simple things

184

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

that you can do to double your mileage.

185

00:06:36,000 --> 00:06:38,000

Regardless of the type of car you have,

186

00:06:38,000 --> 00:06:40,000

you can significantly reduce your fuel consumption.

187

00:06:40,000 --> 00:06:42,000

Wait, so are these techniques legal?

188

00:06:42,000 --> 00:06:44,000

Well, not all of them.

189

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

I mean, there is one where you can roll through stop signs.

190

00:06:46,000 --> 00:06:48,000

But the ones that we're going to be focusing on

191

00:06:48,000 --> 00:06:50,000

are completely 100% legal.

192

00:06:50,000 --> 00:06:52,000

And they double your gas mileage.

193

00:06:52,000 --> 00:06:54,000

That's what they say.

194

00:06:54,000 --> 00:06:56,000

It's a question as old as the car.

195

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

Is there anything you can do

196

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

to make your gas guzzler guzzle

197

00:07:00,000 --> 00:07:02,000

less gas?

198

00:07:02,000 --> 00:07:04,000

Can some simple hypermiling techniques

199

00:07:04,000 --> 00:07:06,000

really double your mileage?

200

00:07:06,000 --> 00:07:08,000

Or is this fuel fable

201

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

running on empty?

202

00:07:12,000 --> 00:07:14,000

Alright, so you mentioned a massive road trip,

203

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

but that sounds a little more like a finale, right?

204

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

Yeah, exactly. Hypermiling is about taking

205

00:07:18,000 --> 00:07:20,000

a bunch of small techniques,

206

00:07:20,000 --> 00:07:22,000

combining them and getting an overall fuel efficiency.

207

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

So what I think we need to do is break down

208

00:07:24,000 --> 00:07:26,000

each of these techniques and find out

209

00:07:26,000 --> 00:07:28,000

how fuel efficient each of them are.

210

00:07:28,000 --> 00:07:30,000

Okay, so what are they?

211

00:07:30,000 --> 00:07:32,000

Actually, out of the top six, we've already done

212

00:07:32,000 --> 00:07:34,000

three on our show. For example, we know

213

00:07:34,000 --> 00:07:36,000

at high speeds it's better to drive with your windows up

214

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

and your AC on.

215

00:07:38,000 --> 00:07:40,000

This test is being done by professional drivers on the closed track.

216

00:07:40,000 --> 00:07:42,000

Your results may differ.

217

00:07:42,000 --> 00:07:44,000

We know that your fuel efficiency increases

218

00:07:44,000 --> 00:07:46,000

when you drive for less.

219

00:07:46,000 --> 00:07:48,000

And we know that over-inflating

220

00:07:48,000 --> 00:07:50,000

your tires by 10% can really boost your mileage.

221

00:07:50,000 --> 00:07:52,000

Getting less rolling resistance

222

00:07:52,000 --> 00:07:54,000

and therefore better fuel efficiency.

223

00:07:54,000 --> 00:07:56,000

Yeah, but there are three that we have not tested in.

224

00:07:56,000 --> 00:07:58,000

That is limiting your speed on a freeway,

225

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

overall control of your acceleration,

226

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

and turning off your engine at a red light.

227

00:08:02,000 --> 00:08:04,000

Alright, why don't we start with the speed tests?

228

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

I mean, that's easy. We could drive around a track

229

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

at three different speeds, compare the fuel usage.

230

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

Sound good? Sounds cool.

231

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

Let's hit the road.

232

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

So that's six hypermiling secrets.

233

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

And the mythbusters have already ticked off three.

234

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

However, before they put them all together,

235

00:08:18,000 --> 00:08:20,000

they need to test the rest.

236

00:08:20,000 --> 00:08:22,000

Starting with limiting speed.

237

00:08:22,000 --> 00:08:24,000

But rather than hitting the highway,

238

00:08:24,000 --> 00:08:26,000

we are going to save so much fuel

239

00:08:26,000 --> 00:08:28,000

in your face, global warming.

240

00:08:28,000 --> 00:08:30,000

First, they're hitting the runway.

241

00:08:30,000 --> 00:08:32,000

We are here at the Alameda runway

242

00:08:32,000 --> 00:08:34,000

to test hypermiling.

243

00:08:34,000 --> 00:08:36,000

Now, a car is most fuel efficient at higher speeds

244

00:08:36,000 --> 00:08:38,000

because it's using higher gears

245

00:08:38,000 --> 00:08:40,000

and it's using momentum of the vehicle.

246

00:08:40,000 --> 00:08:42,000

But at a certain point, those gears max out.

247

00:08:42,000 --> 00:08:44,000

You actually use more fuel to get more speed.

248

00:08:44,000 --> 00:08:46,000

Not only that, the faster you go,

249

00:08:46,000 --> 00:08:48,000

the more wind resistance you're going to experience,

250

00:08:48,000 --> 00:08:50,000

therefore making it less fuel efficient.

251

00:08:50,000 --> 00:08:52,000

So there's a thing called the speed test.

252

00:08:52,000 --> 00:08:54,000

And to test that theory,

253

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

they've set up a circuit one mile long.

254

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

Follow us for fuel savings.

255

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

Learn about hypermiling.

256

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

They'll drive 20 laps at 45,

257

00:09:02,000 --> 00:09:04,000

55, and 65 miles per hour.

258

00:09:04,000 --> 00:09:06,000

And get the fuel efficiency of each speed.

259

00:09:06,000 --> 00:09:08,000

But how will they track their gallons per mile?

260

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

This piece of equipment right here

261

00:09:10,000 --> 00:09:12,000

is a very precise flow meter

262

00:09:12,000 --> 00:09:14,000

of the speed of the vehicle.

263

00:09:14,000 --> 00:09:16,000

And the speed of the vehicle is very precise.

264

00:09:16,000 --> 00:09:18,000

And the speed of the vehicle is very precise.

265

00:09:18,000 --> 00:09:20,000

And the speed of the vehicle is very precise.

266

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

And the speed of the vehicle is very precise flow meter.

267

00:09:22,000 --> 00:09:24,000

It'll tell us how much fuel we consume.

268

00:09:24,000 --> 00:09:26,000

This is connected to the exhaust system.

269

00:09:26,000 --> 00:09:28,000

It's got a temperature sensor, pressure sensor,

270

00:09:28,000 --> 00:09:30,000

and a flow meter.

271

00:09:30,000 --> 00:09:32,000

We've got a weather center here that helps us out

272

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

with humidity, atmospheric pressure,

273

00:09:34,000 --> 00:09:36,000

and ambient temperature,

274

00:09:36,000 --> 00:09:38,000

and a GPS to tell us precisely

275

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

how far we travel.

276

00:09:40,000 --> 00:09:42,000

So with the high tech rig on board,

277

00:09:42,000 --> 00:09:44,000

now it's time to high tail it for the test.

278

00:09:44,000 --> 00:09:46,000

Ready for a road trip?

279

00:09:46,000 --> 00:09:48,000

45 mile per hour test.

280

00:09:48,000 --> 00:09:50,000

3, 2, 1, begin.

281

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

Position running.

282

00:09:52,000 --> 00:09:54,000

Road trip!

283

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

Don't worry, you're not seeing triples.

284

00:09:56,000 --> 00:09:58,000

It's fun driving in circles, eh?

285

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

Look at this.

286

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

They do it in an ask car all the time.

287

00:10:02,000 --> 00:10:04,000

With over 20 minutes at the same speed

288

00:10:04,000 --> 00:10:06,000

for each test,

289

00:10:06,000 --> 00:10:08,000

we're going to need a split screen montage.

290

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

I prefer road trips where we stop

291

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

at cool destinations rather than take data.

292

00:10:12,000 --> 00:10:14,000

What do you mean?

293

00:10:14,000 --> 00:10:16,000

This is a road trip to science.

294

00:10:16,000 --> 00:10:18,000

You're on the lead, I don't see any other cars.

295

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

And while fuel efficiency data collection

296

00:10:20,000 --> 00:10:22,000

isn't the most stimulating...

297

00:10:22,000 --> 00:10:24,000

Sometimes you get to blow things up.

298

00:10:24,000 --> 00:10:26,000

Sometimes you drive in circles

299

00:10:26,000 --> 00:10:28,000

with the air conditioning off.

300

00:10:28,000 --> 00:10:30,000

The mythbusters find a way

301

00:10:30,000 --> 00:10:32,000

to make it interesting.

302

00:10:32,000 --> 00:10:34,000

It's a consistent pattern here.

303

00:10:34,000 --> 00:10:36,000

Every time we go in this direction,

304

00:10:36,000 --> 00:10:38,000

it's an 18 gallons bar,

305

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

and every time we go in that direction,

306

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

it's about 22 gallons bar.

307

00:10:42,000 --> 00:10:44,000

At higher speeds, the wind resistance

308

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

is affecting the gas consumption.

