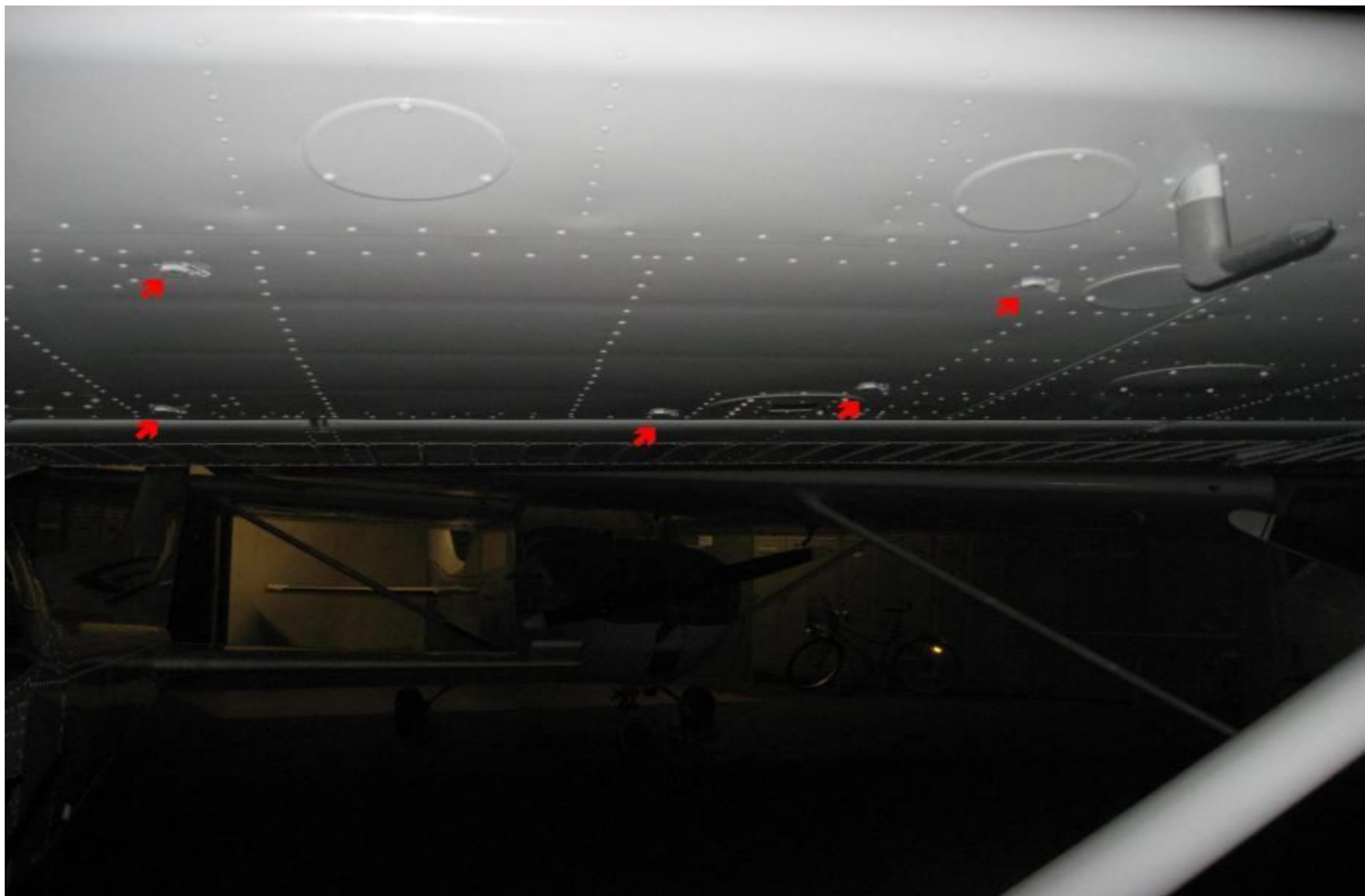


Cessna 172SP.

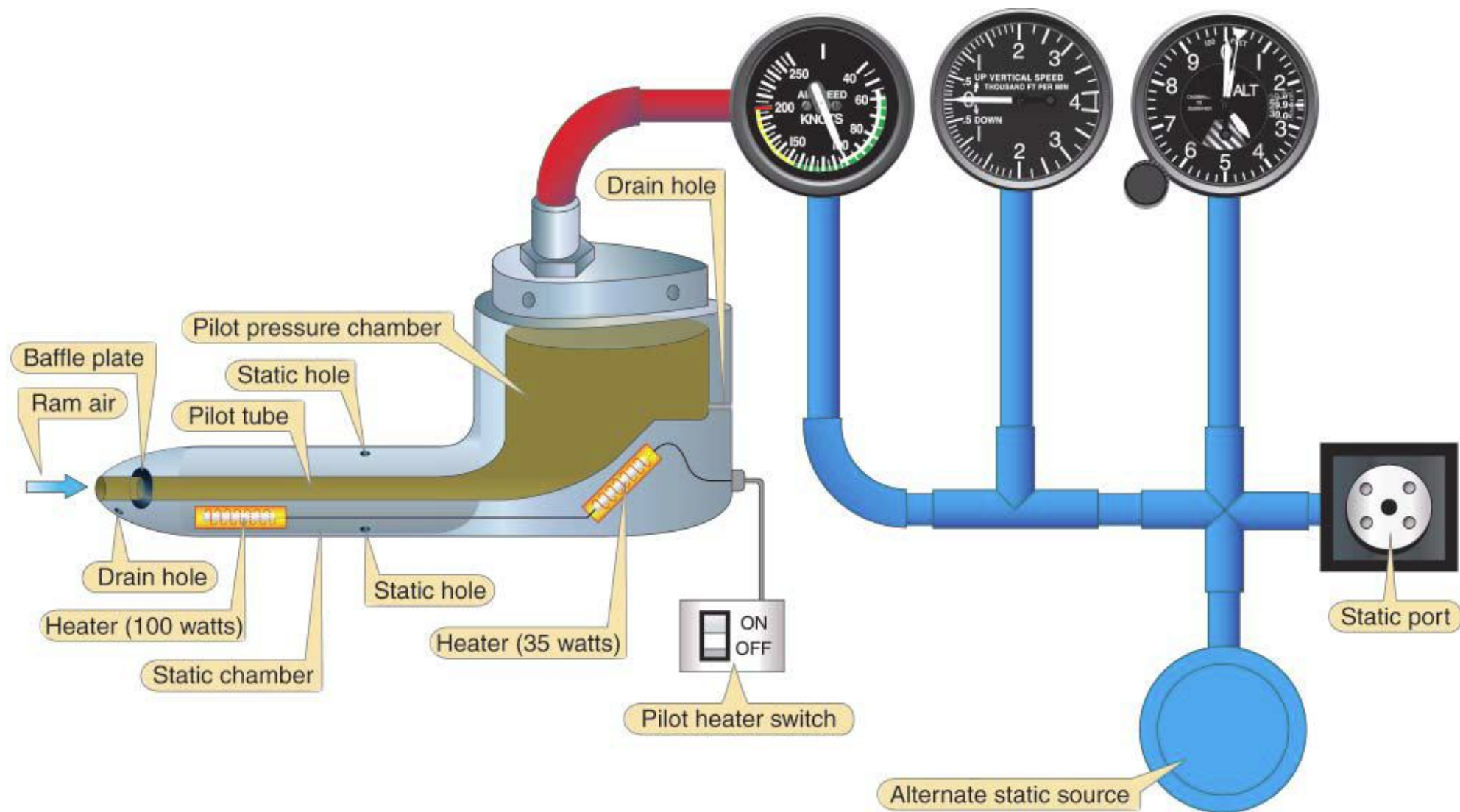


Пилотажно-навигационное оборудование самолета Cessna 172SP NAV III.
Выполнил: Зарубин С.М.

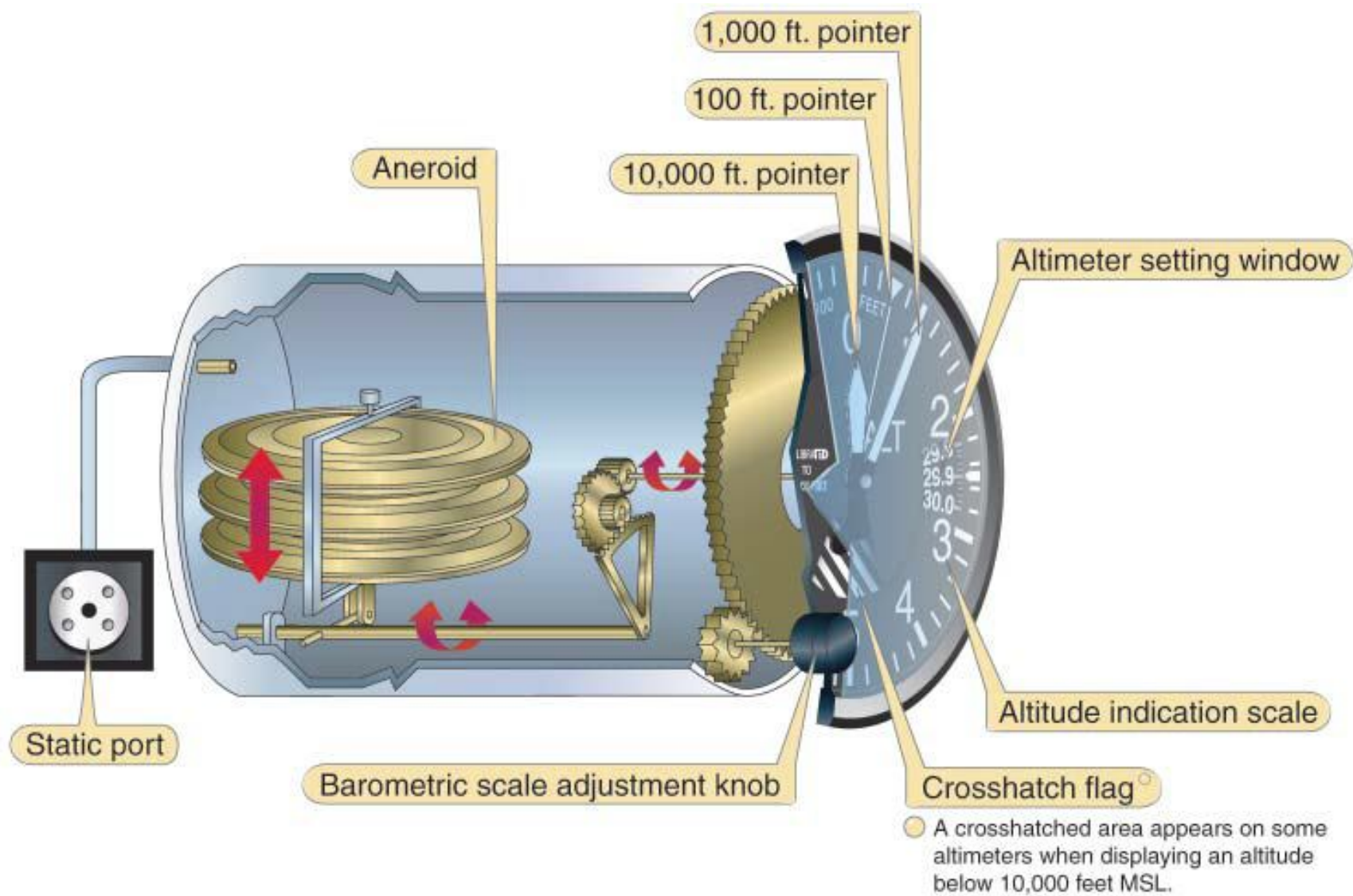
Pitot Tube.



A Typical Electrically Heated Pitot-Static Head.



Sensitive Altimeter Components.



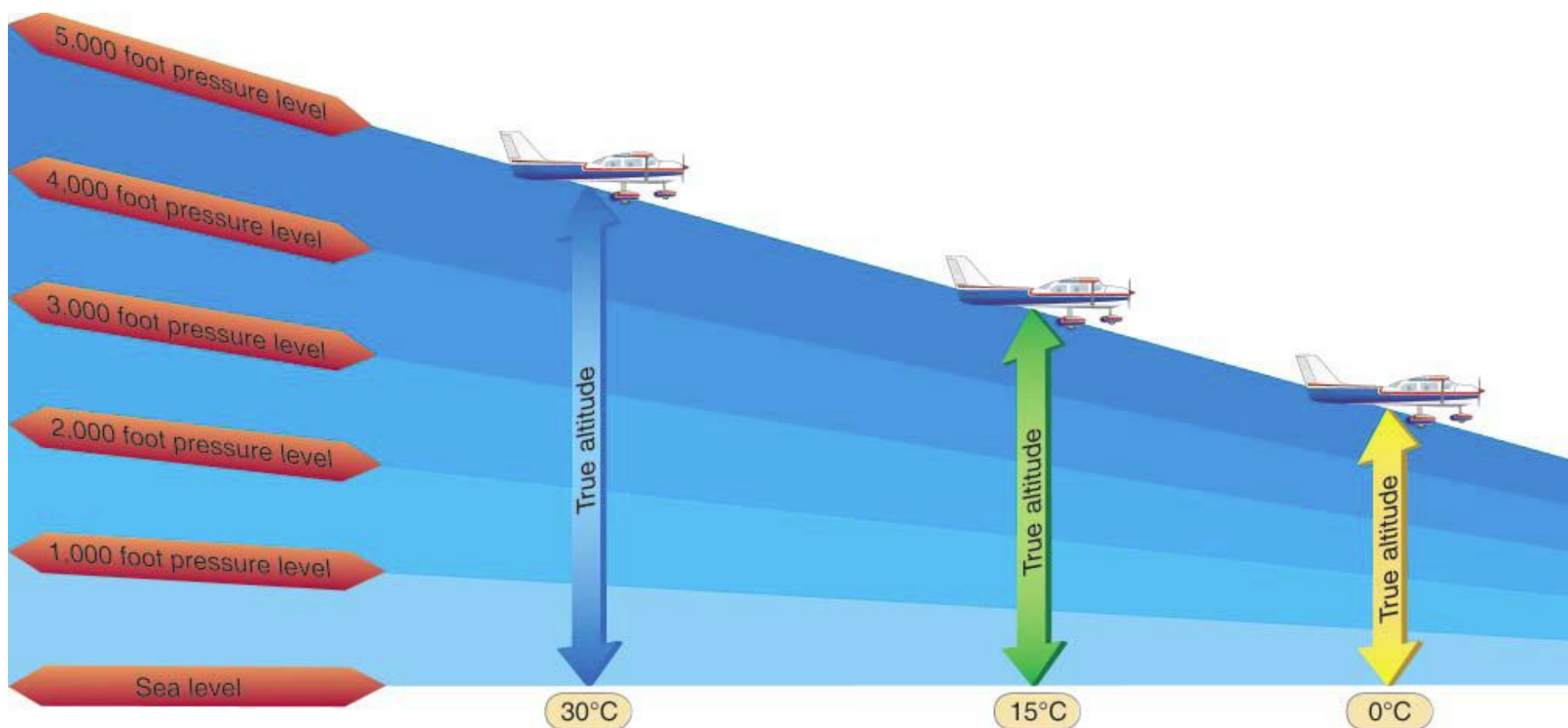
Three-Pointer Altimeter.



