LOGISTICS UPDATE

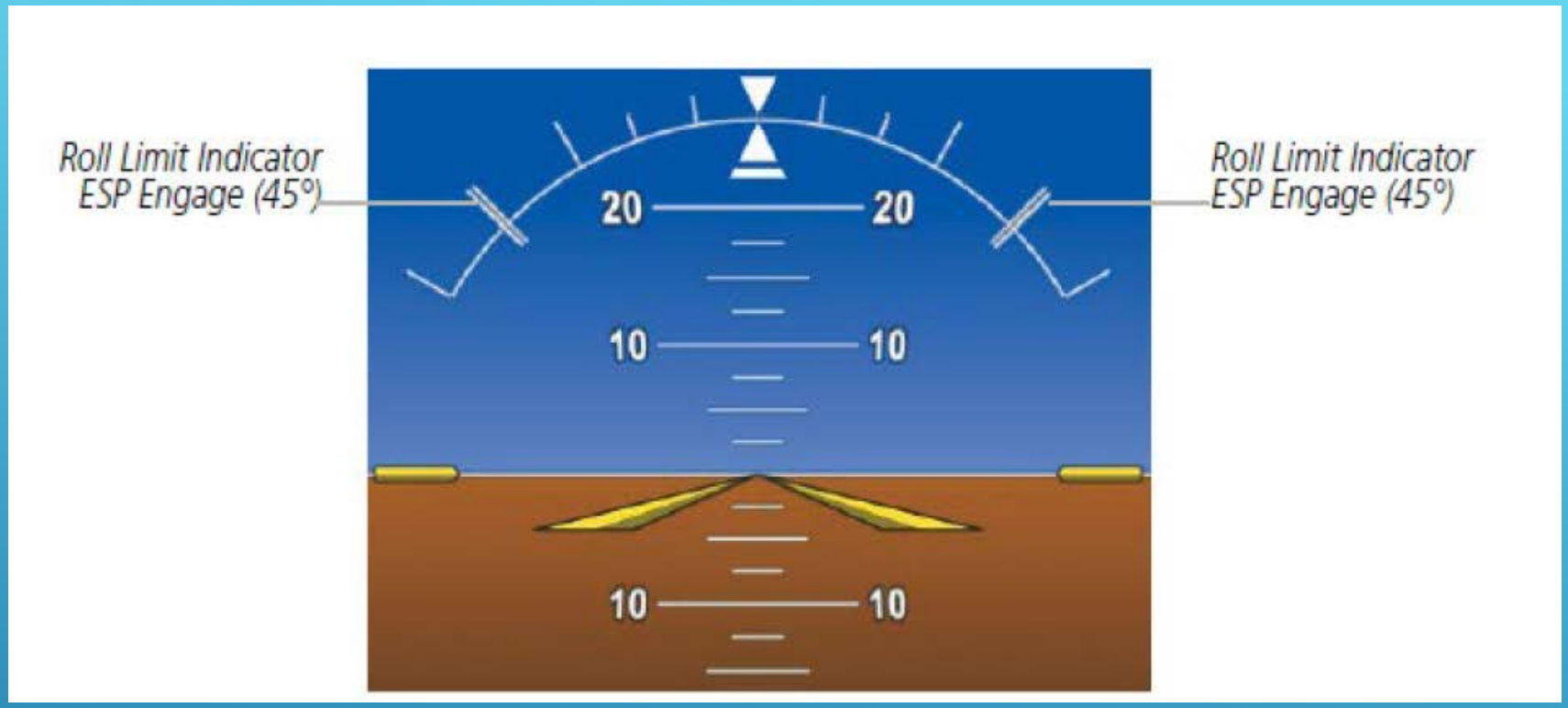
Garmin Electronic Stability System (ESP™)

- ESP provides safety enhancements to aid pilots against loss of control situations
- It is intended to help alert and assist pilots when operation outside the normal flight envelope occurs
- It can be disabled or overridden at any time

GARMIN ESP™

GARMIN ESP™

- ESP functions when the aircraft meets the following conditions
  - Aircraft in flight
  - Aircraft above 200 ft AGL
  - Autopilot not engaged
  - Aircraft is within maximum engagement range of Pitch (+/-50º) and Bank (+/-75º)



System is enabled and monitoring flight parameters when the double lines are present at the 45° point on the roll scale

