

VALIDATION TEST

Title	Flaps change dynamics during take-off (retraction)		
Id	2 c ii 1 a	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 simulator response to a flap retraction during take-off conforms to the class of aeroplanes	<p>Increments (from configuration change to 20s after):</p> <p>Airspeed: -1.6 Kts</p> <p>Pitch Angle: +7.5 deg</p> <p>Altitude: 600 ft</p>
Reference	Evaluation Criteria
Chapter 12 - Validation data - Handling Qualities - Test 2.c.ii.1.a	<p>Airspeed +/- 3 kt</p> <p>Altitude +/- 100 ft</p> <p>Pitch +/- 1.5° or 20%</p>

Demonstration procedure	From steady take-off initial conditions, flaps are retracted.
Manual test procedure	The aircraft is trimmed at take-off flight condition. Then, the pilot sets the flaps from position 1 to 0 and allows the airplane to respond freely.
Automatic test procedure	2 c ii 1 a

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

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Autopilot mode	AUTO_VZ
<p>Automatic IAS (airspeed) and power maintain mode : it changes the attitude through pitch trim value and the power levers to maintain power and IAS. Roll Trim is computed to maintain 0° bank angle.</p>	

Initial parameters	TAKE_OFF
Gross weight (kg) : 1900 Balance (%) : 50 Altitude (ft) : 3000 Vertical speed (ft/min) : 1000 (free) IAS (kt) : 85 Heading (°) : 0 (free) Bank (°) : 0 Attitude (°) : 13 Pedal Position (%) : 0 Column Position (%) : 41 Wheel Position (%) : 0	