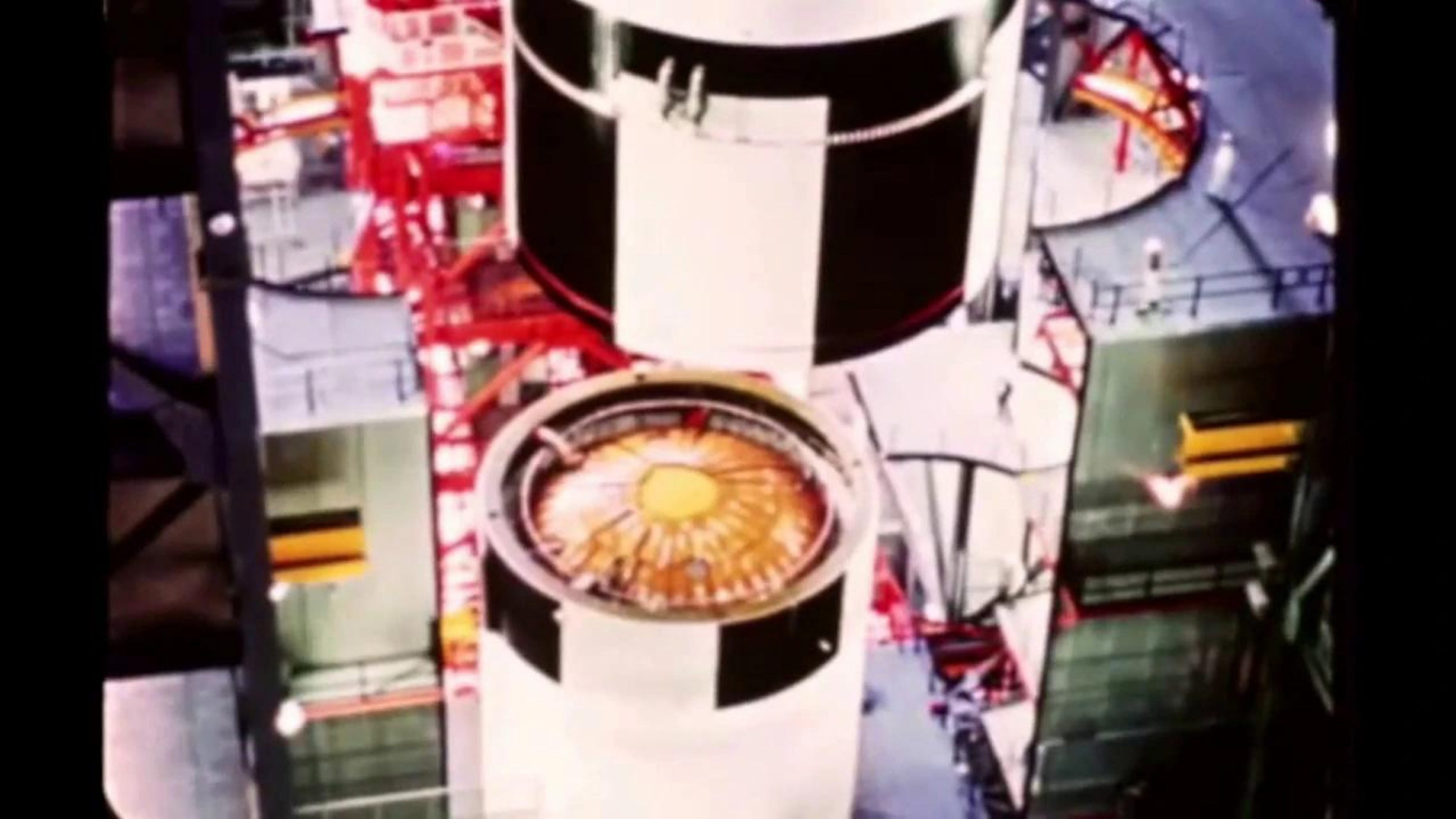

1
00:00:05,670 --> 00:00:11,499
[Music]