GARMIN ESP™

GARMIN ESP™

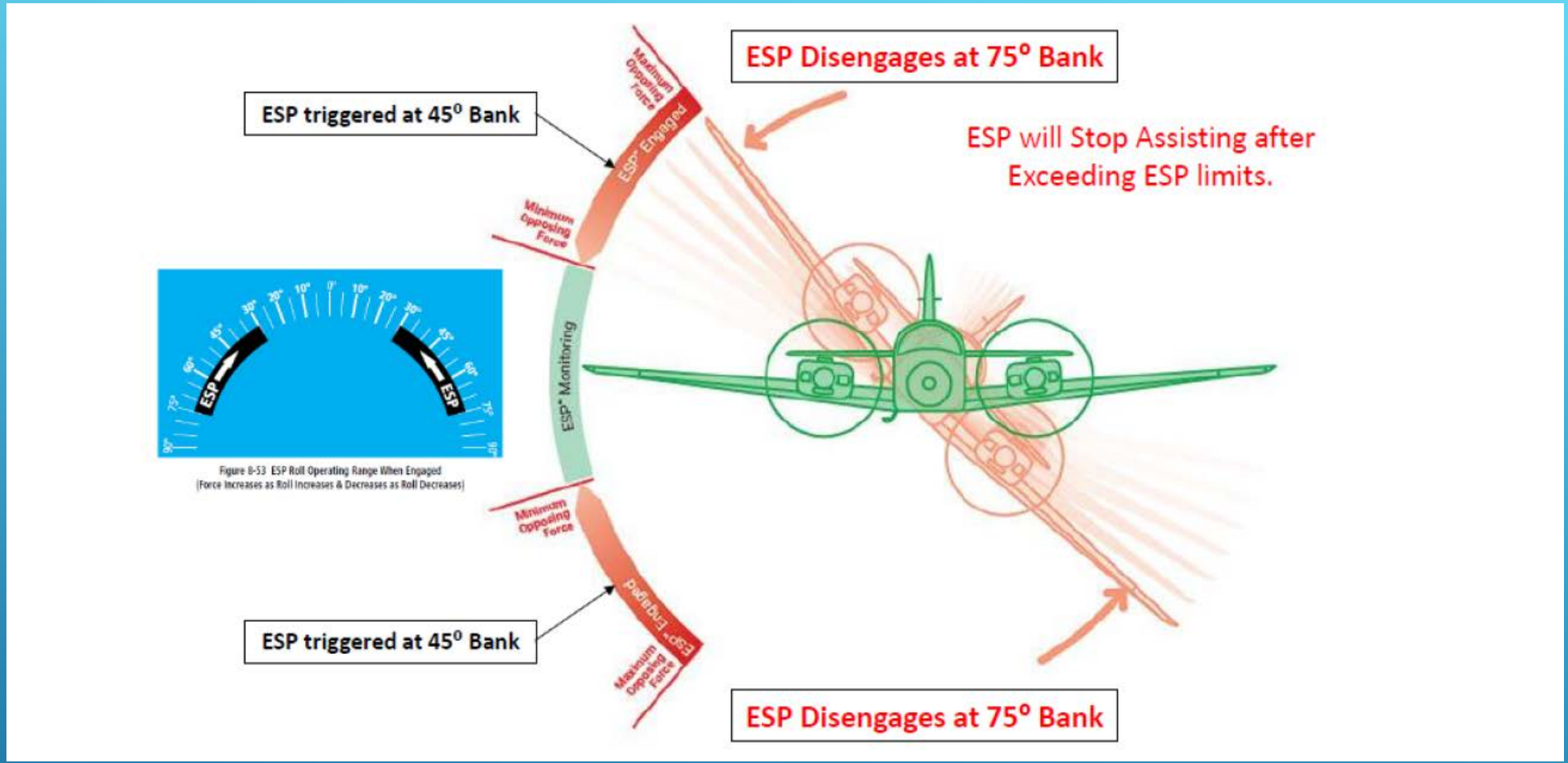
- ESP will engage whenever the aircraft exceeds one or more conditions beyond the normal flight envelope:
  - Pitch
  - Roll
  - V_{NE}
  - Impending stall

GARMIN ESP™

- ESP will provide force to the appropriate control surface to return the aircraft to the normal flight envelope
- The pilot will perceive resistance to control movements in the undesired direction as the aircraft approaches a steep attitude, high speed or impending stall
- The pilot can override by pressing and holding Control Wheel Steering of Autopilot Disconnect Switch
- When switches are released forces will again be applied

