

1

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

Give us a break and don't try anything you're about to see us do at home.

2

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

How to keep your cool and your cash.

3

00:00:33,000 --> 00:00:40,000

Adam and Jamie go round in circles to settle a great automotive mystery.

4

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

I get so much pleasure out of this discomfort.

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

Who are the Mythbusters?

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

Am I missing an eyebrow?

7

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

Adam Savage

8

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

I reject the reality and substitute my own.

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

And Jamie Heidemann

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

Crack, damn you.

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

I wouldn't say Jamie's an evil genius.

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

Between them more than 30 years special effects experience.

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00:01:02,000 --> 00:01:04,000

When will the fun ever stop?

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00:01:04,000 --> 00:01:08,000

They don't just tell the myths, they put them to the test.

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

When the Mythbusters and machinery mix,

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00:01:20,000 --> 00:01:23,000

the result is usually mayhem.

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

So what have we here?

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00:01:26,000 --> 00:01:29,000

A big crane, some shipping containers,

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00:01:29,000 --> 00:01:32,000

cranes and pork lips and everything's all running at once.

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

And Buster in a boom lift.

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00:01:34,000 --> 00:01:37,000

I think Buster's about to be annihilated.

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00:01:37,000 --> 00:01:40,000

Looks like we're in for some big scale myth busting.

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00:01:40,000 --> 00:01:43,000

In fact, they don't come much bigger than this one.

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00:01:43,000 --> 00:01:47,000

There's so much potential for major disaster in this.

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00:01:47,000 --> 00:01:49,000

That's what's exciting.

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00:01:49,000 --> 00:01:52,000

No matter what happens something cool is going to look cool.

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00:01:57,000 --> 00:02:02,000

Alright guys, right off the discovery website comes a absolute gem for you to do.

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

I'm a little jealous.

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

A poster who gave us the tale of a guy using a boom lift,

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

like one of those extended arm cherry pickers,

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00:02:09,000 --> 00:02:12,000

to try and lift the engine out of his car.

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00:02:12,000 --> 00:02:16,000

He's using a chain or something and that fails as he's doing it.

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00:02:16,000 --> 00:02:21,000

And the boom lift catapults this poor guy up and over his house and into a tree.

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00:02:21,000 --> 00:02:23,000

Whoa!

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00:02:23,000 --> 00:02:24,000

Think you're up to it?

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

I think that sounds like a real fun one.

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

Not for Buster it won't be.

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

He's going to be in the boom lift.

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00:02:30,000 --> 00:02:34,000

A car engine will be suspended from the lift on a length of chain.

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00:02:34,000 --> 00:02:38,000

At the right moment, a quick release mechanism will be triggered.

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00:02:38,000 --> 00:02:43,000

The engine will drop and Buster will be catapulted out of the boom lift.

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00:02:43,000 --> 00:02:44,000

Simple, right?

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

Well you know it seems pretty straight forward right now,

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00:02:46,000 --> 00:02:50,000

but I think it's going to get pretty tricky and it's going to use all your skills.

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

First thing we need to do is find a boom lift.

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00:02:52,000 --> 00:02:56,000

And you know they're not cheap so we've got to get right on that.

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00:02:56,000 --> 00:03:01,000

Well also remember it's probably going to be the last thing you're ever going to do with this boom lift.

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

So what? We don't want to go buy a brand new one.

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

Maybe we can rent one, what do you think?

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00:03:06,000 --> 00:03:11,000

Now seriously, would you rent anything to the mythbusters?

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00:03:11,000 --> 00:03:18,000

Just so happens they found a second hand boom lift, free to a good home.

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00:03:18,000 --> 00:03:21,000

Jamie and the build team go kickin' tires.

53

00:03:21,000 --> 00:03:26,000

We've got pretty good use out of it, but the problem is the engine failed for some reason.

54

00:03:26,000 --> 00:03:30,000

I think it needs a little work, but it's going to cost like \$3,000.

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00:03:30,000 --> 00:03:35,000

And it's not worth it to us to spend that much money on it.

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00:03:35,000 --> 00:03:38,000

So I'd rather just give it away rather than sell it.

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00:03:40,000 --> 00:03:44,000

Now the myth doesn't specify the size of the boom lift.

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00:03:44,000 --> 00:03:47,000

The arm on this one extends 40 feet.

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00:03:47,000 --> 00:03:52,000

A 40 foot extension is quite a bit and heck it's free.

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00:03:52,000 --> 00:03:57,000

I think this is great, this is like a \$50,000 machine or something brand new.

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00:03:57,000 --> 00:04:01,000

And it works, it's everything we need.

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

Who knows with a little tweaking it might be just a perfectly functional machine.

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

It's not like Jamie to just jump in like that and sure enough it's not long before that mustache starts a twitching.

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00:04:15,000 --> 00:04:21,000

The only question I would have would be what are our other choices and is there one with a longer boom on it?

65

00:04:21,000 --> 00:04:29,000

Because 40 feet, it's quite a ways up there, but if you have like an 80 or 90 footer,

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00:04:29,000 --> 00:04:34,000

that would seem more likely to me to be able to get up to some serious speed

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00:04:34,000 --> 00:04:38,000

at the end of that long of a lever that it would throw something 200 feet.

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00:04:38,000 --> 00:04:42,000

When it comes to catapulting, size does matter.

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00:04:42,000 --> 00:04:45,000

So it's thanks but no thanks.

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00:04:47,000 --> 00:04:51,000

On the other side of town, a bigger boom lift awaits.

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00:04:51,000 --> 00:04:55,000

There's nothing these junkyard junkies love more than a good rummage.

72

00:04:55,000 --> 00:04:58,000

Look he's coming, he's coming straight for us.

73

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

This rusting relic has a 60 foot arm.

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00:05:04,000 --> 00:05:08,000

This feels nice and secure, I definitely get on here and do some work.

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00:05:08,000 --> 00:05:11,000

And can you believe it, it's also being given away.

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00:05:11,000 --> 00:05:13,000

This thing's got a little gremlin in it.

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00:05:13,000 --> 00:05:16,000

You run just fine and it stops.

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00:05:16,000 --> 00:05:19,000

We call that Murphy. He's coming and our stop.

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00:05:19,000 --> 00:05:26,000

I think I know what the gremlin is, but basically this boom has reached the end of its boom lift life, so I'm not going to fix it.

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00:05:26,000 --> 00:05:29,000

Okay, but will the build team be able to get her going?

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00:05:29,000 --> 00:05:34,000

Hydraulics all work fine on this thing. All the controls work fine, everything works fine on this thing.

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00:05:34,000 --> 00:05:40,000

It's got an electrical gremlin and I do believe that it's either that solenoid,

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

or it's that one there.

84

00:05:42,000 --> 00:05:45,000

The business end still works without the engine.

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

Carrie takes it for a test drive.

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00:05:47,000 --> 00:05:48,000

Do you feel that?

87

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

Stordinarily bouncy.

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

Yeah, you can manage it 60 feet out.

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00:05:53,000 --> 00:05:54,000

Oh boy.

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

It's like the end of being on the end of a fishing drive.

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00:05:56,000 --> 00:05:57,000

Yeah.

92

00:05:57,000 --> 00:05:59,000

That's what they're talking about.

