



1
00:00:11,190 --> 00:00:09,509
hi i'm mike massimino we've been

2
00:00:12,549 --> 00:00:11,200
following along with the astronauts who

3
00:00:14,150 --> 00:00:12,559
are going to fly the next shuttle

4
00:00:15,190 --> 00:00:14,160
mission to the international space

5
00:00:17,109 --> 00:00:15,200
station

6
00:00:19,029 --> 00:00:17,119
what you are about to see is the crew

7
00:00:21,029 --> 00:00:19,039
practicing for their mission the team

8
00:00:23,349 --> 00:00:21,039
that is responsible for training them

9
00:00:24,470 --> 00:00:23,359
and get a sense of what it's like to fly

10
00:00:25,390 --> 00:00:24,480
the shuttle

11
00:00:59,029 --> 00:00:25,400
this is

12
00:01:03,029 --> 00:01:01,510
matt you came you can pick me up here

13
00:01:04,950 --> 00:01:03,039

because i can't be trusted down here by

14

00:01:07,030 --> 00:01:04,960

myself cold winter day didn't want you

15

00:01:08,789 --> 00:01:07,040

to get lost in a snow drifts yes but

16

00:01:10,390 --> 00:01:08,799

that's yeah down here in florida but it

17

00:01:12,070 --> 00:01:10,400

is pretty cold that was in houston it

18

00:01:13,830 --> 00:01:12,080

was freezing i heard that it's a lot

19

00:01:15,910 --> 00:01:13,840

warmer here than it was in houston yeah

20

00:01:17,350 --> 00:01:15,920

yeah here in florida well they've plowed

21

00:01:19,350 --> 00:01:17,360

the roads here so we can get over to the

22

00:01:21,510 --> 00:01:19,360

opf in time excellent

23

00:01:23,510 --> 00:01:21,520

and a lot of salt and sand on the road

24

00:01:24,950 --> 00:01:23,520

but we can still get there and uh all

25

00:01:26,310 --> 00:01:24,960

right and you said opf because that's

26

00:01:28,390 --> 00:01:26,320

what we're going but that stands for

27

00:01:31,270 --> 00:01:28,400

orbiter processing facility you got it

28

00:01:33,510 --> 00:01:31,280

that's the uh the garage for the space

29

00:01:34,789 --> 00:01:33,520

shuttle yep right we got three garages

30

00:01:36,710 --> 00:01:34,799

and three shuttles and that's where all

31

00:01:38,950 --> 00:01:36,720

right work on them that's where 90 of

32

00:01:40,310 --> 00:01:38,960

the work of the shuttle is done okay

33

00:01:42,469 --> 00:01:40,320

and here we are this is the vehicle

34

00:01:44,069 --> 00:01:42,479

assembly building the space shuttle then

35

00:01:45,910 --> 00:01:44,079

be taken into here

36

00:01:47,429 --> 00:01:45,920

and get on a gigantic train and stacked

37

00:01:49,749 --> 00:01:47,439

with its rockets right in this big

38

00:01:51,990 --> 00:01:49,759

building we roll it over

39

00:01:54,389 --> 00:01:52,000

on a transporter and pick it up with

40

00:01:56,789 --> 00:01:54,399

cranes and we'll attach it to

41

00:01:59,109 --> 00:01:56,799

right now the mlp which is the mobile

42

00:02:00,789 --> 00:01:59,119

launch platform and two srbs and one

43

00:02:02,310 --> 00:02:00,799

tank will be sitting there waiting for

44

00:02:03,990 --> 00:02:02,320

it they'll pick it up and they'll attach

45

00:02:06,149 --> 00:02:04,000

it to that srbs at a rocket send to

46

00:02:07,749 --> 00:02:06,159

white rockets on the outside yeah and

47

00:02:09,270 --> 00:02:07,759

it'll be in there for seven days and

48

00:02:11,350 --> 00:02:09,280

then they'll roll it to the pad all

49

00:02:12,790 --> 00:02:11,360

right and then they'll launch it

50

00:02:14,309 --> 00:02:12,800

and there's the vehicle that rolls over

51
00:02:15,670 --> 00:02:14,319
on right there that yellow piece right

52
00:02:18,309 --> 00:02:15,680
there see the yellow thing straight

53
00:02:20,150 --> 00:02:18,319
ahead oh straight ahead okay so you roll

54
00:02:21,589 --> 00:02:20,160
the orbiter goes on top of there the

55
00:02:24,390 --> 00:02:21,599
orbiter goes on top of that and that's

56
00:02:26,630 --> 00:02:24,400