2
00:00:16,970 --> 00:00:14,539
Saturn five quarterly film report number

3
00:00:28,009 --> 00:00:16,980
fourteen covers progress during the

4
00:00:30,500 --> 00:00:28,019
period March April and May 1966 inside

5
00:00:32,810 --> 00:00:30,510
the 48 stories tall vertical Assembly

6
00:00:35,389 --> 00:00:32,820
Building at launch complex 39 of the

7
00:00:38,060 --> 00:00:35,399
Kennedy Space Center a mammoth and

8
00:00:40,400 --> 00:00:38,070
historic undertaking Assembly of the

9
00:00:43,549 --> 00:00:40,410
first complete Saturn 5 space vehicle

10
00:00:45,139 --> 00:00:43,559
began on March 15th with erection of the

11
00:00:47,869 --> 00:00:45,149
vehicles first stage on a mobile

12
00:00:48,889 --> 00:00:47,879
launcher from which future Saturn fives

13
00:00:51,200 --> 00:00:48,899

will be fired

14
00:00:52,880 --> 00:00:51,210
the initial vehicle will be used in

15
00:00:54,740 --> 00:00:52,890
checking out launch facilities and

16
00:00:57,410 --> 00:00:54,750
ground support equipment at the launch

17
00:00:59,450 --> 00:00:57,420
complex the first stage was built by the

18
00:01:03,619 --> 00:00:59,460
Boeing Company at Marshalls masu

19
00:01:06,200 --> 00:01:03,629
assembly facility in New Orleans on

20
00:01:08,750 --> 00:01:06,210
March 25th the next phase of the complex

21
00:01:10,340 --> 00:01:08,760
assembly operation was accomplished with

22
00:01:12,130 --> 00:01:10,350
the second stage of the facility's

23
00:01:14,570 --> 00:01:12,140
checkout vehicle moved into place

24
00:01:17,690 --> 00:01:14,580
hoisted by crane above the first stage

25
00:01:19,520 --> 00:01:17,700
and made it to it this stage was built

26
00:01:21,920 --> 00:01:19,530
by the space & Information Systems

27
00:01:25,969 --> 00:01:21,930
Division of North American Aviation at

28
00:01:28,010 --> 00:01:25,979
seal Beach California erection and

29
00:01:30,499 --> 00:01:28,020
mating of the third stage was performed

30
00:01:32,749 --> 00:01:30,509
on March 29th the Douglas Aircraft

31
00:01:35,179 --> 00:01:32,759
Company produced the facilities checkout

32
00:01:39,140 --> 00:01:35,189
stage at its Huntington Beach facility

33
00:01:41,300 --> 00:01:39,150
in California the facility's checkout

34
00:01:43,190 --> 00:01:41,310
instrument unit manufactured by

35
00:01:45,530 --> 00:01:43,200
International Business Machines at its

36
00:01:48,160 --> 00:01:45,540
facility in Huntsville Alabama was

37
00:01:50,719 --> 00:01:48,170
joined to the third stage on March 30th

38
00:01:53,359 --> 00:01:50,729

during April NASA and contractor

39
00:01:55,609 --> 00:01:53,369
engineers and technicians were busy

40
00:01:58,039 --> 00:01:55,619
installing various dummy ordnance items

41
00:02:00,800 --> 00:01:58,049
such as ullage and retro rockets and

42
00:02:04,399 --> 00:02:00,810
checking out GSE inside the vertical

43
00:02:05,929 --> 00:02:04,409
Assembly Building and on May 2nd mating

44
00:02:08,960 --> 00:02:05,939
of the facilities check out Apollo

45
00:02:11,869 --> 00:02:08,970
spacecraft built by North Americans S&I

46
00:02:13,870 --> 00:02:11,879
D marked completion of assembly of the

47
00:02:18,280 --> 00:02:13,880
first Saturn 5 vehicle

48
00:02:21,100 --> 00:02:18,290
on May 25th the vehicle standing 350

49
00:02:23,500 --> 00:02:21,110
feet tall was rolled out of the VAB to

50
00:02:25,990 --> 00:02:23,510
begin its maiden journey requiring six

51
00:02:30,280 --> 00:02:26,000
hours aboard the mobile launcher to pad

52
00:02:32,230 --> 00:02:30,290
39a three miles away test objectives for

53
00:02:34,270 --> 00:02:32,240
the facility's checkout vehicle include

54
00:02:36,940 --> 00:02:34,280
evaluation of launch vehicle assembly

55
00:02:38,560 --> 00:02:36,950
and handling operations evaluation of

56
00:02:41,290 --> 00:02:38,570
propellant and pneumatic servicing

57
00:02:43,510 --> 00:02:41,300
operations evaluation of compatibility

58
00:02:45,910 --> 00:02:43,520
of launch vehicle with GSE and

59
00:02:48,280 --> 00:02:45,920
facilities determination of vehicle

60
00:02:51,160 --> 00:02:48,290
response to ground wind conditions and

61
