

1

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

I find the defendants guilty.

2

00:00:21,000 --> 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.

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

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

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

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

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

maybe you can hire the Mythbusters.

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

Ha ha! You ready for the A-Team Special?

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

I was born ready, fool.

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

Outstanding.

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00:01:17,000 --> 00:01:26,000

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

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

Sure.

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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 --> 00:01:34,000

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

14

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

Murdoch. That's Murdoch.

15

00:01:36,000 --> 00:01:37,000

That's the one.

16

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

Alright.

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

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

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00:01:43,000 --> 00:01:45,000

What's on the docket?

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00:01:45,000 --> 00:01:56,000

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

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00:01:56,000 --> 00:02:00,000

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

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

See, in almost every episode, the guys are stranded somewhere and they have to build a weapon

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

with only the materials they have at their disposal, right?

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00:02:07,000 --> 00:02:08,000

Right.

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00:02:08,000 --> 00:02:11,000

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

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00:02:11,000 --> 00:02:16,000

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

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00:02:16,000 --> 00:02:22,000

two by fours with a controlled propane explosion to defeat the bad guys.

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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.

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

Maybe you and I could do better.

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

Maybe.

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

Shaw.

32

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

Don't touch me.

33

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

Okay.

34

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

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

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

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

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00:02:41,000 --> 00:02:43,000

As long as I can stand it.

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00:02:43,000 --> 00:02:45,000

Alright.

38

00:02:49,000 --> 00:02:55,000

So, Solenoids looks almost exactly the same.

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00:02:55,000 --> 00:03:02,000

In the show, the A-Team guys built their wood cannon in a general-purpose shop that was attached to a lumber yard.

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00:03:02,000 --> 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.

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

Beautiful.

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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.

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

So, that appears to be the propellant.

44

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.

45

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

Awesome.

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

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

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

Ammo for bad guys.

48

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

Before Adam rolls out the barrel, literally.

49

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

There I am.

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

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

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

It's going to take a while.

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00:03:44,000 --> 00:03:48,000

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

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00:03:48,000 --> 00:03:52,000

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

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

One of my single favorite drill bits of all time.

55

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

Adam uses the Forster.

56

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

I feel like the villain in some kind of movie.

57

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

But even so, it's a tough task.

58

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

I know.

59

00:04:07,000 --> 00:04:11,000

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

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00:04:11,000 --> 00:04:17,000

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

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00:04:17,000 --> 00:04:20,000

You've got to sharpen it all the time.

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00:04:22,000 --> 00:04:29,000

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

63

00:04:33,000 --> 00:04:35,000

There I go.

64

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

Now, that's a hole.

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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.

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

Look at that perfect fit.

67

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?

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

Well, the easiest way is with a spark.

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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.

71

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.

72

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.

73

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

And there it is.

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

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

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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.

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

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

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

But the question is, will it work?

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

All right.

79

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

Loading the device.

80

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

There we go.

81

00:05:44,000 --> 00:05:45,000

Okay.

82

00:05:45,000 --> 00:05:47,000

Device is loaded.

83

00:05:47,000 --> 00:05:49,000

For test one.

84

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

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

85

00:05:51,000 --> 00:05:53,000

They're giving it some gas.

86

00:05:53,000 --> 00:05:55,000

Five seconds worth of propane.

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00:05:55,000 --> 00:05:56,000

Ignition in.

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00:05:56,000 --> 00:05:59,000

Three, two, one, go.

89

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

Nothing.

90

00:06:01,000 --> 00:06:02,000

Nothing.

91

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

Give it another five seconds.

92

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

I'm going to cigar and just make everything you say sound a little more authoritative.

93

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

Get those trucks out of there.

94

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

Move those people over there.

95

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

I'll put those oranges in my summer house.

96

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

Stuff like that.

97

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

Three, two, one.

98

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

Nothing.

99

00:06:24,000 --> 00:06:25,000

Nothing?

100

00:06:25,000 --> 00:06:26,000

Well, that's weird.

101

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

I would expect at least something.

102

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

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

103

00:06:33,000 --> 00:06:34,000

Okay.

104

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

Sparking now.

105

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

Whoa!

106

00:06:38,000 --> 00:06:41,000

That actually blew my hand.

107

00:06:41,000 --> 00:06:44,000

So there was enough residual gas.

108

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

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

109

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

Okay.

110

00:06:49,000 --> 00:06:50,000

All right.

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00:06:50,000 --> 00:06:53,000

We started out by adding way, way, way too much propane to this.

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

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

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

But it's not that way.

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

Propane isn't flammable in and of itself.

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

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

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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

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00:07:08,000 --> 00:07:12,000

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

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

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

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

And three, two, one, fire.

