

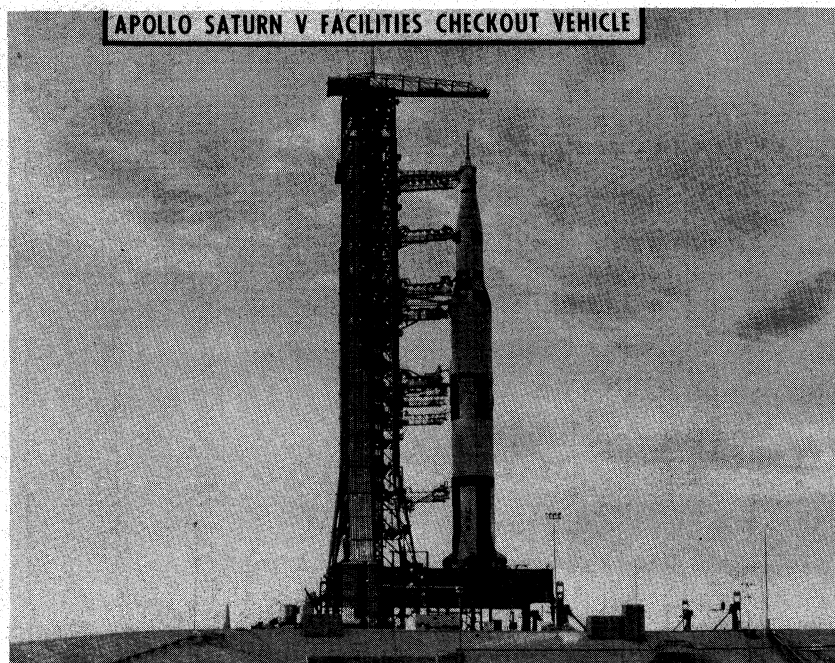


FIGURE 24

In the Saturn V first stage project, we have successfully static fired the first three flight stages at Huntsville (fig. 25). The second flight stage will be shipped to KSC in about a week; the third one is at Michoud undergoing refurbishment and post static checkout. The fourth and subsequent first stage flight articles will be static tested at our Mississippi Test Facility.

There have been failures in the Saturn V program (fig. 26). This was the second stage All-systems test article manufactured not for flight but for developmental ground testing to prove second stage flightworthiness. The stage was delivered late to the Mississippi Test Facility; numerous problems were encountered after it was erected in the stand and prior to static firing. Five short duration firings were accomplished, on the order of 6 seconds and 43 seconds; some were cutoffs due to redline conditions. One full duration test of 360 seconds was achieved; this is the requirement for the second stage in its launch trajectory. The second stage project was progressing quite well when last fall, the All-systems stage failed due to an overpressurization in the hydrogen tank.

Note the spool-like fit-up fixture in the lower part of figure 26. The fixture is being used to great advantage in the program, and I will show you how later.

We underwent some agonizing reappraisal subsequent to the loss of the All-systems. It was quite a blow to the program. We had some plans for that stage which we could no longer achieve; however, we