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00:05:59,000 --> 00:06:02,000

I could see someone having a lot of fun with this and getting into trouble.

94

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

It could be very dangerous, very quick.

95

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

My friend, that is music to the Mythbusters Eels.

96

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

This bouncy boom lift is bringing out Carrie's sadistic side.

97

00:06:13,000 --> 00:06:16,000

Oh guys, this is going to be incredible.

98

00:06:18,000 --> 00:06:21,000

We definitely could throw him.

99

00:06:21,000 --> 00:06:23,000

Wow, look at that.

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

It's like a triple.

101

00:06:24,000 --> 00:06:27,000

That's insane.

102

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

Oh, that's quite a lot of bounce there.

103

00:06:33,000 --> 00:06:35,000

So maybe you guys can get me to a...

104

00:06:35,000 --> 00:06:36,000

Whoa.

105

00:06:36,000 --> 00:06:39,000

Guys, I think this one's it.

106

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

That arm really sticks out there quite a ways.

107

00:06:42,000 --> 00:06:43,000

It's a heck of a lever.

108

00:06:43,000 --> 00:06:45,000

Tire's got off the ground.

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00:06:45,000 --> 00:06:46,000

Yeah.

110

00:06:46,000 --> 00:06:47,000

Now he says that it'll run.

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00:06:47,000 --> 00:06:49,000

I guess it's a bit of a risk once we get it up there.

112

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

We're kind of committed.

113

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

It does come with manuals.

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00:06:52,000 --> 00:06:55,000

That's probably going to be our biggest problem with this thing running.

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00:06:55,000 --> 00:06:58,000

Tari, don't worry about the boom lift.

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

How about poor old Buster?

117

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

Will he be working?

118

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

Looks like he's been mauled by a great white.

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00:07:06,000 --> 00:07:09,000

So Buster is really busted up now.

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00:07:09,000 --> 00:07:10,000

Like really badly.

121

00:07:10,000 --> 00:07:13,000

How did Buster end up in such a mess?

122

00:07:13,000 --> 00:07:18,000

Well, Adam and Jamie were trying to crack the elevator of death myth.

123

00:07:18,000 --> 00:07:22,000

In the name of science, Buster took an eight-story free fall

124

00:07:22,000 --> 00:07:26,000

and soon understood the gravity of the situation.

125

00:07:33,000 --> 00:07:37,000

I don't know if we can put it back together.

126

00:07:37,000 --> 00:07:39,000

Yeah, Scotty can do it.

127

00:07:39,000 --> 00:07:41,000

He's still smiling though.

128

00:07:41,000 --> 00:07:43,000

He always has that little smile.

129

00:07:43,000 --> 00:07:45,000

Still to come.

130

00:07:45,000 --> 00:07:47,000

Which will save you gas?

131

00:07:47,000 --> 00:07:49,000

AC on or windows down?

132

00:07:49,000 --> 00:07:52,000

Jamie's going to hate this a lot more than I am.

133

00:07:52,000 --> 00:07:55,000

Adam and Jamie go driving myth crazy.

134

00:07:55,000 --> 00:07:59,000

And after the break, will it be bye-bye Buster?

135

00:07:59,000 --> 00:08:02,000

The boom lift catapult is locked and loaded.

136

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

The myth Busters want to know,

137

00:08:13,000 --> 00:08:16,000

can you turn a boom lift into a deadly catapult?

138

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

This is going to be incredible!

139

00:08:18,000 --> 00:08:21,000

Buster's going to be in the boom lift when it goes off,

140

00:08:21,000 --> 00:08:24,000

but he's already gone to pieces.

141

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

But we can rebuild him.

142

00:08:26,000 --> 00:08:29,000

Gentlemen, Scotty has the technology.

143

00:08:29,000 --> 00:08:32,000

So I think what I'm going to do is rebuild his shoulder

144

00:08:32,000 --> 00:08:35,000

and modify it. I'm going to make it out of steel.

145

00:08:35,000 --> 00:08:40,000

Steel is a lot stronger than aluminum for impact.

146

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

Right Buster?

147

00:08:42,000 --> 00:08:45,000

Scotty begins the delicate surgery.

148

00:08:52,000 --> 00:08:55,000

Meanwhile, it's chaos in the car park.

149

00:08:57,000 --> 00:09:00,000

The boom lift's about to arrive.

150

00:09:17,000 --> 00:09:21,000

You can actually operate this thing almost entirely

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00:09:21,000 --> 00:09:23,000

just off battery power.

152

00:09:24,000 --> 00:09:28,000

But doing it that way sucks up a lot of juts

153

00:09:28,000 --> 00:09:31,000

and the battery will need constant recharging.

154

00:09:31,000 --> 00:09:34,000

It'll be better if the engine's running.

155

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

But first things first, it's touch and go,

156

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

but it looks like Buster's going to pull through.

157

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

So is that it? Is he ready for action again?

158

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

He is ready.

159

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

You've done a good job, Scotty.

160

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

Look at that brand new hips.

161

00:09:48,000 --> 00:09:51,000

What is that? Roll pins? Set screws.

162

00:09:51,000 --> 00:09:53,000

Nicely done.

163

00:09:53,000 --> 00:09:57,000

Then there's a grade eight half inch threaded stud in there.

164

00:09:59,000 --> 00:10:01,000

No rest for Scotty though.

165

00:10:01,000 --> 00:10:03,000

It's straight from Buster to boom lift.

166

00:10:03,000 --> 00:10:07,000

Just a little electrical gremlin, the guy said.

167

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

Dry. It's totally dry.

168

00:10:14,000 --> 00:10:17,000

Got a hole in the gas line, so Scotty's going to go see

169

00:10:17,000 --> 00:10:20,000

if she can find some new hose and we're going to try this again.

170

00:10:21,000 --> 00:10:25,000

Go, go, go, go, go, go, go, go, go, go, go, go, go.

171

00:10:25,000 --> 00:10:28,000

I don't know what this is.

172

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

I don't have one of these on my car.

173

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

Don't you know how to fix engines?

174

00:10:32,000 --> 00:10:35,000

Yeah, that's a myth that we're going to bust right now.

175

00:10:35,000 --> 00:10:37,000

Let's leave Scotty to get on with it.

176

00:10:37,000 --> 00:10:40,000

The catapult has been around since ancient Greece.

177

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

It's been around for a long time.

178

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

It's been around for a long time.

179

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

It's been around for a long time.

180

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

It's been around for a long time.

181

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

The catapult has been around since ancient Greece.

182

00:10:53,000 --> 00:10:57,000

According to the myth, the boom lift became a type of catapult

183

00:10:57,000 --> 00:10:59,000

known as attraction trebuchet.

184

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

Tension stored in the arm itself provides the flinging force.

185

00:11:04,000 --> 00:11:09,000

That's what the mythbusters hope to replicate, eventually.

186

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

I think it's time to call in the expert.

187

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

Would that be Jamie or Adam?

188

00:11:13,000 --> 00:11:15,000

Jamie, in this case.

189

00:11:16,000 --> 00:11:21,000

Tori and Kari, meanwhile, are handling the crucial matter of signage.

190

00:11:22,000 --> 00:11:27,000

Godspeed the Tosser and all who are catapulted from it.