00:02:55,720 --> 00:02:51,170
training of personnel to process saturn

62
00:02:57,700 --> 00:02:55,730
v launch vehicles manufacturing and

63
00:02:59,430 --> 00:02:57,710

check out of first stages by the Boeing

64
00:03:03,310 --> 00:02:59,440
Company and the Marshall Center

65
00:03:06,040 --> 00:03:03,320
continued throughout the quarter in

66
00:03:07,810 --> 00:03:06,050
first stage ground test operations the

67
00:03:10,630 --> 00:03:07,820
upper assembly of the structural test

68
00:03:13,300 --> 00:03:10,640
stage comprising the inter tank LOX tank

69
00:03:15,400 --> 00:03:13,310
and forward skirt was installed in

70
00:03:18,100 --> 00:03:15,410
Marshalls load test tower in mid-april

71
00:03:20,710 --> 00:03:18,110
and prepared for structural tests due to

72
00:03:22,570 --> 00:03:20,720
start next quarter similar testing was

73
00:03:25,480 --> 00:03:22,580
successfully completed this quarter on

74
00:03:27,460 --> 00:03:25,490
the stages lower assembly comprising the

75
00:03:31,420 --> 00:03:27,470
thrust structure fuel tank and inner

76
00:03:33,340 --> 00:03:31,430
tank the first flight stage which was

77
00:03:35,950 --> 00:03:33,350
successfully static fired at Marshall

78
00:03:38,140 --> 00:03:35,960
last quarter underwent refurbishment and

79
00:03:40,450 --> 00:03:38,150
began post static checkout during the

80
00:03:43,500 --> 00:03:40,460
report period the stage will be shipped

81
00:03:46,360 --> 00:03:43,510
to the Kennedy Space Center in August

82
00:03:48,840 --> 00:03:46,370
the second flight stage was installed in

83
00:03:50,740 --> 00:03:48,850
Marshall static test and on May 17th

84
00:03:53,170 --> 00:03:50,750
following completion of post

85
00:03:55,360 --> 00:03:53,180
manufacturing check out a single

86
00:03:57,160 --> 00:03:55,370
acceptance static firing of a hundred

87
00:04:01,540 --> 00:03:57,170
and twenty five seconds duration is

88
00:04:03,550 --> 00:04:01,550

scheduled for the stage on June 7th at

89
00:04:06,070 --> 00:04:03,560
Marshalls miss shoe assembly facility in

90
00:04:08,890 --> 00:04:06,080
New Orleans Assembly of the third flight

91
00:04:10,630 --> 00:04:08,900
stage was completed on March 9th and the

92
00:04:12,850 --> 00:04:10,640
stage was moved into the stage test

93
00:04:15,550 --> 00:04:12,860
building for post manufacturing checkout

94
00:04:18,370 --> 00:04:15,560
this is the first flight stage assembled

95
00:04:20,020 --> 00:04:18,380
by Boeing Atmos you to ground test

96
00:04:22,750 --> 00:04:20,030
stages had previously been assembled

97
00:04:24,340 --> 00:04:22,760
there after completion of checkout the

98
00:04:26,440 --> 00:04:24,350
third flight stage will go to the

99
00:04:27,999 --> 00:04:26,450
Marshall Center for acceptance static

100
00:04:30,260 --> 00:04:28,009
firing

101
00:04:32,930 --> 00:04:30,270
vertical assembly of the fourth flight

102
00:04:34,460 --> 00:04:32,940
stage has been completed at masu this

103
00:04:36,860 --> 00:04:34,470
stage will be the first flight booster

104
00:04:39,080 --> 00:04:36,870
destined for acceptance static firing at

105
00:04:44,480 --> 00:04:39,090
Marshalls Mississippi test facility

106
00:04:46,550 --> 00:04:44,490
early in 1967 a new upper fuel tank

107
00:04:49,070 --> 00:04:46,560
bulkhead for the fifth flight stage has

108
00:04:51,200 --> 00:04:49,080
been welded into position to replace one

109
00:04:53,240 --> 00:04:51,210
which partially collapsed while being

110
00:04:56,150 --> 00:04:53,250
drained after hydrostatic testing on

111
00:04:58,339 --> 00:04:56,160
April 28th the collapse was caused by a

112
00:05:01,430 --> 00:04:58,349
negative internal pressure due to an

113
00:05:05,300 --> 00:05:01,440

improper test procedure no impact on the

114
00:05:07,580 --> 00:05:05,310
assembly schedule is foreseen structural

115
00:05:10,279 --> 00:05:07,590
assembly of major components for the

116
00:05:14,300 --> 00:05:10,289
sixth flight stage is now in progress by

117
00:05:16,700 --> 00:05:14,310
Boeing masu fabrication of components

118
00:05:25,390 --> 00:05:16,710
such as bulkhead Gore segments for the

119
