



1
00:00:11,950 --> 00:00:07,050

[Music]

2
00:00:17,029 --> 00:00:14,959

film report number 12 covers progress

3
00:00:22,310 --> 00:00:17,039

during the period September October and

4
00:00:25,070 --> 00:00:22,320

November 1965 development manufacturing

5
00:00:26,450 --> 00:00:25,080

and testing of s1c stages by the Boeing

6
00:00:29,620 --> 00:00:26,460

Company and the Marshall Center

7
00:00:33,049 --> 00:00:29,630

continued throughout the quarter in

8
00:00:35,000 --> 00:00:33,059

October responsibility for s1c static

9
00:00:37,490 --> 00:00:35,010

testing at Marshall was transferred to

10
00:00:40,459 --> 00:00:37,500

Boeing but MSFC in a supervisory

11
00:00:42,080 --> 00:00:40,469

capacity the first firing utilizing

12
00:00:44,330 --> 00:00:42,090

automatic check out equipment in the

13
00:00:47,900 --> 00:00:44,340

blockhouse was held on October 8 the

14

00:00:50,420 --> 00:00:47,910

test stage designated s1 CT was fired

15

00:00:53,299 --> 00:00:50,430

for 40 seconds with all elements

16

00:00:55,790 --> 00:00:53,309

functioning as programmed a 96 second

17

00:00:58,520 --> 00:00:55,800

firing was held on November 3rd and on

18

00:01:01,250 --> 00:00:58,530

November 24th a successful full duration

19

00:01:06,859 --> 00:01:01,260

firing of 150 seconds in the automatic

20

00:01:09,080 --> 00:01:06,869

mode was conducted Marshall assembly of

21

00:01:12,469 --> 00:01:09,090

the first Saturn 5 booster flight stage

22

00:01:14,420 --> 00:01:12,479

s1 c1 was completed on September 27th

23

00:01:16,399 --> 00:01:14,430

and the stage was moved from the

24

00:01:18,499 --> 00:01:16,409

manufacturing engineering lab to the

25

00:01:22,429 --> 00:01:18,509

quality and reliability assurance lab

26
00:01:24,679 --> 00:01:22,439
for a post manufacturing check out check

27
00:01:27,260 --> 00:01:24,689
out here a combination of manual and

28
00:01:30,020 --> 00:01:27,270
automatic modes included basic power

29
00:01:31,999 --> 00:01:30,030
tests electromagnetic interference tests

30
00:01:34,520 --> 00:01:32,009
testing of basic instrumentation

31
00:01:36,679 --> 00:01:34,530
automatic calibration and gaseous

32
00:01:39,440 --> 00:01:36,689
pressure system testing of each of the

33
00:01:42,679 --> 00:01:39,450
five f-1 engines plus the overall stage

34
00:01:44,870 --> 00:01:42,689
the s1 c1 is expected to be ready for

35
00:01:49,670 --> 00:01:44,880
delivery to the static test stand in

36
00:01:51,950 --> 00:01:49,680
January 1966 the forward stage assembly

37
00:01:54,050 --> 00:01:51,960
comprising LOX tank inter tank and

38
00:01:57,080 --> 00:01:54,060

forward skirt for the second flight

39

00:01:58,639 --> 00:01:57,090

stage s1 c2 was completed at the

40

00:02:01,340 --> 00:01:58,649

vertical Assembly Building and was

41

00:02:03,980 --> 00:02:01,350

transferred on November 8 to Marshalls

42

00:02:05,870 --> 00:02:03,990

newly finished 100-foot tall horizontal

43

00:02:08,660 --> 00:02:05,880

assembly building for mating to the aft

44

00:02:11,449 --> 00:02:08,670

stage assembly comprising fuel tank and

45

00:02:13,790 --> 00:02:11,459

thrust structure the new facility has a

46

00:02:15,770 --> 00:02:13,800

large high bay area allowing

47

00:02:17,600 --> 00:02:15,780

train support above the stage which was

48

00:02:21,920 --> 00:02:17,610

not possible in the building where s1

49

00:02:23,450 --> 00:02:21,930

Siwon was assembled horizontal mating of

50

00:02:25,610 --> 00:02:23,460

the forward stage assembly to the

51
00:02:28,010 --> 00:02:25,620
previously completed apt stage assembly

52
00:02:31,460 --> 00:02:28,020
was accomplished on November 9th and

53
00:02:34,220 --> 00:02:31,470
component installation is continuing in

