

## Objectives: 8s on Pylons

- Be able to perform 8s on pylons.
- Be able to calculate the pivotal altitude for the maneuver.
- Continue to develop situational awareness and division of attention skills.

## Equipment:

- Chalkboard or paper and pencil
- Model airplane to demo maneuver.

## Elements:

1. Ground - Pre-flight briefing
  - Explain the maneuver (pivotal altitude, sight reference point, reference line ahead of pylon climb, reference line behind pylon descend - demo using model plane).
  - **Pivotal Altitude** = Groundspeed (MPH) \*\* 2 / 15
  - **Pivotal Altitude** = Groundspeed (Knots) \*\* 2 / 11.3
  - Student demonstrates ability to calculate pivotal altitude
  - Student asks questions concerning previous lessons and/or this one.
2. Flight - 8s on Pylons
  - Explain maneuver again
  - Select appropriate reference points within gliding distance of an emergency landing site.
  - Help student select appropriate pylons if necessary
  - Calculate the approximate pivotal altitude
  - Demo and explain the maneuver
  - Help student perform maneuver (not a bad idea to start with just one pylon first).
  - Fly the maneuver applying the necessary corrections to keep the reference line on the pylon.
  - Divides attention between the reference points and looking for other traffic. (eyes inside, and outside)

## Completion Standards:

This lesson is complete when the student is able to perform the maneuver as specified in the *Elements* section.

## Common Errors:

- Fixating on the reference point
- Cheating with the rudder (keep coordinated flight).
- Improper pivotal altitude for the speed.

## References:

FTH; Pages 141 - 143

COMM-ASEL PTS Area of Operation VI.

Jeppesen Instrument/Commercial Manual 14-21 to 14-24

## Possible Review Questions:

1. Pivotal altitude is based on the airplanes \_\_\_\_\_ speed.
2. The formula for pivotal altitude is \_\_\_\_\_.
3. If the pylon appears to be ahead of the reference point, the airplane is too \_\_\_\_\_, and the proper corrective action is to \_\_\_\_\_.

## Pivotal Altitude Examples:

(100)(100)/15=667ft (110)(110)/15=805ft (120)(120)/15=960ft (130)(130)/15=1125ft

(90)(90)/11.3=716ft (100)(100)/11.3=885ft (110)(110)/11.3=1070ft (120)(120)/11.3=1275ft