how we roll it over to the opf

57
00:02:27,910 --> 00:02:26,640
to the vehicle assembly building from

58
00:02:29,030 --> 00:02:27,920
where we are now the vehicle assembly

59
00:02:30,710 --> 00:02:29,040
building that's how we get it over there

60
00:02:33,030 --> 00:02:30,720
we used to take it over on its wheels

61
00:02:35,509 --> 00:02:33,040
but then you have the potential to pick

62
00:02:37,430 --> 00:02:35,519
up some that's all you need some glasses

63
00:02:39,030 --> 00:02:37,440

yeah you don't have tires no we don't

64

00:02:40,869 --> 00:02:39,040

want any damage to the tire so we want

65

00:02:42,550 --> 00:02:40,879

to be able to check them last in here

66

00:02:43,670 --> 00:02:42,560

right and then that'll be it excellent

67

00:02:45,990 --> 00:02:43,680

and this is where we're going this is

68

00:02:47,509 --> 00:02:46,000

the open processing facility here yeah

69

00:02:48,949 --> 00:02:47,519

they're number three is that with space

70

00:02:50,229 --> 00:02:48,959

shows behind those doors right behind

71

00:02:52,070 --> 00:02:50,239

you it's a real spaceship you see the

72

00:02:54,070 --> 00:02:52,080

notch right up there with it there's the

73

00:02:56,070 --> 00:02:54,080

for the tail yeah right there it's like

74

00:02:57,670 --> 00:02:56,080

an afterthought like oh how are we gonna

75

00:02:59,190 --> 00:02:57,680

get it out

76

00:03:00,869 --> 00:02:59,200

how are we gonna get it in

77

00:03:02,470 --> 00:03:00,879

yeah what do you got what's on your list

78

00:03:03,830 --> 00:03:02,480

of things that you got in front of today

79

00:03:05,430 --> 00:03:03,840

we're gonna go do the bucket ride in the

80

00:03:07,030 --> 00:03:05,440

payload bay and then check out

81

00:03:08,630 --> 00:03:07,040

everything check out everything and then

82

00:03:11,190 --> 00:03:08,640

i guess we all head over to the space

83

00:03:13,350 --> 00:03:11,200

station processing facility right we uh

84

00:03:14,630 --> 00:03:13,360

do some work inside the mplm right

85

00:03:16,830 --> 00:03:14,640

stephanie we're going to do a lot of

86

00:03:19,430 --> 00:03:16,840

work mpl is like the big closet kind of

87

00:03:20,790 --> 00:03:19,440

thing big cargo container all right all

88

00:03:23,589 --> 00:03:20,800

right what's the name of this one slide

89

00:03:26,949 --> 00:03:24,550

don't they have italian names or

90

00:03:29,030 --> 00:03:26,959

something the name of our mplm

91

00:03:30,390 --> 00:03:29,040

leonardo

92

00:03:31,990 --> 00:03:30,400

all right it's gotta be italian name

93

00:03:33,830 --> 00:03:32,000

because uh because your last name is

94

00:03:36,470 --> 00:03:33,840

mastracchio yeah is that right

95

00:03:38,309 --> 00:03:36,480

no no but it's named after because italy

96

00:03:39,270 --> 00:03:38,319

makes these things apparently

97

00:03:40,949 --> 00:03:39,280

all right so and you're going to see

98

00:03:42,949 --> 00:03:40,959

that later yep we're going over there in

99

00:03:44,470 --> 00:03:42,959

a couple hours excellent stranger you're

100

00:03:46,309 --> 00:03:44,480

keeping them loose here this is a very

101

00:03:48,550 --> 00:03:46,319

loose this is a very it's a very happy

102

00:03:49,750 --> 00:03:48,560

crew it is it is we have a video guys i

103

00:03:51,750 --> 00:03:49,760

hope you appreciate well you know you

104

00:03:53,110 --> 00:03:51,760

guys should i'm sure stephanie does

105

00:03:55,030 --> 00:03:53,120

you've been on other crews that probably

106

00:03:55,750 --> 00:03:55,040

were stinky compared to this one

107

00:03:58,630 --> 00:03:55,760

no

108

00:04:00,869 --> 00:03:58,640

this is very stephanie's a very fun crew

109

00:04:03,110 --> 00:04:00,879

she keeps us all online all right

110

00:04:05,030 --> 00:04:03,120

well thanks man thanks for lunch

111

00:04:06,149 --> 00:04:05,040

