

1

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

Attention viewers do not try anything you're about to see at home. We're what you call experts

2

00:00:07,640 --> 00:00:10,560

On this charged up episode of myth busters

3

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

There's fire in the hole

4

00:00:15,360 --> 00:00:19,640

As the myth busters unleash their a to z of explosions

5

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

From a for audit

6

00:00:27,760 --> 00:00:29,760

To Z for ZnF

7

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

three two one

8

00:00:33,200 --> 00:00:35,640

This alphabet's the bomb

9

00:00:39,080 --> 00:00:42,840

With behind the scenes blasts from the past nice ride

10

00:00:44,280 --> 00:00:46,440

As well as new booms to blue

11

00:00:47,400 --> 00:00:50,000

And that is an explosion in water

12

00:00:50,560 --> 00:00:55,000

Get set for one of the most explosive episodes in myth busters history

13

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

Fire

14

00:00:59,080 --> 00:01:01,640

My family's glad they let me borrow that China

15

00:01:06,080 --> 00:01:08,080

Who are the myth busters?

16

00:01:09,040 --> 00:01:13,240

Adam Savage 70% chance of science and Jamie Heineman

17

00:01:15,840 --> 00:01:22,280

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

18

00:01:22,280 --> 00:01:24,680

That was insane Brent imihara

19

00:01:25,600 --> 00:01:30,520

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

20

00:01:31,560 --> 00:01:33,560

They put them to the test

21

00:01:46,040 --> 00:01:49,120

All right, so you're wearing the bomb suit you got a crazy look in your eyes

22

00:01:49,120 --> 00:01:57,400

I'm guessing we're doing something pretty explosive. Oh, not just pretty explosive very explosive. How so we're unveiling the a to z of

23

00:01:57,640 --> 00:02:04,080

Myth buster explosions exactly we are going to be presenting the ultimate guide to everything that goes boom

24

00:02:04,080 --> 00:02:09,440

We're going to be reminiscing about our favorite explosions revealing insider secrets and most importantly

25

00:02:09,720 --> 00:02:13,440

Blowing a lot of stuff up. That sounds great. What are we waiting for you?

26

00:02:13,440 --> 00:02:15,440

Oh

27

00:02:17,040 --> 00:02:19,040

Blasts can be such a blast

28

00:02:19,640 --> 00:02:26,440

That it's no wonder they've become a fan favorite and this unique a to z of glee is

29

00:02:26,760 --> 00:02:28,760

packing a punch

30

00:02:28,760 --> 00:02:31,320

Starting as you might expect at the beginning

31

00:02:33,000 --> 00:02:36,680

Where a is not for arsenal or annihilation

32

00:02:37,440 --> 00:02:42,240

But audit all right, so a is for audit was that all about like tax audit?

33

00:02:42,520 --> 00:02:48,040

What's more like record keeping because somehow within the 800 or so myths that we've done

34

00:02:48,040 --> 00:02:51,960

We have found an excuse to do 750 to explosions wait

35

00:02:53,080 --> 00:02:55,640

752 you don't believe me check this out

36

00:02:56,920 --> 00:02:58,920

Dude your stomach is gonna burst

37

00:02:59,080 --> 00:03:04,880

It was the very first episode of myth busters that featured the first explosion. That's huge

38

00:03:04,880 --> 00:03:11,720

That's like three times the size of what it was even if the combo of pig stomach pop rocks and cola did fall a little flat

39

00:03:11,720 --> 00:03:13,720

Okay

40

00:03:14,360 --> 00:03:19,600

Yeah, that's what we call a hell of a Saturday night through episode 4's toilet tail

41

00:03:21,280 --> 00:03:27,440

There was actually a little poof in the toilet we have food and 5's gas gag

42

00:03:28,280 --> 00:03:35,400

Hello explosion. Hello. Hello. He never answers his phone. The boom was still finding its feet

43

00:03:36,160 --> 00:03:41,400

In fact, it wasn't until tree cannon if this isn't blow up this cannon

44

00:03:41,400 --> 00:03:45,720

I don't know what will that we finally saw some shrapnel worth celebrating

45

00:03:49,640 --> 00:03:55,120

But from there this looks perfect there was no holding back three as booms

46

00:03:56,600 --> 00:04:00,800

Big and small super and subtle

47

00:04:01,280 --> 00:04:03,440

Oh began to rack up

48

00:04:06,320 --> 00:04:09,320

After three seasons the boom tally had hit 90

49

00:04:10,960 --> 00:04:12,960

After five seasons to 80

50

00:04:15,080 --> 00:04:17,520

After eight seasons 630

51

00:04:19,240 --> 00:04:23,480

And just last week all right 100 pounds of ample it reached

52

00:04:24,880 --> 00:04:26,880

752

53

00:04:27,880 --> 00:04:31,760

But for be there's only one possible place to go

54

00:04:33,440 --> 00:04:38,680

Be is for bomb range. I know big shocker now. This is the true myth busters home away from home

55

00:04:38,680 --> 00:04:43,840

We've done over 750 explosions and a quarter of them have been done right here today

56

00:04:43,840 --> 00:04:45,200

We're gonna give you more than just stats

57

00:04:45,200 --> 00:04:48,680

We're gonna give you an inside tour because there's more to this place than meets the eye

58

00:04:49,840 --> 00:04:52,600

Like this place located just below the bomb range

59

00:04:52,600 --> 00:05:01,120

It's the emergency vehicle operations course or eva home to a number of myth busters driving adventures including spy car eat my

