# **Report Generated by Test Manager**

Title: Model Comparison - Test

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Gallo, Alberto Ruggeri, Martina Te

desco, Alessandro Toschi

Date: 15-Apr-2021 17:07:21

### **Test Environment**

Platform: PCWIN64 MATLAB: (R2019b)

# Summary

Name	Outcome	Duration (Seconds)
Results: 2021-Apr-15 17:05:08	2 🗷 6🛭	90.835
Comparison Tests	2 🗸 6🛭	90.83
I Free evolution	<b>②</b>	13.812
I Only throttle	•	8.314
I Constant steering	8	8.274
I Ramp steering	8	17.737
I Small sinusoidal steering	8	11.019
Big sinusoidal steering	8	9.988
I Combined 1	8	10.329
I Combined 2	8	10.89

Results: 2021-Apr-15 17:05:08

Result Type: Result Set Parent: None

Start Time: 15-Apr-2021 17:05:09 End Time: 15-Apr-2021 17:06:40

Outcome: Total: 8, Passed: 2, Failed: 6

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### **Comparison Tests**

#### **Test Result Information**

Result Type: Test Case Result

Parent: Results: 2021-Apr-15 17:05:08

Start Time: 15-Apr-2021 17:05:09 End Time: 15-Apr-2021 17:06:40

Outcome: Failed

Cause of Failure: Test failed as iteration failed

Description:

The aim of this report is to check congruences and differences between the dynamic and kinematic vehicle model.

In all the comparisons, our dynamic model is considered as baseline.

For the tests purposes it is not necessary to include equivalence criteria, indeed this will be a qualitative analysis.

#### **Test Case Information**

Name: Comparison Tests Type: Equivalence Test

#### Free evolution

#### **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:05:09
End Time: 15-Apr-2021 17:05:23

Outcome: Passed

# Description:

#### **Free Evolution**

Test performed starting from an initial condition with input equal to 0

#### **Test Case Information**

Name: Free evolution Type: Equivalence Test

## **Iteration Settings**

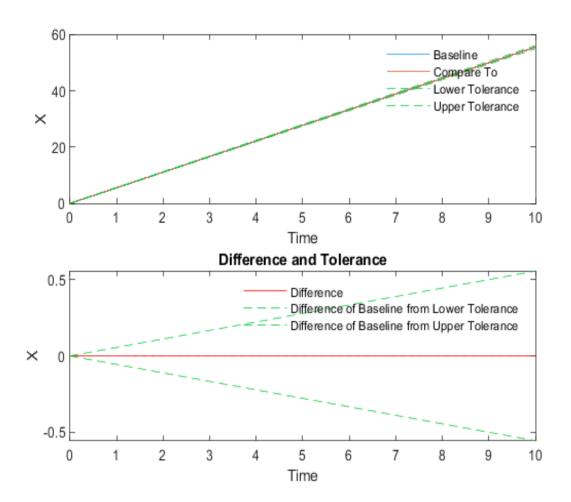
#### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Free_evolut	
	ion.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Free_evolut	
	ion.mat	

# **Equivalence Comparison**

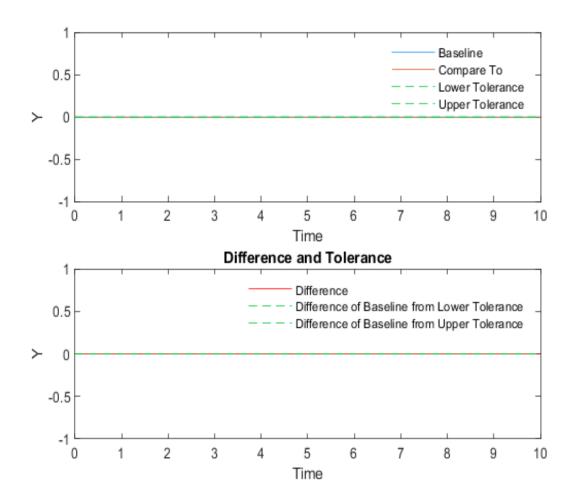
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Intown Cyma	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1	Type 2	2	Time 2	Interp Sync	to Plot
✓ X	0	0.01	0	0	4.34e-19	double		Continuous	double		0.001	linear union	<u>Link</u>
✓ Y	0	0.01	0	0		double		Continuous	double		0.001	linear union	<u>Link</u>
yaw	0	0.01	0	0	0	double		Continuous	double		0.001	linear union	<u>Link</u>
✓ v	0	0.01	0	0		double		Continuous	double		0.001	linear union	<u>Link</u>

Namo		Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Name Tol	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p Sync
✓ X		 0	0.01	0	0	4.34e-19	double		Continuous	double		0.001	linear union



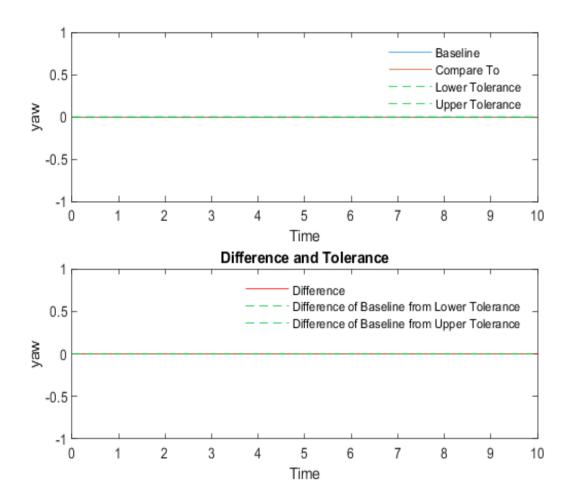
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p sync
✓ Y	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