Drum-Type Altimeter.



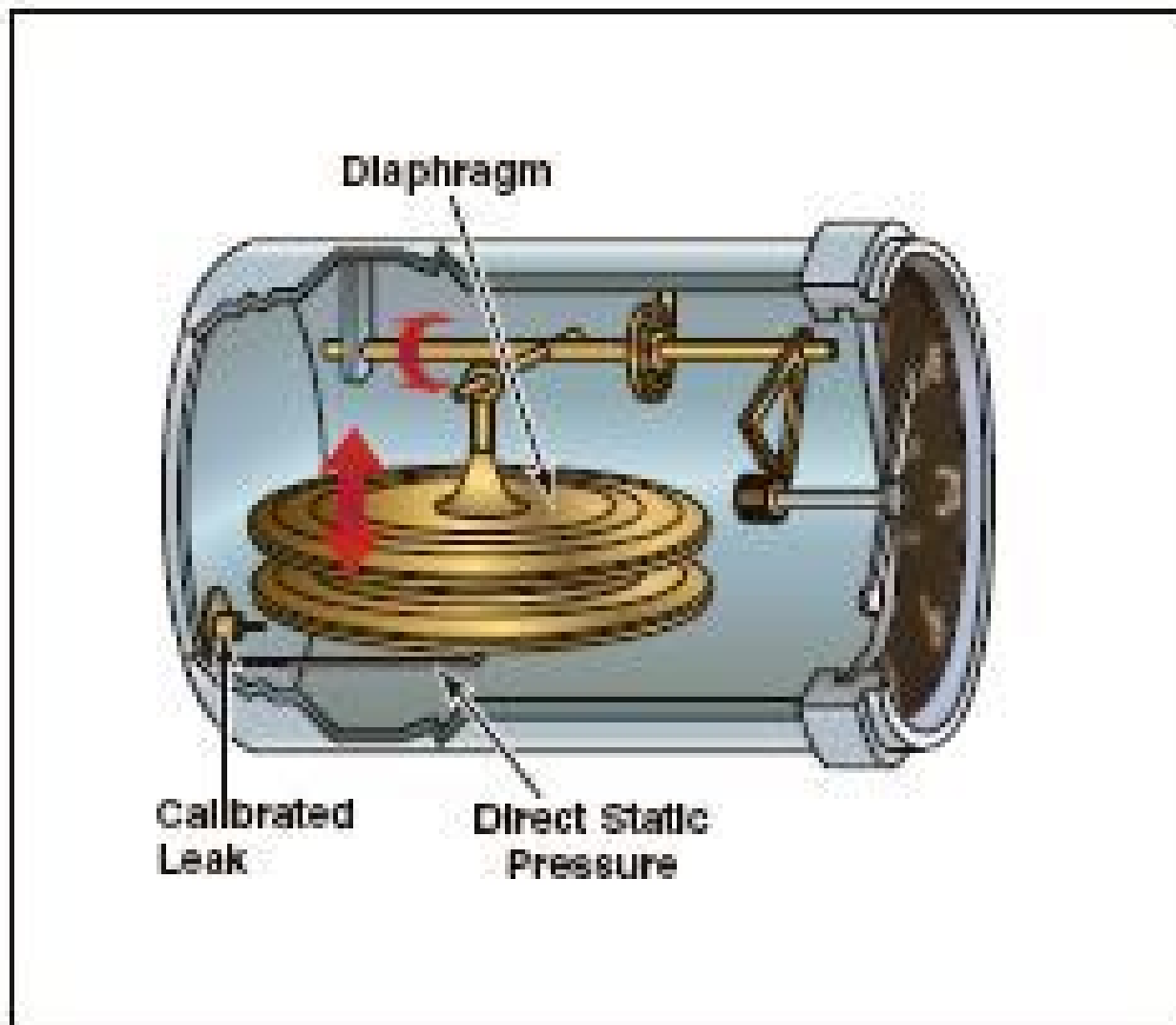
The loss of altitude experienced when flying into an area where the air is warmer (less dense) than standard.



ICAO Cold Temperature Error Table.

		Height Above Airport in Feet													
Reported Temp C°		200	300	400	500	600	700	800	900	1,000	1,500	2,000	3,000	4,000	5,000
	+10	10	10	10	10	20	20	20	20	20	30	40	60	80	90
	0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
	-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
	-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
	-30	40	60	80	100	120	130	150	170	190	280	380	570	760	950
	-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1,210
	-50	60	90	120	150	180	210	240	270	300	450	590	890	1,190	1,500

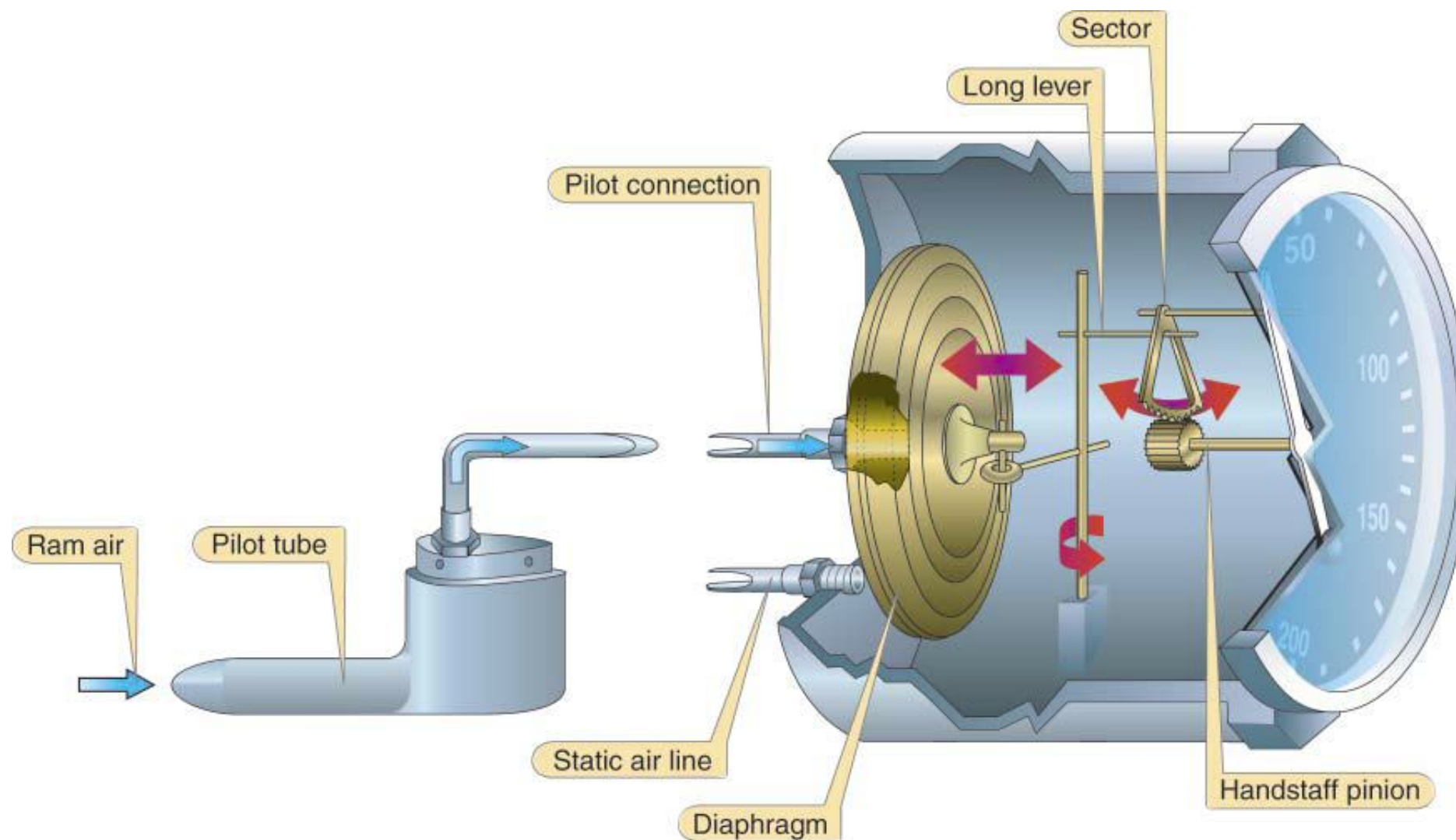
Sensitive Vertical Speed Indicator Components.



Rate of Climb or Descent in Thousands of Feet Per Minute.



Mechanism of an Airspeed Indicator.



A true airspeed indicator allows the pilot to correct IAS for nonstandard temperature and pressure.



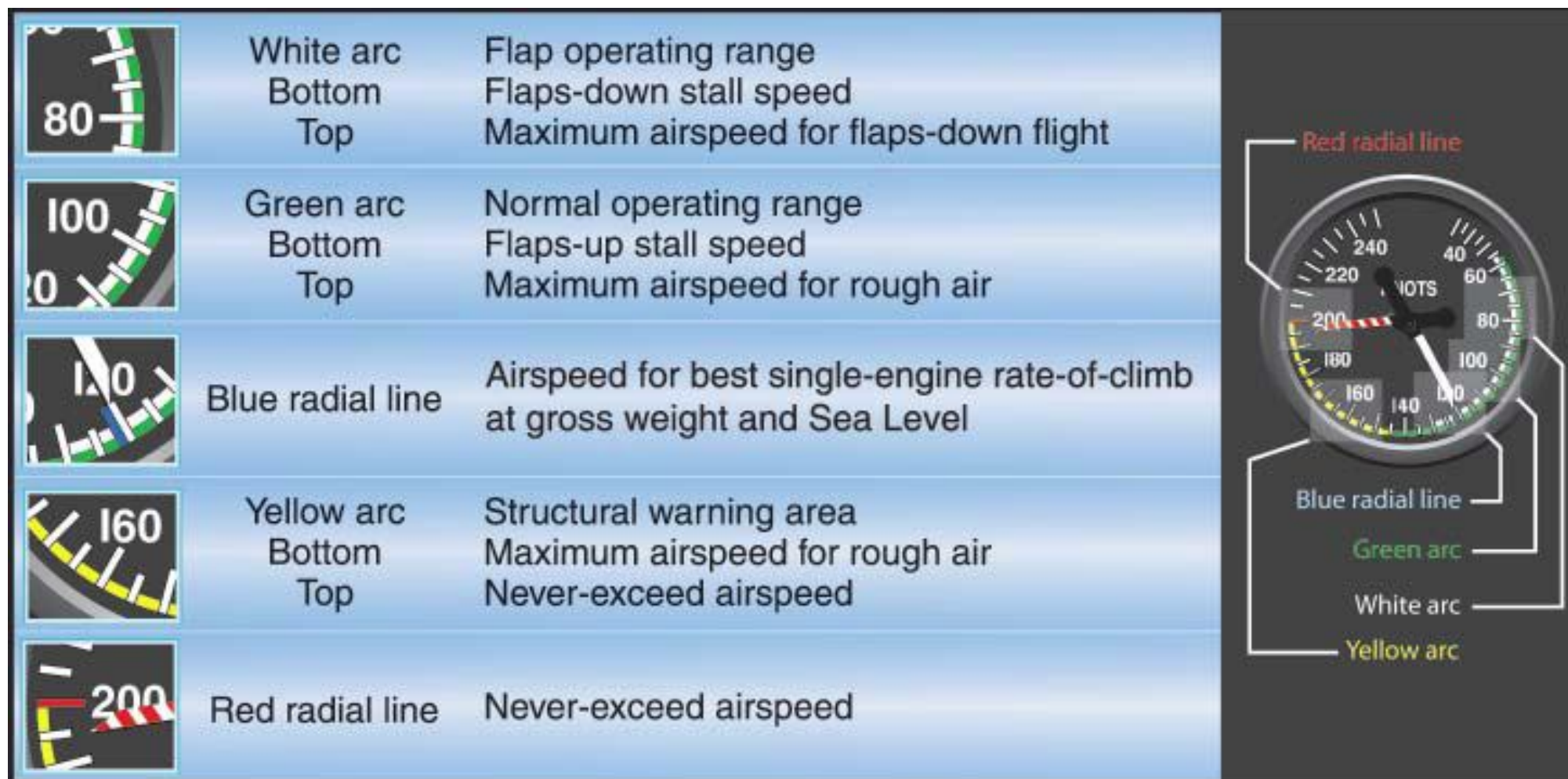
A maximum allowable airspeed indicator has a movable pointer that indicates the never-exceed speed, which changes with altitude to avoid the onset of transonic shock waves.