00:05:29,930 --> 00:05:28,010
the first static firing test of the

120
00:05:32,300 --> 00:05:29,940
second stage flight wait all system

121
00:05:34,879 --> 00:05:32,310
stage was successfully held on April

122
00:05:37,670 --> 00:05:34,889
23rd at the Marshall centers Mississippi

123
00:05:39,709 --> 00:05:37,680
test facility running 15 seconds as

124
00:05:42,830 --> 00:05:39,719
scheduled the tests marked the first

125
00:05:52,040 --> 00:05:42,840
operational use of MTF NASA's newest

126
00:05:54,439 --> 00:05:52,050
facility the first full duration 355

127
00:05:56,390 --> 00:05:54,449
second static firing of the stage was

128
00:05:58,999 --> 00:05:56,400
successfully conducted on May 20th

129
00:06:01,640 --> 00:05:59,009
Jim willing of all four outboard j2

130
00:06:04,700 --> 00:06:01,650
engines was performed the full duration

131
00:06:07,189 --> 00:06:04,710
test had been preceded by a 150 second

132
00:06:09,830 --> 00:06:07,199
firing on May 17th following three

133
00:06:12,709 --> 00:06:09,840
earlier attempts in a second scheduled

134
00:06:14,300 --> 00:06:12,719
full duration firing on May 25th a fire

135
00:06:17,089 --> 00:06:14,310
developed around the number four engine

136
00:06:19,580 --> 00:06:17,099
recirculation valve burning until fuel

137
00:06:24,649 --> 00:06:19,590
was D tanked using the emergency dump

138
00:06:27,379 --> 00:06:24,659

system on May 28th an explosion of the

139
00:06:29,629 --> 00:06:27,389
stages liquid hydrogen tank occurred due

140
00:06:31,879 --> 00:06:29,639
to overpressure during a leak check test

141
00:06:34,999 --> 00:06:31,889
and the stage was almost completely

142
00:06:37,550 --> 00:06:35,009
destroyed pressurization was with helium

143
00:06:40,070 --> 00:06:37,560
and no liquid hydrogen was involved in

144
00:06:41,060 --> 00:06:40,080
the blow-up the tank was over pressured

145
00:06:43,060 --> 00:06:41,070
as a result of the

146
00:06:45,410 --> 00:06:43,070
pressure switches being disconnected and

147
00:06:47,720 --> 00:06:45,420
subsequent ground override of the stage

148
00:06:50,450 --> 00:06:47,730
and facility vent valves to obtain

149
00:06:52,880 --> 00:06:50,460
pressure during the leak check facility

150
00:06:54,740 --> 00:06:52,890
damage appears to be repairable prior to

151
00:06:57,160 --> 00:06:54,750
scheduled arrival of the first s to

152
00:06:59,900 --> 00:06:57,170
flight stage at MTF next quarter

153
00:07:02,800 --> 00:06:59,910
possible program impact due to the

154
00:07:05,390 --> 00:07:02,810
accident is under investigation

155
00:07:08,150 --> 00:07:05,400
the thrust structure assembly for the

156
00:07:10,370 --> 00:07:08,160
second stage high force test program was

157
00:07:13,040 --> 00:07:10,380
shipped in April from Essen IDs seal

158
00:07:15,500 --> 00:07:13,050
beach facility to the wiley laboratories

159
00:07:17,630 --> 00:07:15,510
in Huntsville Alabama where acoustical

160
00:07:21,530 --> 00:07:17,640
and mechanical vibration testing will

161
00:07:23,900 --> 00:07:21,540
get underway next quarter at North

162
00:07:26,900 --> 00:07:23,910
Americans Santa Susana California field

163
00:07:29,480 --> 00:07:26,910

laboratory to full duration firings of

164
00:07:31,940 --> 00:07:29,490
the second stage battleship stage using

165
00:07:34,370 --> 00:07:31,950
flight configuration j2 engines were

166
00:07:37,280 --> 00:07:34,380
held in March to complete the major test

167
00:07:39,200 --> 00:07:37,290
program of battleship development the

168
00:07:41,450 --> 00:07:39,210
battleship stage will be maintained in a

169
00:07:45,710 --> 00:07:41,460
minimum capability status to allow

170
00:07:47,930 --> 00:07:45,720
additional firings if needed work on

171
00:07:50,300 --> 00:07:47,940
second stage flight stages continued at

172
00:07:51,950 --> 00:07:50,310
seal beach with systems installation for

173
00:07:54,800 --> 00:07:51,960
the first flight stage completed in

174
00:07:57,800 --> 00:07:54,810
April systems check out now in progress

175
00:07:59,870 --> 00:07:57,810
will be finished June 30th and the stage

176
00:08:03,710 --> 00:07:59,880