54
00:02:37,190 --> 00:02:34,230
marshals load test tower structural load

55
00:02:39,830 --> 00:02:37,200
testing of the s1 CS aft test stage

56
00:02:42,140 --> 00:02:39,840
hitter take fuel tank thrust structure

57
00:02:45,320 --> 00:02:42,150
was successfully conducted during the

58
00:02:47,900 --> 00:02:45,330
quarter at Marshalls Michou assembly

59
00:02:50,450 --> 00:02:47,910
operations in New Orleans the s-1 C D

60
00:02:52,340 --> 00:02:50,460
dynamic test stage which had been moved

61
00:02:54,410 --> 00:02:52,350
into the stage test building from the

62
00:02:57,530 --> 00:02:54,420
horizontal installation position in the

63
00:02:59,540 --> 00:02:57,540

plant area on August 25th received only

64

00:03:02,390 --> 00:02:59,550

minor damage when the building itself

65

00:03:06,080 --> 00:03:02,400

was severely hit by Hurricane Betsy on

66

00:03:07,100 --> 00:03:06,090

September 9th cell number 1 where s1 CD

67

00:03:09,260 --> 00:03:07,110

was installed

68

00:03:11,300 --> 00:03:09,270

fortunately received less damage than

69

00:03:13,880 --> 00:03:11,310

the other three cells and was quickly

70

00:03:16,400 --> 00:03:13,890

repaired the hurricane damage has not

71

00:03:20,240 --> 00:03:16,410

seriously affected s1c production

72

00:03:22,280 --> 00:03:20,250

schedules at nishu following checkout

73

00:03:25,510 --> 00:03:22,290

and weighing of the dynamic test stage

74

00:03:28,040 --> 00:03:25,520

which is the first Misha assembled s1 C

75

00:03:30,110 --> 00:03:28,050

it was moved from the stage test

76
00:03:32,510 --> 00:03:30,120
building to the Misha barge docks on

77
00:03:36,440 --> 00:03:32,520
October 5th for shipment to the Marshall

78
00:03:41,120 --> 00:03:36,450
Center the stage arrived at MSFC on

79
00:03:43,340 --> 00:03:41,130
October 14th in January 1966 s1 CD will

80
00:03:46,070 --> 00:03:43,350
be installed in the saturn v dynamic

81
00:03:49,250 --> 00:03:46,080
test stand where preparations are now

82
00:03:51,530 --> 00:03:49,260
underway for acceptance a hydro dynamic

83
00:03:53,870 --> 00:03:51,540
support system consisting of four large

84
00:03:56,750 --> 00:03:53,880
concrete pillars topped by hydraulic

85
00:03:59,030 --> 00:03:56,760
actuators with hydrostatic bearings will

86
00:04:01,520 --> 00:03:59,040
enable the vehicle to float virtually

87
00:04:03,650 --> 00:04:01,530
frictionless on a film of oil during

88
00:04:06,320 --> 00:04:03,660

vibration testing simulating flight

89

00:04:08,750 --> 00:04:06,330

conditions steel bumpers are being

90

00:04:10,940 --> 00:04:08,760

erected inside the test stand to prevent

91

00:04:14,930 --> 00:04:10,950

the vehicle from sliding off the support

92

00:04:16,940 --> 00:04:14,940

pedestals a roof has also been installed

93

00:04:19,070 --> 00:04:16,950

atop the stand to prevent a chimney

94

00:04:23,300 --> 00:04:19,080

effect whereby gusts of wind might

95

00:04:25,880 --> 00:04:23,310

destroy test measurements if a summit is

96

00:04:27,620 --> 00:04:25,890

checkout stage s1 CF which was

97

00:04:29,660 --> 00:04:27,630

transferred from issues vertical

98

00:04:32,300 --> 00:04:29,670

Assembly Building into the plant area in

99

00:04:34,790 --> 00:04:32,310

late August under wet installation of

100

00:04:36,500 --> 00:04:34,800

tubing vowels and electrical electronic

101
00:04:38,570 --> 00:04:36,510
systems until mid-november

102
00:04:41,420 --> 00:04:38,580
when it was moved to the stage test

103
00:04:42,890 --> 00:04:41,430
building for check out the F stage is

104
00:04:47,720 --> 00:04:42,900
slated for shipment to Kennedy Space

105
00:04:50,930 --> 00:04:47,730
Center in late January 1966 the first

106
00:04:53,360 --> 00:04:50,940
