

1

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

I find the defendants guilty.

2

00:00:24,000 --> 00:00:29,000

In 2002, a crack science duo was sent to prison for a crime they didn't commit.

3

00:00:29,000 --> 00:00:34,000

These men promptly escaped from a maximum security stockade to the San Francisco Underground.

4

00:00:36,000 --> 00:00:41,000

To date, masked with their new identities, they survive as soldiers of science.

5

00:00:42,000 --> 00:00:47,000

If you have a problem, if no one else can help, and if you can find them,

6

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

maybe you can hire the Mythbusters.

7

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

You ready for the A-Team special?

8

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

I was born ready, fool.

9

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

Outstanding.

10

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

Jamie, did you ever watch that show of the A-Team?

11

00:01:26,000 --> 00:01:27,000

Sure.

12

00:01:27,000 --> 00:01:30,000

Which character from the A-Team do you think I'm most close to resemble?

13

00:01:30,000 --> 00:01:33,000

Which one was that guy that keeps ending up in the mental institution?

14

00:01:33,000 --> 00:01:35,000

Murdoch. That's Murdoch.

15

00:01:35,000 --> 00:01:36,000

That's the one.

16

00:01:37,000 --> 00:01:38,000

Alright.

17

00:01:38,000 --> 00:01:43,000

Well, we have an entire episode devoted to the 80s cult classic The A-Team.

18

00:01:43,000 --> 00:01:44,000

What's on the docket?

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00:01:45,000 --> 00:01:51,000

Well, later we will be trying to disable a car with a manhole courtesy of a sewer explosion.

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00:01:52,000 --> 00:01:58,000

But first up, we have what is really a classic A-Team trope.

21

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

See, in almost every episode, the guys are stranded somewhere,

22

00:02:01,000 --> 00:02:05,000

and they have to build a weapon with only the materials they have at their disposal, right?

23

00:02:05,000 --> 00:02:06,000

Right.

24

00:02:06,000 --> 00:02:10,000

Okay, so in this one, the A-Team is stranded in a lumber yard.

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00:02:10,000 --> 00:02:14,000

The bad guys are on their way back, and the A-Team builds a cannon out of a log

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00:02:14,000 --> 00:02:20,000

that shoots two by fours with a controlled propane explosion to defeat the enemy.

27

00:02:21,000 --> 00:02:22,000

What's the bad guys?

28

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

Sounds dubious.

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00:02:23,000 --> 00:02:26,000

Well, I think we should test it out if it doesn't work.

30

00:02:26,000 --> 00:02:27,000

Maybe you and I could do better.

31

00:02:27,000 --> 00:02:28,000

Maybe.

32

00:02:32,000 --> 00:02:33,000

Shaw.

33

00:02:33,000 --> 00:02:34,000

Don't touch me.

34

00:02:34,000 --> 00:02:35,000

Okay.

35

00:02:35,000 --> 00:02:38,000

Ah, Shaw, shall we gather all the materials we saw in the clip?

36

00:02:38,000 --> 00:02:41,000

Are you going to keep that thing in your mouth the whole time?

37

00:02:41,000 --> 00:02:42,000

As long as I can stand it.

38

00:02:44,000 --> 00:02:45,000

Alright.

39

00:02:45,000 --> 00:02:55,000

So, solenoids, it looks almost exactly the same.

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00:02:55,000 --> 00:02:59,000

In the show, the A-Team guys built their wood cannon in a general-purpose shop

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00:02:59,000 --> 00:03:01,000

that was attached to a lumber yard.

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00:03:01,000 --> 00:03:06,000

Now, they had a log, and they drilled a hole down in the middle of it to make a cannon barrel.

43

00:03:06,000 --> 00:03:07,000

Beautiful.

44

00:03:07,000 --> 00:03:12,000

They're using half two by fours as ammo, and we did see a tank of propane.

45

00:03:12,000 --> 00:03:15,000

So, that appears to be the propellant.

46

00:03:15,000 --> 00:03:20,000

That's what we've got to work with, so we're going to use that equipment to build our wood cannon.

47

00:03:20,000 --> 00:03:21,000

Shaw.

48

00:03:21,000 --> 00:03:27,000

Having gross reference to the clip, the guys collate all of the A-Team's cannon components.

49

00:03:27,000 --> 00:03:29,000

Ammo for bad guys.

50

00:03:29,000 --> 00:03:32,000

Before Adam rolls out the barrel, literally.

51

00:03:32,000 --> 00:03:33,000

There I am.

52

00:03:33,000 --> 00:03:39,000

Now, in the clip, they drill the hole in the log using a drill bit like this called an auger bit.

53

00:03:43,000 --> 00:03:44,000

It's going to take a while.

54

00:03:44,000 --> 00:03:49,000

But frankly, we could not find one in the size that we needed.

55

00:03:49,000 --> 00:03:52,000

We're using a different kind of drill bit called a Forster bit.

56

00:03:52,000 --> 00:03:55,000

One of my single favorite drill bits of all time.

57

00:03:55,000 --> 00:03:58,000

Adam uses the Forstner.

58

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

I feel like the villain in some kind of movie.

59

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

But even so, it's a tough task.

60

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

I know, it seems strange to me to keep having to sharpen this bit when all I'm doing is drilling into wood.

61

00:04:12,000 --> 00:04:18,000

But the fact is that the molecules that make up wood are incredibly dulling to metal blades.

62

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

You've got to sharpen it all the time.

63

00:04:23,000 --> 00:04:30,000

In fact, it takes 40 minutes of hard labor before Adam's barrel is fully bored.

64

00:04:31,000 --> 00:04:34,000

There I go.

65

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

Now that's a hole.

66

00:04:39,000 --> 00:04:46,000

So next, it's over to Jamie, who inserts a hose to fill the barrel with propane.

67

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

Look at that. Perfect fit.

68

00:04:48,000 --> 00:04:51,000

Before prepping the cannon's ignition system.

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00:04:51,000 --> 00:04:54,000

So how are we going to ignite the propane in our cannon?

70

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

Well, the easiest way is with a spark.

71

00:04:56,000 --> 00:05:01,000

And the easiest way for us to get one of those is just to plug a couple of wires into the wall socket.

72

00:05:01,000 --> 00:05:07,000

But that's only going to make a small spark and we need a big one for reliable ignition of the propane.

73

00:05:07,000 --> 00:05:14,000

For that, we're going to use our favorite device for generating large sparks and that's the Neon Transformer.

74

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

And there it is.

75

00:05:16,000 --> 00:05:21,000

And once wired in, their cannon is the perfect copycat.

76

00:05:21,000 --> 00:05:30,000

It's got a 40 inch long log barrel, propane as fuel, a sparking ignition system and planks as projectiles.

77

00:05:30,000 --> 00:05:35,000

Plus, the whole thing's mounted on a forklift, just like the AT.

78

00:05:35,000 --> 00:05:38,000

But the question is, will it work?

79

00:05:38,000 --> 00:05:44,000

All right. Loading the device. There we go.

80

00:05:44,000 --> 00:05:47,000

Okay. Device is loaded.

81

00:05:48,000 --> 00:05:49,000

For test one.

82

00:05:49,000 --> 00:05:51,000

One one thousand, two one thousand, three one thousand.

83

00:05:51,000 --> 00:05:55,000

They're giving it some gas. Five seconds worth of propane.