60

00:05:06,280 --> 00:05:12,040

There we go they stuck in I can hear them tipsy versus tires

61

00:05:16,240 --> 00:05:18,240

And dust up

62

00:05:23,440 --> 00:05:25,440

Nothing over here

63

00:05:26,000 --> 00:05:32,240

You get to the gun range where we have taken aim at a whole bunch of myths in fact, this is where we shot up black beauty

64

00:05:38,760 --> 00:05:43,240

But enough of all that let's get to the bomb range itself and we start here at the entrance gate

65

00:05:46,760 --> 00:05:49,720

Now appears what we call the blast zone

66

00:05:49,800 --> 00:05:57,520

This is where we set up all our experiments explosives blasting caps, but the wire that makes them all go boom runs a hundred yards back down the road

67

00:05:58,800 --> 00:06:05,480

To hear the bunker now this thing is made out of quarter inch steel and the windows are made from two inch thick

68

00:06:05,640 --> 00:06:11,160

Bulletproof glass the best part is it has a remote triggering system so we can set off the explosions

69

00:06:11,520 --> 00:06:19,000

The only downside is the size fitting all of us in plus our cameraman plus our sound person plus our director and JD can be a bit of a trick

70

00:06:19,080 --> 00:06:21,800

Make room for me, but besides the squash

71

00:06:22,200 --> 00:06:28,960

This is the place where we've had the opportunity to watch firsthand some of the most famous moments at myth busters history

72

00:06:32,320 --> 00:06:35,520

I love it when common materials are dangerous go ahead and light it

73

00:06:38,360 --> 00:06:42,200

There's no doubt that the bomb range can blow a gasket bye-bye

74

00:06:43,760 --> 00:06:47,480

And for this countdown it makes for the perfect B movie

75

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

I

76

00:06:56,680 --> 00:06:58,680

Did you get that on high speed?

77

00:06:58,960 --> 00:07:06,440

But for the C word of the day Tori's arriving in style nice ride. Thanks. I guess I know what C is for

78

00:07:07,080 --> 00:07:13,160

Exactly C is for cement truck or cement truck explosion, which has become iconic on myth busters

79

00:07:13,640 --> 00:07:17,340

In fact, it is pretty much what myth busters is all about fun

80

00:07:18,300 --> 00:07:21,440

science and taking things to the max

81

00:07:25,420 --> 00:07:31,620

Indeed but while the ending was epic the start of this cement truck clean out was anything but

82

00:07:32,380 --> 00:07:36,580

Anything that is about a half a cubic foot. Yeah, that oh my god

83

00:07:37,380 --> 00:07:41,620

That's it. Yeah, I know it's pretty pathetic you'd I liked most about that explosion

84

00:07:41,620 --> 00:07:45,340

It juxtaposes so nice and with all the little booms earlier in the show

85

00:07:45,340 --> 00:07:51,340

No anticlimactic that was the firetrucks leaving and that buildup made it even more exciting

86

00:07:51,340 --> 00:07:56,340

Yeah, it was the failure of the small explosions that made the big one so special

87

00:07:57,100 --> 00:08:02,100

However, that is the one explosion that we don't have a high speed of oh, that's right

88

00:08:02,740 --> 00:08:06,300

Everybody was just sitting there waiting in anticipation. The cement truck was there

89

00:08:06,700 --> 00:08:11,180

It was gone high-fiving celebration. We look over at the high-speed operator and

90

00:08:11,700 --> 00:08:18,180

He looks like he's going to cry. There was a technical glitch first huge explosion in myth buster history

91

00:08:18,260 --> 00:08:22,020

No high-speed shot this blink and you miss it moment

92

00:08:22,940 --> 00:08:27,500

Could only be slowed down by literally playing the footage one frame at a time

93

00:08:29,980 --> 00:08:34,260

But that was plenty enough for it to become the fan favorite

94

00:08:36,980 --> 00:08:38,980

Where to go

95

00:08:41,820 --> 00:08:44,980

See today takes us on a date with danger

96

00:08:52,780 --> 00:08:54,780

These were dynamite

97

00:08:56,580 --> 00:08:58,580

Dynamite

98

00:08:58,580 --> 00:09:00,580

traditionally made from nitroglycerin

99

00:09:01,740 --> 00:09:05,980

This sticky trick has been the weapon of choice for many a Western

100

00:09:06,900 --> 00:09:08,900

And

101

00:09:09,540 --> 00:09:16,860

It's also gone with a bang on myth busters. Okay, we're gonna blow ourselves out of jail with the ones to get dynamite

102

00:09:25,420 --> 00:09:32,460

Or has it this actually isn't dynamite in fact none of the dynamite we've used on show has been dynamite

103

00:09:32,460 --> 00:09:39,180

It's a special explosive the JD mixed up for us six drops of essence of terror five drops of sinister sauce

104

00:09:39,220 --> 00:09:41,420

It has the explosive power of dynamite

105

00:09:41,980 --> 00:09:43,820

The look of dynamite

106

00:09:43,820 --> 00:09:48,780

But it's a much safer substitute because nitroglycerin is notoriously unstable

107

00:09:49,620 --> 00:09:54,540

Coming up on myth busters more a to z of explosions. You don't want to miss this

108

00:10:02,460 --> 00:10:16,340

In the a to z of myth busters explosions

109

00:10:18,380 --> 00:10:20,380

We've seen dynamite danger

110

00:10:21,180 --> 00:10:25,620

The is the dynamite cement truck carnage and an awesome

111

00:10:25,620 --> 00:10:28,420

Auto I call this piece explosion

112

00:10:29,340 --> 00:10:31,340

753

113

00:10:32,580 --> 00:10:34,980

It's time to set free the e

114

00:10:37,620 --> 00:10:40,140

A letter which could stand forever green

115

00:10:45,020 --> 00:10:50,460

There are bits of tree everywhere or extreme environments

116

00:10:52,900 --> 00:10:57,820

Or even for experts in the vicinity of five minutes his pants should be in New York

117

00:10:58,660 --> 00:11:04,420

But while these would be suitable selections the obvious e stands for

118

00:11:05,540 --> 00:11:08,260

Explosions, but what exactly are they?