309

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

But will the hyper mile speed

310

00:10:48,000 --> 00:10:50,000

of 45 miles per hour

311

00:10:50,000 --> 00:10:52,000

avoid that?

312

00:10:52,000 --> 00:10:54,000

Alright kids, we're almost home.

313

00:10:54,000 --> 00:10:56,000

Good night.

314

00:10:56,000 --> 00:10:58,000

Finally, after over 30 laps,

315

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

it's time to pull up

316

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

and pump out the data.

317

00:11:02,000 --> 00:11:04,000

And we're here...

318

00:11:04,000 --> 00:11:06,000

in test. Okay, let's take our numbers

319

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

over to the data acquisition team,

320

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

let them export them and do our comparison.

321

00:11:10,000 --> 00:11:12,000

I think we are going to see some serious savings.

322

00:11:12,000 --> 00:11:14,000

Well, it's over to Kent Johnson

323

00:11:14,000 --> 00:11:16,000

and his team for the final tally

324

00:11:16,000 --> 00:11:18,000

on the fuel efficiency.

325

00:11:18,000 --> 00:11:20,000

So it's looking pretty good.

326

00:11:20,000 --> 00:11:22,000

At 65 miles an hour, seeing about 34 miles per gallon.

327

00:11:22,000 --> 00:11:24,000

At 55 miles an hour,

328

00:11:24,000 --> 00:11:26,000

it improved to 17%.

329

00:11:26,000 --> 00:11:28,000

And at 45 miles an hour,

330

00:11:28,000 --> 00:11:30,000

it proved about 30%.

331

00:11:30,000 --> 00:11:32,000

That's actually really good for our myth.

332

00:11:32,000 --> 00:11:34,000

And these hyper miles might be onto something.

333

00:11:34,000 --> 00:11:36,000

They might, because a 30% saving

334

00:11:36,000 --> 00:11:38,000

just by decreasing your speed

335

00:11:38,000 --> 00:11:40,000

to 45 miles per hour is impressive.

336

00:11:40,000 --> 00:11:42,000

So far, it's looking really good for this myth

337

00:11:42,000 --> 00:11:44,000

of hypermiling. It turns out,

338

00:11:44,000 --> 00:11:46,000

after looking at the data, that if you drive at slower speeds

339

00:11:46,000 --> 00:11:48,000

on the freeway, you will in fact save fuel.

340

00:11:48,000 --> 00:11:50,000

But that is just one piece in the puzzle.

341

00:11:50,000 --> 00:11:52,000

Because remember, we're trying to put all these together

342

00:11:52,000 --> 00:11:54,000

in order to double our mileage.

343

00:11:56,000 --> 00:11:58,000

Later, can the mythbusters

344

00:11:58,000 --> 00:12:00,000

double the bank from their tanks?

345

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

Stinky traffic is stopping

346

00:12:02,000 --> 00:12:04,000

and ruining my hosting abilities.

347

00:12:04,000 --> 00:12:06,000

Calming.

348

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

And the big rig takes on a big gig.

349

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

That's a big dude.

350

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

But will Buster survive?

351

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

He's smiling.

352

00:12:14,000 --> 00:12:16,000

He liked it.

353

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

Can being sandwiched

354

00:12:22,000 --> 00:12:24,000

between two corpulent cops

355

00:12:24,000 --> 00:12:26,000

really let you survive

356

00:12:26,000 --> 00:12:28,000

a tremendous T-bone?

357

00:12:28,000 --> 00:12:30,000

A small scale said maybe.

358

00:12:30,000 --> 00:12:32,000

Oh, that looks a lot better.

359

00:12:34,000 --> 00:12:36,000

So now it's time to up the ante

360

00:12:36,000 --> 00:12:38,000

at Alameda Runway.

361

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

Today, instead of remote controlling the vehicles

362

00:12:40,000 --> 00:12:42,000

or pulling them with cables,

363

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

Jamie and I will be driving.

364

00:12:44,000 --> 00:12:46,000

This baby right here.

365

00:12:46,000 --> 00:12:48,000

Oh, yeah, it's on.

366

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

Yep, for full scale, the mythbusters

367

00:12:52,000 --> 00:12:54,000

will literally be putting their lives

368

00:12:54,000 --> 00:12:56,000

on the line for science.

369

00:12:56,000 --> 00:12:58,000

That ought to do.

370

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

That's one big rig.

371

00:13:02,000 --> 00:13:04,000

And two truckers raring to go.

372

00:13:04,000 --> 00:13:06,000

So now to put the car

373

00:13:06,000 --> 00:13:08,000

before the horsepower.

374

00:13:08,000 --> 00:13:10,000

Allow me to introduce you to the car

375

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

we will be smashing today.

376

00:13:12,000 --> 00:13:14,000

It's not only the same make and model

377

00:13:14,000 --> 00:13:16,000

as the car in the clip we're attempting to replicate.

378

00:13:16,000 --> 00:13:18,000

It also has a special significance to me.

379

00:13:18,000 --> 00:13:20,000

Here, take a look at this picture.

380

00:13:20,000 --> 00:13:22,000

That's me, a 25 years old,

381

00:13:22,000 --> 00:13:24,000

20 years ago, and that is my first car.

382

00:13:24,000 --> 00:13:26,000

Yes, this is the same make and model

383

00:13:26,000 --> 00:13:28,000

as my first car.

384

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

Once the car is all lined up,

385

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

the final ingredient for test one

386

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

is the passenger.

387

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

This is our human analog.

388

00:13:36,000 --> 00:13:38,000

It's called a CINDAVER.

389

00:13:38,000 --> 00:13:40,000

It has individual muscles, bones

390

00:13:40,000 --> 00:13:42,000

and organs just like a human.

391

00:13:42,000 --> 00:13:44,000

It will be our crash test dummy

392

00:13:44,000 --> 00:13:46,000

for this test,

393

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

and we're going to X-ray it first

394

00:13:48,000 --> 00:13:50,000

to make sure all its parts are intact.

395

00:13:50,000 --> 00:13:52,000

Immediately after the accident,

396

00:13:52,000 --> 00:13:54,000

our dummy will be X-rayed again

397

00:13:54,000 --> 00:13:56,000

and examined by a friend of mythbusters,

398

00:13:56,000 --> 00:13:58,000

orthopedic surgeon Noah Weiss.

399

00:13:58,000 --> 00:14:00,000

And we'll see just what kind of injuries

400

00:14:00,000 --> 00:14:02,000

we can get.

401

00:14:02,000 --> 00:14:04,000

Yup, it's all good.

402

00:14:04,000 --> 00:14:06,000

Now in the movie, our hero

403

00:14:06,000 --> 00:14:08,000

was seated in the back seat of a car

404

00:14:08,000 --> 00:14:10,000

just like this between two large policemen

405

00:14:10,000 --> 00:14:12,000

and we will do that crash.

406

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

That'll have to do.

407

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

But in order to find out how good or bad

408

00:14:16,000 --> 00:14:18,000

that might have been for him,

409

00:14:18,000 --> 00:14:20,000

we need to control and that's why

410

00:14:20,000 --> 00:14:22,000

in this test, our guy will be seated

411

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

all alone in the back seat.

412

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

Yes, you'll be fine.

413

00:14:26,000 --> 00:14:28,000

No, you won't be fine.

414

00:14:28,000 --> 00:14:30,000

And to quantify just how

415

00:14:30,000 --> 00:14:32,000

not fine he'll be,

416

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

the team adds PCB accelerometers,

417

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

meaning the sandwich suspect

418

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

is all set.

419

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

Glad I'm not you.

420

00:14:40,000 --> 00:14:42,000

Cautiously, Jamie climbs into the cab

421

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

and takes the truck to the

422

00:14:44,000 --> 00:14:46,000

far end of the runway.

423

00:14:46,000 --> 00:14:48,000

Then it's go time.

424

00:14:50,000 --> 00:14:52,000

All right, Jamie, are you ready?

425

00:14:52,000 --> 00:14:54,000

Ready to go.

426

00:14:54,000 --> 00:14:56,000

Crash test control.

427

00:14:56,000 --> 00:14:58,000

Two.

428

00:14:58,000 --> 00:15:00,000

Go.

429

00:15:02,000 --> 00:15:04,000

Like an angry walrus,

430

00:15:04,000 --> 00:15:06,000

the truck eaves into action.

431

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

Accelerating to the

432

00:15:10,000 --> 00:15:12,000

50 miles an hour of the movie.

433

00:15:20,000 --> 00:15:22,000

Here it comes.

434

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

Wow.

435

00:15:36,000 --> 00:15:38,000

That was amazing.

436

00:15:40,000 --> 00:15:42,000

That was one hell of a thud.

437

00:15:42,000 --> 00:15:44,000

Talk about crash.

438

00:15:46,000 --> 00:15:48,000

Bang.

439

00:15:48,000 --> 00:15:50,000

Boom.