thanks for lunch see you mike all right

112

00:04:07,429 --> 00:04:06,159

and where do you want me to go with

113

00:04:08,789 --> 00:04:07,439

these guys you gotta follow them to the

114

00:04:09,910 --> 00:04:08,799

ops i'm gonna follow them all right

115

00:04:11,350 --> 00:04:09,920

they're already gone

116

00:04:13,589 --> 00:04:11,360

all right we'll catch you guys later

117

00:04:14,550 --> 00:04:13,599

thanks man

118

00:04:16,550 --> 00:04:14,560

all right man so we're going to try to

119

00:04:17,990 --> 00:04:16,560

get inside the space shuttle now yep and

120

00:04:20,390 --> 00:04:18,000

if we're going to go and do that we need

121

00:04:21,349 --> 00:04:20,400

here's a logistics guy and uh they keep

122

00:04:22,950 --> 00:04:21,359

all the

123

00:04:24,390 --> 00:04:22,960

stuff what do they got back here but

124

00:04:25,350 --> 00:04:24,400

little of everything all the support

125

00:04:27,270 --> 00:04:25,360

equipment

126
00:04:28,710 --> 00:04:27,280
you got oxygen back here absolutely she

127
00:04:30,070 --> 00:04:28,720
got everything he's got everything but

128
00:04:32,469 --> 00:04:30,080
today we're looking for the bunny suits

129
00:04:34,710 --> 00:04:32,479
two bunny suits to fit two big boys

130
00:04:37,189 --> 00:04:34,720
what's your name sir kevin d as in david

131
00:04:39,189 --> 00:04:37,199
edwards all right

132
00:04:40,550 --> 00:04:39,199
and what sizes are we screaming here

133
00:04:42,390 --> 00:04:40,560
probably big whatever you got the

134
00:04:43,749 --> 00:04:42,400
biggest you got well not big big you're

135
00:04:44,950 --> 00:04:43,759
coming with me aren't you all right you

136
00:04:46,070 --> 00:04:44,960
can't let me alone in there alone you

137
00:04:47,510 --> 00:04:46,080
never know what might happen i'm going

138
00:04:48,870 --> 00:04:47,520

with you all right i'm with you all the

139

00:04:49,830 --> 00:04:48,880

way all right

140

00:04:51,270 --> 00:04:49,840

well thanks for trying to work that

141

00:04:54,070 --> 00:04:51,280

pastrami sandwich we're going to get it

142

00:04:55,990 --> 00:04:55,189

these guys are getting ready to fly in

143

00:04:57,749 --> 00:04:56,000

the space shuttle you're worried about

144

00:04:59,110 --> 00:04:57,759

my pastrami center i think we'll go good

145

00:05:01,029 --> 00:04:59,120

that's that'll be good all right you got

146

00:05:02,710 --> 00:05:01,039

any you got any different colors

147

00:05:04,790 --> 00:05:02,720

is that the only color we got well

148

00:05:10,390 --> 00:05:04,800

sometimes no i'm joking green is perfect

149

00:05:13,590 --> 00:05:11,670

all right they wear blue all the time

150

00:05:15,029 --> 00:05:13,600

give them a different color

151

00:05:16,870 --> 00:05:15,039

so this is this is like the space

152

00:05:17,909 --> 00:05:16,880

shuttle wardrobe closet here exactly

153

00:05:21,350 --> 00:05:17,919

that's where we got it i am your

154

00:05:25,830 --> 00:05:23,590

so we can't see it no a different color

155

00:05:27,590 --> 00:05:25,840

maybe like red or blue no no no no no no

156

00:05:30,790 --> 00:05:27,600

no

157

00:05:34,230 --> 00:05:30,800

think so double up why are you getting

158

00:05:51,029 --> 00:05:35,430

all right look there's the crew down

159

00:05:54,950 --> 00:05:52,550

that's you guys dottie look there you

160

00:05:56,629 --> 00:05:54,960

are i know you're right there but look

161

00:05:58,390 --> 00:05:56,639

at these two guys

162

00:06:00,870 --> 00:05:58,400

oh and how old that picture is that's

163

00:06:02,150 --> 00:06:00,880

mistrachio's high school picture i think

164

00:06:03,350 --> 00:06:02,160

look at that thing rick i didn't know

165

00:06:07,029 --> 00:06:03,360

you were i didn't know you were an

166

00:06:09,110 --> 00:06:07,039

astronaut when you were 17.