119

00:11:09,620 --> 00:11:16,740

Typically speaking explosions like the one that we're about to do this China cabinet are a rapid increase in volume and release of energy

120

00:11:17,020 --> 00:11:23,140

Usually resulting in a shockwave now. There are of course many different types of explosions such as volcanic eruptions

121

00:11:24,140 --> 00:11:27,740

Electrical explosions and nuclear explosions

122

00:11:29,100 --> 00:11:33,020

But the kind that we see most often in our show are chemical explosions

123

00:11:33,020 --> 00:11:36,980

Which usually involve a rapid and violent oxidation reaction

124

00:11:44,740 --> 00:11:49,540

Ever discovered was gunpowder and we have used a lot of it on this show

125

00:11:50,140 --> 00:11:57,700

But our explosive of choice is C4 one in doubt C4

126

00:12:00,260 --> 00:12:04,140

Explosive in it is cyclo-trimethylene trinitramine and here's the science bit

127

00:12:06,540 --> 00:12:10,500

When you press the button an electrical circuit causes the blasting cap to go off

128

00:12:10,900 --> 00:12:18,260

That creates a shock to the C4 which in turn sets off an extreme oxidation reaction that causes the C4 to decompose

129

00:12:18,380 --> 00:12:22,220

Into a variety of gases especially nitrogen and oxides of carbon

130

00:12:22,700 --> 00:12:28,940

The gases expand at 26,000 feet per second and apply a huge force to anything in the surrounding area

131

00:12:29,980 --> 00:12:36,500

So ultimately a C4 boom is just a chemical reaction taken to the max. All right you guys ready for this?

132

00:12:37,020 --> 00:12:43,020

All right, this is e is for explosion in three two one fire

133

00:12:48,380 --> 00:12:52,180

Beautiful that's a good explosion right there yep explosion number

134

00:12:52,980 --> 00:12:57,060

755 a perfect example of the rapport of C4

135

00:12:59,260 --> 00:13:02,100

I bet my family is glad they let me borrow that China

136

00:13:04,780 --> 00:13:06,780

Next in the a-to-z

137

00:13:08,340 --> 00:13:10,340

It's f for food

138

00:13:10,700 --> 00:13:11,980

glorious food

139

00:13:11,980 --> 00:13:15,380

Now as you can tell by the fact that we have to put a sign like this in a refrigerator

140

00:13:15,580 --> 00:13:20,900

Mythbusters and food have a very odd history now sometimes we eat food

141

00:13:21,700 --> 00:13:23,700

Sometimes we blow food up

142

00:13:25,500 --> 00:13:28,060

First it was beans that went ballistic

143

00:13:28,340 --> 00:13:35,100

This is being the funniest day next steaks were set to sizzle red meat and high

144

00:13:35,780 --> 00:13:37,780

explosives

145

00:13:38,940 --> 00:13:40,940

Then came popcorn

146

00:13:43,020 --> 00:13:45,020

Watermelons

147

00:13:46,300 --> 00:13:48,300

And wine

148

00:13:50,780 --> 00:13:57,340

But all of these food flare-ups do have one thing in common all the food that's destroyed on Mythbusters is

149

00:13:57,540 --> 00:14:01,700

Way past its sell-by date and is not fit for human consumption

150

00:14:01,700 --> 00:14:18,100

Next up is something that puts the G in gene whiz

151

00:14:18,780 --> 00:14:24,540

Now over the years we've done a number of episodes featuring these and we've come to understand that they are in fact no joke

152

00:14:24,740 --> 00:14:29,860

All right, this is testing the blast wave of a hand grenade in three two

153

00:14:30,380 --> 00:14:32,380

One fire

154

00:14:40,820 --> 00:14:45,060

To be honest we're totally an off people whose job it is to face these in real life

155

00:14:45,500 --> 00:14:47,500

But the grenade that makes it into this a-to-z

156

00:14:48,660 --> 00:14:55,300

Is the rocket propel grenade or RPG because that is what gave us one of the best booms in Mythbusters history

157

00:14:55,300 --> 00:14:59,180

All right, this is RPG versus trailer just to see what it does

158

00:14:59,860 --> 00:15:01,860

Three two one

159

00:15:08,540 --> 00:15:11,180

It was gone in a 60th of a second

160

00:15:12,900 --> 00:15:17,260

But how did the team pull off shooting an RPG in the first place

161

00:15:18,020 --> 00:15:22,900

We've been trying to get RPGs on the show for years and then along came the movie red

162

00:15:23,020 --> 00:15:28,260

Which featured a head-to-head showdown between an RPG and a handgun, which is perfect for Mythbusters

163

00:15:29,860 --> 00:15:34,460

We headed down to our friends at the energetic materials research and testing center at New Mexico Tech

164

00:15:34,580 --> 00:15:39,780

We borrowed their expertise and their weapons to film one of my favorite explosive stories ever