Flaps lever position : 1 Gear lever position : 0 Left Load (%) : 100 Right Load (%) : 100 Left RPM : 2090 Right RPM : 2090

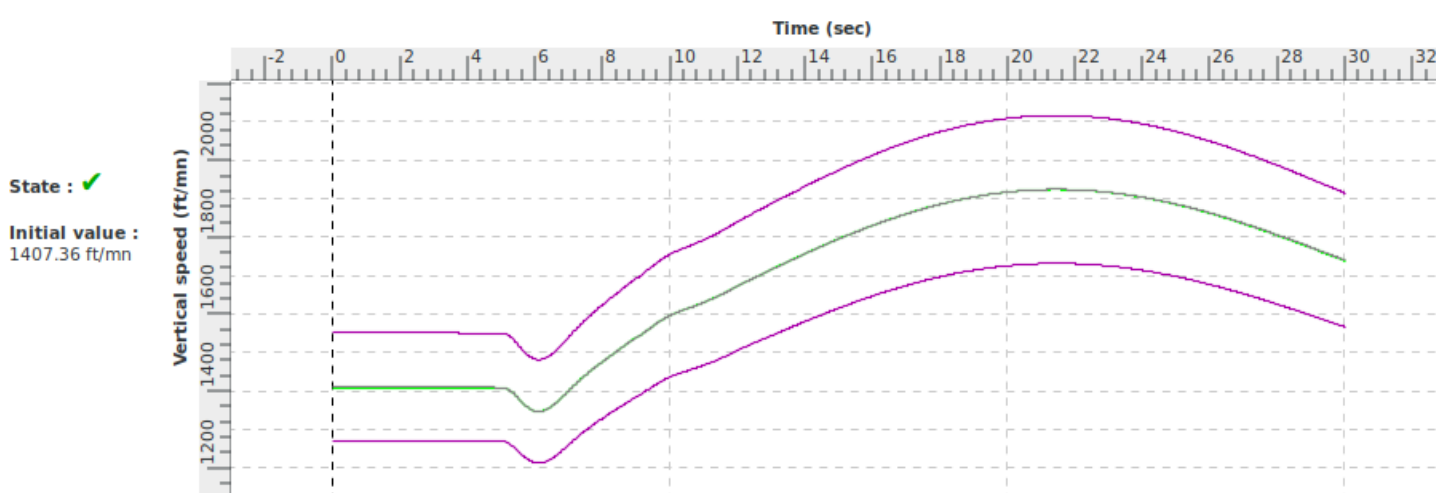
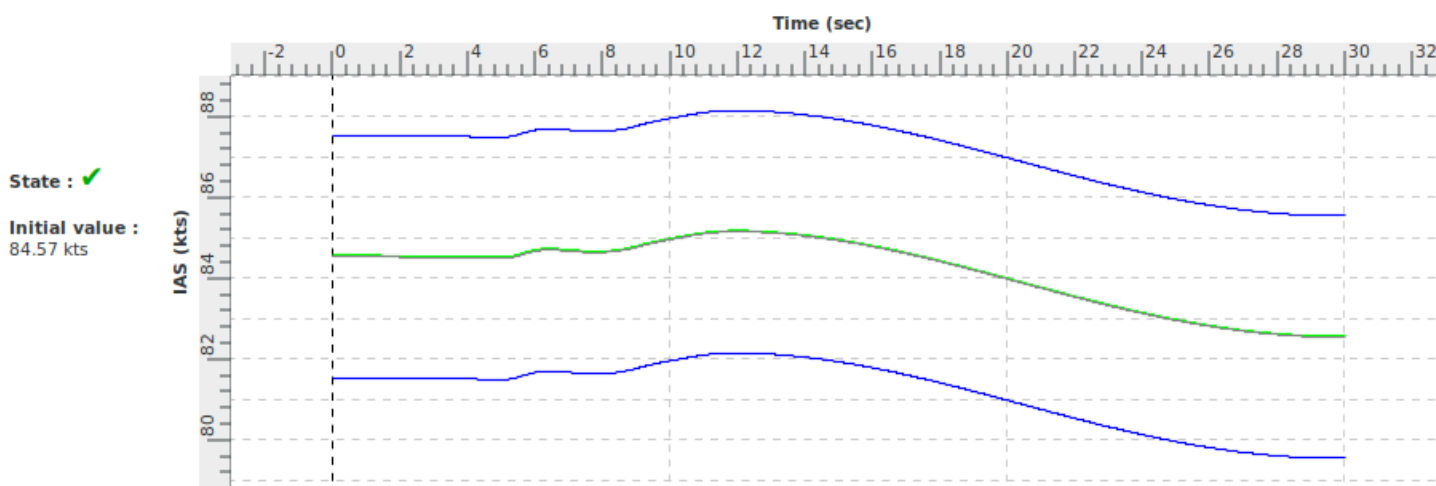
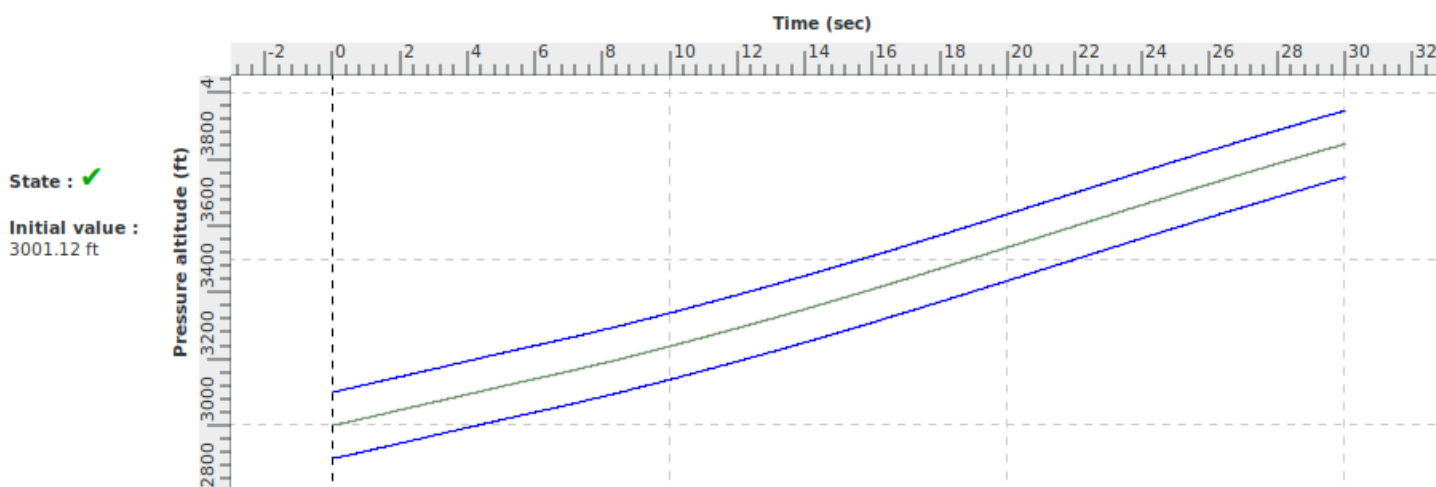
Commands			
Time	Name	Param	Explanations
0.0	Start_Test	0.0	Start the results recording