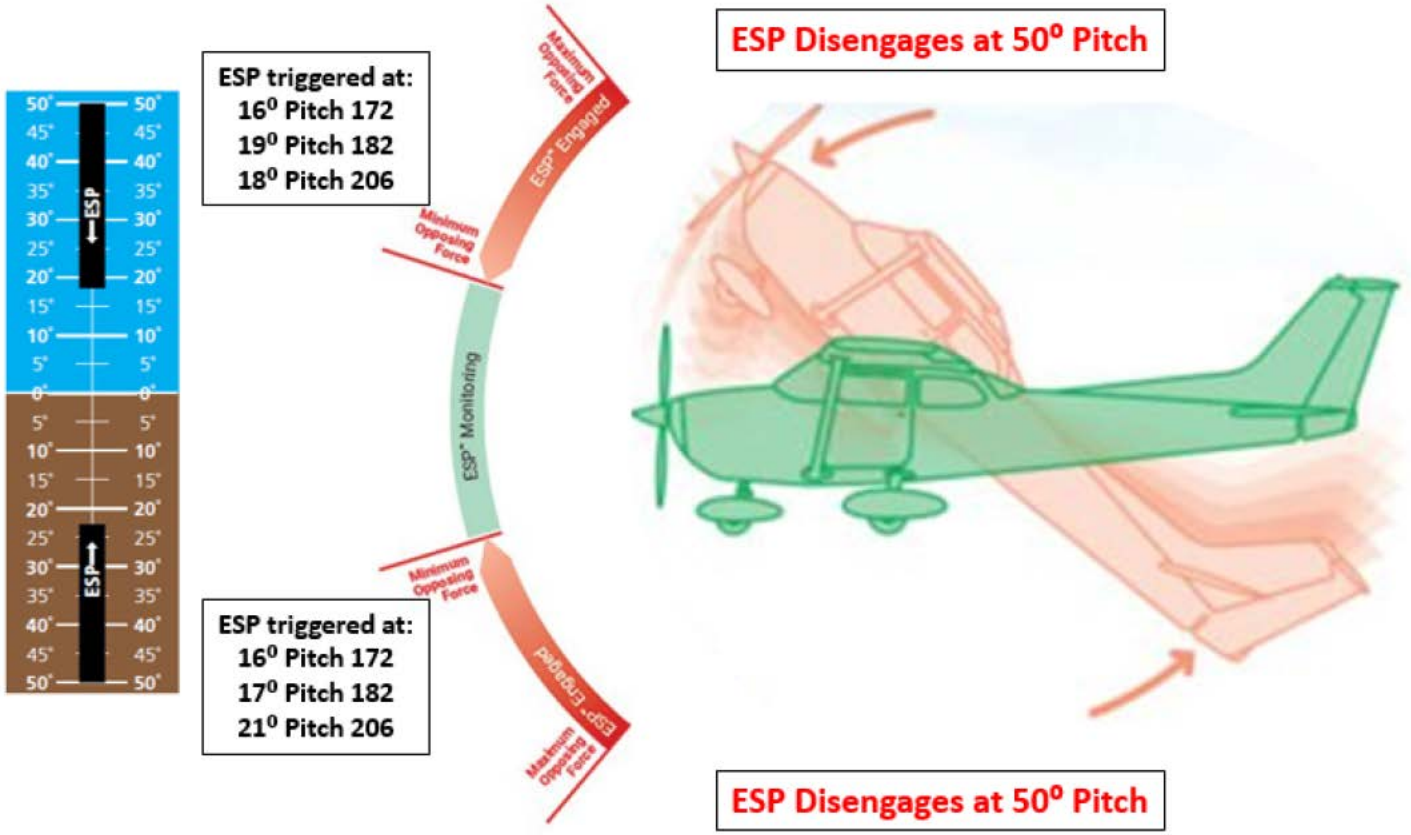
GARMIN ESP™

- As an additional protective feature ESP will automatically turn on the autopilot after a period of normal flight envelope excursion.
- After 10 seconds of ESP engagement, the autopilot will engage automatically with the flight director in Level (LVL) mode
- This feature could be helpful during situations like spatial disorientation or pilot incapacitation


ESP Disengages at 75° Bank
ESP triggered at 45° Bank
ESP will Stop Assisting after
Exceeding ESP limits.
Maximum Opposing Force
ESP Engaged
Minimum Opposing Force
ESP Monitoring
Minimum Opposing Force
ESP Engaged
Maximum Opposing Force
ESP triggered at 45° Bank
ESP Disengages at 75° Bank
ESP
ESP
Figure 8-53 ESP Roll Operating Range When Engaged
(Force Increases as Roll Increases & Decreases as Roll Decreases)

