1
00:00:02,760 --> 00:00:13,500
foreign

2
00:00:13,510 --> 00:00:34,130
[Music]

3
00:00:45,570 --> 00:00:36,350
of Landing a man on the moon and me

4
00:02:10,089 --> 00:00:51,240
[Music]

5
00:02:18,890 --> 00:02:13,790
a.m Eastern let's take a quick look at

6
00:02:24,949 --> 00:02:20,589
change engine start

7
00:02:27,949 --> 00:02:24,959
three two one booster's indignation

8
00:02:38,990 --> 00:02:27,959
and liftoff of Artemis one we rise

9
00:02:43,009 --> 00:02:41,390
all four rs25 engines on the core stage

10
00:02:45,530 --> 00:02:43,019
and two solid rocket boosters now

11
00:02:50,150 --> 00:02:45,540
propelling the vehicle at 128 miles per

12
00:02:53,990 --> 00:02:52,550
very good good control on the role from

13
00:02:56,210 --> 00:02:54,000

teams in Mission Control Houston all

14
00:02:58,130 --> 00:02:56,220
good calls so far now 30 seconds into

15
00:02:59,990 --> 00:02:58,140
the flight Harvest one

16
00:03:01,729 --> 00:03:00,000
first Milestone will be for the vehicle

17
00:03:03,710 --> 00:03:01,739
to pass through Max Q in about one

18
00:03:05,449 --> 00:03:03,720
minute and nine seconds into launch this

19
00:03:11,540 --> 00:03:05,459
is the greatest period of atmospheric

20
00:03:22,970 --> 00:03:13,430
[Music]

21
00:03:27,170 --> 00:03:25,190
looking at 8.8 million pounds of Maximum

22
00:03:29,509 --> 00:03:27,180
thrust

23
00:03:31,369 --> 00:03:29,519
and there you did see a replay of that

24
00:03:32,930 --> 00:03:31,379
launch of the space launch system which

25
00:03:36,290 --> 00:03:32,940
blasted off from the Kennedy Space

26
00:03:38,509 --> 00:03:36,300
Center at 12 47 am Central now following

27
00:03:41,390 --> 00:03:38,519
liftoff those solar arrays were deployed

28
00:03:44,350 --> 00:03:41,400
and we had trans lunar injection which

29
00:03:47,149 --> 00:03:44,360
took place and the icps

30
00:03:49,670 --> 00:03:47,159
separation also occurred

31
00:03:51,649 --> 00:03:49,680
now just a short time ago Orion

32
00:03:54,649 --> 00:03:51,659
conducted the first trajectory

33
00:03:56,930 --> 00:03:54,659
adjustment burn and completed a checkout

34
00:04:00,170 --> 00:03:56,940
of the orbital maneuvering system or

35
00:04:03,229 --> 00:04:00,180
ohms engine and all went smoothly during

36
00:04:05,630 --> 00:04:03,239
that 30-second burn Orion is continuing

37
00:04:08,570 --> 00:04:05,640
its Journey To The Moon and we are

38
00:04:11,030 --> 00:04:08,580

anticipating views shortly as part of an

39
00:04:15,589 --> 00:04:11,040
imagery event now as you can see on your

40
00:04:19,009 --> 00:04:15,599
screen Orion is over 55 500 miles away

41
00:04:22,670 --> 00:04:19,019
from Earth now nine hours into its

42
00:04:24,650 --> 00:04:22,680
flight but still 204 000 miles away from

43
00:04:26,810 --> 00:04:24,660
the Moon of course that distance will

44
00:04:29,689 --> 00:04:26,820
get less and less over the next few days

45
00:04:32,330 --> 00:04:29,699
and at closest approach Orion will be

46
00:04:48,430 --> 00:04:32,340
about 60 nautical miles above the

47
00:04:55,070 --> 00:04:51,469
and we are starting to get some of our

48
00:04:57,170 --> 00:04:55,080
very first views of the Orion spacecraft

49
00:04:59,570 --> 00:04:57,180
great view right there in the center of

50
00:05:02,150 --> 00:04:59,580
your screen of that large engine

51
00:05:04,189 --> 00:05:02,160
the orbital maneuvering system or ohms

52
00:05:07,550 --> 00:05:04,199
engine which just performed that orbital

53
00:05:15,790 --> 00:05:07,560
trajectory correction maneuver again now

54
00:05:22,430 --> 00:05:19,310
that ohms engine is the main

55
00:05:24,650 --> 00:05:22,440
engine and is a repurposed space shuttle

56
00:05:27,890 --> 00:05:24,660
orbital maneuvering system engine that

57
00:05:30,890 --> 00:05:27,900
has flown in space 19 times during space

58
00:05:33,170 --> 00:05:30,900
shuttle flights ranging from 1984 to

59
00:05:35,689 --> 00:05:33,180
2002.