165

00:15:40,300 --> 00:15:44,980

Okay, this is a survivability test RPG shooter versus bullet shooter

166

00:15:57,220 --> 00:15:59,220

That was intense

167

00:15:59,900 --> 00:16:05,020

Not only was it an intense day in the desert, but the RPG was well worth the wait

168

00:16:06,940 --> 00:16:14,340

And once more it's epic shots like these that take us seamlessly onto H for high speeds

169

00:16:16,460 --> 00:16:22,220

You know I'm with Carrie and Grant on this one that the RPG hitting the trailer and that explosion catching it on high speed

170

00:16:22,220 --> 00:16:25,100

Is probably one of the coolest ones we've ever done on the show

171

00:16:25,100 --> 00:16:29,420

The reason why is you can see the RPG actually go through the front of the trailer

172

00:16:29,420 --> 00:16:34,300

And it doesn't explode until it hits the backside of the trailer. I mean it was awesome

173

00:16:35,100 --> 00:16:38,100

While the high speed does ooze awesomeness

174

00:16:38,540 --> 00:16:40,540

It's in revealing a level of detail

175

00:16:41,380 --> 00:16:43,380

That would otherwise remain hidden

176

00:16:44,700 --> 00:16:47,340

Where the high speed really comes into its own

177

00:16:50,260 --> 00:16:55,260

And to prove just that the guys are gonna tear apart a TV

178

00:16:55,260 --> 00:16:57,260

All set, let's go

179

00:16:57,540 --> 00:17:03,260

We're going to put a pound of C4 into the television and then film the explosion on two different high-speed cameras

180

00:17:03,300 --> 00:17:08,860

One will be filming at a thousand frames per second and the other will be filming at 6,900 frames per second

181

00:17:08,860 --> 00:17:11,020

We're gonna compare the two and check out the details

182

00:17:11,820 --> 00:17:16,740

And after a quick muse of the manual, it's time to make room for the boom

183

00:17:16,860 --> 00:17:22,140

All right demonstrating a high-speed camera by blowing up a TV. Here we go in three two

184

00:17:23,060 --> 00:17:25,060

one fire

185

00:17:25,500 --> 00:17:27,500

Oh

186

00:17:29,060 --> 00:17:34,700

Now in real time basically you say three two one the buttons hit and then for us that's it

187

00:17:34,700 --> 00:17:38,620

It's pretty much now you see it now you don't yep real time

188

00:17:41,500 --> 00:17:46,540

It's a blink and you miss it moment, but for the high speed you see a lot more

189

00:17:47,860 --> 00:17:50,740

This camera is running at a thousand frames per second

190

00:17:50,740 --> 00:17:55,820

I mean you can see the bloom of destruction the glass shattering the plastic flying

191

00:17:56,380 --> 00:18:01,620

But now check out the detail you can see with the 6,900 frames per second

192

00:18:01,620 --> 00:18:06,540

You can actually see the shockwave moving out from the center. You can see the television

193

00:18:07,140 --> 00:18:11,300

Pulling apart as it starts to explode not only that but you can see the gases

194

00:18:11,580 --> 00:18:18,660

Expanding and then rushing back in to fill the void where they've just left. This is a much more detailed complete story of the explosion

195

00:18:19,220 --> 00:18:27,180

Ain't that the truth it's a high speed that really gives that detonation detail and in full high definition

196

00:18:30,860 --> 00:18:34,820

Coming up on mytbusters the aid is he abooms fire the whole

197

00:18:49,100 --> 00:18:52,340

It's the mythbusters a to z of explosions

198

00:18:53,980 --> 00:18:59,020

And following H for high speed I is for implants

199

00:18:59,300 --> 00:19:02,180

You know when I got the memo that we were gonna be revisiting implants

200

00:19:02,180 --> 00:19:05,900

This is the last thing I pictured yeah me too, but you know what we're here to reminisce

201

00:19:06,060 --> 00:19:13,060

So let's reminisce exploding implants was one of the first explosive stories we ever did Adam and Jamie tested whether breast implants would explode

202

00:19:13,060 --> 00:19:15,180

On a pressurized airplane and did they?

203

00:19:18,660 --> 00:19:20,660

Well the word no

204

00:19:21,140 --> 00:19:27,980

All right, shall we take it up to let's say 30,000 feet in what must have been the first time that men were ever

205

00:19:28,660 --> 00:19:34,260

Disappointed with implants their padded pockets failed to blow. I didn't really notice any difference at all

206

00:19:34,380 --> 00:19:39,300

But the mythbusters did learn an important lesson Adam. How are they doing? Are they getting bigger?

207

00:19:39,380 --> 00:19:46,260

My breasts are expanding repeat breasts are expanding. You don't always need a blast to have a blast. Oh

208

00:19:49,660 --> 00:19:52,460

Next up it's back to the bomb range

209

00:19:53,340 --> 00:19:59,460

Where J is for JD what I think you need is the mythbusters concerto in C4

210

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

All right JD this one's for you

211

00:20:10,020 --> 00:20:18,260

JD or more formally Sergeant JD Nelson on the record, I'm just gonna say I'm totally against this burning of wine and champagne

212

00:20:19,660 --> 00:20:22,420

Is a true honorary mythbuster?

213

00:20:22,620 --> 00:20:25,980

Okay, the question is you want to do like a surgical kind of an entry around the lock

214

00:20:25,980 --> 00:20:27,580

Or do you want to just blow the crap out of it?

215

00:20:27,580 --> 00:20:29,900

Blow the crap out of it. Okay, it's blow the crap out of it. Yeah

216

00:20:31,500 --> 00:20:38,700

But who exactly is he all in all it's just another brick in the wall and does he have the coolest job in the world?

