
Jody Singer
Patrick Scheuermann

1
00:00:04,910 --> 00:00:02,720
good afternoon and welcome to the j-2x

2
00:00:07,070 --> 00:00:04,920
engine test post test press conference

3
00:00:08,930 --> 00:00:07,080
my name is Daniel Koenig in NASA public

4
00:00:11,450 --> 00:00:08,940
affairs officer and with me to my left

5
00:00:13,400 --> 00:00:11,460
our Daniel Dunn Bakr NASA deputy

6
00:00:16,939 --> 00:00:13,410
associate administrator for exploration

7
00:00:18,500 --> 00:00:16,949
systems development Jodi singer nasa's

8
00:00:22,250 --> 00:00:18,510
space launch systems deputy program

9
00:00:25,070 --> 00:00:22,260
manager Patrick Sherman NASA Stennis

10
00:00:27,259 --> 00:00:25,080
Space Center Director and Mike Kiner

11
00:00:29,599 --> 00:00:27,269
nasa's space launch systems liquid

12
00:00:30,830 --> 00:00:29,609
engines element manager will begin with

13
00:00:32,209 --> 00:00:30,840

brief statements from each of our

14
00:00:35,600 --> 00:00:32,219
participants and then open it up to

15
00:00:37,069 --> 00:00:35,610
questions dan Thank You Daniel good

16
00:00:40,119 --> 00:00:37,079
afternoon everyone and thank you for

17
00:00:43,520 --> 00:00:40,129
coming what a great day a great test

18
00:00:45,619 --> 00:00:43,530
another mark in our progress in getting

19
00:00:47,869 --> 00:00:45,629
the exploration systems developed along

20
00:00:50,810 --> 00:00:47,879
with the testing we have going on with

21
00:00:53,810 --> 00:00:50,820
Orion both in Denver and at Langley the

22
00:00:57,770 --> 00:00:53,820
engine testing here our booster testing

23
00:01:00,529 --> 00:00:57,780
that we did recently out at Utah all

24
00:01:03,049 --> 00:01:00,539
good hardware progress and I think the

25
00:01:05,030 --> 00:01:03,059
team today did a great job demonstrating

26
00:01:07,310 --> 00:01:05,040
good hard work and we appreciate

27
00:01:12,980 --> 00:01:07,320
everything they've done and we're going

28
00:01:15,620 --> 00:01:12,990
to make this happen okay hi i just also

29
00:01:17,600 --> 00:01:15,630
like to say same thing that Dan has said

30
00:01:21,050 --> 00:01:17,610
is it's a wonderful day it's a great

31
00:01:22,640 --> 00:01:21,060
achievement my cottage and his team j-2x

32
00:01:24,770 --> 00:01:22,650
with our contractor pratt whitney

33
00:01:26,510 --> 00:01:24,780
rocketdyne as well as the partnerships

34
00:01:28,340 --> 00:01:26,520
that we have with dennis if made today

35
00:01:30,440 --> 00:01:28,350
successful as the people that have

36
00:01:32,990 --> 00:01:30,450
worked hard to make this happen and it

37
00:01:35,030 --> 00:01:33,000
really is a great feeling to see what we

38
00:01:38,600 --> 00:01:35,040

can do and to go forward with this type

39
00:01:40,760 --> 00:01:38,610
of technology for the future thanks Joey

40
00:01:43,310 --> 00:01:40,770
and I code those words it is about the

41
00:01:44,600 --> 00:01:43,320
the team here from Stennis Space Center

42
00:01:47,090 --> 00:01:44,610
were part of the role that we play in

43
00:01:49,160 --> 00:01:47,100
support of this program very important

44
00:01:50,420 --> 00:01:49,170
the nation and what you heard today was

45
00:01:52,760 --> 00:01:50,430
the sound of the front end of the

46
00:01:56,660 --> 00:01:52,770
critical path of the future and that

47
00:01:59,300 --> 00:01:56,670
sounds sounds pretty good to me yep I'd

48
00:02:01,580 --> 00:01:59,310
like to add to what they had said that I

49
00:02:04,459 --> 00:02:01,590
think Beck was day it's a wonderful day

50
00:02:07,029 --> 00:02:04,469
and I think back to the design to the

51
00:02:09,870 --> 00:02:07,039
analysis we've done to the manufacturing

52