60
00:05:37,790 --> 00:05:35,699
and on the side of the Orion spacecraft

61
00:05:40,490 --> 00:05:37,800
you also see some of the auxiliary

62
00:05:42,529 --> 00:05:40,500
engines on Orion there's eight of those

63
00:05:44,570 --> 00:05:42,539

auxiliary engines located on the bottom

64
00:05:48,189 --> 00:05:44,580
of the European service module in four

65
00:05:53,510 --> 00:05:50,870
these are fixed at the bottom to provide

66
00:05:56,810 --> 00:05:53,520
trajectory Corrections and as a backup

67
00:05:59,090 --> 00:05:56,820
to that main engine the ohms engine

68
00:06:03,469 --> 00:05:59,100
each of those auxiliary engines provide

69
00:06:08,629 --> 00:06:06,110
and there are also 24 smaller engines

70
00:06:11,270 --> 00:06:08,639
grouped into six pods on Orion which

71
00:06:13,370 --> 00:06:11,280
provide attitude control

72
00:06:15,890 --> 00:06:13,380
they can be fired individually as needed

73
00:06:18,710 --> 00:06:15,900
to move the spacecraft in different

74
00:06:19,909 --> 00:06:18,720
directions and rotate it into any

75
00:06:58,870 --> 00:06:19,919
position

76
00:07:06,409 --> 00:07:02,330
we are now over nine hours into the

77
00:07:08,870 --> 00:07:06,419
flight of Artemis one

78
00:07:11,330 --> 00:07:08,880
again SLS launched from the Kennedy

79
00:07:18,529 --> 00:07:11,340
Space Center in Florida at 12 47 a.m

80
00:07:23,510 --> 00:07:21,290
Orion will be completing a 25-day

81
00:07:41,170 --> 00:07:23,520
mission as part of Artemis 1 with a

82
00:07:46,010 --> 00:07:43,969
continuing to get some views of the

83
00:07:47,629 --> 00:07:46,020
orbital maneuvering system or ohms

84
00:08:20,869 --> 00:07:47,639
engine as well as those auxiliary

85
00:08:38,709 --> 00:08:26,869
foreign

86
00:08:44,690 --> 00:08:42,170
so as we continue to anticipate some

87
00:08:47,630 --> 00:08:44,700
additional views during this imagery

88
00:08:49,730 --> 00:08:47,640

event these views will be gathered on

89
00:08:51,590 --> 00:08:49,740
cameras that Orion is equipped with

90
00:08:54,350 --> 00:08:51,600
there's actually three different groups

91
00:08:56,329 --> 00:08:54,360
that fly on the vehicle itself

92
00:09:00,910 --> 00:08:56,339
these include some internal cabin

93
00:09:07,730 --> 00:09:05,269
and Orion is an uncrewed test flight but

94
00:09:10,190 --> 00:09:07,740
when we do fly humans on board soon

95
00:09:15,050 --> 00:09:10,200
these cameras will be capturing views of

96
00:09:19,070 --> 00:09:16,970
and even though there isn't a crew

97
00:09:21,410 --> 00:09:19,080
inside Orion for this Mission we do have

98
00:09:23,269 --> 00:09:21,420
those internal cameras still on board to

99
00:09:25,730 --> 00:09:23,279
test out their capabilities

100
00:09:27,949 --> 00:09:25,740
and there are also external cameras and

101
00:09:31,310 --> 00:09:27,959
those cameras are mainly used for flight

102
00:09:33,290 --> 00:09:31,320
test objectives or ftos in critical

103
00:09:37,210 --> 00:09:33,300
Mission phases to check out how the

104
00:09:39,949 --> 00:09:37,220
vehicle is operating and performing

105
00:09:42,949 --> 00:09:39,959
and then there's what we call external

106
00:09:45,889 --> 00:09:42,959
saw cameras the saw camera is a solar

107
00:09:48,590 --> 00:09:45,899
array Wing camera

108
00:09:51,350 --> 00:09:48,600
basically the solar array wings are

109
00:09:53,630 --> 00:09:51,360
those x-shaped wings that stick out on

110
00:09:55,370 --> 00:09:53,640
the bottom of the Orion vehicle we

111
00:09:57,710 --> 00:09:55,380
aren't getting imagery of that just yet

112
00:09:59,690 --> 00:09:57,720
but we might hear shortly these are used

113
00:10:02,570 --> 00:09:59,700

to collect solar power and distribute

114
00:10:05,210 --> 00:10:02,580
that to the vehicle itself

115
00:10:07,009 --> 00:10:05,220
and then on the very edge of the solar

116
00:10:09,350 --> 00:10:07,019
array wings

117
00:10:11,389 --> 00:10:09,360
there are the cameras which are used to

118
00:10:19,370 --> 00:10:11,399
view different angles of the capsule

119
00:10:23,990 --> 00:10:22,130
the saw cameras can be rotated to get a

120
00:11:10,130 --> 00:10:24,000
different View and perspective from the

121
00:11:14,930 --> 00:11:12,110
and on this graphic that you're seeing

122
00:11:19,490 --> 00:11:14,940
here on your screen you can make out