120

00:07:21,000 --> 00:07:22,000

Hey!

121

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

That was a pop.

122

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

It was.

123

00:07:25,000 --> 00:07:30,000

Don't move even the tiniest bit, not even remotely.

124

00:07:30,000 --> 00:07:36,000

Well, there was fire in the hole, but so far a viable weapon this ain't.

125

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

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

126

00:07:38,000 --> 00:07:43,000

I mean, we've replicated everything that we saw in the clip and we are getting ignition.

127

00:07:43,000 --> 00:07:47,000

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

128

00:07:47,000 --> 00:07:51,000

We're going to have to do something else.

129

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

The guy's stumped.

130

00:07:53,000 --> 00:07:54,000

Hmm.

131

00:07:54,000 --> 00:07:59,000

This A-Team is going to need a plan B.

132

00:08:23,000 --> 00:08:24,000

They detonate the dynamite.

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00:08:24,000 --> 00:08:25,000

Boom!

134

00:08:25,000 --> 00:08:27,000

The manhole cover takes the car completely out.

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

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

136

00:08:30,000 --> 00:08:31,000

Exactly.

137

00:08:31,000 --> 00:08:33,000

No one ever gets hurt by the A-Team.

138

00:08:33,000 --> 00:08:35,000

Well, explosive escapes.

139

00:08:35,000 --> 00:08:36,000

I like it.

140

00:08:41,000 --> 00:08:47,000

The myth is that by placing the dynamite just inside the drain, the A-Team could evade the

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00:08:47,000 --> 00:08:49,000

villains without injuring them.

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00:08:49,000 --> 00:08:51,000

But is that really possible?

143

00:08:54,000 --> 00:08:55,000

That is perfect.

144

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

So there's a plan, right?

145

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

Of course there's a plan.

146

00:09:03,000 --> 00:09:07,000

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

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00:09:07,000 --> 00:09:13,000

So, in lieu of that, we've come to our favorite place in California where we can blow large

148

00:09:13,000 --> 00:09:17,000

things up and even dig holes in the ground, Ion, California.

149

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

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

150

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

But the digging will come later.

151

00:09:25,000 --> 00:09:29,000

Now, obviously, since the A-Team placed their sticks of dynamite inside a sewer, we are going

152

00:09:29,000 --> 00:09:31,000

to do the exact same thing.

153

00:09:31,000 --> 00:09:32,000

Perfect!

154

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

Nice ride.

155

00:09:34,000 --> 00:09:38,000

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

156

00:09:38,000 --> 00:09:41,000

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

157

00:09:41,000 --> 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.

158

00:09:44,000 --> 00:09:47,000

They just want to neutralize them as a threat.

159

00:09:47,000 --> 00:09:51,000

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

160

00:09:51,000 --> 00:09:52,000

control.

161

00:09:52,000 --> 00:09:56,000

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

162

00:09:56,000 --> 00:10:01,000

right on top of it, find out what happens to the driver of the car when we blow that

163

00:10:01,000 --> 00:10:02,000

up.

164

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

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

165

00:10:06,000 --> 00:10:11,000

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

166

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

What's next?

167

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

Buster.

168

00:10:14,000 --> 00:10:19,000

We'll let dynamite detonation outside a sewer, cause casualties where an in-car driver

169

00:10:19,000 --> 00:10:24,000

would have survived this blast, and if so, whether he was injured or not, and how badly.

170

00:10:24,000 --> 00:10:30,000

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

171

00:10:30,000 --> 00:10:35,000

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

172

00:10:35,000 --> 00:10:36,000

what went on.

173

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

Buster may be wired in the hot seat.

174

00:10:38,000 --> 00:10:42,000

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

175

00:10:42,000 --> 00:10:46,000

But he's not the only data that's going to be used to detect the danger.

176

00:10:46,000 --> 00:10:51,000

Now, another reason the A-Team might have placed their explosives inside the manhole

177

00:10:51,000 --> 00:10:54,000

cover is to protect any innocent bystanders standing around.

178

00:10:54,000 --> 00:10:58,000

And that is a reasonable assumption that we would like to test, and that's what these

179

00:10:58,000 --> 00:10:59,000

figures are for.

180

00:10:59,000 --> 00:11:04,000

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

181

00:11:04,000 --> 00:11:08,000

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

182

00:11:08,000 --> 00:11:13,000

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

183

00:11:13,000 --> 00:11:17,000

With the plan coming together, it's OK, little buddy.

184

00:11:17,000 --> 00:11:19,000

Next up is the explosive.