191

00:11:27,000 --> 00:11:29,000

Assuming we ever get it going.

192

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

You'll have to clean it. It's just a little dirt in there.

193

00:11:31,000 --> 00:11:33,000

But the engine works fine. You're going to be in business.

194

00:11:33,000 --> 00:11:35,000

There's no question about it.

195

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

Okay? So I'd pull the whole car off and do a proper job.

196

00:11:39,000 --> 00:11:42,000

But this is one moody machine.

197

00:11:45,000 --> 00:11:47,000

No!

198

00:11:47,000 --> 00:11:51,000

And the curse of the cantakorous boom lift strikes.

199

00:11:51,000 --> 00:11:54,000

Watch out, watch out, sorry. Oh, we got an emergency.

200

00:11:54,000 --> 00:11:56,000

Kari cops an eye full of gas.

201

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

Yeah.

202

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

Go down, go down, go down.

203

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

It's like the ocean.

204

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

How long do you do this before it's at home?

205

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

You can do it for at least 15 minutes.

206

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

Kari'll be okay.

207

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

Well, it's a little red.

208

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

A little red.

209

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

As for the Tosser, it only works in fits and starts.

210

00:12:17,000 --> 00:12:19,000

Want to push that button?

211

00:12:20,000 --> 00:12:24,000

Still, that might be enough to test this myth.

212

00:12:25,000 --> 00:12:31,000

Okay, so our next step is to attach a chain between the engine and the basket with a quick release.

213

00:12:31,000 --> 00:12:35,000

And then we'll pull the quick release when we have it under tension and see how far Buster goes.

214

00:12:35,000 --> 00:12:37,000

Now take a ride.

215

00:12:37,000 --> 00:12:41,000

Not surprisingly, Buster seems a little reluctant to get on the boom lift.

216

00:12:41,000 --> 00:12:43,000

Buster!

217

00:12:43,000 --> 00:12:45,000

Come on, stop climbing around.

218

00:12:45,000 --> 00:12:47,000

What is this? Pants.

219

00:12:53,000 --> 00:12:58,000

As per the myth, a car engine will dangle from a length of chain under the lift.

220

00:12:58,000 --> 00:13:03,000

Just to note, it takes quite a lot of force to move the quick release under load.

221

00:13:03,000 --> 00:13:05,000

How did you guys do it? You need to deal with it?

222

00:13:05,000 --> 00:13:08,000

I did it with a piece of 16th inch cable.

223

00:13:08,000 --> 00:13:09,000

Okay.

224

00:13:09,000 --> 00:13:15,000

And not only that, the quick release requires an up pull or a down pull, so you'll need to rig a pulley in line.

225

00:13:15,000 --> 00:13:18,000

So you can transfer that force from the side.

226

00:13:18,000 --> 00:13:21,000

Because you don't want to be anywhere near it when it goes off.

227

00:13:25,000 --> 00:13:28,000

You're not doing it the Jamie way, obviously.

228

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

I know, I'm doing it the Adam way.

229

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

Quick and dirty, but it gets done.

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

It looks like these kind of accidents happen all the time.

231

00:13:34,000 --> 00:13:39,000

It's actually more of a question with this myth whether Buster's going to be shot over a house

232

00:13:39,000 --> 00:13:42,000

or if he's just going to tumble out of the basket under the ground.

233

00:13:42,000 --> 00:13:46,000

For the first test, the tosser's arm won't be extended.

234

00:13:46,000 --> 00:13:50,000

Now, just got to work out who's going to operate the quick release.

235

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

Road, sham, butt.

236

00:13:53,000 --> 00:13:55,000

Hot man, now.

237

00:13:55,000 --> 00:13:56,000

Alright, whoa, whoa.

238

00:13:56,000 --> 00:13:59,000

It's face off. Me and Scotty.

239

00:14:03,000 --> 00:14:06,000

Looks like Scotty wins.

240

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

Right, it's the moment of truth.

241

00:14:08,000 --> 00:14:13,000

Will Buster be a far flung dummy or is this myth far fetched?

242

00:14:13,000 --> 00:14:18,000

Five, four, three, two, one.

243

00:14:20,000 --> 00:14:21,000

Wow.

244

00:14:21,000 --> 00:14:22,000

That was cool.

245

00:14:22,000 --> 00:14:23,000

Buster.

246

00:14:24,000 --> 00:14:25,000

He didn't even move.

247

00:14:25,000 --> 00:14:27,000

Buster barely wobbled.

248

00:14:27,000 --> 00:14:30,000

Well, that was the most anemic catapult I've ever seen.

249

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

In fact, Buster didn't even budge.

250

00:14:32,000 --> 00:14:35,000

He didn't like quiver hardly on that one.

251

00:14:35,000 --> 00:14:41,000

So now we're going to lift the boom up to where it's kind of in the same position

252

00:14:41,000 --> 00:14:43,000

and extend it all the way out from there.

253

00:14:43,000 --> 00:14:49,000

And I'm hoping that that'll actually create a little bit more of a whip when we let go of the engine.

254

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

Alright, I'm going to count down.

255

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

49, 48.

256

00:14:54,000 --> 00:14:55,000

Scotty.

257

00:14:55,000 --> 00:14:59,000

Five, four, three, two, one.

258

00:15:01,000 --> 00:15:03,000

And Buster didn't even spill his coffee.

259

00:15:03,000 --> 00:15:05,000

He didn't even drop the cup.

260

00:15:06,000 --> 00:15:09,000

Well, Scotty's had an idea.

261

00:15:09,000 --> 00:15:13,000

Well, I'm thinking that if this guy was pulling it from a car and he was up in the basket,

262

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

the engine might have been caught on something.

263

00:15:16,000 --> 00:15:19,000

And he couldn't tell and that would have been enough to break the chain.

264

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

So should we get the caddy in here?

265

00:15:22,000 --> 00:15:23,000

It's Earl's turn.

266

00:15:23,000 --> 00:15:25,000

Alright, let's hook it up to the caddy.

267

00:15:25,000 --> 00:15:28,000

Jamie, like Buster, is unmoved.

268

00:15:28,000 --> 00:15:35,000

Even if it was double what it just did, which it won't do, you know, nothing's going to happen.

269

00:15:35,000 --> 00:15:38,000

If Scotty believes it can happen, that means a lot of people believe it can happen,

270

00:15:38,000 --> 00:15:39,000

so we should try to prove it.

271

00:15:39,000 --> 00:15:40,000

It'll be thorough.

272

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

Okay, let me know when you're ready.

273

00:15:44,000 --> 00:15:48,000

The size of the boom lift might actually be working against them.

274

00:15:48,000 --> 00:15:52,000

The tosser's big enough to absorb the force of the engine's sudden release.

275

00:15:52,000 --> 00:15:55,000

Will Earl's weight make any difference?

276

00:15:56,000 --> 00:16:00,000

Five, four, three, two, one.

277

00:16:04,000 --> 00:16:05,000

Wow.

278

00:16:05,000 --> 00:16:07,000

Dude, he's still holding onto his coffee.

279

00:16:07,000 --> 00:16:08,000

Well, there you go.

280

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

We're going to have to elaborate on the myth.

281

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

We're going to have to do this myth busters way?