for flight rated engines for s1 c3 the

107
00:04:55,250 --> 00:04:53,370
third flight stage arrived at me shoe

108
00:04:57,950 --> 00:04:55,260
from Rocketdyne during the quarter and

109
00:05:01,880 --> 00:04:57,960
are undergoing checkout the fifth engine

110
00:05:05,180 --> 00:05:01,890
is due in December vertical assembly of

111
00:05:07,310 --> 00:05:05,190
s1 c3 began on October 22nd with the

112
00:05:10,820 --> 00:05:07,320
installation of the thrust structure in

113
00:05:14,060 --> 00:05:10,830

the VAB major component assembly

114

00:05:16,370 --> 00:05:14,070

continued on s1 c4 the upper fuel

115

00:05:20,480 --> 00:05:16,380

bulkhead was reworked due to hurricane

116

00:05:22,820 --> 00:05:20,490

damage production of bulkheads for s1 c5

117

00:05:25,220 --> 00:05:22,830

began at miss you in October with the

118

00:05:34,130 --> 00:05:25,230

milling of fittings in Gore FX's and

119

00:05:35,750 --> 00:05:34,140

bases s2 structural testing was

120

00:05:37,490 --> 00:05:35,760

completed this quarter at the see of

121

00:05:39,880 --> 00:05:37,500

each facility of north american aviation

122

00:05:42,380 --> 00:05:39,890

space and information systems division

123

00:05:44,510 --> 00:05:42,390

although the structural test stage

124

00:05:46,850 --> 00:05:44,520

collapsed in the final test on September

125

00:05:49,880 --> 00:05:46,860

29th the failure occurred at an

126
00:05:51,830 --> 00:05:49,890
acceptable load level testing duplicated

127
00:05:55,490 --> 00:05:51,840
in flight loads under structure at the

128
00:05:57,890 --> 00:05:55,500
end of s1 see stage boost marshal and s

129
00:06:00,470 --> 00:05:57,900
NID engineers are investigating the mode

130
00:06:03,440 --> 00:06:00,480
of failure original plans were for

131
00:06:06,350 --> 00:06:03,450
modification of s2 s for dynamic testing

132
00:06:08,390 --> 00:06:06,360
but as a result of the stage loss the

133
00:06:12,470 --> 00:06:08,400
old systems test stage will be used

134
00:06:15,470 --> 00:06:12,480
instead the old system stage designated

135
00:06:17,780 --> 00:06:15,480
s2 t was completed by s anti-d during

136
00:06:19,100 --> 00:06:17,790
September and on October 1st were

137
00:06:22,010 --> 00:06:19,110
shipped to the Marshall setters

138
00:06:25,070 --> 00:06:22,020

Mississippi test facility after static

139

00:06:27,080 --> 00:06:25,080

firing their early next year s 2 T will

140

00:06:30,470 --> 00:06:27,090

be modified and sent to Marshall for a

141

00:06:32,510 --> 00:06:30,480

dynamic testing at the Santa Susana

142

00:06:34,700 --> 00:06:32,520

field laboratory preparations were

143

00:06:37,610 --> 00:06:34,710

underway this quarter for cluster firing

144

00:06:40,430 --> 00:06:37,620

of the s2 battleship stage using flight

145

00:06:41,450 --> 00:06:40,440

configuration j2 engines the first

146

00:06:44,870 --> 00:06:41,460

firing is set

147

00:06:47,480 --> 00:06:44,880

or December also at Santa Susana

148

00:06:49,340 --> 00:06:47,490

successful completion of the s2 common

149

00:06:51,950 --> 00:06:49,350

bulkhead test tank program was

150

00:06:54,140 --> 00:06:51,960

accomplished in early November the tests

151
00:06:56,110 --> 00:06:54,150
investigated structural integrity and

152
00:07:00,589 --> 00:06:56,120
limit conditions in a cryogenic

153
00:07:02,659 --> 00:07:00,599
environment vertical buildup of the s2f

154
00:07:05,320 --> 00:07:02,669
facilities check out stage was completed

155
00:07:07,760 --> 00:07:05,330
at seal beach during the report period

156
00:07:11,749 --> 00:07:07,770
systems installation and insulation

157
00:07:14,629 --> 00:07:11,759
closeout are now in progress vertical

158
00:07:17,150 --> 00:07:14,639