185

00:11:19,000 --> 00:11:26,000

For accuracy, we're using nine sticks of nitroglycerin-based dynamite because that's what they used on the A-Team.

186

00:11:26,000 --> 00:11:29,000

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

187

00:11:29,000 --> 00:11:31,000

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

188

00:11:31,000 --> 00:11:35,000

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

189

00:11:35,000 --> 00:11:39,000

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

190

00:11:39,000 --> 00:11:41,000

Yes, made of chocolate.

191

00:11:41,000 --> 00:11:47,000

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

192

00:11:47,000 --> 00:11:49,000

Stop with two exceptions.

193

00:11:49,000 --> 00:11:52,000

First, the control test has no sewer.

194

00:11:52,000 --> 00:11:58,000

And second, also in the clip, the car is moving, and we are not doing that for two very good

reasons.

195

00:11:58,000 --> 00:12:06,000

Number one, it doesn't make any difference to the physics, but two, and most importantly, we want to be able to compare our control blitz with the other.

196

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

Most importantly, we want to be able to compare our control blast against the blast when we dig a sewer and put the dynamite in there.

197

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

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

198

00:12:17,000 --> 00:12:21,000

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

199

00:12:21,000 --> 00:12:22,000

That is our plan.

200

00:12:29,000 --> 00:12:31,000

All right, sir. You ready?

201

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

I'm ready.

202

00:12:32,000 --> 00:12:33,000

OK.

203

00:12:33,000 --> 00:12:34,000

What if I take the first plunge?

204

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

Knock yourself out.

205

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

All right, here we go.

206

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

This is 18, dynamite test, the control.

207

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

I always wanted to do this.

208

00:12:49,000 --> 00:12:52,000

In three, two, one.

209

00:13:01,000 --> 00:13:04,000

In the Mythbusters 18 special.

210

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

Your sinks taste terrible.

211

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

The guys were wired up to a countdown.

212

00:13:08,000 --> 00:13:12,000

In three, two, one.

213

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

That just got cut.

214

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

What happened to our countdown?

215

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

We'll get right back to it.

216

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

I promise.

217

00:13:17,000 --> 00:13:28,000

I just wanted to remind everybody that what we are testing is how lethal nine sticks of dynamite detonated on the ground under a car are to both the driver of that car and the innocent bystanders on the street.

218

00:13:28,000 --> 00:13:29,000

That is our control test.

219

00:13:29,000 --> 00:13:32,000

Now back to our regularly scheduled countdown.

220

00:13:33,000 --> 00:13:37,000

This is 18, dynamite test, the control.

221

00:13:37,000 --> 00:13:40,000

In three, two, one.

222

00:13:48,000 --> 00:13:54,000

I'm no munitions expert, but I don't think that car is going to be there when the smoke clears.

223

00:13:55,000 --> 00:14:03,000

When the dust eventually settles, the car hasn't disappeared, but it's not exactly in one piece.

224

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

How you doing there, little buddy?

225

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

Oh man.

226

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

He actually looks almost completely intact.

227

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

Oh, wait a second.

228

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

Hey, Adam, check this out.

229

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

Oh.

230

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

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

231

00:14:20,000 --> 00:14:25,000

I am now going to go out on a limb and predict that Buster didn't survive that, but only the numbers will tell us for sure.

232

00:14:26,000 --> 00:14:31,000

It didn't look good for Buster, but what does the data say?

233

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

It looks pretty bad in here, huh?

234

00:14:33,000 --> 00:14:36,000

Like hell on Earth, but get this.

235

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

Buster actually survived that blast.

236

00:14:40,000 --> 00:14:41,000

I know.

237

00:14:41,000 --> 00:14:42,000

Don't get me wrong.

238

00:14:42,000 --> 00:14:43,000

He is not walking away from this blast.

239

00:14:43,000 --> 00:14:44,000

No, no, no.

240

00:14:44,000 --> 00:14:45,000

He's legless below the knees.

241

00:14:45,000 --> 00:14:51,000

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

242

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

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

243

00:14:54,000 --> 00:15:03,000

Although Buster may live to see another day, his injuries are way too awful for the A-Team, and he's not alone.

244

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

Upon careful looking again and again at this high speed, I'm noticing that the blast pressure wave, which normally would be coming upward and outward in the symmetrical bubble,

245

00:15:14,000 --> 00:15:17,000

is not doing that instead.

246

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

It's starting out as two bubbles that are coming out underneath and to the side of the car, 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 --> 00:15:42,000

At this point, you might be wondering how our bystanders have been holding up, and I can tell you, our bystanders withstood a pressure wave of 90 psi, 90.

249

00:15:42,000 --> 00:15:45,000

That's lethal. They were dead.