282

00:16:12,000 --> 00:16:13,000

Yeah.

283

00:16:13,000 --> 00:16:19,000

Doing things the myth busters way usually spells trouble on a tight, tannic scale.

284

00:16:19,000 --> 00:16:23,000

The build team has an idea and it's a biggie.

285

00:16:23,000 --> 00:16:27,000

But before they go big, they've got to go small.

286

00:16:27,000 --> 00:16:31,000

Tori sets about building a scale model boom lift.

287

00:16:31,000 --> 00:16:34,000

What we're trying to do is turn this boom lift into a catapult.

288

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

So an idea we came up with was turning the front axles into an actual pivot point.

289

00:16:39,000 --> 00:16:40,000

Raising...

290

00:16:40,000 --> 00:16:44,000

And then just using the weight of the body of the thing as the catapult weight to.

291

00:16:44,000 --> 00:16:45,000

Exactly.

292

00:16:45,000 --> 00:16:48,000

What we're going to do is we're going to raise it up, grab these points here,

293

00:16:48,000 --> 00:16:52,000

and then let the actual thing swing forward, just like that.

294

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

So this is a scale model.

295

00:16:54,000 --> 00:16:59,000

And then we have scale model truck containers that we're going to use to put this on and use it to lift it up.

296

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

You think those will be strong enough?

297

00:17:01,000 --> 00:17:02,000

The truck containers?

298

00:17:02,000 --> 00:17:03,000

Yeah.

299

00:17:03,000 --> 00:17:04,000

I don't know.

300

00:17:04,000 --> 00:17:05,000

I mean, how much does this thing weigh?

301

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

This thing actually weighs around 25,000 pounds.

302

00:17:08,000 --> 00:17:11,000

I can reinforce those.

303

00:17:11,000 --> 00:17:14,000

Well, it also looks like it's not quite high enough to get a full swing.

304

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

If you wanted to catapult something, you needed it to go all the way over, right?

305

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

Yeah.

306

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

Right now we're hitting right there.

307

00:17:20,000 --> 00:17:21,000

So we've got to go up higher?

308

00:17:21,000 --> 00:17:23,000

We'll probably have to get two containers.

309

00:17:23,000 --> 00:17:24,000

They're totally stacked.

310

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

You can stack them and lock them together, right?

311

00:17:26,000 --> 00:17:27,000

Yeah.

312

00:17:27,000 --> 00:17:29,000

Well, no guts, no glory.

313

00:17:29,000 --> 00:17:34,000

How about a little demonstration using a cutout Jamie doll?

314

00:17:34,000 --> 00:17:37,000

Well, that's not too bad.

315

00:17:37,000 --> 00:17:40,000

That might have made it, you know, like 80, 100 feet or something.

316

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

I think that's pretty good.

317

00:17:42,000 --> 00:17:47,000

What Tori's proposing to build is called a counterweight trebuchet.

318

00:17:47,000 --> 00:17:52,000

This type of catapult, which was popular in the Middle Ages, lets gravity do the work.

319

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

Big rock at one end, even bigger counterweight at the other.

320

00:17:56,000 --> 00:18:01,000

When fired, the counterweight drops and the big rock goes about its business,

321

00:18:01,000 --> 00:18:04,000

certain to cause belligerence on the battlements.

322

00:18:04,000 --> 00:18:08,000

You black-hearted, bespilling dog.

323

00:18:08,000 --> 00:18:11,000

Never you, well-named poacher.

324

00:18:11,000 --> 00:18:15,000

And this would have to be the mother of all trebuchets.

325

00:18:15,000 --> 00:18:19,000

A colossal catapult in the heart of rural England.

326

00:18:19,000 --> 00:18:23,000

Built by a medieval enthusiast with a lot of time on his hands,

327

00:18:23,000 --> 00:18:28,000

this 30-ton monster has no problem flinging fiery fuel bombs.

328

00:18:28,000 --> 00:18:45,000

Oh, and if you're in the area, don't leave your vehicle unattended.

329

00:18:45,000 --> 00:18:57,000

Well, not bad, eh?

330

00:18:57,000 --> 00:18:58,000

Not bad.

331

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

Smashed it up pretty nice.

332

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

It won't drive again anyway, I don't think.

333

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

Not very well, no.

334

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

Will the tosser be able to wreak similar havoc?

335

00:19:09,000 --> 00:19:12,000

Turning heavy machinery into a medieval weapon.

336

00:19:13,000 --> 00:19:17,000

It doesn't get any more mythbusters than that.

337

00:19:17,000 --> 00:19:23,000

Still to come, it's all hands on deck as the boom lift becomes the world's biggest catapult.

338

00:19:23,000 --> 00:19:32,000

And next, which sucks up more fuel, raging air conditioning, or rolling down your windows?

339

00:19:42,000 --> 00:19:48,000

With world oil prices on the rise, everyone's looking for ways to save pennies at the pump.

340

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

How can you get better fuel economy?

341

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

Gentlemen, start your engines.

342

00:19:59,000 --> 00:20:01,000

So is this really an urban legend, Jamie?

343

00:20:01,000 --> 00:20:04,000

No, it's more of an urban puzzle.

344

00:20:04,000 --> 00:20:09,000

Like one of those things you would discuss endlessly, sitting in traffic, or debate on a road trip.

345

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

Yeah, the idea is that on a really hot day, it's more efficient to run with your air conditioning on full blast and your windows up than it is to drive with the windows down and the AC off.

346

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

Well, that seems pretty logical, that seems right to me.

347

00:20:22,000 --> 00:20:25,000

I don't know about that. AC use is an awful lot of power.

348

00:20:25,000 --> 00:20:29,000

Oh, I think a car with a windows open is creating an awful lot of drag.

349

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

That's what makes it a perfect test for mythbusters.

350

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

And that would be us.

351

00:20:33,000 --> 00:20:34,000

That would be us.

352

00:20:34,000 --> 00:20:35,000

Alright.

353

00:20:35,000 --> 00:20:42,000

Ever since the first auto air conditioners arrived in the 1940s, drivers have asked the question,

354

00:20:42,000 --> 00:20:48,000

do you get better fuel economy with the AC on or the windows down?

355

00:20:48,000 --> 00:20:54,000

The mythbusters are about to run two tests to find out once and for all.

356

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

Auto computer gurus Bob and Jesse are helping out with the first test.

357

00:20:59,000 --> 00:21:05,000

This computer will measure fuel consumption by monitoring the rate of air flow through the SUV's engine.

358

00:21:05,000 --> 00:21:10,000

This is going to calculate our average miles per gallon. This is our estimated miles per gallon.

359

00:21:10,000 --> 00:21:18,000

We've got a computer hooked up to the car. We're going to do 15 laps, 5 with the windows up, 5 with the windows down, and 5 with the windows up and the AC on full.

360

00:21:18,000 --> 00:21:23,000

We're going to see if the computer shows us a significant difference in the mileage of the car in those conditions.

361

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

Time to hit the road.

362

00:21:25,000 --> 00:21:32,000

Alright, on my countdown in 5, 4, 3, 2, 1, go.

363

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

The first 5 laps will measure fuel consumption with the windows up and the AC off.