217

00:20:41,100 --> 00:20:46,460

My name is JD Nelson and I've been a sergeant for the Alameda County Sheriff's Office bomb squad for 12 years

218

00:20:46,460 --> 00:20:49,260

As well as doing some crazy things for mythbusters

219

00:20:51,740 --> 00:20:57,900

I spend most of my time dealing with real-life explosive situations if there's a suspicious package

220

00:20:57,900 --> 00:21:00,340

I do a render safe procedure for it

221

00:21:01,300 --> 00:21:06,180

If someone's doing construction and finds a military ordinance, then it's my job to make it safe

222

00:21:07,140 --> 00:21:10,360

It's pretty cool, but sometimes it's dangerous

223

00:21:10,360 --> 00:21:15,900

But by being cool calm and collected JD's the ultimate master blaster

224

00:21:17,460 --> 00:21:21,100

From J to K with some cooking classes

225

00:21:21,500 --> 00:21:26,500

If there's one room that's suffered at the hands of mythbusters, it's the kitchen

226

00:21:26,500 --> 00:21:29,580

But don't just take my word for it. No take mine

227

00:21:30,140 --> 00:21:32,140

There's been exploding microwaves

228

00:21:32,140 --> 00:21:35,380

Fire in the hole in three two one

229

00:21:39,620 --> 00:21:42,620

Exploding fridges there's stuff in there

230

00:21:42,620 --> 00:21:50,180

And full-on kitchen destruction turn on the gas courtesy of methane

231

00:21:54,980 --> 00:21:58,700

That is awesome and see for

232

00:22:07,020 --> 00:22:08,820

Boom

233

00:22:08,820 --> 00:22:12,020

They say the kitchen is the room you're most likely to have an accident

234

00:22:12,780 --> 00:22:15,020

Mythbusters definitely true

235

00:22:23,100 --> 00:22:29,100

Hell is for loud explosions are seriously loud

236

00:22:32,980 --> 00:22:39,820

That was something else but see the problem is we can't show you how low these explosions are because we play them at full volume

237

00:22:39,860 --> 00:22:43,380

You probably burst your TV speakers or at least distort horribly

238

00:22:46,140 --> 00:22:51,820

So we're gonna do a little test we're gonna turn on the lawnmower and use this DB meter to find out exactly how loud it is

239

00:22:52,020 --> 00:22:57,940

Then we're gonna get a pound of C4 park the lawnmower on top of it blow it up and find out how loud the boom is

240

00:22:58,260 --> 00:23:00,540

Because actions speak louder than words

241

00:23:01,540 --> 00:23:05,100

Grant fires her up and Carrie gets a reading at ground zero

242

00:23:06,100 --> 00:23:10,180

We're about 90 and then again 100 feet away

243

00:23:12,420 --> 00:23:19,660

What do you got yeah, we're sticking at about 40 it's not even louder than the ambient noise around here

244

00:23:20,260 --> 00:23:24,380

So with the baselines in the bag the Bontex brace for the boom

245

00:23:24,940 --> 00:23:31,740

But how will C4s crack compare? Okay, Carrie Byron. Are you ready? I'm ready. Okay. Let's do this

246

00:23:32,620 --> 00:23:36,940

This is L is for loud in three two one

247

00:23:40,260 --> 00:23:42,260

It sure was a roar

248

00:23:42,380 --> 00:23:47,940

But as for data well the near mic got maimed and the far one maxed out

249

00:23:48,780 --> 00:23:54,900

That was loud. That was in fact. It was so loud maxed out the meter. Yeah, I had a feeling that was gonna happen

250

00:23:55,740 --> 00:24:00,460

Feeding all we know is that the din was at least 130 DB

251

00:24:01,740 --> 00:24:04,260

Making it louder the blast of a jet

252

00:24:10,500 --> 00:24:16,160

Meanwhile as Carrie's about to confirm M is for movies M is for movies

253

00:24:16,340 --> 00:24:18,100

What does that have to do with explosions?

254

00:24:18,100 --> 00:24:24,380

Well, we can't do a myth busters a to z of explosives without taking movies to task because if there's one thing we've learned on myth busters

255

00:24:24,380 --> 00:24:27,460

It's that Hollywood will always choose style over substance. Yeah, you know

256

00:24:27,460 --> 00:24:32,980

There are still so many classic mistakes that Hollywood makes like cars going over cliffs always explode

257

00:24:38,140 --> 00:24:43,440

That's a negative on the explosion. I'm a reality makes a crappy special effects crew

258

00:24:45,940 --> 00:24:52,660

Or there's the idea that you can jump out of the way of an explosion or that every explosion has to end in a fireball which it doesn't

259

00:24:53,540 --> 00:24:58,420

Not to say movies always get wrong. No, I mean we were able to blow up in a safe using water in a charge

260

00:25:00,460 --> 00:25:05,140

And it is possible these liquid nitrogen to slow down a battery trade explosion

261

00:25:13,140 --> 00:25:16,940

There for the most part movies should just get real because even without special effects trickery

262

00:25:17,580 --> 00:25:20,740

Explosions are awesome. Can you guys stop talking? I'm trying to watch smooth

263

00:25:22,660 --> 00:25:24,660

I

264

00:25:26,820 --> 00:25:28,820

Bye-bye

265

00:25:31,580 --> 00:25:35,940

Don't try anything you see on this show at home. We're what you call experts

266

00:25:39,820 --> 00:25:41,820

With cement trucks

267

00:25:41,860 --> 00:25:44,700

food fights and movie cliches

268

00:25:45,060 --> 00:25:52,180

The explosion a to z has hit halfway. So what's next next up the mother of all explosions?