assembly is underway on s21 the first

159
00:07:19,279 --> 00:07:17,160
flight stage during November the aft

160
00:07:21,770 --> 00:07:19,289
locks bulkhead was successfully tested

161
00:07:24,230 --> 00:07:21,780
to 105 percent of pressure for 10

162
00:07:27,529 --> 00:07:24,240
minutes and is now available for stage

163
00:07:29,990 --> 00:07:27,539

final assembly the or would lh2 bulkhead

164

00:07:33,830 --> 00:07:30,000

and common bulkhead were also completed

165

00:07:35,600 --> 00:07:33,840

and tested during the quarter automatic

166

00:07:38,149 --> 00:07:35,610

check out consoles are being delivered

167

00:07:40,610 --> 00:07:38,159

and installed in essen tidies a duo

168

00:07:42,379 --> 00:07:40,620

vertical checkout building the automatic

169

00:07:44,360 --> 00:07:42,389

equipment is undergoing tests in

170

00:07:48,050 --> 00:07:44,370

preparation for vertical checkout of the

171

00:07:49,939 --> 00:07:48,060

first flight stage fabrication of

172

00:07:52,010 --> 00:07:49,949

structural components and assembly of

173

00:07:55,240 --> 00:07:52,020

major structural sub assemblies are

174

00:07:58,010 --> 00:07:55,250

underway on flight stages 2 & 3

175

00:07:59,390 --> 00:07:58,020

the activation was completed in early

176

00:08:02,110 --> 00:07:59,400

November at the electromechanical

177

00:08:04,879 --> 00:08:02,120

mock-up area at the downy facility

178

00:08:06,279 --> 00:08:04,889

conclusion of compatibility interference

179

00:08:09,649 --> 00:08:06,289

and automatic check out equipment

180

00:08:12,230 --> 00:08:09,659

verification testing terminated the EMM

181

00:08:14,390 --> 00:08:12,240

function and GSE is now being

182

00:08:23,240 --> 00:08:14,400

reallocated to other locations within

183

00:08:26,180 --> 00:08:23,250

Essen Tidy a Douglas Aircraft Company

184

00:08:28,249 --> 00:08:26,190

Sacramento test facility the s4 B

185

00:08:30,279 --> 00:08:28,259

battleship stage was removed from beta

186

00:08:32,899 --> 00:08:30,289

test stand number 1 in September

187

00:08:35,810 --> 00:08:32,909

following completion last quarter of the

188

00:08:38,540 --> 00:08:35,820

battleship test-firing program the stage

189

00:08:40,550 --> 00:08:38,550

will be delivered in early January 1966

190

00:08:42,560 --> 00:08:40,560

to the Arnold engineering development

191

00:08:46,910 --> 00:08:42,570

center at Tullahoma Tennessee for

192

00:08:49,400 --> 00:08:46,920

altitude simulation firing tests after

193

00:08:51,620 --> 00:08:49,410

removal of the battleship stage latest

194

00:08:54,050 --> 00:08:51,630

and one was converted in preparation for

195

00:08:55,250 --> 00:08:54,060

acceptance testing of the s4v flight

196

00:08:58,220 --> 00:08:55,260

stages of

197

00:09:01,700 --> 00:08:58,230

both Saturn 1b and five configurations

198

00:09:06,620 --> 00:09:01,710

the first flight stage designated 501

199

00:09:09,260 --> 00:09:06,630

will be installed in February 1966 the

200

00:09:11,750 --> 00:09:09,270

s4b common bulkhead test specimen was

201
00:09:13,790 --> 00:09:11,760
delivered to sacto in September for

202
00:09:16,970 --> 00:09:13,800
structural testing under cryogenic

203
00:09:19,520 --> 00:09:16,980
conditions utilizing a converted s for

204
00:09:23,810 --> 00:09:19,530
stand testing will get underway next

205
00:09:25,490 --> 00:09:23,820
quarter also its acto installation of

206
00:09:27,670 --> 00:09:25,500
ground support equipment at the vertical

207
00:09:30,410 --> 00:09:27,680
checkout lab is nearing completion

208
00:09:33,320 --> 00:09:30,420
initial use of the new facility for

209
00:09:37,030 --> 00:09:33,330
systems check out of the 500 St stage

210