84

00:05:55,000 --> 00:05:59,000

Ignition in. Three, two, one, go.

85

00:05:59,000 --> 00:06:01,000

Nothing.

86

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

Give it another five seconds.

87

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

What a cigar. It just makes everything you say sound a little more authoritative.

88

00:06:09,000 --> 00:06:11,000

Get those trucks out of there.

89

00:06:11,000 --> 00:06:14,000

Move those people over there.

90

00:06:14,000 --> 00:06:17,000

I'll put those oranges in my summer house.

91

00:06:17,000 --> 00:06:18,000

Stuff like that.

92

00:06:18,000 --> 00:06:23,000

Three, two, one.

93

00:06:23,000 --> 00:06:24,000

Nothing.

94

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

Nothing? Well, that's weird.

95

00:06:26,000 --> 00:06:29,000

I would expect at least something.

96

00:06:29,000 --> 00:06:33,000

Figuring the sparker may have failed, Adam goes in for a closer look.

97

00:06:33,000 --> 00:06:37,000

Okay. Sparking now.

98

00:06:37,000 --> 00:06:39,000

Whoa!

99

00:06:39,000 --> 00:06:42,000

That actually blew my hand.

100

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

So there was enough residual gas.

101

00:06:44,000 --> 00:06:48,000

That tells me we need very, very, very little gas.

102

00:06:48,000 --> 00:06:49,000

Okay.

103

00:06:49,000 --> 00:06:53,000

All right. We started up by adding way, way, way too much propane to this.

104

00:06:53,000 --> 00:06:56,000

Now, you might think, oh, the more propane the better.

105

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

But it's not that way.

106

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

Propane isn't flammable in and of itself.

107

00:07:00,000 --> 00:07:03,000

It's flammable when it's mixed with air or oxygen.

108

00:07:03,000 --> 00:07:08,000

And you have to get the correct mix or stoichiometry in order to get that ignition or that pop

109

00:07:08,000 --> 00:07:11,000

that's actually going to send this out towards the bad guys.

110

00:07:12,000 --> 00:07:17,000

So for test two, the guys use just one second of gas.

111

00:07:17,000 --> 00:07:21,000

And three, two, one. Fire.

112

00:07:21,000 --> 00:07:24,000

Hey! That was a pop.

113

00:07:24,000 --> 00:07:25,000

It was.

114

00:07:25,000 --> 00:07:31,000

Ammo did not move even the tiniest bit, not even remotely.

115

00:07:31,000 --> 00:07:33,000

Well, there was fire in the hole.

116

00:07:33,000 --> 00:07:36,000

But so far, a viable weapon this ain't.

117

00:07:36,000 --> 00:07:39,000

I gotta say, it's not looking so good.

118

00:07:39,000 --> 00:07:43,000

We've replicated everything that we saw in the clip and we are getting ignition.

119

00:07:43,000 --> 00:07:48,000

It's just not as energetic as it showed in the clip.

120

00:07:48,000 --> 00:07:51,000

We're going to have to do something else.

121

00:07:51,000 --> 00:07:53,000

The guy's stumped.

122

00:07:53,000 --> 00:07:55,000

Hmm.

123

00:07:55,000 --> 00:08:00,000

This A team is going to need a plan B.

124

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

So Forklift Fire is all about improvised weaponry taking out the bad guys.

125

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

But the A team were also very adept at making their escape.

126

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

And that is the next thing we're going to tackle.

127

00:08:14,000 --> 00:08:15,000

Go on.

128

00:08:15,000 --> 00:08:20,000

In one of my favorite escapes, they take a bundle of dynamite and put it in a sewer just under a manhole cover.

129

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

Then they wait until the bad guys driving over that manhole cover, they detonate the dynamite.

130

00:08:24,000 --> 00:08:27,000

Boom! The manhole cover takes the car completely out.

131

00:08:27,000 --> 00:08:30,000

So the car is a write-off, but the dudes inside are okay.

132

00:08:30,000 --> 00:08:33,000

Exactly. No one ever gets hurt by the A team.

133

00:08:33,000 --> 00:08:36,000

Well, explosive escapes. I like it.

134

00:08:39,000 --> 00:08:48,000

The myth is that by placing the dynamite just inside the drain, the A team could evade the villains without injuring them.

135

00:08:48,000 --> 00:08:51,000

But is that really possible?

136

00:08:53,000 --> 00:08:55,000

That is perfect.

137

00:08:55,000 --> 00:08:57,000

So there's a plan, right?

138

00:08:57,000 --> 00:08:59,000

Of course there's a plan.

139

00:09:02,000 --> 00:09:07,000

For some reason, urban areas don't like it when you use explosives in their sewers.

140

00:09:07,000 --> 00:09:15,000

So in lieu of that, we've come to our favorite place in California where we can blow large things up and even dig holes in the ground.

141

00:09:15,000 --> 00:09:17,000

I own California.

142

00:09:17,000 --> 00:09:22,000

Thanks to its remote location, I own is the perfect place for some manhole mayhem.

143

00:09:22,000 --> 00:09:25,000

But the digging will come later.

144

00:09:25,000 --> 00:09:30,000

Now obviously, since the A team placed their sticks of dynamite inside a sewer, we are going to do the exact same thing.

145

00:09:30,000 --> 00:09:31,000

Perfect!

146

00:09:33,000 --> 00:09:34,000

Nice ride.

147

00:09:34,000 --> 00:09:37,000

But it raises the question, why would they go through the trouble?

148

00:09:37,000 --> 00:09:40,000

I mean, what's the difference between it on the ground and in the sewer?

149

00:09:40,000 --> 00:09:44,000

And this leads to the A team's MO, which is they don't ever want to kill the bad guys.

150

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

They just want to neutralize them as a threat.

151

00:09:46,000 --> 00:09:52,000

So in order to test whether or not their method is truly non-lethal, we're going to need a control.

152

00:09:52,000 --> 00:09:58,000

That is, 9-6 of dynamite, just like the clip, placed on the ground with this car placed right on top of it.

153

00:09:58,000 --> 00:10:02,000

Find out what happens to the driver of the car when we blow that up.

154

00:10:02,000 --> 00:10:05,000

My prediction, it's not going to be pretty.

155

00:10:07,000 --> 00:10:12,000

So with the car from the clip, the guys are green-lighting a control test.

156

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

What's next?

157

00:10:13,000 --> 00:10:14,000

Buster.

158

00:10:14,000 --> 00:10:23,000

We'll let dynamite detonation outside a sewer, cause casualties where an internal one would not.

159

00:10:23,000 --> 00:10:26,000

We want to find out whether our driver would have survived this blast,

160

00:10:26,000 --> 00:10:30,000

and if so, whether he was injured or not, and how badly.

161

00:10:30,000 --> 00:10:36,000

To do that, we're going to be putting sensors on his head, on his waist and near his feet.

162

00:10:36,000 --> 00:10:42,000

And these sensors can record events down to the microsecond, which will tell us exactly what went on.

163

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

Buster may be wired in the hot seat.

164

00:10:44,000 --> 00:10:48,000

Just remember, little buddy, this is going to hurt you a lot more than it hurts me.

165

00:10:48,000 --> 00:10:51,000

But he's not the only data device.

