

**GEORGE C. MARSHALL
SPACE FLIGHT CENTER
presents**

1
00:00:16,730 --> 00:00:14,110

[Music]

2
00:00:18,980 --> 00:00:16,740

Saturn five quarterly film reports

3
00:00:23,620 --> 00:00:18,990

number eleven Thomas Partridge during

4
00:00:26,150 --> 00:00:23,630

the period June July and August 1965

5
00:00:28,820 --> 00:00:26,160

development manufacturing and testing of

6
00:00:30,560 --> 00:00:28,830

s1c stages by the Boeing Company and the

7
00:00:35,209 --> 00:00:30,570

Marshall Center continued throughout the

8
00:00:37,729 --> 00:00:35,219

fourth the first full duration or 150

9
00:00:40,520 --> 00:00:37,739

second static firing of an s-1 sea stage

10
00:00:43,010 --> 00:00:40,530

for successfully performed on August 5th

11
00:00:46,430 --> 00:00:43,020

at the Marshall Center the 5f1

12
00:00:48,979 --> 00:00:46,440

engines of the test stage s1 CT produced

13
00:00:51,529 --> 00:00:48,989

for thrust of 7 and 1/2 million pounds

14

00:00:52,639 --> 00:00:51,539

all four other engines for gimbal

15

00:00:55,040 --> 00:00:52,649

satisfactorily

16

00:00:57,110 --> 00:00:55,050

the first firing using automatic check

17

00:01:04,100 --> 00:00:57,120

out equipment is presently scheduled for

18

00:01:07,399 --> 00:01:04,110

next court martial assembly of the first

19

00:01:09,950 --> 00:01:07,409

seven five booster flight stage s1 c1

20

00:01:12,200 --> 00:01:09,960

neared completion this quarter the inner

21

00:01:14,359 --> 00:01:12,210

tank watts tank forward skirt assembly

22

00:01:16,070 --> 00:01:14,369

was completed in late June and was

23

00:01:18,200 --> 00:01:16,080

transferred from the vertical Assembly

24

00:01:20,330 --> 00:01:18,210

Building to the horizontal assembly area

25

00:01:21,890 --> 00:01:20,340

for mating to the fuel tank thrust

26

00:01:24,590 --> 00:01:21,900

structure assembly which had been

27

00:01:26,420 --> 00:01:24,600

finished last quarter splicing of the

28

00:01:29,179 --> 00:01:26,430

two tank assemblies was accomplished on

29

00:01:31,090 --> 00:01:29,189

July 12 miscellaneous mechanical and

30

00:01:33,950 --> 00:01:31,100

electrical work is continuing

31

00:01:36,859 --> 00:01:33,960

installation of the 5f1 engines was

32

00:01:38,510 --> 00:01:36,869

finished August 28 the completed stage

33

00:01:40,670 --> 00:01:38,520

is scheduled for turn over to the

34

00:01:45,260 --> 00:01:40,680

quality and reliability assurance lab

35

00:01:48,289 --> 00:01:45,270

for checkout on September 27th assembly

36

00:01:50,870 --> 00:01:48,299

of the second flight stage s1 c2 also

37

00:01:52,999 --> 00:01:50,880

moved forward at Marshall hydrostatic

38

00:01:56,719 --> 00:01:53,009

testing of the fuel tank was completed

39

00:01:58,910 --> 00:01:56,729

in mid-august in addition the skin

40

00:02:01,010 --> 00:01:58,920

assemblies were welded to both the upper

41

00:02:03,560 --> 00:02:01,020

and lower launch tank both heads and

42

00:02:07,910 --> 00:02:03,570

first structure assembly was continued

43

00:02:11,119 --> 00:02:07,920

at MSFC in Marshalls world tests our

44

00:02:13,220 --> 00:02:11,129

theater tank for the s1 CS structural

45

00:02:15,350 --> 00:02:13,230

test stage was installed

46

00:02:18,020 --> 00:02:15,360

the fuel tank first structure assembly

47

00:02:20,360 --> 00:02:18,030

in mid-july and preparations are

48

00:02:23,839 --> 00:02:20,370

underway for structural load testing of

49

00:02:25,790 --> 00:02:23,849

the unit beginning in September at