GARMIN ESP™

Cessna NAV III ESP Pitch limits:



GARMIN ESP™

GARMIN ESP™

- High Airspeed Protection
  - Exceeding V_{NE} will result in ESP applying force to raise the nose
- Low Airspeed Protection (Cessna 172)
  - When airspeed decelerates below 55 KIAS and remains there for 1 second ESP will engage and apply nose down force
- Low Airspeed Protection (Cessna 182 and 206)
  - When stall warning has been active for at lease on half second ESP will engage and apply nose down force.

GARMIN ESP™

- Note: ESP will be automatically enable prior to each flight and should be turned off prior to attempting training maneuvers the exceed ESP envelope limits (i.e., steep turns, slow flight, stalls, etc. ESP may be re-enabled after training maneuvers are complete.

AIRCRAFT STATUS

Aircraft Fleet

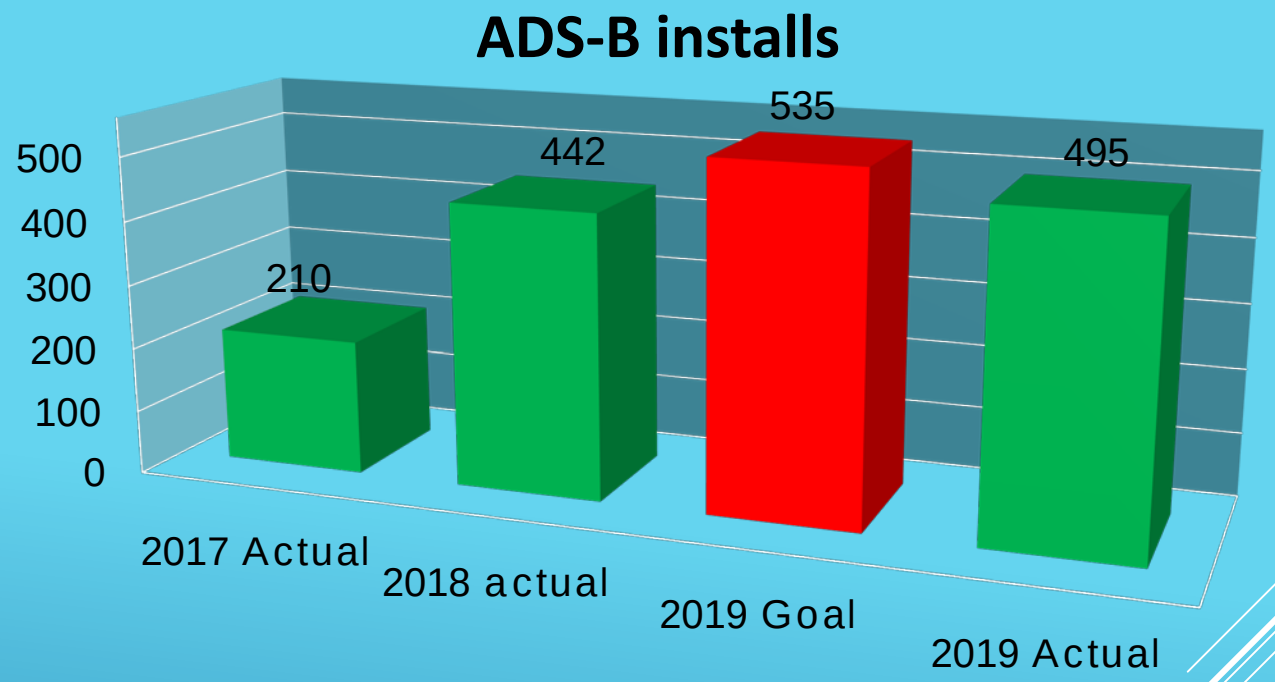
Total in Inventory	563
Pending retirement	30
Refurb Program	3
Extensive MX	6
Available for missions	524



ADS-B UPDATE

ADS-B Status as of 8/1/2019

Total Installations	495
Remaining	40



Region	Cessna 172	Cessna 182	Cessna 206
MAR	1		
NCR	1	1	
PCR	3	1	2
RMR	1		1
SER	2	1	
SWR	3		1
NHQ			1 Sensor

FY18 AIRCRAFT DISTRIBUTION

LOGISTICS UPDATE