269

00:25:52,180 --> 00:25:54,540

Here we go in three two one

270

00:25:55,060 --> 00:25:56,620

fire

271

00:25:56,620 --> 00:25:58,260

Oh

272

00:25:58,260 --> 00:26:04,020

It looks like we must be on the letter in for nothing because when nothing happens when you fire

that trigger

273

00:26:04,500 --> 00:26:11,700

Something has gone wrong, which also means somebody needs to man up and go over rewire and fix the problem

274

00:26:11,700 --> 00:26:17,940

It's a bomb text worst nightmare. Yep. It's when nothing happens. Sendier a torpedo in

275

00:26:18,740 --> 00:26:20,740

three two

276

00:26:20,940 --> 00:26:22,940

one fire and

277

00:26:24,220 --> 00:26:28,220

Miss fire that explosions are at their most dangerous

278

00:26:29,460 --> 00:26:33,700

This is exploding shark 400 pounds of explosives on your go Frank

279

00:26:41,540 --> 00:26:48,720

It's also when nothing happens that explosives technicians are at their most brave you kidding me

280

00:26:49,320 --> 00:26:52,040

This is like the worst experiment ever

281

00:26:52,760 --> 00:26:56,680

But that's why the myth busters use the best in the business

282

00:27:09,280 --> 00:27:14,760

Most of time I'd say a bomb tech has the best job in the world, but when nothing happens, that's really when they earn their pay

283

00:27:16,040 --> 00:27:18,040

No, looks like that's my problem

284

00:27:19,080 --> 00:27:21,480

Next it's over to Grant

285

00:27:22,080 --> 00:27:25,960

Now one of the key parts of myth busting is data. I am totally psyched

286

00:27:26,520 --> 00:27:34,160

About numbers now explosions are no exception, but usually the type of data we're trying to get is whether a person lives or dies

287

00:27:41,840 --> 00:27:46,380

For that our favorite tool is this the Oseco rupture disc

288

00:27:46,620 --> 00:27:52,140

Now this is a carefully engineered metal disc that's designed to burst when it experiences a certain pressure

289

00:27:59,180 --> 00:28:05,740

Now the beauty part is that it's a binary system. There's no complex graphs to interpret. There's no numbers of crunch

290

00:28:05,820 --> 00:28:11,740

It's either not burst or burst. It's very simple and get your answer right away

291

00:28:12,300 --> 00:28:15,820

Simple and quick

292

00:28:17,700 --> 00:28:19,700

Just the way the myth busters like it

293

00:28:20,740 --> 00:28:22,740

Awesome, I love results

294

00:28:23,380 --> 00:28:26,820

Meanwhile back at the bunker carries feeling the pressure

295

00:28:27,260 --> 00:28:32,460

Back when we were on the letter E. We talked about the science of explosions where we concentrated on chemical explosions

296

00:28:35,580 --> 00:28:37,580

But there's another kind of explosion

297

00:28:38,140 --> 00:28:43,060

Pressure vessels now we do these a lot on myth busters and we're going to do one right now

298

00:28:43,060 --> 00:28:50,740

And for that they need three things a pressure vessel a heat source and a don't try this at home warning a

299

00:28:51,580 --> 00:28:54,500

Pressure vessel explosion is a mechanical explosion

300

00:28:54,500 --> 00:29:00,900

The way it happens is you take a sealed vessel and you increase the pressure inside of it to the point where the vessel can no

301

00:29:00,900 --> 00:29:04,180

Longer hold that pressure when it ruptures it creates an explosion

302

00:29:04,180 --> 00:29:08,500

But you know what we have never done a can of shaving cream until now

303

00:29:09,580 --> 00:29:14,900

You know my favorite part about pressure vessels are waiting for the boom you never know quite when they're gonna go off

304

00:29:17,380 --> 00:29:20,980

By my calculation it should explode in three two one

305

00:29:24,300 --> 00:29:29,940

Magic oh my god it went everywhere

306

00:29:35,180 --> 00:29:37,580

Next up time to join the queue

307

00:29:38,380 --> 00:29:44,020

You is for quagmire the one disadvantage to working at the bomb range is it when it rains?

308

00:29:44,020 --> 00:29:47,700

It becomes a horrendous place to work and it rains a lot

309

00:29:48,700 --> 00:29:55,140

carries right gas canister rocket was a deluge disaster. I thought the dangers probably gonna be the

310

00:29:55,660 --> 00:30:01,300

Exploding program takes you're right. Oh, no sounds bogus was a seasonal monsoon

311

00:30:01,580 --> 00:30:03,180

I

312

00:30:03,180 --> 00:30:06,380

Love the bomb range. I don't love it so much when it rains

313

00:30:06,780 --> 00:30:12,540

The mud is basically clay when you walk around you get stuck when you drive around you get stuck

314

00:30:13,780 --> 00:30:16,620

Think we got away with that one. She was a really hard

315

00:30:22,140 --> 00:30:24,140

No one likes a good bag

316

00:30:25,700 --> 00:30:27,700

More than the mythbusters

317

00:30:28,120 --> 00:30:35,620

But in their explosive encyclopedia are somewhat surprisingly stands for rockets

318

00:30:36,260 --> 00:30:42,660

And that's surprising because technically rockets are not explosives, but this being mythbusters things can and do go wrong

