

1

00:00:00,000 --> 00:00:06,140

Please do not try what you are about to see at home. We're what you call experts. Can't you tell?

2

00:00:08,140 --> 00:00:15,680

On this episode of mythbusters cars guns what can go wrong Adam and Jamie are on burn notice

3

00:00:16,640 --> 00:00:22,640

Testing the myth that to give the bad guys the slip close with the no cigar you can bounce a bullet

4

00:00:23,720 --> 00:00:26,960

Awesome, I totally didn't call that through the bottom of their car

5

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

Meanwhile carry Tori Grant

6

00:00:36,440 --> 00:00:40,240

Take on some action hero heroics the ordering explosion

7

00:00:40,640 --> 00:00:42,640

Finding out if the force of a shockwave

8

00:00:45,960 --> 00:00:51,520

Could push the power of an ordinary jump into a superhuman

9

00:01:00,000 --> 00:01:03,200

Mythbusters Adam Savage

10

00:01:05,200 --> 00:01:07,200

Jamie Heineman

11

00:01:09,320 --> 00:01:15,560

Between them more than 30 years of special effects experience together with Tori Belachie

12

00:01:15,560 --> 00:01:18,000

I was insane Brent imihara

13

00:01:19,000 --> 00:01:23,920

And Carrie Byron do it. They don't just tell the myths

14

00:01:25,040 --> 00:01:27,040

They put them to the test

15

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

I

16

00:01:39,720 --> 00:01:46,120

Jamie in your travels have you ever found yourself in a situation where you're being chased by someone and you're shooting at them to try

17

00:01:46,120 --> 00:01:50,280

And stop them from chasing you. I don't want to talk about it. I figured you'd say that

18

00:01:50,760 --> 00:01:54,960

There is a story however from this show called burn notice in the show

19

00:01:54,960 --> 00:01:57,800

Our hero is being chased in a car by another car

20

00:01:57,800 --> 00:02:03,960

And he says that if you don't have an armor piercing round you can forget about shooting through the engine or the radiator of your pursuer

21

00:02:04,160 --> 00:02:10,760

But he says that you can in fact skip bullets off the ground in through the floor of the car that's chasing you

22

00:02:10,760 --> 00:02:15,520

Oh, I'm not so sure about that and that is exactly why I think it's something we should test

23

00:02:17,200 --> 00:02:23,160

To delay a pursuer but leave them unharmed the tactic is literally under fire

24

00:02:23,520 --> 00:02:26,040

Rick Shane bullets off the ground up through the undercarriage

25

00:02:26,040 --> 00:02:32,200

But can you really bounce a bullet up into the underside of a car or is this myth on the rebound?

26

00:02:33,640 --> 00:02:38,600

So what kind of gun were they using in that clip do we know it looks to be a nine millimeter semi-auto

27

00:02:38,760 --> 00:02:43,360

Seems to me the first thing we ought to do is see whether that kind of gun would penetrate the bottom of a car

28

00:02:43,720 --> 00:02:46,920

Excellent. Let's just get out to a shooting range. It's shoot at the bottom of a car

29

00:02:47,600 --> 00:02:49,600

Why not?

30

00:02:50,360 --> 00:02:56,040

So at the Yolo County bomb range the myth busters prepared to take on this myth point blank I

31

00:02:58,120 --> 00:03:03,920

Love the anticipation of shooting at cars. Yeah cars guns. What could go wrong?

32

00:03:04,880 --> 00:03:09,560

These are our cars blue car good guy red car bad guy think late sabers

33

00:03:09,560 --> 00:03:14,560

And this is the orientation they are in in the clip slightly offset and 15 feet apart

34

00:03:14,760 --> 00:03:18,320

Now in the clip the guy says that without a high-powered round

35

00:03:18,320 --> 00:03:22,400

You're not gonna get past the radiator or the firewall yep

36

00:03:22,800 --> 00:03:27,680

Supposedly the underside of the car is a better target. So first they'll test that

37

00:03:27,680 --> 00:03:33,680

We're gonna lift the car up and shoot at point blank range into the floor of the car see if the bullets make it through

38

00:03:33,680 --> 00:03:36,000

I know that they're supposed to have skipped off the ground

39

00:03:36,000 --> 00:03:39,400

But if a direct bullet won't make it through the floor well a skip bullet never would

40

00:03:39,920 --> 00:03:43,080

And to find out if those point blank rounds penetrate

41

00:03:44,760 --> 00:03:47,400

Very expensive balloons clearly

42

00:03:48,040 --> 00:03:53,960

Adam fills the bottom of the car with balloons and then gives the underside of the car a whitewash.
Oh

43

00:03:54,800 --> 00:03:56,800

Yeah

44

00:03:56,800 --> 00:03:58,800

That's a clean experimental space

45

00:03:59,320 --> 00:04:03,920

And the whiteout makes it clear that this bounced round is quite the trick shot

46

00:04:04,680 --> 00:04:09,860

I'm looking at a whole lot of stuff right here that I've got to get past to get into the cab

47

00:04:10,180 --> 00:04:14,380

Really the only hope that I have is a spot right about there

48

00:04:14,420 --> 00:04:18,680

Which may trim the guy's toenails or something, but that's my only hope

49

00:04:19,180 --> 00:04:22,020

Shooting at the underside of a car my Jamie's ready

50

00:04:24,060 --> 00:04:30,460

That looked like an almost perfect hit Jamie's sharp shooting sends a barrage of bullets right into the sweet spot

51

00:04:33,020 --> 00:04:37,100

And although the rounds are hitting the mark have they made it through the wheel well

52

00:04:37,980 --> 00:04:43,460

Oh, I see a hit here. I've gone through the floorboard here, but not through the carpet

53

00:04:43,460 --> 00:04:47,420

It looks like underneath the car. It looks like most bullets were deflected

54

00:04:48,620 --> 00:04:50,980

Wait, there's pop balloon in here

55

00:04:51,460 --> 00:04:55,460

But one burst balloon reveals one bullet did make it through

56

00:04:56,340 --> 00:05:02,140

What does that look like? That's a bullet. Yeah, and it made it through the floor and into the cab of the car

57

00:05:02,140 --> 00:05:06,540

If it made it in through the floor it could have made it into the guy's foot nice shooting text

58

00:05:07,940 --> 00:05:12,700

So I was able to get some bullets to penetrate the cab of the car with this nine millimeter pistol

59

00:05:12,700 --> 00:05:16,500

I went in here a couple down there one over there

60

00:05:16,820 --> 00:05:21,300

But keep in mind that this was a direct hit under optimal static conditions

61

00:05:21,700 --> 00:05:26,580

And that means it is now time to find out whether or not a ricocheting bullet

62

00:05:26,980 --> 00:05:33,260

Keeps enough energy to still pierce the cab of our car. Well round ones over time for ricocheting

63

00:05:38,100 --> 00:05:41,460

Next the myth busters get the jump on Hollywood

64

00:05:45,180 --> 00:05:47,140

What do you look so excited about all right

65

00:05:47,140 --> 00:05:51,980

We are testing a Hollywood movie myth dealing with explosions great. What is it?