00:09:40,160 --> 00:09:37,040
simulator is slated for late December at

211
00:09:41,740 --> 00:09:40,170
the Assembly check-out tower complex at

212
00:09:44,570 --> 00:09:41,750
Douglass's Huntington Beach facility

213
00:09:49,190 --> 00:09:44,580

final installations are underway on the

214

00:09:51,470 --> 00:09:49,200

first flight stage the j2 engine for 501

215

00:09:53,570 --> 00:09:51,480

received from Rocketdyne last quarter

216

00:09:55,910 --> 00:09:53,580

underwent check out in the components

217

00:09:59,780 --> 00:09:55,920

tests lab prior to joining to the stage

218

00:10:02,510 --> 00:09:59,790

in mid-november work continued on the

219

00:10:04,100 --> 00:10:02,520

second flight stage 502 with the

220

00:10:06,020 --> 00:10:04,110

installing of insulation during

221

00:10:09,830 --> 00:10:06,030

completion by the end of the report

222

00:10:11,740 --> 00:10:09,840

period tank components fabrication is

223

00:10:14,810 --> 00:10:11,750

progressing for the third flight stage

224

00:10:18,530 --> 00:10:14,820

503 with tech joining operations

225

00:10:21,350 --> 00:10:18,540

scheduled next quarter qualification

226
00:10:23,930 --> 00:10:21,360
testing of s4b flight stage components

227
00:10:26,590 --> 00:10:23,940
continued with such items as vibration

228
00:10:28,820 --> 00:10:26,600
testing of the low pressure fuel duct

229
00:10:32,270 --> 00:10:28,830
vibration testing of the liquid oxygen

230
00:10:34,910 --> 00:10:32,280
chill down return duct cryogenic testing

231
00:10:42,610 --> 00:10:34,920
of the aft umbilical kit and cycle

232
00:10:47,840 --> 00:10:45,470
the first transcontinental trip for an

233
00:10:50,510 --> 00:10:47,850
f1 engine by truck transport was

234
00:10:53,900 --> 00:10:50,520
accomplished this quarter previously all

235
00:10:55,820 --> 00:10:53,910
transport was by air engine F 20 20 left

236
00:10:58,760 --> 00:10:55,830
rocket Dynes Canoga Park California

237
00:11:00,530 --> 00:10:58,770
plant on September 20 night and arrived

238
00:11:03,590 --> 00:11:00,540

in good condition at the Marshall Center

239

00:11:05,210 --> 00:11:03,600

in Alabama on October 13th the road

240

00:11:08,420 --> 00:11:05,220

transport feasibility study was

241

00:11:09,020 --> 00:11:08,430

initiated by MSFC because of the limited

242

00:11:12,640 --> 00:11:09,030

available

243

00:11:15,680 --> 00:11:12,650

of aircraft capable of carrying the f1

244

00:11:17,960 --> 00:11:15,690

this scale model depicts two of the

245

00:11:19,970 --> 00:11:17,970

seven f1 engine vertical assembly

246

00:11:22,820 --> 00:11:19,980

stations to be constructed at Canoga

247

00:11:24,890 --> 00:11:22,830

Park conversion from horizontal assembly

248

00:11:26,960 --> 00:11:24,900

to vertical is part of Rocketdyne

249

00:11:29,330 --> 00:11:26,970

general program for improvement of

250

00:11:31,790 --> 00:11:29,340

production line techniques in addition

251
00:11:33,740 --> 00:11:31,800
to the vertical assembly stations three

252
00:11:35,780 --> 00:11:33,750
electrical and mechanical checkout

253
00:11:39,560 --> 00:11:35,790
stations and one optical alignment

254
00:11:41,570 --> 00:11:39,570
station will be built construction work

255
00:11:44,000 --> 00:11:41,580
is now underway on the first three

256
00:11:46,450 --> 00:11:44,010
vertical assembly stations the entire

257
00:11:51,740 --> 00:11:46,460
line is expected to be finished early in

258
00:11:53,870 --> 00:11:51,750
1966 a new 2500 ton capacity liquid

259
00:11:55,820 --> 00:11:53,880
oxygen storage tank has been completed

260
00:11:58,460 --> 00:11:55,830
at the edwards field laboratory in

261
00:12:00,620 --> 00:11:58,470
california the new storage tank allows

262
00:12:02,180 --> 00:12:00,630
