



1  
00:00:03,180 --> 00:00:02,690  
[Music]

2  
00:00:06,770 --> 00:00:03,190  
[Applause]

3  
00:00:10,000 --> 00:00:06,780  
[Music]

4  
00:00:15,880 --> 00:00:10,010  
[Applause]

5  
00:00:20,420 --> 00:00:17,260  
[Music]

6  
00:00:22,340 --> 00:00:20,430  
7:5 quarterly film report number 13

7  
00:00:25,960 --> 00:00:22,350  
covers progress during the period

8  
00:00:30,800 --> 00:00:25,970  
December 1st 1965 through February 28

9  
00:00:33,290 --> 00:00:30,810  
1966 development manufacturing and

10  
00:00:34,930 --> 00:00:33,300  
testing of s1c stages by the Boeing

11  
00:00:42,380 --> 00:00:34,940  
Company and the Marshall Center

12  
00:00:45,049 --> 00:00:42,390  
continued throughout the quarter the

13  
00:00:47,360 --> 00:00:45,059

final flowering of the s1c static test

14

00:00:49,940 --> 00:00:47,370

stage was conducted at Marshall on

15

00:00:53,150 --> 00:00:49,950

December 16th this brought the total

16

00:00:58,010 --> 00:00:53,160

number of tests to 15 for a total firing

17

00:01:00,380 --> 00:00:58,020

time of nearly 15 minutes mission

18

00:01:02,569 --> 00:01:00,390

successfully accomplished the stage was

19

00:01:05,149 --> 00:01:02,579

removed from the static test stand On

20

00:01:08,030 --> 00:01:05,159

January 20th and transferred to the

21

00:01:09,679 --> 00:01:08,040

manufacturing area for refurbishment it

22

00:01:11,870 --> 00:01:09,689

will be shipped to Marshalls Mississippi

23

00:01:16,090 --> 00:01:11,880

test facility in November for the

24

00:01:19,280 --> 00:01:16,100

initial firing in MTFs new s1 ceased and

25

00:01:21,890 --> 00:01:19,290

the first s 1c flight stage completed

26  
00:01:23,960 --> 00:01:21,900  
its post manufacturing checkout and was

27  
00:01:27,679 --> 00:01:23,970  
moved to Marshalls test lab On January

28  
00:01:29,050 --> 00:01:27,689  
24th the same date on which the second

29  
00:01:31,580 --> 00:01:29,060  
flight stage was transferred from

30  
00:01:35,510 --> 00:01:31,590  
manufacturing engineering lab to quality

31  
00:01:37,310 --> 00:01:35,520  
lab to begin its checkout the first

32  
00:01:39,590 --> 00:01:37,320  
flight stage was then installed in the

33  
00:01:42,740 --> 00:01:39,600  
static test stand replacing the static

34  
00:01:44,300 --> 00:01:42,750  
test stage following LOX load tests and

35  
00:01:46,910 --> 00:01:44,310  
final preparation for firing

36  
00:01:48,710 --> 00:01:46,920  
the stage underwent the first of two

37  
00:01:51,710 --> 00:01:48,720  
acceptance stepping firing tests On

38  
00:01:54,050 --> 00:01:51,720

February 17th it's five f-1 engines

39

00:01:57,109 --> 00:01:54,060  
producing seven and 1/2 million pounds

40

00:01:59,270 --> 00:01:57,119  
of thrust the Boosters initial firing 40

41

00:02:02,450 --> 00:01:59,280  
seconds in duration was completely

42

00:02:05,600 --> 00:02:02,460  
successful On February 25th the second

43

00:02:08,270 --> 00:02:05,610  
firing was conducted scheduled for 125

44

00:02:10,010 --> 00:02:08,280  
seconds it was cut off at 83 seconds

45

00:02:11,370 --> 00:02:10,020  
when a failure of engine number one

46

00:02:14,400 --> 00:02:11,380  
chamber pressure trends

47

00:02:16,770 --> 00:02:14,410  
users occurred however review a post

48

00:02:19,590 --> 00:02:16,780  
firing data indicated no serious

49

00:02:22,110 --> 00:02:19,600  
irregularity and no further static tests

50

00:02:29,480 --> 00:02:22,120  
are necessary after refurbishment the

51  
00:02:34,260 --> 00:02:32,070  
post manufacturing checkout of the

52  
00:02:36,450 --> 00:02:34,270  
second flight stage is due to be

53  
00:02:38,250 --> 00:02:36,460  
finished early next quarter following

54  
00:02:41,880 --> 00:02:38,260  
which the stage will be moved to the

55  
00:02:43,620 --> 00:02:41,890  
