



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)

COIMBATORE-641 035, TAMIL NADU



DEPARTMENT OF AEROSPACE ENGINEERING

19ASB303 AIRCRAFT MAINTENANCE ENGINEERING

UNIT-1 AIRCRAFT GROUND HANDLING AND SUPPORT EQUIPMENT

MOORING

Define mooring and explain its importance in aircraft ground handling.

Definition:

- **Mooring** refers to the act of anchoring or securing an aircraft to a fixed object on the ground using ropes, chains, or specialized mooring equipment.
- This process prevents the aircraft from moving or being damaged due to external forces like wind or jet blasts.

Importance of Mooring in Aircraft Ground Handling:

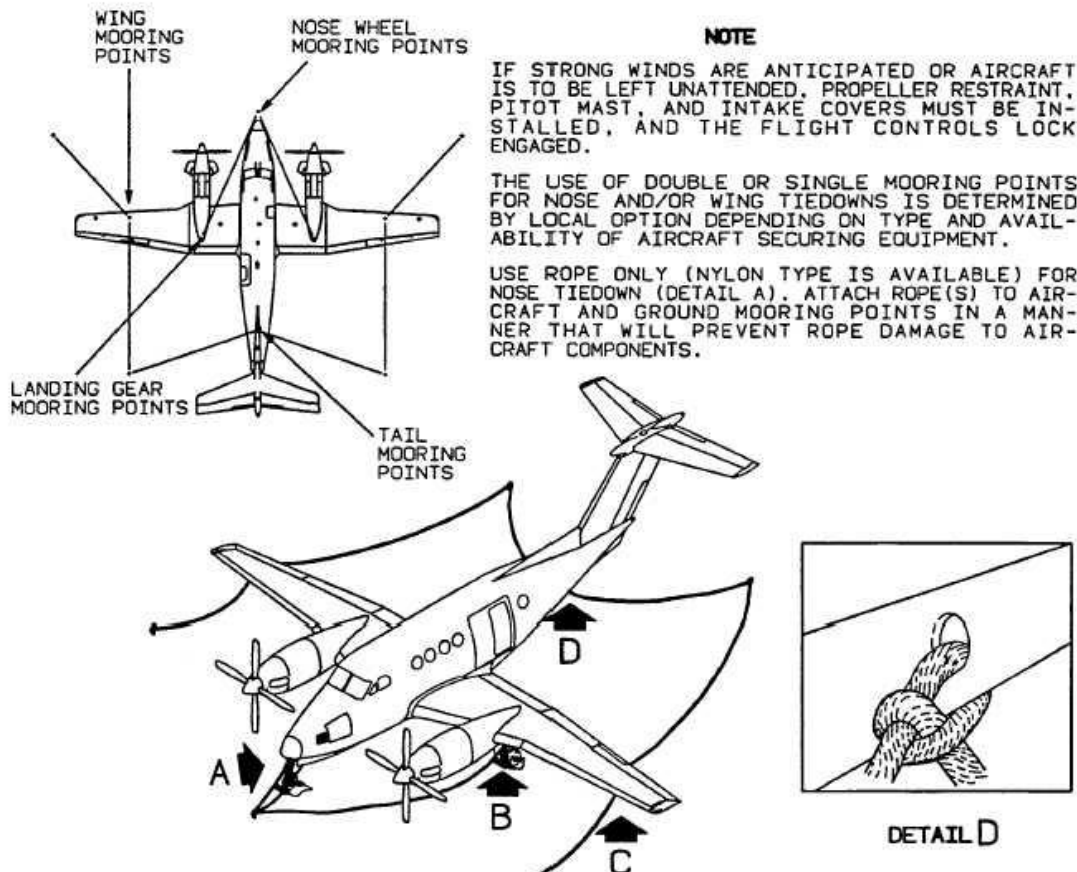
1. **Safety:** Prevents the aircraft from moving unexpectedly, which could cause damage to the aircraft itself, other nearby aircraft, or ground equipment. It also ensures the safety of personnel working around the aircraft.
2. **Stability:** Ensures the aircraft remains in a stable position, especially during maintenance or loading/unloading operations. Stability is crucial for activities such as fueling, boarding passengers, and cargo handling.
3. **Protection from Environmental Forces:** Protects the aircraft from strong winds, which could cause it to move or tip over. In extreme weather conditions, mooring is essential to prevent significant damage to the aircraft.
4. **Prevents Theft or Unauthorized Movement:** Mooring can act as a deterrent against theft or unauthorized towing of the aircraft.
5. **Compliance with Regulations:** Many airports and aviation authorities have regulations requiring aircraft to be moored under certain conditions to ensure safety and compliance with local laws.

Mooring Equipment:

- **Mooring Ropes or Chains:** Used to anchor the aircraft to ground tie-down points.
- **Ground Anchors:** Fixed points on the ground where mooring ropes or chains are attached. These can be embedded in the tarmac or concrete.
- **Chocks:** Placed in front of and behind the wheels to prevent rolling.
- **Tensioning Devices:** Used to apply the correct amount of tension to mooring ropes or chains to keep the aircraft secure.

Procedure for Mooring an Aircraft:

1. **Identify Secure Points:** Determine the appropriate mooring points on the aircraft and ground.
2. **Place Chocks:** Place chocks around the wheels to prevent rolling.
3. **Attach Mooring Ropes/Chains:** Connect the mooring ropes or chains to the aircraft and ground anchors.
4. **Adjust Tension:** Use tensioning devices to adjust the tension on the mooring ropes or chains, ensuring they are neither too tight nor too loose.
5. **Inspect:** Regularly check the mooring equipment and aircraft to ensure everything remains secure.



Reference links : <https://www.youtube.com/watch?v=psfn91R5WFo>

https://aeropeep.com/a320-mooring-points-and-alternative-of-concrete-blocks/#google_vignette