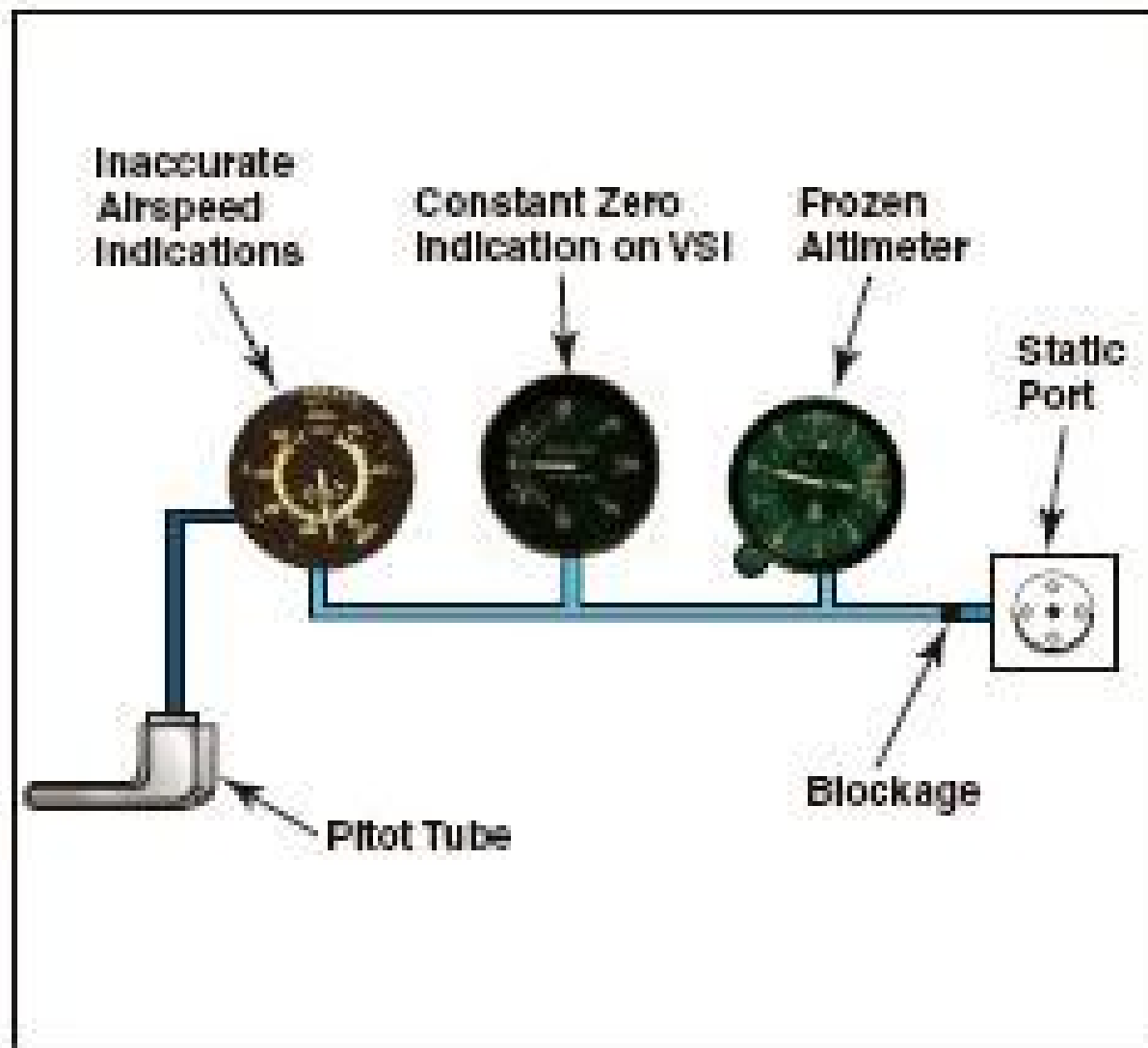
A Machmeter shows the ratio of the speed of sound to the TAS the aircraft is flying.



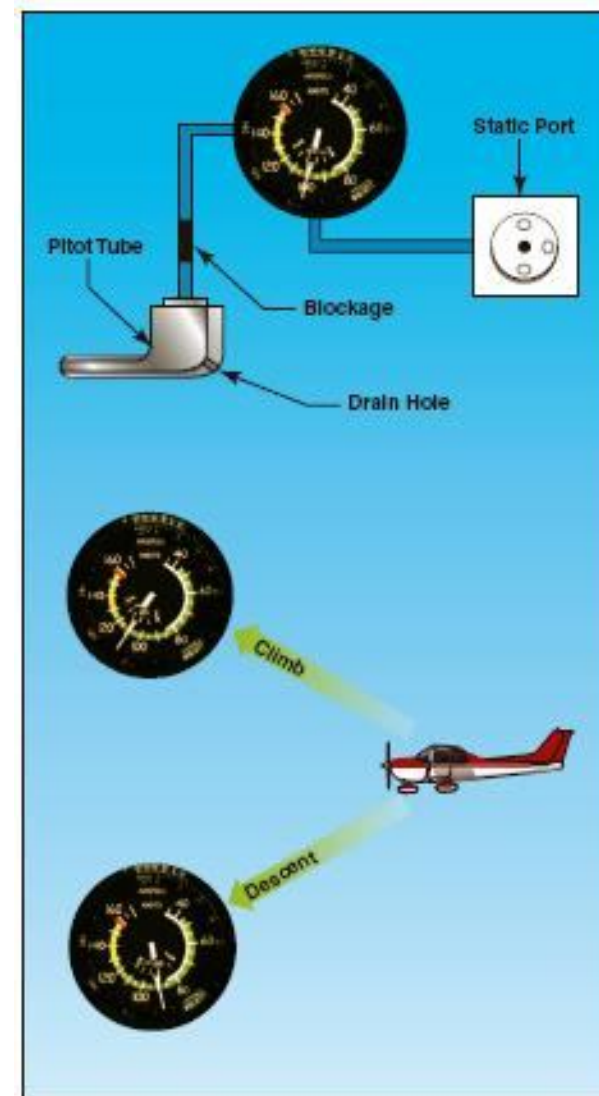
Color Codes for an Airspeed Indicator.



Blocked Static System.



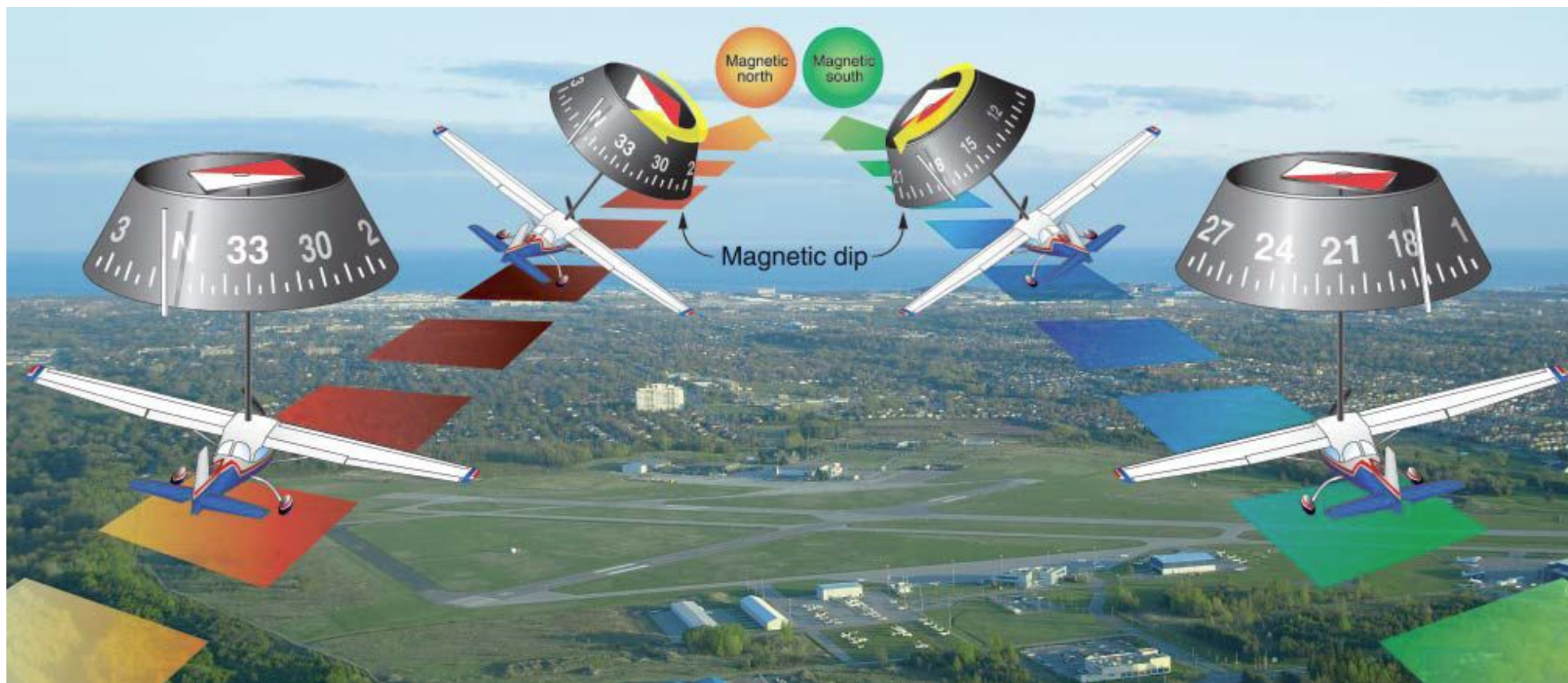
Blocked Pitot System with clear static system.



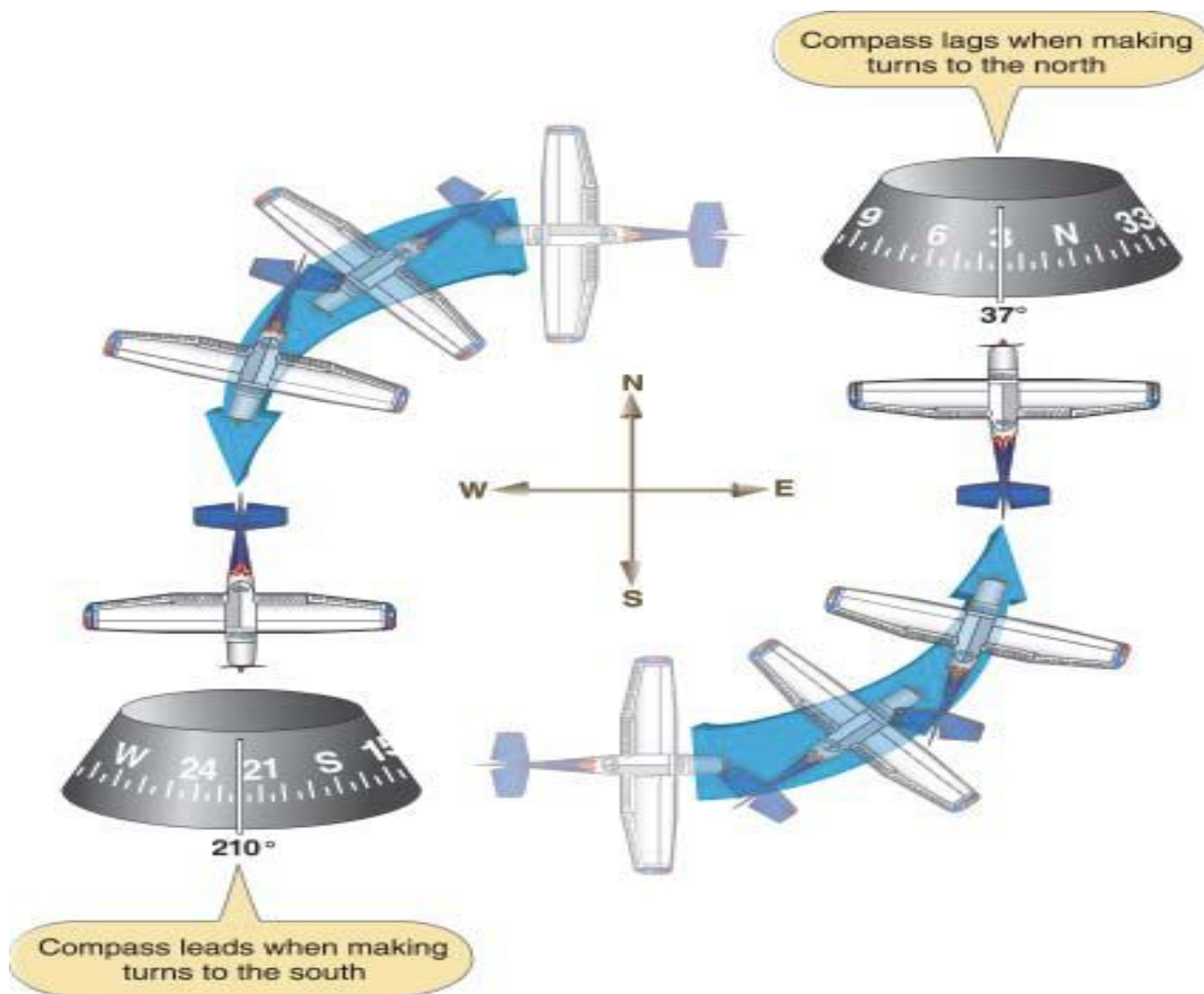
A Magnetic Compass. The vertical line is called the lubber line.



Northerly Turning Error.