static stand for firing at Marshalls

56  
00:02:46,020 --> 00:02:43,630  
Michou assembly facility in New Orleans

57  
00:02:48,480 --> 00:02:46,030  
post manufacturing checkout of the

58  
00:02:52,830 --> 00:02:48,490  
facilities checkout stage ended in early

59  
00:02:54,960 --> 00:02:52,840  
January the stage was weighed prepared

60  
00:02:57,420 --> 00:02:54,970  
for shipment and transported to the

61  
00:03:00,750 --> 00:02:57,430  
barge Poseidon which left on January 15

62  
00:03:04,950 --> 00:03:00,760  
for KSC the booster will be used there

63  
00:03:07,110 --> 00:03:04,960

in checkout of launch complex 39 the

64

00:03:10,290 --> 00:03:07,120

first f1 engine for the third flight

65

00:03:12,690 --> 00:03:10,300

stage was installed on January 21st all

66

00:03:15,210 --> 00:03:12,700

five engines had been mounted by the end

67

00:03:16,920 --> 00:03:15,220

of February the booster will be moved to

68

00:03:20,760 --> 00:03:16,930

the stage test building for post

69

00:03:22,620 --> 00:03:20,770

manufacturing checkout in March the

70

00:03:26,670 --> 00:03:22,630

fourth flight stage is nearing the final

71

00:03:28,800 --> 00:03:26,680

phase of assembly at Michou fabrication

72

00:03:31,140 --> 00:03:28,810

and assembly were in progress on the

73

00:03:34,980 --> 00:03:31,150

stages thrust structure fuel tank and

74

00:03:37,170 --> 00:03:34,990

inner tank work commenced in December on

75

00:03:39,090 --> 00:03:37,180

the sixth flight stage with installation

76  
00:03:43,080 --> 00:03:39,100  
of z stiffeners for the center engine

77  
00:03:51,750 --> 00:03:43,090  
support Assembly of Y rings for the

78  
00:03:56,230 --> 00:03:54,640  
the first cluster firing of the s2

79  
00:03:58,570 --> 00:03:56,240  
battleship stage using flight

80  
00:04:00,370 --> 00:03:58,580  
configuration j2 engines was

81  
00:04:03,310 --> 00:04:00,380  
successfully accomplished on December

82  
00:04:06,280 --> 00:04:03,320  
29th at North American Aviation's Santa

83  
00:04:08,110 --> 00:04:06,290  
Susana California field laboratory the

84  
00:04:11,200 --> 00:04:08,120  
initial static test was for nineteen

85  
00:04:13,300 --> 00:04:11,210  
seconds as scheduled on January 12 the

86  
00:04:16,960 --> 00:04:13,310  
first world duration pairing was held

87  
00:04:18,720 --> 00:04:16,970  
during the 354 second test the engine

88  
00:04:21,790 --> 00:04:18,730

gimbal in system was successfully

89

00:04:24,100 --> 00:04:21,800

operated another objective was to check

90

00:04:26,380 --> 00:04:24,110

out the stages liquid oxygen cutoff

91

00:04:28,900 --> 00:04:26,390

system which terminates propellant flow

92

00:04:31,540 --> 00:04:28,910

when the LOX reaches a preset level a

93

00:04:38,500 --> 00:04:31,550

second for duration firing was held

94

00:04:41,050 --> 00:04:38,510

February 22nd the facility's checkout

95

00:04:43,780 --> 00:04:41,060

stage was completed on February 18th by

96

00:04:45,700 --> 00:04:43,790

the s2 prime contractor north american

97

00:04:48,180 --> 00:04:45,710

space and information systems division

98

00:04:50,860 --> 00:04:48,190

at its seal Beach California facility

99

00:04:52,810 --> 00:04:50,870

following preparations for shipping the

100

00:04:55,390 --> 00:04:52,820

stage was loaded aboard the point Barrow

101  
00:04:58,990 --> 00:04:55,400  
and ocean-going vessel enroute for the

102  
00:05:00,850 --> 00:04:59,000  
Kennedy Space Center final assembly of

103  
00:05:02,410 --> 00:05:00,860  
the first flight stage was underway

104  
00:05:06,250 --> 00:05:02,420  
during the quarter in the vertical

105  
00:05:08,650 --> 00:05:06,260  
Assembly Building at sea or beach in

106  
00:05:10,720 --> 00:05:08,660  
January the stage was transferred to the

107  
00:05:13,420 --> 00:05:10,730  