50

00:02:28,070 --> 00:02:25,800

Marshall's me shoe assembly facility in

51
00:02:30,920 --> 00:02:28,080
New Orleans the Boeing Company achieved

52
00:02:33,650 --> 00:02:30,930
an important goal On June 27th when the

53
00:02:35,870 --> 00:02:33,660
first s1c stage to be assembled at Mishu

54
00:02:39,199 --> 00:02:35,880
was removed from the vertical Assembly

55
00:02:41,809 --> 00:02:39,209
Building the s-1 CD dynamic test stage

56
00:02:43,820 --> 00:02:41,819
was moved to the horizontal installation

57
00:02:45,949 --> 00:02:43,830
position in the flat area where

58
00:02:49,910 --> 00:02:45,959
installation of tubing and wiring is

59
00:02:52,910 --> 00:02:49,920
underway the thrust structure for the s1

60
00:02:56,900 --> 00:02:52,920
CF facilities checkout stage was moved

61
00:02:58,850 --> 00:02:56,910
into the VAB in mid July s1 CF will be

62
00:03:01,160 --> 00:02:58,860
the second stage to be assembled at

63
00:03:05,210 --> 00:03:01,170

Michou and the first to be checked out

64

00:03:07,250 --> 00:03:05,220

in the new stage test building after

65

00:03:10,339 --> 00:03:07,260

completion of hydrostatic testing the

66

00:03:12,289 --> 00:03:10,349

fuel tank for s1 CL was moved into the

67

00:03:14,780 --> 00:03:12,299

vertical assembly position and made it

68

00:03:17,539 --> 00:03:14,790

to the thrust structure here are the 5

69

00:03:20,059 --> 00:03:17,549

watt suction ducts were installed the

70

00:03:22,580 --> 00:03:20,069

inner tank watch tank and forward skirt

71

00:03:25,460 --> 00:03:22,590

were added to complete vertical assembly

72

00:03:27,979 --> 00:03:25,470

of the state's the S 1 CF was removed

73

00:03:30,410 --> 00:03:27,989

from the VAB on August 26th and

74

00:03:35,059 --> 00:03:30,420

transferred to the horizontal assembly

75

00:03:37,490 --> 00:03:35,069

area both heads for s1 c3 and for flight

76
00:03:40,809 --> 00:03:37,500
stages were completed during the quarter

77
00:03:44,180 --> 00:03:40,819
and work was underway on s1 c5 bulkheads

78
00:03:46,129 --> 00:03:44,190
s1 c3 was in the final phases of major

79
00:03:49,039 --> 00:03:46,139
component assembly while similar

80
00:03:52,580 --> 00:03:49,049
operations for s1 c4 were just getting

81
00:03:56,479 --> 00:03:52,590
underway Assembly of s1 c5 will start

82
00:03:58,759 --> 00:03:56,489
next for the change in manufacturing

83
00:04:00,949 --> 00:03:58,769
technique was inaugurated by Boeing in

84
00:04:03,860 --> 00:04:00,959
the form of the pocket milled or T

85
00:04:06,440 --> 00:04:03,870
stiffened wiring the application of this

86
00:04:09,229 --> 00:04:06,450
change will be used in s1 c4 and

87
00:04:11,780 --> 00:04:09,239
subsequent stages the new type of wiring

88
00:04:14,599 --> 00:04:11,790

will add strength as well as delete

89

00:04:21,249 --> 00:04:14,609

5,000 pounds of weight from the s-1 C

90

00:04:27,679 --> 00:04:25,159

the first successful full duration 395

91

00:04:30,920 --> 00:04:27,689

second cluster filing of the 5j two

92

00:04:32,929 --> 00:04:30,930

engines of the s2 battleship stage was

93

00:04:35,209 --> 00:04:32,939

accomplished on August tonight by North

94

00:04:37,459 --> 00:04:35,219

American Aviation space and information

95

00:04:40,670 --> 00:04:37,469

systems division at the Santa Susana

96

00:04:42,740 --> 00:04:40,680

field laboratory for area attempts to

97

00:04:45,439 --> 00:04:42,750

fire for duration have been terminated

98

00:04:48,469 --> 00:04:45,449

prematurely due to various malfunctions