66

00:05:51,980 --> 00:05:57,660

All right, so this comes from a classic action movie where the hero is running from an explosive and just before detonates

67

00:05:57,660 --> 00:06:00,780

He jumps with all of his might. Well, you probably know what happens

68

00:06:00,780 --> 00:06:06,820

I know just as he's mid-air the blast goes off and the resulting shockwave actually pushes him through the air giving him a

69

00:06:06,820 --> 00:06:13,380

Superhuman jump exactly, but is that true can a shockwave from an explosion actually push you further than you can jump on your own

70

00:06:14,860 --> 00:06:17,940

It's a bombastic scene straight from the blockbusters

71

00:06:18,340 --> 00:06:26,060

Escaping an imminent explosion the hero leaps into the air and the force of the blast gives them a super human boost

72

00:06:26,100 --> 00:06:30,300

But are these filmic physics bang on or is this a mission?

73

00:06:30,900 --> 00:06:33,900

Implausible all right, so obviously we're gonna need a human stand

74

00:06:33,900 --> 00:06:38,300

I'm not exactly comfortable with any of us getting exposed to a shockwave sounds like a job for Buster

75

00:06:38,300 --> 00:06:41,780

I think the first order of business is to rig him so he can jump all right

76

00:06:41,780 --> 00:06:45,940

Well, why don't you figure out a way to get him to jump and while you're working on that you and I can find out

77

00:06:45,940 --> 00:06:49,260

How far he should jump so hit the track for a little data collection?

78

00:06:49,260 --> 00:06:54,620

Maybe check out some jump distances hang time exactly a little jump in fact-finding missions

79

00:06:54,940 --> 00:06:56,940

So to jump start the myth

80

00:06:57,340 --> 00:07:03,460

Carriontori need to find out the average distance and hang time of a regular long jump get in strong

81

00:07:04,300 --> 00:07:06,300

Ready to go jump absolutely

82

00:07:06,660 --> 00:07:12,980

We've come to the track at the College of San Mateo to test the myth that the shockwave from a bomb

can actually extend your jump

83

00:07:13,220 --> 00:07:16,620

Now there is no way we're gonna be jumping anywhere near an explosion

84

00:07:16,620 --> 00:07:20,700

But Buster needs to do it so we need to get a benchmark at how far he needs to jump

85

00:07:20,700 --> 00:07:25,020

So we're here to get some expert training from champion long jumper joy upshot

86

00:07:25,900 --> 00:07:32,100

She's good real good. All right. Let's see you do it joy demonstrates exactly how it's done

87

00:07:33,380 --> 00:07:35,380

And she makes it look easy

88

00:07:37,420 --> 00:07:40,620

Then it's over to the first contender all right Carrie

89

00:07:40,620 --> 00:07:47,260

This is your long jump you get three attempts and then we're gonna average all three. You ready?
Yes. Here we go

90

00:07:51,140 --> 00:07:54,300

Carrie gets a run-up and then leaps for all her work

91

00:07:55,900 --> 00:08:01,500

My god, I think we've just seen a new world record. I think I got nine feet with my new technique

92

00:08:05,580 --> 00:08:07,580

I mean graceful graceful

93

00:08:07,580 --> 00:08:15,540

Well with two more jumps Carrie's form improves and so does her distance Carrie you went 10 feet
you've increased your distance

94

00:08:16,780 --> 00:08:21,940

Carrie's just finished all three of her jumps and she came away with a nine and a half feet average

95

00:08:21,980 --> 00:08:27,700

That is incredible considering the fact that she's not that athletic. She's very uncoordinated and she has a bum knee

96

00:08:29,860 --> 00:08:32,700

It's my turn next it's not a competition Tory

97

00:08:32,700 --> 00:08:38,660

It's about data collection and setting the average Joe leaping benchmark. I time to get in the zone

98

00:08:39,700 --> 00:08:41,700

Is he putting my headband? Yes, he is

99

00:08:42,620 --> 00:08:44,620

All right, I'm in the zone

100

00:08:45,620 --> 00:08:51,660

But lechi takes his run up run run run and he really goes the distance

101

00:08:53,020 --> 00:08:59,980

Oh, I got said in my pants. Well, that was about 16 feet. Do you remind you Michael Jordan? All that air two more jumps

102

00:09:02,500 --> 00:09:08,660

And the data on distance is in all right your average to 16 feet minus that and a half good job you guys

103

00:09:08,660 --> 00:09:12,300

All right, why don't we look at the high speed and see how much hang time we're actually getting?

104

00:09:12,940 --> 00:09:17,940

Yep, just as important as the average distance is the average hang time of the jumps

105

00:09:18,340 --> 00:09:20,980

But look you got any air got some height there

106

00:09:21,820 --> 00:09:28,940

That's form but the hang time isn't looking good even with Tory airborne for five tenths of a second

107

00:09:29,100 --> 00:09:32,180

Getting the timing right in full scale is going to be tough

108

00:09:32,460 --> 00:09:39,300

Now we did come out here to find out what the average long jump would be from an average person and between Tory and I

109

00:09:39,300 --> 00:09:42,260

Are average about 12 feet when you look at that on the high speed

110

00:09:42,260 --> 00:09:44,580

That's not even half a second of hang time

111

00:09:44,620 --> 00:09:49,860

That's a very small window to actually trigger everything that needs to happen the jump and the bomb

112

00:09:50,180 --> 00:09:53,140

So I think we might have to go with something that gives us more hang time

113

00:09:53,140 --> 00:09:54,180

Maybe a

114

00:09:54,180 --> 00:10:00,140

Olympic world record or something like that something like a lot no double the hang time what we can get

115

00:10:01,020 --> 00:10:06,580

Doubling their hang time is crucial after all in this myth the hero is leaping for their life

116

00:10:06,980 --> 00:10:09,820

Making this an extraordinary jump

117

00:10:11,140 --> 00:10:15,020

I got what we saw tomorrow coming up ready for the naked Avenger

118

00:10:18,500 --> 00:10:22,700

And later we're literally on the highway to the danger zone

119

00:10:22,700 --> 00:10:37,420

It's a big bounce from the small screen for sheer panic it's hard to beat bullets coming up from the floorboards

120

00:10:37,420 --> 00:10:40,900

But can a bullet on the rebound really shoot through

121

00:10:41,420 --> 00:10:46,220

Having successfully pierced the posted stamp size target of the wheel well of our chase car

122

00:10:46,260 --> 00:10:50,420

It's now time to find out if we can get underneath there with a ricocheted bullet

123

00:10:50,460 --> 00:10:54,100

So we've come out here to this runway in lovely Tracy, California

124

00:10:54,100 --> 00:10:58,620

We're gonna start firing some bullets into the ground and see what kind of predictable behavior

125

00:10:58,620 --> 00:11:04,700

We can expect from those bullets after they bounce so using the cars to map out the trajectory of the clip

126

00:11:05,220 --> 00:11:11,460

Adam sets up a remote rig for the firepower and gets an angle on the angle of the gun pretty good

127

00:11:11,900 --> 00:11:14,500

So at what angle do we begin shooting into the ground?