hydrostatic test station for a numerous

108  
00:05:16,060 --> 00:05:13,430  
static testing upon completion the stage

109  
00:05:18,100 --> 00:05:16,070  
was returned to the assembly area for

110  
00:05:20,170 --> 00:05:18,110  
systems installation and installation

111  
00:05:22,300 --> 00:05:20,180  
closeout to be followed by mounting of

112  
00:05:25,030 --> 00:05:22,310  
engines and completion of mechanical and

113  
00:05:28,480 --> 00:05:25,040

electrical installations scheduled next

114

00:05:30,130 --> 00:05:28,490

quarter fabrication of structural

115

00:05:32,440 --> 00:05:30,140

components and assembly of major

116

00:05:34,990 --> 00:05:32,450

structural sub assemblies for the second

117

00:05:37,900 --> 00:05:35,000

third and fourth flight stages continued

118

00:05:40,210 --> 00:05:37,910

parts such as these s2 skirts are

119

00:05:44,110 --> 00:05:40,220

manufactured at essent ids tulsa

120

00:05:46,480 --> 00:05:44,120

oklahoma plant double seal cryogenic

121

00:05:48,580 --> 00:05:46,490

sidewall insulation for s2 liquid

122

00:05:52,570 --> 00:05:48,590

hydrogen tanks is also produced at the

123

00:05:55,030 --> 00:05:52,580

tulsa facility items of ground support

124

00:05:57,190 --> 00:05:55,040

equipment manufactured at tulsa include

125

00:06:01,390 --> 00:05:57,200

these tanks servicing mechanisms and

126  
00:06:04,240 --> 00:06:01,400  
tank pressurization control units other

127  
00:06:04,890 --> 00:06:04,250  
GSE is produced at Essen tidies Compton

128  
00:06:07,620 --> 00:06:04,900  
California

129  
00:06:09,719 --> 00:06:07,630  
facility typical of work done there is

130  
00:06:12,090 --> 00:06:09,729  
this assembly of gse drawers and

131  
00:06:13,830 --> 00:06:12,100  
consoles some of which are already being

132  
00:06:17,790 --> 00:06:13,840  
installed at the Marshall setters

133  
00:06:20,700 --> 00:06:17,800  
Mississippi test facility qualification

134  
00:06:22,890 --> 00:06:20,710  
testing of various s2 components such as

135  
00:06:24,689 --> 00:06:22,900  
this umbilical disconnect system at the

136  
00:06:27,120 --> 00:06:24,699  
downey facility was in progress

137  
00:06:37,370 --> 00:06:27,130  
throughout the quarter disconnection

138  
00:06:43,050 --> 00:06:40,620

factory checkout of the first s4b flight

139

00:06:44,969 --> 00:06:43,060

stage was concluded in january by the

140

00:06:46,469 --> 00:06:44,979

Douglas Aircraft Company at its Space

141

00:06:48,960 --> 00:06:46,479

Systems Center at Huntington Beach

142

00:06:51,360 --> 00:06:48,970

California the stage will be shipped to

143

00:06:54,980 --> 00:06:51,370

Douglas a Sacramento test facility early

144

00:06:57,360 --> 00:06:54,990

next quarter for acceptance firing tests

145

00:06:59,490 --> 00:06:57,370

structural work including installation

146

00:07:02,210 --> 00:06:59,500

of skirt components continued on the

147

00:07:05,100 --> 00:07:02,220

second flight stage early this quarter

148

00:07:06,060 --> 00:07:05,110

stage joining operations were completed

149

00:07:09,320 --> 00:07:06,070

in mid-february

150

00:07:12,150 --> 00:07:09,330

and factory checkout is now underway

151  
00:07:14,909 --> 00:07:12,160  
during hydrostatic testing of the third

152  
00:07:17,490 --> 00:07:14,919  
flight stage on February 24th the LOX

153  
00:07:19,500 --> 00:07:17,500  
tank failed although at a pressure far

154  
00:07:22,529 --> 00:07:19,510  
above that normally expected during

155  
00:07:24,689 --> 00:07:22,539  
flight preliminary assessment indicated

156  
00:07:27,719 --> 00:07:24,699  
the problem to be in the area of an

157  
00:07:32,070 --> 00:07:27,729  
excessive well to repair program impact

158  
00:07:34,439 --> 00:07:32,080  
if any is being investigated the s4b

159  