99

00:04:50,480 --> 00:04:48,479

all of which were later rectified the

100

00:04:52,550 --> 00:04:50,490

battleship is now being prepared for the

101
00:04:54,800 --> 00:04:52,560
next phase of testing which includes

102
00:05:00,499 --> 00:04:54,810
flight engines gimbal systems and

103
00:05:03,230 --> 00:05:00,509
propellant utilization after completion

104
00:05:05,809 --> 00:05:03,240
of the s2 common bulkhead tests tagged

105
00:05:08,659 --> 00:05:05,819
late last quarter the tank arrived at

106
00:05:10,999 --> 00:05:08,669
Santa Susana on June 3rd the gaseous

107
00:05:13,300 --> 00:05:11,009
nitrogen first pressure test was

108
00:05:16,129 --> 00:05:13,310
successfully conducted on July 10

109
00:05:18,950 --> 00:05:16,139
cryogenic fill and drain tests had to be

110
00:05:21,860 --> 00:05:18,960
postponed because of insulation problems

111
00:05:23,990 --> 00:05:21,870
repairs to insulation were made for some

112
00:05:28,820 --> 00:05:24,000
of the activation completed and testing

113
00:05:29,959 --> 00:05:28,830

was resumed on August 21st at SN I D Co

114

00:05:32,330 --> 00:05:29,969

Beach facility

115

00:05:35,029 --> 00:05:32,340

modification of the tests tower for the

116

00:05:38,119 --> 00:05:35,039

structural test dynamic test stage was

117

00:05:40,329 --> 00:05:38,129

completed on July 16th body and flight

118

00:05:43,189 --> 00:05:40,339

load tests were completed on August 15

119

00:05:47,170 --> 00:05:43,199

these loads simulate the inertia of the

120

00:05:49,790 --> 00:05:47,180

s4b stage and Apollo spacecraft

121

00:05:52,070 --> 00:05:49,800

completion and ultrasonic inspection of

122

00:05:54,230 --> 00:05:52,080

bulkheads for the s2 facilities checkout

123

00:05:56,659 --> 00:05:54,240

stage were accomplished during the

124

00:05:59,180 --> 00:05:56,669

report period stage structural assembly

125

00:06:01,610 --> 00:05:59,190

and numismatic testing have been

126
00:06:06,439 --> 00:06:01,620
completed and the stage moved to station

127
00:06:08,390 --> 00:06:06,449
5 for cleaning the s2 t all system stage

128
00:06:10,790 --> 00:06:08,400
was inverted and placed on the stage

129
00:06:13,909 --> 00:06:10,800
hydrostatic sir for cleaning of liquid

130
00:06:15,760 --> 00:06:13,919
hydrogen tanks in July the wax tank had

131
00:06:18,649 --> 00:06:15,770
previously been cleaned with freon

132
00:06:22,399 --> 00:06:18,659
priming station 5 the liquid hydrogen

133
00:06:24,409 --> 00:06:22,409
feed lines were also installed the stage

134
00:06:26,930 --> 00:06:24,419
was then inverted to a first structure

135
00:06:29,600 --> 00:06:26,940
down attitude and returned to station 2

136
00:06:31,820 --> 00:06:29,610
for further component installation the

137
00:06:32,800 --> 00:06:31,830
fire j2 engines were also installed

138
00:06:36,220 --> 00:06:32,810

under thrust

139

00:06:38,320 --> 00:06:36,230
during august shipment of s2t to

140

00:06:42,070 --> 00:06:38,330
Marshalls Mississippi test facility is

141

00:06:44,800 --> 00:06:42,080
expected early next quarter the common

142

00:06:47,110 --> 00:06:44,810
bulkhead for s21 the first flight stage

143

00:06:49,480 --> 00:06:47,120
has been completed and manufacturer

144

00:06:53,050 --> 00:06:49,490
pockets for flight stages two and three

145

00:06:56,200 --> 00:06:53,060
is in partners at the electromechanical

146

00:06:57,430 --> 00:06:56,210
mock-up stage simulator area @s and ID's

147

00:06:59,950 --> 00:06:57,440
down a facility