166

00:10:51,000 --> 00:10:55,000

Now, another reason the A team might have placed their explosives inside the manhole cover

167

00:10:55,000 --> 00:10:58,000

is to protect any innocent bystanders standing around.

168

00:10:58,000 --> 00:11:02,000

It's a reasonable assumption that we would like to test, and that's what these figures are for.

169

00:11:02,000 --> 00:11:07,000

We've placed these two half-inch plywood cutouts at 15 feet and 10 feet from the blast

170

00:11:07,000 --> 00:11:12,000

to see how much damage they sustain in the control versus the actual experiment.

171

00:11:12,000 --> 00:11:16,000

And of course, on MythBusters, innocent bystanders, just another term for shrapnel catcher.

172

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

With the plan coming together.

173

00:11:19,000 --> 00:11:20,000

It's okay, little buddy.

174

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

Next up is the explosive.

175

00:11:22,000 --> 00:11:26,000

For accuracy, we're using nine sticks of nitroglycerin-based dynamite,

176

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

because that's what they used on the A team.

177

00:11:28,000 --> 00:11:32,000

Now, this is the first time we've used it because it's relatively unstable.

178

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

It's shock-sensitive, and that's bad.

179

00:11:34,000 --> 00:11:38,000

So we're going to take every precaution, and we're going to be safe.

180

00:11:38,000 --> 00:11:42,000

And speaking of being safe, that cigar, it's fake.

181

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

Yes, made of chocolate.

182

00:11:45,000 --> 00:11:51,000

The guys are going that extra mile to make sure that everything matches the clip.

183

00:11:51,000 --> 00:11:53,000

Stop with two exceptions.

184

00:11:53,000 --> 00:11:56,000

First, the control test has no sewer.

185

00:11:56,000 --> 00:11:57,000

And second...

186

00:11:57,000 --> 00:12:02,000

Also in the clip, the car is moving, and we are not doing that for two very good reasons.

187

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

Number one, it doesn't make any difference to the physics,

188

00:12:04,000 --> 00:12:09,000

but two, and most importantly, we want to be able to compare our control blast against the blast

189

00:12:09,000 --> 00:12:11,000

when we dig the sewer and put the dynamite in there.

190

00:12:11,000 --> 00:12:17,000

And in order to compare those two exactly, we need the dynamite in the same spot on both blasts.

191

00:12:17,000 --> 00:12:20,000

And in order to guarantee that, well, we're just not moving the car.

192

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

That is our plan.

193

00:12:23,000 --> 00:12:30,000

All right, sir. You ready?

194

00:12:30,000 --> 00:12:31,000

I'm ready.

195

00:12:31,000 --> 00:12:32,000

Okay.

196

00:12:32,000 --> 00:12:34,000

What if I take the first plunge?

197

00:12:34,000 --> 00:12:35,000

Knock yourself out.

198

00:12:35,000 --> 00:12:38,000

All right, here we go.

199

00:12:38,000 --> 00:12:42,000

This is 18, dynamite test, the control.

200

00:12:45,000 --> 00:12:48,000

My voice is only to do this.

201

00:12:48,000 --> 00:12:52,000

In three, two, one.

202

00:12:53,000 --> 00:13:04,000

In the Mythbusters A-Team Special...

203

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

This thing tastes terrible.

204

00:13:06,000 --> 00:13:09,000

The guys were wired up to a countdown...

205

00:13:09,000 --> 00:13:12,000

In three, two, one.

206

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

That just got cut.

207

00:13:14,000 --> 00:13:15,000

What happened to our countdown?

208

00:13:15,000 --> 00:13:17,000

We'll get right back to it. I promise.

209

00:13:17,000 --> 00:13:22,000

I just wanted to remind everybody that what we are testing is how lethal nine sticks of dynamite

210

00:13:22,000 --> 00:13:26,000

are that are detonated on the ground under a car or to both the driver of that car

211

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

and the innocent bystanders on the street.

212

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

That is our control test.

213

00:13:30,000 --> 00:13:33,000

Now, back to our regularly scheduled countdown.

214

00:13:33,000 --> 00:13:38,000

This is 18, dynamite test, the control.

215

00:13:38,000 --> 00:13:42,000

In three, two, one.

216

00:13:49,000 --> 00:13:51,000

I'm no munitions expert.

217

00:13:51,000 --> 00:13:54,000

But I don't think that car is going to be there when the smoke clears.

218

00:13:56,000 --> 00:14:00,000

When the dust eventually settles, the car hasn't disappeared.

219

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

But it's not exactly in one piece.

220

00:14:03,000 --> 00:14:05,000

How you doing there, little buddy?

221

00:14:05,000 --> 00:14:06,000

Oh, man.

222

00:14:06,000 --> 00:14:11,000

He actually looks almost completely intact.

223

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

Oh, wait a second. Hey, Adam, check this out.

224

00:14:15,000 --> 00:14:16,000

Oh.

225

00:14:16,000 --> 00:14:20,000

That's a whole clean through to the underside of the car.

226

00:14:20,000 --> 00:14:23,000

I am now going to go out on a limb and predict that Buster didn't survive that,

227

00:14:23,000 --> 00:14:25,000

but only the numbers will tell us for sure.

228

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

It didn't look good for Buster.

229

00:14:29,000 --> 00:14:31,000

But what does the data say?

230

00:14:31,000 --> 00:14:33,000

It looks pretty bad in here, huh?

231

00:14:33,000 --> 00:14:34,000

Like hell on Earth.

232

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

But get this.

233

00:14:36,000 --> 00:14:40,000

Buster actually survived that blast.

234

00:14:40,000 --> 00:14:43,000

I know. Don't get me wrong. He is not walking away from this blast.

235

00:14:43,000 --> 00:14:45,000

No, no, no. He's legless below the knees.

236

00:14:45,000 --> 00:14:49,000

He has permanent hearing damage, if not almost total hearing loss.

237

00:14:49,000 --> 00:14:51,000

And permanent lung damage.

238

00:14:51,000 --> 00:14:54,000

He's not walking away, but he's not dead either.

239

00:14:54,000 --> 00:14:57,000

Although Buster may live to see another day,

240

00:14:58,000 --> 00:15:03,000

his injuries are way too awful for the A-Team, and he's not alone.

241

00:15:03,000 --> 00:15:06,000

Upon careful looking again and again at this high speed,

242

00:15:06,000 --> 00:15:10,000

I'm noticing that the blast pressure wave,

243

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

which normally would be coming upward and outward in the symmetrical bubble,

244

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

is not doing that instead.

245

00:15:18,000 --> 00:15:24,000

It's starting out as two bubbles that are coming out underneath and to the side of the car,

246

00:15:24,000 --> 00:15:28,000

spreading out the energy coming off of this blast to the side.

247

00:15:28,000 --> 00:15:33,000

That energy to the side spells bad news for the bystanders.

248

00:15:33,000 --> 00:15:36,000

At this point, you might be wondering how our bystanders have been holding up,

249

00:15:36,000 --> 00:15:42,000

and I can tell you, our bystanders withstood a pressure wave of 90 psi, 90.

250

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

That's lethal. They were dead.

251

00:15:45,000 --> 00:15:51,000

With death and destruction from shockwave and shrapnel, the control blast was catastrophic.

252

00:15:54,000 --> 00:15:59,000

But will going underground, as per the A-Team's technique, really make a difference?