00:07:36,750 --> 00:07:34,449  
stage simulator was delivered to sacto

160  
00:07:38,610 --> 00:07:36,760  
in december and installed in the newly

161  
00:07:40,350 --> 00:07:38,620  
completed vehicle checkout lab for

162  
00:07:43,409 --> 00:07:40,360  
continuity tests in conjunction with

163  
00:07:47,159 --> 00:07:43,419

automatic GRC completion of tests is

164

00:07:49,500 --> 00:07:47,169

expected early next quarter structural

165

00:07:51,689 --> 00:07:49,510

testing of the s4 be common bulkhead

166

00:07:54,779 --> 00:07:51,699

test specimen under cryogenic conditions

167

00:07:57,200 --> 00:07:54,789

began at sacto in december and seven

168

00:07:59,490 --> 00:07:57,210

tests were successfully conducted

169

00:08:02,279 --> 00:07:59,500

although the specimen finally failed

170

00:08:04,230 --> 00:08:02,289

during the test on January 13th data

171

00:08:07,950 --> 00:08:04,240

from the prior tests indicated no

172

00:08:10,230 --> 00:08:07,960

problem with flight stages at SAC those

173

00:08:13,230 --> 00:08:10,240

gamma complex static testing of a

174

00:08:15,629 --> 00:08:13,240

prototype model of the Saturn 5s for B

175

00:08:17,860 --> 00:08:15,639

auxiliary propulsion system was

176

00:08:21,470 --> 00:08:17,870

conducted during the quarter

177

00:08:23,690 --> 00:08:21,480

the widespread s4b qualification testing

178

00:08:25,610 --> 00:08:23,700

program is proceeding unscheduled with

179

00:08:27,680 --> 00:08:25,620

items such as vibration tests of

180

00:08:30,610 --> 00:08:27,690

retro-rockets at the Thiokol chemical

181

00:08:33,110 --> 00:08:30,620

corporations why such division in Utah

182

00:08:35,719 --> 00:08:33,120

vibration thermal shock and functional

183

00:08:38,120 --> 00:08:35,729

testing of the s4 B's main fuel feed

184

00:08:41,690 --> 00:08:38,130

duct at Douglass's Santa Monica facility

185

00:08:44,270 --> 00:08:41,700

and testing of the s4 B oxidizer duct

186

00:08:58,190 --> 00:08:44,280

assembly at Wiley labs in El Segundo

187

00:09:01,190 --> 00:08:58,200

California assembly and delivery of the

188

00:09:03,860 --> 00:09:01,200

f1 engine for the third s1c flight stage

189

00:09:06,350 --> 00:09:03,870

the initial manned configuration stage

190

00:09:08,630 --> 00:09:06,360

were completed by Rocketdyne during the

191

00:09:11,510 --> 00:09:08,640

quarter one of the major components is

192

00:09:13,880 --> 00:09:11,520

this mark 10 turbo pump shown here in

193

00:09:16,430 --> 00:09:13,890

early build up stage with the main shaft

194

00:09:19,820 --> 00:09:16,440

in an assembly jig at rocky tines Canoga

195

00:09:22,070 --> 00:09:19,830

Park California plant in a later

196

00:09:24,500 --> 00:09:22,080

Assembly stage the fuel pollutes are in

197

00:09:26,420 --> 00:09:24,510

place this is how the pump looks prior

198

00:09:30,320 --> 00:09:26,430

to buildup of the turbine section and

199

00:09:32,960 --> 00:09:30,330

LOX pump in its final stage the pumps

200

00:09:36,440 --> 00:09:32,970

secondary lock seal locks volute and

201  
00:09:39,140 --> 00:09:36,450  
turbine manifold are all installed after

202  
00:09:41,510 --> 00:09:39,150  
a final inspection the pump is taken to

203  
00:09:43,460 --> 00:09:41,520  
the Santa Susana site for testing the

204  
00:09:47,240 --> 00:09:43,470  
large flame at the top of the stand is

205  
00:09:49,760 --> 00:09:47,250  
the afterburn this instrumentation film

206  
00:09:53,780 --> 00:09:49,770  
shows an f1 engine turbo pump during a

207  
00:09:56,000 --> 00:09:53,790  
hot fire testing at Santa Susana in the

208  
00:09:57,860 --> 00:09:56,010  
developmental area Rocketdyne has been

209  
00:09:59,570 --> 00:09:57,870  
contracted by NASA to develop an

210  
00:10:02,090 --> 00:09:59,580  
instrumentation system for measuring