00:02:12,270 --> 00:02:09,880
the j-2x team both the mark

53
00:02:15,690 --> 00:02:12,280
instead us guys along with our faculty

54
00:02:17,250 --> 00:02:15,700
rocketdyne contractor partner and to to

55
00:02:18,930 --> 00:02:17,260
see the seeds that we planted a few

56
00:02:21,690 --> 00:02:18,940
years ago come together like this and

57
00:02:24,510 --> 00:02:21,700
and to hit this important milestone for

58
00:02:26,610 --> 00:02:24,520
our testing and it didn't see it go from

59
00:02:29,780 --> 00:02:26,620
here on and finishing the maturity of

60
00:02:32,640 --> 00:02:29,790
this engine and getting back into flight

61
00:02:34,050 --> 00:02:32,650
all right thanks Mike we'll open it up

62
00:02:35,730 --> 00:02:34,060
for questions now if you'd like to ask a

63
00:02:37,650 --> 00:02:35,740

question please raise your hand Mike

64
00:02:38,730 --> 00:02:37,660
will be passed to you also please

65
00:02:42,750 --> 00:02:38,740
remember to state your name and

66
00:02:44,520 --> 00:02:42,760
affiliation good afternoon Vanessa

67
00:02:47,430 --> 00:02:44,530
Bolano with WG no news out of New

68
00:02:48,810 --> 00:02:47,440
Orleans I'm wondering we reach though

69
00:02:51,780 --> 00:02:48,820
I've been hearing we've reached the

70
00:02:54,090 --> 00:02:51,790
we've reached the 500 second goal here

71
00:02:56,790 --> 00:02:54,100
one is this what are we going to see

72
00:03:01,410 --> 00:02:56,800
this engine actually take flight take us

73
00:03:04,260 --> 00:03:01,420
out of Earth into space take that one or

74
00:03:06,420 --> 00:03:04,270
mature okay as far as the j-2x is going

75
00:03:08,850 --> 00:03:06,430
to be a critical part of us going beyond

76
00:03:12,090 --> 00:03:08,860
low-earth orbit right now the first

77
00:03:14,130 --> 00:03:12,100
flight is after 20 21 right now we're

78
00:03:16,650 --> 00:03:14,140
doing all the design and study and

79
00:03:18,660 --> 00:03:16,660
testing and taking the technology out of

80
00:03:20,490 --> 00:03:18,670
it applying it to our engines that were

81
00:03:22,860 --> 00:03:20,500
going to fly on the core as well as

82
00:03:24,570 --> 00:03:22,870
using production technology different

83
00:03:27,990 --> 00:03:24,580
things that we come up with to make sure

84
00:03:36,630 --> 00:03:28,000
that we can deliver and payload to space

85
00:03:42,570 --> 00:03:39,660
I li route with the Huntsville Times I

86
00:03:45,660 --> 00:03:42,580
guess this is for my it sounded good

87
00:03:47,790 --> 00:03:45,670
where we were how did it sound where you

88
00:03:49,559 --> 00:03:47,800

were and were you able to tell anything

89
00:03:53,130 --> 00:03:49,569
immediately afterward about the engine

90
00:03:57,030 --> 00:03:53,140
and how it how it looks sure yeah did

91
00:03:58,890 --> 00:03:57,040
sound great didn't it and so we went

92
00:04:01,140 --> 00:03:58,900
down and took a look at the data we have

93
00:04:02,910 --> 00:04:01,150
a lot of guys on console and and they

94
00:04:05,010 --> 00:04:02,920
while we've got a lot of data to pour

95
00:04:07,800 --> 00:04:05,020
through and for 500 seconds of good data

96
00:04:09,150 --> 00:04:07,810
we we got a quick look of it and the

97
00:04:11,910 --> 00:04:09,160
engine performed exactly as we expected

98
00:04:14,370 --> 00:04:11,920
it to we're going to pull through to

99
00:04:15,949 --> 00:04:14,380
make sure that that all the if we find

100
00:04:22,740 --> 00:04:15,959
any issues we'll take care of those but

101
00:04:28,860 --> 00:04:22,750
first look is it went great next

102
00:04:33,140 --> 00:04:31,530
Vanessa Bolano again with WG no news we

103
00:04:36,660 --> 00:04:33,150
hear a lot about the future of