364

00:21:39,000 --> 00:21:43,000

Now, this won't be a leisurely Sunday drive.

365

00:21:43,000 --> 00:21:50,000

SUV's aren't built for racetracks. Their tires certainly aren't. Also, the track is banked.

366

00:21:50,000 --> 00:21:53,000

And Jamie will have to concentrate all the way.

367

00:21:53,000 --> 00:22:02,000

Jamie's going to hate this a lot more than I am. I mean, I'm not going to find it pleasant, but I get so much pleasure out of his discomfort.

368

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

You know, Jamie, they regularly pull 160 miles per hour on the track.

369

00:22:07,000 --> 00:22:11,000

I'm not going to be laughing in a couple of minutes when I'm plowing one of these behemoths across the lanes.

370

00:22:11,000 --> 00:22:15,000

Jamie keeps the needle hovering at around 55 miles per hour.

371

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

After 5 laps with the windows up, the fuel consumption figures are in.

372

00:22:20,000 --> 00:22:24,000

Right now we're averaging 11.7 miles to a gallon.

373

00:22:24,000 --> 00:22:27,000

Now it's time to roll the windows down.

374

00:22:27,000 --> 00:22:35,000

It looks like we're averaging about 11.4 to 11.3 with all the windows down in the vehicle.

375

00:22:35,000 --> 00:22:41,000

Jamie, you're doing great. You are a tribute to American individualism.

376

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

I wish I could see his face right now.

377

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

It would be completely impassive. You wouldn't see a single change on it.

378

00:22:49,000 --> 00:22:57,000

That's windows up and AC on. Repeat, windows up and AC on. This is the last 5 laps.

379

00:23:03,000 --> 00:23:05,000

We're averaging 11.7.

380

00:23:08,000 --> 00:23:10,000

So we're averaging 11.7.

381

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

Jamie gets the checkered flag, but that SUV is no race car.

382

00:23:19,000 --> 00:23:24,000

I gotta say it's pretty intense and I'm going to be ill.

383

00:23:24,000 --> 00:23:29,000

We are going to be dead after this is over as far from exhaustion.

384

00:23:29,000 --> 00:23:35,000

I was starting to get a little more relaxed in it trying to lay back and go,

385

00:23:35,000 --> 00:23:38,000

you know, no big deal.

386

00:23:38,000 --> 00:23:44,000

You have to focus. It was a real stretch for me even to open and close the windows doing that.

387

00:23:44,000 --> 00:23:47,000

What was the difference in actual miles per gallon?

388

00:23:47,000 --> 00:23:52,000

With the windows up and AC on, it was right around 11.7 and 11.8.

389

00:23:52,000 --> 00:23:55,000

With AC on and off, it didn't make a difference that much.

390

00:23:55,000 --> 00:24:01,000

With the windows down, it was 11.3 and that's where it was making a difference with the drag of the wind.

391

00:24:01,000 --> 00:24:04,000

Wow. That seems pretty significant over a full tank of gas.

392

00:24:04,000 --> 00:24:05,000

Oh yeah. Big time.

393

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

So clearly it's more efficient to drive with the windows up and the air conditioning on

394

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

than to drive with the windows down.

395

00:24:12,000 --> 00:24:14,000

Yeah, definitely.

396

00:24:14,000 --> 00:24:15,000

That's what the computer said.

397

00:24:15,000 --> 00:24:17,000

So that's that all figured out.

398

00:24:17,000 --> 00:24:20,000

Not quite. There's still a question mark.

399

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

See, those figures are based on a computer model.

400

00:24:23,000 --> 00:24:26,000

That model assumes ideal conditions.

401

00:24:26,000 --> 00:24:31,000

Adam and Jamie like to test things out for themselves.

402

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

That's why they're doing the Average Joe test.

403

00:24:34,000 --> 00:24:37,000

Okay everybody from Jamie's car, come on, get on the scale.

404

00:24:37,000 --> 00:24:43,000

Two identical SUVs, two full tanks and two identical payloads.

405

00:24:43,000 --> 00:24:46,000

Everybody in Adam's car, let's get weighed in. Come on.

406

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

One SUV has the AC on and the other has the window down.

407

00:24:50,000 --> 00:24:56,000

The logic is simple. The vehicle that uses the most gas will stop first.

408

00:24:56,000 --> 00:25:01,000

It'll be a seven hour marathon and the boys have to be prepared.

409

00:25:01,000 --> 00:25:06,000

I got a whole regimen. I got bananas, I got cookies, I got candies, I got lots of coffee

410

00:25:06,000 --> 00:25:08,000

and I got lots of music.

411

00:25:08,000 --> 00:25:10,000

Come on Jamie.

412

00:25:10,000 --> 00:25:13,000

Don't knock it till you've tried it.

413

00:25:13,000 --> 00:25:17,000

Think twice before accepting a dinner invitation to Jamie's house.

414

00:25:17,000 --> 00:25:19,000

This is lunch.

415

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

Question is, has he already eaten it?

416

00:25:22,000 --> 00:25:28,000

This particular batch, I call the 440 Fort, has four fruits, four vegetables and four grains.

417

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

It actually tastes quite nice. It's sort of like a spacho.

418

00:25:32,000 --> 00:25:35,000

Sure it does Jamie, but how do you actually eat it?

419

00:25:35,000 --> 00:25:39,000

Split the corner of it. This is sort of dripping because I had to thaw it.

420

00:25:39,000 --> 00:25:43,000

And you just kind of go like that and it down it goes.

421

00:25:43,000 --> 00:25:48,000

Don't know how he's going to manage that while driving around a racetrack at 55 miles per hour.

422

00:25:51,000 --> 00:25:53,000

Let's suffer together brother.

423

00:25:53,000 --> 00:26:01,000

Well, you know, and also remember going at that speed on this track, if you have a blowout, it may not be a safe thing.

424

00:26:01,000 --> 00:26:02,000

Later.

425

00:26:02,000 --> 00:26:04,000

And away we go.

426

00:26:04,000 --> 00:26:10,000

Jamie's got the AC on. Adam has the windows down. Who will run out of gas first?

427

00:26:10,000 --> 00:26:14,000

I would not have called that at all. I'm really surprised. I'm shocked even.

428

00:26:14,000 --> 00:26:20,000

And up next, the danger levels reach critical as the boom lift catapult prepares to fire.

429

00:26:20,000 --> 00:26:23,000

Once this thing is up in the air, we're not going to hear it.

430

00:26:35,000 --> 00:26:37,000

To work.

431

00:26:37,000 --> 00:26:39,000

The boom lift myths already been busted.

432

00:26:39,000 --> 00:26:41,000

And Buster didn't even spill his coffee.

433

00:26:41,000 --> 00:26:48,000

There's no way a person could be hurled 200 feet from a 60 foot boom lift under normal circumstances.

434

00:26:48,000 --> 00:26:51,000

But how about abnormal circumstances?

435

00:26:59,000 --> 00:27:01,000

I'm getting my pork lift lesson for the day.

436

00:27:05,000 --> 00:27:07,000

I'm going to get some gas.

437

00:27:11,000 --> 00:27:20,000

Here's the plan. The 30,000 pound boom lift will be placed on top of four storage containers with its front axle acting as a pivot point.