167

00:06:10,390 --> 00:06:09,120

they had your picture up there i know

168

00:06:12,309 --> 00:06:10,400

they figured that they didn't realize

169

00:06:13,990 --> 00:06:12,319

they had two italians in the program

170

00:06:15,830 --> 00:06:14,000

they got us mixed up

171

00:06:17,350 --> 00:06:15,840

we'll see inside

172

00:06:20,070 --> 00:06:17,360

squeeze so many people over here we are

173

00:06:22,469 --> 00:06:20,080

at the nose of the space shuttle

174

00:06:23,990 --> 00:06:22,479

that's the nose of the space shuttle

175

00:06:28,870 --> 00:06:24,000

you can see some windows behind the

176

00:06:31,909 --> 00:06:30,629

so what we got is window shaped bags

177

00:06:33,590 --> 00:06:31,919

that's it they're going to go through

178

00:06:34,870 --> 00:06:33,600

that they make sure you know they what

179

00:06:36,309 --> 00:06:34,880

they're going to put in there exactly

180

00:06:37,430 --> 00:06:36,319

it's all built up for them so now they

181

00:06:38,870 --> 00:06:37,440

get to go through it and verify

182

00:06:40,150 --> 00:06:38,880

everything's where they expect it to be

183

00:06:46,710 --> 00:06:40,160

right and everything looks like what

184

00:06:50,309 --> 00:06:48,550

that goes on your side so it's not just

185

00:06:52,070 --> 00:06:50,319

window now shades they have window

186

00:06:53,749 --> 00:06:52,080

shades they have nice correct i'm gonna

187

00:06:54,790 --> 00:06:53,759

go to bed at night right you don't want

188

00:06:56,230 --> 00:06:54,800

this that you know every time you go

189

00:06:57,189 --> 00:06:56,240

around the earth every 90 minutes yeah i

190

00:06:58,629 --> 00:06:57,199

mean i mean you're gonna have a lot of

191

00:07:00,629 --> 00:06:58,639

sun very bright it's gonna keep you

192

00:07:01,909 --> 00:07:00,639

awake sunrise sunset

193

00:07:03,430 --> 00:07:01,919

so you put

194

00:07:05,830 --> 00:07:03,440

but they also store other stuff in there

195

00:07:08,309 --> 00:07:05,840

too little platforms oh you have some

196

00:07:09,749 --> 00:07:08,319

ifs astronomy sandwich i wish

197

00:07:11,029 --> 00:07:09,759

you if you asked for one we can put one

198

00:07:12,390 --> 00:07:11,039

now you're saying they've got some ifm

199

00:07:14,309 --> 00:07:12,400

which is in-flight maintenance got some

200

00:07:16,390 --> 00:07:14,319

hoses here all right

201
00:07:17,430 --> 00:07:16,400
so clay and rick are the space walkers

202
00:07:19,749 --> 00:07:17,440
right

203
00:07:21,270 --> 00:07:19,759
daddy you're the iv person

204
00:07:22,790 --> 00:07:21,280
is jim help him with suit up or is he an

205
00:07:24,710 --> 00:07:22,800
iv person too

206
00:07:26,309 --> 00:07:24,720
so jim's going to shoot him up and

207
00:07:28,390 --> 00:07:26,319
you're going to tell him what to do

208
00:07:32,390 --> 00:07:28,400
all right do they listen to you yes

209
00:07:36,870 --> 00:07:34,309
this is it look at that those are all

210
00:07:39,110 --> 00:07:36,880
the tiles see nothing but tiles

211
00:07:40,070 --> 00:07:39,120
25 000 tiles all different shapes and

212
00:07:44,150 --> 00:07:40,080