250

00:15:45,000 --> 00:15:54,000

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

251

00:15:54,000 --> 00:16:05,000

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

252

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

Back at the shop, Adam and Janie's A-Team cannon, as so far flung. But Adam knows why.

253

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

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

254

00:16:24,000 --> 00:16:32,000

What we've got is ammo where pressure can't build up because there's almost as much space around the ammo as there is ammo.

255

00:16:32,000 --> 00:16:39,000

That means the gas can get right by it. This is the correct size hole from the clip and the correct size ammo for the clip.

256

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

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

257

00:16:41,000 --> 00:16:49,000

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

258

00:16:49,000 --> 00:16:53,000

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

259

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

There we go.

260

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

To up the pressure.

261

00:16:56,000 --> 00:16:59,000

Now, see that?

262

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

Much less space.

263

00:17:01,000 --> 00:17:08,000

But will this now type fitting torpedo go ballistic?

264

00:17:08,000 --> 00:17:13,000

Firing in three, two, one.

265

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

Yeah!

266

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

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

267

00:17:23,000 --> 00:17:31,000

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

268

00:17:31,000 --> 00:17:35,000

So to give them if another lifeline, here's Jamie.

269

00:17:35,000 --> 00:17:40,000

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

270

00:17:40,000 --> 00:17:48,000

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

burn.

271

00:17:48,000 --> 00:17:57,000

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

272

00:17:57,000 --> 00:18:03,000

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

273

00:18:03,000 --> 00:18:04,000

Smells like oxygen.

274

00:18:04,000 --> 00:18:06,000

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

275

00:18:06,000 --> 00:18:14,000

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

276

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

And back goes the fuel line.

277

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

Three, two, one.

278

00:18:26,000 --> 00:18:31,000

Oops!

279

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

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

280

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,

281

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

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

282

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

I mean, it was kind of scary.

283

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,

284

00:18:52,000 --> 00:19:00,000

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

285

00:19:00,000 --> 00:19:07,000

So with some running repairs on their log, better than new, and some better late than never safety shields.

286

00:19:07,000 --> 00:19:09,000

There we go.

287

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

That makes me feel safer.

288

00:19:11,000 --> 00:19:18,000

It's all systems go to find out if there is a propane and oxygen mixture that will fire their projectile,

289

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

but won't destroy their cannon.

290

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

Okay, I'm fueling.

291

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

Three, two, one.

292

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

Hey! That moved about a foot.

293

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

For each test.

294

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

So going to four seconds.

295

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

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

296

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

Firing in three, two, one.

297

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

We got it out!

298

00:19:42,000 --> 00:19:43,000

Woohoo!

299

00:19:43,000 --> 00:19:44,000

Give me high five.

300

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

But after some early encouragement.

301

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

Three, two, one.

302

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

It's not long before a familiar pattern emerges.

303

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

This one's for the money.

304

00:19:56,000 --> 00:19:59,000

Firing in three, two, one.

305

00:19:59,000 --> 00:20:06,000

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

306

00:20:06,000 --> 00:20:13,000

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

307

00:20:13,000 --> 00:20:16,000

Three, two, one.

308

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

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

309

00:20:22,000 --> 00:20:23,000

Our plan was good.

310

00:20:23,000 --> 00:20:24,000

Great even.

311

00:20:24,000 --> 00:20:29,000

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

312

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

and then we added pure oxygen.

313

00:20:31,000 --> 00:20:34,000

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

314

00:20:34,000 --> 00:20:36,000

We got breached cannons.

315

00:20:36,000 --> 00:20:37,000

We got loud cracks.

316

00:20:37,000 --> 00:20:38,000

We got bangs.

317

00:20:38,000 --> 00:20:39,000

We got fire.

318

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.

319

00:20:46,000 --> 00:20:52,000

We have scientifically busted this device completely.

320

00:20:53,000 --> 00:20:54,000

But here's the thing.

321

00:20:54,000 --> 00:20:59,000

I have to imagine that if you put Jamie and I in an abandoned lumber yard,

322

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

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

323

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

Let's call it.

324

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

Yeah.

325

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

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

326

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

Welcome back.

327

00:21:25,000 --> 00:21:26,000

Here's the scene.

328

00:21:26,000 --> 00:21:28,000

The A-team is stranded in a lumber yard.

329

00:21:28,000 --> 00:21:31,000

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

330

00:21:31,000 --> 00:21:34,000

Now, instead of wanting to escape or run away,

331

00:21:34,000 --> 00:21:39,000

the A-team builds an elaborate device to punish the bad guys when they return.

332

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

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

333

00:21:44,000 --> 00:21:46,000

Three, two, one.

