

TransNorthern Aviation
Volpar Turboliner II Maneuvers



Principal Base of Operations:

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EFFECTIVE PAGES

This list shows the current revision and effective date of each page.

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1	Original	01-10-21
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FAA Final Approval,
Office AL03
Effective date 12/7/2023
James Howery, POI

**JAMES M
HOWERY** Digitally signed by
JAMES M HOWERY
Date: 2023.12.07
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USE OF THE MANEUVERS GUIDE

The flight maneuvers contained herein are designed to support the flight training curriculum segment. The procedures established for each maneuver are designed to standardize company flight training.

All crewmembers are expected to demonstrate knowledge and proficiency in each maneuver (both ground & flight) listed in the flight training curriculum segment in accordance with the standards set forth in the applicable airman certification standards guide. While TransNorthern LLC recognizes standards for operating the aircraft, we also recognize our diverse operating environment may require the pilot to use judgement in determining the proper operational criteria for a given situation.

Instructors and check airman will be familiar with the ATP (FAA-S-ACS-11), Commercial Pilot (FAA-S-ACS-7A), or Instrument Rating (FAA-S-ACS-8B) Airman Certification Standards as applicable, prior to conducting training & testing.

These flight training maneuvers do not replace the aircraft performance and operating limitations published in the Volpar Turboliner II AFM. Compliance with the FAA Limitations section is mandatory for all flight operations.

Training Considerations:

- Flight training sessions should be preceded and followed by an instructor briefing and debriefing.
- Flight training maneuvers should be completed above 3,000' AGL
- Flight training maneuvers should be modified as necessary to comply with ATC instructions.
- For traffic avoidance ADSB and ATC Traffic Advisory services should be used whenever possible.
- Clearing turns should be conducted as necessary prior to initiating the maneuver.
- Instructors should emphasize use of appropriate checklists and single or multi-crewmember resource management.

Volpar Operational Speeds (KIAS)

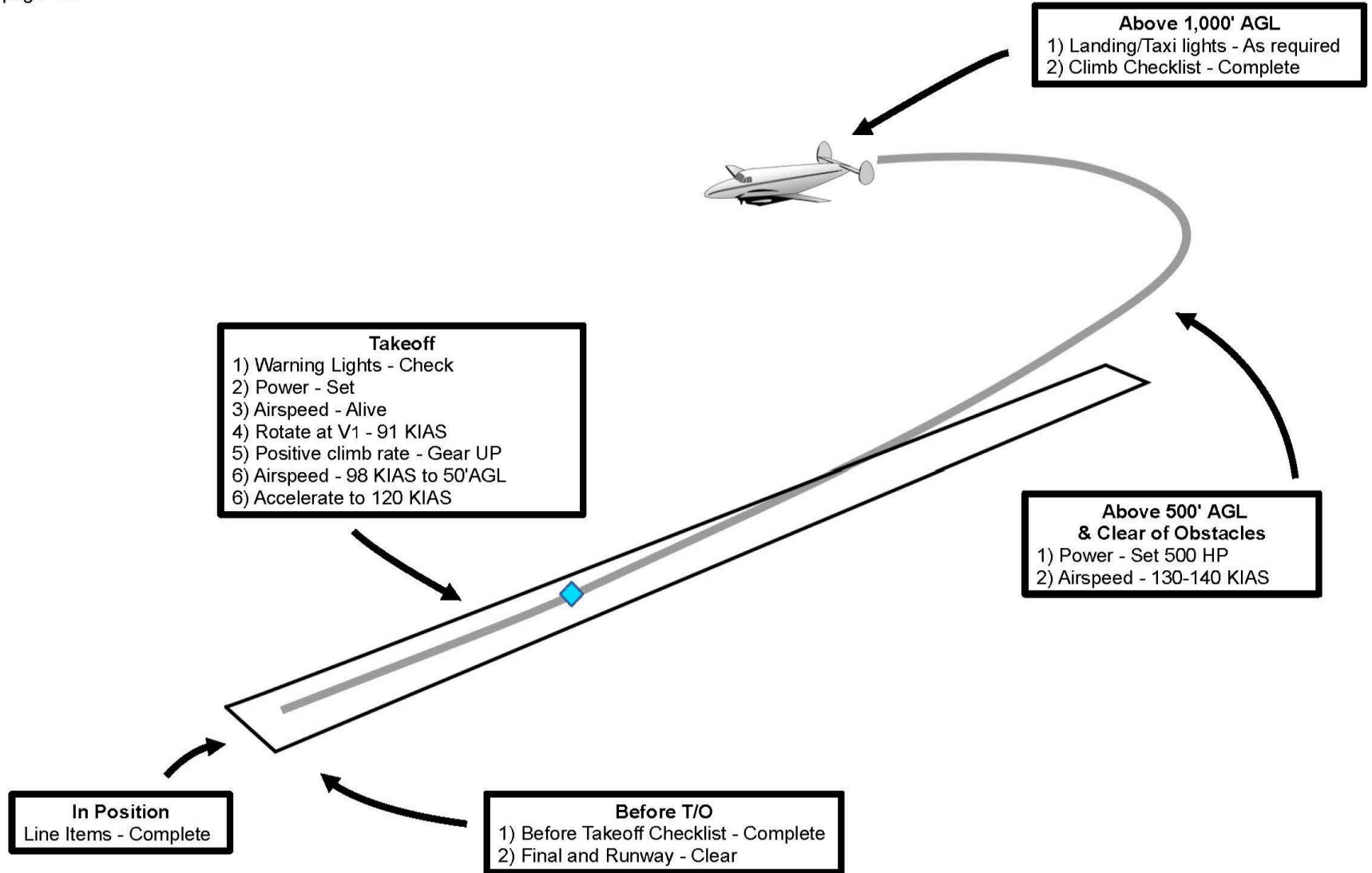
V _{MC}	84	Minimum Single Engine Control Speed (Red Line)
V ₁	91	Critical Engine Failure Speed
V _X	94	Two Engine Best Angle of Climb Speed
V _{YSE}	111	Single Engine Best Rate of Climb Speed (Blue Line)
V _Y	117	Two Engine Best Rate of Climb Speed
	150	Cruise Climb Speed
	23	Maximum demonstrated crosswind