sizes

213
00:07:46,230 --> 00:07:44,160

25 000. protect the vehicle on re-entry

214

00:07:47,830 --> 00:07:46,240

and you can see all the discoloration

215

00:07:49,830 --> 00:07:47,840

you can see most of a lot of these tiles

216

00:07:51,270 --> 00:07:49,840

have been here since day one really yeah

217

00:07:52,790 --> 00:07:51,280

they're already damaged right you

218

00:07:54,150 --> 00:07:52,800

replace them as you can kind of see if

219

00:07:55,830 --> 00:07:54,160

you can zoom in on there you see the

220

00:07:57,990 --> 00:07:55,840

black the black ones yeah the dark black

221

00:08:00,629 --> 00:07:58,000

ones are the newer ones been repaired

222

00:08:02,629 --> 00:08:00,639

yeah all right and uh as a side note

223

00:08:03,830 --> 00:08:02,639

that little round circle there

224

00:08:05,589 --> 00:08:03,840

uh one of the things we have to do

225

00:08:07,510 --> 00:08:05,599

before we go which one on any one of

226

00:08:09,990 --> 00:08:07,520

them anyone in the little circle yes we

227

00:08:12,070 --> 00:08:10,000

have to waterproof each tile

228

00:08:14,950 --> 00:08:12,080

each tile because these are nothing more

229

00:08:17,270 --> 00:08:14,960

than ceramic sponges right and these

230

00:08:19,909 --> 00:08:17,280

will drink stuff twice their weight in

231

00:08:21,350 --> 00:08:19,919

water all right and we can't go ahead

232

00:08:22,869 --> 00:08:21,360

hey if you take it to the pad and it

233

00:08:24,550 --> 00:08:22,879

rains it'll drink that much water and

234

00:08:25,830 --> 00:08:24,560

then obviously it's a whole lot heavier

235

00:08:27,430 --> 00:08:25,840

and then even worse when you get up

236

00:08:29,350 --> 00:08:27,440

there that ice expands and this whole

237

00:08:31,430 --> 00:08:29,360

thing would crack okay so we fill it

238

00:08:33,750 --> 00:08:31,440

with a waterproofing which is kind of

239

00:08:35,269 --> 00:08:33,760

like a scotch guard and it keeps it

240

00:08:37,110 --> 00:08:35,279

waterproof so it doesn't absorb any of

241

00:08:39,589 --> 00:08:37,120

that water so each one of these tiles

242

00:08:41,269 --> 00:08:39,599

has to be individually waterproof prior

243

00:08:42,790 --> 00:08:41,279

to rolling out

244

00:08:43,670 --> 00:08:42,800

big job

245

00:08:46,310 --> 00:08:43,680

yeah

246

00:08:47,910 --> 00:08:46,320

so this is the crew cabin

247

00:08:49,190 --> 00:08:47,920

and we make sure we protect the windows

248

00:08:51,110 --> 00:08:49,200

all the windows are under these hard

249

00:08:53,190 --> 00:08:51,120

covers right in case something does

250

00:08:54,630 --> 00:08:53,200

happen we protect those those are

251
00:08:55,670 --> 00:08:54,640
very time consuming to replace the

252
00:08:57,910 --> 00:08:55,680
windows

253
00:08:59,670 --> 00:08:57,920
so we keep them protected at all times

254
00:09:01,590 --> 00:08:59,680
yeah we got overhead windows as well

255
00:09:02,870 --> 00:09:01,600
right there at the top but these are the

256
00:09:04,870 --> 00:09:02,880
front looking windows where the pilot

257
00:09:06,630 --> 00:09:04,880
