

VALIDATION TEST

Title	Power change dynamics during approach		
Id	2 c i 1	Aircraft	DA42-VI
Device	A42M2-12	Version	1.0
Qualification Level	FNPT2	Operator	AFTA
Result Date	04/04/24	Master Date	01/03/19
Result Load	2012.01	Master Load	1902

Objective	Expected Results
Demonstrate that the power change induced longitudinal dynamics during approach conforms to the class of aeroplanes	Max. Dynamics Variations: Airspeed 0 kt Pitch angle +3 deg Altitude +700 ft
Reference	Evaluation Criteria
Chapter 12 - Validation data - Handling Qualities - Test 2.c.i.1	Airspeed +/- 3 kt Altitude +/- 100 ft Pitch +/- 1.5° or 20%

Demonstration procedure	From steady approach initial conditions, power lever is set to maximum go-around position.
Manual test procedure	Pilot trims the airplane in approach flight condition and then, the power is increased to maximum go-around position, allowing free uncontrolled aircraft response. The results are recorded and compared to the airplane data.
Automatic test procedure	2 c i 1

Authority's approval (date, signature and comments)	Operator's approval (date, signature and comments)

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Autopilot mode	AUTO_SPEED
Automatic Vertical Speed and power maintain mode : it changes the attitude through pitch trim value and the power levers to maintain power and VS. Roll Trim is computed to maintain 0° bank angle.	

Initial parameters	HOLD_FLAPS_APP_GEAR
Gross weight (kg) : 1900	Flaps lever position : 1
Balance (%) : 50	Gear lever position : 1
Altitude (ft) : 3000	Left Load (%) : 70
Vertical speed (ft/min) : 0	Right Load (%) : 70
IAS (kt) : 106 (free)	Left RPM : 2060
Heading (°) : 0 (free)	Right RPM : 2060
Bank (°) : 0	
Attitude (°) : -1	
Pedal Position (%) : 0	
Column Position (%) : 32	
Wheel Position (%) : 0	