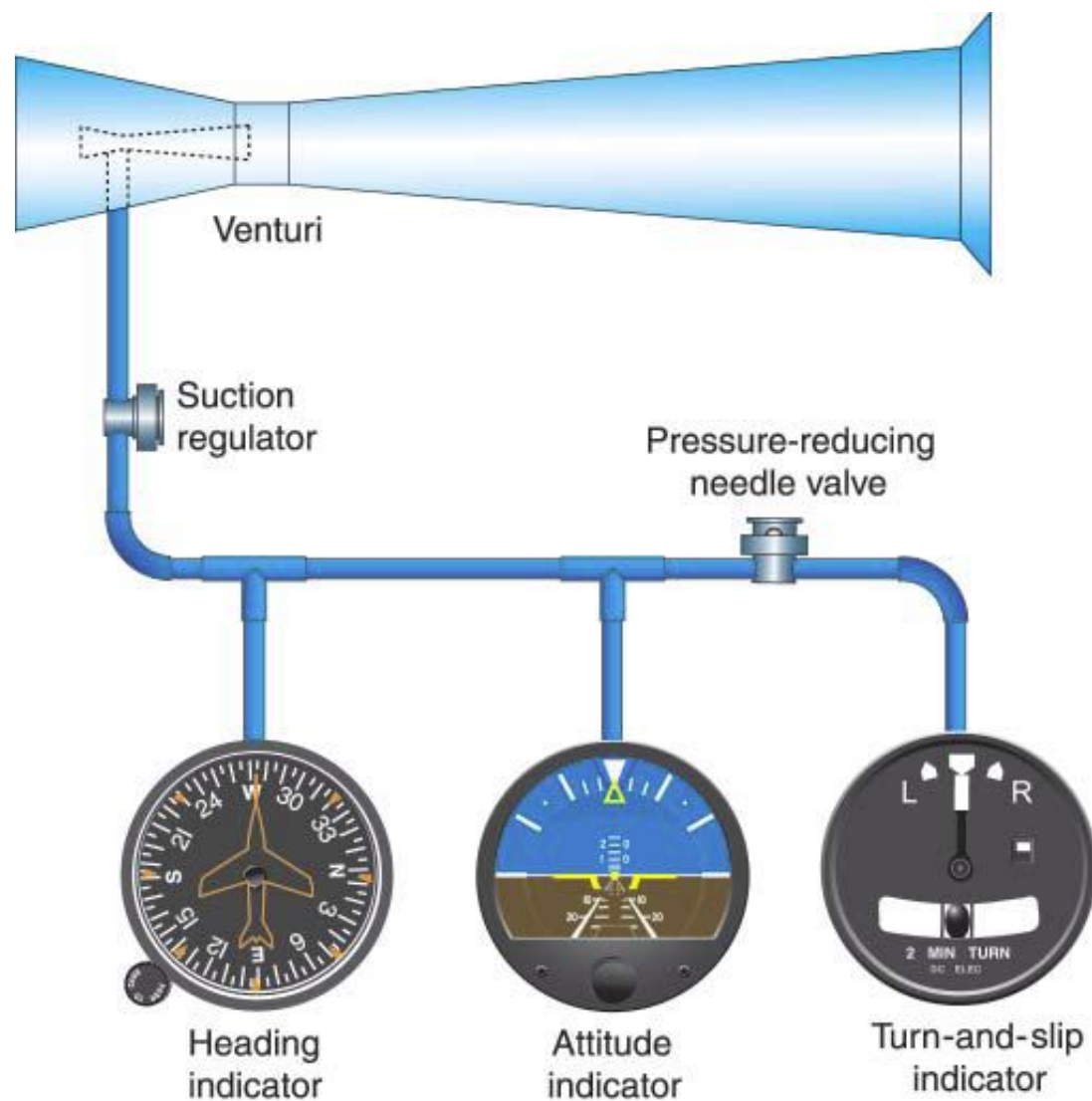
North and South Turn Error.



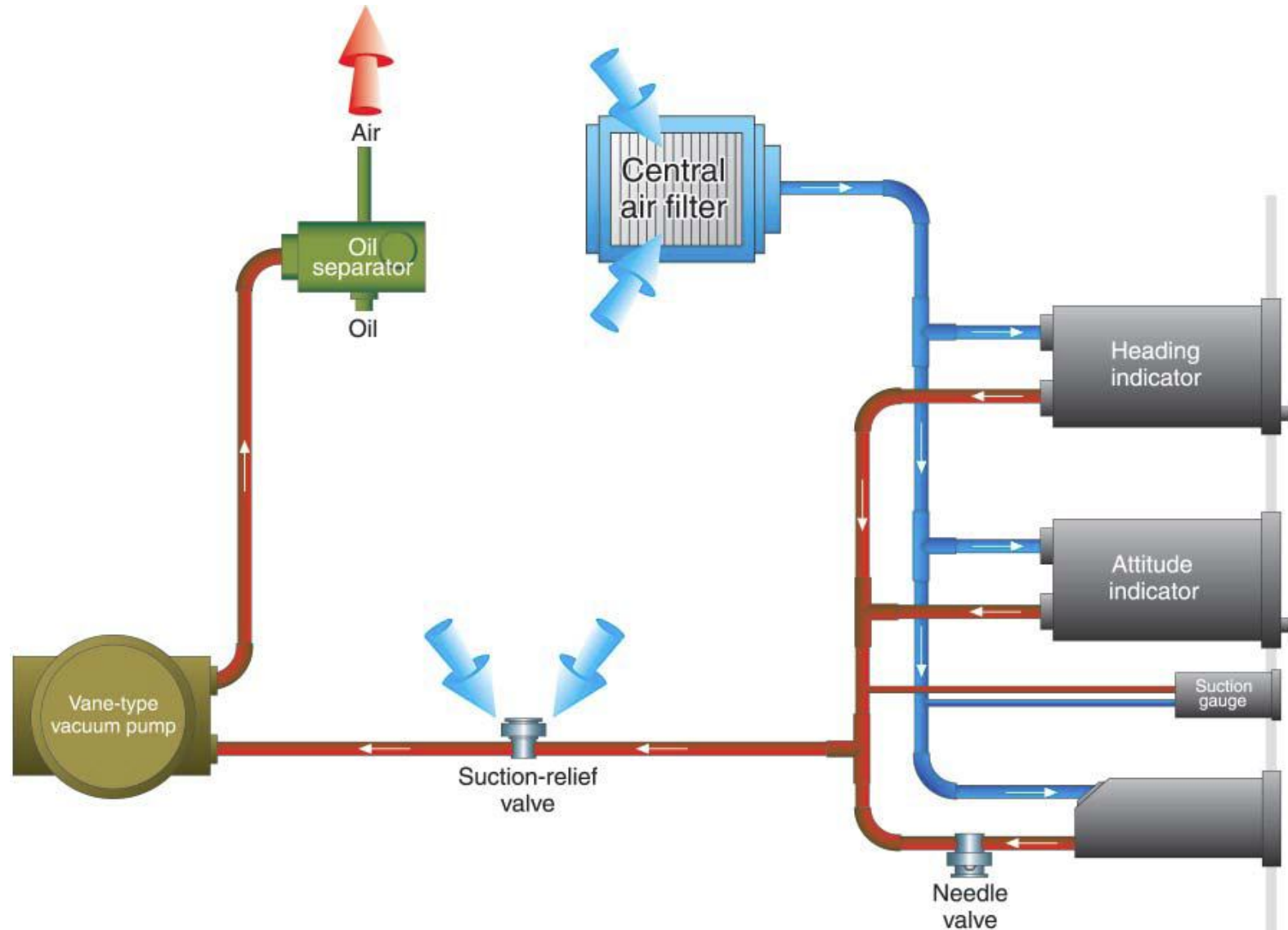
The Effects of Acceleration Error.



A venturi tube system that provides necessary vacuum to operate key instruments.



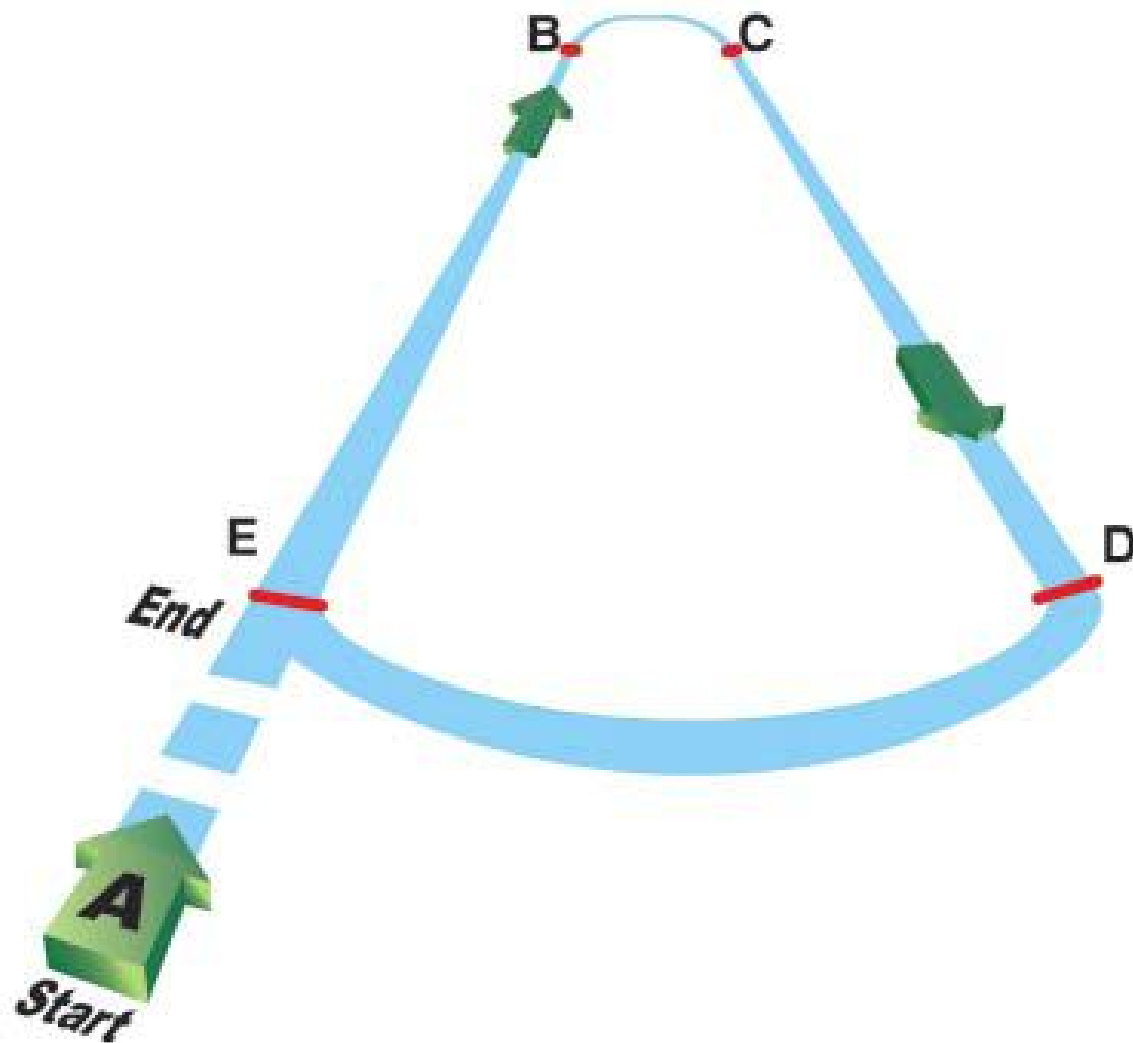
Single-engine instrument vacuum system using a steel-vane wet-type vacuum pump.



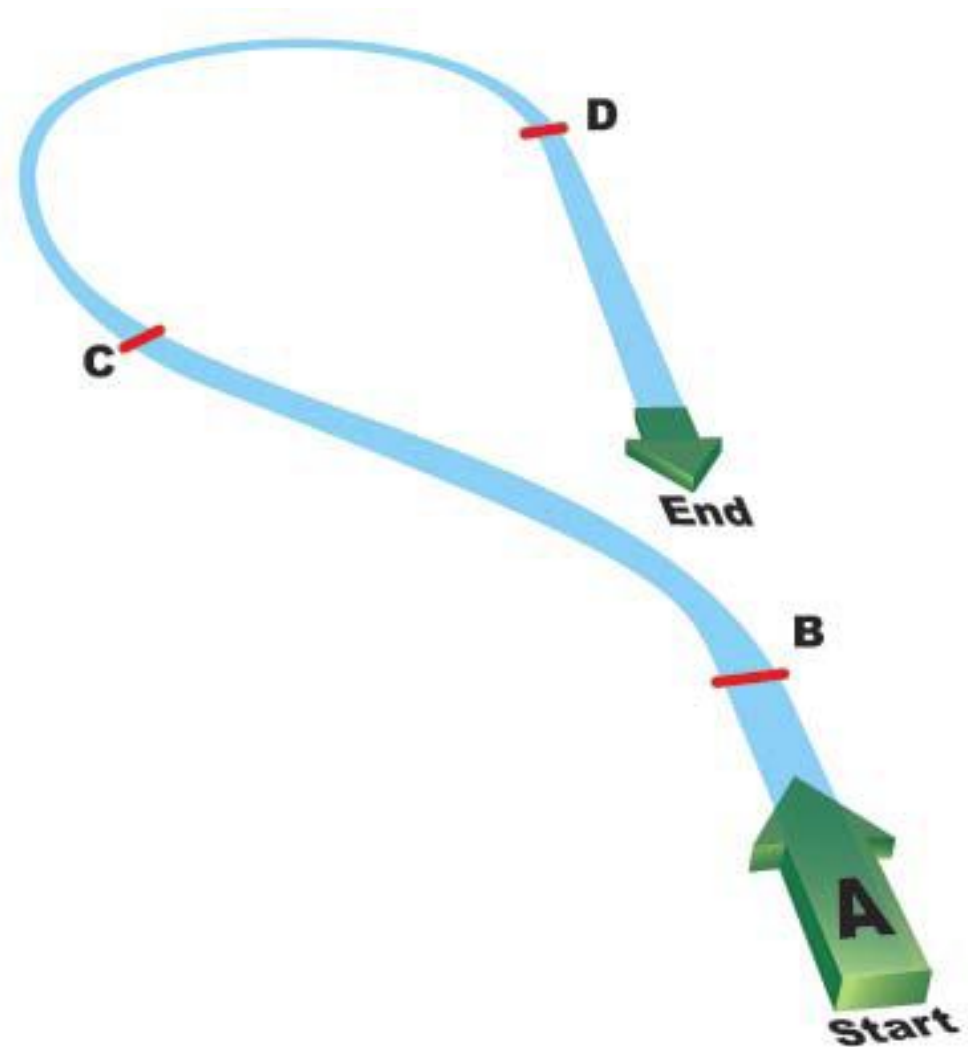
The dial of this attitude indicator has reference lines to show pitch and roll.