148

00:07:01,900 --> 00:06:59,960
check out of the s2 separation system

149

00:07:05,260 --> 00:07:01,910
was successfully performed during the

150

00:07:06,820 --> 00:07:05,270
report period all s2 stage electrical

151
00:07:09,960 --> 00:07:06,830
and mechanical functions can be

152
00:07:12,400 --> 00:07:09,970
performed or simulated by the emm

153
00:07:15,280 --> 00:07:12,410
development of the basic program takes

154
00:07:16,960 --> 00:07:15,290
was completed and the emm functional

155
00:07:26,650 --> 00:07:16,970
demonstration was successfully

156
00:07:28,420 --> 00:07:26,660
accomplished the s4 the facilities

157
00:07:30,340 --> 00:07:28,430
checkout stage underwent final

158
00:07:33,190 --> 00:07:30,350
installation of equipment such as this

159
00:07:35,050 --> 00:07:33,200
auxiliary propulsion system module early

160
00:07:38,050 --> 00:07:35,060
this quarter a Douglas Aircraft Company

161
00:07:40,210 --> 00:07:38,060
alpha complex Sacramento test facility

162
00:07:42,190 --> 00:07:40,220
following successful completion of

163
00:07:46,300 --> 00:07:42,200

propellant loading tests at SAC those

164

00:07:48,969 --> 00:07:46,310

beta complex the facilities check out

165

00:07:51,760 --> 00:07:48,979

stage left Sacramento by chef June 10th

166

00:07:53,830 --> 00:07:51,770

on its way by of the Panama Canal to the

167

00:07:57,450 --> 00:07:53,840

Kennedy Space Center for use there in

168

00:08:00,010 --> 00:07:57,460

launch complex 34 check out operations

169

00:08:02,500 --> 00:08:00,020

following completion of Saturn 1b

170

00:08:05,469 --> 00:08:02,510

configuration battleship stage testing

171

00:08:07,870 --> 00:08:05,479

last quarter AJ - engine with restart

172

00:08:10,980 --> 00:08:07,880

capability was installed in preparation

173

00:08:14,080 --> 00:08:10,990

for a seven-five battleship testing

174

00:08:16,060 --> 00:08:14,090

during the initial test on July 1st a

175

00:08:18,100 --> 00:08:16,070

fire broke out as a result of an

176

00:08:20,529 --> 00:08:18,110

accumulation of hydrogen in the upper

177

00:08:22,630 --> 00:08:20,539

thrust cone area and the program was

178

00:08:24,969 --> 00:08:22,640

delayed approximately one month for a

179

00:08:28,180 --> 00:08:24,979

refurbishment of damaged components such

180

00:08:30,250 --> 00:08:28,190

as wiring and tubing the first

181

00:08:32,829 --> 00:08:30,260

successful full duration battleship

182

00:08:36,490 --> 00:08:32,839

firing with restart was accomplished on

183

00:08:38,589 --> 00:08:36,500

August 17th the stages j2 engine ran for

184

00:08:40,659 --> 00:08:38,599

three minutes before being cut off for a

185

00:08:43,270 --> 00:08:40,669

30-minute simulated orbital Coast

186

00:08:43,830 --> 00:08:43,280

periods it was then reignited for a

187

00:08:46,770 --> 00:08:43,840

three

188

00:08:48,990 --> 00:08:46,780

fifty-five second run a similar test on

189

00:08:51,930 --> 00:08:49,000

August 20th concluded the Battleship

190

00:08:53,970 --> 00:08:51,940

firing program at sector later stands

191

00:08:58,430 --> 00:08:53,980

number one will now be modified for use

192

00:09:00,540 --> 00:08:58,440

in acceptance testing of flight stages

193

00:09:03,120 --> 00:09:00,550

construction of the vertical checkout

194

00:09:04,790 --> 00:09:03,130

laboratory at sectoral continued with

195

00:09:07,440 --> 00:09:04,800

installation of ground support equipment

196

00:09:11,520 --> 00:09:07,450

the facility will be used for post

