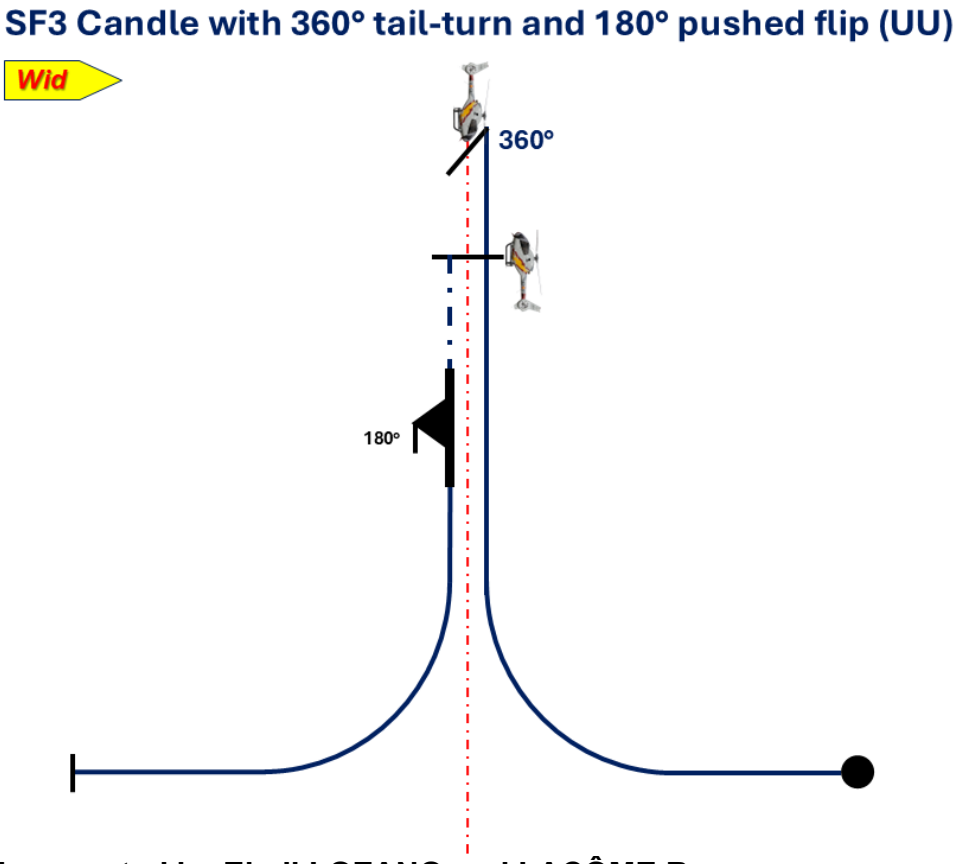
Pilot training for 2026 : July 18,2026
SF3 Candle with 360° tail turn and 180° pushed flip- (uu)



Presentation created by Eladi LOZANO and LACÔME Roger

Unlike the official drawing which depicts the helicopter nose up at the end of the ascent, the one shown above shows how the tail-turn should be performed.

The definition below is not official but clearly defines how this figure should be performed.

SF3 Candle with 360° tail turn and 180° pushed flip (UU) **K Factor = None**

Specificities:

- The quarter loops at the entrance and the exit of the figure must have the same radius.
- At the end of the ascent the longitudinal axis of the MA must be **vertical, nose down**.
- The tail turn rotation must begin and end at the same altitude.

Description:

● MA flies a straight **horizontal** line for a minimum of 10 m then performs a quarter inside loop followed by a **vertical** ascent on the centre line.

● Before the end of the ascent, MA begins a 360°tail turn.