Volpar Limitation Speeds (KIAS)

V _{FE}	142	Flaps Extended speed - Power Off (Emergency Descent)
V _{FE}	115	Flaps Extended Speed - Full Down (Normal Operations)
V _{LO}	138	Landing Gear Operating Speed
V _{LE}	138	Landing Gear Extended Speed
V _A	132	Maneuvering Speed
V _{MO}	210	Max Operating Speed

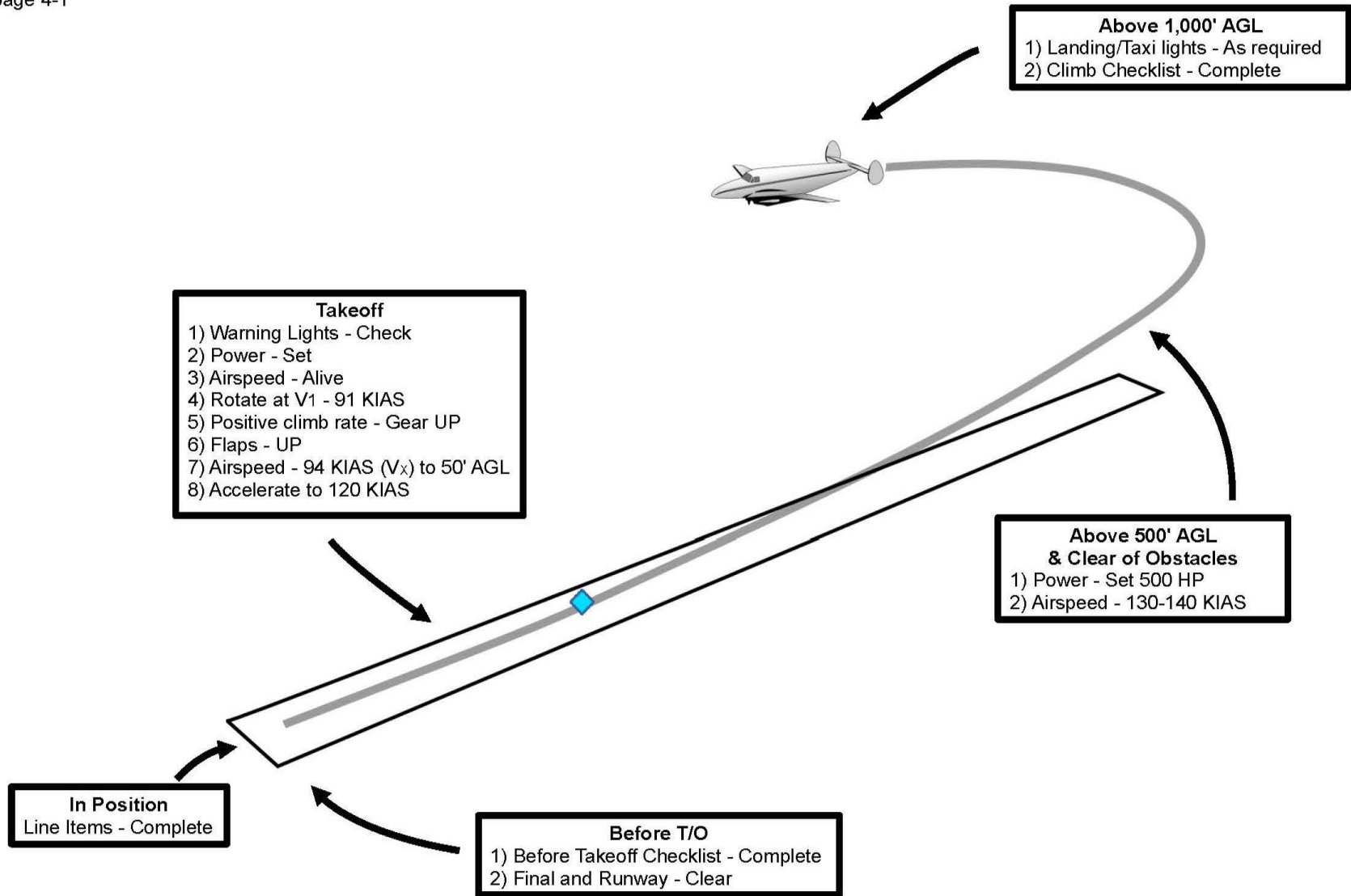
Normal Takeoff and Departure – Flaps Up

Note: V₁ is always 91 KIAS per AFM page 4-1



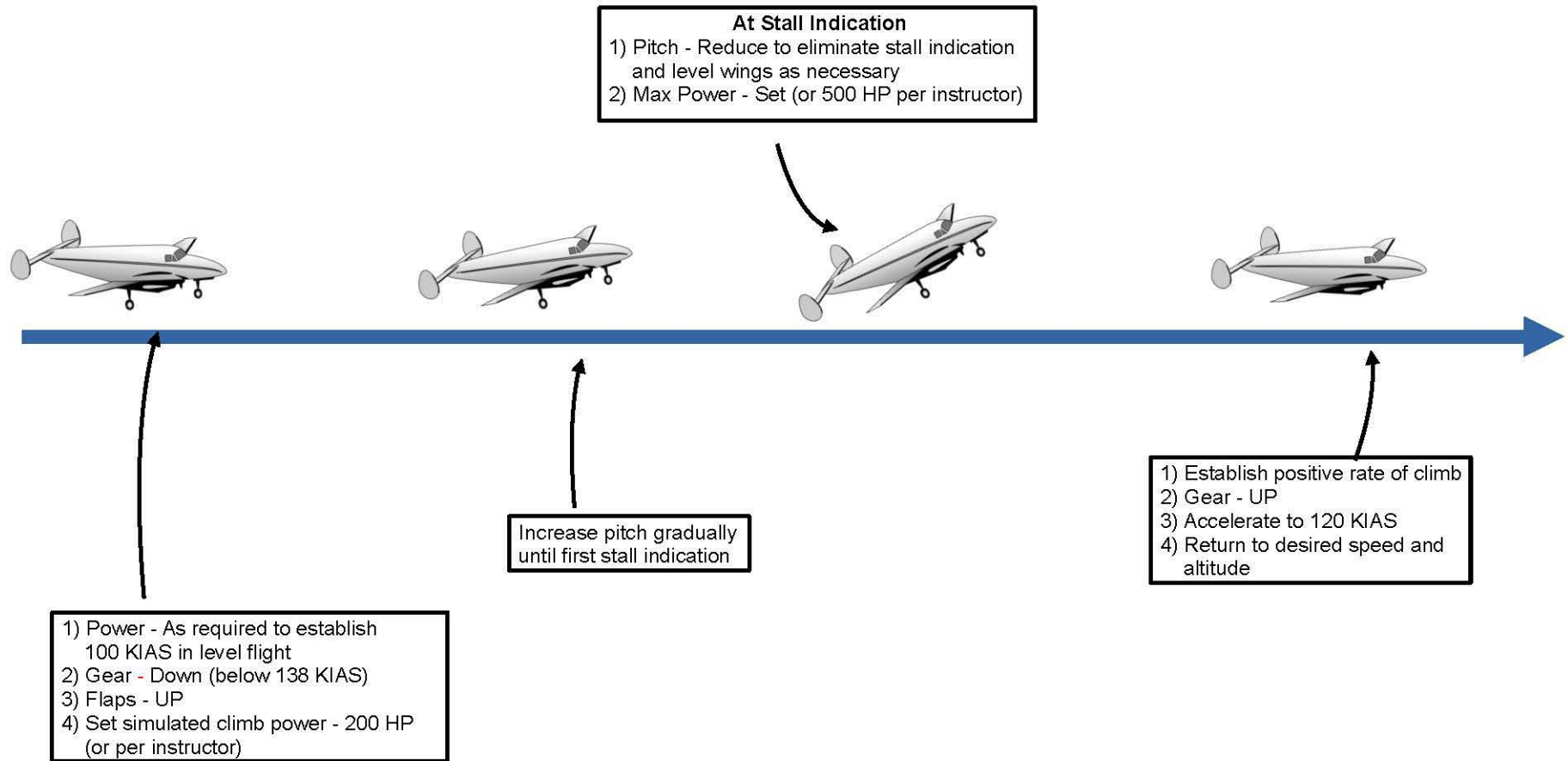
Short Field Takeoff and Departure – Flaps 15°