253

00:16:05,000 --> 00:16:09,000

Back at the shop, Adam and Jamie's A-Team cannon...

254

00:16:09,000 --> 00:16:12,000

Three, two, one.

255

00:16:13,000 --> 00:16:15,000

...as so far, flunked.

256

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

But Adam knows why.

257

00:16:18,000 --> 00:16:24,000

What makes something leave something, like ammo leaving a barrel, is pressure behind the ammo.

258

00:16:24,000 --> 00:16:28,000

What we've got is ammo where pressure can't build up

259

00:16:28,000 --> 00:16:32,000

because there's almost as much space around the ammo as there is ammo.

260

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

That means the gas can get right by it.

261

00:16:34,000 --> 00:16:39,000

This is the correct size hole from the clip and the correct size ammo for the clip.

262

00:16:39,000 --> 00:16:41,000

But I don't think we're going to get anything out of this.

263

00:16:41,000 --> 00:16:48,000

I think we need to build a little bit of a barrier behind this to create some corked pressure in there.

264

00:16:49,000 --> 00:16:52,000

So, Adam's altering the A-Team's design...

265

00:16:53,000 --> 00:16:54,000

There we go.

266

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

...to up the pressure.

267

00:16:56,000 --> 00:16:57,000

Now, see that?

268

00:16:59,000 --> 00:17:01,000

Much less space.

269

00:17:01,000 --> 00:17:05,000

But will this now type fitting torpedo go ballistic?

270

00:17:05,000 --> 00:17:08,000

Fire in three, two, one.

271

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

Yeah!

272

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

Boy, I'm glad I wasn't standing in front of that thing.

273

00:17:19,000 --> 00:17:24,000

It's another flat-out failure that bears no resemblance to the clip.

274

00:17:27,000 --> 00:17:31,000

So to give the myth another lifeline, here's Jamie.

275

00:17:31,000 --> 00:17:36,000

Along with propane, they had a tank of oxygen, just like this one here.

276

00:17:36,000 --> 00:17:44,000

Now, oxygen is an aggressive oxidizer that I'm betting would make a far more energetic sort of a burn.

277

00:17:44,000 --> 00:17:51,000

So, while we didn't see them use it, just for due diligence, we're going to try it.

278

00:17:52,000 --> 00:17:56,000

Like Adam before him, Jamie's going off-script.

279

00:17:56,000 --> 00:17:58,000

Smells like oxygen.

280

00:17:58,000 --> 00:18:00,000

No, it doesn't. It doesn't smell like anything.

281

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

As this time, he adds pure oxygen to his propane party.

282

00:18:04,000 --> 00:18:05,000

No.

283

00:18:08,000 --> 00:18:10,000

And back goes the fuel line.

284

00:18:12,000 --> 00:18:15,000

Three, two, one.

285

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

And now, we're going to try it.

286

00:18:23,000 --> 00:18:27,000

Oops.

287

00:18:31,000 --> 00:18:35,000

Wow, well, that wasn't exactly what I had in mind.

288

00:18:35,000 --> 00:18:41,000

I mean, I knew the introduction of pure oxygen in there would make a more energetic reaction,

289

00:18:41,000 --> 00:18:45,000

but I didn't think it was going to blow up the whole barrel.

290

00:18:45,000 --> 00:18:47,000

I mean, it was kind of scary.

291

00:18:47,000 --> 00:18:52,000

But it does make me think that if I dial back the oxygen to just the right amount,

292

00:18:52,000 --> 00:18:58,000

I should be able to find a sweet spot that shoots that wooden ammo out as pretty as you please.

293

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

So, with some running repairs on their log, better than new,

294

00:19:04,000 --> 00:19:09,000

and some better late than never safety shields, there we go.

295

00:19:09,000 --> 00:19:11,000

That makes me feel safer.

296

00:19:11,000 --> 00:19:16,000

It's all systems go to find out if there is a propane and oxygen mixture

297

00:19:16,000 --> 00:19:20,000

that will fire their projectile but won't destroy their cannon.

298

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

Okay, I'm fueling.

299

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

Three, two, one.

300

00:19:25,000 --> 00:19:28,000

Hey, that moved about a foot.

301

00:19:28,000 --> 00:19:29,000

For each test.

302

00:19:29,000 --> 00:19:31,000

So, going to four seconds.

303

00:19:31,000 --> 00:19:35,000

The guys are altering the relative amounts of the two gases.

304

00:19:35,000 --> 00:19:40,000

One thousand. Firing in three, two, one.

305

00:19:41,000 --> 00:19:43,000

We got it out! Woohoo!

306

00:19:43,000 --> 00:19:45,000

Give me high five.

307

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

But after some early encouragement.

308

00:19:48,000 --> 00:19:51,000

Three, two, one.

309

00:19:51,000 --> 00:19:54,000

It's not long before a familiar pattern emerges.

310

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

This one's for the money.

311

00:19:56,000 --> 00:20:00,000

Firing in three, two, one.

312

00:20:01,000 --> 00:20:07,000

That was by far the most vigorous bang yet, and our projectile didn't move at all.

313

00:20:07,000 --> 00:20:14,000

Indeed, after two dozen concentration combinations, including a repeat of Jamie's Big Bang.

314

00:20:14,000 --> 00:20:17,000

Three, two, one.

315

00:20:17,000 --> 00:20:23,000

It's clear that no gas mixture has the pushing power to weaponize their wood.

316

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

Our plan was good. Great even.

317

00:20:25,000 --> 00:20:30,000

We methodically experimented with different air-fuel mixtures of propane and air,

318

00:20:30,000 --> 00:20:32,000

and then we added pure oxygen.

319

00:20:32,000 --> 00:20:35,000

We added a barrel block to the back of our projectiles.

320

00:20:35,000 --> 00:20:39,000

We got breached cannons. We got loud cracks. We got bangs. We got fire.

321

00:20:39,000 --> 00:20:46,000

Still, one thing we did not get was any projectiles leaving the barrel and traveling towards their opponents.

322

00:20:47,000 --> 00:20:53,000

We have scientifically busted this device completely.

323

00:20:53,000 --> 00:20:59,000

But here's the thing. I have to imagine that if you put Jamie and I in an abandoned lumber yard,

324

00:20:59,000 --> 00:21:02,000

that we would be able to come up with something that was effective.

325

00:21:02,000 --> 00:21:03,000

Let's call it.

326

00:21:03,000 --> 00:21:04,000

Yeah.

327

00:21:04,000 --> 00:21:07,000

Let's figure out another way to hurl wood at our opponents.

328

00:21:24,000 --> 00:21:29,000

Welcome back. Here's the scene. The A-team is stranded in a lumber yard.

329

00:21:29,000 --> 00:21:32,000

The bad guys have gone away, but they'll be back in an hour.

330

00:21:32,000 --> 00:21:39,000

Now, instead of wanting to escape or run away, the A-team builds an elaborate device to punish the bad guys when they return.

331

00:21:39,000 --> 00:21:44,000

Now, Jamie and I have already tested the method that they used in the show.

332

00:21:44,000 --> 00:21:47,000

Three, two, one.

333

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

It totally didn't work.

334

00:21:50,000 --> 00:21:58,000

But we've stranded ourselves in a lumber yard, and we are going to attempt to build our own device to punish the bad guys when they return.