438

00:27:20,000 --> 00:27:30,000

The arm will be cocked and when it's released, the massive weight of the swinging machine will catapult poor old Buster through space like Mitty Vellamo.

439

00:27:30,000 --> 00:27:34,000

It's audacious. It's ludicrous. It's myth busters.

440

00:27:39,000 --> 00:27:42,000

First, the containers have to be stacked.

441

00:27:46,000 --> 00:27:48,000

Let's go up.

442

00:27:51,000 --> 00:27:54,000

You need to pull it so we get parallel.

443

00:27:54,000 --> 00:27:56,000

Yeah.

444

00:27:56,000 --> 00:27:57,000

Okay.

445

00:28:01,000 --> 00:28:02,000

Good.

446

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

I hope the rest of it is that easy.

447

00:28:04,000 --> 00:28:07,000

You just totally jinxed us.

448

00:28:07,000 --> 00:28:09,000

This is going to be awesome.

449

00:28:09,000 --> 00:28:14,000

Can you imagine that 30,000 pound man lift just swinging through here?

450

00:28:14,000 --> 00:28:16,000

It's going to be ridiculous.

451

00:28:16,000 --> 00:28:20,000

This is what I like. There's so much potential for a huge disaster.

452

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

I would plant it from the top.

453

00:28:23,000 --> 00:28:27,000

The containers will have to be reinforced to take the weight of the boom lift.

454

00:28:27,000 --> 00:28:29,000

All right.

455

00:28:29,000 --> 00:28:35,000

The engineering that we're doing here is just kind of gut by gut and by seated at the pants.

456

00:28:35,000 --> 00:28:44,000

You know, we know how much this lift over here, the tosser weighs and we know how much the weight of the boom lift is.

457

00:28:44,000 --> 00:28:52,000

We know how much this lift over here, the tosser weighs and we know how much those things weigh.

458

00:28:52,000 --> 00:28:57,000

We're eyeballing the thickness of the steel and the way that they're built and everything.

459

00:28:57,000 --> 00:29:01,000

And my money says that it'll hold just fine.

460

00:29:01,000 --> 00:29:06,000

This whole thing is just really one of the more extravagant stunts that we've done, I think.

461

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

Hey, Carrie, make sure we've extended all the way out.

462

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

No problem.

463

00:29:14,000 --> 00:29:18,000

Yeah, now let's see whether we can do the same thing here.

464

00:29:18,000 --> 00:29:21,000

The boom arm will be caulked by anchoring it to a weight.

465

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

I gotta say, you know, I don't think anybody's ever done this before.

466

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

You know, this has to be a world first, either that or it's just stupid.

467

00:29:30,000 --> 00:29:34,000

Next, steel tubes have to be welded onto the front wheels.

468

00:29:34,000 --> 00:29:39,000

These have to support the whole boom lift as it swings down.

469

00:29:39,000 --> 00:29:41,000

So it'd be nice if they didn't come off.

470

00:29:41,000 --> 00:29:44,000

Measuring that hub, it's exactly 11 inches.

471

00:29:44,000 --> 00:29:49,000

And measuring this is exactly 12 inches and you've got exactly half inch stuff there.

472

00:29:49,000 --> 00:29:51,000

There's like no margin of error.

473

00:29:51,000 --> 00:29:54,000

That's why we have a round surface, round stock for shimming the...

474

00:29:54,000 --> 00:29:58,000

Good thing Scotty's on the case. She's a welding wonder.

475

00:30:04,000 --> 00:30:07,000

He's getting through it. He's a good student.

476

00:30:07,000 --> 00:30:09,000

Thank you, Scotty.

477

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

It's easy to do things, not easy to think about what to do.

478

00:30:16,000 --> 00:30:18,000

Oh yeah, oh yeah.

479

00:30:18,000 --> 00:30:19,000

Very nice.

480

00:30:19,000 --> 00:30:22,000

We're nearing launch. Where's our catapult seat?

481

00:30:22,000 --> 00:30:27,000

Alright, Buster. No more yoga. You're going in the basket.

482

00:30:28,000 --> 00:30:31,000

Not without some more gentle persuasion.

483

00:30:33,000 --> 00:30:35,000

Hold on, hold on.

484

00:30:36,000 --> 00:30:38,000

Okay, okay.

485

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

Right now we've got Buster in the basket.

486

00:30:50,000 --> 00:30:53,000

Scotty and Tori are up on the lift trying to secure some braces.

487

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

It's getting really exciting.

488

00:30:55,000 --> 00:30:58,000

We're just about to lift up with this giant boom lift.

489

00:30:58,000 --> 00:31:01,000

No matter what, it's going to be something amazing.

490

00:31:01,000 --> 00:31:06,000

It's going to take the whole thing down or it's going to throw Buster across this lot.

491

00:31:06,000 --> 00:31:08,000

The question is how far?

492

00:31:08,000 --> 00:31:12,000

Well, I mean obviously the tradition is we always have to see if we can catch Buster

493

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

by estimating his distance perfectly.

494

00:31:14,000 --> 00:31:17,000

So, I don't know.

495

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

I think about another maybe 15 feet that way.

496

00:31:20,000 --> 00:31:26,000

It's got to be 100 times more, you know, thrust than what the myth would have in it.

497

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

You still don't think he's going to go a couple hundred feet?

498

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

No, I don't think he's going to go much farther than right about here.

499

00:31:32,000 --> 00:31:35,000

It's almost time to crank up the crane.

500

00:31:35,000 --> 00:31:38,000

Jamie delivers one last safety pep talk.

501

00:31:38,000 --> 00:31:40,000

Nobody gets under this thing.

502

00:31:40,000 --> 00:31:45,000

The crane or anything that's suspended nowhere near it.

503

00:31:45,000 --> 00:31:49,000

You don't run across it because you forgot something or anything like that.

504

00:31:49,000 --> 00:31:50,000

Do not do that.

505

00:31:50,000 --> 00:31:53,000

It's totally, once this thing is up in the air, we're not going to get near it.

506

00:31:54,000 --> 00:31:58,000

Our two failure points are going to be either the containers are going to buckle

507

00:31:58,000 --> 00:32:01,000

or those axle extensions are going to break the welds.

508

00:32:01,000 --> 00:32:04,000

So, both are both.

509

00:32:04,000 --> 00:32:07,000

Still to come. Countdown to catapult.

510

00:32:07,000 --> 00:32:12,000

On my count in five, four, three.

511

00:32:12,000 --> 00:32:19,000

And after the break, lapping it up, Adam and Jamie find out who keeps their cool and their fuel.

512

00:32:19,000 --> 00:32:21,000

It's getting pretty chilly in here.

513

00:32:24,000 --> 00:32:34,000

Adam and Jamie are preparing to embark on a road trip up to seven hours around Altamont Raceway.

514

00:32:34,000 --> 00:32:41,000

All to find out which gives you better fuel economy, turning on the AC or rolling down the windows.

515

00:32:41,000 --> 00:32:46,000

It'll be enough to give them white line fever and it could get dangerous.

516

00:32:46,000 --> 00:32:48,000

This test will not be fun.

517

00:32:48,000 --> 00:32:49,000

I'll have to pee.

518

00:32:49,000 --> 00:32:51,000

I'll probably have to poo before this thing is done.