123
00:11:22,850 --> 00:11:19,500
slightly the solar arrays those black X

124
00:11:25,009 --> 00:11:22,860
shaped figures there and that is where

125
00:11:29,449 --> 00:11:25,019
those saw cameras are located that we

126
00:11:36,710 --> 00:11:33,410
Orion is over 56 000 miles away from

127
00:11:39,590 --> 00:11:36,720
Earth but still has about 204 000 miles

128
00:11:42,889 --> 00:11:39,600
in its Journey to the Moon

129
00:11:45,590 --> 00:11:42,899
again this is a

130
00:11:48,590 --> 00:11:45,600
a test flight of the Orion vehicle and

131
00:12:09,470 --> 00:11:48,600
its capabilities resulting in a 25-day

132
00:12:09,480 --> 00:12:43,629
I don't know

133
00:12:49,009 --> 00:12:46,310
the team here in Mission Control Houston

134
00:12:51,590 --> 00:12:49,019
continues to support and here shortly

135
00:12:53,870 --> 00:12:51,600
the team will ensure that the saw or

136
00:12:57,350 --> 00:12:53,880
solar array Wing cameras are positioned

137
00:13:02,750 --> 00:12:57,360
correctly as we anticipate imagery

138
00:13:07,370 --> 00:13:06,110

now this view of potentially Earth will

139
00:13:08,509 --> 00:13:07,380
be a little different than what we're

140
00:13:11,329 --> 00:13:08,519
used to seeing from the International

141
00:13:12,530 --> 00:13:11,339
Space Station which orbits about 250

142
00:13:15,470 --> 00:13:12,540
miles

143
00:13:19,310 --> 00:13:15,480
above Earth now as just mentioned Orion

144
00:13:26,410 --> 00:13:19,320
is currently over 50 000 miles away so

145
00:13:30,410 --> 00:13:28,670
now of course throughout the coming days

146
00:13:32,930 --> 00:13:30,420
we will expect to see the earth grow

147
00:13:34,970 --> 00:13:32,940
smaller and smaller and the moon grow

148
00:14:28,389 --> 00:13:34,980
larger in the field of view as Orion

149
00:14:34,970 --> 00:14:31,910
as Orion continues its Journey towards

150
00:14:36,350 --> 00:14:34,980
the moon now over nine hours since it

151
00:14:38,810 --> 00:14:36,360
launched from the Kennedy Space Center

152
00:14:41,509 --> 00:14:38,820
in Florida let's look at a broad

153
00:14:43,670 --> 00:14:41,519
overview of the Artemis mission to see

154
00:14:46,730 --> 00:14:43,680
what has happened so far and what is

155
00:14:51,230 --> 00:14:48,170
welcome

156
00:14:53,509 --> 00:14:51,240
to the Moon board we got this just in

157
00:14:56,569 --> 00:14:53,519
time for the first mission in Artemis

158
00:14:58,790 --> 00:14:56,579
Artemis one so let me use it now to take

159
00:15:00,710 --> 00:14:58,800
you through as always we're going to

160
00:15:03,889 --> 00:15:00,720
start off with a launch in this case

161
00:15:06,530 --> 00:15:03,899
four rs-25 engines ignite two solid

162
00:15:09,050 --> 00:15:06,540
rocket boosters sending SLS and Orion

163
00:15:11,150 --> 00:15:09,060

Skyward on the way uphill a couple of

164
00:15:13,550 --> 00:15:11,160
jettison events things coming off of the

165
00:15:15,290 --> 00:15:13,560
rocket one of the most visual will be

166
00:15:16,910 --> 00:15:15,300
these two solid rocket boosters coming

167
00:15:19,490 --> 00:15:16,920
off about two minutes into the flight

168
00:15:21,889 --> 00:15:19,500
after all of their propellants gone we

169
00:15:24,230 --> 00:15:21,899
also have three fairings protecting

170
00:15:25,850 --> 00:15:24,240
Orion on the way uphill as well as the

171
00:15:28,610 --> 00:15:25,860
launch abort system that will come off

172
00:15:30,470 --> 00:15:28,620
now after we get through all of the

173
00:15:32,689 --> 00:15:30,480
propellant in that giant core stage

174
00:15:35,030 --> 00:15:32,699
we'll hear Mikko main engine cut off it

175
00:15:37,730 --> 00:15:35,040
will drop away turning propulsion over

176
00:15:40,970 --> 00:15:37,740
to this the interim cryogenic propulsion

177
00:15:43,069 --> 00:15:40,980
stage or icps it's going to make its

178
00:15:44,449 --> 00:15:43,079
first maneuver to raise up the lowest

179
00:15:46,850 --> 00:15:44,459
part of our orbit around the Earth

180
00:15:49,009 --> 00:15:46,860
really put us in a nice circular path

181
00:15:51,410 --> 00:15:49,019
around our planet and while we're in

182
00:15:53,269 --> 00:15:51,420
Earth orbit we can check out Orion make

183
00:15:56,090 --> 00:15:53,279
sure its systems are functioning as we

184
00:15:59,090 --> 00:15:56,100
