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LANDING GEAR ARRANGEMENT



- Three basic arrangements of landing gear are used:

1. Tail wheel-type landing gear (also known as conventional gear),
2. Tandem landing gear, and
3. Tricycle-type landing gear.

1. Tail wheel-type landing





- Tail wheel-type landing gear is also known as conventional gear because many early aircraft use this type of arrangement.
- The main gear are located forward of the center of gravity, causing the tail to require support from a third wheel assembly.
- A few early aircraft designs use a skid rather than a tail wheel. This helps slow the aircraft upon landing and provides directional stability.
- The resulting angle of the aircraft fuselage, when fitted with conventional gear, allows the use of a long propeller that compensates for older, underpowered engine design.
- The increased clearance of the forward fuselage offered by tail wheel-type landing gear is also advantageous when operating in and out of non-paved runways

2. Tandem Landing Gear



SERIAL NO. 44-68221, AAF MUSEUM.



Sail Plane



B-47 Bomber



B-52 Bomber



- Few aircraft are designed with tandem landing gear. As the name implies, this type of landing gear has the main gear and tail gear aligned on the longitudinal axis of the aircraft.
- Sailplanes commonly use tandem gear, although many only have one actual gear forward on the fuselage with a skid under the tail.
- A few military bombers, such as the B-47 and the B-52, have tandem gear, as does the U2 spy plane. The VTOL Harrier has tandem gear but uses small outrigger gear under the wings for support. Generally, placing the gear only under the fuselage facilitates the use of very flexible wings.

3. Tricycle Type Landing Gear





WLB

Grp one

Grp one

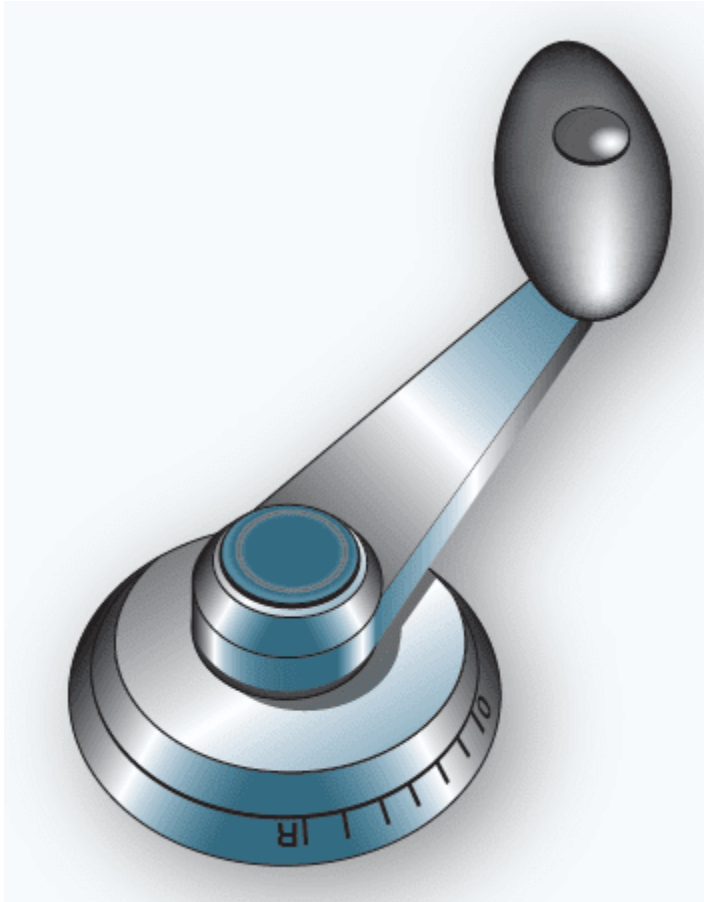
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- The most commonly used landing gear arrangement is the tricycle-type landing gear. It is comprised of main gear and nose gear.