0.0	deconnectionPA_att	0.0	disable QTG Autopilot in attitude axis
0.0	deconnectionPA_roll	0.0	disable QTG Autopilot in roll axis
0.0	deconnectionPA_rudder	0.0	disable QTG Autopilot in yaw axis
5.0	Flaps	0.0	Move the flaps lever to the desired position
30.0	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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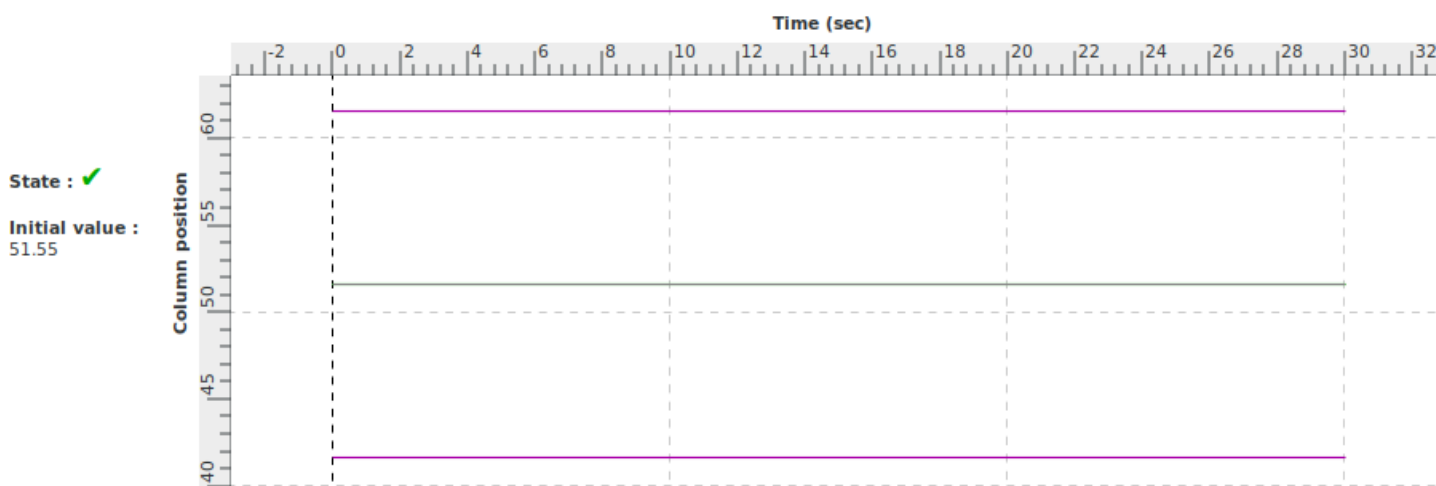
