

STS-112 POST LAUNCH PAD DEBRIS INSPECTION REPORT
KSC Debris Team
07 October 2002

The post launch inspection of the MLP-3, Pad B FSS, north flame trench, and Pad B apron was conducted on 07 October 2002 from Launch + 1.50 to 6.25 hours (1745 to 2200 EST).

No flight hardware was found.

Orbiter liftoff lateral acceleration data to predict stud hang-ups received from Boeing-Huntington Beach and reported as 0.15 g. Inspection was performed and the south holddown studs were visually assessed as having no indication of hang-up. Erosion was typical for both the north and south posts. Epon shim on HDP 1 is cracked with some delamination, no evidence of missing material. North holddown post blast covers and T-0 umbilical exhibited nominal exhaust plume damage. Both SRB aft skirt GN2 purge lines were intact and erect, protective tape layering was partially eroded and exhibited frayed braiding on the RH side.

The LO2 and LH2 Tail Service Masts (TSM) appeared undamaged with both bonnets observed to have closed properly. The MLP deck was generally in good shape.

The GH2 vent line latched on the fifth tooth on the latching mechanism. The vent line was located in a 'centered' position in the latching mechanism. The GUCP 7-inch quick disconnect probe was accessible for inspection and appeared to be undamaged with sealing surface in good shape. The deceleration cable was in nominal configuration, and the vent line blanket was sooted.

The OAA appeared to be intact with no evidence of plume impingement. All slidewire baskets were secured with no evidence of damage.

The GOX vent arm, ducts and structure appeared to be in nominal condition. The GOX vent seals were inspected and found to be in good shape with no indication of ET paint residue present. Mastic was chipped/missing from two locations on the upper surface of the GOX vent hood.

Debris findings included:

- FSS 115' an "Evacuation Route" sign was found laying on the OWP (Orbiter Weather Protection) structure, it was determined that the sign was from the 125' level.
- FSS 95' "Evacuation Route" was loose and wrapped around banister.
- South Flametrench Apron, SRB Plug material was found.
- North Flametrench Deflector, Significant erosion from left and right boosters; fence is damaged with debris at base.
- Bolts were found loose in the attach points for the Sound Suppression Pipes (SW corner).

Overall damage to the pad appeared to be normal. Photos will be available on SIMS.

Michael R. Payne NASA-KSC
Bill Richards USA-KSC
Scott Otto Lockheed-Martin LSS
Duane Leggett Boeing Integration