211  
00:10:05,240 --> 00:10:02,100  
radiative heat from the exhaust plume of

212  
00:10:08,390 --> 00:10:05,250  
an f1 engine and to perform an analysis

213  
00:10:10,880 --> 00:10:08,400

of exhaust plume radiation processes the

214

00:10:13,090 --> 00:10:10,890

study will assess the role of carbon as

215

00:10:15,710 --> 00:10:13,100

a thermal radiator and the geometry

216

00:10:22,270 --> 00:10:15,720

location and progress of afterburning

217

00:10:27,830 --> 00:10:25,700

the j2 engine qualification test series

218

00:10:30,470 --> 00:10:27,840

was completed by Rocketdyne on December

219

00:10:33,470 --> 00:10:30,480

22nd the series conducted at Santa

220

00:10:35,450 --> 00:10:33,480

Susana served to man rate the j2 the

221

00:10:39,680 --> 00:10:35,460

engine was fired 30 times for an

222

00:10:42,470 --> 00:10:39,690

accumulated duration of 3750 seconds in

223

00:10:44,900 --> 00:10:42,480

early January j2 qualification service

224

00:10:47,630 --> 00:10:44,910

life tests were conducted with seven

225

00:10:51,680 --> 00:10:47,640

successive full duration 500 second

226  
00:10:53,450 --> 00:10:51,690  
firings also at Santa Susana a study was

227  
00:10:55,880 --> 00:10:53,460  
performed to provide data on the

228  
00:10:58,220 --> 00:10:55,890  
movement of locks during a firing in

229  
00:11:00,160 --> 00:10:58,230  
sequence the film shows introduction of

230  
00:11:02,450 --> 00:11:00,170  
helium to sub cool the propellant

231  
00:11:05,090 --> 00:11:02,460  
pressurization of the run tank with

232  
00:11:09,650 --> 00:11:05,100  
gaseous nitrogen and depletion of the

233  
00:11:11,360 --> 00:11:09,660  
tank during firing a series of vibration

234  
00:11:14,330 --> 00:11:11,370  
test was conducted at rocky Dean's

235  
00:11:17,360 --> 00:11:14,340  
Canoga Park plant subjecting the j2 to

236  
00:11:20,210 --> 00:11:17,370  
simulated loads of the s1c stage boost

237  
00:11:22,310 --> 00:11:20,220  
phase the tests simulated those flight

238  
00:11:25,990 --> 00:11:22,320

loads expected at booster ignition

239

00:11:28,160 --> 00:11:26,000

liftoff maximum aerodynamic load Mach 1

240

00:11:31,250 --> 00:11:28,170

aerodynamic gusts and steady-state

241

00:11:33,680 --> 00:11:31,260

flight no discrepancies were noted

242

00:11:36,079 --> 00:11:33,690

following an electromechanical check out

243

00:11:38,390 --> 00:11:36,089

the vibration test engine was installed

244

00:11:42,470 --> 00:11:38,400

in a test stand and fired for a full

245

00:11:44,900 --> 00:11:42,480

duration a new facility an electrical

246

00:11:46,910 --> 00:11:44,910

assembly cleanroom production line has

247

00:11:49,880 --> 00:11:46,920

been placed in operation at rocky Dean's

248

00:11:51,770 --> 00:11:49,890

Canoga Park plant the facility is used

249

00:11:55,329 --> 00:11:51,780

in the buildup of electrical control

250

00:11:58,310 --> 00:11:55,339

assemblies for the j2 engine system a

251  
00:11:59,810 --> 00:11:58,320  
total of seven j2 engines was delivered

252  
00:12:03,200 --> 00:11:59,820  
by rocky during this quarter to the

253  
00:12:07,040 --> 00:12:03,210  
Saturn 5 stage users including 3 for the

254  
00:12:09,890 --> 00:12:07,050  
third s to flight stage 2 s2 spares 1s

255  
00:12:11,570 --> 00:12:09,900  
for B spare and one for testing at the

256  
00:12:12,920 --> 00:12:11,580  
Air Force's Arnold engineering

257  
00:12:17,300 --> 00:12:12,930  
Development Center in Tullahoma

258  
00:12:19,400 --> 00:12:17,310  
Tennessee a douglas s4 b battleship

259  
00:12:21,290 --> 00:12:19,410  
stage which will be used for tankage in

260  
00:12:24,590 --> 00:12:21,300  
the tests was delivered to tella home on

261  
00:12:26,570 --> 00:12:24,600  
January 22nd following installation in

262  
00:12:29,180 --> 00:12:26,580  