334

00:21:46,000 --> 00:21:48,000

It totally didn't work.

335

00:21:48,000 --> 00:21:51,000

But we've stranded ourselves in a lumber yard,

336

00:21:51,000 --> 00:21:57,000

and we are going to attempt to build our own device to punish the bad guys when they return.

337

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

So it'll be a pretty good show.

338

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

The goal is simple.

339

00:22:02,000 --> 00:22:07,000

With one hour on the clock, can Adam and Jamie, using only the stuff they find,

340

00:22:07,000 --> 00:22:12,000

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

341

00:22:12,000 --> 00:22:16,000

Well, first up, they need a plan.

342

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

So, shooting these is ammo.

343

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

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

344

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

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

345

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

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

346

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

We've got one on the...

347

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

There's a trailer over there.

348

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

The trailer is beautiful.

349

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

And so somehow we spin that up, right?

350

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

That's going to be terrifying.

351

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?

352

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

Well, I saw this wrench over here.

353

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

Dude.

354

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

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

355

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

When you smile, it makes me nervous.

356

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.

357

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

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

358

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

Yeah.

359

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

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

360

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.

361

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

But will it spin it up to speed?

362

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

Okay, you ready?

363

00:23:30,000 --> 00:23:31,000

I'm ready. Go for it.

364

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

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

365

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

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

366

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

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

367

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

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

368

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

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

369

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

In theory, this is like a pitching machine.

370

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

But remember, we're doing this with lumber.

371

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

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

372

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

And there are a lot of moving parts here.

373

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

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

374

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

which is the whole point of this.

375

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

While Jamie gets on with integrating the flywheel...

376

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

Alright, do it.

377

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

Adam's taking aim at the ammoth.

378

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

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

379

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

That's going to be awesome.

380

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

I absolutely love an indoor working like this.

381

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.

382

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

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

383

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

Yeah, baby!

384

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

Want to know how this works?

385

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

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

386

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

This ammo box sits right about here.

387

00:25:05,000 --> 00:25:10,000

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

388

00:25:10,000 --> 00:25:14,000

until that piece of wood contacts the spinning wheel.

389

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.

390

00:25:21,000 --> 00:25:26,000

Then Jamie pulls this back, you see all the ammo drops down and he's ready for another one.

391

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

Bang!

392

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.

393

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

Alright, tat tat tat tat tat.

394

00:25:37,000 --> 00:25:43,000

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

395

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

There we go.

396

00:25:44,000 --> 00:25:46,000

He's aligned the wheel with the torque wrench.

397

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

And added some safety shielding.

398

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

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

399

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

That's why I built this structure this way.

400

00:25:58,000 --> 00:26:05,000

So as I'm behind it, firing it, I'll be protected by stuff in the event this actually takes off.

401

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

This is going to work killer.

402

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

I hope so.

403

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

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

404

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

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

405

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.

406

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.

407

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

That's great.

408

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.

409

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

This should work beautifully.

410

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.

411

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

Love making stuff like this.

412

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

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

413

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

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

414

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

With time running out.

415

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

That's it.

416

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

Okay.

417

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

The mythbusters attach the wheel to the aimer.

418

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

Look, I'm pretty good.

419

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

Then the magazine to the wheel.

420

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

Dude, it's almost perfectly balanced.

421

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

Almost like we knew what we were doing.

422

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

Almost like we knew what we were doing.

423

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

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

424

00:27:29,000 --> 00:27:31,000

That's terrifying to stand here.

425

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

Fire!

426

00:27:33,000 --> 00:27:34,000

Three, two, one!

427

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

That's what I'm talking about.

428

00:27:42,000 --> 00:27:43,000

Hey!

429

00:27:43,000 --> 00:27:44,000

Hey!

430

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

I hit the camera!

431

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

That is awesome.

432

00:27:52,000 --> 00:27:55,000

Our machine is working beautifully.

433

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

It's a wonder to behold.

434

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

It is terrifying to be behind.

435

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

When it starts out, the wheel is slightly unbalanced.

436

00:28:02,000 --> 00:28:03,000

It's kind of like...

437

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

And it settles in.

438

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.

439

00:28:12,000 --> 00:28:13,000

I hit a camera.

440

00:28:13,000 --> 00:28:15,000

It was beautiful.

441

00:28:15,000 --> 00:28:16,000

Three, two, one!

442

00:28:16,000 --> 00:28:18,000

Shooting at over 50 miles an hour.

443

00:28:18,000 --> 00:28:20,000

That is awesome.

444

00:28:20,000 --> 00:28:23,000

Their forklift fire is the real deal.