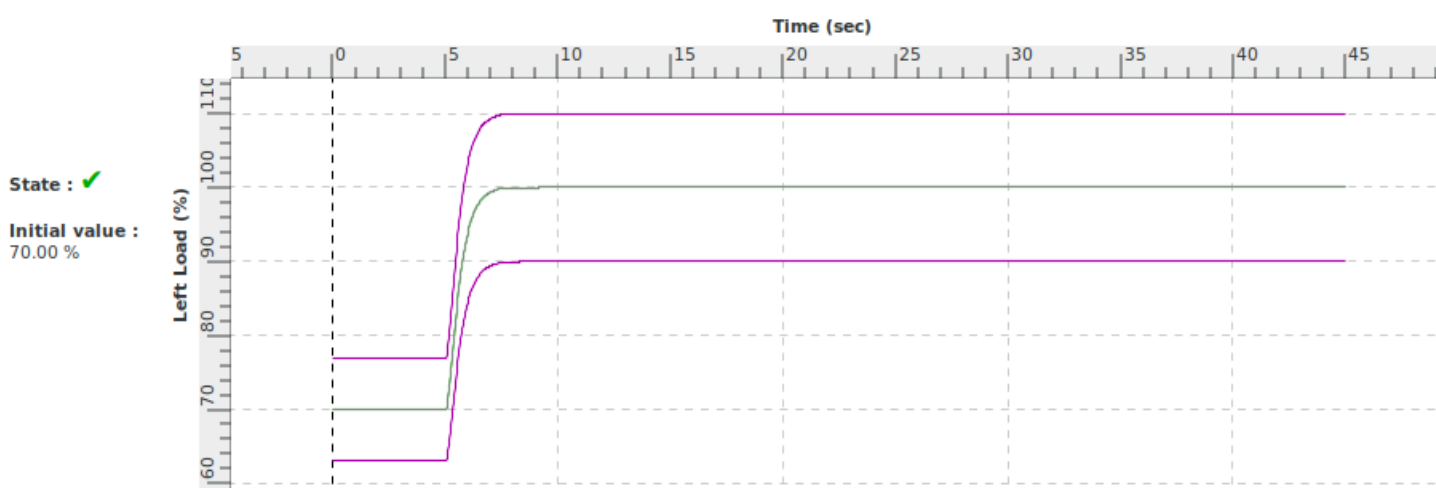
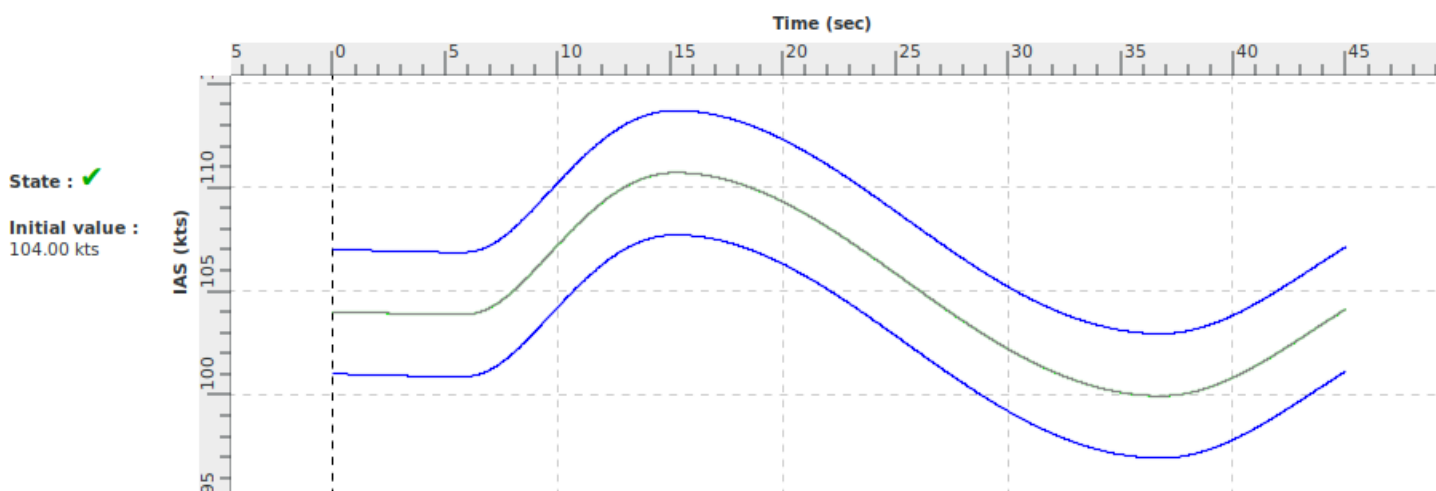
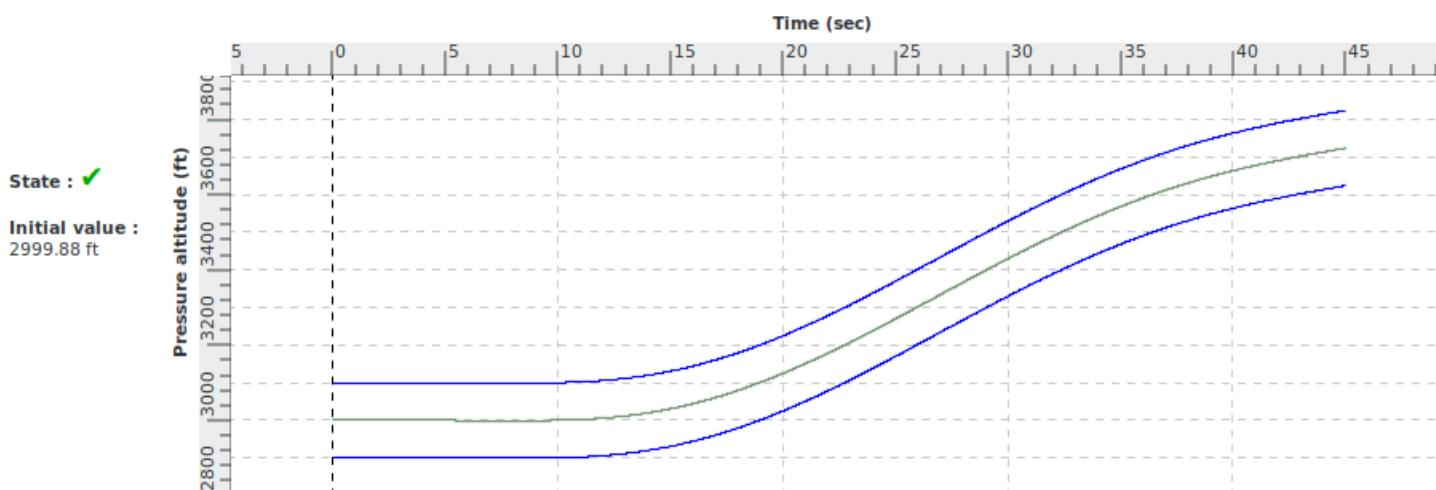
Commands			
Time	Name	Param	Explanations
0.0	Start_Test	0.0	Start the results recording
0.0	deconnectionPA_att	0.0	disable QTG Autopilot in attitude axis
0.0	deconnectionPA_roll	0.0	disable QTG Autopilot in roll axis
0.0	deconnectionPA_rudder	0.0	disable QTG Autopilot in yaw axis
5.0	power_GOAROUND_MAX	29.0	Set engine parameters to go-around power
45.0	Stop_Test	0.0	Stop the test procedure