will then be shipped to MTF for

177
00:08:05,180 --> 00:08:03,720
acceptance static firing pneumo static

178
00:08:06,560 --> 00:08:05,190
testing and cleaning of the second

179
00:08:08,300 --> 00:08:06,570
flight stage have been accomplished

180
00:08:11,030 --> 00:08:08,310
following completion of vertical

181
00:08:13,520 --> 00:08:11,040
assembly in April systems installation

182
00:08:17,390 --> 00:08:13,530
now underway is expected to be done by

183
00:08:19,550 --> 00:08:17,400
July Assembly of major structural

184
00:08:21,620 --> 00:08:19,560
components for the third flight stage is

185
00:08:25,340 --> 00:08:21,630
complete and the stages and vertical

186
00:08:27,770 --> 00:08:25,350
build-up for flight stages four through

187
00:08:37,460 --> 00:08:27,780
six fabrication and sub assembly of

188
00:08:41,899 --> 00:08:39,589

the first flight stage was shipped by

189
00:08:43,760 --> 00:08:41,909
ocean-going barge on March 11th from

190
00:08:46,460 --> 00:08:43,770
Douglas Aircraft company's Huntington

191
00:08:49,010 --> 00:08:46,470
Beach California facility and arrived

192
00:08:52,190 --> 00:08:49,020
four days later at Douglass's Sacramento

193
00:08:54,830 --> 00:08:52,200
test center for acceptance firing on

194
00:08:57,710 --> 00:08:54,840
March 21st the stage was installed in

195
00:09:00,020 --> 00:08:57,720
sac toes beta test and number one pre

196
00:09:02,600 --> 00:09:00,030
firing check-out began nine days later

197
00:09:05,210 --> 00:09:02,610
and the fully successful acceptance

198
00:09:08,480 --> 00:09:05,220
static firing test of 455 seconds

199
00:09:11,000 --> 00:09:08,490
duration was run on May 26 in the test

200
00:09:13,460 --> 00:09:11,010
the stage demonstrated the j2 engine

201
00:09:16,130 --> 00:09:13,470
restart capability after a simulated

202
00:09:19,190 --> 00:09:16,140
orbital Coast area the stage initially

203
00:09:21,050 --> 00:09:19,200
fired for 150 seconds then after restart

204
00:09:23,360 --> 00:09:21,060
for 305 seconds

205
00:09:30,170 --> 00:09:23,370
delivery of the first flight stage to

206
00:09:32,270 --> 00:09:30,180
KSC is scheduled for July factory

207
00:09:34,250 --> 00:09:32,280
checkout of the second flight stage was

208
00:09:36,530 --> 00:09:34,260
completed May 9th at Huntington Beach

209
00:09:39,740 --> 00:09:36,540
the stage is being prepared for shipment

210
00:09:42,200 --> 00:09:39,750
to Sacto on May 31st aboard the super

211
00:09:45,950 --> 00:09:42,210
guppy aircraft for acceptance firing

212
00:09:47,540 --> 00:09:45,960
scheduled in late July because of the

213
00:09:50,000 --> 00:09:47,550

requirement for assembly of a new

214
00:09:52,070 --> 00:09:50,010
hydrostatic test stage occasioned by

215
00:09:54,530 --> 00:09:52,080
damage to the third flight stages LOX

216
00:09:57,020 --> 00:09:54,540
tank during hydrostatic testing last

217
00:09:59,210 --> 00:09:57,030
quarter certain flight stage structural

218
00:10:01,490 --> 00:09:59,220
components are being interchanged to

219
00:10:04,130 --> 00:10:01,500
provide minimum overall scheduled impact

220
00:10:06,530 --> 00:10:04,140
the damaged LOX tank has been repaired

221
00:10:08,770 --> 00:10:06,540
and successfully retested and will be

222
00:10:11,410 --> 00:10:08,780
part of the new hydrostatic test stage

223
00:10:13,520 --> 00:10:11,420
structural fabrication is continuing on

224
00:10:17,900 --> 00:10:13,530
components for the fourth and fifth

225
00:10:19,730 --> 00:10:17,910
flight stages the s4b stage simulator

226
00:10:22,280 --> 00:10:19,740
was removed from the vehicle checkout

227
00:10:25,190 --> 00:10:22,290
tower at SAC tow in March following

228
00:10:26,960 --> 00:10:25,200
completion of factory checkout and was

229
00:10:29,540 --> 00:10:26,970
shipped by super guppy to the Marshall

230
00:10:32,240 --> 00:10:29,550
Center for use in its Saturn 5 systems

231
00:10:34,010 --> 00:10:32,250
development facility the stage simulator

232
00:10:36,590 --> 00:10:34,020
consists of a thrust structure and

233
00:10:41,000 --> 00:10:36,600
functional mock-up engine plus forward

234
00:10:42,980 --> 00:10:41,010