104
00:04:38,490 --> 00:04:36,670
exploration and a lot of people not sure

105
00:04:41,520 --> 00:04:38,500
what it means especially after we've

106
00:04:44,670 --> 00:04:41,530
seen funding cuts what is the future of

107
00:04:48,000 --> 00:04:44,680
space exploration what can we expect for

108
00:04:50,040 --> 00:04:48,010
the next 20 30 years well i think that

109
00:04:52,170 --> 00:04:50,050
the future you you see that one of the

110
00:04:54,840 --> 00:04:52,180
early steps of it here today is jodi

111
00:04:58,440 --> 00:04:54,850
talked about getting this engine ready

112
00:05:01,650 --> 00:04:58,450
for our eventual heavy-lift rocket to

113
00:05:05,510 --> 00:05:01,660

take crew and cargo beyond low-earth

114
00:05:08,400 --> 00:05:05,520
orbit eventually we're going to Mars we

115
00:05:11,100 --> 00:05:08,410
we have near-earth asteroids the moon

116
00:05:14,040 --> 00:05:11,110
other destinations between here and Mars

117
00:05:17,280 --> 00:05:14,050
that we're going to go visit the future

118
00:05:18,660 --> 00:05:17,290
is bright for exploration recognizing we

119
00:05:20,940 --> 00:05:18,670
do live in a constrained budget

120
00:05:22,800 --> 00:05:20,950
environment at this point and we

121
00:05:25,770 --> 00:05:22,810
understand that and we've set up the

122
00:05:28,920 --> 00:05:25,780
program to live within those within that

123
00:05:30,810 --> 00:05:28,930
funding environment but the future for

124
00:05:32,220 --> 00:05:30,820
exploration is bright because we're

125
00:05:34,860 --> 00:05:32,230
building the systems and you see the

126
00:05:37,140 --> 00:05:34,870
evidence today of part of the team and

127
00:05:39,090 --> 00:05:37,150
an important part of the team along with

128
00:05:41,730 --> 00:05:39,100
everyone else working across the country

129
00:05:43,920 --> 00:05:41,740
to go get the crew capsules the launch

130
00:05:46,290 --> 00:05:43,930
vehicles the transportation system in

131
00:05:49,440 --> 00:05:46,300
place so that we can go beyond low-earth

132
00:05:51,960 --> 00:05:49,450
orbit and this is an early step but it's

133
00:05:54,540 --> 00:05:51,970
evidence that that we're making progress

134
00:05:59,160 --> 00:05:54,550
and we will continue to work towards

135
00:06:01,350 --> 00:05:59,170
exploration hi Mary Perez Sun Herald

136
00:06:08,430 --> 00:06:01,360
where the Stennis Space Center for in

137
00:06:11,340 --> 00:06:08,440
the exploration well I'm proud to say

138
00:06:14,340 --> 00:06:11,350

that we fit you know right now is in the

139
00:06:17,030 --> 00:06:14,350
future of NASA is happening today you

140
00:06:21,360 --> 00:06:17,040
heard the j-2x test successfully today

141
00:06:23,400 --> 00:06:21,370
we are also supporting the cots program

142
00:06:25,740 --> 00:06:23,410
that's going to be resupply on the space

143
00:06:28,500 --> 00:06:25,750
station with the aj26 engine in another

144
00:06:30,810 --> 00:06:28,510
test stand and we also are waiting and

145
00:06:31,920 --> 00:06:30,820
delivery of the thrust chamber assembly

146
00:06:34,160 --> 00:06:31,930
from Blue Origin which will be

147
00:06:37,770 --> 00:06:34,170
supporting the Commercial Crew program

148
00:06:39,150 --> 00:06:37,780
as well so expect big things for Stennis

149
00:06:40,830 --> 00:06:39,160
dennis has had a traditional role in

150
00:06:42,210 --> 00:06:40,840
rocket test and a very strong

151
00:06:43,680 --> 00:06:42,220
relationship and partners

152
00:06:44,910 --> 00:06:43,690
ship with the Marshall Space Flight

153
00:06:58,110 --> 00:06:44,920
Center and would look forward to that

154
00:07:04,540 --> 00:07:00,760
highly group again I guess for mr.