expect before we commit to sending it to

185
00:16:03,650 --> 00:15:59,100
the Moon that happens here the trans

186
00:16:06,290 --> 00:16:03,660
lunar injection to a 20-minute firing of

187
00:16:09,470 --> 00:16:06,300
this icps upper stage and what that's

188
00:16:11,629 --> 00:16:09,480

designed to do is really give Orion

189
00:16:13,930 --> 00:16:11,639
enough energy to get out of low earth

190
00:16:16,670 --> 00:16:13,940
orbit and make its way to the Moon

191
00:16:19,069 --> 00:16:16,680
shortly after that the icps will

192
00:16:21,650 --> 00:16:19,079
separate its job pushing Orion is done

193
00:16:23,750 --> 00:16:21,660
it has a couple of secondary payloads in

194
00:16:26,269 --> 00:16:23,760
here some cubesats that it'll deploy

195
00:16:28,910 --> 00:16:26,279
ultimately sending itself on a path

196
00:16:31,430 --> 00:16:28,920
around the Moon before it escapes and

197
00:16:33,769 --> 00:16:31,440
goes into orbit around the sun meanwhile

198
00:16:36,470 --> 00:16:33,779
Orion though continues on its Journey

199
00:16:38,689 --> 00:16:36,480
it'll make some correction Burns as it

200
00:16:40,850 --> 00:16:38,699
fine-tunes its path towards our lunar

201
00:16:43,850 --> 00:16:40,860
neighbor before we get into all the

202
00:16:46,670 --> 00:16:43,860
exciting stuff up close we'll dip in for

203
00:16:48,889 --> 00:16:46,680
a 60 nautical mile flyby of the lunar

204
00:16:50,749 --> 00:16:48,899
surface using the engines on the

205
00:16:53,990 --> 00:16:50,759
European service module to push us

206
00:16:57,350 --> 00:16:54,000
around and into distant retrograde orbit

207
00:16:59,509 --> 00:16:57,360
or Dro that's this dotted line that you

208
00:17:01,670 --> 00:16:59,519
can see up here this is really where

209
00:17:04,130 --> 00:17:01,680
we're going to learn about Orion while

210
00:17:06,949 --> 00:17:04,140
we fly around the Moon about 38 000

211
00:17:09,409 --> 00:17:06,959
miles off the lunar surface we call it

212
00:17:11,809 --> 00:17:09,419
retrograde as the Moon is heading in

213
00:17:14,870 --> 00:17:11,819

that direction Orion will be heading in

214
00:17:17,329 --> 00:17:14,880
this one opposite retrograde

215
00:17:19,309 --> 00:17:17,339
now after we're done in that orbit it'll

216
00:17:22,370 --> 00:17:19,319
be time to come home we'll execute a

217
00:17:24,770 --> 00:17:22,380
maneuver to exit do another flyby close

218
00:17:26,750 --> 00:17:24,780
to the lunar surface that commits us to

219
00:17:28,730 --> 00:17:26,760
coming home and fine-tuning our path

220
00:17:31,190 --> 00:17:28,740
towards the atmosphere we'll make any

221
00:17:33,830 --> 00:17:31,200
correction burns on our way back as

222
00:17:35,870 --> 00:17:33,840
necessary before it's time to re-enter

223
00:17:37,250 --> 00:17:35,880
the atmosphere now before that can

224
00:17:39,650 --> 00:17:37,260
happen we'll have a spacecraft

225
00:17:41,930 --> 00:17:39,660
separation event the service module its

226
00:17:43,370 --> 00:17:41,940
job is done it breaks away ends up

227
00:17:46,250 --> 00:17:43,380
burning up in the atmosphere after

228
00:17:49,690 --> 00:17:46,260
carrying Orion to the Moon and back

229
00:17:52,610 --> 00:17:49,700
what this does is reveal the heat shield

230
00:17:55,549 --> 00:17:52,620
the large structure on the base of Orion

231
00:17:58,070 --> 00:17:55,559
testing this is our number one goal for

232
00:17:59,990 --> 00:17:58,080
the Artemis one flight because when we

233
00:18:02,510 --> 00:18:00,000
come back from the Moon we're going to

234
00:18:04,850 --> 00:18:02,520
be moving at 25

235
00:18:06,590 --> 00:18:04,860
000 miles an hour that's 8 000 miles an

236
00:18:08,570 --> 00:18:06,600
hour faster than when you come home from

237
00:18:10,970 --> 00:18:08,580
the International Space Station and what

238
00:18:13,669 --> 00:18:10,980

that's going to cause is this to heat up

239
00:18:15,049 --> 00:18:13,679
to about 5000 degrees Fahrenheit that's

240
00:18:17,270 --> 00:18:15,059
half the temperature if you were

241
00:18:19,370 --> 00:18:17,280
standing on the surface of the Sun so

242
00:18:21,830 --> 00:18:19,380
things will be very hot but that heat

243
00:18:23,330 --> 00:18:21,840
shield does its job to protect the Orion

244
00:18:25,190 --> 00:18:23,340
capsule which will be bringing our

245