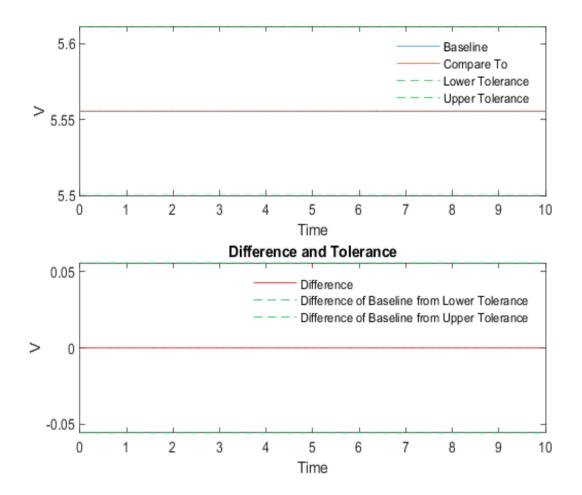
Back to Report SummaryBack to Criteria Results

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
yaw		0.01	0	0	0	double		Continuous	double		0.001	linear union



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Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

#### **Input Information**

External Input Na Free\_evolution.mat me:

 $\label{line:c:simul} External \ Input \ File: C:\ Users\ gianv\ Documents\ GitHub\ Compliance\_te st\ Matlab \ scripts\ Simulink\ Models\ Free\_evolution. \\ mat$ 

#### **Input Information**

External Input Na Free\_evolution.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Free\_evolution.

mat

#### Simulation 1

#### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Free\_evolution.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

 $st\\Matlab\ scripts\\Simulink\\Models\\Free\_evolution.$ 

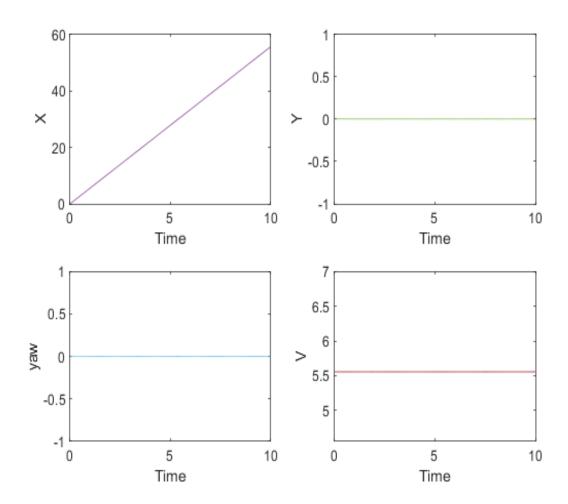
mat

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double	<del></del> _	Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Free\_evolution.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Free\_evolution.

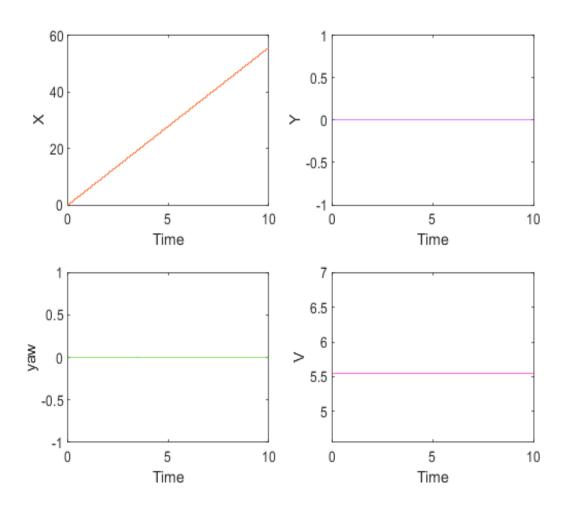
mat

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

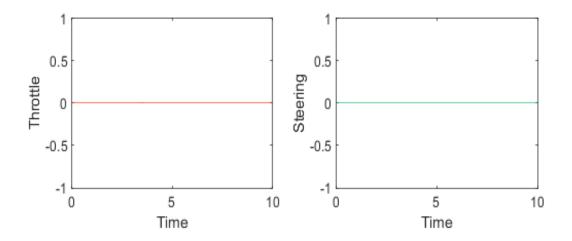
Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		0.001	zoh	union	<u>Link</u>
Y	double		0.001	zoh	union	<u>Link</u>
yaw	double	 	0.001	zoh	union	<u>Link</u>
V	double		0.001	zoh	union	<u>Link</u>
Throttle	double		0.001	zoh	union	<u>Link</u>
Steering	double		0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double		0.001	zoh	union
	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# **Only throttle**

# **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:05:23

End Time: 15-Apr-2021 17:05:31

Outcome: Passed

Description:

# Only throttle

Test performed keeping the steering angle equal to 0 and varying the throttle

#### **Test Case Information**

Name: Only throttle Type: Equivalence Test

# **Iteration Settings**

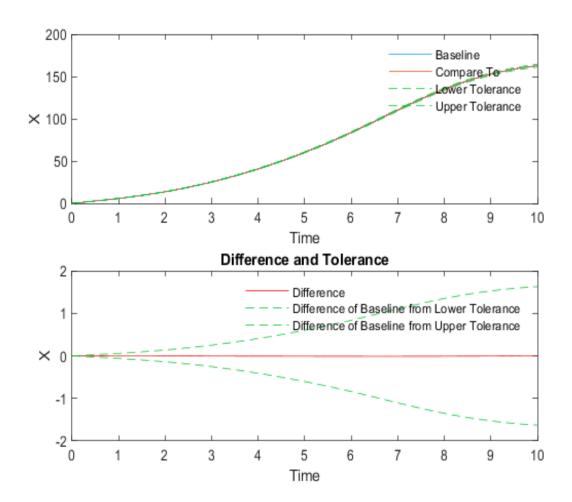
#### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Only_thrott	
	le.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Only_thrott	
	le.mat	

# **Equivalence Comparison**

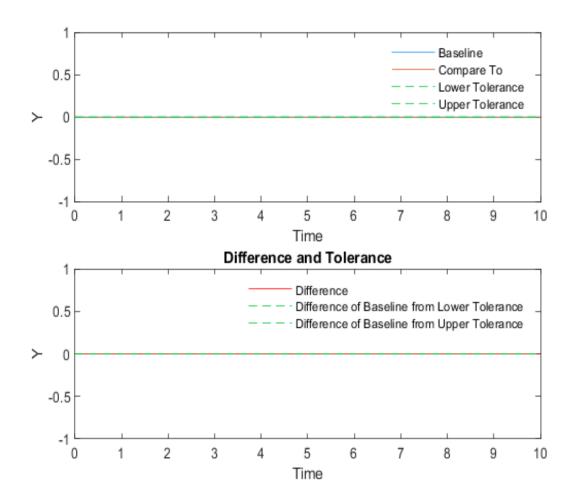
Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data Type 1	Units 1	Sample Time 1	Data Type 2	Units 2	Sample Time 2	Interp	Sync	Link to Plot
✓ X	0	0.01	0	0	0.0107	double		Continuous	double		0.001	linear	union	<u>Link</u>
✓ Y	0	0.01	0	0	$\begin{bmatrix} 0 \end{bmatrix}$	double		Continuous	double		0.001	linear	union	<u>Link</u>
🥝 yaw	0	0.01	0	0		double		Continuous	double		0.001	linear	union	<u>Link</u>
☑ v	0	0.01	0	0	$\begin{bmatrix} & - & \\ & 0 & \end{bmatrix}$	double		Continuous	double		0.001	linear	union	<u>Link</u>

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
runic	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	interp bytic
✓ X	0	0.01	0	0	0.0107	double		Continuous	double		0.001	linear union



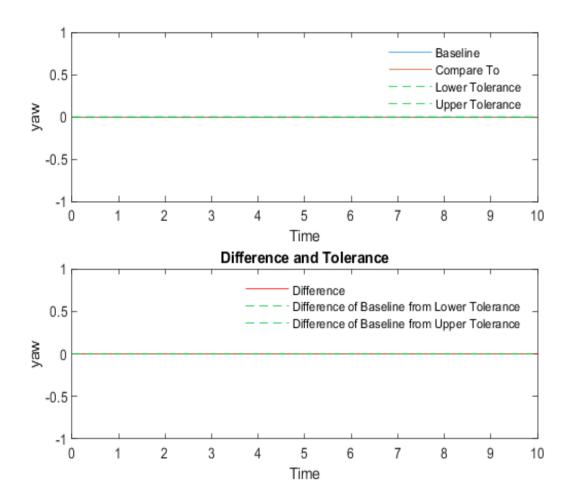
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p sync
✓ Y	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



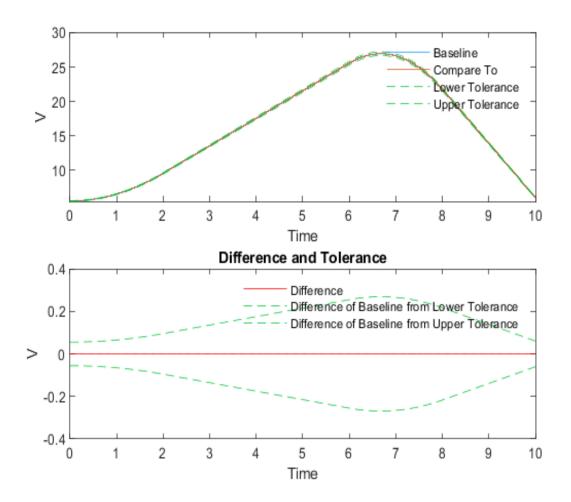
Back to Report SummaryBack to Criteria Results

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
yaw		0.01	0	0	0	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



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#### **Input Information**

External Input Na Only\_throttle.mat me:

 $\label{linear} \begin{tabular}{l} External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t\\ est\Matlab scripts\Simulink\Models\Only\_throttle.\\ mat \end{tabular}$ 

#### **Input Information**

External Input Na Only\_throttle.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Only\_throttle.

mat

#### Simulation 1

#### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Only\_throttle.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Only\_throttle.