519

00:32:51,000 --> 00:32:53,000

I'll have to be holding it in.

520

00:32:53,000 --> 00:32:57,000

The producer will be taunting me on the radio the whole time.

521

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

The wheels are going to be screeching.

522

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

We'll have a tire blowout at some point, I'm sure.

523

00:33:02,000 --> 00:33:04,000

And that's exactly the problem.

524

00:33:04,000 --> 00:33:09,000

At 55 miles per hour, the blowout danger is too great.

525

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

Safety officials insist on a shorter test at a slower speed.

526

00:33:15,000 --> 00:33:24,000

Plan B, using this pump, the guys will empty the SUV's tanks and then put exactly five gallons of gas into each one.

527

00:33:24,000 --> 00:33:31,000

Seems like a good idea, but it's a lot easier to put gas into a car than to take it out.

528

00:33:31,000 --> 00:33:38,000

Well, the plan seemed really simple, but in classic Mythbusters style, bring a couple of cars to a race track,

529

00:33:38,000 --> 00:33:40,000

running them until their fuel is gone.

530

00:33:40,000 --> 00:33:43,000

Five hours into it, we haven't gotten started yet.

531

00:33:44,000 --> 00:33:47,000

It's turning out to be a big job.

532

00:33:47,000 --> 00:33:50,000

Everybody has to take their turn at the pump.

533

00:33:50,000 --> 00:33:53,000

A little music helps pass the time.

534

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

Finally, the grey SUV's empty.

535

00:34:03,000 --> 00:34:06,000

So it all starts again with the white one.

536

00:34:08,000 --> 00:34:10,000

At last, both tanks are dry.

537

00:34:10,000 --> 00:34:13,000

Well, we're finally ready to do this bloody test.

538

00:34:13,000 --> 00:34:15,000

These cars are out of gas.

539

00:34:15,000 --> 00:34:20,000

We're putting in exactly five gallons in each car.

540

00:34:20,000 --> 00:34:22,000

We're going to drive them until they run out.

541

00:34:22,000 --> 00:34:24,000

Looks like we're ready to roll.

542

00:34:24,000 --> 00:34:27,000

Well, almost ready.

543

00:34:27,000 --> 00:34:29,000

There you go.

544

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

Here we go.

545

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

Ready to go.

546

00:34:35,000 --> 00:34:37,000

It's going to be cold in here.

547

00:34:37,000 --> 00:34:39,000

Gentlemen, stop your engines.

548

00:34:39,000 --> 00:34:41,000

Roger that. Starting now.

549

00:34:41,000 --> 00:34:43,000

Roger, starting.

550

00:34:43,000 --> 00:34:45,000

Get ready.

551

00:34:46,000 --> 00:34:48,000

And away we go.

552

00:34:50,000 --> 00:34:58,000

Remember, these are identical vehicles carrying identical amounts of fuel and identical payloads.

553

00:34:58,000 --> 00:35:04,000

Because of safety concerns, Adam and Jamie will stick to 45 miles per hour.

554

00:35:04,000 --> 00:35:09,000

Jamie's grey SUV has the AC on full and the windows up.

555

00:35:09,000 --> 00:35:14,000

Adam's vehicle has the AC off and the windows down.

556

00:35:14,000 --> 00:35:19,000

Five gallons of gas in each, which will stop first.

557

00:35:19,000 --> 00:35:22,000

We are cruising at 45 miles per hour.

558

00:35:22,000 --> 00:35:24,000

Round and round they go.

559

00:35:24,000 --> 00:35:27,000

Where they stop, but nobody knows.

560

00:35:27,000 --> 00:35:29,000

It's getting pretty chilly in here.

561

00:35:29,000 --> 00:35:31,000

Glad I brought my coat.

562

00:35:31,000 --> 00:35:34,000

I'm a camera man who doesn't have one on.

563

00:35:46,000 --> 00:35:50,000

It's kind of hard on your neck going around like this.

564

00:35:50,000 --> 00:36:04,000

Remember kids, this test is being done by professional drivers on the closed track.

565

00:36:04,000 --> 00:36:06,000

Your results may differ.

566

00:36:08,000 --> 00:36:14,000

The computer test showed that blasting the AC was more fuel efficient than driving with the windows down.

567

00:36:14,000 --> 00:36:20,000

But what's this? Jamie's AC-cooled SUV is slowing down.

568

00:36:20,000 --> 00:36:22,000

Yeah, I'm coasting now.

569

00:36:22,000 --> 00:36:27,000

Jamie's car just cracked out and mine's still going strong at 45 miles per hour.

570

00:36:27,000 --> 00:36:32,000

Looks like it's more fuel efficient to drive with your windows down than with your AC on.

571

00:36:34,000 --> 00:36:35,000

I don't get it.

572

00:36:35,000 --> 00:36:40,000

So Adam, what do you think? Are you going to keep running for another half hour or what?

573

00:36:40,000 --> 00:36:47,000

I don't know. When I come in I think we're just going to have to bust this myth and say that the fuel efficiency is better with your windows down than with your AC on.

574

00:36:47,000 --> 00:36:50,000

Yeah, that's sort of what the test says, isn't it? Over.

575

00:36:50,000 --> 00:36:54,000

I would not have called that at all. I'm really surprised. I'm shocked even.

576

00:36:57,000 --> 00:37:03,000

30 laps later, Adam's naturally ventilated vehicle finally runs out of gas.

577

00:37:04,000 --> 00:37:09,000

Oh man. I feel like I'm leaning like this.

578

00:37:09,000 --> 00:37:11,000

That totally confounded my expectations.

579

00:37:11,000 --> 00:37:16,000

There's no other way of interpreting it. We've gone over all of the facts of what went on here.

580

00:37:16,000 --> 00:37:18,000

I ran out first by running the AC.

581

00:37:18,000 --> 00:37:23,000

Yeah, 15 miles ago. That's 30 laps that I did that you didn't do. I mean, I'm just like...

582

00:37:28,000 --> 00:37:30,000

Windows versus AC. What's the verdict?

583

00:37:30,000 --> 00:37:36,000

Well, the computer showed that it was actually better to run with the AC on. Not by much, but it was better.

584

00:37:36,000 --> 00:37:41,000

I've got a little bit of a problem with that, which is the computer's actually measuring the air flow into the engine,

585

00:37:41,000 --> 00:37:44,000

not the fuel consumption of the engine.

586

00:37:44,000 --> 00:37:49,000

And it's basing its assessment on a computerized model under ideal circumstances.

587

00:37:49,000 --> 00:37:54,000

Yeah, our average Joe test was pretty straightforward and kind of foolproof.

588

00:37:54,000 --> 00:37:56,000

We put so much gas in, we ran for so long.

589

00:37:56,000 --> 00:38:02,000

And it pretty definitively showed by almost 15% that running with the windows down was a lot more fuel efficient.

590

00:38:02,000 --> 00:38:04,000

Yeah, that's a pretty significant difference.

591

00:38:04,000 --> 00:38:08,000

So, AC being more fuel efficient, I'd say busted.

592

00:38:08,000 --> 00:38:09,000

Busted.

593

00:38:09,000 --> 00:38:10,000

Yeah.