319

00:30:42,660 --> 00:30:45,660

That's why our rockets turn into explosives sometime

320

00:30:48,020 --> 00:30:51,500

To be fair most mythbusters rockets

321

00:30:53,500 --> 00:30:55,500

Have flown straight and true

322

00:30:56,420 --> 00:30:58,420

But that's not always been the case

323

00:30:59,580 --> 00:31:07,340

First there was the salami rocket. I'm making a rocket out of meat which was less meat missile and more baloney bomb

324

00:31:09,700 --> 00:31:15,700

But that's nothing compared to the most epic rocket fail. It's time to install the rockets

325

00:31:16,060 --> 00:31:22,100

The Jato rocket car revisit the goal of the experiment was to get a 67 in poly to fly

326

00:31:22,220 --> 00:31:28,140

So Adam and Jamie spent upwards of twenty thousand dollars in super-sized rockets, which should have been more than enough to get the job done

327

00:31:29,180 --> 00:31:32,220

Grants, right these rockets had power aplenty

328

00:31:33,580 --> 00:31:41,260

Good on the hook moving well it goes it's heading towards the ramp, but with that power came no

responsibility

329

00:31:46,340 --> 00:31:48,340

Or not

330

00:31:48,340 --> 00:31:51,580

So we built a big rolling bomb instead of a rocket

331

00:31:52,380 --> 00:31:54,380

Do we get a mine then?

332

00:31:55,740 --> 00:31:57,740

I think someone owes me ten thousand bucks

333

00:31:58,860 --> 00:32:04,060

Now turns out there was a glitch which meant the thrust couldn't escape fast enough and that meant

334

00:32:05,140 --> 00:32:12,060

The most epic of epic failures in the history of mythbusters and one of the most spectacular explosions ever

335

00:32:13,700 --> 00:32:19,660

With our defied by a menacing mishap S is for our number one priority

336

00:32:20,300 --> 00:32:21,620

safety

337

00:32:21,620 --> 00:32:25,820

People often assume that explosions are the most dangerous thing that we do on our show

338

00:32:26,060 --> 00:32:28,980

But in fact, there's some of the safest things we do

339

00:32:31,740 --> 00:32:38,140

But that's because we have an array of protective gear and a strict set of safety protocols that we follow

340

00:32:38,300 --> 00:32:46,100

But that doesn't mean it doesn't get scary sometimes like the time I carried a bag full of explosive gas in a bomb suit just like this

341

00:32:46,660 --> 00:32:49,340

In a scene that's never aired until now

342

00:32:49,580 --> 00:32:51,580

All right, I'm gonna start feeling it as

343

00:32:52,540 --> 00:32:56,780

suited for safety Tory once carried a bubble of trouble

344

00:32:59,340 --> 00:33:06,020

Knowing that one small spark could spell disaster suddenly I wish I were wearing a bomb suit too

345

00:33:09,540 --> 00:33:11,740

We go camera ready, okay

346

00:33:19,340 --> 00:33:26,220

I'm like you'd think explosions aren't necessarily fraught with danger, but that doesn't make them risk-free

347

00:33:27,900 --> 00:33:33,660

Ironically the piece of equipment that has caused the most serious injuries on the show are these safety ballistic shields

348

00:33:33,660 --> 00:33:38,220

They're over 200 pounds of piece. They've crushed a couple of fingers and definitely put out a few backs

349

00:33:38,220 --> 00:33:40,220

But still much better than getting blown up

350

00:33:41,540 --> 00:33:43,540

Meanwhile tea is for a toilet

351

00:33:44,540 --> 00:33:51,660

Now the kitchen isn't the only dangerous place here on MythBusters the bathroom can be just as dangerous

352

00:33:51,660 --> 00:33:58,700

Why because you never know when a toilet might explode with an unsavory subject matter. This ought to clean out the pipes

353

00:33:59,380 --> 00:34:01,380

That's not hang around

354

00:34:04,100 --> 00:34:06,100

Whether it be thanks to C4

355

00:34:14,180 --> 00:34:22,100

Or even alkali metals with Mary of rubidium count three two one

356

00:34:25,700 --> 00:34:29,540

There's been more than enough blue lunacy on MythBusters

357

00:34:31,580 --> 00:34:35,700

Next you is not for you Bend but for underground

358

00:34:36,260 --> 00:34:40,980

Right now. I'm burying a firecracker. Why because I love underground

359

00:34:41,700 --> 00:34:48,860

Explosions, I don't know if there's just more of an anticipation, but they just seem to be a lot

more fun be they golfing gags

360

00:34:54,740 --> 00:35:01,100

Drain disasters all right sewer explosion three two one

361

00:35:01,100 --> 00:35:14,460

Or simply movie madness firing four pounds man for three two one

362

00:35:19,860 --> 00:35:22,580

Oh, yeah, I saw it go all the way up the hill there

363

00:35:22,580 --> 00:35:24,580

Oh

364

00:35:27,340 --> 00:35:34,260

The underground boom is something worth seeing again and again so it's back to carry

365

00:35:35,820 --> 00:35:42,780

Now for a completely gratuitous explosion underground in three two one

366

00:35:45,340 --> 00:35:47,340

Well that was a nice little thud

367

00:35:53,260 --> 00:35:55,260

Oh

368

00:35:55,620 --> 00:36:01,660

B was for bomb range a was for audit and was for nothing fire

369

00:36:02,780 --> 00:36:05,500

Oh, and G was for grenade

370

00:36:07,900 --> 00:36:13,980

Put them together and what do you get fire and the bags continue right now? Oh

371

00:36:16,540 --> 00:36:17,340

All right now

372

00:36:17,340 --> 00:36:21,860

I know all this looks like a lot of automotive junk, but it's actually what's left over from a car