197

00:09:13,010 --> 00:09:11,530

static check out of flight stages at the

198

00:09:15,480 --> 00:09:13,020

Douglas Huntington Beach flat

199

00:09:19,440 --> 00:09:15,490

fabrication and assembly continued on

200

00:09:22,650 --> 00:09:19,450

the first two s4b five flight stages 501

201
00:09:25,410 --> 00:09:22,660
and 502 after removal from insulation

202
00:09:27,840 --> 00:09:25,420
chambers 501 was transferred to the

203
00:09:30,360 --> 00:09:27,850
assembly checkout tower complex for

204
00:09:34,230 --> 00:09:30,370
installation of components in the LH 2

205
00:09:36,180 --> 00:09:34,240
tank the propellant tanks for the 502

206
00:09:40,620 --> 00:09:36,190
stage are being assembled in position

207
00:09:42,660 --> 00:09:40,630
number 1 of the complex yes to forward

208
00:09:45,810 --> 00:09:42,670
skirt has been received from s and ID

209
00:09:48,180 --> 00:09:45,820
for use in conjunction with the s4b aft

210
00:09:51,360 --> 00:09:48,190
inter stage testing at Douglas next

211
00:09:54,390 --> 00:09:51,370
quarter conversion hardware for

212
00:09:57,300 --> 00:09:54,400
converting the s4 b 1b dynamic stage to

213
00:10:00,390 --> 00:09:57,310

a 7 fire configuration was weighed and

214

00:10:01,980 --> 00:10:00,400

balanced at Huntington Beach prior to

215

00:10:04,470 --> 00:10:01,990

shipment to the Marshall Center in

216

00:10:07,080 --> 00:10:04,480

harvest the forward skirt will be used

217

00:10:09,780 --> 00:10:07,090

in dynamic testing of the s4 BD

218

00:10:12,390 --> 00:10:09,790

instrument unit and Apollo spacecraft in

219

00:10:14,760 --> 00:10:12,400

October the earth inter stage will be

220

00:10:17,310 --> 00:10:14,770

stored until needed next year for

221

00:10:21,450 --> 00:10:17,320

dynamic testing of the entire Saturn 5

222

00:10:23,970 --> 00:10:21,460

vehicle the first j2 engine delivered by

223

00:10:25,770 --> 00:10:23,980

Rocketdyne to Marshall under wet initial

224

00:10:35,060 --> 00:10:25,780

static wiring during August in the

225

00:10:40,740 --> 00:10:37,500

the first of a series of environmental

226

00:10:43,140 --> 00:10:40,750

tests of the f1 engine was conducted by

227

00:10:46,250 --> 00:10:43,150

Rocketdyne in July at test stand

228

00:10:48,540 --> 00:10:46,260

1e edwards field laboratory california

229

00:10:50,490 --> 00:10:48,550

successful start and operation of the

230

00:10:53,550 --> 00:10:50,500

engine system was accomplished after

231

00:10:57,030 --> 00:10:53,560

high temperature conditioning at 135

232

00:10:58,890 --> 00:10:57,040

degrees Fahrenheit for 16 hours later a

233

00:11:00,260 --> 00:10:58,900

successful firing was performed

234

00:11:02,790 --> 00:11:00,270

following a low temperature

235

00:11:06,780 --> 00:11:02,800

environmental test simulating possible

236

00:11:09,600 --> 00:11:06,790

hold conditions at launch at Rocketdyne

237

00:11:12,030 --> 00:11:09,610

Canoga Park California plant a program

238

00:11:14,220 --> 00:11:12,040

aimed at improvement of f1 engine thrust

239

00:11:16,410 --> 00:11:14,230

chamber assembly techniques was underway

240

00:11:18,510 --> 00:11:16,420

as a result of hot gas leakage

241

00:11:21,030 --> 00:11:18,520

experienced in some recent production

242

00:11:23,340 --> 00:11:21,040

engines this series of operations which

243

00:11:25,380 --> 00:11:23,350

is expected to solve the problem covers

244

00:11:27,329 --> 00:11:25,390

assembly of the thrust chamber up to the

245

00:11:31,230 --> 00:11:27,339