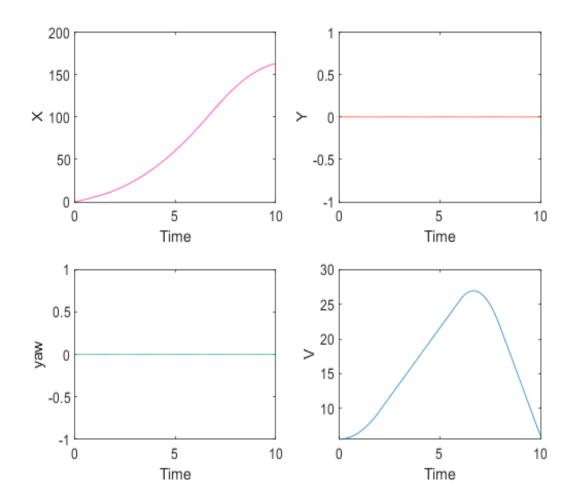
mat

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double	<del></del> _	Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Only\_throttle.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Only\_throttle.

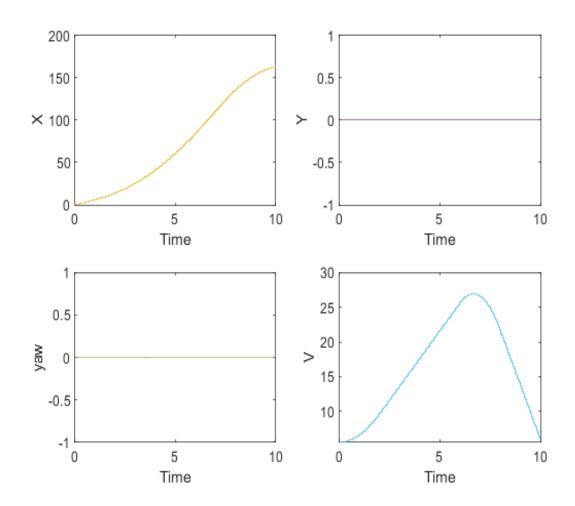
mat

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

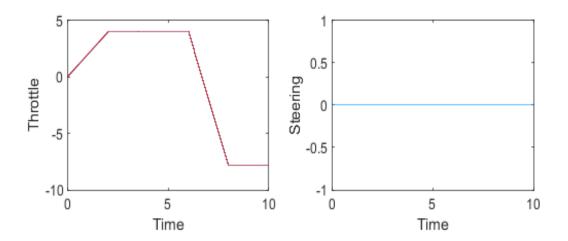
Name	Data Type	Units	Sample Time	Interp	Sync	Link
						to Plot
_ X	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
_ <u>Y</u>	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
yaw	double	<u> </u>	0.001	zoh	union	<u>Link</u>
_ <u>v</u>	double	 	0.001	zoh	union	<u>Link</u>
Throttle	double	 	0.001	zoh	union	<u>Link</u>
Steering	double	 	0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double	<del>_</del>	0.001	zoh	union
v	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# **Constant steering**

## **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:05:31

End Time: 15-Apr-2021 17:05:39

Outcome: Failed

Cause of Failure: Failed criteria: Equivalence

Description:

## **Constant steering**

Test performed keeping the throttle equal to 0 and giving a constant steering angle value

#### **Test Case Information**

Name: Constant steering Type: Equivalence Test

## **Iteration Settings**

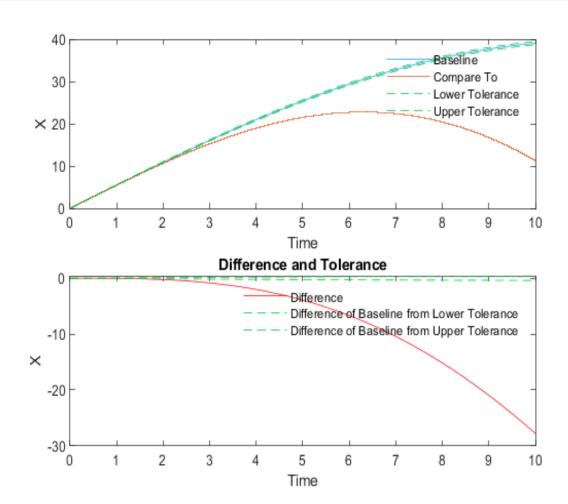
#### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Constant_st	
	eering.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Constant_st	
	eering.mat	

# **Equivalence Comparison**

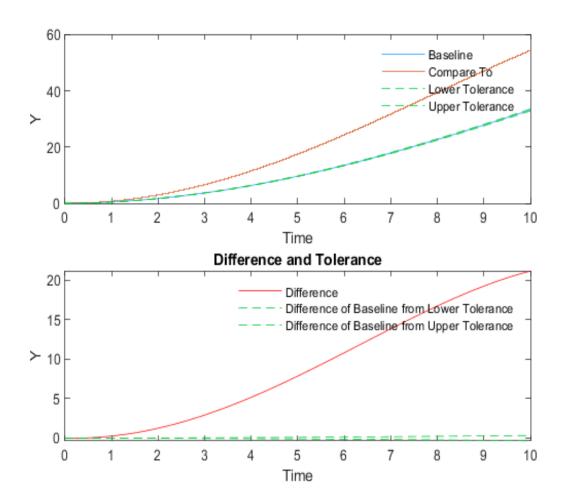
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Interp Sync	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1	Type 2	2	Time 2	inter p Sync	to Plot
<b>8</b> X	0	0.01	0	0	27.8	double		Continuous	double		0.001	linear union	<u>Link</u>
<b>⊗</b> Y	0	0.01	0	0	21.2	double		Continuous	double		0.001	linear union	<u>Link</u>
🕴 yaw	0	0.01	0	0	0.683	double		Continuous	double		0.001	linear union	<u>Link</u>
✓ v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union	<u>Link</u>