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Log of Revision		
Rev. Nbr	Date	Reason for revision

Notes

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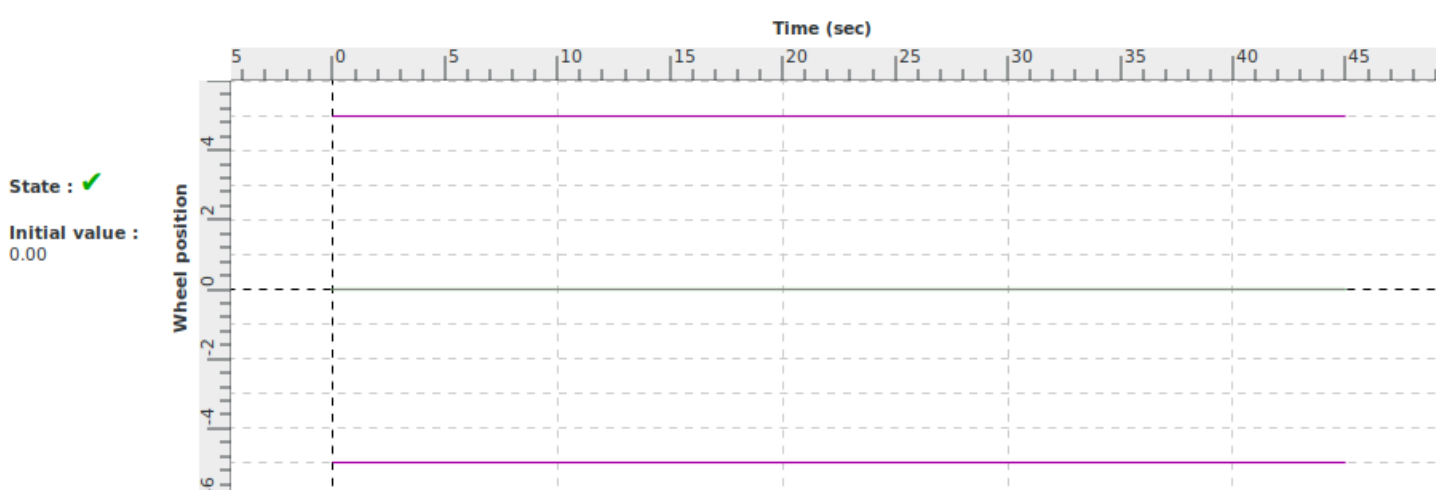
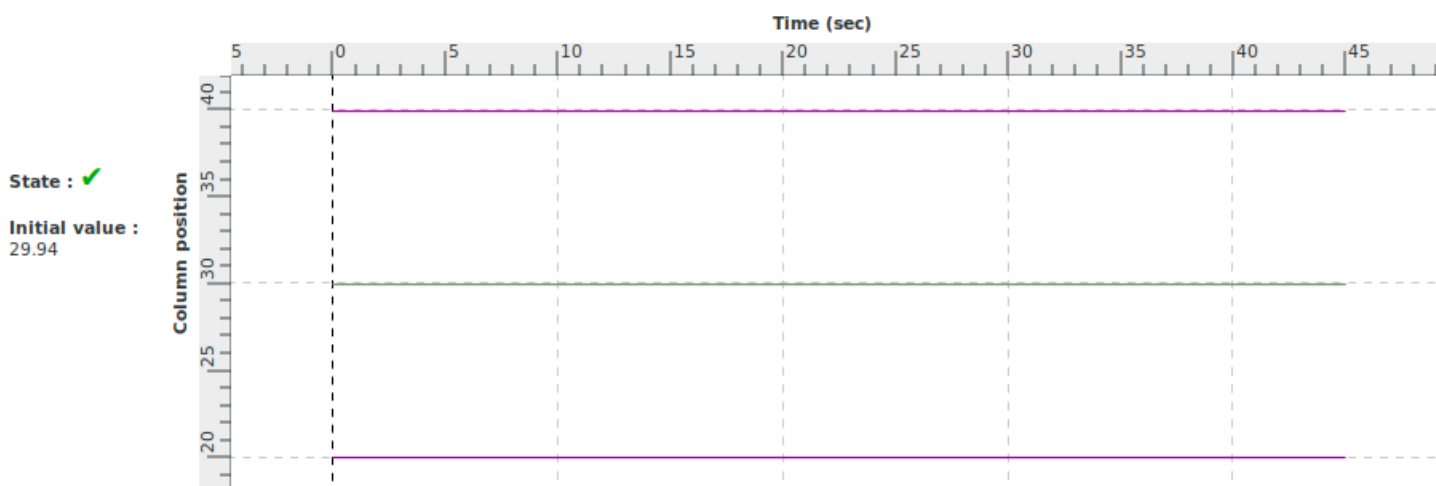
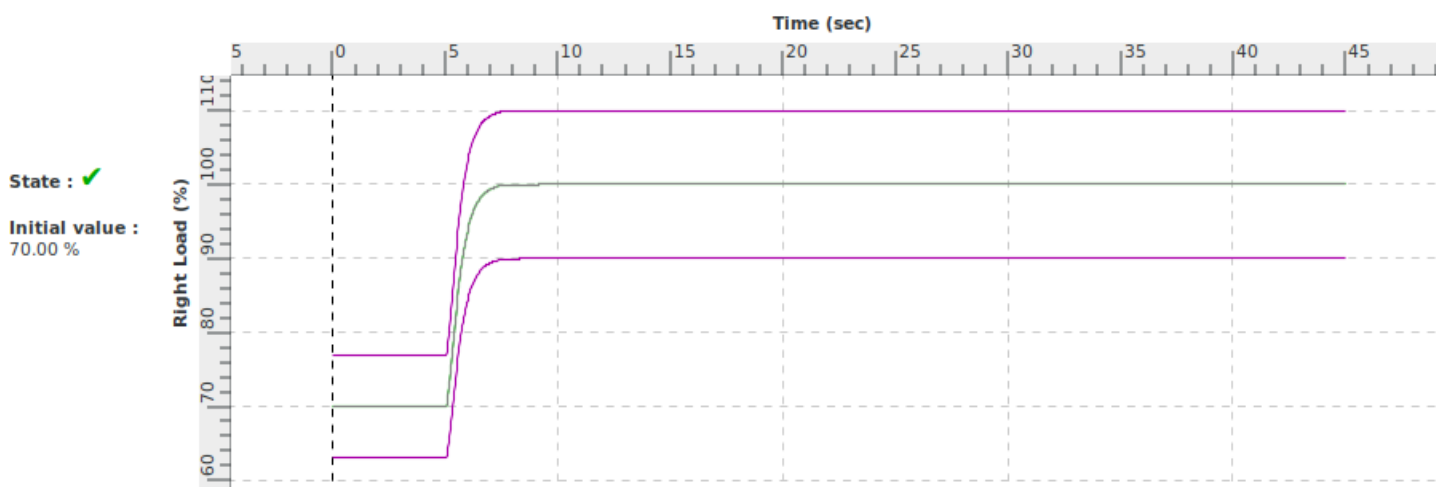
Legend :