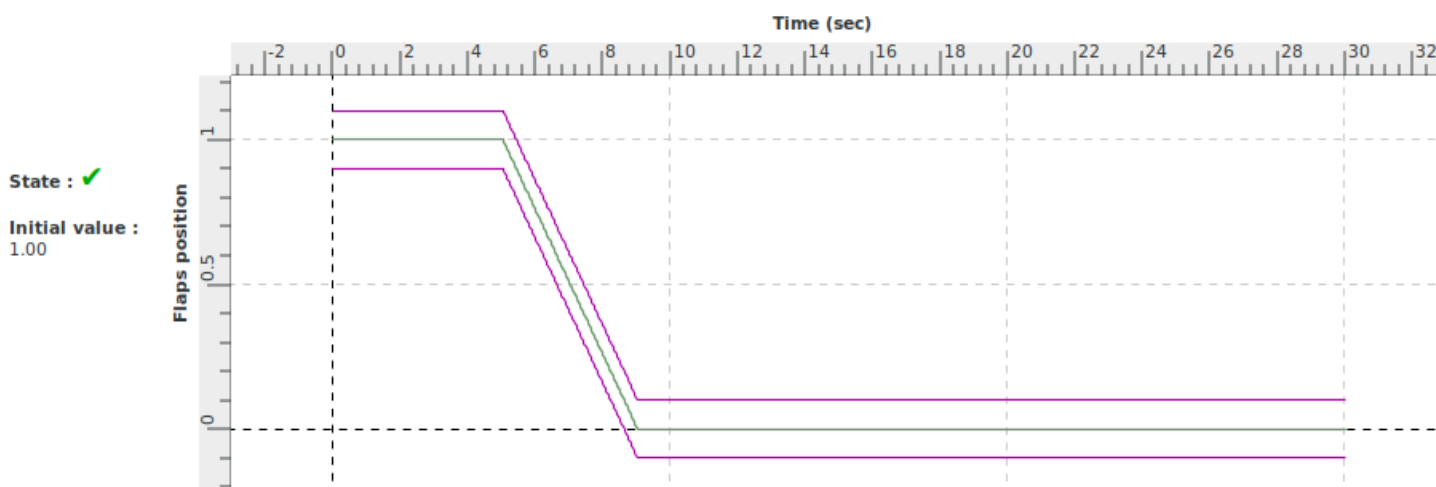
Legend :

green : results within tolerances
blue : tolerances

red : results out of tolerances
violet : tolerances Alsim

grey : master

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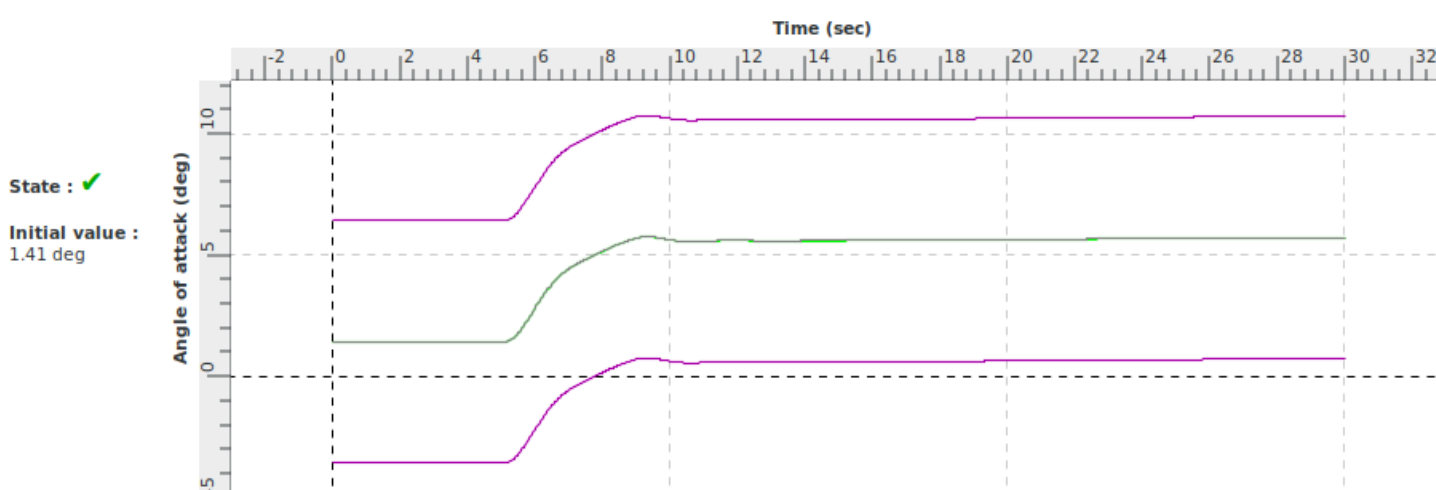
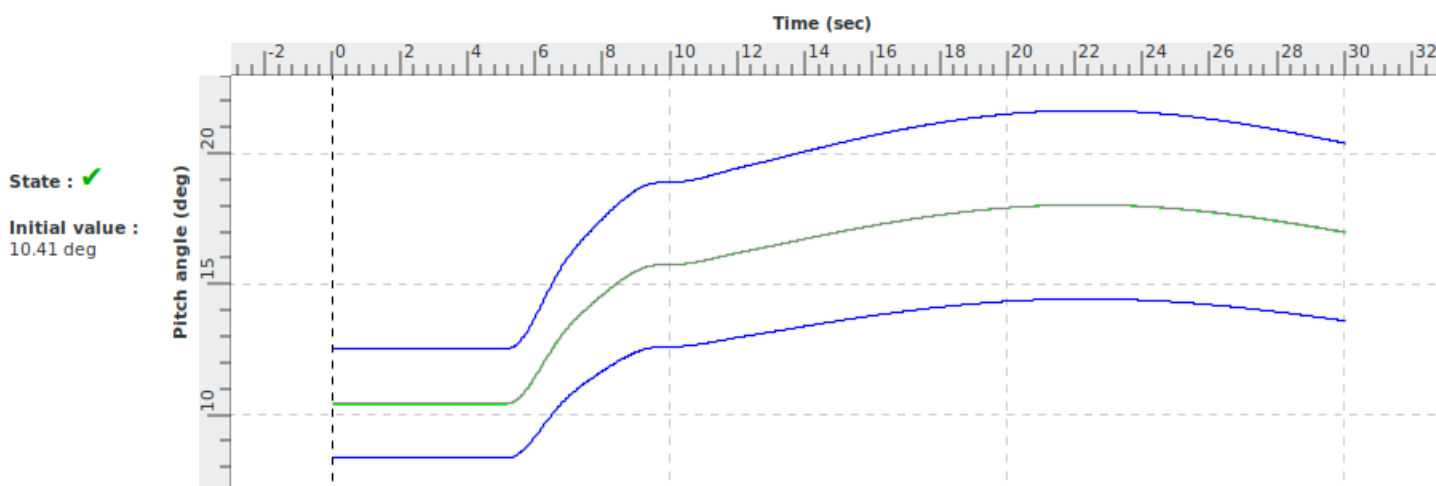
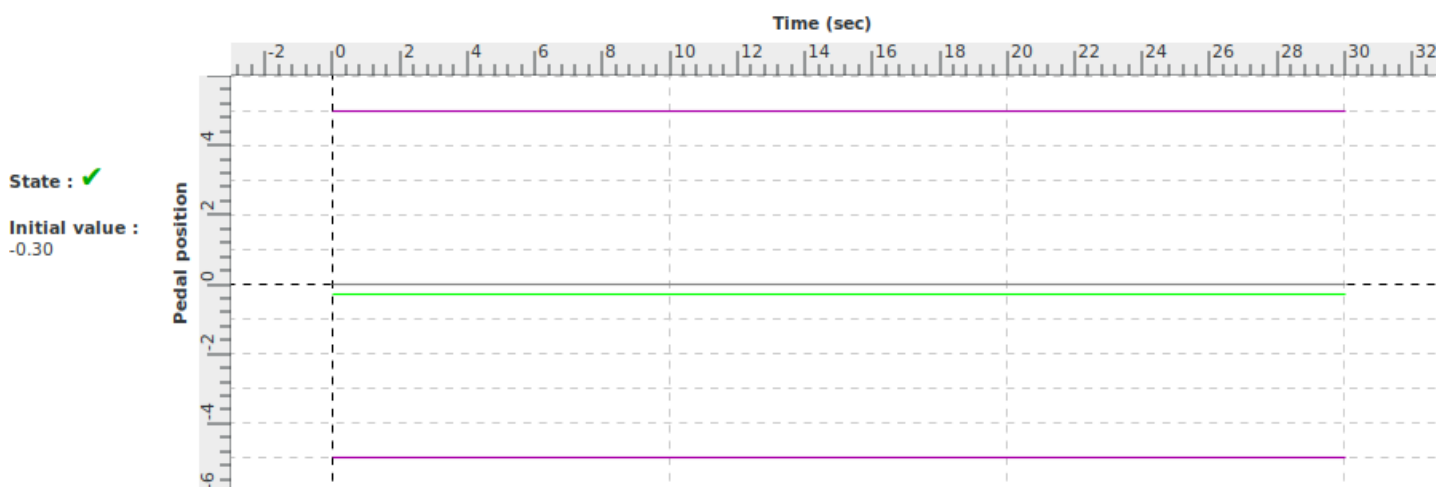