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sy	nc
🛭 X	0	0.01	0	0	27.8	double		Continuous	double		0.001	linear uni	ion



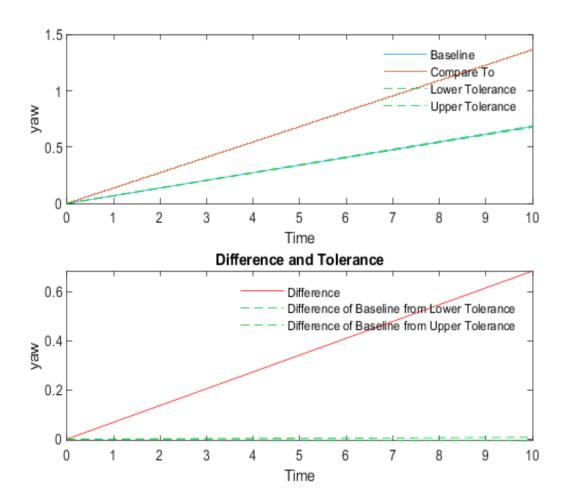
# Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p Sync
<b>⊗</b> Y	0	0.01	0	0	21.2	double		Continuous	double		0.001	linear union



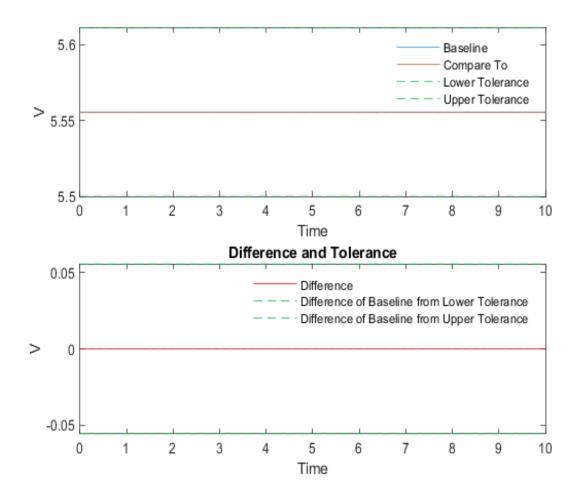
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Ivalite	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	interp byne
🕴 yaw	0	0.01	0	0	0.683	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p sync
✓ v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



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#### **Input Information**

External Input Na Constant\_steering.mat me:

 $\label{limit} External\ Input\ File: C:\Users\gianv\Documents\GitHub\Compliance\_te\\ st\Matlab\ scripts\Simulink\Models\Constant\_steeri\\ ng.mat$ 

#### **Input Information**

External Input Na Constant\_steering.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Constant\_steeri

ng.mat

#### Simulation 1

#### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1

External Input Name: Constant\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Constant\_steeri

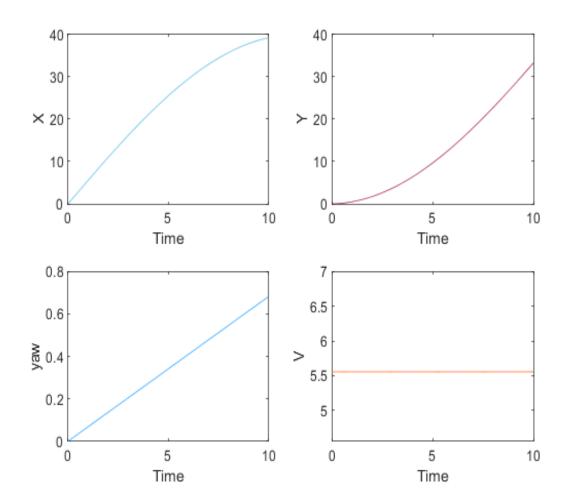
ng.mat

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double	<del></del> _	Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration 1

External Input Name: Constant\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Constant\_steeri