and commander look at that six windows

258
00:09:12,550 --> 00:09:06,640
up front two on top and two in the back

259
00:09:16,949 --> 00:09:14,550
real spaceship i think this is the right

260
00:09:19,110 --> 00:09:16,959
orbiter make sure when you get out there

261
00:09:20,389 --> 00:09:19,120
make sure on launch day too i think make

262
00:09:22,230 --> 00:09:20,399
sure you got the right one make sure it

263
00:09:23,990 --> 00:09:22,240

says discovery on it right because they

264

00:09:25,269 --> 00:09:24,000

all kind of look the same they do you

265

00:09:26,710 --> 00:09:25,279

don't want to get

266

00:09:27,829 --> 00:09:26,720

you don't want to go to the wrong one

267

00:09:28,949 --> 00:09:27,839

don't make sure we go to the correct

268

00:09:30,550 --> 00:09:28,959

because they're putting your stuff

269

00:09:32,389 --> 00:09:30,560

inside of this one right and you want

270

00:09:34,710 --> 00:09:32,399

your stuff i want my shirts you want

271

00:09:35,829 --> 00:09:34,720

your shirts and everything all your food

272

00:09:38,150 --> 00:09:35,839

yeah you don't want to have to wear

273

00:09:39,269 --> 00:09:38,160

who's after you it's ken hammond

274

00:09:40,550 --> 00:09:39,279

we don't want to wear his stuff but

275

00:09:42,150 --> 00:09:40,560

probably you know

276

00:09:44,070 --> 00:09:42,160

it may not be as nice as what you picked

277

00:09:45,670 --> 00:09:44,080

out

278

00:09:47,110 --> 00:09:45,680

you probably spent a few hours inside of

279

00:09:48,949 --> 00:09:47,120

one of those i did mainly looking out

280

00:09:50,389 --> 00:09:48,959

the window i try not to touch anything

281

00:09:52,070 --> 00:09:50,399

when i'm in there but uh but there's

282

00:09:54,470 --> 00:09:52,080

always little pilot stuff but you spent

283

00:09:56,070 --> 00:09:54,480

as much almost as much time outside as

284

00:09:57,590 --> 00:09:56,080

you did inside there's not a lot of time

285

00:09:59,670 --> 00:09:57,600

outside yeah they wanted me out as much

286

00:10:01,269 --> 00:09:59,680

as possible yeah they like yes and i i

287

00:10:06,389 --> 00:10:01,279

liked saying that to play like your

288

00:10:09,829 --> 00:10:08,230

get out of the house you're bothering me

289

00:10:11,590 --> 00:10:09,839

you're driving me crazy get out of the

290

00:10:13,190 --> 00:10:11,600

house

291

00:10:14,470 --> 00:10:13,200

yeah yeah i'm being an italian kid my

292

00:10:16,230 --> 00:10:14,480

mommy should chase me with like a wooden

293

00:10:18,069 --> 00:10:16,240

spoon to go outside

294

00:10:19,990 --> 00:10:18,079

you know yeah right yeah they just you

295

00:10:21,509 --> 00:10:20,000

know there was no wooden spoons so

296

00:10:24,470 --> 00:10:21,519

anyway

297

00:10:26,069 --> 00:10:24,480

on top all right

298

00:10:27,750 --> 00:10:26,079

there's two windows everything's covered

299

00:10:29,910 --> 00:10:27,760

okay it's kind of hard to imagine what

300

00:10:32,069 --> 00:10:29,920

it looks like yeah but uh they'll uh

301
00:10:33,190 --> 00:10:32,079
when they when they get ready to really

302
00:10:34,389 --> 00:10:33,200