the test cell and mounting of the j2

263  
00:12:31,699 --> 00:12:29,190

engine next quarter firing tests will

264

00:12:33,740 --> 00:12:31,709

begin in July for verification of start

265

00:12:41,680 --> 00:12:33,750

restart and engine performance at

266

00:12:46,490 --> 00:12:44,690

the flight systems instrument unit was

267

00:12:48,380 --> 00:12:46,500

completed on December 6th at the

268

00:12:50,540 --> 00:12:48,390

Marshall Center and was moved into the

269

00:12:54,350 --> 00:12:50,550

quality and reliability of surance lab

270

00:12:56,269 --> 00:12:54,360

for checkout in mid-february a final

271

00:12:58,670 --> 00:12:56,279

checkout operations were completed under

272

00:13:00,440 --> 00:12:58,680

unit together with the three IBM check

273

00:13:02,870 --> 00:13:00,450

out trailers housing equipment for

274

00:13:05,449 --> 00:13:02,880

telemetry radio frequency and digital

275

00:13:07,490 --> 00:13:05,459

data acquisition systems check out the

276  
00:13:09,530 --> 00:13:07,500  
IU and check out equipment are being

277  
00:13:11,900 --> 00:13:09,540  
moved to Douglas aircrafts Huntington

278  
00:13:13,610 --> 00:13:11,910  
Beach facility where functional tests

279  
00:13:16,130 --> 00:13:13,620  
will begin next quarter in an

280  
00:13:20,269 --> 00:13:16,140  
environmental chamber simulating orbital

281  
00:13:22,550 --> 00:13:20,279  
thermal vacuum conditions the vibration

282  
00:13:24,500 --> 00:13:22,560  
test IU was emplaced in a fixture for

283  
00:13:26,630 --> 00:13:24,510  
mechanical vibration testing at Wiley

284  
00:13:28,730 --> 00:13:26,640  
labs Huntsville facility in December

285  
00:13:31,069 --> 00:13:28,740  
following successful completion of

286  
00:13:32,870 --> 00:13:31,079  
acoustic tests last quarter the

287  
00:13:37,340 --> 00:13:32,880  
mechanical program was successfully

288  
00:13:39,019 --> 00:13:37,350

concluded by Wiley on January 20th after

289

00:13:40,460 --> 00:13:39,029

Marshall had updated the facilities

290

00:13:43,189 --> 00:13:40,470

checkout I you to the flight

291

00:13:45,410 --> 00:13:43,199

configuration it was shipped to KSC on

292

00:13:50,150 --> 00:13:45,420

February 28th for use in checking out

293

00:13:52,220 --> 00:13:50,160

launch complex 39 structural testing of

294

00:13:55,069 --> 00:13:52,230

the second structural test I you began

295

00:13:57,650 --> 00:13:55,079

December 30th at Marshall after a series

296

00:14:00,470 --> 00:13:57,660

of successful tests the unit crumpled on

297

00:14:03,620 --> 00:14:00,480

February 2nd at 140 percent of maximum

298

00:14:07,490 --> 00:14:03,630

aerodynamic load the exact safety factor

299

00:14:10,069 --> 00:14:07,500

for man rating two more tests had been

300

00:14:12,530 --> 00:14:10,079

planned the IU has now been broken down

301  
00:14:15,410 --> 00:14:12,540  
into sections for posts test examination

302  
00:14:16,819 --> 00:14:15,420  
and an evaluation of all tests data is

303  
00:14:19,009 --> 00:14:16,829  
underway to determine if additional

304  
00:14:22,730 --> 00:14:19,019  
testing using a new unit will be

305  
00:14:24,560 --> 00:14:22,740  
required installation of components in

306  
00:14:26,810 --> 00:14:24,570  
the first and second flight instrument

307  
00:14:28,730 --> 00:14:26,820  
units got underway this quarter at IBM

308  
00:14:30,920 --> 00:14:28,740  
Huntsville completion of installation

309  
00:14:34,120 --> 00:14:30,930  
and start of check out of the first

310  
00:14:36,889 --> 00:14:34,130  
flight I you are scheduled for mid-may

311  
00:14:39,319 --> 00:14:36,899  
build-up of IBM's checkout capability

312  
00:14:41,660 --> 00:14:39,329  
continue during the report period in the

313  
00:14:44,210 --> 00:14:41,670

area of component test equipment this