445

00:28:24,000 --> 00:28:27,000

But next, the ultimate test.

446

00:28:27,000 --> 00:28:31,000

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

447

00:28:31,000 --> 00:28:35,000

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

448

00:28:35,000 --> 00:28:36,000

That is perfect.

449

00:28:36,000 --> 00:28:39,000

Where their above ground control caused carnage.

450

00:28:44,000 --> 00:28:46,000

He's legless below the knees.

451

00:28:46,000 --> 00:28:50,000

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

452

00:28:50,000 --> 00:28:53,000

All it's left for us to do now is to dig a sewer,

453

00:28:53,000 --> 00:28:56,000

and then we'll have to find a way to get him out of here.

454

00:28:56,000 --> 00:28:59,000

And then we'll have to find a way to get him out of here.

455

00:28:59,000 --> 00:29:03,000

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

456

00:29:06,000 --> 00:29:09,000

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

457

00:29:09,000 --> 00:29:12,000

Next, the guys need a city sewer.

458

00:29:12,000 --> 00:29:14,000

Nothing like digging a good trench.

459

00:29:14,000 --> 00:29:20,000

To see if the same blast, but just barely underground, will be injury free for all.

460

00:29:20,000 --> 00:29:24,000

Next, we put trench plates across here.

461

00:29:24,000 --> 00:29:27,000

Yeah, you're spot on.

462

00:29:27,000 --> 00:29:31,000

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

463

00:29:31,000 --> 00:29:34,000

And boom, you got a sewer.

464

00:29:34,000 --> 00:29:42,000

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

465

00:29:45,000 --> 00:29:49,000

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

466

00:29:49,000 --> 00:29:52,000

It is also incredibly dangerous.

467

00:29:52,000 --> 00:29:57,000

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

468

00:29:57,000 --> 00:29:59,000

Filled up.

469

00:29:59,000 --> 00:30:01,000

That's it.

470

00:30:01,000 --> 00:30:06,000

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

471

00:30:06,000 --> 00:30:09,000

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

472

00:30:09,000 --> 00:30:14,000

but you really, it's best if the two people doing its thoughts are identical.

473

00:30:14,000 --> 00:30:16,000

Like a well-oiled machine.

474

00:30:16,000 --> 00:30:19,000

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

475

00:30:19,000 --> 00:30:24,000

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

476

00:30:24,000 --> 00:30:27,000

Alright, it looks beautiful.

477

00:30:27,000 --> 00:30:28,000

Yeah.

478

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

I love it when a plan comes together.

479

00:30:32,000 --> 00:30:34,000

Oh, shut up.

480

00:30:34,000 --> 00:30:40,000

With the trench plates in place, the guys next man up their manhole.

481

00:30:40,000 --> 00:30:42,000

Hello.

482

00:30:42,000 --> 00:30:44,000

And after a quick sewer survey.

483

00:30:44,000 --> 00:30:47,000

Oh, yeah.

484

00:30:47,000 --> 00:30:49,000

Looks great down here, man.

485

00:30:49,000 --> 00:30:50,000

Like a real sewer.

486

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

And it's nice and cool.

487

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

We should have lunch down there.

488

00:30:53,000 --> 00:30:54,000

That's a fabulous idea.

489

00:30:54,000 --> 00:30:56,000

The great backfill can begin.

490

00:30:56,000 --> 00:31:00,000

And that right there, that's your man in the show.

491

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

As Jamie buries most, but not all of their sewer system.

492

00:31:04,000 --> 00:31:07,000

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

493

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

Among them things, wow, Jamie's pretty good with the excavator.

494

00:31:10,000 --> 00:31:12,000

I wonder if he had help.

495

00:31:12,000 --> 00:31:17,000

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

496

00:31:17,000 --> 00:31:20,000

And it involves replicating the circumstances of the myth.

497

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

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

498

00:31:23,000 --> 00:31:25,000

Key word, system.

499

00:31:25,000 --> 00:31:29,000

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

500

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

There's a lot of places for the expanding gases of the explosion to go.

501

00:31:33,000 --> 00:31:36,000

And that is 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

00:31:42,000 --> 00:31:44,000

Ah, to do it.

504

00:31:44,000 --> 00:31:47,000

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. Pardon me, pardon me.

518

00:32:31,000 --> 00:32:34,000

Thank you, sir. Thanks for the ride.

519

00:32:34,000 --> 00:32:39,000

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

520

00:32:39,000 --> 00:32:47,000

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

521

00:32:47,000 --> 00:32:52,000

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

522

00:32:52,000 --> 00:32:57,000

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

523

00:32:57,000 --> 00:32:59,000

Here we go.