Note: V₁ is always 91 KIAS per AFM page 4-1



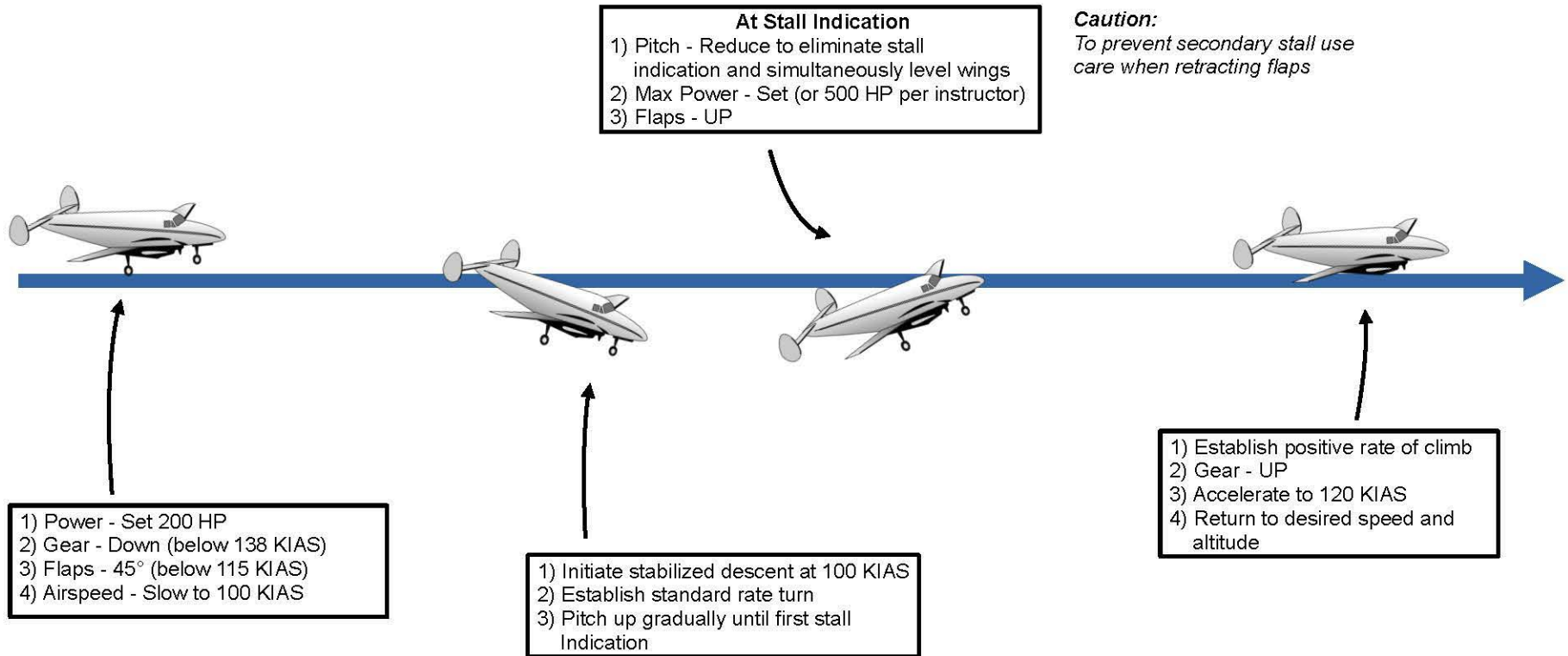
Takeoff Configuration Stall

Notes: Complete maneuver above 3000' AGL



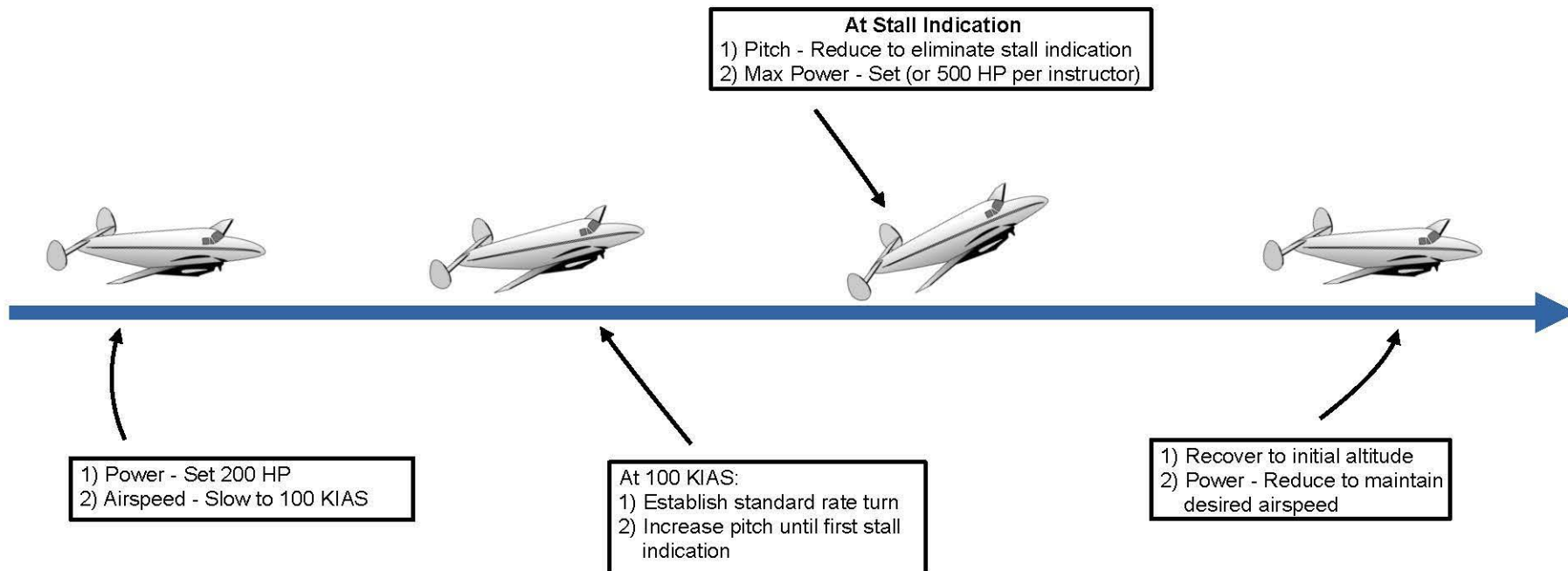
Landing Configuration Stall

Note: Complete maneuver above 3000' AGL



Clean Configuration Stall

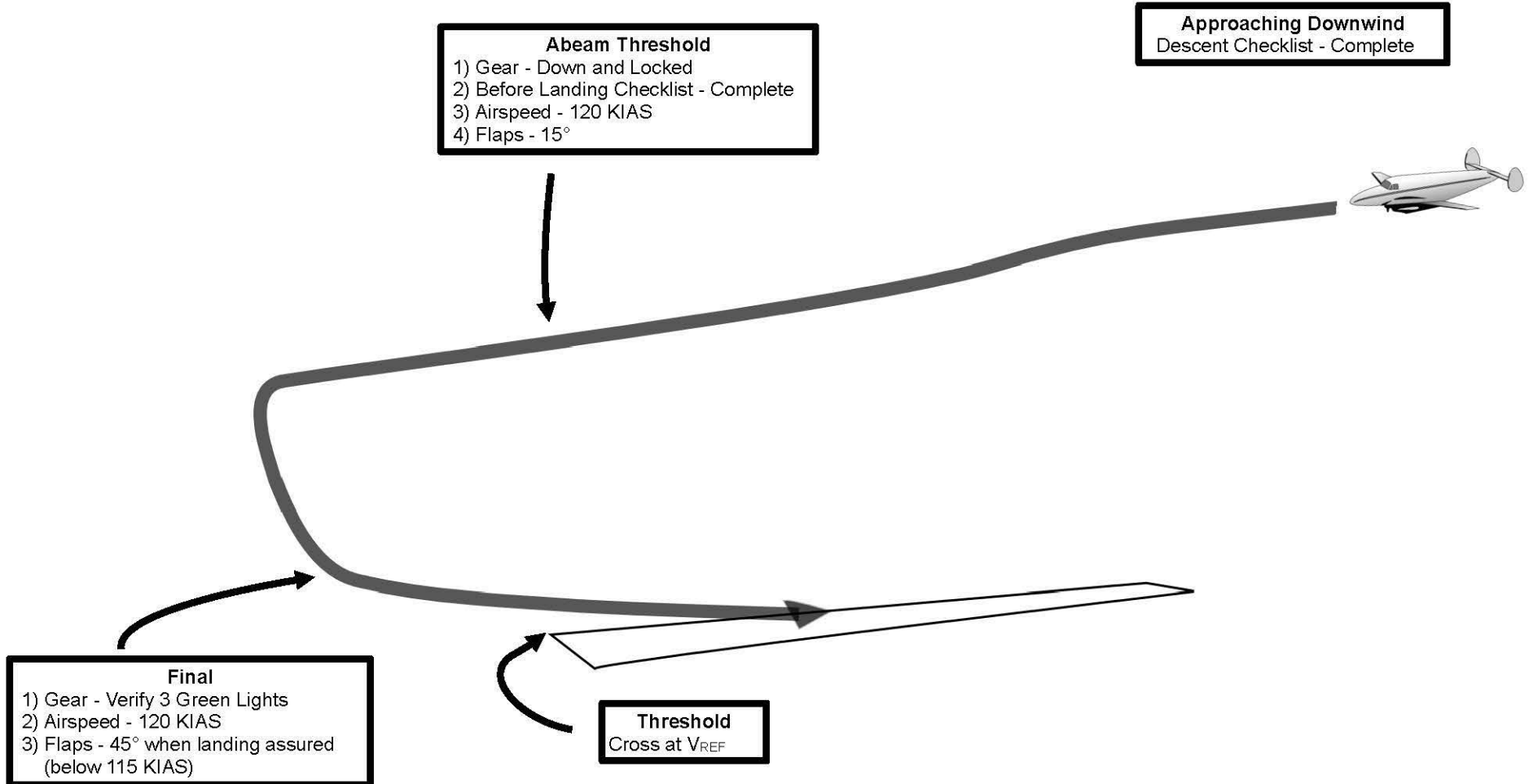
Note:
Complete maneuver above 3000' AGL



Normal Visual Approach

Weight - Pounds	V _{REF} KIAS Flaps 45°
11,000	102
10,000	97
9,000	92
8,000	87

AFM page 4-10



Visual Approach – One Engine Inoperative