and aft skirts acceptance test firings

235
00:10:45,350 --> 00:10:42,990
of the auxiliary propulsion system

236
00:10:47,990 --> 00:10:45,360
modules for the first flight stage were

237
00:11:00,940 --> 00:10:48,000
held on May 6th and 13th at SAC tows

238
00:11:06,670 --> 00:11:04,420

all 5f1 engines for the fourth s1c

239
00:11:08,500 --> 00:11:06,680
flight stage plus three of the engines

240
00:11:10,210 --> 00:11:08,510
for the fifth flight stage were

241
00:11:10,810 --> 00:11:10,220
delivered by Rocketdyne during this

242
00:11:13,150 --> 00:11:10,820
quarter

243
00:11:15,490 --> 00:11:13,160
rocket Dean's nearly completed vertical

244
00:11:17,620 --> 00:11:15,500
assembly production line at the Canoga

245
00:11:20,200 --> 00:11:17,630
Park California plant is now in

246
00:11:22,570 --> 00:11:20,210
operation and producing f-1 engines at

247
00:11:24,640 --> 00:11:22,580
the rate of two a month engines

248
00:11:27,280 --> 00:11:24,650
delivered this quarter were of the qual

249
00:11:29,620 --> 00:11:27,290
two configuration qualified for manned

250
00:11:31,510 --> 00:11:29,630
flight reliability and designed to meet

251
00:11:33,790 --> 00:11:31,520
the additional payload requirements of

252
00:11:37,510 --> 00:11:33,800
the fourth Saturn 5 and subsequent

253
00:11:39,940 --> 00:11:37,520
vehicles an intensive f1 engine

254
00:11:42,130 --> 00:11:39,950
component qualification test program was

255
00:11:44,950 --> 00:11:42,140
continued by Rocketdyne throughout the

256
00:11:46,530 --> 00:11:44,960
report period this static load test of

257
00:11:49,110 --> 00:11:46,540
the hyper gal manifold assembly

258
00:11:51,820 --> 00:11:49,120
performed at zero degrees Fahrenheit

259
00:11:56,500 --> 00:11:51,830
simulates effects of engine storage at

260
00:11:57,970 --> 00:11:56,510
low temperature conditions in vibration

261
00:12:00,670 --> 00:11:57,980
testing of the flight instrument

262
00:12:02,860 --> 00:12:00,680
junction box stroboscopic photography

263
00:12:12,430 --> 00:12:02,870

transforms the action into slow-motion

264
00:12:14,830 --> 00:12:12,440
for engineering analysis a total of 12

265
00:12:17,110 --> 00:12:14,840
j2 engines was delivered by Rocketdyne

266
00:12:19,960 --> 00:12:17,120
this quarter including the first of the

267
00:12:21,820 --> 00:12:19,970
new upgraded 230,000 pounds thrust

268
00:12:24,070 --> 00:12:21,830
engines which went to the Marshall

269
00:12:26,530 --> 00:12:24,080
Center for static firing tests the

270
00:12:30,400 --> 00:12:26,540
engine has 5,000 pounds more thrust than

271
00:12:32,740 --> 00:12:30,410
previous j2 s rocket deans new j2 engine

272
00:12:34,840 --> 00:12:32,750
production line at the Canoga Park plant

273
00:12:37,360 --> 00:12:34,850
features positioning of engines at floor

274
00:12:40,630 --> 00:12:37,370
level to allow ready access by personnel

275
00:12:44,380 --> 00:12:40,640
also each engine can be rotated to the

276
00:12:46,480 --> 00:12:44,390
exact area desired a teardown

277
00:12:48,880 --> 00:12:46,490
engineering inspection was held in March

278
00:12:51,190 --> 00:12:48,890
on the j2 engine which had previously

279
00:12:53,740 --> 00:12:51,200
completed the qualification test series

280
00:12:55,330 --> 00:12:53,750
at Santa Susana all components were

281
00:12:57,880 --> 00:12:55,340
found to be in excellent condition and

282
00:13:00,730 --> 00:12:57,890
suitable for use after reassembly in

283
00:13:04,450 --> 00:13:00,740
either the spares support program or the

284
00:13:06,130 --> 00:13:04,460
research and development program at the

285
00:13:07,570 --> 00:13:06,140
Air Force's Arnold engineering

286
00:13:10,900 --> 00:13:07,580
development center at Tullahoma

287
00:13:13,240 --> 00:13:10,910
Tennessee the douglas s4 bead battleship

288
00:13:14,480 --> 00:13:13,250

stage to be used for tankage in a series

289
00:13:17,000 --> 00:13:14,490
of j2 engine

290
00:13:19,519 --> 00:13:17,010
environmental verification tests was

291
00:13:22,070 --> 00:13:19,529
installed in a test cell and the engine

292
00:13:24,380 --> 00:13:22,080