524

00:32:59,000 --> 00:33:02,000

Three, two, one.

525

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.

526

00:33:09,000 --> 00:33:14,000

Keep coming and a little more. Perfect.

527

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

All that leaves is a prediction.

528

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.

529

00:33:23,000 --> 00:33:30,000

But then on the other hand, we have that manhole cover which is most likely going to turn into fragments

530

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

because it's cast iron and that's brittle.

531

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

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

532

00:33:39,000 --> 00:33:44,000

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

533

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

Are you ready? Yeah.

534

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

All right, I'm going to hook it up.

535

00:33:51,000 --> 00:33:56,000

There's one. There's two.

536

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

Count it down.

537

00:33:58,000 --> 00:33:59,000

All right.

538

00:34:01,000 --> 00:34:07,000

Explosives in the manhole cover in three, two, one.

539

00:34:10,000 --> 00:34:12,000

That did it. Wow.

540

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

That was awesome.

541

00:34:18,000 --> 00:34:24,000

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

542

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.

543

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

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

544

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

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

545

00:34:43,000 --> 00:34:44,000

Second explosion.

546

00:34:44,000 --> 00:34:50,000

The dynamite in the sewer, just as we saw on the A-Team, dented the oil pan of this car but did not break through.

547

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

It looks like it didn't actually penetrate though.

548

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

Wow.

549

00:34:53,000 --> 00:35:02,000

My prediction, post-explosion, pre-datacrunch is that our dude is totally fine, but we've got to check all that stuff out first.

550

00:35:04,000 --> 00:35:05,000

Yep.

551

00:35:05,000 --> 00:35:08,000

While initial impressions are good, it's all down to the data.

552

00:35:09,000 --> 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.

553

00:35:19,000 --> 00:35:25,000

This time, with the sewer, he only experienced 9 psi. That's less than half.

554

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.

555

00:35:32,000 --> 00:35:36,000

A little unhappy him with some bruises, but he would have walked away.

556

00:35:38,000 --> 00:35:47,000

So Buster's only bruised. How about the bystanders? Last time a lethal 90 psi. This time, 11 psi.

557

00:35:47,000 --> 00:35:55,000

That's right. Isn't that cool? Not only is the blast survivable for the guy inside the car, it's also for the bystanders by the side of the road.

558

00:35:55,000 --> 00:35:59,000

I don't know, Doctor, but you might want to have that shoulder looked at. Kind of weird.

559

00:36:01,000 --> 00:36:03,000

It's an astounding result.

560

00:36:05,000 --> 00:36:13,000

Simply by placing the dynamite millimeters below their manhole, the shockwave takes out the car and the car alone.

561

00:36:14,000 --> 00:36:22,000

This is really cool. 95% of the time, what you see in movies and television has no bearing on actual physics.

562

00:36:22,000 --> 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.

563

00:36:31,000 --> 00:36:38,000

That is, putting dynamite inside a manhole is a fine way of making a non-lethal explosion that will take out a car.

564

00:36:39,000 --> 00:36:41,000

So how do you want to call this one?

565

00:36:41,000 --> 00:36:49,000

Well, I think the A-team's plan was an excellent plan. The difference between the above ground blast and the sewer blast is patently obvious.

566

00:36:49,000 --> 00:36:55,000

That is a survivable explosion. This one, less so. I'd say it's plausible.

567

00:36:56,000 --> 00:36:59,000

Isn't that thing kind of getting disgusting by now?

568

00:36:59,000 --> 00:37:04,000

It's totally disgusting. It's like chewing on a little tobacco soap sock. It's gross.

569

00:37:12,000 --> 00:37:16,000

Alright, let's get out of here.

570

00:37:16,000 --> 00:37:17,000

Where to, Colonel?

571

00:37:17,000 --> 00:37:19,000

Back to the lumberyard.

572

00:37:23,000 --> 00:37:25,000

Yeah!

573

00:37:34,000 --> 00:37:36,000

Fire! Three, two, one!

574

00:37:36,000 --> 00:37:44,000

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?

575

00:37:44,000 --> 00:37:45,000

Good enough.

576

00:37:45,000 --> 00:37:51,000

So I want to make a bad guy that pops up like one of those ducks at the amusement park.

577

00:37:52,000 --> 00:37:56,000

And I'm going to cut it out of this foam board. Absolutely badass.

578

00:37:56,000 --> 00:37:59,000

That guy is going to be our first bad guy. Let's try it out.

579

00:37:59,000 --> 00:38:01,000

That's a stable state.

580

00:38:01,000 --> 00:38:06,000

I think that'll work.

581

00:38:17,000 --> 00:38:21,000

In an abandoned lumberyard, it's time to play ball.