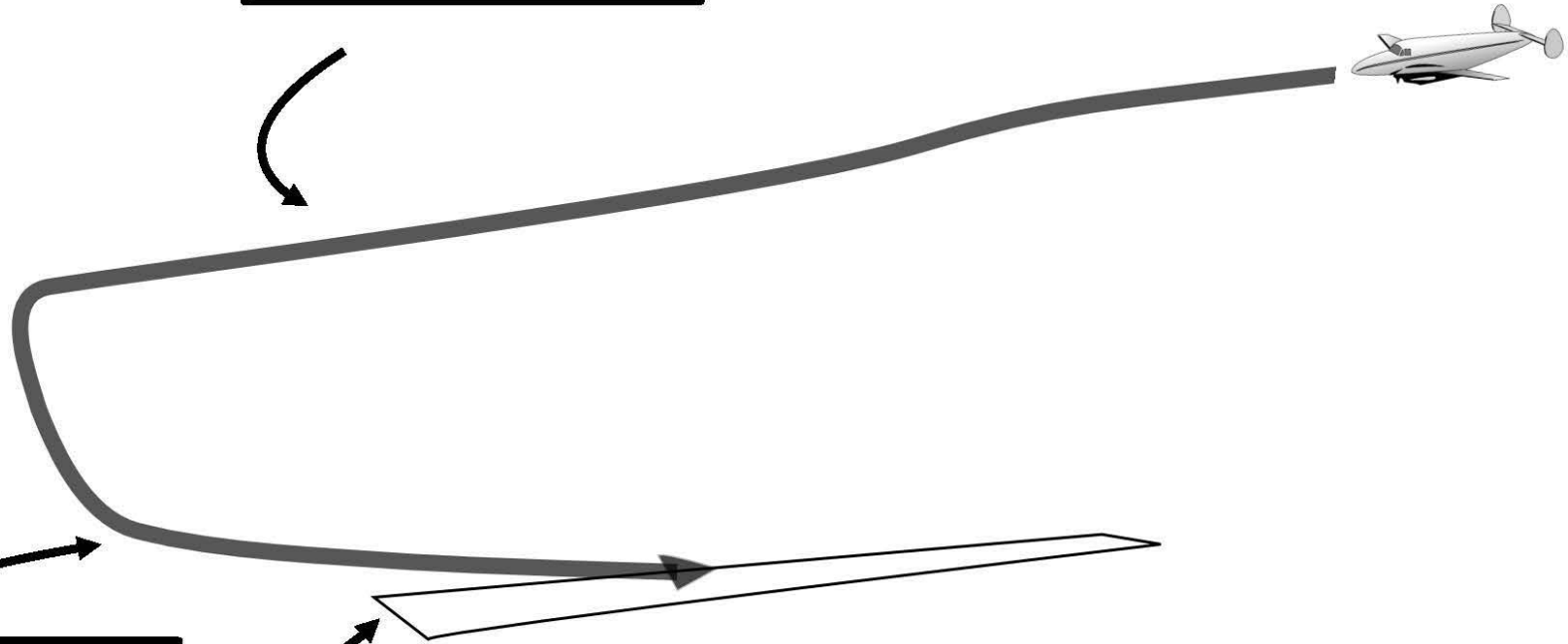
Note:
V_{REF} for single engine landing is 105 KIAS (same as no flap landing) and is 1.3 V_{s1} at GW.
Only GW stall speeds are listed in the AFM.
See Stall Speed Chart page 4-8

Approaching Downwind
1) Simulate inoperative engine - Slowly retard one engine to 150-200 HP
2) Engine Failure Checklist - Complete
3) Airspeed - 130 KIAS or as desired
4) Power - As Required

Abeam Threshold
1) Gear - Down and Locked
2) Before Landing Checklist - Complete
3) Airspeed - 120 KIAS (V_{YSE} 111 KIAS)