440

00:15:50,000 --> 00:15:52,000

Their green machine's been

441

00:15:52,000 --> 00:15:54,000

totally total.

442

00:15:56,000 --> 00:15:58,000

Well, that wake you up.

443

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

That impact was

444

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

it was frightening, actually.

445

00:16:04,000 --> 00:16:06,000

Coming up on the car

446

00:16:06,000 --> 00:16:08,000

at that speed, you don't realize

447

00:16:08,000 --> 00:16:10,000

how fast you're going until

448

00:16:10,000 --> 00:16:12,000

you kind of get close to it, and then you realize

449

00:16:12,000 --> 00:16:14,000

that this is going to be serious.

450

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

It was. It was like

451

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

a racking

452

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

explosion. It was a bang.

453

00:16:22,000 --> 00:16:24,000

Bang.

454

00:16:28,000 --> 00:16:30,000

Jamie may have lived to tell the T-Bone tale,

455

00:16:30,000 --> 00:16:32,000

but the question is,

456

00:16:32,000 --> 00:16:34,000

has Buster?

457

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

He looks a little more flexible

458

00:16:36,000 --> 00:16:38,000

than he was when he first went in.

459

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

Well, firstly,

460

00:16:40,000 --> 00:16:42,000

Dr. Weiss delivers his prognosis.

461

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

Dr. Weiss, how was our patient

462

00:16:44,000 --> 00:16:46,000

after that accident?

463

00:16:46,000 --> 00:16:48,000

Well, this patient has sustained multiple

464

00:16:48,000 --> 00:16:50,000

devastating injuries.

465

00:16:50,000 --> 00:16:52,000

There are fractures and dislocations

466

00:16:52,000 --> 00:16:54,000

of the neck, the thoracic spine,

467

00:16:54,000 --> 00:16:56,000

low back and pelvis.

468

00:16:56,000 --> 00:16:58,000

This patient is very, very dead.

469

00:16:58,000 --> 00:17:00,000

Wow. I want to say thank you,

470

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

but I also, that's just so horrifying.

471

00:17:02,000 --> 00:17:04,000

And for a second opinion,

472

00:17:04,000 --> 00:17:06,000

Dr. Harding has the G-Load.

473

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

All right, David, how did our guy do?

474

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

The chest saw

475

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

540 Gs.

476

00:17:12,000 --> 00:17:14,000

Ow! And his head saw

477

00:17:14,000 --> 00:17:16,000

620. That's, that's, that's dead.

478

00:17:16,000 --> 00:17:18,000

Dead or not, door nail.

479

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

Yep, because that's over

480

00:17:20,000 --> 00:17:22,000

6 times the survivable

481

00:17:22,000 --> 00:17:24,000

threshold.

482

00:17:24,000 --> 00:17:26,000

The difference between this kind of crash

483

00:17:26,000 --> 00:17:28,000

and what happens between a couple of cars

484

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

when they hit on the highway,

485

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

is that the truck here is a brute.

486

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

And the numbers bear that out.

487

00:17:34,000 --> 00:17:36,000

We've got enormous figures on the G-Loads.

488

00:17:36,000 --> 00:17:38,000

The big question here

489

00:17:38,000 --> 00:17:40,000

is what happens when we put our dummy

490

00:17:40,000 --> 00:17:42,000

between a couple of fat guys.

491

00:17:42,000 --> 00:17:44,000

Will he survive then?

492

00:17:44,000 --> 00:17:46,000

Looking at this kind of damage,

493

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

will he really something if he does?

494

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

The G-Load is a great car.

495

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

It's a great car.

496

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

It's a great car.

497

00:18:22,000 --> 00:18:24,000

It's a great car.

498

00:18:24,000 --> 00:18:26,000

It's a great car.

499

00:18:26,000 --> 00:18:28,000

It's a great car.

500

00:18:28,000 --> 00:18:30,000

It's a great car.

501

00:18:30,000 --> 00:18:32,000

It's a great car.

502

00:18:32,000 --> 00:18:34,000

It's a great car.

503

00:18:34,000 --> 00:18:36,000

It's a great car.

504

00:18:36,000 --> 00:18:38,000

It's a great car.

505

00:18:38,000 --> 00:18:40,000

It's a great car.

506

00:18:40,000 --> 00:18:42,000

It's a great car.

507

00:18:42,000 --> 00:18:44,000

It's a great car.

508

00:18:44,000 --> 00:18:47,000

High-tech wizardry will track the fuel consumption.

509

00:18:47,000 --> 00:18:49,000

Okay, this is the control test

510

00:18:49,000 --> 00:18:51,000

for hypermiling lap one.

511

00:18:51,000 --> 00:18:53,000

Let's do this.

512

00:18:56,000 --> 00:18:58,000

And to make sure there are no other variables,

513

00:18:58,000 --> 00:19:00,000

the AC is off.

514

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

All our designated driver grant needs to do

515

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

is drive normally.

516

00:19:06,000 --> 00:19:08,000

Hey, Mom, Dad, are we there yet?

517

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

Not there yet, honey.

518

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

Accelerating and braking as he usually would.

519

00:19:12,000 --> 00:19:14,000

I kind of hate this slide.

520

00:19:14,000 --> 00:19:16,000

I know it's so long.

521

00:19:16,000 --> 00:19:18,000

There's not a single other car with the hold up.

522

00:19:18,000 --> 00:19:20,000

And sticking to the speed limit of 30 miles per hour.

523

00:19:20,000 --> 00:19:22,000

Science make me car sick.

524

00:19:22,000 --> 00:19:25,000

Then after 20 laps, they've got their control baseline.

525

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

It was really interesting to watch the equipment

526

00:19:27,000 --> 00:19:29,000

as Grant was driving.

527

00:19:29,000 --> 00:19:32,000

Even at idle, the car is using about 0.5 gallons per hour.

528

00:19:32,000 --> 00:19:34,000

And then when Grant was speeding up,

529

00:19:34,000 --> 00:19:36,000

he was getting up to about 6.5 gallons per hour.

530

00:19:36,000 --> 00:19:38,000

Now it's time to see what the techniques

531

00:19:38,000 --> 00:19:40,000

of hypermiling are going to do

532

00:19:40,000 --> 00:19:42,000

and how it affects how much fuel you use.

533

00:19:42,000 --> 00:19:44,000

Hopefully we'll save some.

534

00:19:44,000 --> 00:19:46,000

And those hypermining traffic tactics

535

00:19:46,000 --> 00:19:48,000

all rest on how you accelerate,

536

00:19:48,000 --> 00:19:50,000

stop, and brake.

537

00:19:50,000 --> 00:19:52,000

Now for this, when you see a light,

538

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

you start to decelerate in case it turns red.

539

00:19:54,000 --> 00:19:56,000

If you have to stop at a red light,

540

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

you turn the car completely off.

541

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

And then when you start up again,

542

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

you accelerate really, really, really slowly

543

00:20:02,000 --> 00:20:04,000

to save as much gas as possible.

544

00:20:04,000 --> 00:20:06,000

Now acceleration is basically burning fuel,

545

00:20:06,000 --> 00:20:09,000

but braking is a complete waste of the car's energy

546

00:20:09,000 --> 00:20:11,000

because you're basically stopping

547

00:20:11,000 --> 00:20:13,000

all the momentum of the vehicle.

548

00:20:13,000 --> 00:20:15,000

Now how is this going to translate

549

00:20:15,000 --> 00:20:17,000

into the fuel consumption?

550

00:20:17,000 --> 00:20:19,000

That's what we're about to find out.

551

00:20:19,000 --> 00:20:21,000

Okay, painfully slow acceleration, you're doing well.

552

00:20:21,000 --> 00:20:23,000

Uh-oh, there's a stop sign coming up.

553

00:20:23,000 --> 00:20:25,000

Decelerating early,

554

00:20:25,000 --> 00:20:27,000

make a full, complete stop.

555

00:20:27,000 --> 00:20:29,000

Really smooth acceleration.

556

00:20:29,000 --> 00:20:31,000

It's like my driver's

557

00:20:31,000 --> 00:20:33,000

ed test.

558

00:20:33,000 --> 00:20:35,000

Interesting thing, there's no, like,

559

00:20:35,000 --> 00:20:37,000

peaks right now. It's all just kind of

560

00:20:37,000 --> 00:20:39,000

consistent, low fuel usage.

561

00:20:39,000 --> 00:20:41,000

Just like the control,

562

00:20:41,000 --> 00:20:43,000

Grant must stick to the 30 mile per hour speed limit.

563

00:20:43,000 --> 00:20:45,000

But this time, he's limiting

564

00:20:45,000 --> 00:20:47,000

both his acceleration and deceleration.

565

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

You can see, slow a little bit,

566

00:20:49,000 --> 00:20:51,000

anticipation of possible red,

567

00:20:51,000 --> 00:20:53,000

and roll through it.

568

00:20:53,000 --> 00:20:55,000

Yeah.