128

00:11:14,540 --> 00:11:19,100

The first shot is going to be at what I'm gonna call the intuition angle if I was this guy

129

00:11:19,220 --> 00:11:24,820

This is the angle at which I feel like I would have to hit the ground in order to bounce it correctly into the wheel

130

00:11:24,820 --> 00:11:28,900

Well of Maya Salon turns out it's about 16 and a half degrees am I right?

131

00:11:28,900 --> 00:11:31,980

I have no idea, but it's as good a place as any to begin

132

00:11:32,140 --> 00:11:35,060

It's the natural place to start their rebound analysis

133

00:11:35,060 --> 00:11:41,100

So Adam sets up a backboard to track the angle of the ricochet alright for our first intuition shot

134

00:11:41,100 --> 00:11:45,300

I'm gonna load this copper jacketed cartridge into the gun and we're gonna fire

135

00:11:46,340 --> 00:11:48,340

the gun is hot in

136

00:11:48,340 --> 00:11:50,460

three two one

137

00:11:53,500 --> 00:11:55,500

That was a perfect shot a

138

00:11:56,020 --> 00:12:01,740

Perfect shot and a perfect bounce the bullet hit perfectly in the center of our white box

139

00:12:01,740 --> 00:12:06,620

That's great and based on the bullet hole in the backboard Adam can get the angle

140

00:12:06,940 --> 00:12:07,580

All right

141

00:12:07,580 --> 00:12:12,900

The bullet was aimed at the ground at a 16.2 degree angle and after it hit the ground it left at

142

00:12:13,420 --> 00:12:16,940

9.95 degree angle just a little bit more than half

143

00:12:17,420 --> 00:12:19,420

of the angle a

144

00:12:19,420 --> 00:12:21,420

little bit more than half

145

00:12:21,460 --> 00:12:25,980

But the question is did the bullet lose power after its rebound from the ground?

146

00:12:30,580 --> 00:12:33,660

Here's the thing the bullet is hitting the ground at 1200 plus feet per second

147

00:12:33,660 --> 00:12:35,660

It's even the ground at

148

00:12:36,020 --> 00:12:41,780

962 feet per second that is a lot of energy still in that piece of metal. Yeah, that's not a lot of loss

149

00:12:41,940 --> 00:12:44,340

Well, let's try a steeper angle. Yep

150

00:12:44,340 --> 00:12:50,940

It's going to take a few more tilts at bouncing bullets before the mythbusters have the ins and outs of ricochet dynamics

151

00:12:51,380 --> 00:12:53,740

Test number two at 32 degrees

152

00:12:54,460 --> 00:12:57,660

Gun is hot in three two one

153

00:13:00,140 --> 00:13:06,260

Whoa, whoa very interesting another shot where I hit exactly where I wanted to

154

00:13:06,900 --> 00:13:17,100

Well, that's unexpected the ricochet angle is pretty much exactly the angle that it hit the ground at like a mirror

155

00:13:17,380 --> 00:13:22,520

Hit it 32 degrees and it bounced at 32 degrees. I would not have called that

156

00:13:23,380 --> 00:13:25,220

That is weird

157

00:13:25,220 --> 00:13:30,500

Weird at its plane that the sharper angle has had another important impact on the bullet

158

00:13:30,940 --> 00:13:34,060

Entry speeds the same as its predecessor exit speed is

159

00:13:34,580 --> 00:13:38,900

475 feet per second. It's lost almost two-thirds of its energy

160

00:13:39,700 --> 00:13:42,220

Hit in the ground at that angle and that puts it down

161

00:13:42,220 --> 00:13:49,140

I think around 300 miles an hour, which you wouldn't want to get hit by but I don't know whether that's going to penetrate steel or not

162

00:13:49,140 --> 00:13:51,140

Yeah, it's a lot of lost energy

163

00:13:51,620 --> 00:13:58,460

At this point one thing is perfectly clear the steeper the bullet hits the ground at the more energy is going to lose in that

164

00:13:58,660 --> 00:14:05,180

Transaction now we need to find a better zone where the angle is not so steep that it loses all of its energy

165

00:14:05,540 --> 00:14:12,580

But it's steep enough to get where it needs to go underneath the car and to round out the angle of their automatic

166

00:14:12,580 --> 00:14:17,900

Dangle got this hot. They're trying a much shallower eight degrees three two one

167

00:14:20,820 --> 00:14:22,820

A little bit forward of where I expected

168

00:14:23,820 --> 00:14:30,220

But hit the asphalt at eight degrees and ricochet off of it at five point one degrees

169

00:14:30,500 --> 00:14:33,860

Some data right there this time the angle was less acute

170

00:14:33,860 --> 00:14:40,420

But interestingly the bullet hit the board traveling at 1130 feet per second the fastest speed yet

171

00:14:40,620 --> 00:14:42,980

So what does that mean for bouncing bullets?

172

00:14:45,380 --> 00:14:52,300

Behind me I've got two cars a gun position and three shots in the ground and a bunch of bullet angles to work out

173

00:14:52,300 --> 00:14:56,140

Now I could have the editors do it graphically for me hold on hold on

174

00:14:56,420 --> 00:15:00,540

But that only helps you understand what's going on. I want to understand what's going on here and now

175

00:15:00,540 --> 00:15:04,380

So I'm actually gonna draw all those angles in a brightly colored string

176

00:15:04,900 --> 00:15:12,960

Like something out of CSI our pink plotting spider is tracking all the angles of the bullets to

work out where they should hit the car

177

00:15:13,460 --> 00:15:17,580

And it's clear from the outset that one angle is not going to work

178

00:15:17,580 --> 00:15:23,300

I think right off the bat looking at this extreme angle and the amount of power we lose we should chuck the 32 degree angle

179

00:15:23,300 --> 00:15:24,800

I agree. All right

180

00:15:24,800 --> 00:15:28,940

Keep going, but the 16 degree angle hits the target. Oh

181

00:15:29,580 --> 00:15:33,180

Jamie that looks really good. I gotta say coming into this

182

00:15:33,180 --> 00:15:37,180

I didn't think we'd be able to get a steep enough angle to get up and into the car, but

183

00:15:37,980 --> 00:15:41,660

Looks like I was wrong their angle of aim is determined

184

00:15:41,660 --> 00:15:45,820

But there's still one more test for the bouncing bullet this right here

185

00:15:45,820 --> 00:15:49,260

It's actually cut from the wheel well of the car that's chasing us

186

00:15:49,420 --> 00:15:56,860

We're going to ricochet a bullet into it to see if 75 percent of its original energy is enough to pierce this steel plate

187

00:15:56,860 --> 00:15:59,340

Oh and all the padding that's behind it

188

00:16:00,700 --> 00:16:02,700

ricochet shot into firewall

189

00:16:03,260 --> 00:16:07,480

I'm excited about this one three two one fire

190

00:16:09,340 --> 00:16:11,100

Perfect hit

191

00:16:11,180 --> 00:16:18,300

Firing at 16 degrees the bullet bounced and hit the board at 10 degrees, but did it have the power to penetrate?