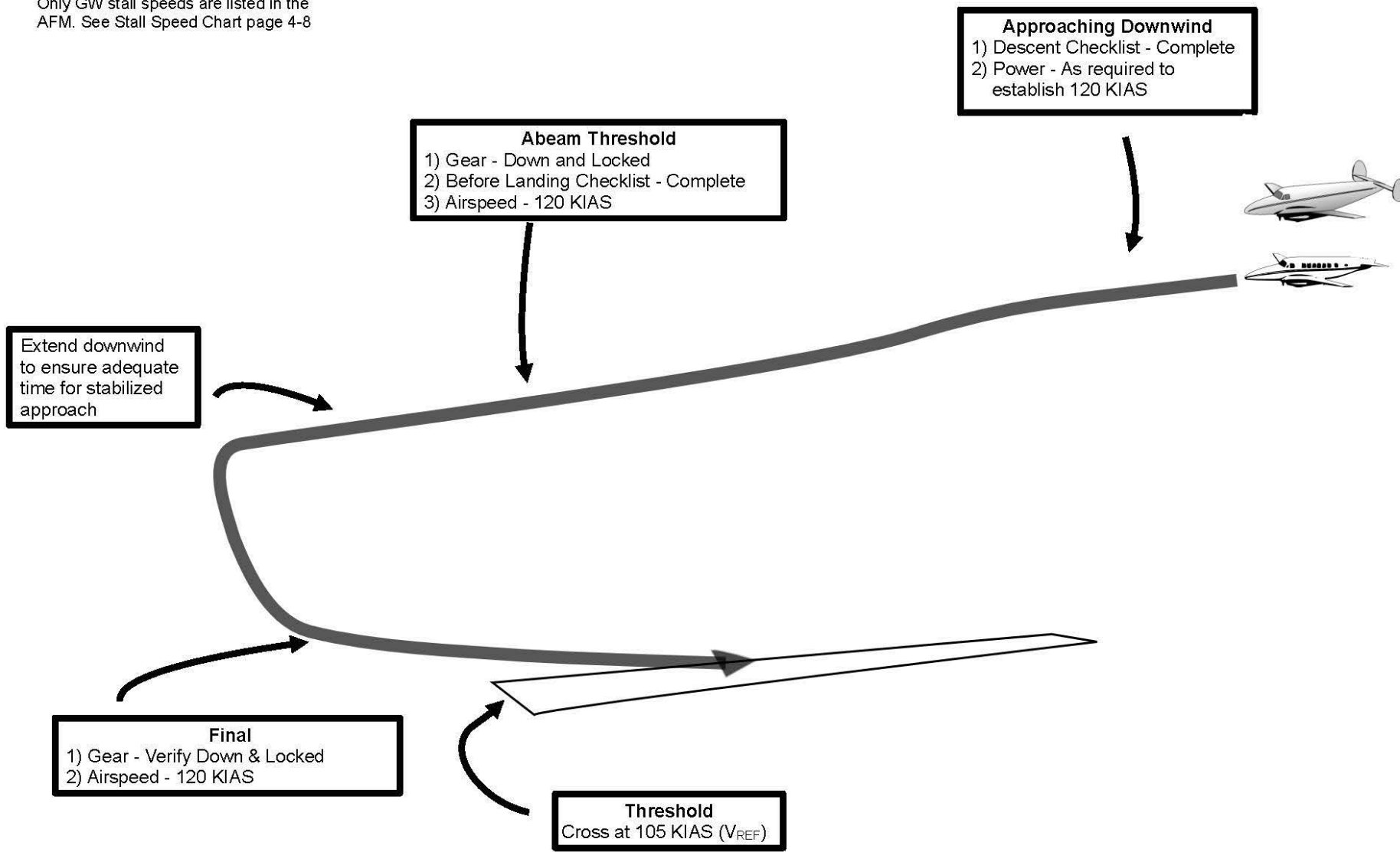
Final
1) Verify Gear Down & Locked
2) Airspeed - 120 KIAS (V_{YSE} 111 KIAS)
3) Flaps - Leave UP

Threshold
Cross at 105 KIAS (V_{REF})



Visual Approach – Flap Malfunction (no flaps)

Note:
V_{REF} for no flap landing is 105 KIAS and is 1.3 V_{s1} at GW.
Only GW stall speeds are listed in the AFM. See Stall Speed Chart page 4-8



ILS / LPV / VNAV Approach with Missed Approach

Weight - Pounds	V _{REF} KIAS Flaps 45°
11,000	102
10,000	97
9,000	92
8,000	87

AFM page 4-10

- Prior to IAF or Vectors**
- 1) ATIS - Obtain
 - 2) Approach - Review, load, tune, identify
 - 3) Descent checklist - Complete
 - 4) Airspeed - 130-150 KIAS
 - 5) Power - As required

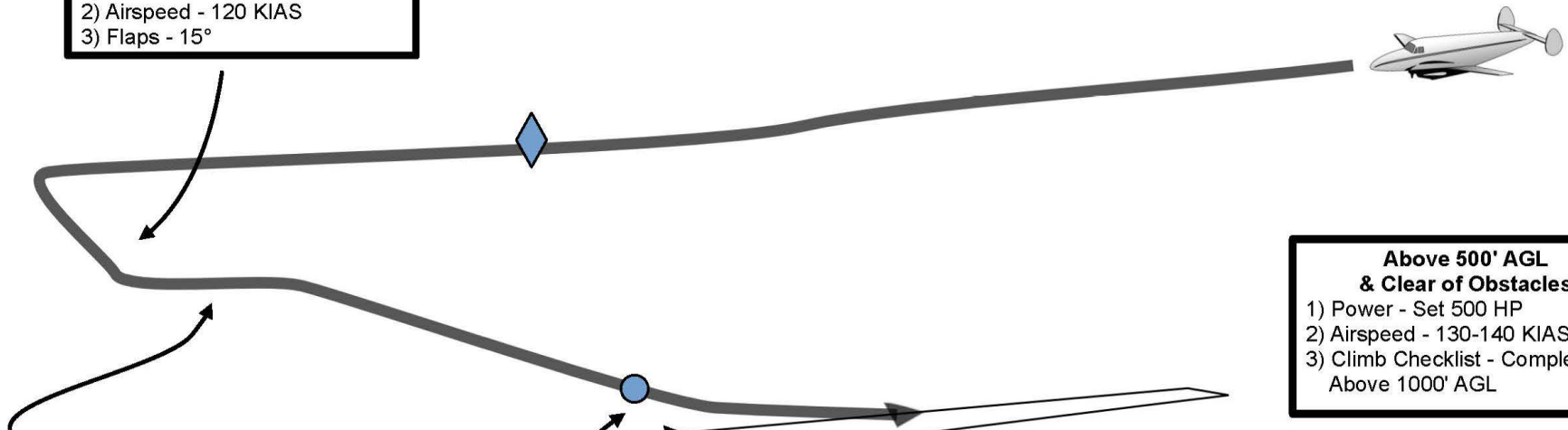
- IAF Inbound or Vectors**
- 1) Power - Set 200 HP
 - 2) Airspeed - 120 KIAS
 - 3) Flaps - 15°

- Above 500' AGL & Clear of Obstacles**
- 1) Power - Set 500 HP
 - 2) Airspeed - 130-140 KIAS
 - 3) Climb Checklist - Complete Above 1000' AGL

- 1 Dot below Glideslope Intercept**
- 1) Gear - DOWN and Locked
 - 2) Before Landing Checklist - Complete
 - 3) Check FAF crossing altitude
 - 4) Airspeed - 120 KIAS
 - 5) Power - As required