594

00:38:12,000 --> 00:38:15,000

After the break, is this the world's biggest human catapult?

595

00:38:15,000 --> 00:38:18,000

Find out, because we're going to fire it any second now.

596

00:38:28,000 --> 00:38:31,000

The boom lift catapults approaching critical mass.

597

00:38:31,000 --> 00:38:35,000

Five, four, three, two, one.

598

00:38:35,000 --> 00:38:37,000

This myth has already been busted.

599

00:38:37,000 --> 00:38:42,000

There's no way anyone could be thrown 200 feet from a 60 foot boom lift.

600

00:38:42,000 --> 00:38:50,000

Unless, of course, the boom lift happens to be balanced on some shipping containers and rigged to go off like a medieval catapult.

601

00:39:01,000 --> 00:39:11,000

Busters hanging on for dear life.

602

00:39:11,000 --> 00:39:14,000

It's looking good, man. This is going to be pretty awesome.

603

00:39:14,000 --> 00:39:17,000

He was just touching that post.

604

00:39:17,000 --> 00:39:18,000

Oh, okay.

605

00:39:24,000 --> 00:39:25,000

Slow down!

606

00:39:25,000 --> 00:39:28,000

Christine, hold yours, Christine.

607

00:39:28,000 --> 00:39:30,000

That looks pretty good.

608

00:39:31,000 --> 00:39:33,000

That looks good there.

609

00:39:36,000 --> 00:39:37,000

Stop!

610

00:39:37,000 --> 00:39:40,000

The containers seem to be bearing the weight of the boom lift.

611

00:39:40,000 --> 00:39:45,000

We're not seeing any signs of stress on the containers or on the welds.

612

00:39:45,000 --> 00:39:48,000

So, so far so good.

613

00:39:51,000 --> 00:39:53,000

Yeah, I'm starting up, okay?

614

00:39:53,000 --> 00:39:54,000

Yep.

615

00:39:54,000 --> 00:39:56,000

Busters are gone, or now?

616

00:39:56,000 --> 00:39:59,000

Now the arm has to be lowered and cocked.

617

00:39:59,000 --> 00:40:00,000

Stay back and hover this way.

618

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

Adam takes the strain in the forklift. Buster begins his slow descent.

619

00:40:05,000 --> 00:40:08,000

Everything looks just fine.

620

00:40:08,000 --> 00:40:09,000

Roger that.

621

00:40:09,000 --> 00:40:16,000

As he lowers into position, the body of the truck rises, putting strain on Scotty's axle extensions.

622

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

If it's all going to come crashing down, now's the time.

623

00:40:20,000 --> 00:40:21,000

Okay.

624

00:40:22,000 --> 00:40:23,000

Okay.

625

00:40:23,000 --> 00:40:29,000

Busters in position. The boom lift catapult is locked and loaded. Any last thoughts?

626

00:40:29,000 --> 00:40:32,000

I think the whole damn thing is just going to fall down.

627

00:40:32,000 --> 00:40:35,000

I think there's about a 10% chance of the whole thing falling down.

628

00:40:35,000 --> 00:40:44,000

About a 40% chance of Buster actually flying any distance, and the other 50% is Buster going boom right in front of the thing.

629

00:40:44,000 --> 00:40:47,000

Okay, let's see.

630

00:40:47,000 --> 00:40:50,000

Alright, everybody grab yourself a piece of the cable.

631

00:40:50,000 --> 00:40:53,000

Looks like a tug-of-war team on the quick release cable.

632

00:40:53,000 --> 00:40:55,000

Anybody that's not ready!

633

00:40:55,000 --> 00:41:01,000

This is it. Time to answer the question, catapult or catastrophic?

634

00:41:01,000 --> 00:41:07,000

On my count in five, four, three, two, one.

635

00:41:11,000 --> 00:41:12,000

Woo!

636

00:41:15,000 --> 00:41:16,000

What?

637

00:41:16,000 --> 00:41:17,000

Yeah!

638

00:41:26,000 --> 00:41:32,000

I don't think we're going to be returning this lift.

639

00:41:35,000 --> 00:41:36,000

Oh my God!

640

00:41:37,000 --> 00:41:39,000

Oh, destruction.

641

00:41:40,000 --> 00:41:46,000

In the container canyon, there's carnage. The tosser's taken its last look.

642

00:41:46,000 --> 00:41:49,000

Oh my God. Look at the wheels popped off.

643

00:41:49,000 --> 00:41:50,000

The wheels broke right off the edge.

644

00:41:50,000 --> 00:41:54,000

Hey Adam, would you say it's safe to say that there won't be a second shot?

645

00:41:56,000 --> 00:42:03,000

Buster isn't feeling a hundred percent either. He really suffered at the end of the long arm of the law of gravity.

646

00:42:03,000 --> 00:42:08,000

He lost both legs, one leg separated and his hand ended up what, 20 feet away?

647

00:42:08,000 --> 00:42:12,000

Congratulations, that's the most destruction Buster's taken in a single drop.

648

00:42:12,000 --> 00:42:14,000

We're going to end him here.

649

00:42:21,000 --> 00:42:26,000

Still, he's nowhere near the gurney.

650

00:42:26,000 --> 00:42:30,000

The distance to the furthest body part, I'd say you got 65 feet.

651

00:42:38,000 --> 00:42:40,000

What do you think guys? Is the myth busted?

652

00:42:40,000 --> 00:42:44,000

Oh, myth totally failed, completely busted. Totally, completely busted.

653

00:42:44,000 --> 00:42:48,000

And Buster? Busted. And Boom Lift? Busted.

654

00:42:48,000 --> 00:42:50,000

Everything's busted.

655

00:42:50,000 --> 00:42:52,000

Triggered? Busted.

656

00:42:52,000 --> 00:42:54,000

So you guys going to stick around for the cleanup?

657

00:42:54,000 --> 00:42:56,000

No, no, we're going to go to some Buster's.

658

00:42:56,000 --> 00:42:58,000

Great!

659

00:42:58,000 --> 00:43:01,000

Hi, thanks for helping with the fun part.

660

00:43:01,000 --> 00:43:06,000

Myth Busters, breaking big things for science every day.

661

00:43:11,000 --> 00:43:13,000

Alright, still rolling.

662

00:43:14,000 --> 00:43:19,000

Well, I know if you're watching this show, a bunch of you think that we're screwing it up.

663

00:43:19,000 --> 00:43:25,000

Yeah, so give me some feedback online in a live chat immediately after the show on Discovery.com.

664

00:43:25,000 --> 00:43:30,000

Join Adam and Jamie tonight after the show for a live chat at Discovery.com.

665

00:43:30,000 --> 00:43:33,000

Next Wednesday, Adam and Jamie really blow their stacks.

666

00:43:33,000 --> 00:43:35,000

Big Boom, Big Boom, Big Boom!

667

00:43:35,000 --> 00:43:38,000

Plus an exclusive look at the new build, National Treasure.

668

00:43:38,000 --> 00:43:40,000

The best deal of declaration ever, guys.

669

00:43:40,000 --> 00:43:42,000

A two-hour Myth Busters National Treasure special.

670

00:43:42,000 --> 00:43:45,000

Next Wednesday at 8 only on the Discovery Channel.