335

00:21:58,000 --> 00:22:00,000

So it'll be a pretty good show.

336

00:22:01,000 --> 00:22:07,000

The goal is simple. With one hour on the clock, can Adam and Jamie, using only the stuff they find,

337

00:22:07,000 --> 00:22:13,000

build a weapon that can take out the bad guys by firing planks as projectiles?

338

00:22:13,000 --> 00:22:16,000

Well, first up, they need a plan.

339

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

So, shooting these is ammo.

340

00:22:19,000 --> 00:22:24,000

Yeah, I had some thoughts about an easier and more reliable way of doing this.

341

00:22:24,000 --> 00:22:29,000

I'm thinking something like a pitching machine, where we get wheels spinning,

342

00:22:29,000 --> 00:22:34,000

and we just feed our ammo into the wheel, and it kicks it out.

343

00:22:34,000 --> 00:22:36,000

We've got one on the...

344

00:22:36,000 --> 00:22:38,000

There's a trailer over there.

345

00:22:38,000 --> 00:22:39,000

The trailer is beautiful.

346

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

And so somehow we spin that up, right?

347

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

That's going to be terrifying.

348

00:22:43,000 --> 00:22:48,000

If we get that up to a nice speed, what do you think should we use a motor off of the compressor?

349

00:22:48,000 --> 00:22:51,000

Well, I saw this wrench over here.

350

00:22:52,000 --> 00:22:53,000

Dude.

351

00:22:56,000 --> 00:23:02,000

I think these suckers go like 5,000 RPM or something scary, which, you know...

352

00:23:04,000 --> 00:23:06,000

When you smile, it makes me nervous.

353

00:23:06,000 --> 00:23:12,000

Alright, so I guess the first thing is to make sure that that thing can actually power that wheel at a speed we like.

354

00:23:12,000 --> 00:23:17,000

Then we'll figure out a way to make that structure amable and suitable.

355

00:23:17,000 --> 00:23:18,000

Yeah.

356

00:23:18,000 --> 00:23:20,000

Alright, I love this plan. Let's do it.

357

00:23:21,000 --> 00:23:26,000

It's a promising plan that gets better when the torque wrench does fit the wheel hub.

358

00:23:26,000 --> 00:23:29,000

But will it spin it up to speed?

359

00:23:29,000 --> 00:23:30,000

Okay, you ready?

360

00:23:30,000 --> 00:23:32,000

I'm ready. Go for it.

361

00:23:38,000 --> 00:23:41,000

And that's just the start they were hoping for.

362

00:23:43,000 --> 00:23:45,000

I don't know how fast that was going, but...

363

00:23:45,000 --> 00:23:48,000

That seems... I'm going to call that fast enough.

364

00:23:48,000 --> 00:23:54,000

Being able to spin their wheel of misfortune fast is vital to launching their lumber.

365

00:23:57,000 --> 00:24:00,000

But will the rest of the plan come together so smoothly?

366

00:24:01,000 --> 00:24:03,000

In theory, this is like a pitching machine.

367

00:24:03,000 --> 00:24:05,000

But remember, we're doing this with lumber.

368

00:24:05,000 --> 00:24:10,000

We're using various tools that were not made for this kind of thing.

369

00:24:10,000 --> 00:24:12,000

And there are a lot of moving parts here.

370

00:24:12,000 --> 00:24:16,000

That's a lot of stuff that we have to integrate if it's going to actually work smoothly,

371

00:24:16,000 --> 00:24:18,000

which is the whole point of this.

372

00:24:19,000 --> 00:24:21,000

While Jamie gets on with integrating the flywheel...

373

00:24:22,000 --> 00:24:23,000

Alright, do it.

374

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

Adam's taking aim at the ammoth.

375

00:24:28,000 --> 00:24:33,000

Where he's trying to outgun the A-team by going semi-auto.

376

00:24:36,000 --> 00:24:37,000

This is going to be awesome.

377

00:24:37,000 --> 00:24:40,000

I absolutely love an adore working like this.

378

00:24:40,000 --> 00:24:45,000

Seat of the pants on the fly, figuring stuff out with what's in front of you.

379

00:24:46,000 --> 00:24:50,000

The solutions that come up with are weirdly elegant in those conditions of rise.

380

00:24:51,000 --> 00:24:52,000

Yeah, baby!

381

00:24:53,000 --> 00:24:54,000

Want to know how this works?

382

00:24:54,000 --> 00:25:01,000

The wheel sits right about here spinning very crazy fast in that direction.

383

00:25:02,000 --> 00:25:05,000

This ammo box sits right about here.

384

00:25:05,000 --> 00:25:11,000

When Jamie pulls the trigger, that's this lever, it feeds a piece of wood out.

385

00:25:11,000 --> 00:25:14,000

Until that piece of wood contacts the spinning wheel.

386

00:25:14,000 --> 00:25:21,000

The moment it does, the wheel grabs that piece of wood and hurls it at one of our bad guys.

387

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

Then Jamie pulls this back.

388

00:25:23,000 --> 00:25:26,000

You see all the ammo drops down and he's ready for another one.

389

00:25:26,000 --> 00:25:27,000

Bang!

390

00:25:28,000 --> 00:25:32,000

I think we could fire like 15 shots in maybe five or six seconds with this thing.

391

00:25:32,000 --> 00:25:34,000

Alright, ta-ta-ta-ta-ta-ta.

392

00:25:35,000 --> 00:25:43,000

Like Adam Hannibal Savage, howling mad Heinemann is also making progress.

393

00:25:43,000 --> 00:25:44,000

There we go.

394

00:25:44,000 --> 00:25:47,000

He's aligned the wheel with the torque wrench.

395

00:25:48,000 --> 00:25:50,000

And added some safety shielding.

396

00:25:50,000 --> 00:25:56,000

Angular momentum is enough at certain speeds to actually make this tire explode.

397

00:25:56,000 --> 00:25:58,000

That's why I built this structure this way.

398

00:25:58,000 --> 00:26:04,000

So as I'm behind it, firing it, I'll be protected by stuff in the event this actually takes up a lot of space.

399

00:26:05,000 --> 00:26:06,000

This is going to work killer.

400

00:26:06,000 --> 00:26:07,000

I hope so.

401

00:26:09,000 --> 00:26:13,000

With the bad guys less than 20 minutes away, there's no rest for the wicked.

402

00:26:13,000 --> 00:26:18,000

After building the firing mechanism, the next task for me is to build the aiming mechanism.

403

00:26:18,000 --> 00:26:23,000

And this is non-trivial because it's quite easy just to take a spinning disc and feed a piece of wood into it.

404

00:26:23,000 --> 00:26:28,000

It's another thing entirely to be able to aim that both side to side and up and down.

405

00:26:28,000 --> 00:26:29,000

That's great.

406

00:26:29,000 --> 00:26:39,000

I kind of have to build essentially a wooden swing with a pivot in the middle of it to hold this entire like 60, 70 pound device that we're building.

407

00:26:40,000 --> 00:26:41,000

This should work beautifully.

408

00:26:41,000 --> 00:26:47,000

As a side note, I'd like to point out that we're putting all this together with some really quite basic tools.

409

00:26:47,000 --> 00:26:49,000

Love making stuff like this.

410

00:26:49,000 --> 00:26:53,000

You know, wood saws, some drills and screws and glue.