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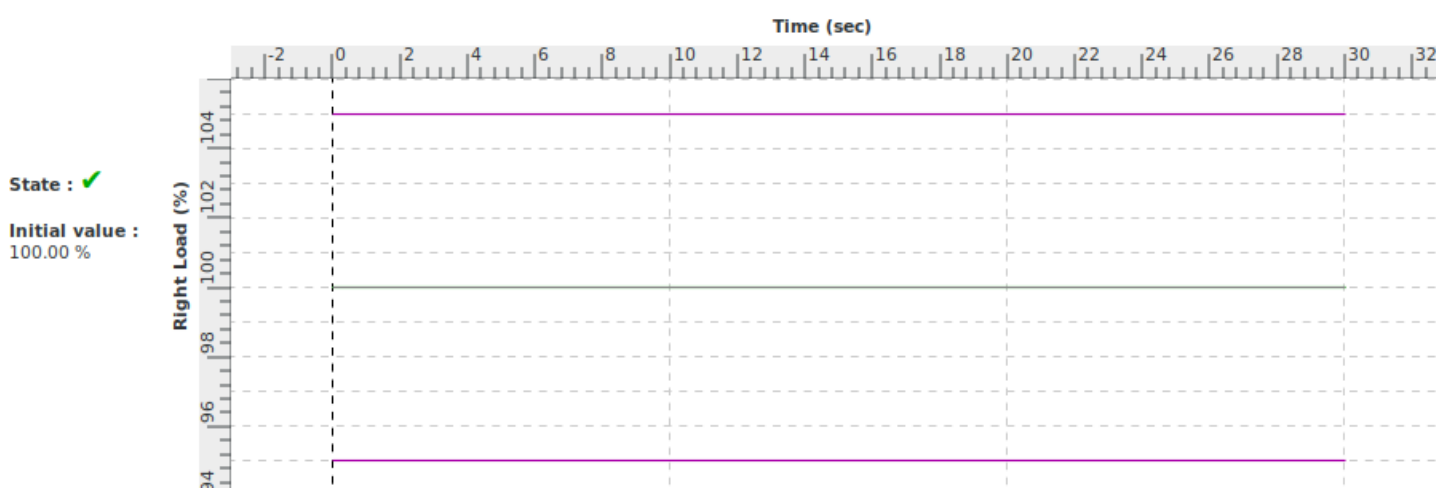
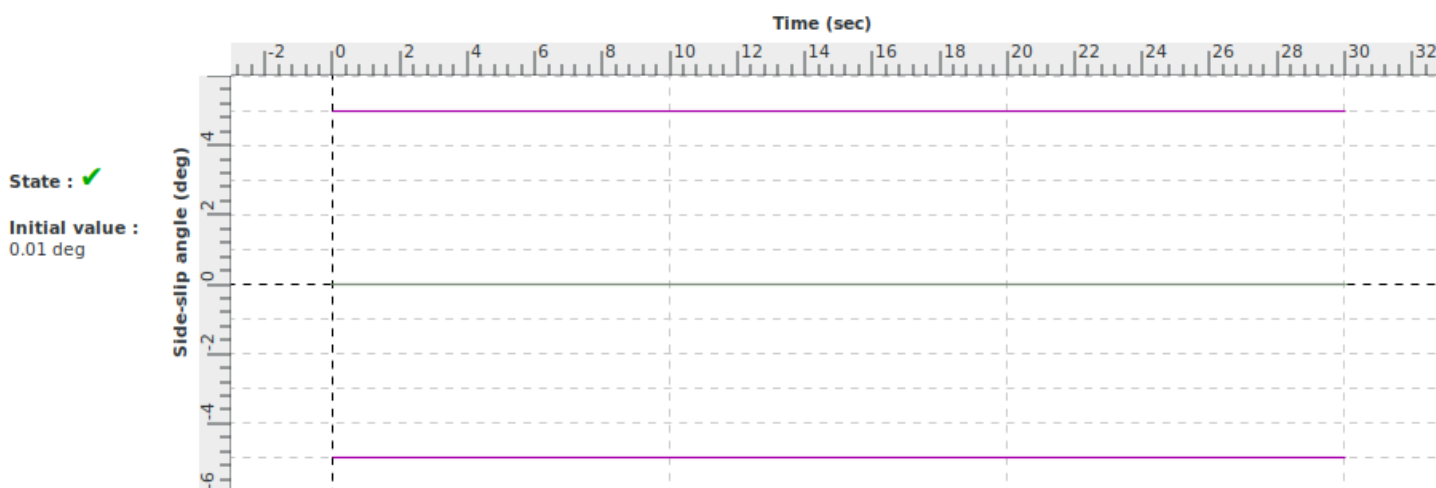
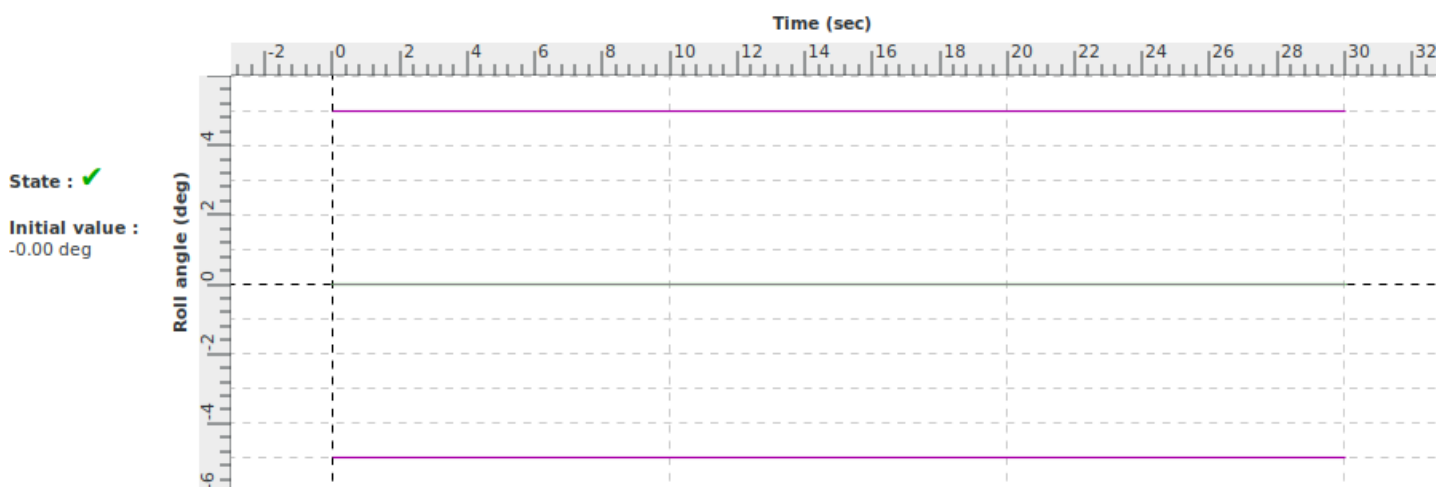
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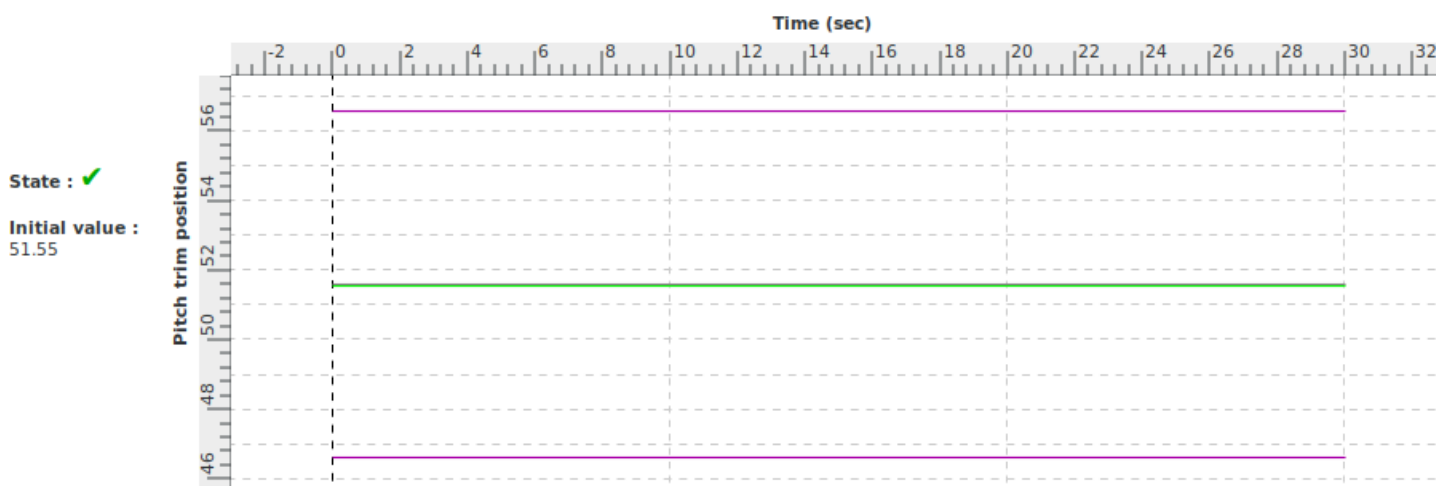
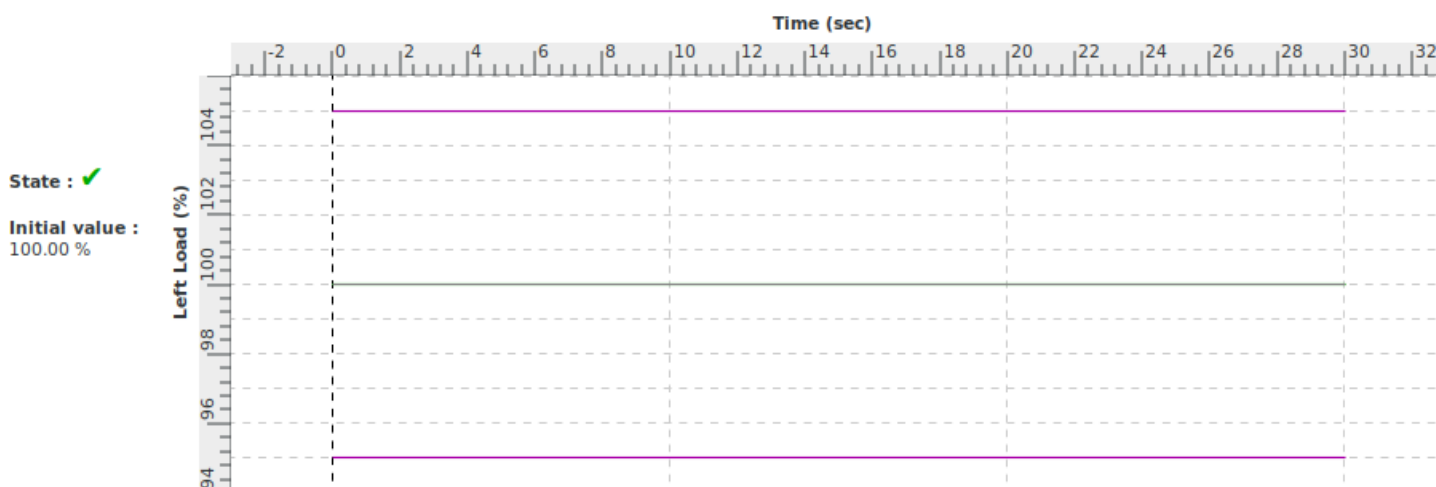
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