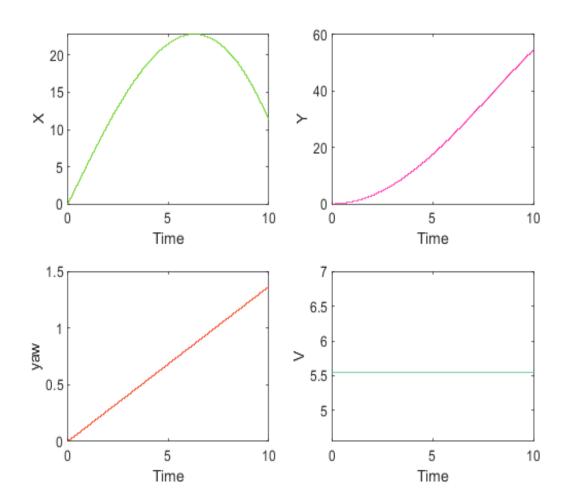
ng.mat

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

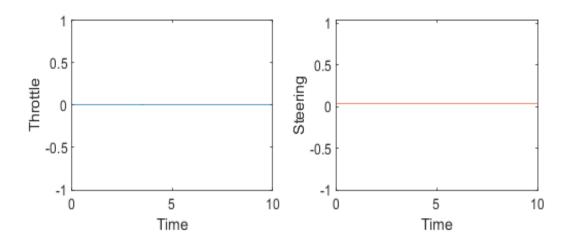
Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		0.001	zoh	union	<u>Link</u>
Y	double		0.001	zoh	union	<u>Link</u>
yaw	double		0.001	zoh	union	<u>Link</u>
V	double		0.001	zoh	union	<u>Link</u>
Throttle	double		0.001	zoh	union	<u>Link</u>
Steering	double		0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double		0.001	zoh	union
v	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# Ramp steering

# **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:05:39

End Time: 15-Apr-2021 17:05:57

Outcome: Failed

Cause of Failure: Failed criteria: Equivalence

Description:

## Ramp steering

Test performed keeping the throttle equal to 0 and giving a ramp steering angle signal (from  $0^{\circ}$  to  $36^{\circ}$ )

#### **Test Case Information**

Name: Ramp steering Type: Equivalence Test

## **Iteration Settings**

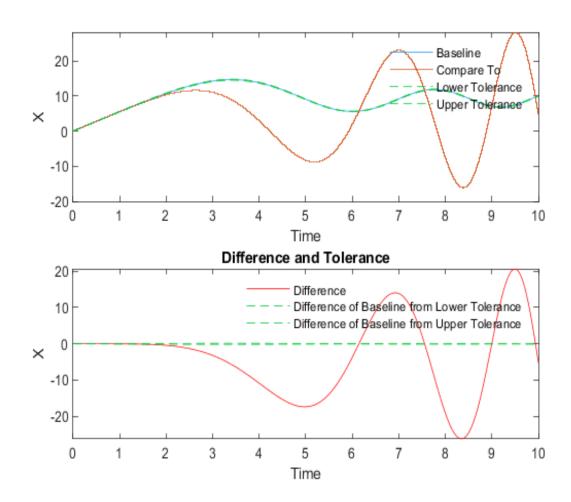
#### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Ramp_steer	
	ing.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	I I
	Models\Ramp_steer	
	ing.mat	

# **Equivalence Comparison**

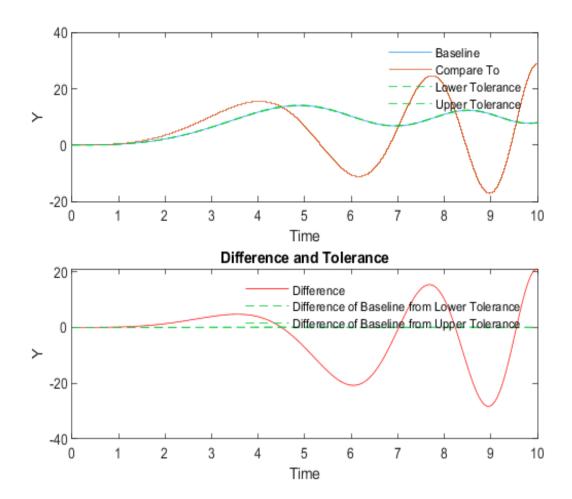
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Interp Sync	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1	Type 2	2	Time 2	inter p sync	to Plot
<b>8</b> X	0	0.01	0	0	26.1	double		Continuous	double		0.001	linear union	<u>Link</u>
<b>⊗</b> Y	0	0.01	0	0	28.3	double		Continuous	double		0.001	linear union	<u>Link</u>
🕴 yaw	0	0.01	0	00	7.88	double		Continuous	double		0.001	linear union	<u>Link</u>
✓ v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union	<u>Link</u>

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p Sync
<b>8</b> X	0	0.01	0	0	26.1	double		Continuous	double		0.001	linear union



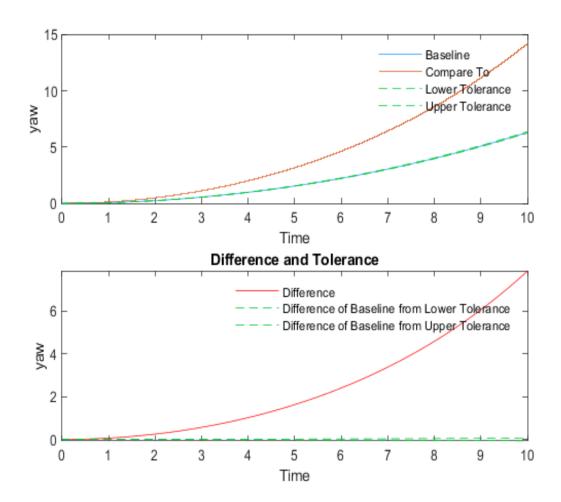
# Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Syn
	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p 3yin
<b>⊗</b> Y	0	0.01	0	0	28.3	double		Continuous	double		0.001	linear unio



