SESSION 44: UNUSUAL ATTITUDES — RECOVERY PROCEDURES: NOSE-HIGH AND NOSE-LOW

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1. An "unusual attitude" is an aircraft attitude that is:

A. Any attitude during a normal turn

B. Unintentional and not normally experienced in instrument flight (e.g., extreme pitch or bank)

C. A standard-rate turn

D. A normal climb or descent

2. Unusual attitudes in instrument flight are most commonly caused by:

A. A current database

B. Proper trim

C. A functioning autopilot

D. Spatial disorientation, distraction, turbulence, or instrument failure

3. A nose-HIGH unusual attitude is recognized on the instruments by:

A. Increasing airspeed and a descending altimeter

B. Decreasing airspeed, an altimeter increasing, and a high pitch on the attitude indicator

C. A centered ball only

D. A constant airspeed and altitude

4. A nose-LOW unusual attitude is recognized on the instruments by:

A. Increasing airspeed, a descending altimeter, and a downward VSI

B. Decreasing airspeed and a climbing altimeter

C. A constant heading and altitude

D. A standard-rate turn indication

5. The recovery from a nose-HIGH unusual attitude (approaching a stall) requires the pilot to:

A. Reduce power and pull back

B. Bank steeply first

C. Add power, lower the nose (reduce pitch), and level the wings

D. Maintain the attitude and wait

6. In the nose-high recovery, adding power and lowering the nose is done to:

A. Increase the bank

B. Tighten the turn

C. Reduce altitude rapidly

D. Increase airspeed and prevent a stall while reducing the excessive pitch

7. The recovery from a nose-LOW unusual attitude (airspeed increasing, descending) requires the pilot to:

A. Reduce power, level the wings, and gently raise the nose to level flight

B. Add full power and pull hard

C. Increase the bank

D. Maintain the dive

8. In the nose-low recovery, reducing power first is important because:

A. It increases the descent rate

B. It tightens the spiral

C. It prevents excessive airspeed buildup as the nose is raised

D. It increases the bank angle

9. In the nose-low recovery, the wings are leveled BEFORE raising the nose because:

A. Pulling back in a bank tightens the turn/spiral and increases load factor without effectively raising the nose

B. The nose cannot be raised in a bank

C. The airspeed must increase first

D. The power must be added first

10. A key reason the attitude indicator may be unreliable during an extreme unusual attitude is that:

A. The altimeter has failed

B. Older vacuum attitude indicators can tumble or be unreliable at extreme attitudes

C. The magnetic compass is more accurate

D. The turn coordinator drives it

11. When the attitude indicator is suspect, the pilot recognizes a nose-low attitude using the:

A. Airspeed (increasing), altimeter (decreasing), and VSI (descending)

B. Magnetic compass only

C. Heading indicator only

D. Navigation display

12. When the attitude indicator is suspect, the pilot recognizes a nose-high attitude using the:

A. Heading indicator only

B. Navigation display

C. Magnetic compass only

D. Airspeed (decreasing), altimeter (increasing), and VSI (climbing)

13. Recovery control inputs in an unusual attitude should be:

A. Abrupt and large

B. Delayed until the attitude worsens

C. Smooth and coordinated to avoid overstressing the aircraft or causing a secondary upset

D. Made with rudder only

14. The correct sequence for a nose-low recovery is commonly remembered as:

A. Power (reduce), bank (level), pitch (raise to level)

B. Pitch first, then power

C. Bank first, then power, then pitch

D. Pitch and power simultaneously, ignoring bank

15. The correct sequence for a nose-high recovery is commonly remembered as:

A. Reduce power, then pull back

B. Power (increase), pitch (lower the nose), bank (level the wings)

C. Bank first, then reduce power

D. Maintain pitch and add power only

16. During recovery, the pilot should cross-check multiple instruments rather than fixate because:

A. A single instrument (especially a tumbled attitude indicator) may give a false picture

B. Only one instrument is reliable

C. The autopilot will recover the aircraft

D. The compass is the primary recovery instrument

17. A nose-low unusual attitude left uncorrected can rapidly lead to:

A. A stall only

B. A climb

C. A coordinated turn

D. Excessive airspeed, high load factors in the pullout, and possible structural damage or ground impact

18. Over-rotating during a nose-high recovery (pulling power and raising the nose) risks:

A. A spiral dive

B. An overspeed

C. A stall or spin from the already-high pitch and low airspeed

D. A coordinated turn

19. A pilot who pulls back hard while still banked in a nose-low recovery is likely to:

A. Level the wings automatically

B. Tighten the spiral and increase the load factor, worsening the situation

C. Reduce the airspeed safely

D. Recover normally

20. The reason coordinated rudder use matters in unusual attitude recovery is to:

A. Increase the bank

B. Replace aileron input

C. Raise the nose