411

00:26:54,000 --> 00:27:00,000

Basically, we're using far less than what they showed in the actual A-Team episode.

412

00:27:02,000 --> 00:27:04,000

With time running out.

413

00:27:04,000 --> 00:27:05,000

That's it.

414

00:27:05,000 --> 00:27:06,000

Okay.

415

00:27:06,000 --> 00:27:09,000

The mythbusters attach the wheel to the aimer.

416

00:27:09,000 --> 00:27:10,000

Look, I'm pretty good.

417

00:27:11,000 --> 00:27:13,000

Then the magazine to the wheel.

418

00:27:13,000 --> 00:27:15,000

Dude, it's almost perfectly balanced.

419

00:27:16,000 --> 00:27:18,000

Almost like we knew what we were doing.

420

00:27:18,000 --> 00:27:20,000

Almost like we knew what we were doing.

421

00:27:20,000 --> 00:27:24,000

And before the bad guys arrive, they could fire off one quick test.

422

00:27:30,000 --> 00:27:32,000

That's terrifying to stand here.

423

00:27:32,000 --> 00:27:33,000

Fire!

424

00:27:33,000 --> 00:27:35,000

Three, two, one!

425

00:27:40,000 --> 00:27:42,000

That's what I'm talking about.

426

00:27:42,000 --> 00:27:44,000

Hey!

427

00:27:47,000 --> 00:27:49,000

I hit the camera.

428

00:27:51,000 --> 00:27:52,000

That is awesome.

429

00:27:53,000 --> 00:27:55,000

Our machine is working beautifully.

430

00:27:55,000 --> 00:27:57,000

It's a wonder to behold.

431

00:27:57,000 --> 00:27:59,000

It is terrifying to be behind.

432

00:27:59,000 --> 00:28:02,000

When it starts out, the wheel is slightly unbalanced.

433

00:28:02,000 --> 00:28:04,000

It's kind of like...

434

00:28:06,000 --> 00:28:07,000

And it settles in.

435

00:28:07,000 --> 00:28:12,000

And then you pull the lever and bang, the piece of wood shoots out like 60 feet.

436

00:28:12,000 --> 00:28:14,000

I hit the camera.

437

00:28:14,000 --> 00:28:15,000

It was beautiful.

438

00:28:15,000 --> 00:28:17,000

Three, two, one!

439

00:28:17,000 --> 00:28:19,000

Shooting at over 50 miles an hour.

440

00:28:20,000 --> 00:28:21,000

That is awesome.

441

00:28:21,000 --> 00:28:24,000

Their forklift fire is the real deal.

442

00:28:25,000 --> 00:28:28,000

But next, the ultimate test.

443

00:28:28,000 --> 00:28:32,000

Will it take down the bad guys before it's too late?

444

00:28:38,000 --> 00:28:43,000

Adam and Jamie escape from a maximum security stockade to an abandoned quarry.

445

00:28:43,000 --> 00:28:44,000

It is perfect.

446

00:28:44,000 --> 00:28:48,000

Where their above ground control caused carnage.

447

00:28:51,000 --> 00:28:53,000

He's legless below the knees.

448

00:28:53,000 --> 00:28:57,000

And if he didn't get help soon, he could even drown in his own blood.

449

00:28:57,000 --> 00:29:02,000

All it's left for us to do now is to dig a sewer and try it again.

450

00:29:05,000 --> 00:29:08,000

Yep, to put the A-teams' ammo to the test.

451

00:29:08,000 --> 00:29:11,000

Next, the guys need a city sewer.

452

00:29:11,000 --> 00:29:13,000

Nothing like digging a good trench.

453

00:29:13,000 --> 00:29:17,000

To see if the same blast, but just barely underground,

454

00:29:17,000 --> 00:29:20,000

will be injury free for all.

455

00:29:20,000 --> 00:29:23,000

Next, we put trench plates across here.

456

00:29:23,000 --> 00:29:26,000

Yeah, you're spot on.

457

00:29:26,000 --> 00:29:31,000

And we'll completely cover this except for where our manhole is going to be.

458

00:29:31,000 --> 00:29:33,000

And boom, you got a sewer.

459

00:29:33,000 --> 00:29:41,000

Believe it or not, this is actually the first time that we've ever used a trench plate for a trench.

460

00:29:41,000 --> 00:29:45,000

This kind of operation, it looks like fun and it is.

461

00:29:45,000 --> 00:29:48,000

It is also incredibly dangerous.

462

00:29:48,000 --> 00:29:53,000

Any one of these plates could shift just a half inch and take off one of Jamie's fingers without even noticing.

463

00:29:53,000 --> 00:29:54,000

Built up.

464

00:29:54,000 --> 00:29:56,000

That's it.

465

00:29:56,000 --> 00:30:01,000

And it is this kind of operation that the two of us excel at in working with each other.

466

00:30:01,000 --> 00:30:04,000

Because in order to do it safely, you not only have to move carefully,

467

00:30:04,000 --> 00:30:08,000

but you really, it's best if the two people are on the same side.

468

00:30:08,000 --> 00:30:10,000

Like a well oiled machine.

469

00:30:10,000 --> 00:30:13,000

And frankly, when Jamie and I are doing something like this,

470

00:30:13,000 --> 00:30:18,000

our brains are running on totally parallel tracks and it's a sheer pleasure to do it.

471

00:30:18,000 --> 00:30:20,000

That looks beautiful.

472

00:30:20,000 --> 00:30:22,000

Yeah.

473

00:30:22,000 --> 00:30:26,000

I love it when a plan comes together.

474

00:30:26,000 --> 00:30:28,000

Oh, shut up.

475

00:30:28,000 --> 00:30:32,000

With the trench plates in place, the guys next,

476

00:30:32,000 --> 00:30:36,000

and our manhole, are going to be in the middle of the trench.

477

00:30:36,000 --> 00:30:39,000

In the middle of the trench, the guys next,

478

00:30:39,000 --> 00:30:41,000

and up their manhole.

479

00:30:41,000 --> 00:30:43,000

Hello.

480

00:30:43,000 --> 00:30:45,000

And after a quick sewer survey.

481

00:30:45,000 --> 00:30:48,000

Oh, yeah.

482

00:30:48,000 --> 00:30:50,000

Looks great down here, man.

483

00:30:50,000 --> 00:30:51,000

Like a real sewer.

484

00:30:51,000 --> 00:30:53,000

And it's nice and cool.

485

00:30:53,000 --> 00:30:55,000

We should have lunch down there.

486

00:30:55,000 --> 00:30:57,000

That's a fabulous idea.

487

00:30:57,000 --> 00:30:59,000

The great backfill can begin.

488

00:30:59,000 --> 00:31:01,000

Not right there.

489

00:31:01,000 --> 00:31:03,000

That's your man in the shower.

490

00:31:03,000 --> 00:31:07,000

And I'm going to be the first to know what you think of all of their sewer system.

491

00:31:07,000 --> 00:31:10,000

At this point in the episode, you've probably entertained a few thoughts.

492

00:31:10,000 --> 00:31:11,000

Among them things.

493

00:31:11,000 --> 00:31:12,000

Wow.

494

00:31:12,000 --> 00:31:14,000

Jamie's pretty good with the excavator.

495

00:31:14,000 --> 00:31:16,000

I wonder if he had help.