Rocketdyne to meet increased testing

263
00:12:05,770 --> 00:12:02,190

schedules for both research and

264

00:12:09,500 --> 00:12:05,780

development and production f-1 engines

265

00:12:11,420 --> 00:12:09,510

to f1 engine checkout console assemblies

266

00:12:13,700 --> 00:12:11,430

were delivered barakatuh in this quarter

267

00:12:16,010 --> 00:12:13,710

to the Boeing Company at Michou for

268

00:12:18,830 --> 00:12:16,020

installation in the first f1 checkout

269

00:12:21,260 --> 00:12:18,840

station there a third unit is slated for

270

00:12:22,970 --> 00:12:21,270

delivery in December the console

271

00:12:25,580 --> 00:12:22,980

provides electrical pneumatic and

272

00:12:27,740 --> 00:12:25,590

hydraulic inputs and outputs for the f1

273

00:12:29,810 --> 00:12:27,750

engine for performing specific

274

00:12:33,260 --> 00:12:29,820

functional tests to determine its

275

00:12:35,900 --> 00:12:33,270

operational condition at the marshall

276
00:12:38,750 --> 00:12:35,910
center's new single position f1 static

277
00:12:41,540 --> 00:12:38,760
test and activated last quarter pre

278
00:12:43,310 --> 00:12:41,550
firings totaling approximately 360

279
00:12:53,510 --> 00:12:43,320
seconds were conducted during this

280
00:12:55,580 --> 00:12:53,520
report during the Rocketdyne built j2

281
00:12:57,500 --> 00:12:55,590
flight rating test engine underwent

282
00:13:00,500 --> 00:12:57,510
teardown inspection in September

283
00:13:03,440 --> 00:13:00,510
following completion of frt last quarter

284
00:13:05,960 --> 00:13:03,450
the engine number 2023 which had been

285
00:13:09,200 --> 00:13:05,970
static fired 25 times for a total of

286
00:13:11,450 --> 00:13:09,210
2700 60 seconds was completely

287
00:13:15,860 --> 00:13:11,460
disassembled for detailed inspection of

288
00:13:18,320 --> 00:13:15,870

all components following preparations

289

00:13:19,160 --> 00:13:18,330

for the j2 qualification test series at

290

00:13:21,499 --> 00:13:19,170

the end of the

291

00:13:23,929 --> 00:13:21,509

the initial static firing of engine

292

00:13:26,749 --> 00:13:23,939

number 2032 who was conducted on the

293

00:13:28,900 --> 00:13:26,759

Delta to stand at Santa Susana the

294

00:13:30,729 --> 00:13:28,910

engine was fired for full duration of

295

00:13:33,470 --> 00:13:30,739

470 seconds

296

00:13:35,989 --> 00:13:33,480

qualification test series which will man

297

00:13:38,809 --> 00:13:35,999

rate the j2 engine is scheduled for

298

00:13:40,729 --> 00:13:38,819

completion by December 31st the engine

299

00:13:42,859 --> 00:13:40,739

will be fired 30 times for an

300

00:13:46,429 --> 00:13:42,869

accumulated duration of three thousand

301
00:13:48,349 --> 00:13:46,439
seven hundred fifty seconds radio

302
00:13:50,299 --> 00:13:48,359
interference tests as a part of the

303
00:13:52,309 --> 00:13:50,309
qualification program were conducted

304
00:13:55,039 --> 00:13:52,319
this quarter at rocky Dean's Los Angeles

305
00:13:57,079 --> 00:13:55,049
division overall purpose of the tests is

306
00:13:59,359 --> 00:13:57,089
to show that the engine will not emit

307
00:14:02,499 --> 00:13:59,369
undesirable interference or be

308
00:14:04,879 --> 00:14:02,509
susceptible to external interference

309
00:14:07,460 --> 00:14:04,889
rocky dines research and development

310
00:14:09,859 --> 00:14:07,470
program on j2 engine thermal insulation

311
00:14:12,169 --> 00:14:09,869
continued during the quarter a test

312
00:14:14,689 --> 00:14:12,179
sample was subjected to various degrees

313
00:14:17,720 --> 00:14:14,699

of temperature with a plasma gun as the

314

00:14:19,849 --> 00:14:17,730

external heat source the various moles