D. Keep the aircraft coordinated and avoid inducing a spin during the recovery

21. Practicing unusual attitude recoveries builds the pilot's ability to:

A. Avoid all turbulence

B. Eliminate the need for instruments

C. Fly without a cross-check

D. Quickly recognize the attitude from the instruments and apply the correct recovery promptly

22. A pilot recovering from a nose-low spiral should prioritize:

A. Adding power immediately

B. Pulling back to stop the descent

C. Leveling the wings, then managing power and pitch

D. Increasing the bank to bleed energy

23. The instruments that most directly reveal an unusual attitude when the attitude indicator is trusted are the:

A. Attitude indicator (pitch/bank) confirmed by the airspeed, altimeter, and VSI trends

B. Magnetic compass and clock

C. Navigation display and DME

D. Transponder and audio panel

24. A primary defense against entering an unusual attitude in IMC is to:

A. Disable the autopilot permanently

B. Maintain a disciplined instrument cross-check and avoid distraction and disorientation

C. Fly faster

D. Reduce the scan rate

25. The fundamental objective of unusual attitude training is to:

A. Eliminate the need for trim

B. Replace navigation procedures

C. Enable the pilot to recognize and recover from an unintended extreme attitude using the instruments before control is lost

D. Practice steep turns for proficiency

ANSWER KEY & EXPLANATIONS – SESSION 44

1. B. Unintentional/extreme — An unusual attitude is an unintentional attitude not normally experienced in instrument flight (e.g., extreme pitch or bank).

2. D. Disorientation/distraction/etc. — Unusual attitudes are most commonly caused by spatial disorientation, distraction, turbulence, or instrument failure.

3. B. Decreasing ASI, climbing alt, high pitch — A nose-high attitude shows decreasing airspeed, an increasing altimeter, and high pitch on the attitude indicator.

4. A. Increasing ASI, descending — A nose-low attitude shows increasing airspeed, a descending altimeter, and a downward VSI.

5. C. Power up, nose down, level — The nose-high recovery is to add power, lower the nose, and level the wings.

6. D. Prevent stall — Adding power and lowering the nose increases airspeed and prevents a stall while reducing excessive pitch.

7. A. Power reduce, level, raise nose — The nose-low recovery is to reduce power, level the wings, and gently raise the nose to level flight.

8. C. Prevent overspeed — Reducing power first in the nose-low recovery prevents excessive airspeed buildup as the nose is raised.

9. A. Pulling in bank tightens spiral — Wings are leveled before raising the nose because pulling back in a bank tightens the spiral and increases load factor without effectively raising the nose.

10. B. AI can tumble — The attitude indicator may be unreliable in an extreme attitude because older vacuum units can tumble.

11. A. ASI/alt/VSI for nose-low — With a suspect attitude indicator, a nose-low attitude is recognized by increasing airspeed, decreasing altimeter, and descending VSI.

12. D. ASI/alt/VSI for nose-high — With a suspect attitude indicator, a nose-high attitude is recognized by decreasing airspeed, increasing altimeter, and climbing VSI.

13. C. Smooth/coordinated — Recovery inputs should be smooth and coordinated to avoid overstressing the aircraft or a secondary upset.

14. A. Power/bank/pitch (nose-low) — The nose-low sequence is reduce power, level the bank, then raise the pitch to level.

15. B. Power/pitch/bank (nose-high) — The nose-high sequence is increase power, lower the nose, then level the wings.

16. A. Single instrument can mislead — Cross-checking matters because a single instrument (especially a tumbled attitude indicator) may give a false picture.

17. D. Overspeed/load/impact — An uncorrected nose-low attitude can lead to excessive airspeed, high load factors in the pullout, and possible structural damage or ground impact.

18. C. Stall/spin — Over-rotating in a nose-high recovery risks a stall or spin from the high pitch and low airspeed.

19. B. Tightens spiral — Pulling back while banked in a nose-low recovery tightens the spiral and increases load factor.

20. D. Avoid spin — Coordinated rudder keeps the aircraft coordinated and avoids inducing a spin during recovery.

21. D. Recognize/recover promptly — Practicing recoveries builds the ability to quickly recognize the attitude and apply the correct recovery promptly.

22. C. Level then power/pitch — A nose-low spiral recovery prioritizes leveling the wings, then managing power and pitch.

23. A. AI confirmed by trends — An unusual attitude is most directly revealed by the attitude indicator confirmed by the airspeed, altimeter, and VSI trends.

24. B. Cross-check/avoid distraction — The primary defense against entering an unusual attitude is a disciplined cross-check and avoiding distraction and disorientation.

25. C. Recognize/recover before loss — Unusual attitude training enables the pilot to recognize and recover from an unintended extreme attitude using the instruments before control is lost.