155
00:07:06,969 --> 00:07:04,550
Dunbar we were told today that you're

156
00:07:09,550 --> 00:07:06,979
going to test I think five developmental

157
00:07:11,350 --> 00:07:09,560
engines and then two engines to certify

158
00:07:13,779 --> 00:07:11,360
before you get to a flight engine if

159
00:07:15,610 --> 00:07:13,789
that if that's right why so many engines

160
00:07:19,559 --> 00:07:15,620
I mean what do you have to test so many

161
00:07:21,939 --> 00:07:19,569
engines couldn't you maybe test three

162
00:07:24,909 --> 00:07:21,949
well I'll take a first cut at that and

163
00:07:27,670 --> 00:07:24,919

then I'll turn it over to Mike the

164
00:07:29,680 --> 00:07:27,680
reason we test different engines in the

165
00:07:32,559 --> 00:07:29,690
law and the number of engines we test is

166
00:07:35,200 --> 00:07:32,569
based upon the need to demonstrate the

167
00:07:37,330 --> 00:07:35,210
engine performance also repeatability

168
00:07:39,909 --> 00:07:37,340
and to get a good understanding of how

169
00:07:41,320 --> 00:07:39,919
the hardware will work in in the various

170
00:07:43,480 --> 00:07:41,330
environments in which it will have to

171
00:07:45,490 --> 00:07:43,490
operate and to demonstrate all of our

172
00:07:48,999 --> 00:07:45,500
processes and procedures that you need

173
00:07:51,219 --> 00:07:49,009
to develop and build that engine so Mike

174
00:07:53,439 --> 00:07:51,229
and his team have done a great job of

175
00:07:55,149 --> 00:07:53,449
making sure we understand what we need

176
00:07:58,209 --> 00:07:55,159
to do what we need to test and then

177
00:07:59,860 --> 00:07:58,219
laying out an efficient test program to

178
00:08:01,209 --> 00:07:59,870
go meet those needs meet those test

179
00:08:04,899 --> 00:08:01,219
objectives so that we can demonstrate

180
00:08:08,769 --> 00:08:04,909
good hardware we continue to work that

181
00:08:11,320 --> 00:08:08,779
and the team has done great and we just

182
00:08:13,290 --> 00:08:11,330
continue to look for those things we do

183
00:08:17,950 --> 00:08:13,300
the testing so that we can learn and

184
00:08:20,320 --> 00:08:17,960
understand how things operate and right

185
00:08:21,999 --> 00:08:20,330
now that's our plan and Mike and his

186
00:08:24,519 --> 00:08:22,009
team have done a great job and I'll let

187
00:08:27,430 --> 00:08:24,529
Mike go into any further details about

188
00:08:29,260 --> 00:08:27,440

how we choose the numbers then then hit

189
00:08:30,490 --> 00:08:29,270
it pretty good we want to make sure that

190
00:08:31,689 --> 00:08:30,500
we have a good design we also want to

191
00:08:33,880 --> 00:08:31,699
make sure that we understand how to make

192
00:08:35,560 --> 00:08:33,890
a good repeatable design and also we

193
00:08:37,209 --> 00:08:35,570
want to drive out any issues that we

194
00:08:41,319 --> 00:08:37,219
have while on the ground so to make sure

195
00:08:43,600 --> 00:08:41,329
not to have them in the air and so we we

196
00:08:45,579 --> 00:08:43,610
want to test several times you say that

197
00:08:47,470 --> 00:08:45,589
