

of a test stand previously used for developmental testing of the house spacecraft. The four stations were constructed as two sets of two stations each and share much common ground support equipment.

Approximately 50 additional ground equipment units were required to support the checkout of the Block II spacecraft. Definition and manufacture of these new requirements were completed during 1966. Later, the first complete activation was accomplished for Block II testing in two test stands at North American Aviation.

Lunar Module checkout

Four factory integrated test stands were activated last year at Grumman Aircraft Engineering Corporation. Three stands are to be used for acceptance checkout of completed Lunar Modules. The fourth, which is a wooden stand used for electro-magnetic compatibility tests, was used for house spacecraft developmental testing.

A large quantity of ground support equipment produced for Command and Service Module use also has been allocated to satisfy ground support needs for the Lunar Module. This common use equipment consists mainly of test signal command devices and fluid servicing equipment.

The requirement for a third Automatic Checkout Equipment station for Lunar Module checkout became apparent during 1966. The last station to be produced was expedited and its timely installation at Grumman averted a checkout bottleneck before it occurred. During the summer of 1967, this checkout problem will no longer exist and the added Automatic Checkout Equipment station will be removed from Bethpage for installation as the fifth station at KSC.

Spacecraft checkout facilities at KSC

The Industrial Area Facilities at KSC have been activated for the Block I Apollo Saturn I missions. Ground support equipment modifications will be required, however, for Block II Command and Service Module checkout at the propulsion static firing pad and in the altitude chamber. These modifications will be accomplished early in 1967.

Ground support equipment installation and associated activation tasks started during the early fall of 1966 and are almost completed to support Lunar Module checkout. During the summer of 1966, the installation of a third and fourth Automatic Checkout Equipment station was completed for spacecraft checkout support. We have deferred installation of the fifth station until the summer of 1967, allowing additional support for factory checkout of the Lunar Module.

Launch operation facilities

Launch Complex 34/37

Launch Complex 34, whose conversion for launching the uprated Saturn I was completed last year, was since utilized for two unmanned Saturn I launches and will be used for the first manned Apollo Saturn I mission (fig. 47, MC66-5457).

Possible changes required in the launch pad as a result of the AS-204 Saturn I was launched from this complex (fig. 48, MC66-5449). Launch Complex 37 for uprated Saturn I launches was completed in 1966 and an Apollo/Saturn I was launched from this complex (fig. 48, MC66-5449). Launch Complex 37 also has now been modified for Lunar Module launches with the Apollo/Saturn I.

Assembly of the Apollo/Saturn I is performed on Launch Complexes 34 and 37 as the stages are received from the factory. The spacecraft modules are checked out in the Industrial Area at KSC prior to mating with the launch vehicle.

Launch Complex 34 currently has the capability of assembling, checking out, and launching the Saturn I with the Apollo Command and Service Module.

Launch Complex 37, when modifications are completed early in 1967, will have the capability of launching the uprated Apollo/Saturn I with the Lunar Module. Plans are now proceeding so that in 1968 Launch Complex 37 will also be able to launch an Apollo/Saturn I with a Command and Service Module.

Launch Complex 39

Construction of Launch Complex 39 (fig. 49, MC66-5446) for the Saturn V launch vehicle is well along, and we have completed the Wet Test of Pad A utilizing the 500-F vehicle. Individual stage propellant as well as multiple simultaneous propellant loading was demonstrated, proving the capabilities of