496

00:31:16,000 --> 00:31:20,000

But among your comments might be why are you guys leaving one whole end of your sewer system open?

497

00:31:20,000 --> 00:31:23,000

And it involves replicating the circumstances of the myth.

498

00:31:23,000 --> 00:31:26,000

See, we're testing an explosion of dynamite in a sewer system.

499

00:31:26,000 --> 00:31:28,000

Keyword, system.

500

00:31:28,000 --> 00:31:32,000

Sewers are part of a long set of catacombs running underneath the city.

501

00:31:32,000 --> 00:31:36,000

And that's why we're leaving ours open.

502

00:31:36,000 --> 00:31:41,000

With one end open, one end closed, and the top soon to be sealed shut.

503

00:31:41,000 --> 00:31:44,000

Do it.

504

00:31:44,000 --> 00:31:48,000

Their drain in a day is done.

505

00:31:48,000 --> 00:31:53,000

That just leaves the rest of the experiment, starting with driver and car.

506

00:31:53,000 --> 00:31:55,000

Who drives with their legs crossed?

507

00:31:55,000 --> 00:31:57,000

Only Buster.

508

00:31:57,000 --> 00:32:00,000

Next come the all-important PCB sensors.

509

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

We're using these sensors to determine whether or not Buster lives or dies in these explosive

tests.

510

00:32:04,000 --> 00:32:08,000

But it's worth talking a little bit about how they work because it's pretty cool.

511

00:32:08,000 --> 00:32:11,000

Inside this sensor is a type of crystal called piezo.

512

00:32:11,000 --> 00:32:16,000

When you flex it or press on it, it generates a tiny amount of electricity that is very consistent.

513

00:32:16,000 --> 00:32:19,000

You can expose it to a blast pressure wave.

514

00:32:19,000 --> 00:32:24,000

It will generate a little amount of electricity that we can equate to the amount of pressure it receives.

515

00:32:24,000 --> 00:32:28,000

That directly tells us whether or not Buster could live or die.

516

00:32:28,000 --> 00:32:29,000

Excuse me, Buster.

517

00:32:29,000 --> 00:32:31,000

Pardon me. Excuse me. Thank you.

518

00:32:31,000 --> 00:32:33,000

Pardon me. Thank you, sir.

519

00:32:33,000 --> 00:32:37,000

Thanks for the ride.

520

00:32:37,000 --> 00:32:40,000

I'll call you when it's time to pick me up.

521

00:32:40,000 --> 00:32:48,000

After that comes the dynamite, positioned millimeters below the manhole at the very uppermost point of their drain.

522

00:32:48,000 --> 00:32:52,000

So this is exactly what we see them do in the clip.

523

00:32:52,000 --> 00:32:58,000

Nine sticks of dynamite off to the side a bit with the manhole cover on top of it.

524

00:32:58,000 --> 00:33:00,000

There we go.

525

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

Three, two, one.

526

00:33:03,000 --> 00:33:09,000

The final piece of the puzzle is to position the car exactly as it was in the control test.

527

00:33:09,000 --> 00:33:12,000

Keep coming and a little more.

528

00:33:12,000 --> 00:33:14,000

Perfect.

529

00:33:14,000 --> 00:33:16,000

All that leaves is a prediction.

530

00:33:16,000 --> 00:33:23,000

Now my impression is that the sewer is going to allow some of the blast pressure to escape down into that cavity.

531

00:33:23,000 --> 00:33:32,000

But then on the other hand, we have that manhole cover, which is most likely going to turn into fragments because it's cast iron and that's brittle.

532

00:33:32,000 --> 00:33:38,000

And that may well hold on to the energy somewhat and direct it upward into the car.

533

00:33:38,000 --> 00:33:43,000

Where that puts Buster, it's anybody's guess. That's what we're going to find out.

534

00:33:47,000 --> 00:33:48,000

Are you ready?

535

00:33:48,000 --> 00:33:49,000

Yeah.

536

00:33:49,000 --> 00:33:51,000

All right, I want to hook it up.

537

00:33:51,000 --> 00:33:54,000

There's one. There's two.

538

00:33:57,000 --> 00:33:58,000

Counter-attempt.

539

00:33:58,000 --> 00:34:00,000

All right.

540

00:34:01,000 --> 00:34:04,000

Explosives in the manhole cover.

541

00:34:04,000 --> 00:34:07,000

In three, two, one.

542

00:34:10,000 --> 00:34:11,000

That did it.

543

00:34:11,000 --> 00:34:12,000

Wow.

544

00:34:12,000 --> 00:34:14,000

That was awesome.

545

00:34:14,000 --> 00:34:24,000

When the dust settles this time, it's clear that the car hasn't been torn apart.

546

00:34:24,000 --> 00:34:31,000

We have yet to crunch the data. We have yet to look at high speed, but on the face of what I witnessed and what I can see here.

547

00:34:31,000 --> 00:34:36,000

That held together better than I thought it would. That's for sure.

548

00:34:36,000 --> 00:34:41,000

I feel like that was a fantastic comparative set of explosions.

549

00:34:42,000 --> 00:34:47,000

Second explosion. The dynamite in the sewer just as we saw in the A-Team,

550

00:34:47,000 --> 00:34:50,000

dented the oil pan of this car but did not break through.

551

00:34:50,000 --> 00:34:52,000

It looks like it didn't actually penetrate though.

552

00:34:52,000 --> 00:34:53,000

Wow.

553

00:34:53,000 --> 00:34:59,000

My prediction, post-explosion, pre-datacrunch, is that our dude is totally fine.

554

00:34:59,000 --> 00:35:02,000

But we've got to check all that stuff out first.

555

00:35:04,000 --> 00:35:05,000

Yep.

556

00:35:05,000 --> 00:35:08,000

While initial impressions are good, it's all down to the data.

557

00:35:08,000 --> 00:35:18,000

I've analyzed the data from the sewer-based explosion, and it's pretty interesting because the prior blast exposed Buster to 26 PSI.

558

00:35:18,000 --> 00:35:25,000

This time, with the sewer, he only experienced 9 PSI. That's less than half.

559

00:35:25,000 --> 00:35:32,000

And that means that as opposed to ending up in the hospital with some serious injuries, this time he would have walked away.

560

00:35:32,000 --> 00:35:36,000

A little unhappy and with some bruises, but he would have walked away.

561

00:35:39,000 --> 00:35:42,000

So, Buster's only bruised. How about the bystanders?

562

00:35:42,000 --> 00:35:47,000

Last time, a lethal 90 PSI. This time, 11 PSI.

563

00:35:47,000 --> 00:35:49,000

That's right! Isn't that cool?

564

00:35:49,000 --> 00:35:55,000

Not only is the blast survivable for the guy inside the car, it's also for the bystanders by the side of the road.

565

00:35:55,000 --> 00:35:58,000

I don't know, Doctor, but you might want to have that shoulder looked at.

566

00:35:58,000 --> 00:35:59,000

It looks kind of weird.

567

00:36:01,000 --> 00:36:03,000

It's an astounding result.

568

00:36:04,000 --> 00:36:13,000

Simply by placing the dynamite millimeters below their manhole, the shockwave takes out the car and the car alone.

569

00:36:13,000 --> 00:36:15,000

This is really cool.