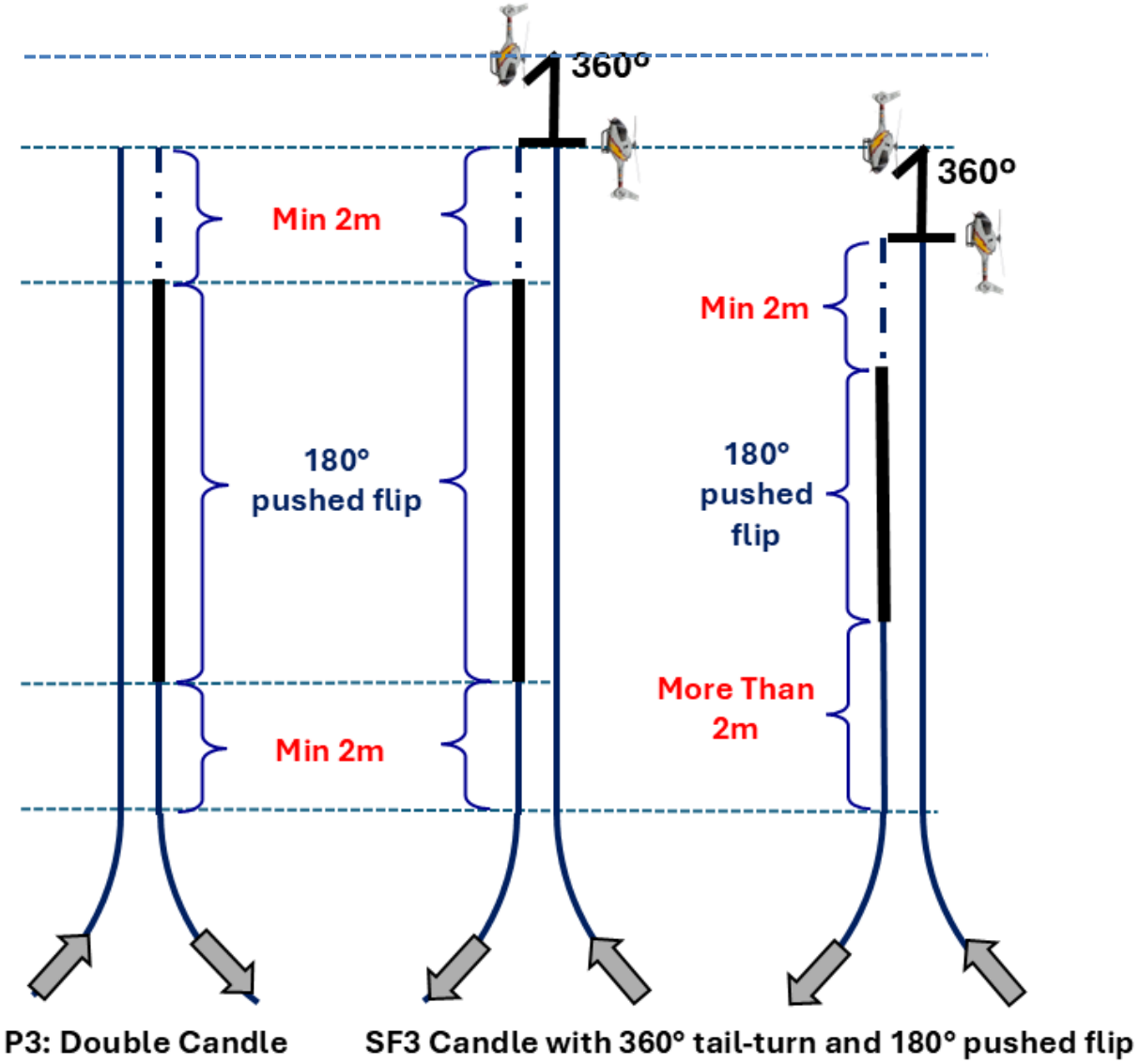
● After executing the tail turn and in a **vertical trajectory**, MA flies backwards for a minimum of 2m followed by a 180° pushed half flip followed by a descent forwards for a minimum of 2m.

● MA then performs a quarter inside loop which must end at the same altitude as when entering figure. MA then flies a straight **horizontal** line for a minimum of 10 m.

Reminder of the penalties for the tail turn:

● If the tail turn only starts at the end of the vertical ascent, a penalty of 2 points will be applied.
● Depending on the altitude difference between the start of the rotation and the end the penalty will range from 0.5 to 1.5 points.

Comparing the **SF3** manoeuvre with the **P3** manœuvre **Double candle** with descending half flips it involves the same three manoeuvres during the descent (2m, flip, then 2m), representing a very long descent distance that very few pilots manage to execute. This manœuvre **SF3 also includes a 360° tail turn**, which represents an additional difficulty compared to P3. But there's always a solution to every problem.



Comments:

As with the P3: Double candle, for this **SF3** manoeuvre speed is needed so that the helicopter ascents as high as possible because the 4 manoeuvres during the descent will take place over a very long distance.

The first difficulty concerns the radius of the first quarter loop; the coach must be very vigilant on this difficulty because, apart from the fact that the radius must be equal to that of the quarter loop at the end of the figure, the vertical ascent that follows must be at least as long as that which the helicopter will travel during the 3 descent manoeuvres after the end of the tail-turn; if this distance represents 30 m for example, then the vertical ascent after the quarter loop must also be 30 m; it is the same principle as for the P3.

The most significant challenge lies in the 360° tail turn, as the rotation must begin well before the end of the climb so that the judges observe a vertical trajectory during the first 180° of the tail turn. At the end of the entire ascent, the helicopter's fuselage must be vertical with the nose pointing downwards, and then it completes the remaining 180° of rotation during the descent.

The tail turn rotation must end at the same altitude at which it began.
As for the 3 manoeuvres that follow the sequences are difficult to execute because after the 180° tail-turn in descent the helicopter must continue to descend in reverse for a minimum distance of 2m and there many pilots do not make this descent in reverse because the helicopter has not climbed high enough after the quarter loop.

Next comes the half-flip; the helicopter has already gained a lot of speed during the descent of the tail-turn and the flight in reverse, so you have to try to perform the half-flip over a distance that is not too long in order to have time to make a nice descent of at least 2m after the half-flip that is clearly visible to the judges.
Summary of the main key points :

- Perform a quarter loop with a rather short radius and ascent as high as possible.
- At the end of the ascent, the nose of the helicopter must be pointing downwards.
- Perform a half-flip over a relatively short distance.
- **Perform the second descent of a distance of more (+) 2m if possible.**

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- Perform a half-flip over a relatively short distance.

- Perform the second descent of a distance of more (+) 2m if possible.

The penalties that should be applied for the tail turn are:

● If the tail turn only starts at the end of the vertical ascent, a penalty of 2 points will be applied.

● Depending on the difference in altitude between the beginning and end of the rotation, the penalty will vary from 0.5 to 1.5 points.

Thanks for your interest