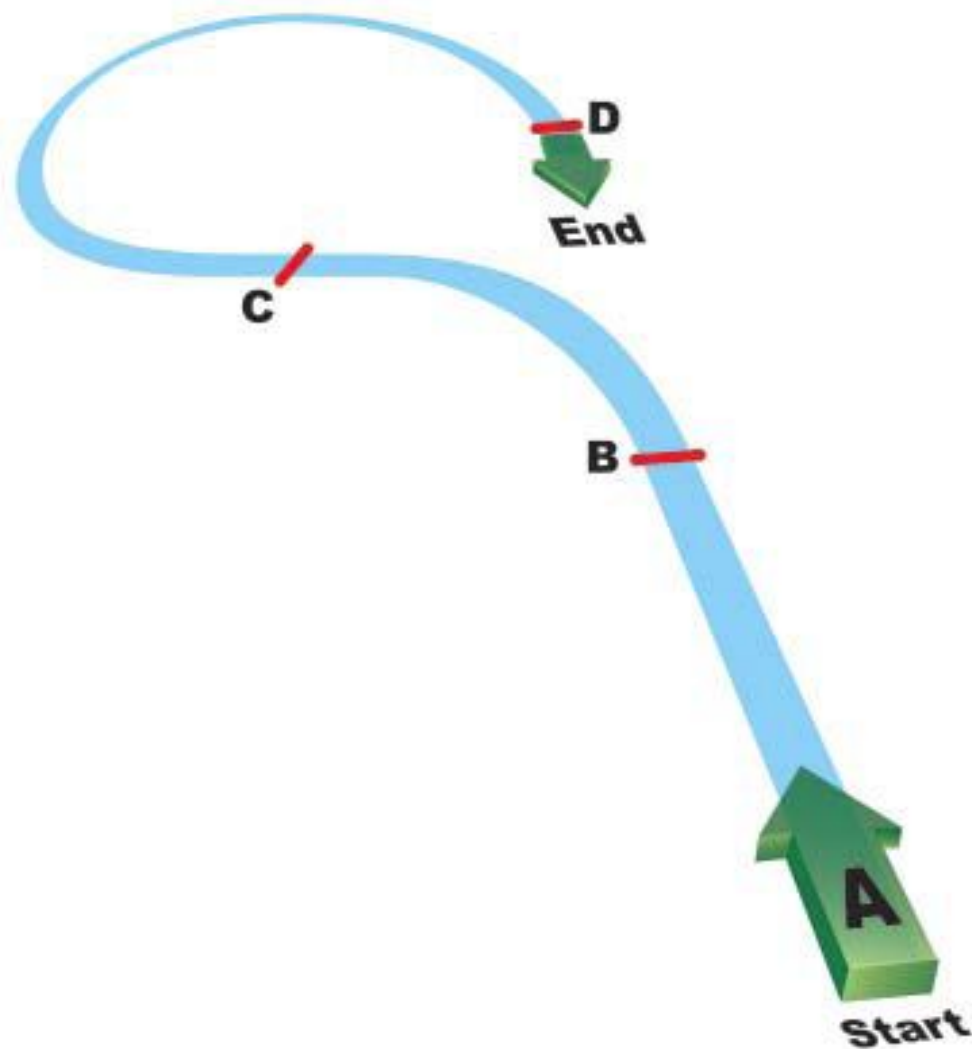
Racetrack Pattern (Entire Pattern in Level Flight).



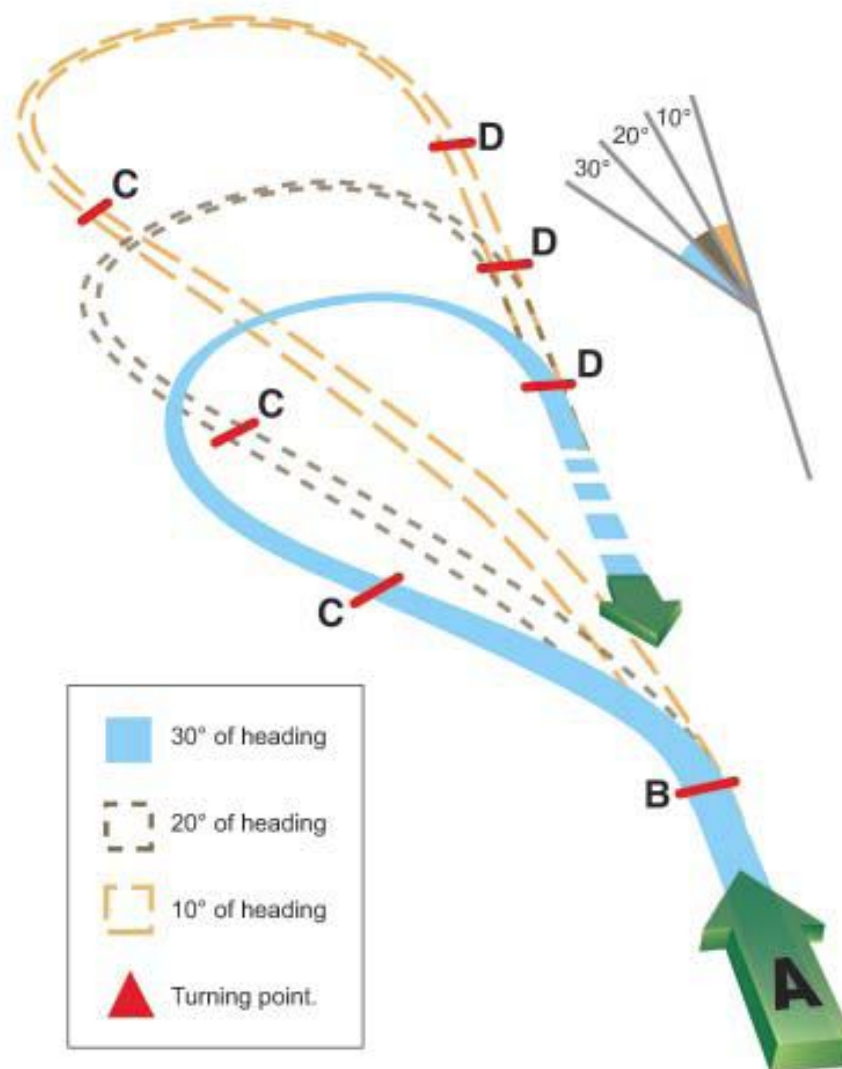
Standard Procedure Turn (Entire Pattern in Level Flight).



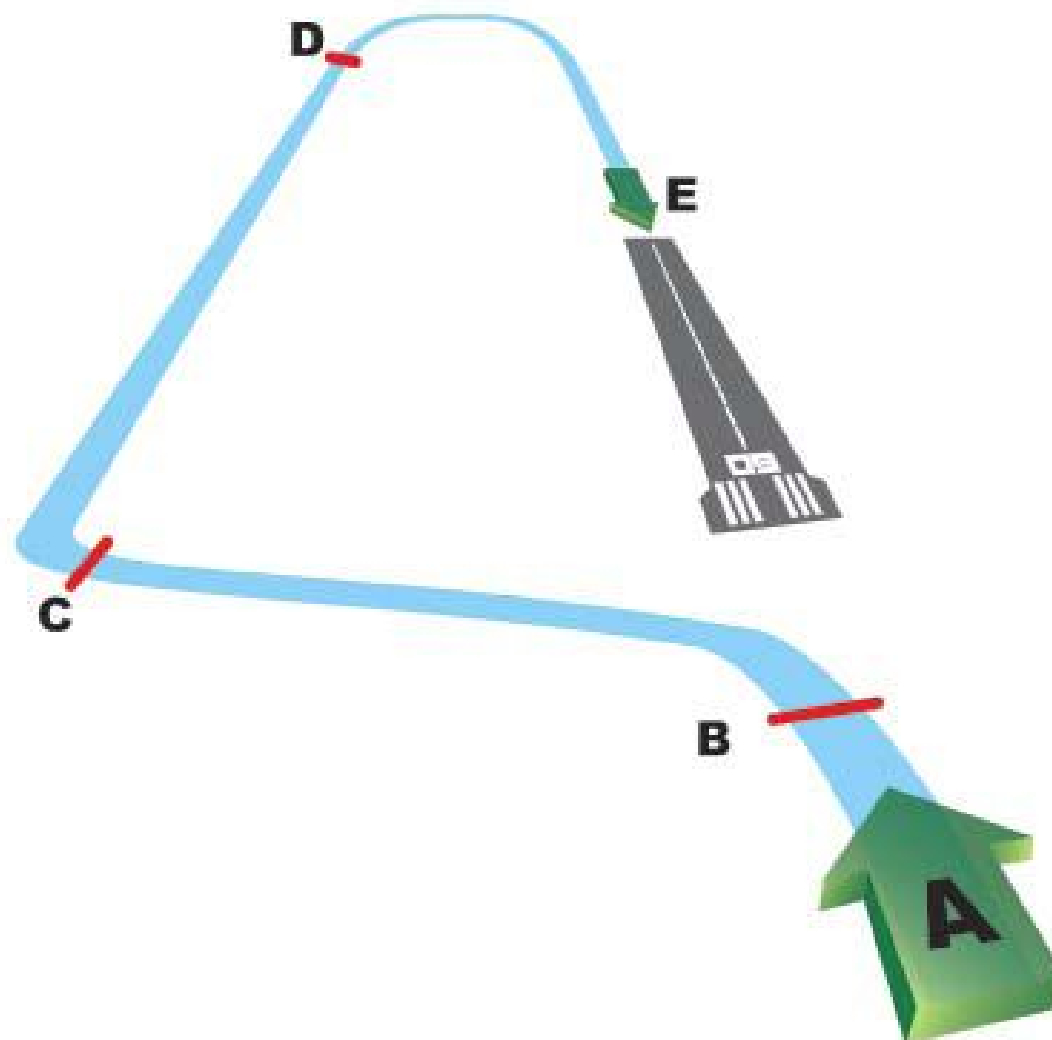
80/260 Procedure Turn (Entire Pattern in Level Flight).



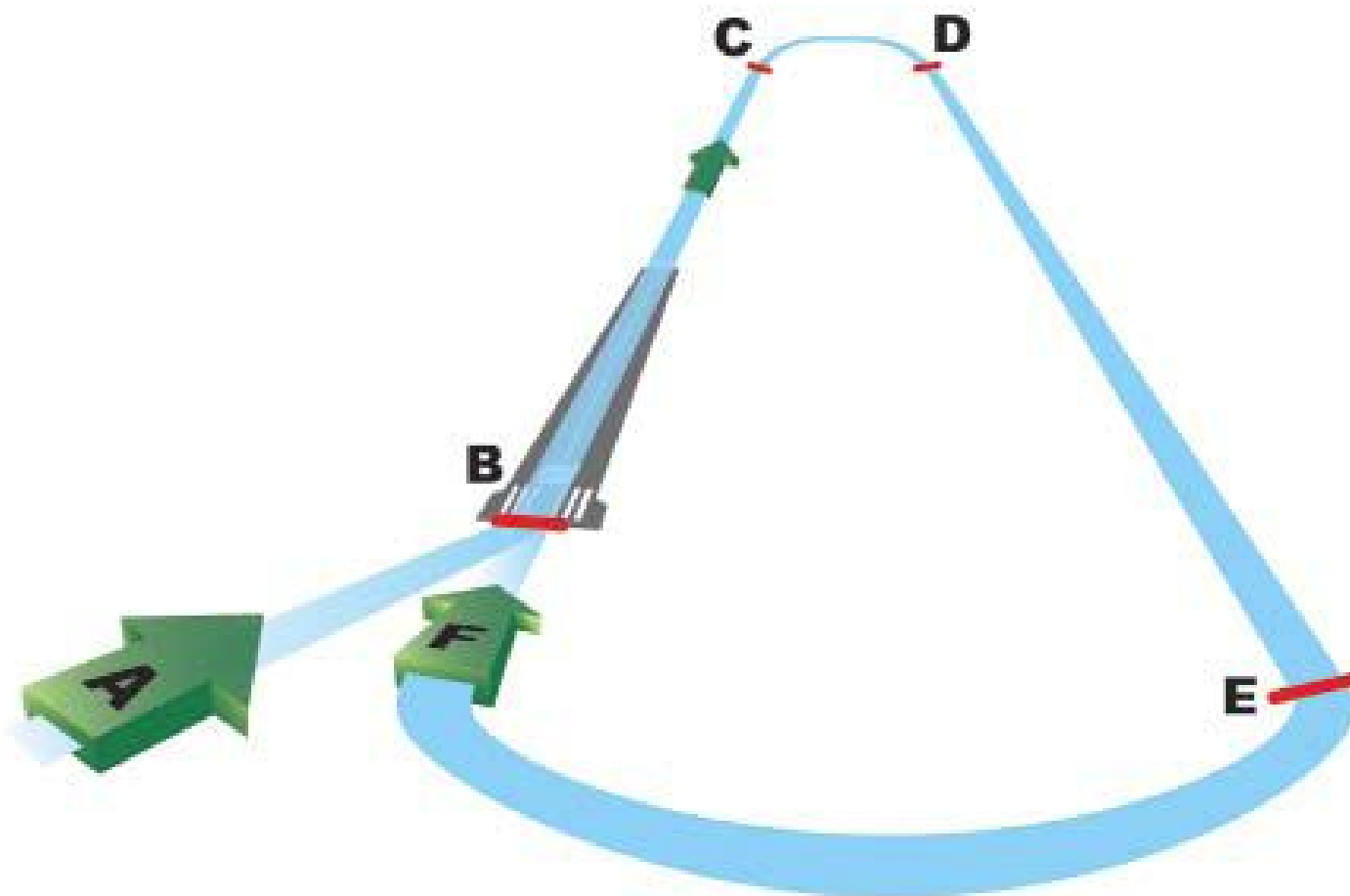
Teardrop Pattern (Entire Pattern in Level Flight).