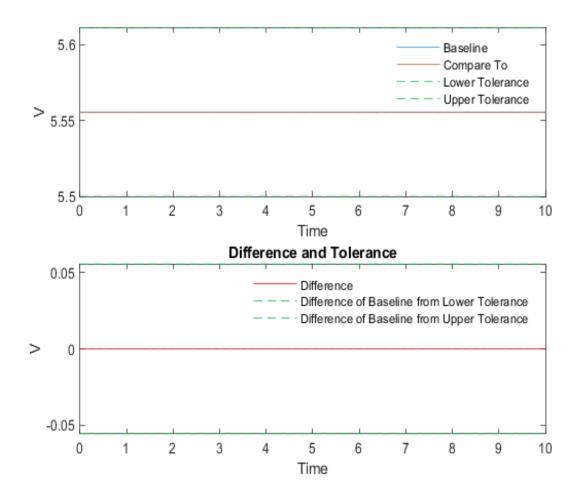
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	linter p oyne
🕴 yaw	0	0.01	0	0	7.88	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
✓ v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

### **Input Information**

External Input Na Ramp\_steering.mat me:

 $\label{line:c:simul} External \ Input \ File: C:\ Users\ gianv\ Documents\ GitHub\ Compliance\_te st\ Matlab \ scripts\ Simulink\ Models\ Ramp\_steering. \\ mat$ 

## **Input Information**

External Input Na Ramp\_steering.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Ramp\_steering.

mat

#### Simulation 1

### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Ramp\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Ramp\_steering.

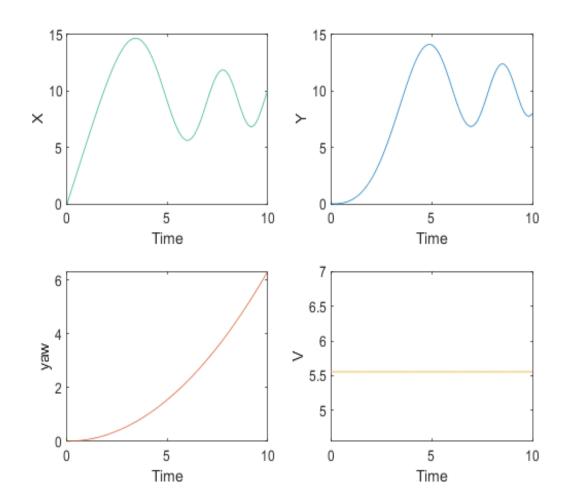
mat

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type Units		Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double	<del></del> _	Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Ramp\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Ramp\_steering.

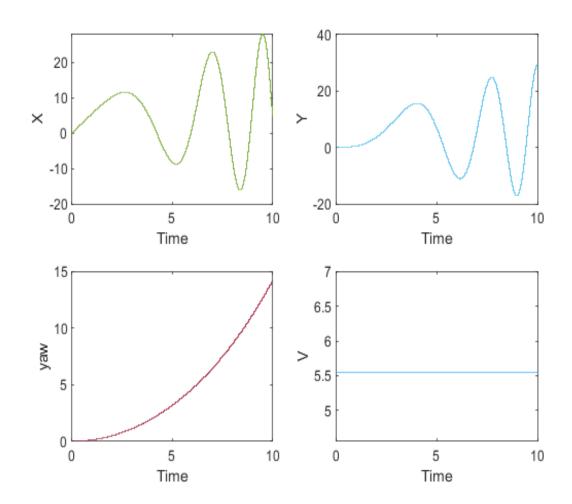
mat

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

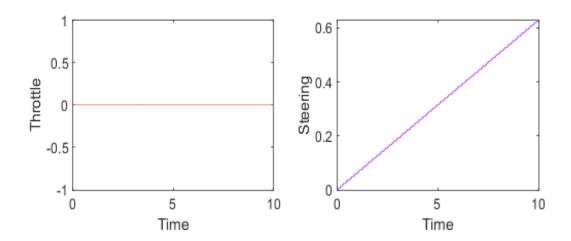
Name	Data Type	Units	Sample Time	Interp	Sync	Link
						to Plot
_ X	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
_ <u>Y</u>	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
yaw	double	<u> </u>	0.001	zoh	union	<u>Link</u>
_ <u>v</u>	double	 	0.001	zoh	union	<u>Link</u>
Throttle	double	 	0.001	zoh	union	<u>Link</u>
Steering	double	 	0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double		0.001	zoh	union
v	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# Small sinusoidal steering

## **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:05:57

End Time: 15-Apr-2021 17:06:08

Outcome: Failed

Cause of Failure: Failed criteria: Equivalence

Description:

Small sinusoidal steering Test performed keeping the throttle equal to 0 and giving a sinusoidal steering angle signal with frequency 0.2Hz and amplitude  $5^{\circ}$ 