582

00:38:23,000 --> 00:38:26,000

Because the Mythbusters air-powered pitching machine...

583

00:38:26,000 --> 00:38:28,000

Three, two, one!

584

00:38:29,000 --> 00:38:32,000

...is firing on all cylinders.

585

00:38:33,000 --> 00:38:35,000

That is awesome!

586

00:38:40,000 --> 00:38:49,000

Well, our cannon is ready. And by our best estimates, this thing ought to fire these chunks of wood at something between 50 and 75 miles per hour.

587

00:38:49,000 --> 00:38:52,000

That is significant and dangerous.

588

00:38:52,000 --> 00:38:57,000

And I want to point out that this is a purely improvised build by me and Jamie.

589

00:38:57,000 --> 00:39:03,000

So all of this design was here on site. A sheer pleasure to see the classic Mythbusters build.

590

00:39:04,000 --> 00:39:09,000

Like the A-Team, the guys improvised their weapon in just one hour.

591

00:39:09,000 --> 00:39:12,000

But will it be able to hurt the henchmen?

592

00:39:13,000 --> 00:39:14,000

Last one.

593

00:39:15,000 --> 00:39:16,000

Locked and loaded.

594

00:39:16,000 --> 00:39:18,000

Time to find out.

595

00:39:18,000 --> 00:39:20,000

What exactly are we testing?

596

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.

597

00:39:26,000 --> 00:39:27,000

Hit it!

598

00:39:27,000 --> 00:39:29,000

Yep. Let's do it.

599

00:39:31,000 --> 00:39:43,000

For us, given that we've busted the tree cannon approach entirely, we intend to test out our own firing mechanism, both in terms of accuracy, quickness to fire, and the time it takes to take out the bad guys.

600

00:39:44,000 --> 00:39:52,000

Outside the double doors, there are seven bad guys, each ready to pop up just where they did in the A-Team scene.

601

00:39:52,000 --> 00:39:54,000

It's showtime!

602

00:39:55,000 --> 00:39:59,000

But can Jamie take them down in just 70 seconds?

603

00:40:03,000 --> 00:40:05,000

It's a perfect start.

604

00:40:08,000 --> 00:40:13,000

As Jamie takes out pop-ups one and two with shots straight to the head.

605

00:40:16,000 --> 00:40:20,000

And from there, well, let's roll an A-Team montage.

606

00:40:24,000 --> 00:40:26,000

Yeah!

607

00:40:28,000 --> 00:40:30,000

Oh! No blow!

608

00:40:36,000 --> 00:40:39,000

Yes! One more! There's like a one last one!

609

00:40:46,000 --> 00:40:48,000

Yeah!

610

00:40:49,000 --> 00:40:51,000

Woo-hoo!

611

00:40:52,000 --> 00:40:59,000

One minute, five seconds! That was awesome! I love when a plan comes together!

612

00:41:02,000 --> 00:41:08,000

We had our targets rigged so that when I hit one, another one would pop up in its place.

613

00:41:08,000 --> 00:41:13,000

I was able to get them one after the other until I had to get the farthest guy out.

614

00:41:13,000 --> 00:41:19,000

The thing is, the further the range, the more that these sticks start to tumble and do unpredictable things.

615

00:41:19,000 --> 00:41:22,000

But even though I took every stick of ammo I had...

616

00:41:23,000 --> 00:41:25,000

Yeah!

617

00:41:25,000 --> 00:41:29,000

In the end, I got every single guy. The rig worked like a charm.

618

00:41:30,000 --> 00:41:31,000

Yeah!

619

00:41:32,000 --> 00:41:38,000

Our task was pretty straightforward. Replicate a clip from the A-Team to Mythbusters style.

620

00:41:38,000 --> 00:41:44,000

Same ammo, completely new construction. We used a spinning wheel this time and an air wrench.

621

00:41:44,000 --> 00:41:45,000

Yeah!

622

00:41:45,000 --> 00:41:48,000

And guess what? It worked magnificently.

623

00:41:49,000 --> 00:41:52,000

It worked exactly like we saw in the clip. It was awesome.

624

00:41:52,000 --> 00:41:59,000

Firing at 60 miles an hour with near perfect pitch, their rig was the real deal.

625

00:41:59,000 --> 00:42:04,000

And having scratch-pilted in under an hour using junk lying around the lumber yard,

626

00:42:04,000 --> 00:42:09,000

you might say that the Mythbusters have out-18'd the A-Team.

627

00:42:09,000 --> 00:42:13,000

Hey A-Team, if you need our help again, you know where to find us.

628

00:42:22,000 --> 00:42:25,000

The Mythbusters