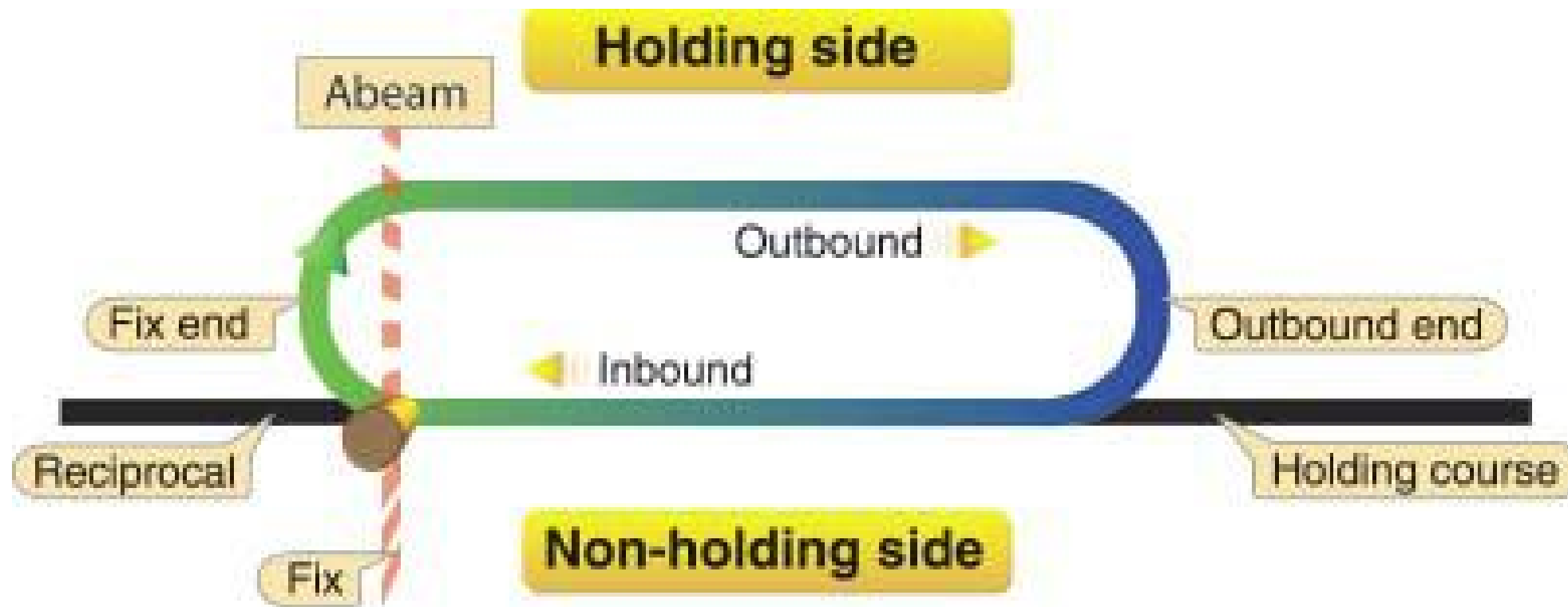
Circling Approach Pattern I (Imaginary Runway).



Circling Approach Pattern II (Imaginary Runway).



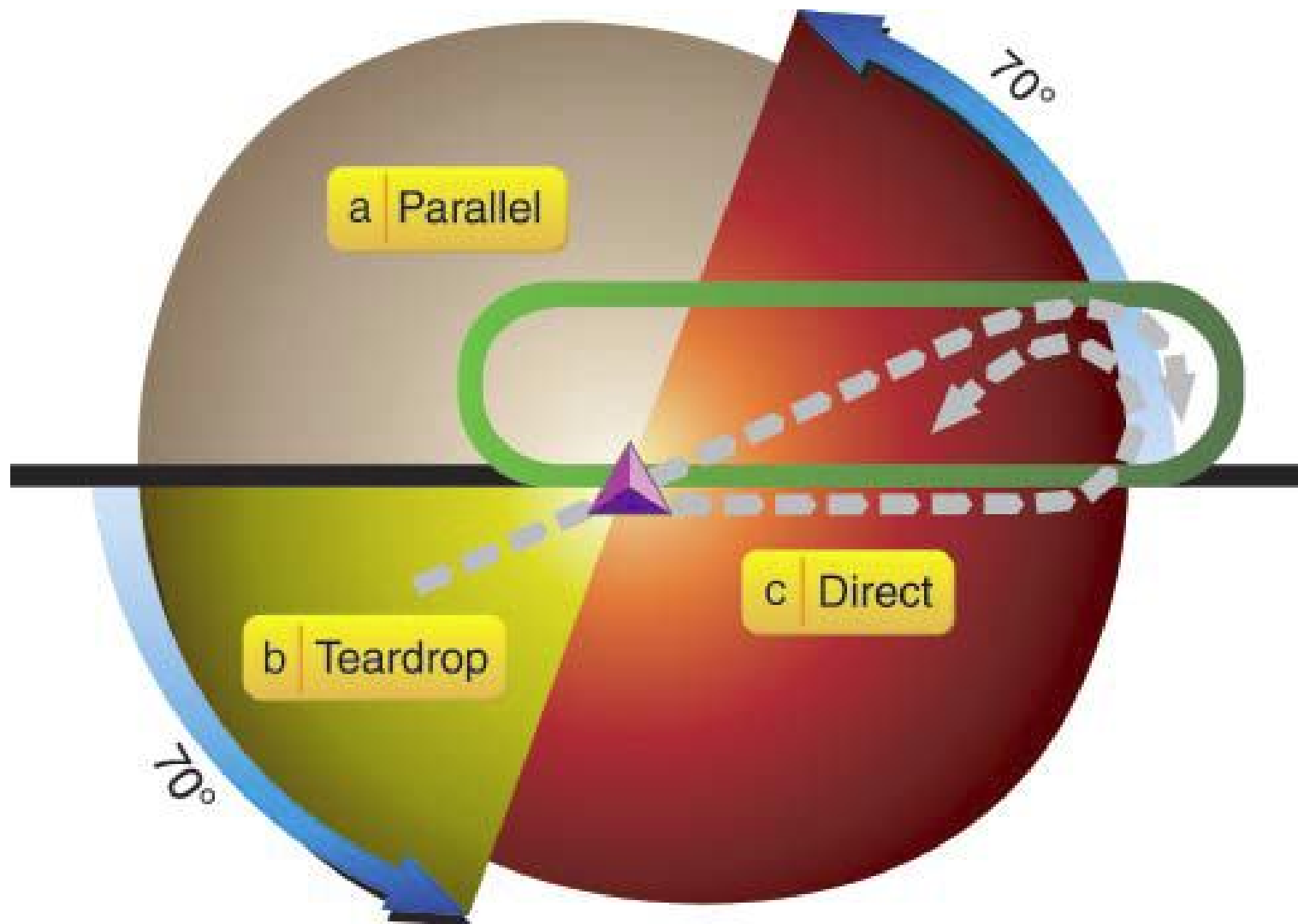
Standard Holding Pattern – No Wind.



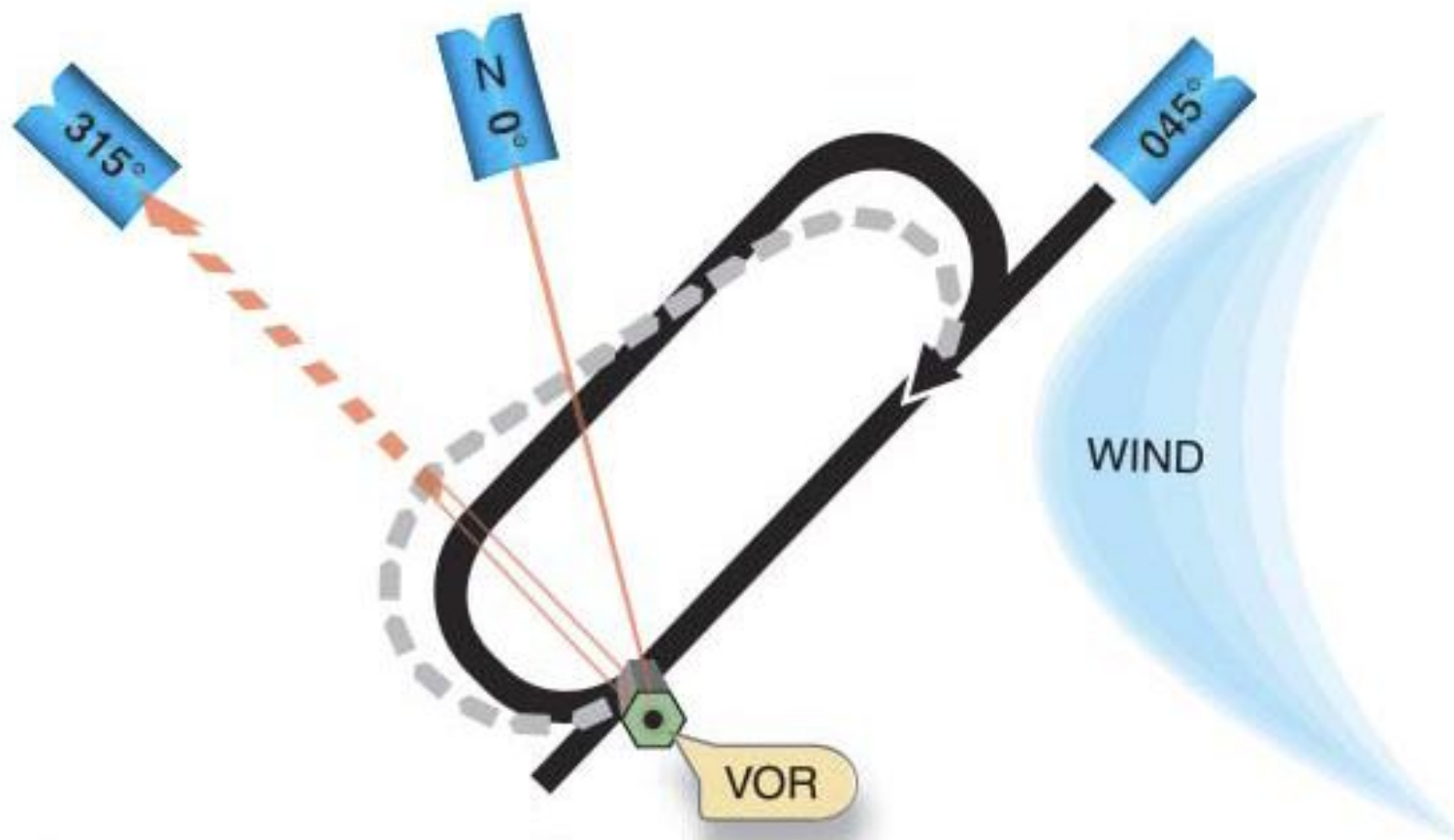
Standard pattern: Right turns (illustrated)

Non-standard pattern: Left turns

Holding Pattern Entry Procedures.

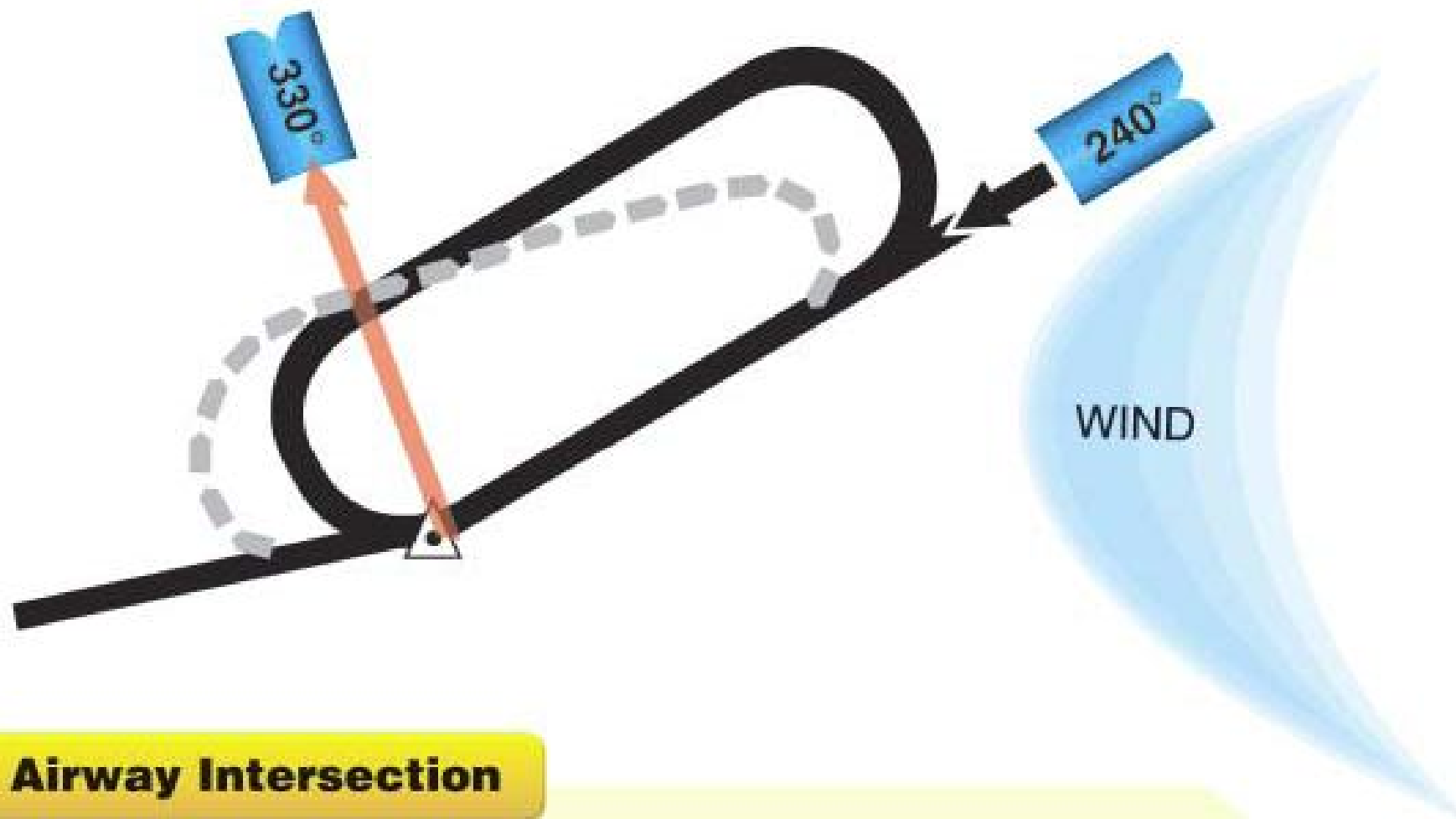


Holding – Outbound Timing.