was mounted firing tests are scheduled

293
00:13:27,079 --> 00:13:24,390
next quarter for verification of start

294
00:13:36,350 --> 00:13:27,089
restart and performance at simulated

295
00:13:38,600 --> 00:13:36,360
high-altitude conditions the flight

296
00:13:41,360 --> 00:13:38,610
systems instrument unit assembled at

297
00:13:43,010 --> 00:13:41,370
MSFC was delivered in early March to

298
00:13:45,290 --> 00:13:43,020
Douglas Aircraft Huntington Beach

299
00:13:47,420 --> 00:13:45,300
facility where preparations were made

300
00:13:49,480 --> 00:13:47,430
for functional tests scheduled for late

301
00:13:51,650 --> 00:13:49,490
May in an environmental chamber

302
00:13:54,139 --> 00:13:51,660
simulating orbital thermal vacuum

303
00:13:57,019 --> 00:13:54,149
conditions during the vacuum environment

304
00:13:59,480 --> 00:13:57,029
test the IU will be mated with a third

305
00:14:03,710 --> 00:13:59,490
stage forward stage simulator and a

306
00:14:05,810 --> 00:14:03,720
lunar module thermal simulator vibration

307
00:14:08,120 --> 00:14:05,820
testing of the second vibration test IU

308
00:14:10,730 --> 00:14:08,130
was successfully conducted at Wiley labs

309
00:14:12,769 --> 00:14:10,740
Huntsville facility during April to

310
00:14:14,690 --> 00:14:12,779
verify the flight worthiness of the IBM

311
00:14:17,360 --> 00:14:14,700
produced unit for Saturn five vehicles

312
00:14:21,290 --> 00:14:17,370
with respect to specified vibration

313
00:14:23,990 --> 00:14:21,300

environments a third structure will test

314
00:14:27,670 --> 00:14:24,000
IU is now being built by IBM Huntsville

315
00:14:29,600 --> 00:14:27,680
scheduled for delivery to MSFC in June

316
00:14:31,490 --> 00:14:29,610
investigation of the crumpling of the

317
00:14:34,430 --> 00:14:31,500
second structure will test IU last

318
00:14:36,699 --> 00:14:34,440
quarter during load testing over the st1

319
00:14:39,500 --> 00:14:36,709
24 stabilized platform position

320
00:14:43,850 --> 00:14:39,510
indicated need for continuation of tests

321
00:14:46,220 --> 00:14:43,860
using a new IU component installation

322
00:14:48,889 --> 00:14:46,230
for the first Saturn five flight IU has

323
00:14:51,560 --> 00:14:48,899
been finished at IBM and check-out is in

324
00:14:57,190 --> 00:14:51,570
progress upon completion scheduled July

325
00:15:02,240 --> 00:14:59,569
structural fabrication of the second

326
00:15:05,120 --> 00:15:02,250
Saturn 5 flight IU which began March

327
00:15:06,800 --> 00:15:05,130
21st is nearing completion component

328
00:15:13,950 --> 00:15:06,810
installation is due to be finished in

329
00:15:18,360 --> 00:15:16,620
buildup of Marshall Saturn five systems

330
00:15:20,910 --> 00:15:18,370
development facility neared completion

331
00:15:23,010 --> 00:15:20,920
this quarter with installation of the

332
00:15:25,350 --> 00:15:23,020
third stage forward section with

333
00:15:27,420 --> 00:15:25,360
breadboard instrument unit attached plus

334
00:15:30,240 --> 00:15:27,430
the third stage aft section and j2

335
00:15:32,190 --> 00:15:30,250
engine the facility is a breadboard or

336
00:15:36,060 --> 00:15:32,200
simulation of launch vehicle automatic

337
00:15:38,790 --> 00:15:36,070
checkout GSE at launch complex 39 KSC

338
00:15:42,990 --> 00:15:38,800

Plus components simulating a completely

339
00:15:44,550 --> 00:15:43,000
assembled Saturn 5 vehicle installation

340
00:15:46,560 --> 00:15:44,560
and check-out of equipment around the

341
00:15:50,060 --> 00:15:46,570
interior circumference of the breadboard

342
00:15:52,050 --> 00:15:50,070
instrument unit is well underway

343
00:15:53,370 --> 00:15:52,060
installation of electrical support

344
00:15:56,370 --> 00:15:53,380
equipment is now complete in the

345
00:15:58,380 --> 00:15:56,380
breadboard areas simulating the LC 39

346
00:16:00,930 --> 00:15:58,390
launch control center and mobile launch

347
00:16:03,150 --> 00:16:00,940
facility ground equipment tests at the

348
00:16:05,250 --> 00:16:03,160
breadboard LCC were finished this

349
00:16:07,410 --> 00:16:05,260
quarter as well as debugging of the

350