00:18:27,289 --> 00:18:25,200
astronauts home at the end of these

246
00:18:30,230 --> 00:18:27,299
future missions after we're through that

247
00:18:32,630 --> 00:18:30,240
fiery re-entry parachutes deploy Orion

248
00:18:35,690 --> 00:18:32,640
splashes down in the ocean we'll have a

249
00:18:38,210 --> 00:18:35,700
U.S Navy ship standing by with recovery

250
00:18:40,610 --> 00:18:38,220
Personnel to pick Orion up out of the

251
00:18:46,010 --> 00:18:40,620
water and bring it in to the first

252
00:18:50,270 --> 00:18:48,110
and if you're just tuning in with us

253
00:18:54,289 --> 00:18:50,280
Orion launched from the Kennedy Space

254
00:18:57,830 --> 00:18:54,299
Center in Florida at 12 47 a.m Central 1

255
00:19:00,590 --> 00:18:57,840
47 a.m Eastern and is on its way to the

256
00:19:03,409 --> 00:19:00,600
Moon following trans lunar injection and

257
00:19:06,529 --> 00:19:03,419
the first orbital tradection correction

258
00:19:10,010 --> 00:19:06,539
burn earlier this morning Orion is now

259
00:19:11,810 --> 00:19:10,020
over 50 000 miles away from Earth and

260
00:19:14,930 --> 00:19:11,820
we're beginning to see imagery from

261
00:19:17,270 --> 00:19:14,940
Orion most notably of the large main

262
00:19:20,270 --> 00:19:17,280
engine on the European service module

263
00:19:32,710 --> 00:19:20,280

the ohms or orbital maneuvering system

264
00:19:39,470 --> 00:19:35,570
we're also getting some views of the

265
00:19:44,870 --> 00:19:42,289
located to the left and the right of the

266
00:19:53,270 --> 00:19:44,880
ohms engine there are eight auxiliary

267
00:19:57,650 --> 00:19:55,669
now again that main engine that you're

268
00:20:00,830 --> 00:19:57,660
seeing the largest engine the orbital

269
00:20:03,470 --> 00:20:00,840
maneuvering system engine was used just

270
00:20:05,930 --> 00:20:03,480
a short time ago to perform a burn that

271
00:20:13,250 --> 00:20:05,940
lasted about 30 seconds all went

272
00:20:18,650 --> 00:20:16,430
the engine can provide 6 000 pounds of

273
00:20:21,169 --> 00:20:18,660
thrust and is equipped to steer the

274
00:20:23,750 --> 00:20:21,179
spacecraft and can also be used in some

275
00:20:29,750 --> 00:20:23,760
abort cases to safely return Orion to

276
00:20:37,070 --> 00:20:31,870
this engine that you see in the center

277
00:20:40,909 --> 00:20:37,080
the module there flew on 19 space

278
00:20:44,710 --> 00:20:40,919
shuttle flights beginning with sts-41 G

279
00:21:23,450 --> 00:20:44,720
in October of 1984 and ending with

280
00:21:28,370 --> 00:21:26,330
now so Ryan continues its Journey To The

281
00:22:28,990 --> 00:21:28,380
Moon we do anticipate potential Earth

282
00:22:37,730 --> 00:22:32,630
at this hour now 9 hours and 19 minutes

283
00:22:41,210 --> 00:22:37,740
since launch Orion is 57 000 miles away

284
00:22:47,450 --> 00:22:41,220
from Earth closing in on the moon two

285
00:22:53,149 --> 00:22:50,570
in this animation you can see the saw or

286
00:22:56,149 --> 00:22:53,159
solar array wings as they are being

287
00:23:09,649 --> 00:22:56,159
oriented in anticipation of this imagery

288
00:23:15,590 --> 00:23:12,350

so again that saw camera is a solar

289
00:23:18,470 --> 00:23:15,600
array Wing camera

290
00:23:20,149 --> 00:23:18,480
the solar arrays are that x-shaped Wing

291
00:23:22,430 --> 00:23:20,159
that sticks out of the bottom of Orion

292
00:23:24,770 --> 00:23:22,440
that you can see on your screen there

293
00:23:28,010 --> 00:23:24,780
used to collect solar power and

294
00:23:31,970 --> 00:23:28,020
distribute that to the vehicle itself

295
00:23:34,430 --> 00:23:31,980
and on the very end of These Wings

296
00:23:39,289 --> 00:23:34,440
are cameras which can capture different

297
00:25:36,649 --> 00:23:41,750
those wings can be rotated to gather

298
00:25:42,830 --> 00:25:39,169
the team here in Mission Control Houston

299
00:25:45,230 --> 00:25:42,840
is continuing to ensure that the solar

300
00:25:58,190 --> 00:25:45,240
arrays are positioned correctly for the

301
00:26:08,090 --> 00:26:03,730
is

302
00:26:11,570 --> 00:26:08,100
a slightly different angle of those

303
00:26:13,669 --> 00:26:11,580
auxiliary engines on the sides of the

304
00:26:15,590 --> 00:26:13,679
orbital maneuvering system engine that's

305
00:26:21,789 --> 00:26:15,600