315

00:14:24,710 --> 00:14:19,859

are representative of engine hardware

316

00:14:26,419 --> 00:14:24,720

configurations a total of 11 j2 engines

317

00:14:28,970 --> 00:14:26,429

was delivered by rocket day in this

318

00:14:32,989 --> 00:14:28,980

quarter to the stage users including the

319

00:14:36,679 --> 00:14:32,999

final engine for s2 501 all five engines

320

00:14:39,169 --> 00:14:36,689

for s2 502 the remaining 4s to

321

00:14:43,909 --> 00:14:39,179

battleship stage engines and the flight

322

00:14:45,919 --> 00:14:43,919

engine for s4 b 502 the first three

323

00:14:47,720 --> 00:14:45,929

start ago j2 engine delivered to

324

00:14:51,139 --> 00:14:47,730

marshall underwent three scattering

325

00:14:54,159 --> 00:14:51,149

firings the longest for 418 seconds in

326

00:14:57,169 --> 00:14:54,169

MSFC ss4 v battleship tests state

327

00:15:07,009 --> 00:14:57,179

restart tests are expected to begin next

328

00:15:09,109 --> 00:15:07,019

quarter throughout the quarter ground

329

00:15:11,629 --> 00:15:09,119

test instrument units were assembled and

330

00:15:13,759 --> 00:15:11,639

tested assembly of the breadboard test

331

00:15:15,889 --> 00:15:13,769

unit was near completion with delivery

332

00:15:18,499 --> 00:15:15,899

to Marshalls system development facility

333

00:15:21,019 --> 00:15:18,509

due in early December assembly of the

334

00:15:24,439 --> 00:15:21,029

flight systems iu was near completion by

335

00:15:26,359 --> 00:15:24,449

the end of November the three checkout

336

00:15:28,639 --> 00:15:26,369

trailer is used to check out the flight

337

00:15:31,340 --> 00:15:28,649

systems iu were delivered to Marshall by

338

00:15:32,900 --> 00:15:31,350

IBM Huntsville in September the check

339

00:15:35,150 --> 00:15:32,910

out equipment covering two

340

00:15:37,370 --> 00:15:35,160

Nitori radiofrequency and a digital data

341

00:15:39,410 --> 00:15:37,380

acquisition system is mounted in

342

00:15:41,360 --> 00:15:39,420

trailers so it can later be sent to

343

00:15:44,110 --> 00:15:41,370

Douglas Aircraft in California to

344

00:15:46,490 --> 00:15:44,120

monitor flight simulation tests

345

00:15:50,390 --> 00:15:46,500

structural assembly of the first flight

346

00:15:52,970 --> 00:15:50,400

instrument unit SIU 501 began in late

347

00:15:54,740 --> 00:15:52,980

November at IBM Huntsville component

348

00:15:59,540 --> 00:15:54,750

assembly is scheduled to start in mid

349

00:16:02,360 --> 00:15:59,550

January 1966 the second structural test

350

00:16:04,040 --> 00:16:02,370

I you assembled by IBM Huntsville using

351
00:16:07,100 --> 00:16:04,050
segments manufactured by North American

352
00:16:10,040 --> 00:16:07,110
Aviation was completed in early October

353
00:16:13,790 --> 00:16:10,050
and moved to MSFC for structural testing

354
00:16:15,710 --> 00:16:13,800
scheduled for December at Walley labs

355
00:16:18,350 --> 00:16:15,720
Huntsville facility high intensity

356
00:16:20,630 --> 00:16:18,360
reverberation tests chamber acoustic

357
00:16:22,640 --> 00:16:20,640
vibration testing of the vibration test

358
00:16:25,430 --> 00:16:22,650
I you were successfully conducted in

359
00:16:27,590 --> 00:16:25,440
mid-november the tremendous noise levels

360
00:16:30,140 --> 00:16:27,600
produced by the Saturn 5 first stage

361
00:16:32,120 --> 00:16:30,150
engines were simulated by a pneumatic

362
00:16:34,760 --> 00:16:32,130
sound source producing sound pressure

363
00:16:37,640 --> 00:16:34,770

levels up to just above 150 decibels

364

00:16:46,160 --> 00:16:37,650

over a twenty five to ten thousand cycle

365

00:16:48,410 --> 00:16:46,170

per second frequency range at the

366