373

00:36:21,900 --> 00:36:25,220

Exploded, so I'm guessing B is for vehicle exactly now

374

00:36:25,220 --> 00:36:29,820

We have probably totaled around 130 vehicles on the show a lot of them. We've crashed

375

00:36:31,340 --> 00:36:34,020

Some we've destroyed with the rocket sled at New Mexico Tech

376

00:36:36,940 --> 00:36:41,780

But a lot of them we've blown up so we roll the montage indeed we shall

377

00:36:52,500 --> 00:36:58,940

Next up is W a letter. That's all about H₂O

378

00:36:59,220 --> 00:37:07,460

Now water and explosives are a particularly good mix for mythbusters for two reasons first water and air have very different properties

379

00:37:07,580 --> 00:37:11,620

For example water is incompressible. It's denser than air

380

00:37:11,740 --> 00:37:18,660

It's more conductive and all this means that explosions travel differently through water than they do through air

381

00:37:19,500 --> 00:37:21,500

Indeed by being incompressible

382

00:37:22,740 --> 00:37:26,360

Go for it water is a great way to help crack a safe

383

00:37:29,580 --> 00:37:32,220

And the way its density differs from air

384

00:37:33,140 --> 00:37:39,260

Everything's in it looks great has led to many a lagoon boom 50 pounds of Ampo in

385

00:37:39,900 --> 00:37:41,900

three two

386

00:37:42,420 --> 00:37:43,780

one

387

00:37:43,780 --> 00:37:45,780

Bye-bye

388

00:37:49,660 --> 00:37:53,340

But what's grads other reason for loving this liquid?

389

00:37:54,100 --> 00:38:00,860

Second reason is that explosions on high speed with water look really cool and to prove just that

390

00:38:01,860 --> 00:38:03,860

Don't try this at home

391

00:38:09,300 --> 00:38:11,660

That is an explosion in water

392

00:38:13,140 --> 00:38:15,140

With W all washed up

393

00:38:16,020 --> 00:38:22,300

Next up it's two letters for the price of one where X is nothing if not predictable

394

00:38:28,340 --> 00:38:33,340

Well, we've moved on to the letter X and let's face it we can't afford to blow up an X ray

395

00:38:33,460 --> 00:38:37,580

So we've gone the cheap route and blowing up some xylophones

396

00:38:38,180 --> 00:38:43,300

Why do we hate instruments cuz we can't play them but X is not flying solo

397

00:38:43,300 --> 00:38:49,860

We're also gonna throw why in here because why is for yelling fire in the hole fire in the hole

398

00:38:50,700 --> 00:38:52,700

Whether it's me or Adam

399

00:38:53,660 --> 00:38:55,660

Or JD

400

00:38:56,060 --> 00:38:58,060

Or Frank

401

00:38:58,780 --> 00:39:05,940

It's always yelled three times and in three different directions, but every time it's yelled it definitely means something exciting is gonna happen

402

00:39:06,060 --> 00:39:12,140

All right, this is X for xylophone because well, it's too expensive to blow up an X ray machine

403

00:39:12,140 --> 00:39:16,180

Are you guys ready ready three two one?

404

00:39:25,100 --> 00:39:27,100

Like music to my ears

405

00:39:34,420 --> 00:39:39,700

I call this piece explosion 753 from a ferrata

406

00:39:42,540 --> 00:39:44,540

To why for yelling

407

00:39:52,140 --> 00:39:55,980

The most busters a to z of explosions has been a blast

408

00:39:58,820 --> 00:40:04,220

And with just one letter left you might say that the guys are going to end the bank

409

00:40:04,220 --> 00:40:06,220

I

410

00:40:09,740 --> 00:40:16,820

Will if X is any indication next we're gonna be blowing up a zebra right no z is for zenith the

pinnacle the biggest

411

00:40:17,140 --> 00:40:21,700

Explosion in myth busters history, which would be the blast from homemade diamonds

412

00:40:21,700 --> 00:40:27,580

Yeah, that was the episode we were trying to figure out different ways to make diamonds in one of them involved using explosives

413

00:40:28,860 --> 00:40:32,620

Yep when microwaving peanut butter didn't spring any bling

414

00:40:32,860 --> 00:40:39,300

I'm starting to get the idea that this shouldn't be done inside the myth busters turned to a girl's second best friend

415

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

Explosives

416

00:40:42,100 --> 00:40:44,100

They started big

417

00:40:45,660 --> 00:40:48,060

But ended enormous with

418

00:40:48,940 --> 00:40:55,820

5,000 pounds of ant foam charging five four three two one zero

419

00:41:03,540 --> 00:41:05,540

Oh

420

00:41:11,060 --> 00:41:16,380

Given that that's the biggest explosion we've ever done why isn't it the fan favorite well

421

00:41:16,380 --> 00:41:18,620

I'm like the cement truck, which was there and gone

422

00:41:19,300 --> 00:41:23,420

Well, there's your problem. We really are just looking at a big giant tube

423

00:41:25,340 --> 00:41:29,740

Yeah, there's really nothing in it to give you scale. I mean when the explosion went off

424

00:41:32,660 --> 00:41:36,540

Which was five times bigger than the cement truck you couldn't tell how big it was

425

00:41:39,300 --> 00:41:44,940

Yeah, but unlike the cement truck we actually have an amazing high speed that just shows the shockwave moving

426

00:41:50,740 --> 00:41:57,300

All right fair enough there's just one more thing that bothers me though. What's that? How are we ever gonna top it? Oh, we'll figure out a way