that larger engine right in the middle

306
00:26:28,130 --> 00:26:24,289
and we are actually seeing a little bit

307
00:26:30,350 --> 00:26:28,140
of movement in the solar array Wings two

308
00:27:03,190 --> 00:26:30,360
and three in anticipation of the imagery

309
00:27:07,490 --> 00:27:05,029
continuing to get a different

310
00:27:09,470 --> 00:27:07,500
perspective of Orion and the European

311
00:27:11,990 --> 00:27:09,480
service module as those solar array

312
00:27:14,210 --> 00:27:12,000
Wings continue to move

313
00:27:16,610 --> 00:27:14,220

as with nearly everything else during

314
00:27:18,529 --> 00:27:16,620
Artemis 1 the two main objectives for

315
00:27:21,529 --> 00:27:18,539
the imagery system is to capture the

316
00:27:23,570 --> 00:27:21,539
flight test objective data and ensure we

317
00:27:24,590 --> 00:27:23,580
have a safe built vehicle for crew to

318
00:27:26,990 --> 00:27:24,600
fly on

319
00:27:30,970 --> 00:27:27,000
really starting to be able to make out

320
00:28:11,890 --> 00:27:30,980
that solar array Wing now in the bottom

321
00:28:31,510 --> 00:28:14,510
and you're seeing there on your screen

322
00:28:39,169 --> 00:28:34,909
this view of Earth captured from a human

323
00:28:42,350 --> 00:28:39,179
rated spacecraft not seen since 1972

324
00:28:43,970 --> 00:28:42,360
during the final Apollo Mission some 50

325
00:28:46,909 --> 00:28:43,980
years ago

326
00:28:49,549 --> 00:28:46,919
the views of our Blue Marble in the

327
00:28:52,130 --> 00:28:49,559
Blackness of space now capturing the

328
00:29:32,710 --> 00:28:52,140
imagination of a new generation the

329
00:29:39,230 --> 00:29:35,750
Orion looking back at Earth as it

330
00:29:41,149 --> 00:29:39,240
travels toward the moon 57

331
00:30:22,070 --> 00:29:41,159
000 miles away from the place we call

332
00:30:22,080 --> 00:30:39,070
foreign

333
00:30:44,870 --> 00:30:42,470
and as we continue to Marvel in this

334
00:30:47,750 --> 00:30:44,880
spectacular image here in Mission

335
00:30:50,330 --> 00:30:47,760
Control Houston you have a great view of

336
00:30:52,370 --> 00:30:50,340
the orbital maneuvering system or Ohm's

337
00:30:55,130 --> 00:30:52,380
engine that main engine on the top left

338
00:30:58,490 --> 00:30:55,140

of your screen there that was used an

339
00:31:01,490 --> 00:30:58,500
hour and 43 minutes ago to perform the

340
00:31:04,490 --> 00:31:01,500
OTC or outbound trajectory correction

341
00:31:06,889 --> 00:31:04,500
maneuver as well as a few of the

342
00:31:09,950 --> 00:31:06,899
auxiliary engines on the bottom of the

343
00:31:15,230 --> 00:31:09,960
European service module flanked by the

344
00:31:17,930 --> 00:31:15,240
solar array ring solar array wing on the

345
00:31:43,730 --> 00:31:17,940
right portion right above the Earth on

346
00:31:51,289 --> 00:31:47,029
and here are some statistics

347
00:31:56,450 --> 00:31:51,299
on Orion now 57 000 miles away from

348
00:31:58,909 --> 00:31:56,460
Earth nearly 58 000 miles away and 203

349
00:32:00,730 --> 00:31:58,919
000 miles away from the moon traveling

350
00:32:31,990 --> 00:32:00,740
at

351
00:32:37,909 --> 00:32:34,669
if you're just tuning in with us you're

352
00:32:40,490 --> 00:32:37,919
looking at a breathtaking live view of

353
00:32:43,010 --> 00:32:40,500
the Earth from the Orion spacecraft as

354
00:32:45,710 --> 00:32:43,020
it makes its Journey To The Moon Orion

355
00:32:49,789 --> 00:32:45,720
launched earlier today at 12 47 a.m

356
00:32:53,389 --> 00:32:49,799
Central 1 47 a.m Eastern atop the space

357
00:35:29,030 --> 00:32:53,399
launch system and is in hour nine and a

358
00:35:35,630 --> 00:35:31,730
We are continuing to get these views of

359
00:35:38,450 --> 00:35:35,640
earth from the solar array Wing camera

360
00:35:39,950 --> 00:35:38,460
the solar array Wing can be seen there

361
00:35:45,829 --> 00:35:39,960
in the center of your screen that

362
00:35:57,970 --> 00:35:50,329
Orion is now over 58 000 miles away from

363
00:36:03,710 --> 00:36:01,849

and you can see there the x-shaped

364
00:36:06,710 --> 00:36:03,720
figures on your screen those are the

365
00:36:08,630 --> 00:36:06,720
solar array Wings themselves which were

366
00:36:13,609 --> 00:36:08,640
where the camera views we were getting

367
00:36:13,619 --> 00:36:19,190
and this view from inside the Orion