green : results within tolerances
blue : tolerances

red : results out of tolerances
violet : tolerances Alsim

grey : master

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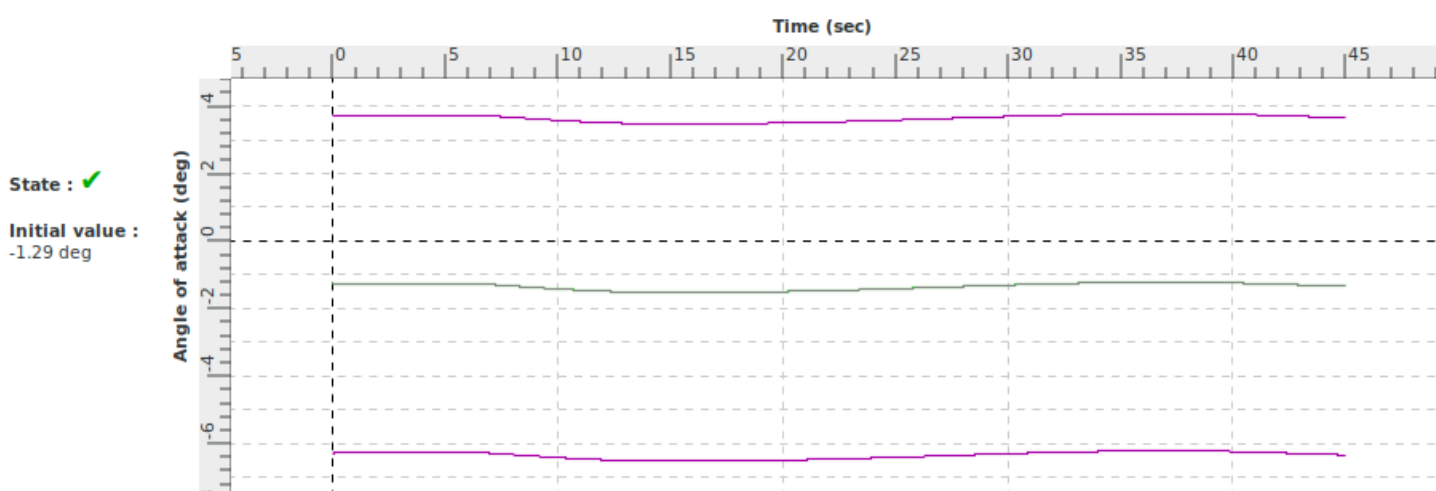
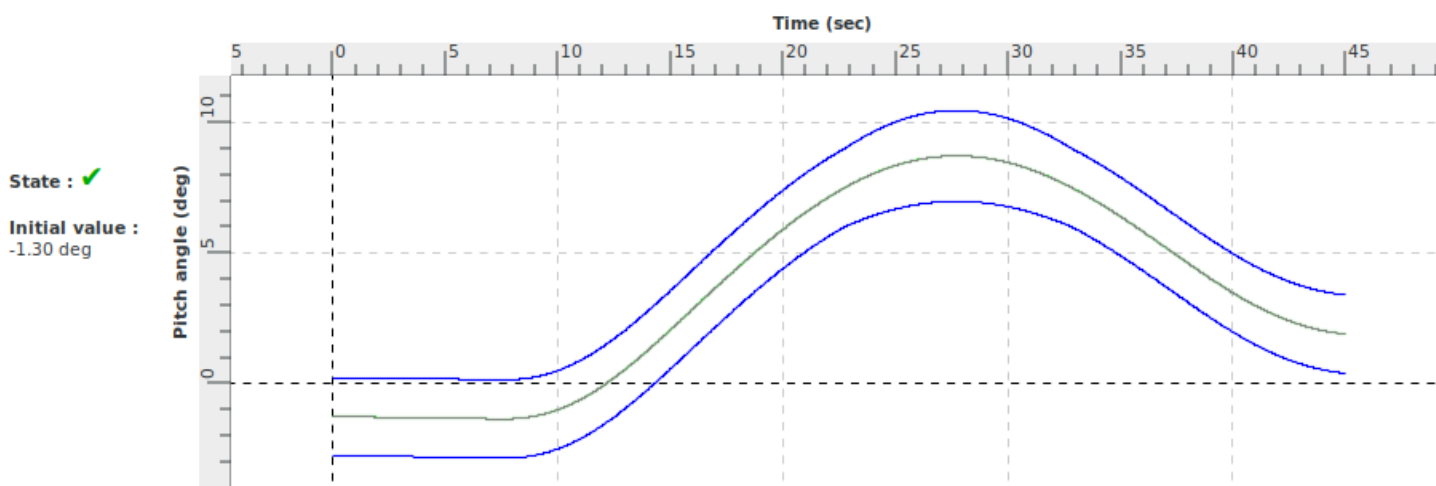
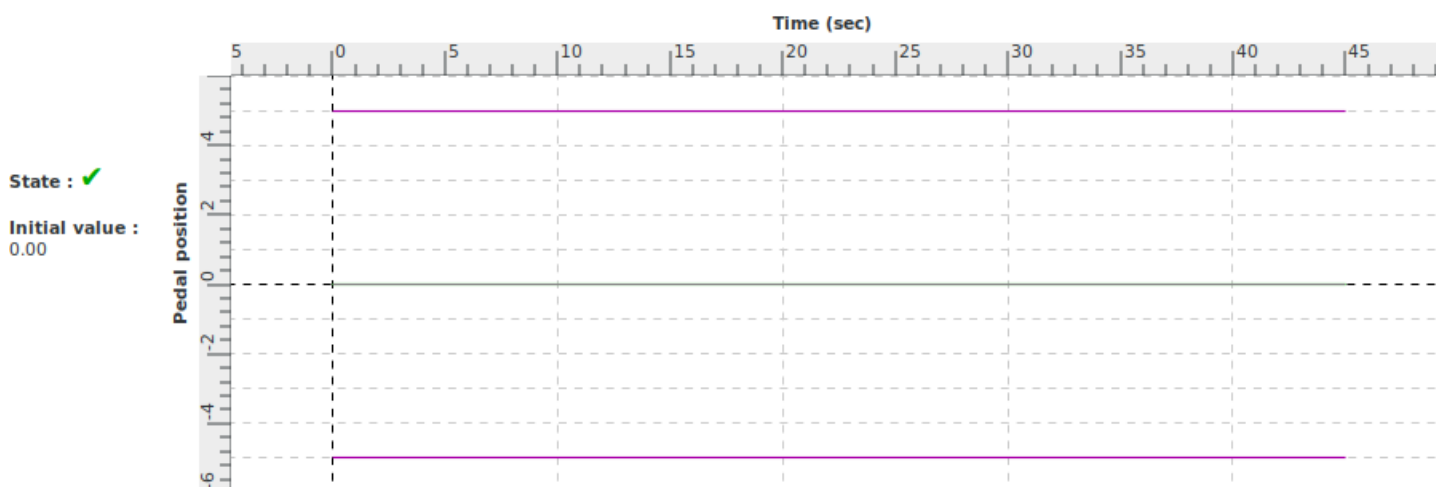
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