point of installation in the brazing

246

00:11:33,329 --> 00:11:31,240

furnace activation of Rocketdyne snoo

247

00:11:35,640 --> 00:11:33,339

manufacturing building number 4 at

248

00:11:38,310 --> 00:11:35,650

Canoga Park is scheduled in early

249

00:11:40,470 --> 00:11:38,320

September f1 turbo pump and valve

250

00:11:42,300 --> 00:11:40,480

assembly operations were transferred to

251
00:11:44,370 --> 00:11:42,310
the new facility for manufacturing

252
00:11:47,430 --> 00:11:44,380
building number one in mid-august

253
00:11:51,329 --> 00:11:47,440
two large clean rooms were also readied

254
00:11:54,420 --> 00:11:51,339
for use the Marshall center's new single

255
00:11:56,880 --> 00:11:54,430
position f1 engine static test stand was

256
00:12:00,030 --> 00:11:56,890
activated on July 8 with a successful

257
00:12:03,090 --> 00:12:00,040
10-second firing on July 21st for

258
00:12:05,070 --> 00:12:03,100
duration 150 second firing of the one

259
00:12:08,490 --> 00:12:05,080
and one-half million pound thrust engine

260
00:12:11,370 --> 00:12:08,500
was successfully performed in all twelve

261
00:12:16,890 --> 00:12:11,380
firings totaling 16 and 1/2 minutes were

262
00:12:19,740 --> 00:12:16,900
held in the new stand this fourth all

263
00:12:23,190 --> 00:12:19,750

5f1 engines for the first seven five

264

00:12:24,960 --> 00:12:23,200

flight stage s1 c1 were received at

265

00:12:27,480 --> 00:12:24,970

marshall from Rocketdyne during the

266

00:12:29,190 --> 00:12:27,490

report period and underwent checkout and

267

00:12:36,740 --> 00:12:29,200

minor modification before being

268

00:12:42,720 --> 00:12:40,050

the j2 engine flight rating test series

269

00:12:45,570 --> 00:12:42,730

which was begun by Rocketdyne in May was

270

00:12:49,260 --> 00:12:45,580

completed on July 21st at services at a

271

00:12:52,020 --> 00:12:49,270

total of 25 firings accumulating 46

272

00:12:54,630 --> 00:12:52,030

minutes was performed deficiencies found

273

00:12:56,670 --> 00:12:54,640

during the frt series will be corrected

274

00:13:00,150 --> 00:12:56,680

prior to completion of engine

275

00:13:03,960 --> 00:13:00,160

qualification teardown of the frt engine

276
00:13:07,620 --> 00:13:03,970
J 2023 for engineering inspection began

277
00:13:10,110 --> 00:13:07,630
in August engine number J 2032 was

278
00:13:12,540 --> 00:13:10,120
acceptance tested and the 200k

279
00:13:15,350 --> 00:13:12,550
qualification test series will begin at

280
00:13:17,280 --> 00:13:15,360
Delta 2 test stand next port

281
00:13:22,650 --> 00:13:17,290
qualification tests are due to be

282
00:13:25,110 --> 00:13:22,660
completed by December 31st the last of

283
00:13:27,510 --> 00:13:25,120
the five j2 engines for the s2 all

284
00:13:31,770 --> 00:13:27,520
system stage were delivered to s and ID

285
00:13:33,870 --> 00:13:31,780
in June Rocketdyne has inaugurated use

286
00:13:35,880 --> 00:13:33,880
of a for access numerical control

287
00:13:38,180 --> 00:13:35,890
measuring inspection machine in

288
00:13:40,950 --> 00:13:38,190

connection with j2 injector assembly

289

00:13:42,600 --> 00:13:40,960

this automatic technique from its time

290

00:13:44,760 --> 00:13:42,610

reduction as well as increased

291

00:13:47,160 --> 00:13:44,770

reliability of measurement data and

292

00:13:49,860 --> 00:13:47,170

fulfills the Rocketdyne integrated

293

00:13:52,530 --> 00:13:49,870

systems approach of employing numerical

294

00:14:01,140 --> 00:13:52,540