192

00:16:18,540 --> 00:16:22,220

Oh, and it went through. Oh, yeah, dude. Look at that

193

00:16:22,780 --> 00:16:28,700

Even the ricochet shot went through all the padding and heat shielding and the firewall that would have hurt

194

00:16:29,580 --> 00:16:35,340

Awesome. I totally didn't call that. Yep. The 16 degree bullet not only bounced in the right trajectory

195

00:16:35,660 --> 00:16:38,300

But it also retained enough power to penetrate

196

00:16:38,620 --> 00:16:41,100

So it's time for this myth to hit the road

197

00:16:42,780 --> 00:16:49,900

Later the surf is up for buster. Good luck buddy. Think action hero, but can he catch a shock wave?

198

00:16:51,580 --> 00:16:53,580

That was a healthy shock wave

199

00:16:59,660 --> 00:17:04,140

In this explosive surfs up myth a hero leaps at the last second

200

00:17:04,540 --> 00:17:09,900

And supposedly by catching the shock wave his jump is amped up to the superhuman

201

00:17:11,180 --> 00:17:13,180

After athletics 101

202

00:17:13,180 --> 00:17:14,380

How do you do it?

203

00:17:14,380 --> 00:17:19,260

It seems the hang-time duration of an ordinary jump is not long enough for a blast

204

00:17:19,820 --> 00:17:25,740

So they're turning to the extra ordinary now for this test. We're going for world record territory

205

00:17:27,420 --> 00:17:33,820

A long jump that's approximately 25 feet for women and 29 feet for men that should give us about a second of hang time

206

00:17:34,540 --> 00:17:40,540

That'll make it a little bit easier for buster to still be in mid air after we launch him for us to set off the bomb

207

00:17:40,860 --> 00:17:44,620

That means that we have a benchmark for at least 25 feet for buster

208

00:17:45,260 --> 00:17:49,260

But buster isn't an elite lawn jumper. So he's going to need a boost

209

00:17:49,820 --> 00:17:51,500

Since buster can't jump on his own

210

00:17:51,500 --> 00:17:57,260

We need to help him by giving him both upward and forward momentum and to do that. We're going to use this

211

00:17:57,980 --> 00:17:59,500

nitrogen cannon

212

00:17:59,500 --> 00:18:04,060

Since the cannon will ultimately be just a hop skipping a jump from an explosion

213

00:18:04,380 --> 00:18:06,380

That'd have to be so heavy

214

00:18:06,380 --> 00:18:13,020

For its own protection. It gets a full metal jacket. There it is. It's beautiful. Hello cannon in the box

215

00:18:13,740 --> 00:18:16,220

Then tori turns his attention to buster

216

00:18:17,340 --> 00:18:22,700

Fitting him with a strategically placed rod that will launch him at the perfect angle from the cannon

217

00:18:25,340 --> 00:18:29,020

Landed it with the rig set sometimes you just need a cape

218

00:18:29,500 --> 00:18:35,100

We'll jump in jack flashes leap match the professional jump distance and hang time that they need

219

00:18:36,860 --> 00:18:39,660

Grant charges nitro to 1500 psi

220

00:18:40,780 --> 00:18:42,780

All right ready for the naked avenger

221

00:18:44,060 --> 00:18:46,060

And buster is ready for jump off

222

00:18:46,780 --> 00:18:48,780

three two one

223

00:18:51,980 --> 00:18:57,500

He flies to the air without a care in the world. All right, let's see how far he went at 32 feet

224

00:18:57,740 --> 00:19:00,380

Buster's rear boost was a little too energetic

225

00:19:00,620 --> 00:19:06,460

He actually smashed into the top of the showbiz. So they dial nitro back for launch number two

226

00:19:07,180 --> 00:19:11,740

All right, here we go. 1000 psi three two one

227

00:19:14,380 --> 00:19:20,300

Think that's it cool this time at around 60 percent of the psi buster flew 25 feet

228

00:19:20,540 --> 00:19:26,940

within the professional range they were looking for and the high speed confirms a one second hang time

229

00:19:27,100 --> 00:19:30,300

All right. Well, that was a near perfect flight, but for due diligence

230

00:19:30,460 --> 00:19:32,460

They try multiple jumps

231

00:19:32,460 --> 00:19:38,060

At each time the nitro cannon gets them the perfect combination of distance and hang time

232

00:19:38,780 --> 00:19:45,100

So setting the air cannon at 1000 psi is giving us a consistent jump sending buster 25 feet

233

00:19:45,180 --> 00:19:48,620

That's good enough for an elite jumper. That's good enough for an action hero

234

00:19:49,340 --> 00:19:51,740

And it's good enough to bring on the booms

235

00:19:57,260 --> 00:20:00,940

Usually in a car chase shoot them up the shooters aim at each other

236

00:20:01,500 --> 00:20:05,580

But this myth is all about taking them out with a sneaky undershot

237

00:20:06,460 --> 00:20:07,580

fire

238

00:20:07,580 --> 00:20:10,860

So far the myth busters have gotten a mythical bullet bounce

239

00:20:13,580 --> 00:20:17,260

And it went through but will that change when they start ricocheting in motion

240

00:20:17,900 --> 00:20:23,820

We'll define that out adam and jamie have to track the trajectory of the bouncing bullet at 40 miles an hour

241

00:20:23,980 --> 00:20:29,500

Only six feet away from the truck. Well, I'm just extrapolating so they've puzzled out an ingenious solution

242

00:20:30,380 --> 00:20:33,500

This is the rig that we have designed to find this out

243

00:20:33,660 --> 00:20:39,500

It's effectively a trailer except that it's an open frame mounted to one rail our high speed camera mounted to the other

244

00:20:39,660 --> 00:20:42,620

A measurement gauge to make sure that the bullet hits the ground

245

00:20:43,020 --> 00:20:46,620

Precisely where we wanted to and at the angle we need we're going to have our gun

246

00:20:46,700 --> 00:20:49,420

Hard mounted to a mast in the bed of the pickup truck

247

00:20:49,660 --> 00:20:52,940

All we need to do is get this rig up to 40 miles an hour fire this gun

248

00:20:53,260 --> 00:20:59,180

Catch it on high speed and we will learn whether or not that 40 miles an hour makes a difference to the exit trajectory

249

00:20:59,820 --> 00:21:03,180

It's got to do a complicated job, but it's a simple build

250

00:21:04,300 --> 00:21:09,580

And in no time at all they're back out at the range with a lime rig ready for the lime line

251

00:21:09,900 --> 00:21:15,420

Awesome. Look at that. It's like it was designed for so to find out if the bullet will still bounce at speed

252

00:21:15,820 --> 00:21:19,260

Watch the plan. This is how our traveling bullet rig is going to work

253

00:21:19,980 --> 00:21:22,540

While jamie gets the truck up to 40 to 45 miles per hour

254

00:21:22,700 --> 00:21:27,420

I'll be sitting in the back protected by this bullet proof shield when we get to the right spot

255

00:21:27,500 --> 00:21:29,820

I will pull this string firing the gun

256

00:21:30,700 --> 00:21:35,740

And when the bullet hits right around here, we're going to be recording it on the high speed camera

257

00:21:36,140 --> 00:21:37,980

Then we're going to crunch the numbers and at that point

258

00:21:38,060 --> 00:21:43,580

We will know whether the gun moving 40 miles an hour over the ground affects either the exit trajectory or speed

259

00:21:43,580 --> 00:21:50,220

Yep, this is where the lead hits the road at the best case scenario angle of 16 degrees

260

00:21:50,940 --> 00:21:52,940

Rolling gun test

261

00:21:53,020 --> 00:21:55,020

Three two one go

262

00:21:55,660 --> 00:21:59,180

But will the road ricochet change its trajectory and speed?