368
00:36:19,200 --> 00:36:24,109
inside the Orion vehicle

369
00:36:29,690 --> 00:36:27,650
this is a uncrewed test flight but on

370
00:36:32,150 --> 00:36:29,700
the left of your screen there we do have

371
00:36:35,030 --> 00:36:32,160
one of our purposeful passengers our

372
00:36:37,069 --> 00:36:35,040
munikin who is wearing the Orion crew

373
00:36:39,349 --> 00:36:37,079
survival spacesuit this will be the

374
00:36:41,990 --> 00:36:39,359
spacesuit that will be utilized by

375
00:36:57,609 --> 00:36:42,000
astronauts when they launch to the moon

376
00:37:02,630 --> 00:37:00,170
on the right of your screen there you

377
00:37:04,670 --> 00:37:02,640
can see one of the windows

378
00:37:06,950 --> 00:37:04,680
that our crew members will have the

379
00:37:09,230 --> 00:37:06,960
opportunity to look out from

380
00:38:21,550 --> 00:37:09,240
once they make their Journey to the loom

381
00:38:26,630 --> 00:38:24,109
again if you're just joining us you're

382
00:38:29,030 --> 00:38:26,640
looking at an in-cabin view of the

383
00:38:31,010 --> 00:38:29,040
uncrewed Orion vehicle

384
00:38:33,290 --> 00:38:31,020
on the left of the screen there is one

385
00:38:35,270 --> 00:38:33,300
of our purposeful passengers wearing the

386
00:38:38,089 --> 00:38:35,280
Orion crew survival suit that will be

387
00:38:42,829 --> 00:38:38,099
utilized and worn by astronauts during

388
00:38:46,490 --> 00:38:42,839

the dynamic phases of flight to the Moon

389
00:38:48,470 --> 00:38:46,500
as this is a test mission while all the

390
00:38:50,750 --> 00:38:48,480
components of Orion in the space launch

391
00:38:52,550 --> 00:38:50,760
system are being tested the Orion crew

392
00:38:55,010 --> 00:38:52,560
survival suit is now having the

393
00:40:32,109 --> 00:38:55,020
opportunity to be tested in space as

394
00:40:32,119 --> 00:40:35,510
all right

395
00:40:35,520 --> 00:40:46,569
foreign

396
00:40:53,089 --> 00:40:50,569
to get in Cabin views inside the Orion

397
00:40:55,670 --> 00:40:53,099
spacecraft

398
00:40:58,069 --> 00:40:55,680
Orion lifted off from the Kennedy Space

399
00:41:01,910 --> 00:40:58,079
Center in Florida nine and a half hours

400
00:41:08,750 --> 00:41:05,450
as part of a 25-day test flight around

401
00:41:12,410 --> 00:41:08,760
the moon and into deep space

402
00:41:18,410 --> 00:41:12,420
Orion is slated to splash down on

403
00:41:24,170 --> 00:41:21,410
again this is a uncrewed test flight but

404
00:41:26,329 --> 00:41:24,180
we do have our moon again pictured there

405
00:41:28,550 --> 00:41:26,339
on the left of your screen in the seat

406
00:41:30,050 --> 00:41:28,560
they're wearing the Orion crew survival

407
00:41:34,790 --> 00:41:30,060
suit

408
00:42:00,950 --> 00:41:34,800
by our crew members when they fly inside

409
00:42:06,890 --> 00:42:04,370
as you can see there the suit itself is

410
00:42:09,470 --> 00:42:06,900
that bright orange color

411
00:42:11,630 --> 00:42:09,480
that is to help make crew members more

412
00:42:13,609 --> 00:42:11,640
easily visible in the ocean should they

413
00:42:17,290 --> 00:42:13,619

ever need to exit Orion without the

414
00:42:23,089 --> 00:42:21,349
the spacesuit is also fire resistant and

415
00:42:25,310 --> 00:42:23,099
is a pressure garment that includes a

416
00:42:27,410 --> 00:42:25,320
restraint layer to control the shape and

417
00:42:36,650 --> 00:42:27,420
ease astr and to ease astronauts

418
00:42:42,349 --> 00:42:39,650
the suit also has a thermal management

419
00:42:44,990 --> 00:42:42,359
system to help keep astronauts cool and

420
00:42:50,510 --> 00:42:45,000
dry and a liquid cooling garment that's

421
00:42:56,630 --> 00:42:54,770
the Orion suits will be custom fitted

422
00:43:02,510 --> 00:42:56,640
for each crew member to accommodate

423
00:43:08,030 --> 00:43:04,730
and the gloves will be touch screen

424
00:43:14,109 --> 00:43:08,040
compatible to work alongside the systems

425
00:43:18,470 --> 00:43:16,849
the Orion crew survival suit is

426
00:43:21,290 --> 00:43:18,480
primarily designed for launch and

427
00:43:23,450 --> 00:43:21,300
re-entry but can also keep astronauts

428
00:43:28,690 --> 00:43:23,460
safe if Orion were to lose cabin

429
00:43:33,530 --> 00:43:30,829
astronauts could survive inside this

430
00:43:35,089 --> 00:43:33,540
