



Ares

WEEKLY SUMMARY



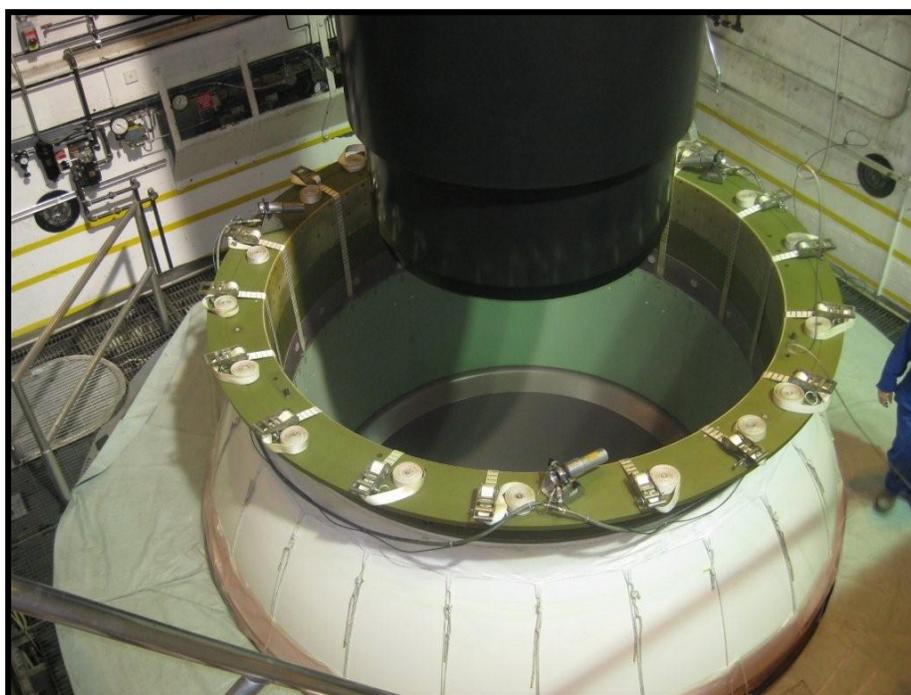
Kennedy Space Center's Ground Operations successfully rolled out the Ares I-X test demonstration vehicle from the Vehicle Assembly Building (VAB) to Pad 39B on Tuesday morning, October 20. The 327-foot rocket was bolted to a modified shuttle mobile launch platform, which then left the VAB at 1:39 a.m. EDT and arrived at Pad 39B at 9:17 a.m. EDT. The activity was essentially flawless and was successfully concluded with vehicle stabilization system capture (at the pad) of the launch vehicle at about 10:30 a.m. EDT. The Ares I-X launch is scheduled for October 27.



Recent activities specific to the Elements include:

First Stage (FS)

- ***Segment Casting for DM-2:*** The Development Motor – 2 (DM-2) aft segment was successfully cast on October 8. This is the first segment to be processed through mix-cast operations for DM-2. The core tool was removed on October 15 following completion of propellant cure. The next critical processes for this segment will be removal of the Silastic-J grain former, trimming of propellant in the annulus region, and x-ray inspection. Processing of the next segment will commence following completion of x-ray. The next segment to be cast for DM-2 will be the forward segment on November 9.



Removal of core tooling from the DM-2 aft segment following propellant cure

Upper Stage Engine (USE)

- ***Upper Stage Engine, Assembly & Test:*** The second of two Chemical Steam Generator (CSG) foundations was poured at Stennis Space Center (SSC) Test Stand A-3. The foundations will support nine CSG skirts to deliver 5,000 pounds per second of steam to the diffuser. The skirts will be located on both sides of the horizontal section of the diffuser, near the tower structure. The site view (in the below picture) is from the northeast side of the tower. The foundation being poured is on the southeast side. The cubical figures in the middle of the photograph are support

piers for the horizontal diffuser section. The cylindrical figures on the left are CSG propellant vessels. The outline of scaffolding (to install tank hardware) is barely visible on the far left.



The south CSG foundation pour at Test Stand A-3

Vehicle Integration (VI)

- Ares Lightning Effects Testing Round 2:*** Upper stage hydrogen tank coupons and a prototype upper stage systems tunnel mock-up were shipped to Lightning Technologies, Inc., in Pittsfield, MA, last week. These test articles will be used to evaluate direct and indirect effects of lightning strikes to the Ares vehicle. Test preparation was performed on October 19, and arc-entry testing on the upper stage tank coupon was initiated the following day. The picture shows the test setup for the tank coupon. Testing of the upper stage systems tunnel prototype is scheduled to occur the week of October 26.



Test set-up for tank coupon

Flight and Integration Test Office (FITO)

- ***Hydrodynamic Support (HDS) – Building 4619:*** The Integrated Vehicle Ground Vibration Test (IVGVT) HDS team has “Flowed Oil” and “Floated and Bounced” a piston in one of the HDS units for the first time in 30 years. In addition, they successfully demonstrated a “Power Out” contingency operation.



HDS units being outfitted with custom built warming blankets

The Ares Projects looks forward to the November launch of STS-129, Space Shuttle Atlantis.

...and as of this Ares Projects Weekly Summary, there are only 4 days until the first Ares I test flight, Ares I-X.