569

00:20:55,000 --> 00:20:57,000

And when they don't catch the green light,

570

00:20:57,000 --> 00:20:59,000

oh, oh, oh, oh, oh,

571

00:20:59,000 --> 00:21:01,000

it comes light.

572

00:21:01,000 --> 00:21:03,000

Oh, so slow.

573

00:21:03,000 --> 00:21:05,000

All right.

574

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

Shut off the engine. That saves more fuel.

575

00:21:07,000 --> 00:21:09,000

Engine off.

576

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

We should have done this during the winter.

577

00:21:11,000 --> 00:21:13,000

Green light.

578

00:21:13,000 --> 00:21:15,000

Okay.

579

00:21:15,000 --> 00:21:17,000

Just like the control, they complete 20

580

00:21:17,000 --> 00:21:19,000

sweaty circuits.

581

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

And eventually,

582

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

it's time to find out how fuel frugal

583

00:21:23,000 --> 00:21:25,000

this technique really is.

584

00:21:25,000 --> 00:21:27,000

All right.

585

00:21:27,000 --> 00:21:29,000

We made it. Nice driving.

586

00:21:29,000 --> 00:21:31,000

Thank you. Well done.

587

00:21:31,000 --> 00:21:33,000

So the results are in.

588

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

Let's take a look at the data. Now, I need a graph here.

589

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

As you can see, Grant's control test,

590

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

him driving normally, which is a little scary,

591

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

he was able to get 13 miles per gallon.

592

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

But then, on his hypermiling test,

593

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

his eco-friendly driving,

594

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

he was able to get 17 miles per gallon.

595

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

That is a 30% increase.

596

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

This is incredible. But remember,

597

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

this myth is about doubling your mileage.

598

00:21:53,000 --> 00:21:55,000

So, we need to take all these techniques,

599

00:21:55,000 --> 00:21:57,000

put them together, and see if we can get that mythical double

600

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

mileage.

601

00:21:59,000 --> 00:22:01,000

That's another two ticks for the hypermile code.

602

00:22:01,000 --> 00:22:03,000

Which means it's time to put it all together

603

00:22:03,000 --> 00:22:05,000

and go road tripping.

604

00:22:05,000 --> 00:22:07,000

I love you too.

605

00:22:07,000 --> 00:22:09,000

There's no way

606

00:22:09,000 --> 00:22:11,000

a solo mid-seat suspect

607

00:22:11,000 --> 00:22:13,000

will survive a T-boning truck.

608

00:22:13,000 --> 00:22:15,000

This patient is very, very dead.

609

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

But will some big bone

610

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

busters help?

611

00:22:19,000 --> 00:22:21,000

We're going to have to go to the hospital

612

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

to get the car ready.

613

00:22:23,000 --> 00:22:25,000

We're going to have to go to the hospital

614

00:22:25,000 --> 00:22:27,000

to get the car ready.

615

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

And on to our next episode

616

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

of Total Bone Busters...

617

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

We've now come to the point in the episode

618

00:22:33,000 --> 00:22:35,000

where it's time for Jamie and I

619

00:22:35,000 --> 00:22:37,000

to make a pair of

620

00:22:37,000 --> 00:22:39,000

plus-sized busters.

621

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

Now, here's a problem we have.

622

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

They got only 350 pounds a piece.

623

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

Which means just making them is going to be difficult,

624

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

both in terms of moving them around,

625

00:22:47,000 --> 00:22:49,000

installing them in the car, etc., etc.

626

00:22:49,000 --> 00:22:51,000

There is so much static electricity on this phone.

627

00:22:51,000 --> 00:22:53,000

Check out my hairdo.

628

00:22:53,000 --> 00:22:55,000

So, we've come up with, I think,

629

00:22:55,000 --> 00:22:56,560

out of an open cell phone.

630

00:22:56,560 --> 00:22:59,180

I'll state outright, I've never worked with a piece of foam.

631

00:22:59,180 --> 00:23:00,320

This frickin' big before.

632

00:23:00,320 --> 00:23:02,720

I didn't even know you could get them this big.

633

00:23:02,720 --> 00:23:05,580

Then we will coat the outside of our car figure

634

00:23:05,580 --> 00:23:07,960

in a hard rubber and put it in the car.

635

00:23:07,960 --> 00:23:09,880

This how Michelangelo starts the P.A. Tah.

636

00:23:09,880 --> 00:23:10,720

I know what you're saying,

637

00:23:10,720 --> 00:23:11,960

that doesn't weigh as much as a person.

638

00:23:11,960 --> 00:23:14,080

No, it doesn't, that'll make it easy to install.

639

00:23:14,080 --> 00:23:16,920

Once it's in the car, we will fill it with water.

640

00:23:16,920 --> 00:23:19,800

It's a lightweight solution to a heavy set problem.

641

00:23:19,800 --> 00:23:23,160

Two giant blocks of foam and two mythbusters,

642

00:23:23,160 --> 00:23:25,840

armed with two very different ideas.

643

00:23:25,840 --> 00:23:28,640

Adam's going for the suckin' and see approach,

644

00:23:28,640 --> 00:23:31,520

drawing an obese outline and letting rip.

645

00:23:31,520 --> 00:23:34,120

Ha ha ha ha ha ha!

646

00:23:34,120 --> 00:23:37,680

Jamie, on the other hand, is being a little more methodical.

647

00:23:37,680 --> 00:23:40,400

To sculpt my fat guy, I could just start hacking away

648

00:23:40,400 --> 00:23:42,620

at a chunk of foam, which is what Adam is doing.

649

00:23:42,620 --> 00:23:46,760

I opted instead to do it from a computer generated image

650

00:23:46,760 --> 00:23:48,440

that I found online.

651

00:23:48,440 --> 00:23:51,640

This is a top view of our guy.

652

00:23:51,640 --> 00:23:55,640

And what we've done is slice him in chunks

653

00:23:55,640 --> 00:23:58,500

that end up looking like this one.

654

00:23:58,500 --> 00:24:00,800

This is around the midsection of his body.

655

00:24:00,800 --> 00:24:04,200

This top surface represents the top surface

656

00:24:04,200 --> 00:24:05,960

of a four inch slab of foam.

657

00:24:05,960 --> 00:24:08,640

So when I cut this out, all I have to do

658

00:24:08,640 --> 00:24:12,120

is stack all these other pieces together.

659

00:24:12,120 --> 00:24:16,260

One fat guy in 2D and I've got my guy.

660

00:24:16,260 --> 00:24:18,240

It's classic mythbusters.

661

00:24:18,240 --> 00:24:21,160

Adam forges ahead fast and furious.

662

00:24:21,160 --> 00:24:22,440

Come off that man.

663

00:24:22,440 --> 00:24:23,280

Show yourself.

664

00:24:25,160 --> 00:24:27,680

While Jamie is more slow and steady,

665

00:24:29,080 --> 00:24:30,600

one using intuition,

666

00:24:31,440 --> 00:24:33,640

I'm starting to figure out what he looks like.

667

00:24:35,120 --> 00:24:37,200

The other using ingenuity.

668

00:24:37,200 --> 00:24:38,680

This doesn't look like much right now,

669

00:24:38,680 --> 00:24:41,320

but as soon as I start stacking these blocks,

670

00:24:41,320 --> 00:24:43,480

it's gonna turn into something.

671

00:24:43,480 --> 00:24:47,200

But before long, both are taking shape.

672

00:24:47,200 --> 00:24:49,000

I'd say that's a pretty heavy guy.

673

00:24:50,000 --> 00:24:52,240

I'm so in love with this thing.

674

00:24:52,240 --> 00:24:54,960

Even if one has been a little neater.

675

00:24:54,960 --> 00:24:56,880

This is a sum total of my scrap.

676

00:25:01,160 --> 00:25:02,000

I'm just saying.

677

00:25:04,320 --> 00:25:07,120

Next, Jamie moves on to adding a plumbing system.

678

00:25:08,000 --> 00:25:09,920

That's how we're gonna get the water in.

679

00:25:09,920 --> 00:25:13,280

So that his foam figure can become big bone.

680

00:25:13,280 --> 00:25:14,120

There we go.

681

00:25:14,120 --> 00:25:15,600

He's plumbed and he's got a skeleton.

682

00:25:15,600 --> 00:25:19,120

Now all I have to do is make him look real.

683

00:25:19,120 --> 00:25:21,040

Meanwhile, Adam's got a problem.

684

00:25:21,040 --> 00:25:23,720

His chubby chum is just too big.

685

00:25:24,720 --> 00:25:26,880

He's a giant and I don't think it'll fit in the car.

686

00:25:26,880 --> 00:25:29,920

So I'm gonna take about six inches

687

00:25:29,920 --> 00:25:32,120

right out of his center chest here.

688

00:25:33,480 --> 00:25:35,640

Luckily, a few nip and tux later.

689

00:25:38,640 --> 00:25:40,080

Much better.