263

00:22:01,100 --> 00:22:04,460

Jamie guns the truck to the speed from the clip and gives adam his cue

264

00:22:05,180 --> 00:22:07,980

Here at 45. Here we go firing

265

00:22:08,540 --> 00:22:16,540

All right, the gun is fired the bullet fired, but how did it bounce?

266

00:22:19,580 --> 00:22:21,580

I think that worked perfectly

267

00:22:21,580 --> 00:22:23,340

Let's see where it hit

268

00:22:23,340 --> 00:22:26,220

There it is pretty much exactly where we expected it to hit

269

00:22:26,780 --> 00:22:29,340

Let's review the high speed and see what the data says. Yeah

270

00:22:30,220 --> 00:22:32,940

And it turns out that everything worked like clockwork

271

00:22:33,900 --> 00:22:36,700

Excellent. It's we caught it. That's beautiful

272

00:22:36,780 --> 00:22:39,820

Even with the rig traveling at 45 miles per hour

273

00:22:40,140 --> 00:22:46,220

Amazingly they captured the split second skip and crucially for the myth the bullet rebounded at

274

00:22:47,180 --> 00:22:49,980

950 feet per second and at a 10 degree angle

275

00:22:50,380 --> 00:22:56,780

Exactly matching the static results. This one is cool, dude. I mean having tested all the constituent parts

276

00:22:57,180 --> 00:23:00,540

I wouldn't have called this but i'm starting to think that this thing might actually be plausible

277

00:23:01,180 --> 00:23:05,020

Well, let's put everything together and go full scale. Yeah, absolutely

278

00:23:07,660 --> 00:23:13,260

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

279

00:23:21,740 --> 00:23:26,460

Okay, so now we've got buster rig so he can jump with the distance and hang time of an olympic athlete

280

00:23:26,780 --> 00:23:33,100

What's next? I think maybe we should set buster about 50 feet away from the blast just like you would see in any typical action movie

281

00:23:33,180 --> 00:23:36,140

Sounds like a solid distance and then when he's halfway through his jump

282

00:23:36,380 --> 00:23:41,740

We set off the explosion and see if the shockwave will push him any further than if he could jump on a zone power

283

00:23:42,060 --> 00:23:47,500

Cool, but i've got one addition. You know the movies how they use all different types of explosives different sizes of blasts

284

00:23:47,900 --> 00:23:52,300

Why don't we do multiple blasts and increase the explosive each time depending on the result?

285

00:23:52,940 --> 00:23:54,940

I'm not gonna argue with that

286

00:23:55,820 --> 00:23:58,860

That's the plan and to begin the blockbuster blitz

287

00:23:58,940 --> 00:24:08,060

Where better than angels camp quarry? This is the best location the home of some of the biggest bangs in myth buster's history

288

00:24:11,340 --> 00:24:13,340

So curious see if this actually works

289

00:24:13,900 --> 00:24:16,620

Leaping dummies and explosions. I mean, I can't think of anything better

290

00:24:16,860 --> 00:24:18,700

It's a bombastic combo

291

00:24:18,700 --> 00:24:24,060

But before buster gets a leaping torii needs to make the earth move a couple more digs and we're there

292

00:24:24,300 --> 00:24:29,340

Since the nitro cannon will be boosting buster from ground level it needs to get down and dirty

293

00:24:31,180 --> 00:24:33,900

Perfect and protected from the explosive action

294

00:24:34,300 --> 00:24:37,260

But to time the jump and blast just right

295

00:24:37,660 --> 00:24:43,100

Nitro is going to need a very tricky trigger now this right here is the trigger for the cannon

296

00:24:43,420 --> 00:24:45,180

And frank initiates the blast

297

00:24:45,180 --> 00:24:48,220

It's going to come down a line of shock tube and split in two directions

298

00:24:48,460 --> 00:24:51,020

The first one's going to come over here that hits this switch

299

00:24:51,580 --> 00:24:55,420

Fires the cannon the other side of that goes over to the explosive

300

00:24:55,660 --> 00:25:00,540

Through a delay cap that's going to delay it half a second to let buster get to the top of his arc

301

00:25:00,940 --> 00:25:08,060

For fires off the explosion once the trigger is taken care of enter the stand-in action hero. He's on

302

00:25:08,860 --> 00:25:10,860

Andy stand proud

303

00:25:11,500 --> 00:25:13,500

Wait, why are we dressing like a commando?

304

00:25:15,500 --> 00:25:20,700

And with buster in position the first order of business is to check the timing on grand's trigger

305

00:25:20,780 --> 00:25:28,460

Okay, we're at a thousand psi and find out how far buster jumps without explosives in three two one

306

00:25:32,540 --> 00:25:38,780

That looks great hilarious so far so good just like the sharp test the cannon sent buster flying

307

00:25:39,580 --> 00:25:41,580

Measure from his hips like a long jump

308

00:25:42,220 --> 00:25:46,220

But how far how far did he go 27 feet?

309

00:25:46,700 --> 00:25:52,300

At altitude the cannon gives buster a little more boost setting the control at 27 feet

310

00:25:52,620 --> 00:25:54,620

But what about the timing?

311

00:25:54,620 --> 00:25:59,580

So our timing system worked out which is great news because this experiment is all about timing

312

00:25:59,740 --> 00:26:04,700

As you can see from the high speed he goes up and the explosive goes off right at the top of his arc

313

00:26:05,180 --> 00:26:09,820

So now it's time for us to load up 10 pounds of c4. See if our commando buddy

314

00:26:10,620 --> 00:26:13,820

Can beat 27 feet. Yep. That's the plan

315

00:26:13,900 --> 00:26:17,500

So it's over to explosives expert frank to wire up the c4

316

00:26:18,140 --> 00:26:20,700

Just keep the business end pointed away from you. Okay

317

00:26:21,340 --> 00:26:24,060

While grant primes the trigger and the cannon

318

00:26:26,060 --> 00:26:30,300

Nitrogen is loaded. This is it the moment of truth for the myth

319

00:26:30,780 --> 00:26:37,660

Special delivery will the shock wave from 10 pounds of c4 extend buster's jump comes the firing line

320

00:26:38,620 --> 00:26:40,620

Well, there's only one way to find out

321

00:26:41,260 --> 00:26:48,220

Safely back in the bunker a thousand feet away from launch. I'd never get tired of this. All right arming

322

00:26:49,340 --> 00:26:55,420

It's time to count backwards from three in three two one fire

323

00:26:58,940 --> 00:27:04,700

Wow that happens so fast. Yeah, we're gonna have to look at the high speed to see exactly what happened, but I don't know

324

00:27:05,740 --> 00:27:10,380

Well, it's clear from the high speed that buster's jump peaked as the shock wave reached him

325

00:27:10,940 --> 00:27:14,940

But did he fly further than 27 feet? All right, what do you got?