Tricycle-type landing gear is used on large and small aircraft with the following benefits:

- Allows more forceful application of the brakes without nosing over when braking, which enables higher landing speeds.
- Provides better visibility from the flight deck, especially during landing and ground maneuvering.
- Prevents ground-looping of the aircraft. Since the aircraft center of gravity is forward of the main gear, forces acting on the center of gravity tend to keep the aircraft moving forward rather than looping, such as with a tail wheel-type landing gear.
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A nose wheel steering tiller located on the flight deck

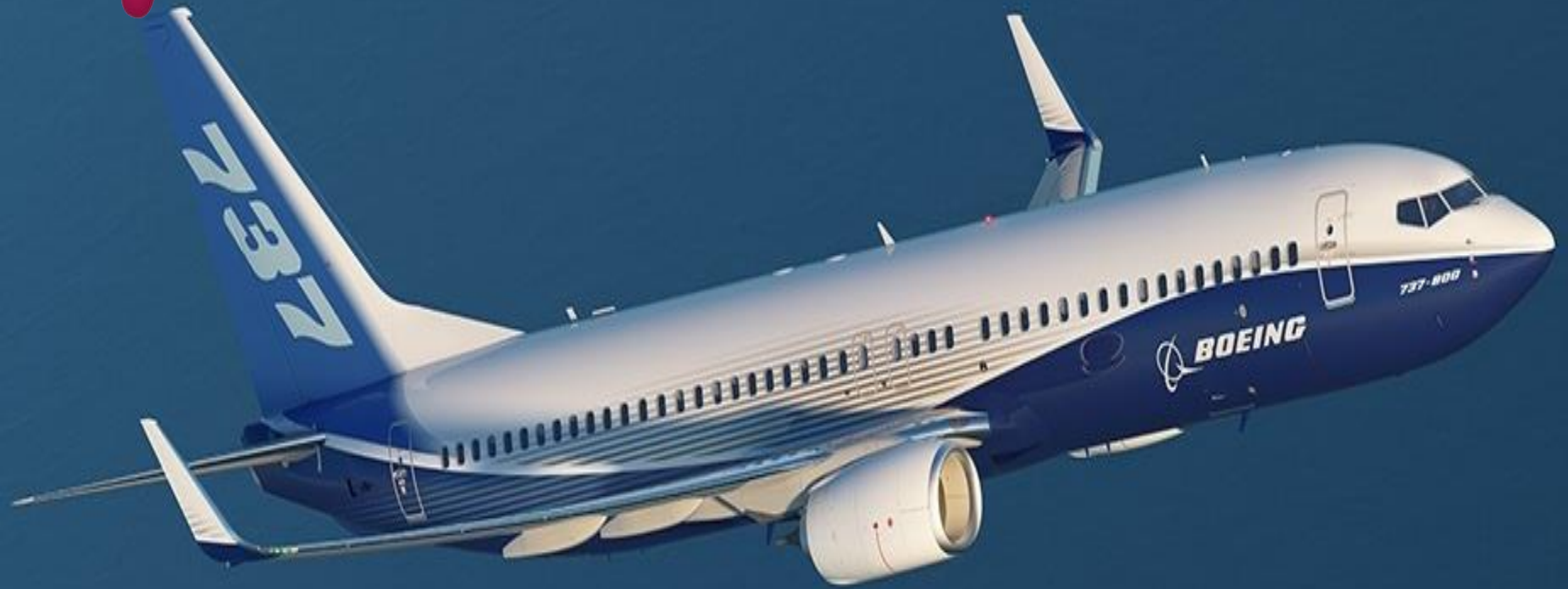


- The nose gear of a few aircraft with tricycle-type landing gear is not controllable. It simply casters as steering is accomplished with differential braking during taxi.
- However, nearly all aircraft have steerable nose gear.
- On light aircraft, the nose gear is directed through mechanical linkage to the rudder pedals.
- Heavy aircraft typically utilize hydraulic power to steer the nose gear. Control is achieved through an independent tiller in the flight deck

TODAY'S AMAZING FACT???????

Did You
Know?

The total number of aircraft currently in service is approximately 23,600 - that includes passenger and cargo aircraft.



धन्यवाद

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