314

00:14:47,269 --> 00:14:44,220

new turn tilt test stand was added in

315

00:14:49,460 --> 00:14:47,279

January for use in checking out the st1

316

00:14:51,890 --> 00:14:49,470

24 M inertial platforms

317

00:14:56,780 --> 00:14:51,900

Subsystem before installation in the eye

318

00:15:00,050 --> 00:14:56,790

you also IBM's new aerospace system test

319

00:15:01,850 --> 00:15:00,060

& Evaluation console known as aztec was

320

00:15:04,490 --> 00:15:01,860

being checked out this quarter and will

321

00:15:06,680 --> 00:15:04,500

be operational in april the previous

322

00:15:07,430 --> 00:15:06,690

aztec unit has been incorporated into

323

00:15:11,330 --> 00:15:07,440

IBM's

324

00:15:12,950 --> 00:15:11,340

simulation laboratory for use in

325

00:15:15,590 --> 00:15:12,960

checkout of the fully assembled

326

00:15:18,350 --> 00:15:15,600

aiyoo the Saturn 5 central control room

327

00:15:22,790 --> 00:15:18,360

now under construction by IBM will be

328

00:15:24,710 --> 00:15:22,800

operational in May I BMS instrumentation

329

00:15:26,870 --> 00:15:24,720

and communication acceptance complex

330

00:15:29,720 --> 00:15:26,880

which ties in to the central control

331

00:15:31,880 --> 00:15:29,730

room was completed in January it has the

332

00:15:41,540 --> 00:15:31,890

capability of testing various telemetry

333

00:15:43,850 --> 00:15:41,550

components at Marshall Saturn five GSE

334

00:15:45,800 --> 00:15:43,860

test facility umbilical disconnects

335

00:15:47,540 --> 00:15:45,810

testing began this quarter on the swing

336

00:15:50,710 --> 00:15:47,550

arms which will be used on the mobile

337

00:15:53,480 --> 00:15:50,720

launcher at KSC s launch complex 39

338

00:15:56,660 --> 00:15:53,490

airplane engines generated winds up to

339

00:15:59,000 --> 00:15:56,670

75 miles per hour to simulate wind loads

340

00:16:01,940 --> 00:15:59,010

which might puppet a Saturn 5 vehicle on

341

00:16:04,280 --> 00:16:01,950

its head in Florida the swing arms which

342

00:16:06,200 --> 00:16:04,290

provide for personnel access propellant

343

00:16:09,050 --> 00:16:06,210

loading and electrical and pneumatic

344

00:16:12,470 --> 00:16:09,060

connections will be shipped to KSC upon

345

00:16:14,510 --> 00:16:12,480

completion of testing build-up of

346

00:16:17,060 --> 00:16:14,520

marshall saturn v systems development

347

00:16:19,460 --> 00:16:17,070

facility is continuing with installation

348

00:16:21,740 --> 00:16:19,470

of the f1 engine this quarter the

349

00:16:24,350 --> 00:16:21,750

facility is a breadboard or simulation

350

00:16:27,380 --> 00:16:24,360

of launch vehicle automatic checkout GSE

351  
00:16:29,600 --> 00:16:27,390  
at launch complex 39 plus components

352  
00:16:32,540 --> 00:16:29,610  
simulating a completely assembled Saturn

353  
00:16:34,760 --> 00:16:32,550  
5 vehicle purpose of the facility is to

354  
00:16:37,940 --> 00:16:34,770  
verify compatibility between the Saturn

355  
00:16:40,520 --> 00:16:37,950  
5 and launch vehicle GS II and also to

356  
00:16:44,420 --> 00:16:40,530  
develop and verify checkout tapes which

357  
00:16:45,950 --> 00:16:44,430  
will be used for actual launchings the

358  
00:16:47,960 --> 00:16:45,960  
breadboard instrument unit was also

359  
00:16:50,390 --> 00:16:47,970  
delivered to the breadboard facility

360  
00:16:52,760 --> 00:16:50,400  
during the report period prior to the

361  
00:16:56,870 --> 00:16:52,770  
Saturn 5 program and the launch vehicle

362  
00:16:59,480 --> 00:16:56,880  
GSE concept stage peculiar GSE that is

363  
00:17:01,460 --> 00:16:59,490

designed for individual stages only had

364

00:17:04,279 --> 00:17:01,470

to be used at the Cape for checkout of

365

00:17:06,360 --> 00:17:04,289

the fully assembled vehicle