if I so many engines we're actually

198
00:08:50,079 --> 00:08:47,480
doing it with fewer engines anyone ever

199
00:08:52,210 --> 00:08:50,089
has for this class of engine and we

200
00:08:54,819 --> 00:08:52,220
understand the need to try to get that

201
00:08:56,139 --> 00:08:54,829
as modern analysis techniques improving

202
00:08:59,050 --> 00:08:56,149
things like that we will be able to

203
00:09:01,269 --> 00:08:59,060
continue to take steps towards less and

204
00:09:03,490 --> 00:09:01,279
less engines for demonstration we've

205
00:09:05,110 --> 00:09:03,500
taken a big step with j-2x and we would

206
00:09:07,720 --> 00:09:05,120
continue to do that with future engines

207
00:09:09,370 --> 00:09:07,730
and we just need to get to know this

208
00:09:10,569 --> 00:09:09,380
thing and make sure it's working just

209
00:09:12,939 --> 00:09:10,579
like we designed it

210
00:09:14,379 --> 00:09:12,949
one of my mentor says the hardware knows

211
00:09:24,340 --> 00:09:14,389
the truth we just need to get to know

212
00:09:29,020 --> 00:09:27,280
twofold question wondering how many

213
00:09:32,290 --> 00:09:29,030

people from start to finish including

214
00:09:35,170 --> 00:09:32,300
all the testing does it actually work on

215
00:09:39,490 --> 00:09:35,180
an engine like this and also how much

216
00:09:42,430 --> 00:09:39,500
does something like this cost immediate

217
00:09:44,590 --> 00:09:42,440
demise all right yeah for the protest

218
00:09:46,480 --> 00:09:44,600
day there's about 30 to 35 folks that

219
00:09:49,930 --> 00:09:46,490
are there operating both the facility

220
00:09:52,090 --> 00:09:49,940
and watching over the engine our team of

221
00:09:53,980 --> 00:09:52,100
people that do the design analysis

222
00:09:57,370 --> 00:09:53,990
manufacturer back in 20 rock bands

223
00:09:59,200 --> 00:09:57,380
around 400 we have some folks that help

224
00:10:01,960 --> 00:09:59,210
at the Marshall Space Flight Center and

225
00:10:06,670 --> 00:10:01,970
down here at at Stennis Space Center and

226
00:10:08,560 --> 00:10:06,680
and we we totaled about 150 a test we

227
00:10:10,420 --> 00:10:08,570
really talk about those in terms of test

228
00:10:11,950 --> 00:10:10,430
series and but if you were to try to get

229
00:10:15,370 --> 00:10:11,960
down to what there's a single test cost

230
00:10:18,430 --> 00:10:15,380
around 350 thousand dollars but but when

231
00:10:19,930 --> 00:10:18,440
we apply that across you know several

232
00:10:22,600 --> 00:10:19,940
months and those kinds of things it

233
00:10:24,940 --> 00:10:22,610
averages out but we get about 28 test

234
00:10:26,200 --> 00:10:24,950
out of each engine and then we move to

235
00:10:27,490 --> 00:10:26,210
the next engine and that's kind of the

236
00:10:34,630 --> 00:10:27,500
life of the engine as we begin to

237
00:10:38,650 --> 00:10:34,640
understand it to its maturity other

238
00:10:42,280 --> 00:10:40,300

if there no other questions and that

239
00:10:43,960 --> 00:10:42,290
will conclude today's proceedings for

240
00:10:45,639 --> 00:10:43,970
more information on the j-2x engine on