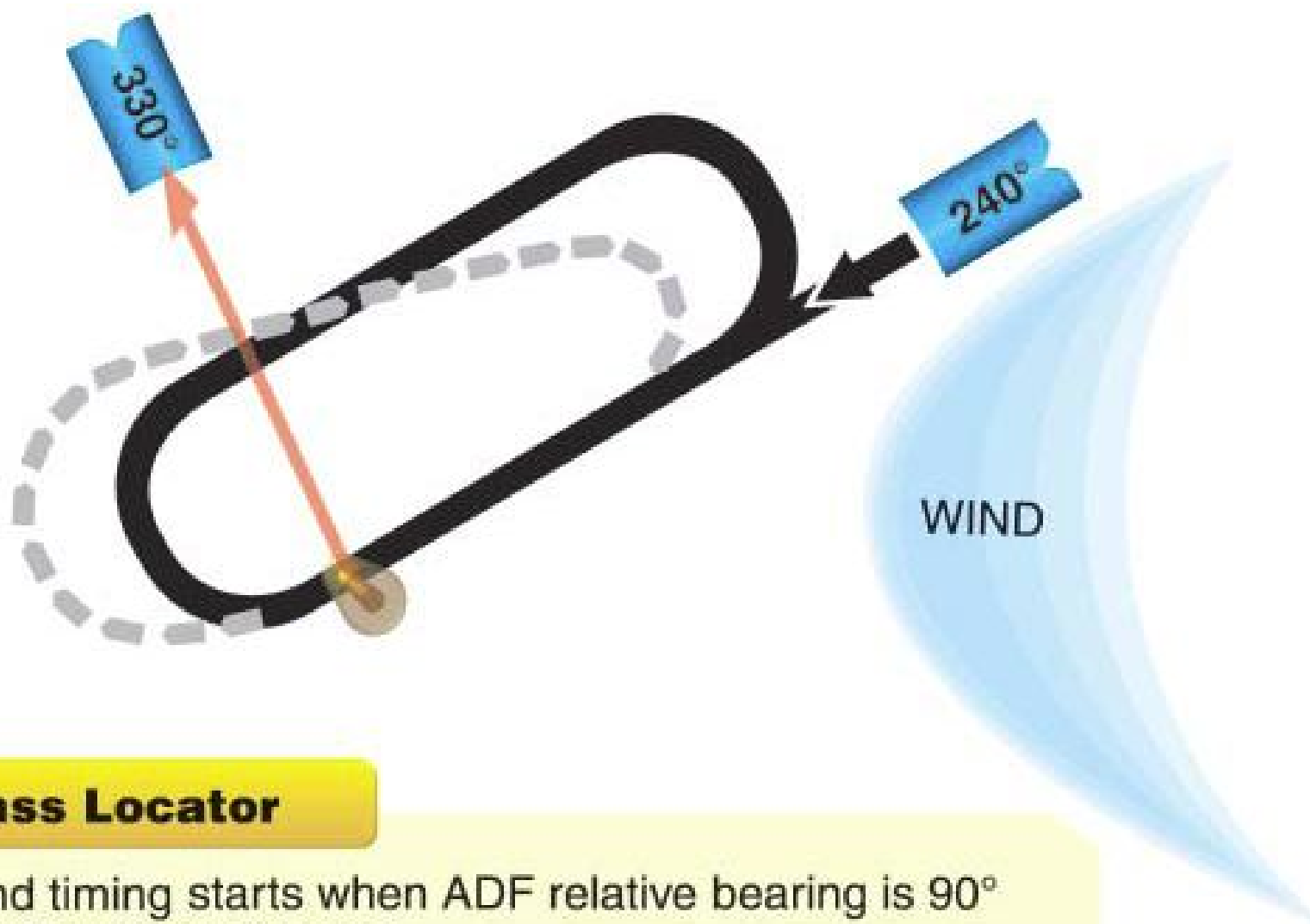
VOR

Outbound timing starts when TO/FROM indicator reverses.



Airway Intersection

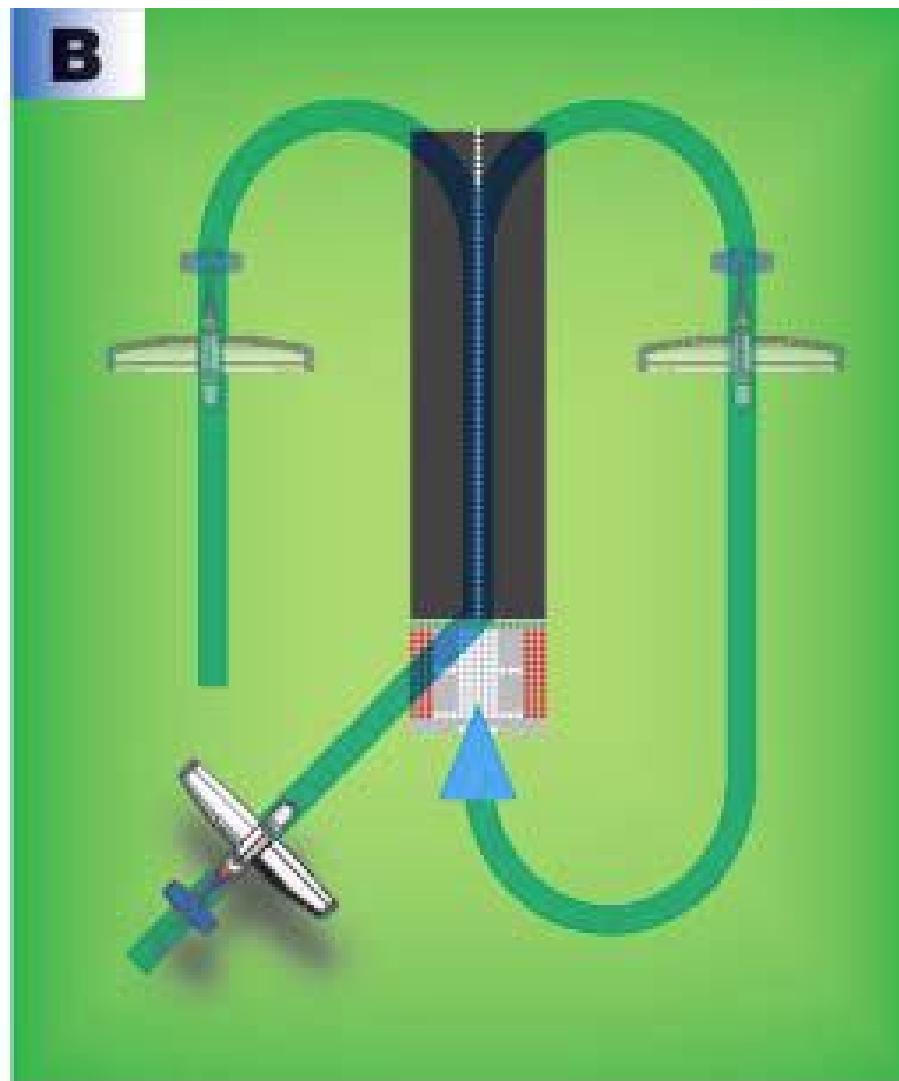
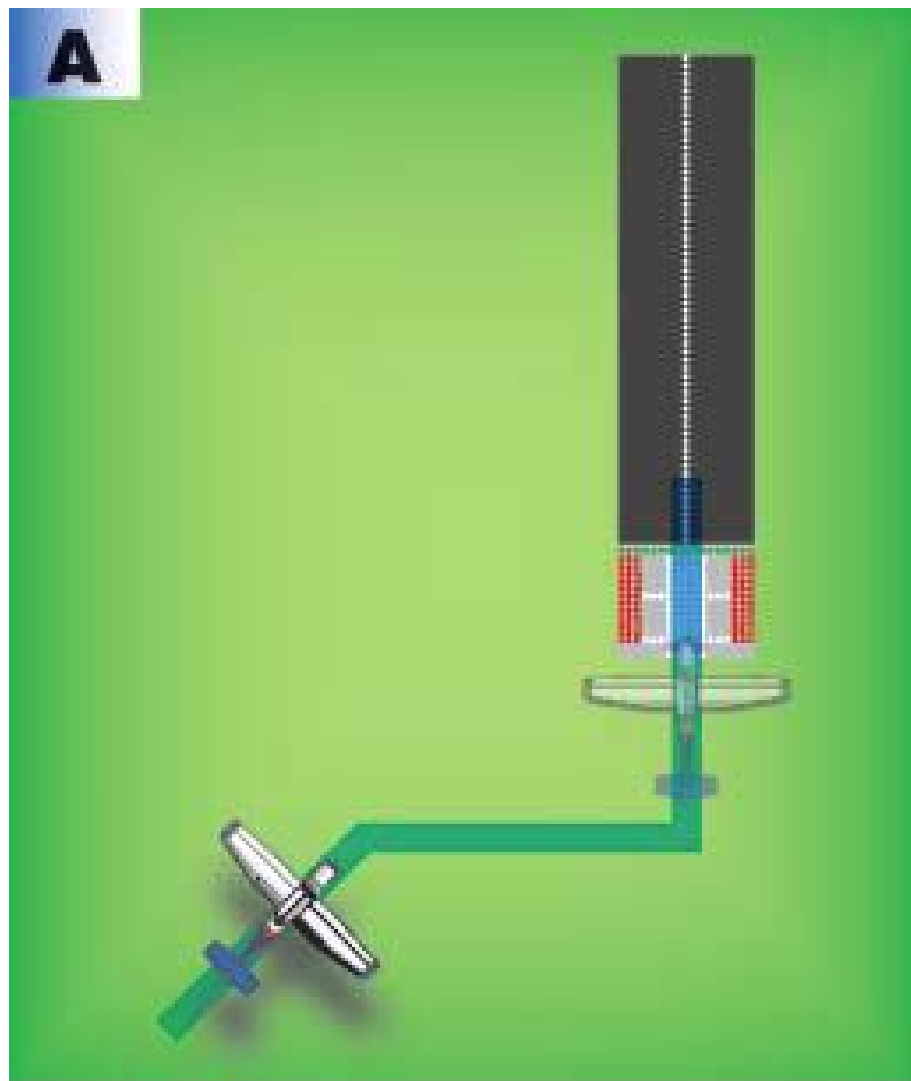
Outbound timing starts at completion of outbound turn, since 330° magnetic bearing cannot be determined.

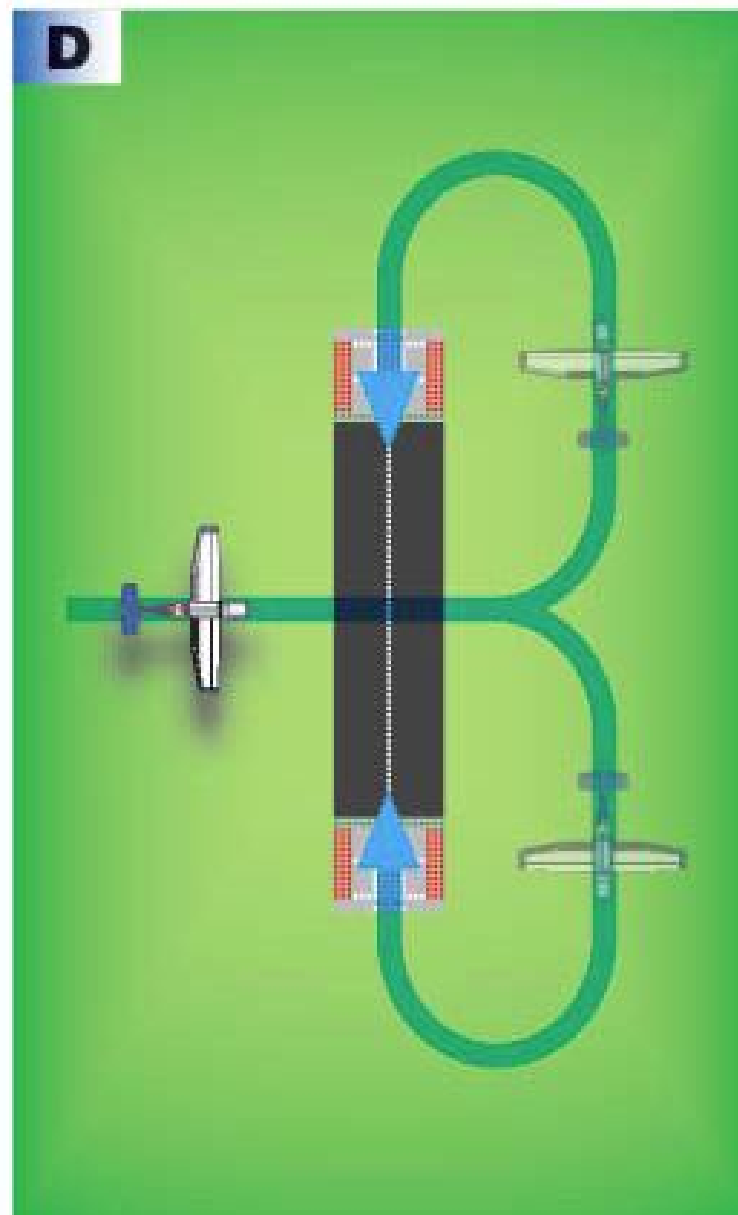
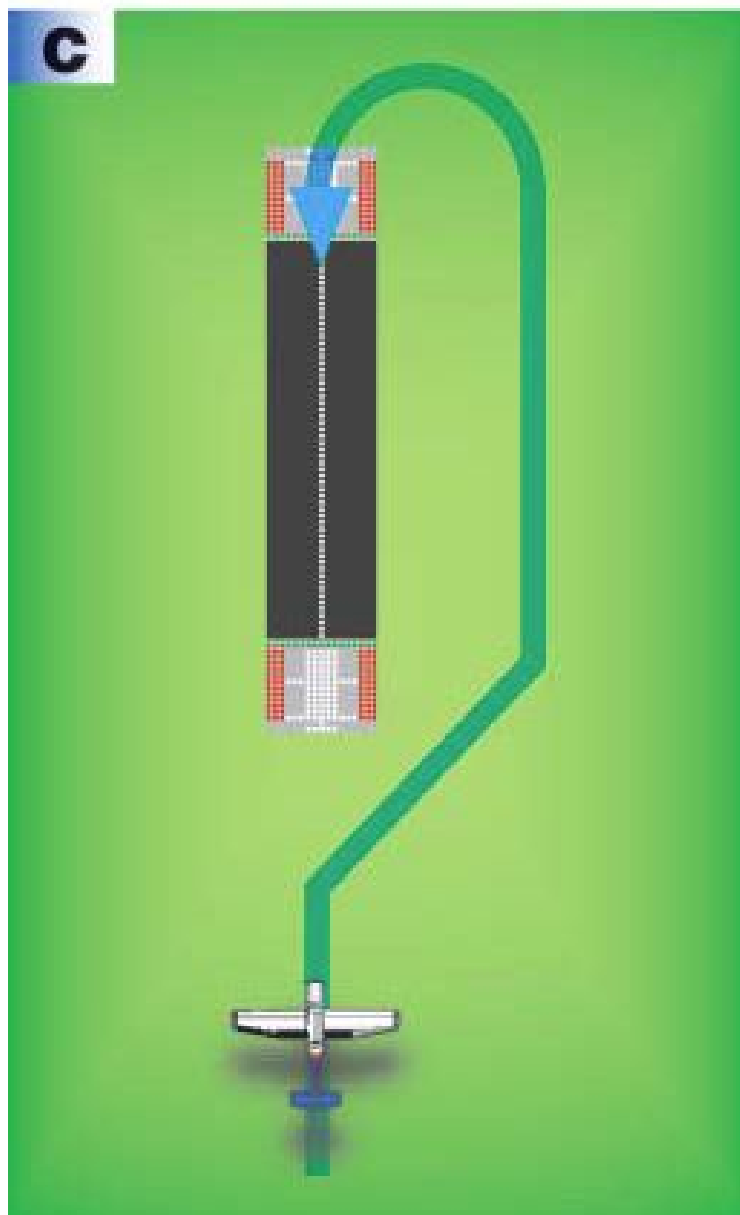


Compass Locator

Outbound timing starts when ADF relative bearing is 90° minus drift correction angle.