690

00:25:40,080 --> 00:25:43,140

And Adam's dummy's ready for its own plumbing parts.

691

00:25:45,640 --> 00:25:46,480

Nice.

692

00:25:46,480 --> 00:25:47,680

Yeah, isn't that cool?

693

00:25:48,840 --> 00:25:51,000

That just leaves two things.

694

00:25:51,000 --> 00:25:52,000

And it's a man.

695

00:25:53,480 --> 00:25:55,520

First, a split screen time lapse

696

00:25:55,520 --> 00:25:57,840

with a full figured foam is finished.

697

00:25:57,840 --> 00:26:00,200

Man, they look fantastic.

698

00:26:00,200 --> 00:26:03,160

And second, a leak free rubber skin.

699

00:26:04,720 --> 00:26:07,400

One coat down, he is almost done.

700

00:26:07,400 --> 00:26:11,080

That'll let their chunky creations hold water.

701

00:26:11,080 --> 00:26:13,840

Over the past 10 years, we've done hundreds of experiments

702

00:26:13,880 --> 00:26:17,400

with 44 different busters and buster analogs.

703

00:26:22,520 --> 00:26:24,480

Right at this moment right now,

704

00:26:24,480 --> 00:26:28,240

Mr. Orange here is my flat out all time favorite.

705

00:26:28,240 --> 00:26:32,320

And once Mr. White and Agent Orange all dried up.

706

00:26:34,880 --> 00:26:36,400

It's clopperin' time.

707

00:26:36,400 --> 00:26:38,040

Yeah!

708

00:26:38,040 --> 00:26:39,720

Keep on truckin'.

709

00:26:39,720 --> 00:26:40,560

Let's do this.

710

00:26:40,560 --> 00:26:41,400

Here we go!

711

00:26:41,400 --> 00:26:42,560

Because after the break,

712

00:26:42,560 --> 00:26:45,280

will the boys in Blubber save busters?

713

00:26:45,280 --> 00:26:46,840

My strings are tightened!

714

00:26:51,680 --> 00:26:56,200

In hypermiling, Tori wants one more pre-road trippin' test.

715

00:26:56,200 --> 00:26:58,000

Next, we're gonna see about taking off

716

00:26:58,000 --> 00:26:59,720

the side view mirror of a car.

717

00:26:59,720 --> 00:27:02,040

Apparently it makes the car so aerodynamic

718

00:27:02,040 --> 00:27:04,080

that it gives you better mileage.

719

00:27:06,080 --> 00:27:08,080

And for some quick aerodynamics,

720

00:27:08,080 --> 00:27:10,320

it's off to the NASA water channel.

721

00:27:10,320 --> 00:27:11,680

All right, you ready for the big show?

722

00:27:11,680 --> 00:27:12,520

Yeah.

723

00:27:12,520 --> 00:27:13,480

There we go.

724

00:27:13,480 --> 00:27:14,680

Nice.

725

00:27:14,680 --> 00:27:16,880

All right, so that is the side with the mirror

726

00:27:16,880 --> 00:27:18,520

and you can see the drag where the die

727

00:27:18,520 --> 00:27:19,760

is just hanging there.

728

00:27:19,760 --> 00:27:22,800

All right, I'm gonna move to the side without the mirror.

729

00:27:22,800 --> 00:27:25,360

And it's just closed right away.

730

00:27:25,360 --> 00:27:26,640

There's no drag.

731

00:27:26,640 --> 00:27:29,200

Yep, removing a mirror to reduce drag

732

00:27:29,200 --> 00:27:32,080

should result in more fantastic fuel savings.

733

00:27:35,280 --> 00:27:37,800

Do not try what you are about to see at home.

734

00:27:37,800 --> 00:27:39,680

Where would you call experts?

735

00:27:41,080 --> 00:27:42,080

Oh, shit.

736

00:27:43,280 --> 00:27:46,120

Want to save money and time at the gas pump?

737

00:27:46,120 --> 00:27:48,000

The Mythbusters do.

738

00:27:48,000 --> 00:27:50,360

So they're joining the Hypermile Club.

739

00:27:51,720 --> 00:27:54,680

All right, shut off the engine, let's save some more fuel.

740

00:27:54,680 --> 00:27:57,240

To find out if this fuel saving system

741

00:27:57,240 --> 00:27:59,520

can double the bank from your tank.

742

00:28:00,360 --> 00:28:01,880

For our hypermiling grand finale,

743

00:28:01,880 --> 00:28:03,920

we'll be driving this 2012 sedan,

744

00:28:03,920 --> 00:28:06,160

the one that we've been using for all of our shorter runs.

745

00:28:06,160 --> 00:28:08,080

But we're throwing another car in the mix.

746

00:28:08,080 --> 00:28:09,520

This one's five years older

747

00:28:09,520 --> 00:28:12,280

and it has over 75,000 miles on it.

748

00:28:12,280 --> 00:28:13,760

Grant and I will be in the brand new car

749

00:28:13,760 --> 00:28:15,480

and Tori will be driving this one.

750

00:28:15,480 --> 00:28:17,440

Don't worry, he won't be lonely.

751

00:28:17,440 --> 00:28:19,040

Buster's in the passenger seat.

752

00:28:19,040 --> 00:28:20,680

It's a great conversation list.

753

00:28:20,680 --> 00:28:21,520

Now for our test,

754

00:28:21,520 --> 00:28:23,440

we'll be using our same fuel measurement system.

755

00:28:23,440 --> 00:28:26,400

But we're also gonna be measuring the old fashioned way.

756

00:28:26,400 --> 00:28:28,680

And that is by driving till we run out of gas.

757

00:28:28,680 --> 00:28:30,000

Here we go.

758

00:28:30,000 --> 00:28:31,880

Exactly three gallons.

759

00:28:33,400 --> 00:28:35,640

So we are gonna be driving one giant lap

760

00:28:35,640 --> 00:28:38,720

around the Bay Area, about 150 miles.

761

00:28:38,720 --> 00:28:39,720

Now that's a good distance

762

00:28:39,720 --> 00:28:42,320

and it's gonna give us a real world average.

763

00:28:42,320 --> 00:28:43,960

We're gonna be driving through city streets,

764

00:28:43,960 --> 00:28:45,840

country roads and freeways.

765

00:28:45,840 --> 00:28:46,880

And to avoid traffic,

766

00:28:46,880 --> 00:28:48,400

we're gonna drive in the middle of the day

767

00:28:48,400 --> 00:28:50,240

so that way we don't have any extra variables

768

00:28:50,240 --> 00:28:51,880

and messing up our data.

769

00:28:51,880 --> 00:28:52,840

Give me those.

770

00:28:52,840 --> 00:28:56,360

It's the fuel efficiency road trip to a rule them all.

771

00:28:56,360 --> 00:28:58,800

They're even adding an aerodynamic skin

772

00:28:58,800 --> 00:29:00,520

and removing a side mirror

773

00:29:00,520 --> 00:29:03,440

to combine every single fuel saving tip

774

00:29:03,440 --> 00:29:05,880

for hyper hypermiling.

775

00:29:05,880 --> 00:29:07,840

All right, let's save some fuel.

776

00:29:07,880 --> 00:29:10,200

With three gallons of gas on board,

777

00:29:10,200 --> 00:29:12,200

drivers start your engines.

778

00:29:14,440 --> 00:29:15,760

How do you know suckers?

779

00:29:15,760 --> 00:29:16,840

That's hyper mile.

780

00:29:18,160 --> 00:29:19,680

It's going to be intense

781

00:29:19,680 --> 00:29:22,360

because they've got a hypermiling checklist,

782

00:29:22,360 --> 00:29:24,160

a hyper mile long.

783

00:29:24,160 --> 00:29:26,760

Never drive above 45 miles per hour.

784

00:29:26,760 --> 00:29:27,760

Done.

785

00:29:27,760 --> 00:29:30,120

Remove the wing mirror on the passenger door.

786

00:29:30,120 --> 00:29:30,960

Done.

787

00:29:30,960 --> 00:29:33,480

Avoid braking and wrapped acceleration.

788

00:29:33,480 --> 00:29:34,320

Done.

789

00:29:34,320 --> 00:29:36,520

Turn off engine and stop lights.

790

00:29:36,520 --> 00:29:38,160

I don't like this at all.

791

00:29:38,160 --> 00:29:40,080

Try and stay relaxed.

792

00:29:40,080 --> 00:29:41,280

Green light, green light.

793

00:29:43,280 --> 00:29:44,240

Gentle.

794

00:29:44,240 --> 00:29:46,520

Not turning on the AC.

795

00:29:46,520 --> 00:29:47,360

Done.

796

00:29:47,360 --> 00:29:49,960

Legally drafting when the opportunity presents itself.

797

00:29:49,960 --> 00:29:51,560

Okay, I haven't had that opportunity yet.