00:16:09,270 --> 00:16:07,420
checkout tapes for use at KSC in

351
00:16:19,110 --> 00:16:09,280
checkout of the Saturn five facilities

352
00:16:22,470 --> 00:16:19,120
checkout vehicle at the Marshall centers

353
00:16:24,630 --> 00:16:22,480
Saturn 5 dynamic test and the Shakers

354
00:16:26,790 --> 00:16:24,640
which will vibrate the Saturn 5 dynamic

355
00:16:29,550 --> 00:16:26,800
test vehicle during dynamic testing this

356
00:16:31,980 --> 00:16:29,560
fall underwent acceptance testing during

357
00:16:34,560 --> 00:16:31,990
the quarter the shakers built by laying

358
00:16:36,480 --> 00:16:34,570
electronics Anaheim California were

359
00:16:39,120 --> 00:16:36,490
tested against a forty-seven thousand

360
00:16:41,610 --> 00:16:39,130
pound mass of steel mounted on wheels on

361
00:16:44,220 --> 00:16:41,620
a track three such shakers will be

362
00:16:47,600 --> 00:16:44,230
installed in the dynamic test stand one

363
00:16:50,850 --> 00:16:47,610

for lateral mode and two for roll mode

364
00:16:52,740 --> 00:16:50,860
the s2 facilities checkout stage will be

365
00:16:55,380 --> 00:16:52,750
shipped from KSC to Marshall in

366
00:16:57,570 --> 00:16:55,390
September for use as part of the dynamic

367
00:17:00,180 --> 00:16:57,580
test vehicle as a result of a decision

368
00:17:04,320 --> 00:17:00,190
in early May instead of using the all

369
00:17:06,270 --> 00:17:04,330
system stage as originally planned at

370
00:17:08,670 --> 00:17:06,280
Marshalls Mississippi test facility

371
00:17:11,010 --> 00:17:08,680
construction continued on second stage

372
00:17:14,760 --> 00:17:11,020
static tests and number two designated

373
00:17:17,070 --> 00:17:14,770
a1 while the first or a to stand became

374
00:17:19,980 --> 00:17:17,080
operational with the initial second

375
00:17:22,020 --> 00:17:19,990
stage all system stage firing a1

376
00:17:24,780 --> 00:17:22,030
superstructure steel work was topped off

377
00:17:26,020 --> 00:17:24,790
in April and installation of siding was

378
00:17:29,630 --> 00:17:26,030
begun

379
00:17:32,330 --> 00:17:29,640
at MTF steel position first stage static

380
00:17:34,880 --> 00:17:32,340
test and the b2 position is rapidly

381
00:17:36,800 --> 00:17:34,890
nearing completion fabrication of the

382
00:17:38,810 --> 00:17:36,810
booster support frame is underway and

383
00:17:42,800 --> 00:17:38,820
sheet work on the engine removal

384
00:17:45,200 --> 00:17:42,810
platform has been finished at the b1

385
00:17:46,990 --> 00:17:45,210
position installation of load frames for

386
00:17:49,190 --> 00:17:47,000
the flame deflector is in progress

387
00:17:52,930 --> 00:17:49,200
structural steel and engine removal

388
00:17:55,400 --> 00:17:52,940

platform steel is being received on-site

389
00:17:58,460 --> 00:17:55,410
despite the setback incurred due to the

390
00:18:00,530 --> 00:17:58,470
s2 all system stage explosion March

391
00:18:02,440 --> 00:18:00,540
April and May witnessed the achievement

392
00:18:04,670 --> 00:18:02,450
of a number of vital program goals

393
00:18:07,450 --> 00:18:04,680
including virtual completion of the

394
00:18:10,280 --> 00:18:07,460
Saturn 5 systems development facility

395
00:18:13,550 --> 00:18:10,290
preparation for environmental testing of

396
00:18:15,830 --> 00:18:13,560
the flight systems IU preparation for

397
00:18:19,100 --> 00:18:15,840
simulated high altitude tests of the j2

398
00:18:21,370 --> 00:18:19,110
engine successful acceptance testing of

399
00:18:23,780 --> 00:18:21,380
the first third stage flight stage

400
00:18:26,360 --> 00:18:23,790
initial static firing of the second

401
00:18:29,660 --> 00:18:26,370
stage all system stage marking first

402
00:18:31,940 --> 00:18:29,670
operational use of MTF and culminating

403
00:18:34,640 --> 00:18:31,950
in the major achievement of assembling

404
00:18:37,220 --> 00:18:34,650
for the first time a complete Saturn 5

405
00:18:39,140 --> 00:18:37,230
vehicle at KSC for checkout of

406
00:18:41,540 --> 00:18:39,150
facilities which will be used in

407
00:18:42,080 --> 00:18:41,550
launching the Saturn 5 flight vehicles