326

00:27:15,580 --> 00:27:18,460

27 feet. So that's a negative on c4

327

00:27:19,100 --> 00:27:25,020

That's a negative on the c4, but when it comes to myth busting. Well one boom is never enough

328

00:27:25,420 --> 00:27:27,420

You can definitely feel that fun

329

00:27:29,660 --> 00:27:30,620

For those of you playing at home

330

00:27:30,620 --> 00:27:35,100

We've been testing the myth that if someone is chasing you in a car and you don't want to kill them by firing bullets to their windshield

331

00:27:36,060 --> 00:27:41,980

You can instead skip bullets off of the ground that was supposedly pierced the underside of the car distract the driver making stop chasing

332

00:27:42,540 --> 00:27:46,060

So far we've discovered that bullets bounce off the ground at reasonable angles for this to be possible

333

00:27:46,300 --> 00:27:50,060

That they in fact actually can even after bouncing pierced the underside of the car

334

00:27:50,380 --> 00:27:55,180

Now we're about to put all of the knowledge we gather together into one large full scale full speed experiment

335

00:27:55,180 --> 00:27:57,180

And we're going to be shooting at this very car

336

00:27:57,580 --> 00:28:02,140

Are you ready? Definitely, but first the myth busters have to rejig their rig

337

00:28:02,860 --> 00:28:04,860

As this time it's towing a car

338

00:28:05,580 --> 00:28:09,580

Not a trailer and they need to leave room for the bullet to hit its target

339

00:28:09,740 --> 00:28:14,940

This arrow right here describes our target sweet spot. This is the bulkhead. This is the wheel well

340

00:28:15,340 --> 00:28:19,020

This little area right here is how much of it is visible to our bullet

341

00:28:20,140 --> 00:28:24,940

That's where we got to hit. That's our postage stamp with the gun loaded adam's feeling optimistic

342

00:28:25,420 --> 00:28:26,860

gun is hot

343

00:28:26,860 --> 00:28:30,940

Every step of this story i've been wrong about my intuition at the beginning

344

00:28:30,940 --> 00:28:33,020

I thought from a physics standpoint. It was quite a stretch

345

00:28:33,180 --> 00:28:36,780

I didn't think bullets would skip off the ground at any significant angle or significant speed

346

00:28:36,940 --> 00:28:42,620

But it turns out both are plausible now that we've got all this setup. I have to admit the feelings of true

347

00:28:43,100 --> 00:28:44,380

optimism

348

00:28:44,380 --> 00:28:47,260

I feel like we're going to get a successful hit on this run

349

00:28:50,060 --> 00:28:53,020

We are literally on the highway to the danger zone

350

00:28:55,900 --> 00:29:00,540

Okay taking off in three two one

351

00:29:01,500 --> 00:29:04,620

Ha as they ride into the danger zone

352

00:29:05,020 --> 00:29:08,540

Jamie guns the car to car chase speed 45

353

00:29:09,180 --> 00:29:12,460

And then it's over to adam for a barrage of bouncing bullets

354

00:29:13,340 --> 00:29:18,460

All right firing one two three four five

355

00:29:21,660 --> 00:29:23,660

Okay stop

356

00:29:24,860 --> 00:29:26,860

That seemed to work beautifully did

357

00:29:26,940 --> 00:29:30,460

Five bullets bounced, but did any make that mythical target?

358

00:29:31,020 --> 00:29:33,020

interior inspection

359

00:29:34,380 --> 00:29:38,700

The interior is clean no penetration. No not that I can see

360

00:29:39,420 --> 00:29:44,780

Inside the cap. There's no sign of penetration and a look underneath reveals why

361

00:29:45,900 --> 00:29:51,500

Look, I can see four of the bullets. They just bounced into the swing arm on their way to find the firewall. It's in the way

362

00:29:52,140 --> 00:29:54,140

Close but no cigar. Exactly

363

00:29:55,740 --> 00:29:57,740

A close shot

364

00:29:57,900 --> 00:30:02,460

But although the bullets bounced there was just too much car in the line of fire

365

00:30:04,300 --> 00:30:11,100

But the mythbusters have come too far to give up after only one run so they reset excellent

366

00:30:14,620 --> 00:30:21,100

And unleash another five bullets firing one two three four five

367

00:30:21,260 --> 00:30:26,380

But once again, they're floored by the floor. It definitely didn't come through this piece of cardboard

368

00:30:27,100 --> 00:30:32,780

I have to admit I'm a little disappointed after everything that we've learned so far this seems so within our graph so

369

00:30:33,740 --> 00:30:35,100

plausible

370

00:30:35,100 --> 00:30:40,460

Like but it just turns out that there is too much crap underneath this car that is in the bullet's way

371

00:30:41,020 --> 00:30:45,820

On its trajectory towards the firewall and this is the exact same make and model of car

372

00:30:46,140 --> 00:30:50,220

It's in the clip we're testing yep the gun the car it all matches

373

00:30:50,380 --> 00:30:56,620

But even though firing point blank at the bottom of the car might work like an almost perfect hit in reality

374

00:30:56,860 --> 00:31:00,620

A bouncing bullet just doesn't have a clear path through to the real well

375

00:31:01,180 --> 00:31:05,180

Coming up gotta say i'm a little disappointed in this one. I was really hoping it would work

376

00:31:05,420 --> 00:31:09,660

Yeah, but you know what if you want a non-lethal way of getting a guy to stop following you

377

00:31:09,660 --> 00:31:14,780

You should just shoot the darn tire. We should totally we should totally do that. Why not?

378

00:31:21,100 --> 00:31:25,820

It's a myth ripped straight from the big screen

379

00:31:26,860 --> 00:31:30,780

Our hero runs from an explosion and at the last second jumps

380

00:31:31,180 --> 00:31:35,020

Supposedly surfing the shockwave for a super human spring

381

00:31:35,740 --> 00:31:38,700

And despite exploding 10 pounds of c4

382

00:31:39,820 --> 00:31:43,580

50 feet from buster. There's been no shockwave surfing

383

00:31:43,980 --> 00:31:48,300

Well, not yet for our first experiment. We used 10 pounds of c4

384

00:31:48,460 --> 00:31:53,980

We did see the wave propagate through buster just as he hit the peak of his jump exactly where it should have been

385

00:31:54,220 --> 00:31:58,220

Though it did not change the trajectory of the jump nor the distance that he jumped

386

00:31:58,620 --> 00:32:04,140

So now we're moving on to a low velocity explosive anfo. This should be really interesting

387

00:32:04,940 --> 00:32:07,420

C4 is a high brissons explosive

388

00:32:07,740 --> 00:32:12,300

It delivers a rapid shock impulse and shatters objects in close proximity

389

00:32:12,460 --> 00:32:18,460

However anfo is a low brissons explosive meaning that it will heave and throw objects

390

00:32:19,260 --> 00:32:22,700

But does that mean that it can heave and throw our commando?