spacesuit for up to six days as they

431
00:43:36,290 --> 00:43:35,099
make their way back to Earth if

432
00:43:38,089 --> 00:43:36,300
necessary

433
00:43:41,329 --> 00:43:38,099
and the suits are also equipped with a

434
00:43:43,430 --> 00:43:41,339
suite of survival gear in the event that

435
00:44:20,530 --> 00:43:43,440
again they have to exit Orion after a

436
00:44:27,109 --> 00:44:24,589
and as we've mentioned Artemis 1 is an

437
00:44:29,630 --> 00:44:27,119
uncrewed test flight of

438
00:44:30,770 --> 00:44:29,640

the space launch system and the Orion

439
00:44:32,510 --> 00:44:30,780
vehicle

440
00:44:34,490 --> 00:44:32,520
so the

441
00:44:36,470 --> 00:44:34,500
Moon again you see on the left of your

442
00:44:39,290 --> 00:44:36,480
screen there does not have a human

443
00:44:41,569 --> 00:44:39,300
inside of it but it does actually have a

444
00:44:46,970 --> 00:44:43,970
the Moon's name is Campos and is

445
00:44:49,790 --> 00:44:46,980
dedicated to Arturo Campos who was a key

446
00:45:02,030 --> 00:44:49,800
player in bringing Apollo 13 safely back

447
00:45:07,130 --> 00:45:04,790
the moon again received its name as the

448
00:45:10,130 --> 00:45:07,140
result of a competitive bracket contest

449
00:45:13,490 --> 00:45:10,140
honoring some of NASA's key figures

450
00:45:16,670 --> 00:45:13,500
programs and astronomical objects

451
00:45:19,730 --> 00:45:16,680
NASA received more than 300 000 votes

452
00:48:40,089 --> 00:45:19,740
and the winner was Arturo campus

453
00:48:46,250 --> 00:48:43,730
and with the first live image reviews of

454
00:48:48,650 --> 00:48:46,260
Earth from Orion that will wrap up our

455
00:48:50,870 --> 00:48:48,660
coverage for today but we'll continue to

456
00:48:52,750 --> 00:48:50,880
post daily updates about the mission on

457
00:48:55,849 --> 00:48:52,760
the Artemis blog at

458
00:48:57,950 --> 00:48:55,859
blogs.nasa.gov Artemis and we'll also be

459
00:49:00,290 --> 00:48:57,960
posting updates on our social media

460
00:49:02,329 --> 00:49:00,300
accounts we'll be back on the air on

461
00:49:04,609 --> 00:49:02,339
Monday to cover the outbound powered

462
00:49:07,130 --> 00:49:04,619
flyby burn at which point we will

463
00:49:09,109 --> 00:49:07,140

witness Orion's closest Approach To The

464
00:49:11,510 --> 00:49:09,119
Moon which will be approximately 80

465
00:49:15,290 --> 00:49:11,520
nautical miles our coverage will begin

466
00:49:19,430 --> 00:49:15,300
at 6 15 a.m Central 7 15 a.m Eastern

467
00:49:22,609 --> 00:49:19,440
with a burn targeted at 6 43 a.m Central

468
00:49:26,990 --> 00:49:22,619
7 43 a.m Eastern and closest approach

469
00:49:27,950 --> 00:49:27,000
occurring at 6 57 a.m Central 7 57 a.m

470
00:49:29,930 --> 00:49:27,960
Eastern

471
00:49:32,270 --> 00:49:29,940
again when we're not live you can check

472
00:49:34,130 --> 00:49:32,280
out the blog for updates and also

473
00:49:36,770 --> 00:49:34,140
subscribe to the NASA newsletter for

474
00:49:38,930 --> 00:49:36,780
updates on the spacecraft and mich and

475
00:49:41,329 --> 00:49:38,940
Mission and we're also excited to

476
00:49:43,130 --> 00:49:41,339
introduce Artemis all access which is a

477
00:49:45,230 --> 00:49:43,140
short video product released two to

478
00:49:47,450 --> 00:49:45,240
three times weekly that will provide

479
00:49:49,790 --> 00:49:47,460
updates about Mission accomplishments

480
00:49:52,609 --> 00:49:49,800
with a look at what's to come plus we'll

481
00:49:55,309 --> 00:49:52,619
have inside looks and explainers but for

482
00:49:57,890 --> 00:49:55,319
now with Orion continuing its journey to

483
00:50:00,109 --> 00:49:57,900
our nearest Celestial neighbor the Moon

484
00:50:02,630 --> 00:50:00,119
that will wrap up our coverage for today

485
00:50:06,930 --> 00:50:02,640
thanks so much for watching us this is

486
00:50:26,089 --> 00:50:13,210
[Music]

487
00:50:31,970 --> 00:50:29,510
well in my left hand I have a feather

488
00:50:34,430 --> 00:50:31,980

in my right hand a hammer and I guess

489
00:50:36,349 --> 00:50:34,440
one of the reasons we got here today was

490
00:50:38,150 --> 00:50:36,359
because of a gentleman named Galileo a

491
00:50:40,550 --> 00:50:38,160
long time ago who made a rather

492
00:50:43,130 --> 00:50:40,560
significant discovery about falling