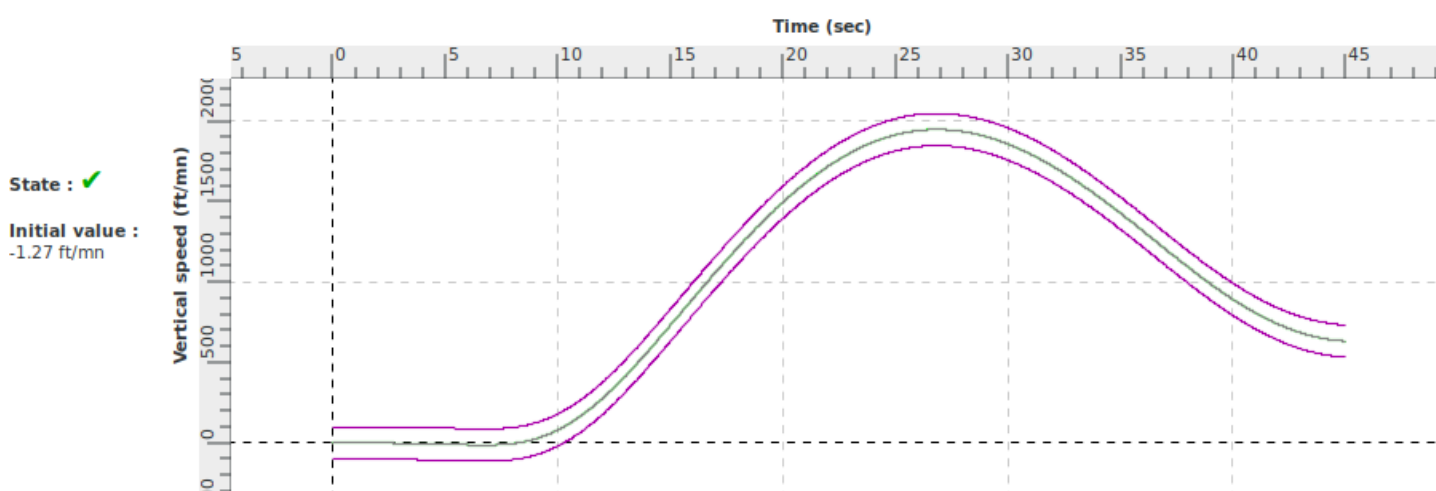
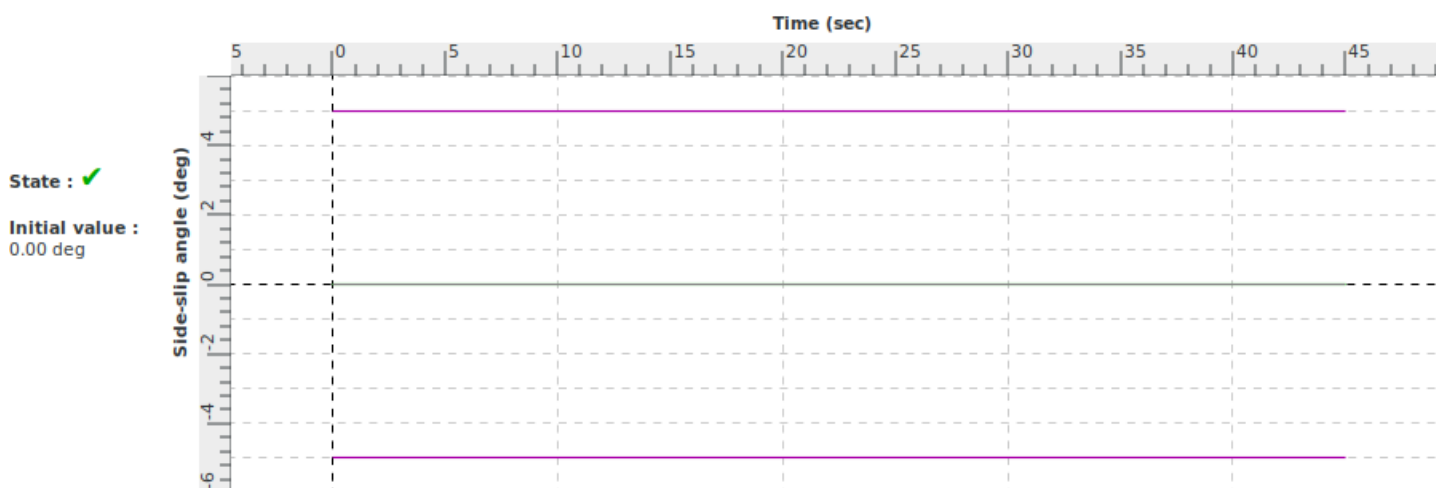
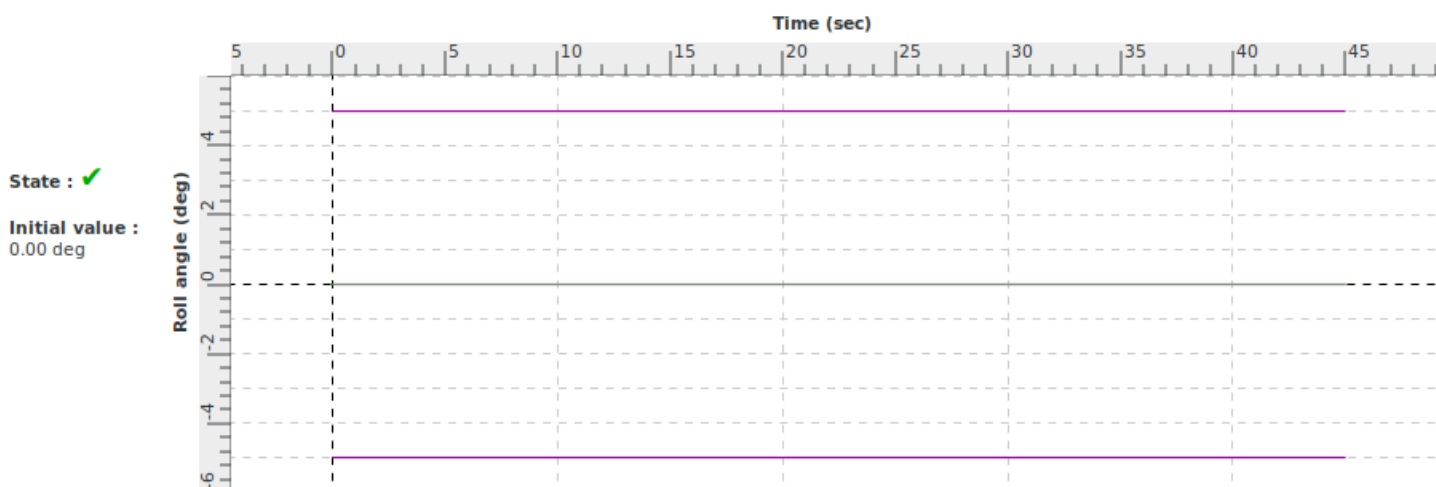
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