Circling Approaches.

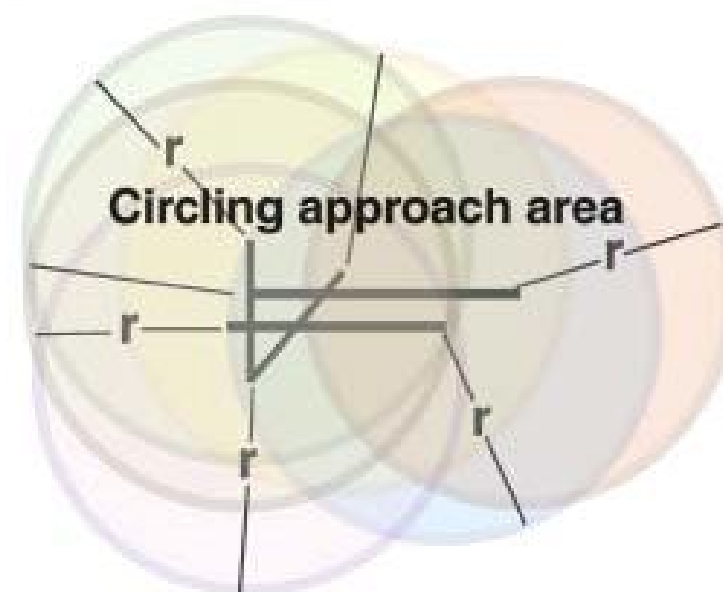




Пилотажно-навигационное оборудование самолета Cessna 172SP NAV III.
Выполнил: Зарубин С.М.

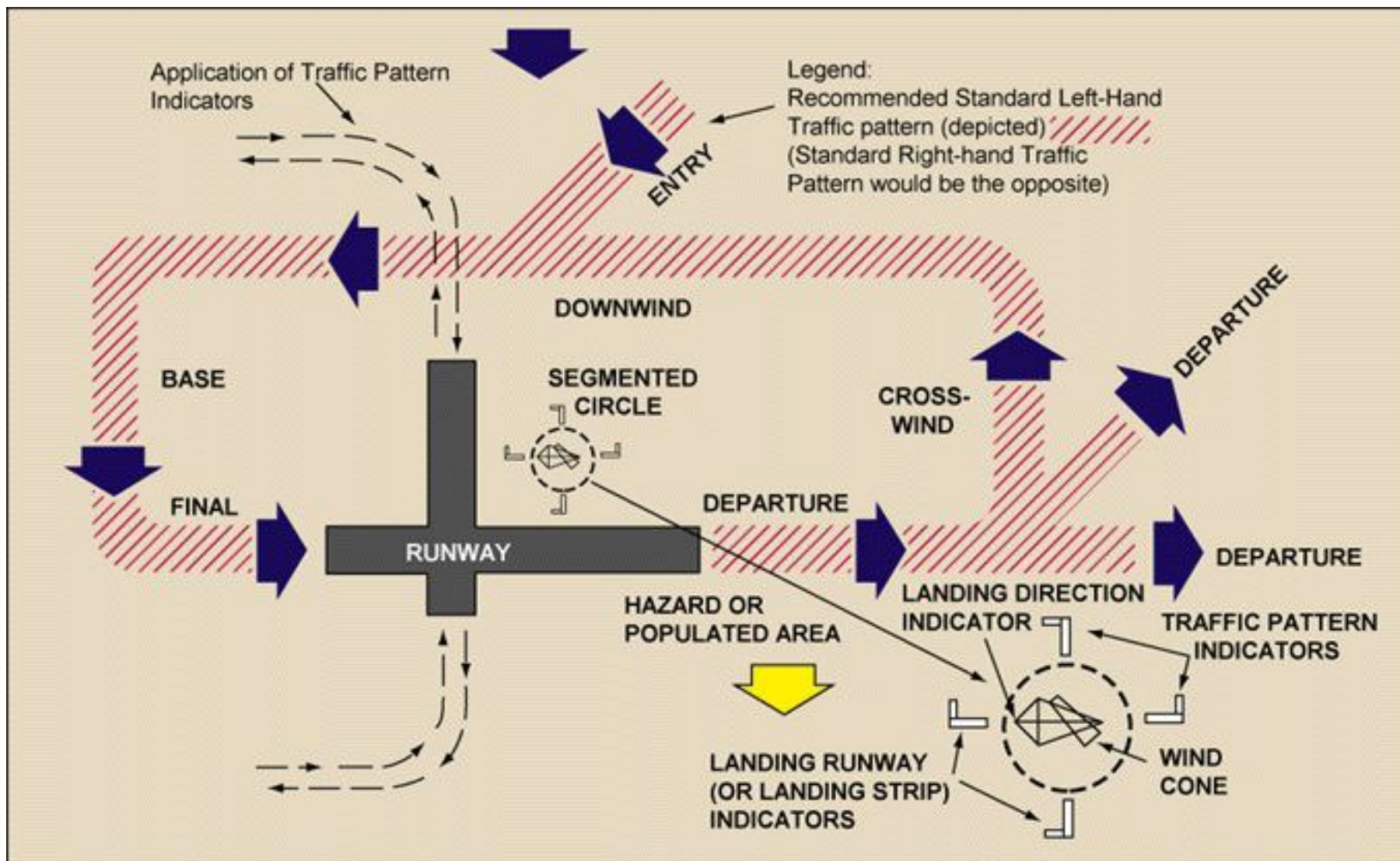
Circling Approach Area Radii (USA).

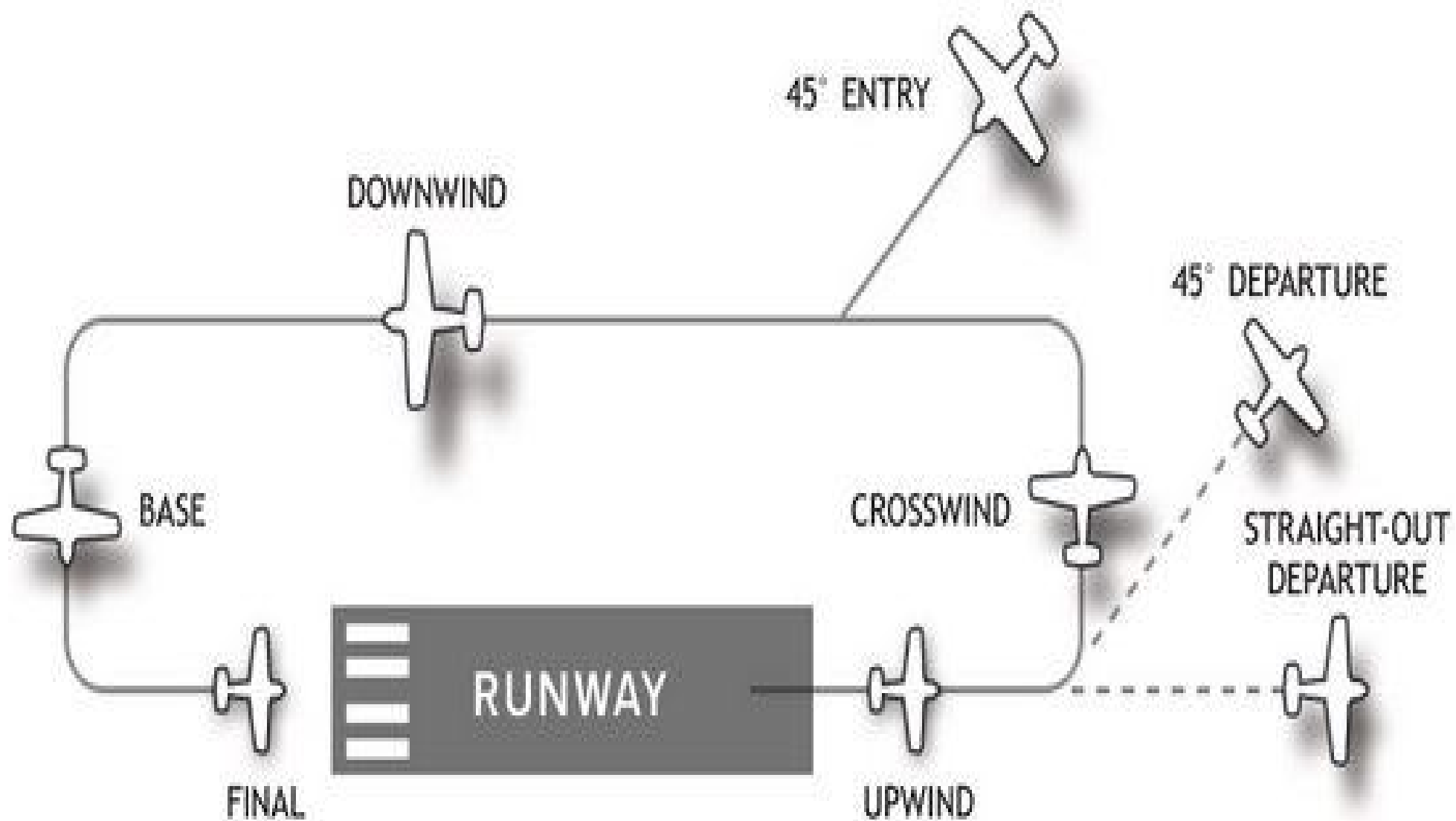
Approach Category	Radius (miles)
Class A	1.3
Class B	1.5
Class C	1.7
Class D	2.3
Class E	4.5

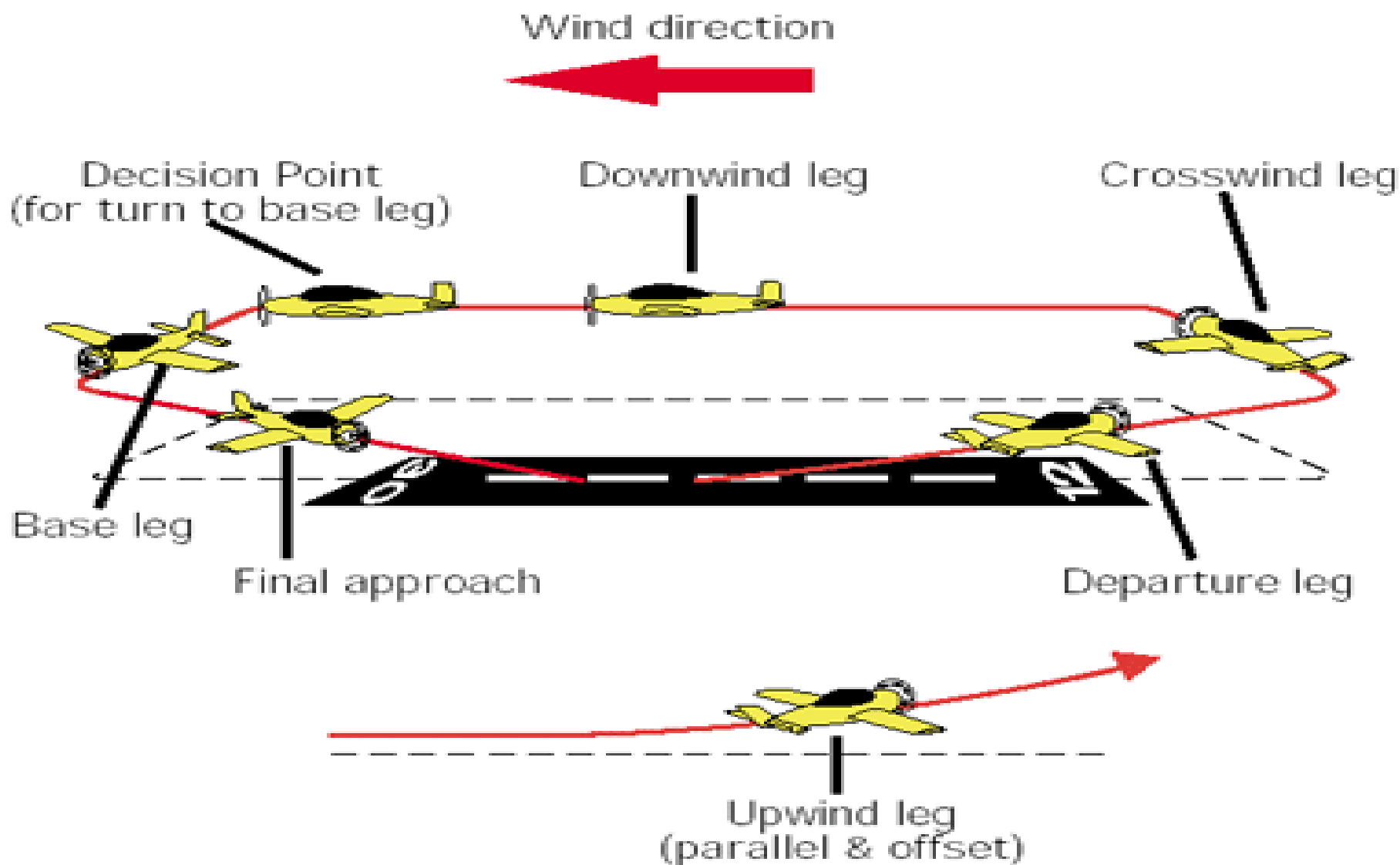


Defining size of areas, radii (r) vary with the approach category

The Traffic Pattern









THE END