391

00:32:23,340 --> 00:32:30,380

Unfortunately for buster. He's about to find out. All right, that's 10 pounds of low velocity explosive anfo

392

00:32:31,500 --> 00:32:33,340

We go

393

00:32:33,340 --> 00:32:36,780

All right, this is 10 pounds of anfo. Let's see if he rides that shockwave

394

00:32:37,740 --> 00:32:41,020

in three two one fire

395

00:32:43,260 --> 00:32:45,260

Oh

396

00:32:48,540 --> 00:32:50,540

Let's see what happens. Yeah

397

00:32:50,860 --> 00:32:57,500

The anfo definitely packed a punch and the shockwave is clear to see but did buster hit your ride

398

00:32:58,540 --> 00:33:00,540

All right, what do we get?

399

00:33:00,540 --> 00:33:03,260

27 feet. That's it. So he didn't go any farther

400

00:33:04,300 --> 00:33:10,300

It's the same result again despite changing explosive buster didn't serve the shockwave

401

00:33:10,540 --> 00:33:16,540

So far everything we've tried has failed. That's 10 pounds of anfo 10 pounds of c4

402

00:33:16,780 --> 00:33:20,940

Neither one has moved to any further than no explosive at all. So next up

403

00:33:21,100 --> 00:33:25,340

We're going to more than double that to 25 pounds now my personal feeling

404

00:33:26,060 --> 00:33:32,300

It's not going to make a difference. Okay. Here we go with 25 pounds of anfo arming

405

00:33:33,180 --> 00:33:35,180

I didn't three two

406

00:33:35,740 --> 00:33:37,740

one fire

407

00:33:40,300 --> 00:33:42,300

A healthy shockwave

408

00:33:43,420 --> 00:33:45,420

I don't know. Let's check the ice beat

409

00:33:46,140 --> 00:33:48,140

That felt good

410

00:33:49,100 --> 00:33:51,980

Doubling up on the anfo certainly doubled the thud

411

00:33:53,420 --> 00:33:55,580

But did it pick up buster along the way?

412

00:33:57,900 --> 00:33:59,900

Okay, and we have

413

00:34:00,460 --> 00:34:03,180

27 again. So he hasn't moved at all

414

00:34:04,220 --> 00:34:05,820

Nope

415

00:34:05,820 --> 00:34:08,300

25 pounds of anfo and still

416

00:34:08,380 --> 00:34:16,780

27 feet but as the myth buster's scene goes it's worth doing it's worth over doing with 100 pounds of anfo

417

00:34:22,540 --> 00:34:27,100

Down at Tracy airport the myth busters are ready to make the rubber meet the round

418

00:34:28,140 --> 00:34:33,980

A bullet bounce into the wheel well is busted. So they're taking aim of the actual wheels

419

00:34:34,140 --> 00:34:36,460

Now this is a fun way to get to location

420

00:34:37,420 --> 00:34:42,060

Now in the movies somebody shoots a tire the tire explodes and the car spins out of control

421

00:34:43,180 --> 00:34:45,340

Now, I don't know whether that's going to happen or not

422

00:34:45,420 --> 00:34:47,580

But I do know that if you shoot a tire

423

00:34:47,980 --> 00:34:53,900

You are going to put a hole in it and it will deflate the real question here is how quickly is that going to happen because

424

00:34:54,380 --> 00:34:56,380

If it does happen quickly

425

00:34:56,380 --> 00:35:01,420

That's going to be a problem for the driver and he's going to have a hard time maintaining that pursuit

426

00:35:01,980 --> 00:35:03,980

It's going to work perfectly

427

00:35:04,220 --> 00:35:06,220

The rig for this test is pretty straightforward

428

00:35:06,460 --> 00:35:09,820

I have welded a platform to the frame of the car right in front of the tire

429

00:35:09,980 --> 00:35:14,940

I'll attach a loaded pistol with a string that goes from the trigger pull all the way to me in the driver's compartment

430

00:35:15,180 --> 00:35:17,740

When I get this car up to 45 miles an hour and I want to shoot out the tire

431

00:35:17,820 --> 00:35:20,460

I pull the string pulling the trigger and put a hole in the tire

432

00:35:21,500 --> 00:35:24,700

However, adam's safety is not going to be quite so straightforward

433

00:35:25,020 --> 00:35:29,020

Basically because the gun is going to be mounted in the front of the car facing back

434

00:35:29,580 --> 00:35:31,580

Which puts adam in the line of fire

435

00:35:32,140 --> 00:35:37,740

Now it's sought to mitigate this in every way we can conceive of we've lined the inside and the back of the wheel well

436

00:35:37,820 --> 00:35:39,820

With bulletproof vests in addition

437

00:35:40,140 --> 00:35:43,820

We've lined the engine compartment with several layers of bulletproof vests

438

00:35:44,620 --> 00:35:49,660

On top of that we've lined the inside of the car and adam seat with bulletproof vests. Finally

439

00:35:50,460 --> 00:35:57,100

I'll be wearing one. I think we're ready. Let's do it. All right. All right, everybody. Here we go shooting out the tire

440

00:35:57,660 --> 00:35:58,620

in

441

00:35:58,620 --> 00:35:59,420

three

442

00:35:59,420 --> 00:36:00,060

two

443

00:36:00,060 --> 00:36:02,060

One here we go

444

00:36:04,220 --> 00:36:10,060

Once again adam gets the car up to the 45 mile per hour car chase speed and then it's over to the bullets

445

00:36:11,500 --> 00:36:13,500

Here we go firing

446

00:36:15,340 --> 00:36:19,900

The bullets take out enough rubber to black out the camera, but when it comes to the car

447

00:36:21,420 --> 00:36:25,580

I don't notice anything and this car is still totally within my control

448

00:36:26,140 --> 00:36:30,220

Look I can actually steer like this and it's not a problem. This is nothing

449

00:36:30,620 --> 00:36:36,940

It may be nothing now, but it's just a question of time. My tire's been shot and nothing happened

450

00:36:37,740 --> 00:36:43,660

All right, i'm stopping here half a mile down the track and adam has no alternative but to stop

451

00:36:45,340 --> 00:36:46,780

I lived

452

00:36:46,780 --> 00:36:48,940

That is our tire. Look it's flat

453

00:36:50,620 --> 00:36:55,420

Totally worked. It wasn't instantaneous, but that didn't stop a pursuit that would totally

454

00:36:55,580 --> 00:36:57,660

Put an end to a pursuit

455

00:36:58,300 --> 00:37:05,420

It might not spin the car out of control hollywood style, but it's more effective than a bounced bullet at stopping a car

456

00:37:05,580 --> 00:37:09,020

It's up skipping bullets off the ground is a reliable technique for stopping a pursuit

457

00:37:09,580 --> 00:37:12,620

Totally busted if you're gonna shoot at something shoot at their tires

458

00:37:13,420 --> 00:37:16,220

Let's get out of here. Yeah. Well, we're not driving. Yep

459

00:37:16,380 --> 00:37:18,380

Yeah

460

00:37:22,540 --> 00:37:29,740

Next the surfer shockwave finale goes out with a bang all right 100 pounds of amp foe. Well, let's send the action hero flying