00:16:51,560 --> 00:16:48,420

Marshall Center dynamic testing of the

367

00:16:53,510 --> 00:16:51,570

s4 BD dynamic test stage in conjunction

368

00:16:55,760 --> 00:16:53,520

with the dynamic test instrument unit

369

00:16:57,800 --> 00:16:55,770

and an Apollo spacecraft was

370

00:17:01,250 --> 00:16:57,810

successfully completed during the report

371

00:17:04,160 --> 00:17:01,260

period at Marshalls Mississippi test

372

00:17:07,040 --> 00:17:04,170

facility activation efforts on the first

373

00:17:09,590 --> 00:17:07,050

s two static tests and designated a2

374

00:17:12,050 --> 00:17:09,600

were directed early this quarter two

375

00:17:14,750 --> 00:17:12,060

priority items to prepare the stand for

376

00:17:17,780 --> 00:17:14,760

installation of the s2 t all system

377

00:17:19,850 --> 00:17:17,790

stage delivered by s and ID beneficial

378

00:17:24,530 --> 00:17:19,860

occupancy of the stand was accepted on

379

00:17:26,780 --> 00:17:24,540

October 1st on October 19th the s2 t was

380

00:17:30,050 --> 00:17:26,790

installed in the stand by s and ID and

381

00:17:32,180 --> 00:17:30,060

support personnel the s2 t to be used

382

00:17:34,100 --> 00:17:32,190

for checkout a facility systems ground

383

00:17:36,680 --> 00:17:34,110

support equipment and the stage itself

384

00:17:41,660 --> 00:17:36,690

will be the first vehicle test-fired at

385

00:17:44,240 --> 00:17:41,670

mt f in early 1966 work on the second s

386

00:17:46,310 --> 00:17:44,250

to stand designated a1 progressed

387

00:17:48,080 --> 00:17:46,320

steadily during the quarter

388

00:17:50,330 --> 00:17:48,090

concrete work on the service corps and

389

00:17:52,580 --> 00:17:50,340

front vents is complete and steel

390

00:17:57,289 --> 00:17:52,590

erection below the flame deflector was

391

00:17:59,659 --> 00:17:57,299

started at the s1 ceased and MTFs other

392

00:18:02,180 --> 00:17:59,669

principal test element overall progress

393

00:18:04,210 --> 00:18:02,190

is on schedule concrete work on the

394

00:18:06,230 --> 00:18:04,220

center and east pier is finished and

395

00:18:08,659 --> 00:18:06,240

installation of steel for the flame

396

00:18:11,299 --> 00:18:08,669

deflector and engine removal platform is

397

00:18:13,159 --> 00:18:11,309

well underway concrete work on the West

398

00:18:17,180 --> 00:18:13,169

Pier is complete through the sixth floor

399

00:18:20,539 --> 00:18:17,190

level in summary September October and

400

00:18:22,820 --> 00:18:20,549

November 1965 four months of continuing

401
00:18:25,009 --> 00:18:22,830
progress along a broad front with

402
00:18:27,259 --> 00:18:25,019
achievements such as the first s1c

403
00:18:30,649 --> 00:18:27,269
static firing using automatic check out

404
00:18:35,210 --> 00:18:30,659
equipment completion of assembly of the

405
00:18:38,090 --> 00:18:35,220
first s1 c flight stage delivery of the

406
00:18:41,869 --> 00:18:38,100
first Misha produced s1 see the dynamic

407
00:18:45,200 --> 00:18:41,879
test stage completion of Assembly of the

408
00:18:47,330 --> 00:18:45,210
s2 all systems test stage and its

409
00:18:51,049 --> 00:18:47,340
delivery to mississippi test facility

410
00:18:53,450 --> 00:18:51,059
for static firing successful testing of

411
00:18:57,289 --> 00:18:53,460
the s4 the dynamic test stage and

412
00:19:00,279 --> 00:18:57,299
dynamic test iu successful acoustic

413
00:19:02,690 --> 00:19:00,289

testing of the vibration test iu

414

00:19:07,039 --> 00:19:02,700

improvement of one engine production

415

00:19:08,790 --> 00:19:07,049

techniques and initiation of j2 engine

416

00:19:09,890 --> 00:19:08,800

qualification testing

417

00:19:11,940 --> 00:19:09,900

[Music]