798

00:29:51,560 --> 00:29:54,520

Over inflating our tires by 10%.

799

00:29:54,520 --> 00:29:55,480

Their capacity.

800

00:29:55,480 --> 00:29:59,800

Cover the cars in streamlined skin.

801

00:29:59,800 --> 00:30:00,800

Done.

802

00:30:00,800 --> 00:30:02,960

And lastly, try to navigate intersections

803

00:30:02,960 --> 00:30:04,320

so we're always going through green lights.

804

00:30:04,320 --> 00:30:05,920

I think we're doing well.

805

00:30:05,920 --> 00:30:08,560

But hold on, aren't we forgetting something?

806

00:30:08,560 --> 00:30:10,640

What about a control?

807

00:30:10,640 --> 00:30:13,120

Well, luckily, they did that yesterday.

808

00:30:13,120 --> 00:30:15,920

It was a control cruise of an identical route.

809

00:30:18,640 --> 00:30:19,840

I forgot I don't speak Wookiee.

810

00:30:19,840 --> 00:30:21,240

I also speak Klingon.

811

00:30:21,240 --> 00:30:22,680

I bet you do.

812

00:30:22,680 --> 00:30:23,520

Krta!

813

00:30:23,520 --> 00:30:25,360

At an identical time of day.

814

00:30:25,360 --> 00:30:26,800

We can play this game.

815

00:30:26,800 --> 00:30:28,200

You wanna play the silent treatment?

816

00:30:28,200 --> 00:30:30,120

I can play the silent treatment too.

817

00:30:30,120 --> 00:30:32,840

Under identical weather conditions.

818

00:30:32,840 --> 00:30:34,400

Wow, this is a beautiful place

819

00:30:34,400 --> 00:30:36,000

to conduct a science experiment.

820

00:30:36,000 --> 00:30:37,120

Can you get an allergies?

821

00:30:37,120 --> 00:30:37,960

Oh!

822

00:30:37,960 --> 00:30:38,920

Oh!

823

00:30:38,920 --> 00:30:40,240

Driven completely normally.

824

00:30:40,240 --> 00:30:41,080

Over there.

825

00:30:41,080 --> 00:30:42,280

With no hypermiling.

826

00:30:42,280 --> 00:30:44,680

Until their three gallons of gas ran out.

827

00:30:45,680 --> 00:30:47,120

We're running out, we're running out.

828

00:30:47,120 --> 00:30:48,400

Oh, that's it.

829

00:30:48,400 --> 00:30:49,440

All right.

830

00:30:49,440 --> 00:30:51,400

I think that's it, Buster.

831

00:30:51,400 --> 00:30:53,000

We are out.

832

00:30:53,000 --> 00:30:53,880

Woo!

833

00:30:53,880 --> 00:30:55,360

All right, that's it for the control test.

834

00:30:55,360 --> 00:30:59,760

We went 64 miles and got 21.3 miles per gallon.

835

00:30:59,760 --> 00:31:03,200

So Buster and I made it 78 miles on three gallons of gas.

836

00:31:03,200 --> 00:31:05,520

That is 26 miles per gallon.

837

00:31:05,520 --> 00:31:06,800

That was the control.

838

00:31:06,800 --> 00:31:08,960

And they'll need to double those figures

839

00:31:08,960 --> 00:31:10,320

to confirm this myth.

840

00:31:11,480 --> 00:31:14,600

So it's back to today's hypermiling test.

841

00:31:14,600 --> 00:31:16,720

And in the midst of city traffic.

842

00:31:16,720 --> 00:31:17,560

Oh shoot.

843

00:31:18,960 --> 00:31:21,480

You really gotta pay attention when you're hypermiling.

844

00:31:21,480 --> 00:31:23,920

Otherwise you're gonna f*** off a lot of drivers.

845

00:31:23,920 --> 00:31:26,440

Fuel frugality is frustrating.

846

00:31:27,560 --> 00:31:29,520

This is it, we are coast city.

847

00:31:29,520 --> 00:31:30,640

But it doesn't matter.

848

00:31:30,640 --> 00:31:32,080

Because all the stinking traffic

849

00:31:32,080 --> 00:31:35,600

is stopping and ruining my coasting abilities.

850

00:31:35,600 --> 00:31:38,560

Calming, calming, calming.

851

00:31:38,560 --> 00:31:39,920

Hey, f***ing.

852

00:31:39,920 --> 00:31:41,480

Maybe I should drive home.

853

00:31:41,480 --> 00:31:42,320

Ancient.

854

00:31:43,640 --> 00:31:46,720

However, soon they're through the stress of the city

855

00:31:46,720 --> 00:31:48,360

and the motors are still running

856

00:31:48,360 --> 00:31:49,880

as they head out on the highway.

857

00:31:52,240 --> 00:31:54,600

Is that us causing all that traffic?

858

00:31:54,600 --> 00:31:56,600

Ha ha ha ha.

859

00:31:56,600 --> 00:31:57,440

Oops.

860

00:31:57,440 --> 00:32:00,400

Oh, she just gave us a burp.

861

00:32:00,400 --> 00:32:02,280

Yeah, you hate us.

862

00:32:02,280 --> 00:32:03,600

You hate science?

863

00:32:03,600 --> 00:32:05,600

What, you don't like science?

864

00:32:05,600 --> 00:32:07,360

But while their discipline driving

865

00:32:07,360 --> 00:32:10,200

has other drivers road raging,

866

00:32:10,200 --> 00:32:11,720

they are making savings.

867

00:32:11,720 --> 00:32:16,080

We are at, let's see, our mileage is 31315.

868

00:32:16,080 --> 00:32:21,080

Okay, so that is 12 miles past our mark.

869

00:32:21,440 --> 00:32:22,280

Really?

870

00:32:22,280 --> 00:32:23,120

Yeah.

871

00:32:23,120 --> 00:32:23,960

Wow.

872

00:32:23,960 --> 00:32:25,120

52 to go.

873

00:32:25,120 --> 00:32:27,560

Okay, whether it's confirmed or not,

874

00:32:27,560 --> 00:32:29,600

I'm sort of impressed already.

875

00:32:29,600 --> 00:32:32,640

At the 80 mile mark, they've reached the scenic route

876

00:32:32,640 --> 00:32:34,760

and topped their control mileage.

877

00:32:36,360 --> 00:32:37,640

This is the first time that we're seeing

878

00:32:37,640 --> 00:32:39,760

really windy roads on this course.

879

00:32:39,760 --> 00:32:42,320

Now, the technique here is to kind of maintain

880

00:32:42,320 --> 00:32:44,800

a consistent speed so that you don't have to actually

881

00:32:44,800 --> 00:32:48,160

break in the turns because if you're breaking,

882

00:32:48,160 --> 00:32:49,760

you're losing energy.

883

00:32:49,760 --> 00:32:51,280

But now that there's some downhill,

884

00:32:51,280 --> 00:32:54,000

I'm gonna just try to coast through these turns

885

00:32:54,000 --> 00:32:55,600

at a safe speed.

886

00:32:55,600 --> 00:32:59,720

The tail buster hypermiling is a commitment.

887

00:32:59,720 --> 00:33:01,160

It's a way of life.

888

00:33:01,160 --> 00:33:03,200

What a scary.

889

00:33:03,200 --> 00:33:04,840

Possibly a way of death too.

890

00:33:04,840 --> 00:33:05,680

Ha ha ha.

891

00:33:08,320 --> 00:33:09,880

I'm starting to get it hypermilers.

892

00:33:09,880 --> 00:33:10,920

I'm getting it.

893

00:33:10,920 --> 00:33:13,360

I understand you people now.

894

00:33:13,360 --> 00:33:14,840

In the gas studio.

895

00:33:14,840 --> 00:33:15,680

Now I get it.

896

00:33:15,680 --> 00:33:18,080

Carrie's got the fuel savings fever.

897

00:33:18,080 --> 00:33:20,680

You might see actual tears if we don't make this.

898

00:33:20,680 --> 00:33:22,040

And energy to burn.

899

00:33:22,880 --> 00:33:25,800

The only problem is the engine doesn't.

900

00:33:25,800 --> 00:33:26,800

Uh oh.

901

00:33:26,800 --> 00:33:29,960

Because despite Carrie's death driving.

902

00:33:29,960 --> 00:33:30,960

That's it.

903

00:33:30,960 --> 00:33:32,680

They're running on empty.

904

00:33:32,680 --> 00:33:33,520

That's it.

905

00:33:33,520 --> 00:33:34,360

No brakes.

906

00:33:34,360 --> 00:33:37,840

Well, we definitely did not double our mileage.

907

00:33:37,840 --> 00:33:39,280

It was getting so optimistic.

908

00:33:39,280 --> 00:33:40,920

It was looking so good.

909

00:33:40,920 --> 00:33:43,320

Yeah, we didn't even come close to doubling our mileage.