- DA and Runway in Sight**
- 1) Flaps - 45°
 - 2) Threshold - Cross at V_{REF}

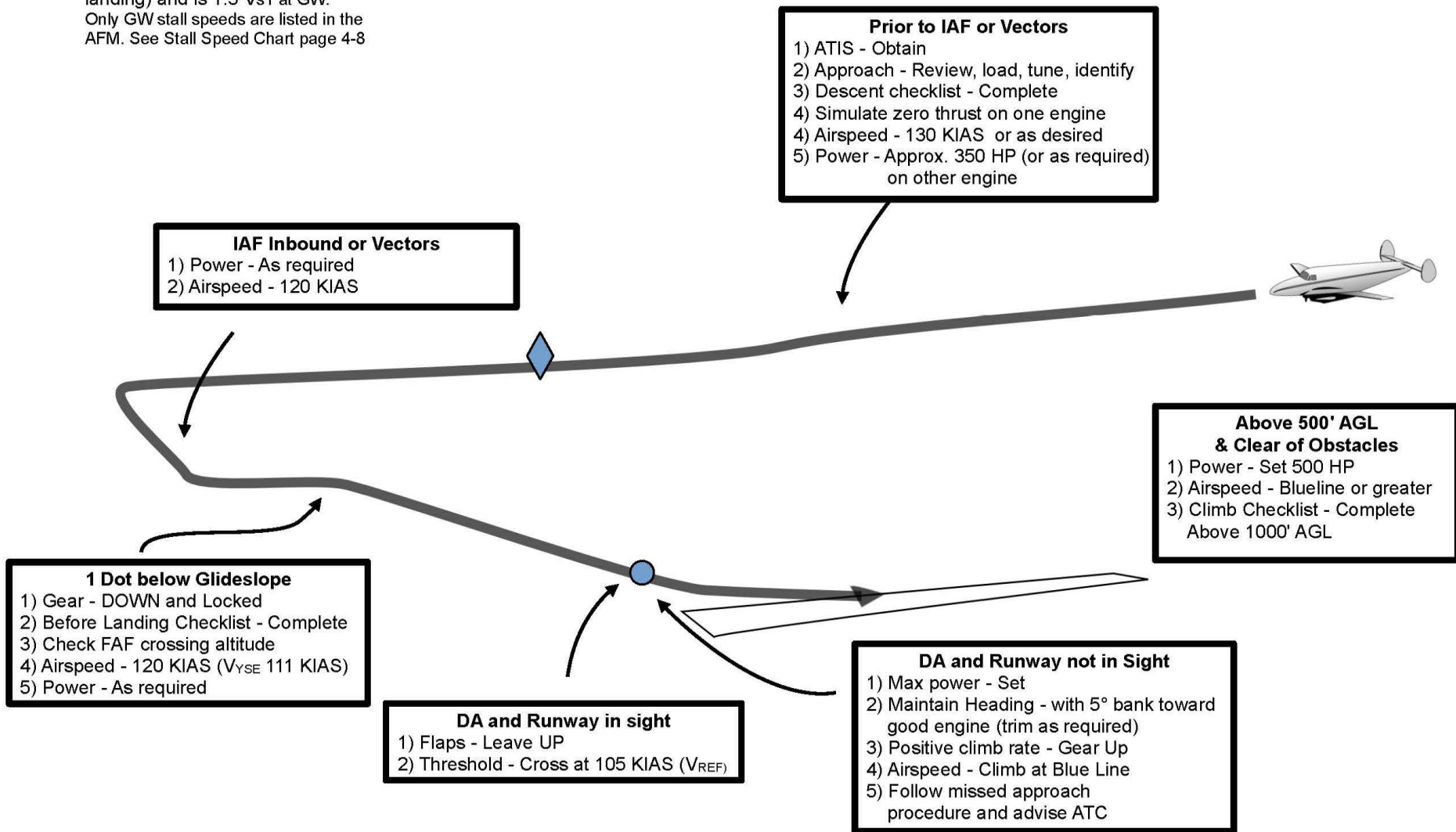
- DA and Runway not in Sight**
- 1) Max power - Set
 - 2) Pitch 10° up - Adjust as necessary
 - 3) Positive climb rate - Gear Up
 - 4) Flaps - UP
 - 5) Airspeed - Climb at 120 KIAS
 - 6) Follow missed approach procedure and advise ATC



ILS / LPV / VNAV Approach with Missed Approach
One Engine Inoperative

Note:

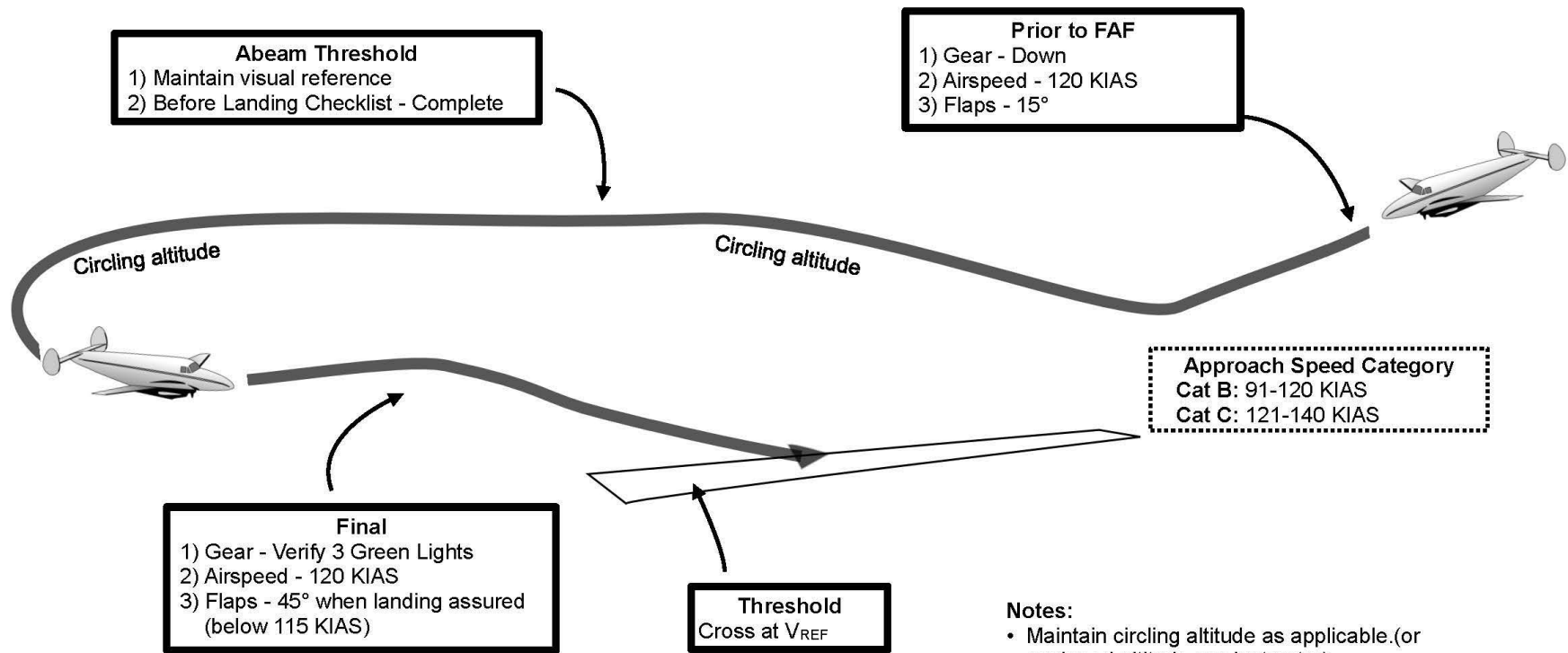
V_{REF} for single engine landing is 105 KIAS (same as no flap landing) and is 1.3 V_{S1} at GW. Only GW stall speeds are listed in the AFM. See Stall Speed Chart page 4-8