control from design intent to finished

295

00:14:03,180 --> 00:14:01,150

component throughout the quarter ground

296

00:14:05,730 --> 00:14:03,190

test instrument units for assembled and

297

00:14:07,890 --> 00:14:05,740

tested design changes necessitated

298

00:14:10,320 --> 00:14:07,900

partial reassembly of the flight systems

299

00:14:13,320 --> 00:14:10,330

instrument unit at Marshall this quarter

300

00:14:16,140 --> 00:14:13,330

checkout is due in October assembly got

301
00:14:19,770 --> 00:14:16,150
underway on the breadboard test unit 500

302
00:14:21,630 --> 00:14:19,780
s T the vibration test unit was

303
00:14:23,880 --> 00:14:21,640
completed and delivered to Wiley labs

304
00:14:26,900 --> 00:14:23,890
Huntsville Alabama on August 20th

305
00:14:29,760 --> 00:14:26,910
testing will begin early next quarter

306
00:14:31,740 --> 00:14:29,770
the facility's checkout unit worships to

307
00:14:35,610 --> 00:14:31,750
Kennedy Space Center upon completion of

308
00:14:38,040 --> 00:14:35,620
assembly at Marshall in June virtually

309
00:14:39,840 --> 00:14:38,050
all 7/5 load tests and the structural

310
00:14:42,390 --> 00:14:39,850
test unit have been successfully

311
00:14:45,030 --> 00:14:42,400
completed based on test results the

312
00:14:47,040 --> 00:14:45,040
access door is being re-evaluated and

313
00:14:50,000 --> 00:14:47,050

further testing in this area may be

314

00:14:52,340 --> 00:14:50,010

conducted next quarter

315

00:14:54,770 --> 00:14:52,350

a second structural test unit assembled

316

00:14:56,930 --> 00:14:54,780

by IBM Huntsville using segments

317

00:14:59,300 --> 00:14:56,940

manufactured by North American Aviation

318

00:15:01,940 --> 00:14:59,310

was rejected by Marshall due to

319

00:15:03,500 --> 00:15:01,950

discrepancies another unit is now in

320

00:15:12,770 --> 00:15:03,510

assembly scheduled for delivery

321

00:15:15,200 --> 00:15:12,780

September 30th the Marshall setters 18

322

00:15:17,810 --> 00:15:15,210

and 1/2 acre 7 fire service armed

323

00:15:20,210 --> 00:15:17,820

umbilical test facility shown in this

324

00:15:22,220 --> 00:15:20,220

artist drawing neared completion during

325

00:15:25,460 --> 00:15:22,230

the report period and is scheduled for

326

00:15:27,500 --> 00:15:25,470

activation next quarter the new MSFC

327

00:15:31,270 --> 00:15:27,510

aerial will provide extensive facilities

328

00:15:34,250 --> 00:15:31,280

for testing of the four hold down arms

329

00:15:37,010 --> 00:15:34,260

three-tail service masts and nine

330

00:15:39,320 --> 00:15:37,020

service arms depicted here in muddled

331

00:15:41,900 --> 00:15:39,330

form that are to be used on the mobile

332

00:15:45,170 --> 00:15:41,910

or launcher for a launch complex 39 at

333

00:15:47,690 --> 00:15:45,180

Kennedy Space Center prior to official

334

00:15:50,390 --> 00:15:47,700

activation of the entire test facility

335

00:15:53,000 --> 00:15:50,400

the hold down arm test fed was in use

336

00:15:55,220 --> 00:15:53,010

this quarter testing of the initial set

337

00:15:57,950 --> 00:15:55,230

of hose-down arms was completed in late

338

00:16:00,590 --> 00:15:57,960

July and testing of a second set is

339

00:16:03,050 --> 00:16:00,600

currently in progress the first set has

340

00:16:07,040 --> 00:16:03,060

been shipped to KSC for installation at

341

00:16:08,960 --> 00:16:07,050

complex 39 the initial checkout and

342

00:16:11,690 --> 00:16:08,970