910

00:33:43,320 --> 00:33:45,960

We went 64 the first time on our control

911

00:33:45,960 --> 00:33:47,760

and we only got to 90 this time.

912

00:33:47,760 --> 00:33:49,600

That's only 40%.

913

00:33:49,600 --> 00:33:52,920

Yep, 40% is a long way from 100.

914

00:33:52,920 --> 00:33:57,280

However, this myth and Tori are still on the road.

915

00:33:57,280 --> 00:33:59,760

I just hit 136 on my addometer.

916

00:33:59,760 --> 00:34:03,400

Which means 20 more miles and this myth is confirmed.

917

00:34:03,400 --> 00:34:04,840

This is insane.

918

00:34:04,840 --> 00:34:06,680

Am I the only one excited about this?

919

00:34:08,200 --> 00:34:09,320

Yeah, I guess so.

920

00:34:09,320 --> 00:34:12,640

However, Tori might have spoken too soon.

921

00:34:12,640 --> 00:34:13,960

Oh, I'm running out of gas.

922

00:34:15,240 --> 00:34:16,080

Ha ha ha.

923

00:34:16,080 --> 00:34:19,560

Oh, I was so close.

924

00:34:20,560 --> 00:34:21,400

Ah.

925

00:34:22,680 --> 00:34:23,600

I was so close.

926

00:34:23,600 --> 00:34:28,600

I was just saying how I was at 136 miles.

927

00:34:28,680 --> 00:34:30,280

All I needed was 20 more miles

928

00:34:30,280 --> 00:34:31,840

and we were gonna confirm this myth.

929

00:34:31,840 --> 00:34:35,080

And as soon as I finished saying that, the engine shut off.

930

00:34:37,000 --> 00:34:38,880

I think we have to bust this one.

931

00:34:38,880 --> 00:34:40,840

I mean, it did give us a lot more mileage,

932

00:34:40,840 --> 00:34:43,520

but it's not doubling our mileage.

933

00:34:43,520 --> 00:34:45,240

So this one's looking busted.

934

00:34:46,120 --> 00:34:49,200

Tori managed an impressive 70% increase

935

00:34:49,200 --> 00:34:51,800

while Karrion Grant scored 40%.

936

00:34:51,800 --> 00:34:56,800

So even though the myths busted, it's still fuel for thought.

937

00:34:56,880 --> 00:34:58,840

I started out with pure skepticism,

938

00:34:58,840 --> 00:35:03,200

thinking that hypermiling was just a whack-a-doo theory.

939

00:35:03,200 --> 00:35:06,720

To starting to believe it, to starting to get into it,

940

00:35:06,720 --> 00:35:09,680

to starting to work the system and feel the game,

941

00:35:09,680 --> 00:35:12,440

to like getting really emotionally excited

942

00:35:12,440 --> 00:35:14,480

about the fact that we had a hill or a turn

943

00:35:14,480 --> 00:35:16,480

so I could see the little bit of fuel

944

00:35:16,480 --> 00:35:19,480

to the few drops that were gonna get us that extra mileage.

945

00:35:19,480 --> 00:35:22,040

And though we did not double our mileage,

946

00:35:22,040 --> 00:35:24,160

40% is nothing to laugh at.

947

00:35:36,560 --> 00:35:37,560

Welcome back.

948

00:35:37,560 --> 00:35:38,960

We've been testing the story

949

00:35:38,960 --> 00:35:40,120

that if you're in the back seat of a car

950

00:35:40,120 --> 00:35:42,960

that gets t-boned by a truck like this one,

951

00:35:43,040 --> 00:35:46,680

you're better off being sandwiched between two big dudes.

952

00:35:46,680 --> 00:35:48,400

So to test this, we did a control

953

00:35:48,400 --> 00:35:50,600

in which we put our crass test dummy in the back seat

954

00:35:50,600 --> 00:35:52,000

with nothing around him,

955

00:35:52,000 --> 00:35:53,840

and we hit him with this very truck.

956

00:35:57,640 --> 00:35:59,440

Things didn't fare so well for him.

957

00:35:59,440 --> 00:36:00,440

He died.

958

00:36:00,440 --> 00:36:02,200

This patient is very, very dead.

959

00:36:02,200 --> 00:36:04,480

Now we're gonna sit him in the back seat of a new car

960

00:36:04,480 --> 00:36:06,400

between two big dudes,

961

00:36:06,400 --> 00:36:08,760

and we're gonna hit him with this truck again.

962

00:36:08,760 --> 00:36:11,280

Yep, with two portly passengers,

963

00:36:11,280 --> 00:36:14,840

this is going to be one supersized finale.

964

00:36:14,840 --> 00:36:15,760

Are you ready?

965

00:36:15,760 --> 00:36:16,880

We're all ready.

966

00:36:16,880 --> 00:36:17,720

Excellent.

967

00:36:19,320 --> 00:36:23,240

Like the control, a brand new SNDEVER takes up back seat.

968

00:36:23,240 --> 00:36:24,320

Come on, buddy.

969

00:36:24,320 --> 00:36:26,720

We'll get him in here if it's the last thing he ever does.

970

00:36:26,720 --> 00:36:28,960

Oh wait, this is the last thing he ever does.

971

00:36:28,960 --> 00:36:31,280

And once he's sitting pretty in the middle,

972

00:36:31,280 --> 00:36:32,120

excellent.

973

00:36:32,800 --> 00:36:34,320

It's time to call the cops.

974

00:36:35,560 --> 00:36:38,400

Remember, right now they're chubby creations.

975

00:36:39,640 --> 00:36:41,040

Time for your accident, little buddy.

976

00:36:41,040 --> 00:36:42,480

Our light weights,

977

00:36:42,480 --> 00:36:45,400

tipping the scales at a mere 12 pounds each.

978

00:36:47,480 --> 00:36:48,320

That's it!

979

00:36:48,320 --> 00:36:49,160

I got it!

980

00:36:49,160 --> 00:36:51,160

But all that's about to change.

981

00:36:51,160 --> 00:36:53,360

All right, buddy, let's get you up to weight.

982

00:36:54,560 --> 00:36:56,240

To get our cops to the required mass

983

00:36:56,240 --> 00:36:58,640

and consistency of an obese person,

984

00:36:58,640 --> 00:37:00,520

we're simply gonna fill them up with water.

985

00:37:00,520 --> 00:37:02,280

Oh, it's working beautifully.

986

00:37:02,280 --> 00:37:03,760

One gallon, that's eight pounds.

987

00:37:03,760 --> 00:37:05,400

We got a bunch to go.

988

00:37:05,400 --> 00:37:07,120

Now based on their overall volume,

989

00:37:07,120 --> 00:37:10,240

each guy will weigh about 350 pounds when they're full.

990

00:37:10,240 --> 00:37:11,520

They're starting to get denser.

991

00:37:11,520 --> 00:37:13,360

Which is right in the ballpark we need.

992

00:37:13,360 --> 00:37:16,160

All right, dude is full of water,

993

00:37:16,160 --> 00:37:18,200

and up to eight, now it's up to Jimmy.

994

00:37:19,360 --> 00:37:22,720

And once Mr. White's also piled on the pounds,

995

00:37:22,720 --> 00:37:23,960

that's a big dude.

996

00:37:23,960 --> 00:37:27,920

Cop number two, like the experiment, is good to go.

997

00:37:27,920 --> 00:37:29,400

I don't think there's any question here

998

00:37:29,400 --> 00:37:30,920

if the person who's gonna do better

999

00:37:30,920 --> 00:37:33,880

with these guys around him than he would by himself.

1000

00:37:33,880 --> 00:37:35,840

He will, padding is good, it works.

1001

00:37:35,840 --> 00:37:38,600

That's why they put airbags in cars.

1002

00:37:38,600 --> 00:37:41,640

The only real question here is whether he will actually

1003

00:37:41,640 --> 00:37:44,600

survive, is the padding enough to do that?

1004

00:37:44,600 --> 00:37:45,800

I really don't know.

1005

00:37:45,800 --> 00:37:46,880

Time to suit up.

1006

00:37:46,880 --> 00:37:49,520

Although this time, Adam's behind the wheel.

1007

00:37:49,520 --> 00:37:53,040

For this full figured finale, everything else is the same.

1008

00:37:53,040 --> 00:37:53,880

Let's do this.

1009

00:37:53,880 --> 00:37:57,560

The same car, with the same truck going the same speed.

1010

00:37:57,560 --> 00:38:00,920

The only difference, those plus size passengers.

1011

00:38:00,920 --> 00:38:02,520

Okay, Adam, are you ready?

1012

00:38:02,520 --> 00:38:03,360

Ready.

1013

00:38:06,120 --> 00:38:08,080

All right, on my mark.

1014

00:38:09,000 --> 00:38:12,560

Three, two, one, go.

1015

00:38:19,440 --> 00:38:21,280

37 miles per hour.

1016

00:38:22,360 --> 00:38:23,200

45.