need operation when they get ready to

303
00:10:36,389 --> 00:10:34,399
take the ship

304
00:10:38,470 --> 00:10:36,399
out of the orbiter processing facility

305
00:10:39,910 --> 00:10:38,480
where we are now all these platforms

306
00:10:41,990 --> 00:10:39,920
pull back

307
00:10:44,389 --> 00:10:42,000
and they they slide out of the way and

308
00:10:46,630 --> 00:10:44,399
then they close the payload bay doors

309
00:10:48,389 --> 00:10:46,640
and then they uh they pull the orbiter

310
00:10:49,670 --> 00:10:48,399
out right after the doors there it's

311
00:10:51,990 --> 00:10:49,680
gonna go so it's gonna pull right out

312
00:10:52,870 --> 00:10:52,000
this way uh maybe not maybe that's the

313
00:10:53,910 --> 00:10:52,880

other thing the other one the other side

314

00:10:55,430 --> 00:10:53,920

gonna put the other way all right the

315

00:10:57,509 --> 00:10:55,440

other door pack it out we're gonna back

316

00:10:59,269 --> 00:10:57,519

it up back it up put it in reverse they

317

00:11:00,870 --> 00:10:59,279

do they put it but it's a carrier it's

318

00:11:02,230 --> 00:11:00,880

not on the wheels so there's no wheels

319

00:11:04,470 --> 00:11:02,240

they got it on a carrier yeah they got

320

00:11:06,069 --> 00:11:04,480

yeah like real long centipede looking

321

00:11:07,990 --> 00:11:06,079

carrier thing and they put the orbiter

322

00:11:09,350 --> 00:11:08,000

down and they slide it out and then they

323

00:11:10,790 --> 00:11:09,360

take it over the vertical assembly

324

00:11:12,069 --> 00:11:10,800

building where they'll pitch it up into

325

00:11:13,990 --> 00:11:12,079

the vertical

326

00:11:16,069 --> 00:11:14,000

and then i made it to the external tank

327

00:11:17,829 --> 00:11:16,079

in our solid rocket booster

328

00:11:19,910 --> 00:11:17,839

that takes about a week okay and then

329

00:11:21,509 --> 00:11:19,920

they roll that whole that whole assembly

330

00:11:22,630 --> 00:11:21,519

out to the pad all at once in the

331

00:11:24,069 --> 00:11:22,640

vertical

332

00:11:25,430 --> 00:11:24,079

and that is the launch pad that it gets

333

00:11:27,190 --> 00:11:25,440

put on in the vert in the vehicle

334

00:11:28,870 --> 00:11:27,200

assembly building that's this one

335

00:11:30,710 --> 00:11:28,880

platform right and that thing sits on

336

00:11:32,710 --> 00:11:30,720

top of a great big crawler and that

337

00:11:34,230 --> 00:11:32,720

crawler drives it out to the pad at like

338

00:11:35,910 --> 00:11:34,240

about a mile per hour or two miles per

339

00:11:37,910 --> 00:11:35,920

hour really slow yeah it takes forever

340

00:11:39,269 --> 00:11:37,920

it crawls it does kicks

341

00:11:40,550 --> 00:11:39,279

they wake up in the morning and they

342

00:11:41,590 --> 00:11:40,560

start moving and by the time you go to

343

00:11:43,509 --> 00:11:41,600

bed they might have it out there at the

344

00:11:45,030 --> 00:11:43,519

pad okay

345

00:11:46,949 --> 00:11:45,040

yeah

346

00:11:48,470 --> 00:11:46,959

all right

347

00:11:49,350 --> 00:11:48,480

excellent what else you want to show us