461

00:37:36,860 --> 00:37:43,580

So far we have thoroughly tested this myth we have a action hero jumping 50 feet away from an explosion

462

00:37:43,820 --> 00:37:47,100

Our timing has been perfect. We started off with 10 pounds of c4

463

00:37:48,060 --> 00:37:50,060

Moved on to 10 pounds of amp foe

464

00:37:50,780 --> 00:37:52,780

Then ramped it up to 25 pounds

465

00:37:53,580 --> 00:37:57,180

But still the shockwave was not enough to push him forward now

466

00:37:57,500 --> 00:38:02,620

We're gonna move on to 100 pounds four times the explosive might sound like overkill

467

00:38:03,020 --> 00:38:09,980

But this is a boom or bust test so far. We haven't actually seen any extra jump distance

468

00:38:10,860 --> 00:38:13,180

I'm not so sure we're gonna see any with this either

469

00:38:14,380 --> 00:38:18,780

But I'm still crossing my fingers with a hefty pile of amp foe about to go boom

470

00:38:19,580 --> 00:38:21,580

And the cannon prime

471

00:38:21,580 --> 00:38:24,940

Maybe this is what it will take for buster to hang 10

472

00:38:26,460 --> 00:38:29,660

Somebody ordering explosion. Everybody ready? Okay, here we go

473

00:38:30,700 --> 00:38:32,700

Arming and in three

474

00:38:33,500 --> 00:38:34,700

two

475

00:38:34,700 --> 00:38:36,700

one

476

00:38:37,660 --> 00:38:41,100

Dang that was a big blast. Nice desk

477

00:38:44,300 --> 00:38:48,700

I can't even see him. All right, he's used the desk cloud clears. Maybe we could see if he went any further

478

00:38:49,980 --> 00:38:53,740

Uh, 100 pounds of amp foe had the myth busters jumping out of their skin

479

00:38:53,980 --> 00:38:57,340

But did that impressive shockwave send busters surfing?

480

00:39:00,780 --> 00:39:03,500

The same 27 feet

481

00:39:04,140 --> 00:39:09,100

100 pounds of amp foe. He didn't move at all 27 feet again. I so wanted this to work

482

00:39:09,260 --> 00:39:13,100

I don't know. Maybe it's just watching too many action films, but I really wanted this one to happen

483

00:39:13,340 --> 00:39:17,100

Well, I guess we got no choice, but to call this one busted. You can't surf a shockwave

484

00:39:18,860 --> 00:39:21,900

All right, so this myth is totally busted. Yeah, but it's got me wondering

485

00:39:21,980 --> 00:39:24,220

Do you think there's any way to surf a shockwave? I don't know

486

00:39:24,300 --> 00:39:28,060

What if we were able to increase your surface area by a huge amount?

487

00:39:28,300 --> 00:39:32,460

Maybe having that much more surface area you might catch the shockwave and push you a little bit further

488

00:39:32,620 --> 00:39:38,860

So maybe we build something to attach the buster to act as a shockwave catcher. Exactly. I know just what to build it out

489

00:39:39,420 --> 00:39:45,180

For his shockwave enhancer, torii's turned into a combination of the familiar and the bizarre

490

00:39:45,660 --> 00:39:49,820

A steel frame and a blanket now you're probably asking yourself. Wait a minute

491

00:39:49,900 --> 00:39:52,700

The blanket is not going to withstand the blast and you're right

492

00:39:52,940 --> 00:39:56,860

So what we're going to do is we're going to spray it with bed liner because as you remember

493

00:39:57,820 --> 00:40:03,660

Bed liner is blast proof after a quick spray of bed liner to harden it up

494

00:40:04,620 --> 00:40:07,340

The team is back at the quarry giant kite, huh?

495

00:40:07,980 --> 00:40:14,860

We'll see it's like a big sail to give buster his bombproof blanket. That is gorgeous. Let's see if he flies

496

00:40:15,420 --> 00:40:19,020

For a control test in three two one

497

00:40:19,340 --> 00:40:21,340

Fire

498

00:40:22,860 --> 00:40:28,300

Perfect the heavier rig has buster flying a slightly shorter 23 feet

499

00:40:28,700 --> 00:40:32,460

But will the explosion fling him further? Okay, here's the thing

500

00:40:32,780 --> 00:40:38,620

The reason why I think buster hasn't jumped much further so far is because while the shockwave moves very quickly

501

00:40:39,020 --> 00:40:41,900

It only moves a relatively small amount of air a layer

502

00:40:42,220 --> 00:40:46,860

Perhaps 12 inches thick and that's not enough force to push him any further

503

00:40:47,340 --> 00:40:51,580

Now this rig has the advantage of having a lot of surface area to catch a shockwave

504

00:40:51,900 --> 00:40:55,820

But unfortunately it adds a lot of weight and so the net result

505

00:40:56,140 --> 00:40:58,300

I think is that he's not going to go much further

506

00:40:59,100 --> 00:41:04,060

Well with a hundred pounds of anfo set to detonate will that extra surface area

507

00:41:04,540 --> 00:41:06,940

Finally get buster surfing the shockwave

508

00:41:07,580 --> 00:41:11,820

All right, this is the final experiment for riding a shockwave this time with the sail

509

00:41:12,700 --> 00:41:13,820

three

510

00:41:13,820 --> 00:41:15,020

two

511

00:41:15,020 --> 00:41:16,780

one

512

00:41:16,780 --> 00:41:18,780

two

513

00:41:20,380 --> 00:41:23,420

Wow, I never get tired of that. I can't tell what happens

514

00:41:24,060 --> 00:41:25,900

The cannon triggered

515

00:41:25,900 --> 00:41:30,940

The anfo went off and it seems as though the shockwave did in fact give buster a boost

516

00:41:32,220 --> 00:41:34,220

But did he travel any further?

517

00:41:35,340 --> 00:41:36,860

Five feet

518

00:41:36,860 --> 00:41:38,860

I can't wait to see if it worked

519

00:41:40,060 --> 00:41:41,820

10 feet

520

00:41:41,820 --> 00:41:43,580

15 feet

521

00:41:43,580 --> 00:41:45,580

20 feet

522

00:41:46,780 --> 00:41:48,380

23 feet

523

00:41:48,380 --> 00:41:52,540

What he didn't go any further at all. That was the same as the control test

524

00:41:52,780 --> 00:41:58,060

Okay, we give it everything we got and we still didn't get that Hollywood sail jump and then just blow up

525

00:41:58,460 --> 00:42:04,780

All right. Well, I guess it's busted. I'm a little disappointed in Hollywood. All right buster busted

526

00:42:05,900 --> 00:42:07,660

again

527

00:42:07,660 --> 00:42:11,980

And that was so cool to watch him jump through the air and the explosion going off

528

00:42:13,100 --> 00:42:15,500

Yeah, you know what being in action here is a tough job

529

00:42:17,580 --> 00:42:19,580

I

530

00:42:22,460 --> 00:42:29,420

Want to know why we did what we did why we didn't do what we didn't go to discovery.com slash myth busters after show and check it out