1017

00:38:25,840 --> 00:38:26,680

48.

1018

00:38:28,200 --> 00:38:30,600

You're at 50, hold it at 50.

1019

00:38:30,600 --> 00:38:32,080

Hold it right there.

1020

00:38:32,080 --> 00:38:34,080

All right, here we go.

1021

00:38:35,400 --> 00:38:36,240

Ah!

1022

00:38:38,600 --> 00:38:39,440

Oh my gosh.

1023

00:38:39,440 --> 00:38:41,600

That's just awful.

1024

00:38:41,600 --> 00:38:42,440

Woo!

1025

00:38:42,440 --> 00:38:44,760

And yet, it's kinda cool.

1026

00:38:45,760 --> 00:38:46,600

Oh boy!

1027

00:38:48,040 --> 00:38:49,680

My sphincter tightened.

1028

00:38:52,160 --> 00:38:53,480

Are you okay?

1029

00:38:53,480 --> 00:38:55,200

Wow, what a concussion.

1030

00:38:55,200 --> 00:38:56,040

Boom!

1031

00:38:58,440 --> 00:39:00,720

I think I screamed for the last time.

1032

00:39:00,720 --> 00:39:02,680

I think I screamed for the last time.

1033

00:39:02,680 --> 00:39:04,680

I think I screamed for the last time.

1034

00:39:04,680 --> 00:39:06,680

I think I screamed for the last time.

1035

00:39:07,160 --> 00:39:09,760

I think I screamed for the last 30 feet.

1036

00:39:09,760 --> 00:39:11,600

I just went, ah!

1037

00:39:11,600 --> 00:39:12,600

Ah!

1038

00:39:12,600 --> 00:39:13,440

Boom!

1039

00:39:14,640 --> 00:39:16,240

Better than a cup of coffee, isn't it?

1040

00:39:16,240 --> 00:39:17,080

Wow!

1041

00:39:18,680 --> 00:39:20,280

That was a rush!

1042

00:39:21,120 --> 00:39:23,240

It may have been a rush for Adam,

1043

00:39:23,240 --> 00:39:26,120

but it was savage for the car.

1044

00:39:26,120 --> 00:39:28,560

We have teeth on the cindever.

1045

00:39:28,560 --> 00:39:30,880

That is awful.

1046

00:39:30,880 --> 00:39:32,160

He's smiling.

1047

00:39:32,160 --> 00:39:33,000

He liked it.

1048

00:39:33,000 --> 00:39:36,440

And if this hit looks bad from the outside,

1049

00:39:36,440 --> 00:39:39,280

inside the car, it's a disaster.

1050

00:39:39,280 --> 00:39:40,360

His head came off.

1051

00:39:42,320 --> 00:39:43,520

Well, his head's come off.

1052

00:39:44,520 --> 00:39:45,840

That's not a good sign.

1053

00:39:45,840 --> 00:39:48,120

No, I mean his head's like, come clean off.

1054

00:39:50,360 --> 00:39:53,120

It's like, not attached to his body.

1055

00:39:53,120 --> 00:39:55,120

Well, that means we don't need no data.

1056

00:39:56,080 --> 00:39:58,000

Still, we might as well.

1057

00:39:58,000 --> 00:40:01,080

Remember, Jamie thought Buster might survive.

1058

00:40:01,080 --> 00:40:03,080

Courtesy of his portly pals.

1059

00:40:03,080 --> 00:40:05,280

You know, it looks so good.

1060

00:40:05,280 --> 00:40:09,360

Yet, given his decapitation, that's not looking likely.

1061

00:40:11,080 --> 00:40:12,200

Yeah, I know.

1062

00:40:12,200 --> 00:40:14,000

But what do the doctors say?

1063

00:40:16,280 --> 00:40:17,600

So Doc, his head fell off.

1064

00:40:17,600 --> 00:40:18,840

But what else is wrong with him?

1065

00:40:18,840 --> 00:40:22,000

In addition to his complete dislocation of his head,

1066

00:40:23,480 --> 00:40:27,520

he sustained massive injuries to his chest, abdomen,

1067

00:40:27,520 --> 00:40:30,360

pelvis, all of his extremities.

1068

00:40:30,360 --> 00:40:32,120

These are devastating.

1069

00:40:32,120 --> 00:40:33,760

Our first dummy was certainly dead,

1070

00:40:33,760 --> 00:40:35,960

but this one's even more dead.

1071

00:40:35,960 --> 00:40:38,080

Well, it's not at all what we expected,

1072

00:40:38,080 --> 00:40:39,840

but that's pretty definitive.

1073

00:40:39,840 --> 00:40:40,680

It might be.

1074

00:40:40,680 --> 00:40:43,760

But were the G-loads on Bufford Buster lower

1075

00:40:43,760 --> 00:40:45,040

this time around?

1076

00:40:45,040 --> 00:40:46,520

All right, David, what is the news?

1077

00:40:46,520 --> 00:40:47,480

What is the data tell us?

1078

00:40:47,480 --> 00:40:49,120

Well, we maxed out our sensors.

1079

00:40:49,120 --> 00:40:53,360

We, wait a minute, we had like five and 600 G crashes

1080

00:40:53,360 --> 00:40:56,320

last time, but what was our max?

1081

00:40:56,320 --> 00:40:58,640

More than 800 Gs.

1082

00:40:58,640 --> 00:40:59,640

Wow.

1083

00:40:59,640 --> 00:41:00,960

And we don't know how much worse.

1084

00:41:00,960 --> 00:41:03,000

It's just above 800 Gs.

1085

00:41:03,000 --> 00:41:03,740

That's correct.

1086

00:41:03,740 --> 00:41:04,580

Okay.

1087

00:41:04,580 --> 00:41:05,900

Thank you, sir.

1088

00:41:05,900 --> 00:41:06,740

Woo!

1089

00:41:06,740 --> 00:41:11,460

So with the Gs maxing out eight times the survivable limit,

1090

00:41:11,460 --> 00:41:13,820

there's only one conclusion to make.

1091

00:41:13,820 --> 00:41:14,820

So let's recap.

1092

00:41:14,820 --> 00:41:17,340

In the first crash, our purpose seated alone

1093

00:41:17,340 --> 00:41:19,300

in the back seat and on impact,

1094

00:41:19,300 --> 00:41:22,900

it stood five to 600 Gs of force,

1095

00:41:22,900 --> 00:41:25,380

a completely deadly amount of Gs.

1096

00:41:25,380 --> 00:41:28,500

In the second crash, seated between two big cops,

1097

00:41:28,500 --> 00:41:32,140

this being one of them, he withstood well over 800.

1098

00:41:32,140 --> 00:41:34,860

And that was totally counter to what both Jamie and I

1099

00:41:34,860 --> 00:41:35,620

predicted.

1100

00:41:35,620 --> 00:41:38,180

The second crash was far worse.

1101

00:41:38,180 --> 00:41:39,420

Ain't that the truth?

1102

00:41:39,420 --> 00:41:43,180

The two corpulent cops didn't shield the suspect

1103

00:41:43,180 --> 00:41:44,460

and killed him.

1104

00:41:44,460 --> 00:41:46,740

And Jamie's figured out why.

1105

00:41:46,740 --> 00:41:49,740

Earlier, I thought any padding would be good padding

1106

00:41:49,740 --> 00:41:51,500

and that our dummy would be better off

1107

00:41:51,500 --> 00:41:53,660

between the two big guys.

1108

00:41:53,660 --> 00:41:55,860

But it turns out I was wrong.

1109

00:41:55,860 --> 00:41:57,820

Water doesn't impress.

1110

00:41:57,820 --> 00:41:59,260

And we're mostly water.

1111

00:41:59,260 --> 00:42:01,860

So it was actually like our dummy

1112

00:42:01,860 --> 00:42:04,260

was between a rock and a hard place.

1113

00:42:04,260 --> 00:42:05,620

How do you want to call this one?

1114

00:42:05,620 --> 00:42:07,580

Well, it was totally not what we expected.

1115

00:42:07,580 --> 00:42:10,020

You'd be much worse off in the back of a car

1116

00:42:10,020 --> 00:42:12,340

between two big guys than did not happen there

1117

00:42:12,340 --> 00:42:13,700

in the first place.

1118

00:42:13,700 --> 00:42:14,660

The myth is busted.

1119

00:42:14,660 --> 00:42:15,300

Copy that.

1120

00:42:15,300 --> 00:42:16,540

It's totally busted.

1121

00:42:16,540 --> 00:42:17,940

Let's get out of here.

1122

00:42:17,940 --> 00:42:18,440

Oh.

1123

00:42:23,340 --> 00:42:26,660

Want to know why we did or didn't do something on the show?

1124

00:42:26,660 --> 00:42:29,660

Log on to [discovery.com slash mythbusters](http://discovery.com/slash/mythbusters) after show

1125

00:42:29,660 --> 00:42:31,620

to find out.