366

00:17:08,189 --> 00:17:06,370

installation of electrical support

367

00:17:09,840 --> 00:17:08,199

equipment at the Saturn 5 breadboard

368

00:17:19,260 --> 00:17:09,850

facility continued throughout the

369

00:17:21,600 --> 00:17:19,270

quarter at Marshall Saturn five dynamic

370

00:17:23,970 --> 00:17:21,610

test stand installation of the Saturn 5

371

00:17:26,850 --> 00:17:23,980

dynamic test vehicles first stage was

372

00:17:28,710 --> 00:17:26,860

accomplished on January 14th testing of

373

00:17:30,570 --> 00:17:28,720

the stage to determine vibration and

374

00:17:33,120 --> 00:17:30,580

bending characteristics during flight

375

00:17:35,549 --> 00:17:33,130

we'll begin this summer later the two

376

00:17:37,770 --> 00:17:35,559

upper stages I you and dummy Apollo

377

00:17:41,250 --> 00:17:37,780

spacecraft will be headed for full-scale

378

00:17:43,500 --> 00:17:41,260

testing meanwhile prior to start of

379

00:17:45,330 --> 00:17:43,510

dynamic testing checkout is underway of

380

00:17:47,640 --> 00:17:45,340

the hydraulic support system on which

381

00:17:49,409 --> 00:17:47,650

the booster rests in the stand the

382

00:17:53,130 --> 00:17:49,419

system was built and installed by the

383

00:17:55,169 --> 00:17:53,140

Martin company of Baltimore at Marshalls

384

00:17:57,360 --> 00:17:55,179

Mississippi test facility preparations

385

00:18:00,659 --> 00:17:57,370

are continuing to ready the first s two

386

00:18:03,799 --> 00:18:00,669

static test stand designated a 2 for the

387

00:18:06,360 --> 00:18:03,809

initial s2 firing scheduled next quarter

388

00:18:08,310 --> 00:18:06,370

modifications of the s2 all systems

389

00:18:11,750 --> 00:18:08,320

stage which was installed in the stand

390

00:18:14,669 --> 00:18:11,760

last quarter are also continuing

391

00:18:17,100 --> 00:18:14,679

construction of the second s to stand

392

00:18:21,570 --> 00:18:17,110

designated a1 is progressing steadily

393

00:18:24,090 --> 00:18:21,580

understand is 58 percent complete at the

394

00:18:26,039 --> 00:18:24,100

door position s1 see static test stand

395

00:18:28,789 --> 00:18:26,049

concrete work in direction of Steel

396

00:18:31,830 --> 00:18:28,799

continued throughout the report period

397

00:18:33,270 --> 00:18:31,840

the test control centers for both areas

398

00:18:35,580 --> 00:18:33,280

have been finished except for

399

00:18:38,810 --> 00:18:35,590

installation of equipment the data

400

00:18:41,600 --> 00:18:38,820

acquisition facility is now operational

401  
00:18:45,779 --> 00:18:41,610  
in summary the period of December 1st

402  
00:18:47,399 --> 00:18:45,789  
1965 through February 28 1966 witnessed

403  
00:18:49,380 --> 00:18:47,409  
to the achievement of significant

404  
00:18:51,630 --> 00:18:49,390  
program milestones including the

405  
00:18:55,500 --> 00:18:51,640  
successful acceptance static firing of

406  
00:18:58,080 --> 00:18:55,510  
the first s 1c flight stage shipment of

407  
00:19:01,919 --> 00:18:58,090  
the s 1 C and s two facilities checkout

408  
00:19:04,350 --> 00:19:01,929  
stages to KSC the first cluster firing

409  
00:19:06,440 --> 00:19:04,360  
of the s2 battleship stage using flight

410  
00:19:09,720 --> 00:19:06,450  
configuration j2 engines

411  
00:19:12,930 --> 00:19:09,730  
factory checkout of the first s4v flight

412  
00:19:15,360 --> 00:19:12,940  
stage completion of the j2 engine

413  
00:19:17,580 --> 00:19:15,370

qualification test series

414

00:19:21,450 --> 00:19:17,590

successful instrument unit vibration

415

00:19:24,140 --> 00:19:21,460

tests testing of GIC items such as the

416

00:19:27,030 --> 00:19:24,150

mobile launcher swing arms and

417

00:19:29,980 --> 00:19:27,040

preparation for the initial S - static