Normal Instrument Approach – Circling

Weight - Pounds	V _{REF} KIAS Flaps 45°
11,000	102
10,000	97
9,000	92
8,000	87

AFM page 4-10



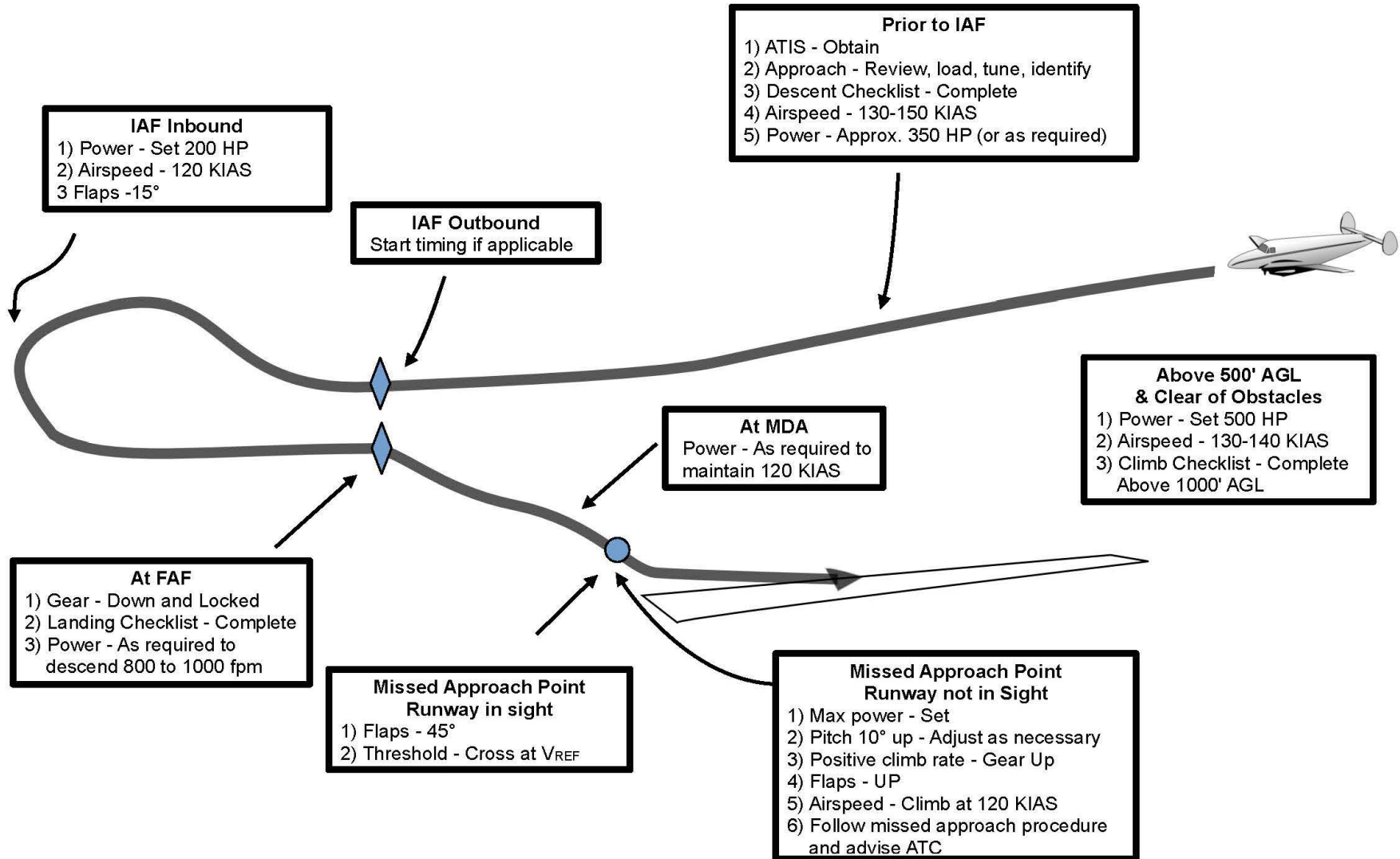
Notes:

- Maintain circling altitude as applicable.(or assigned altitude per Instructor)
- Runway must be in sight during entire maneuver.
- No more than 30° bank angle.
- Missed approach procedure according to type of approach.
- Obstacle clearance is 300' at circling minimum altitude.

Weight - Pounds	V _{REF} KIAS Flaps °
11,000	102
10,000	97
9,000	92
8,000	87

AFM page 4-10

Non-Precision Approach with Missed Approach



Non-Precision Approach with Missed Approach
One Engine Inoperative

Note:

V_{REF} for single engine landing is 105 KIAS (same as no flap landing) and is 1.3 V_{s1} at GW. Only GW stall speeds are listed in the AFM. See Stall Speed Chart page 4-8