570

00:36:15,000 --> 00:36:21,000

95% of the time, what you see in movies and television has no bearing on actual physics.

571

00:36:21,000 --> 00:36:31,000

So it is very funny to me to delve into a cheesy 1980s action show that I totally grew up on and find that their physics are sound.

572

00:36:32,000 --> 00:36:39,000

That is, putting dynamite inside a manhole is a fine way of making a non-lethal explosion that will

take out a car.

573

00:36:39,000 --> 00:36:41,000

So how do you want to call this one?

574

00:36:41,000 --> 00:36:44,000

Well, I think the A-team's plan was an excellent plan.

575

00:36:44,000 --> 00:36:49,000

The difference between the above ground blast and the sewer blast is patently obvious.

576

00:36:49,000 --> 00:36:55,000

That is a survivable explosion. This one, less so. I'd say it's plausible.

577

00:36:56,000 --> 00:36:59,000

Isn't that thing kind of getting disgusting by now?

578

00:36:59,000 --> 00:37:03,000

It's totally disgusting. It's like chewing on a little tobacco soap sock. It's gross.

579

00:37:14,000 --> 00:37:16,000

Alright, let's get out of here.

580

00:37:16,000 --> 00:37:17,000

Where to, Colonel?

581

00:37:17,000 --> 00:37:19,000

Back to the lumberyard.

582

00:37:23,000 --> 00:37:24,000

Yeah!

583

00:37:30,000 --> 00:37:34,000

5, 3, 2, 1!

584

00:37:37,000 --> 00:37:43,000

Now, if Jamie and I are going to embark on building our own log shooter, we should really test it against some bad guys, don't you think?

585

00:37:43,000 --> 00:37:44,000

That's enough.

586

00:37:44,000 --> 00:37:50,000

So I want to make a bad guy that pops up like one of those ducks at the amusement park.

587

00:37:51,000 --> 00:37:53,000

And I'm going to cut it out of this foam board.

588

00:37:53,000 --> 00:37:54,000

Absolutely badass.

589

00:37:54,000 --> 00:37:56,000

That guy is going to be our first bad guy.

590

00:37:56,000 --> 00:37:58,000

Let's try it out. That's a stable state.

591

00:37:58,000 --> 00:38:00,000

I think that'll work.

592

00:38:14,000 --> 00:38:18,000

In an abandoned lumberyard, it's time to play ball.

593

00:38:20,000 --> 00:38:25,000

Because the Mythbusters air-powered pitching machine is a great tool for the game.

594

00:38:25,000 --> 00:38:32,000

The Mythbusters air-powered pitching machine is firing on all cylinders.

595

00:38:34,000 --> 00:38:36,000

That is awesome, isn't it?

596

00:38:41,000 --> 00:38:42,000

Well, our cannon is ready.

597

00:38:42,000 --> 00:38:49,000

And by our best estimates, this thing ought to fire these chunks of wood at something between 50 and 75 miles per hour.

598

00:38:49,000 --> 00:38:52,000

That is significant and dangerous.

599

00:38:52,000 --> 00:38:57,000

And I want to point out that this is a purely improvised build by B and Jamie.

600

00:38:57,000 --> 00:39:00,000

So all of this design was here on site.

601

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

A sheer pleasure is a classic Mythbusters build.

602

00:39:04,000 --> 00:39:09,000

Like the A-Team, the guys improvised their weapon in just one hour.

603

00:39:09,000 --> 00:39:12,000

But will it be able to hurt the henchmen?

604

00:39:13,000 --> 00:39:14,000

Last one.

605

00:39:15,000 --> 00:39:16,000

Locked and loaded.

606

00:39:16,000 --> 00:39:18,000

Time to find out.

607

00:39:18,000 --> 00:39:20,000

What exactly are we testing?

608

00:39:20,000 --> 00:39:26,000

Well, in the clip, the guys spend about one minute and ten seconds firing their wood weapon at the bad guys to drive them off.

609

00:39:26,000 --> 00:39:27,000

Hit it!

610

00:39:27,000 --> 00:39:29,000

Yep. Let's do it.

611

00:39:31,000 --> 00:39:38,000

For us, given that we've busted the tree cannon approach entirely, we intend to test out our own firing mechanism.

612

00:39:38,000 --> 00:39:43,000

Both in terms of accuracy, quickness to fire, and the time it takes to take out the bad guys.

613

00:39:44,000 --> 00:39:48,000

Outside the double doors, there are seven bad guys.

614

00:39:48,000 --> 00:39:52,000

Each ready to pop up just where they did in the A-Team scene.

615

00:39:52,000 --> 00:39:54,000

It's showtime!

616

00:39:56,000 --> 00:40:00,000

But can Jamie take them down in just 70 seconds?

617

00:40:04,000 --> 00:40:06,000

It's a perfect start.

618

00:40:08,000 --> 00:40:13,000

As Jamie takes out pop-ups one and two with shots straight to the head.

619

00:40:13,000 --> 00:40:15,000

Yeah!

620

00:40:16,000 --> 00:40:20,000

And from there, well, let's roll an A-Team montage.

621

00:40:23,000 --> 00:40:25,000

Yeah!

622

00:40:28,000 --> 00:40:30,000

Oh! No blood!

623

00:40:30,000 --> 00:40:32,000

Oh!

624

00:40:36,000 --> 00:40:39,000

Yes! One more! Here's another one! Last one!

625

00:40:44,000 --> 00:40:46,000

Yeah!

626

00:40:52,000 --> 00:40:59,000

One minute, five seconds! That was awesome! I love when a plan comes together!

627

00:41:01,000 --> 00:41:07,000

We had our targets rigged so that when I hit one, another one would pop up in its place.

628

00:41:07,000 --> 00:41:12,000

I was able to get them one after the other until I had to get the farthest guy out.

629

00:41:12,000 --> 00:41:18,000

The thing is, the further the range, the more that these sticks start to tumble and do unpredictable things.

630

00:41:18,000 --> 00:41:21,000

But even though I took every stick of ammo I had...

631

00:41:22,000 --> 00:41:24,000

Yeah!

632

00:41:24,000 --> 00:41:29,000

In the end, I got every single guy. The rig worked like a charm.

633

00:41:29,000 --> 00:41:31,000

Yeah!

634

00:41:32,000 --> 00:41:34,000

Our task was pretty straightforward.

635

00:41:34,000 --> 00:41:38,000

Replicate a clip from the A-Team to Mythbusters style.

636

00:41:38,000 --> 00:41:41,000

Same ammo, completely new construction.

637

00:41:41,000 --> 00:41:44,000

We used a spinning wheel this time and an air wrench.

638

00:41:44,000 --> 00:41:45,000

Yeah!

639

00:41:45,000 --> 00:41:48,000

And guess what? It worked magnificently.

640

00:41:49,000 --> 00:41:52,000

It worked exactly like you saw in the clip. It was awesome.

641

00:41:52,000 --> 00:41:59,000

Firing at 60 miles an hour with near perfect pitch, their rig was the real deal.

642

00:41:59,000 --> 00:42:04,000

And having scratch-built it in under an hour using junk lying around the lumber yard,

643

00:42:04,000 --> 00:42:09,000

you might say that the Mythbusters have out-18'd the A-Team.

644

00:42:09,000 --> 00:42:13,000

Hey A-Team, if you need our help again, you know where to find us.