testing of the first of the facility's

343

00:16:13,760 --> 00:16:11,700

eight vehicle motion simulators this one

344

00:16:16,250 --> 00:16:13,770

for the Apollo command module mock-up

345

00:16:18,710 --> 00:16:16,260

were accomplished this quarter the

346

00:16:20,870 --> 00:16:18,720

simulator is driven by a hydraulic servo

347

00:16:22,820 --> 00:16:20,880

system capable of simulating total

348

00:16:25,040 --> 00:16:22,830

movement between vehicle and launcher

349

00:16:27,170 --> 00:16:25,050

during pre-launch and launch conditions

350

00:16:29,840 --> 00:16:27,180

produced by very high winds

351
00:16:31,820 --> 00:16:29,850
each simulator duplicates that portion

352
00:16:34,190 --> 00:16:31,830
of the vehicle skin containing

353
00:16:38,270 --> 00:16:34,200
associated umbilical connections and

354
00:16:40,250 --> 00:16:38,280
personnel access hatches five of the

355
00:16:42,230 --> 00:16:40,260
facility's eight simulators are equipped

356
00:16:45,170 --> 00:16:42,240
with elevator devices that simulate

357
00:16:47,120 --> 00:16:45,180
liftoff of the seven five vehicle the

358
00:16:49,490 --> 00:16:47,130
liftoff simulators were tested for the

359
00:16:51,530 --> 00:16:49,500
first time this quarter the elevator

360
00:16:54,140 --> 00:16:51,540
accelerates for a distance of eight feet

361
00:17:02,180 --> 00:16:54,150
with total travel of eleven feet eight

362
00:17:07,250 --> 00:17:04,390
at Marshall's Mississippi test facility

363
00:17:09,919 --> 00:17:07,260

Padres continued on construction of the

364

00:17:14,270 --> 00:17:09,929

test complexes s two stage static test

365

00:17:17,059 --> 00:17:14,280

stands designated a 2 and a 1 and the

366

00:17:21,740 --> 00:17:17,069

duo position s 1 C stage static test

367

00:17:23,870 --> 00:17:21,750

death on June 30th the s2 fit-up fixture

368

00:17:26,390 --> 00:17:23,880

which simulates the size and weight of

369

00:17:28,820 --> 00:17:26,400

the stage became the first seven program

370

00:17:31,880 --> 00:17:28,830

article shipped through MTFs new lock

371

00:17:36,350 --> 00:17:31,890

system the fixture was hung in the s2 a2

372

00:17:38,419 --> 00:17:36,360

test and in august construction and

373

00:17:40,880 --> 00:17:38,429

activation continued during the report

374

00:17:43,039 --> 00:17:40,890

period on facilities in MTF the

375

00:17:47,840 --> 00:17:43,049

laboratory and engineering complex and

376

00:17:51,649 --> 00:17:47,850

support services complex in summary June

377

00:17:53,690 --> 00:17:51,659

July and August 1965 four months of

378

00:17:56,390 --> 00:17:53,700

continuing seven five program

379

00:17:58,789 --> 00:17:56,400

advancement with milestones such as the

380

00:18:02,240 --> 00:17:58,799

first full duration fire engine static

381

00:18:05,149 --> 00:18:02,250

firing of an s-1 sea stage near

382

00:18:09,169 --> 00:18:05,159

completion of assembly of the first s1 c

383

00:18:11,899 --> 00:18:09,179

flight stage the first successful for

384

00:18:15,980 --> 00:18:11,909

duration fired engine powering of the s2

385

00:18:19,700 --> 00:18:15,990

battleship stage the first s for p5

386

00:18:22,430 --> 00:18:19,710

battleship stage static firing the

387

00:18:26,570 --> 00:18:22,440

beginning of f1 engine environmental

388

00:18:30,680 --> 00:18:26,580

testing completion of j2 engine flight

389

00:18:33,730 --> 00:18:30,690

rating tests assembly and testing of

390

00:18:37,190 --> 00:18:33,740

various ground test instrument units and