### **Test Case Information**

Name: Small sinusoidal steering

Type: Equivalence Test

### **Iteration Settings**

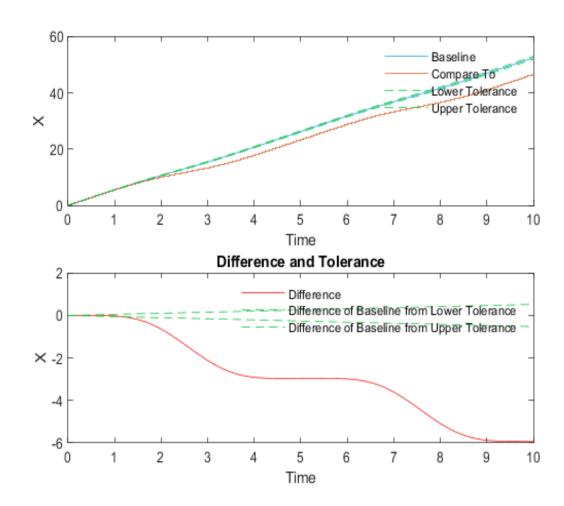
### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Small_sinus	
	oidal_steering.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Small_sinus	
	oidal_steering.mat	

## **Equivalence Comparison**

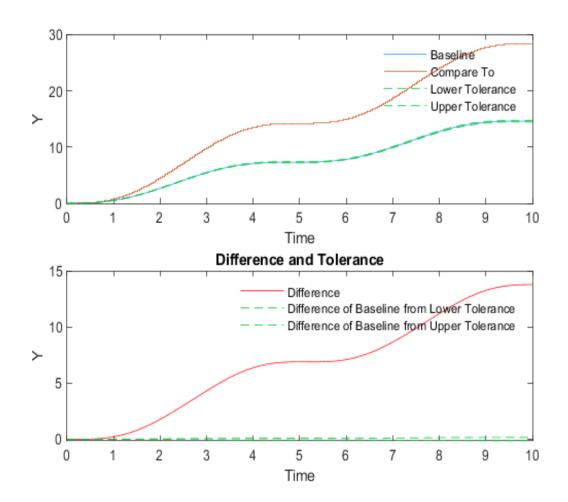
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Interp Syr	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1 Type 2		2	Time 2	inter pi syr	to Plot
<b>8</b> X	0	0.01	0	0	5.94	double		Continuous	double		0.001	linear uni	on <u>Link</u>
<b>⊗</b> Y	0	0.01	0	0	13.8	double		Continuous	double		0.001	linear uni	on <u>Link</u>
🔕 yaw	0	0.01	0	0	0.273	double		Continuous	double		0.001	linear uni	on <u>Link</u>
<b>⊘</b> v	o	0.01	0	0	 	double	T –	Continuous	double		0.001	linear uni	on <u>Link</u>

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
<b>8</b> X	0	0.01	0	0	5.94	double		Continuous	double		0.001	linear union



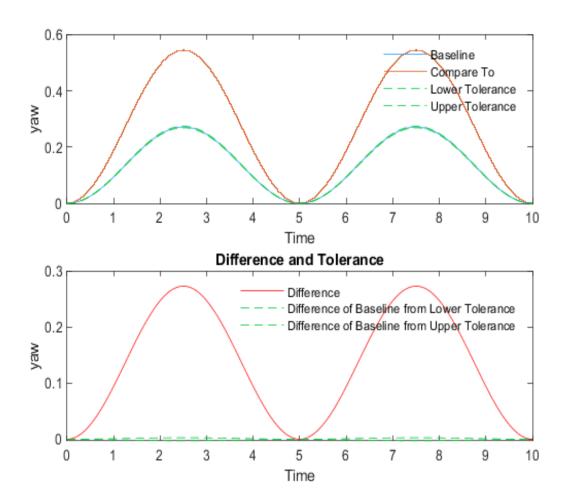
# Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p Sync
<b>⊗</b> Y	0	0.01	0	0	13.8	double		Continuous	double		0.001	linear union



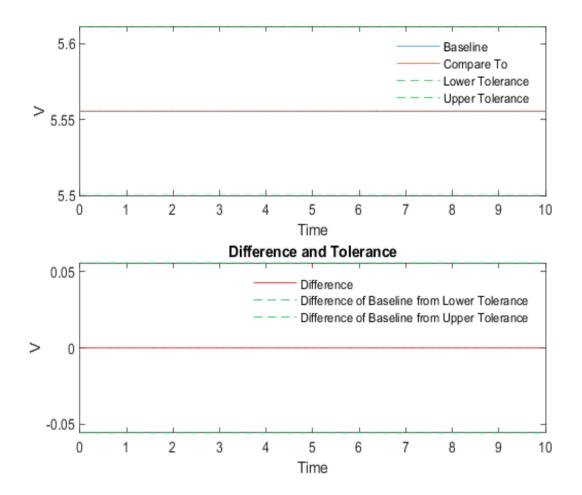
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
1102110	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	Little P of lite
🕴 yaw	0	0.01	0	0	0.273	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

### **Input Information**

External Input Na Small\_sinusoidal\_steering.mat me:

 $\label{limit} External\ Input\ File: C:\Users\gianv\Documents\GitHub\Compliance\_te\\ st\Matlab\ scripts\Simulink\Models\Small\_sinusoid\\ al\_steering.mat$ 

### **Input Information**

External Input Na Small\_sinusoidal\_steering.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Small\_sinusoid

al\_steering.mat

#### Simulation 1

### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration 1

External Input Name: Small\_sinusoidal\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Small\_sinusoid

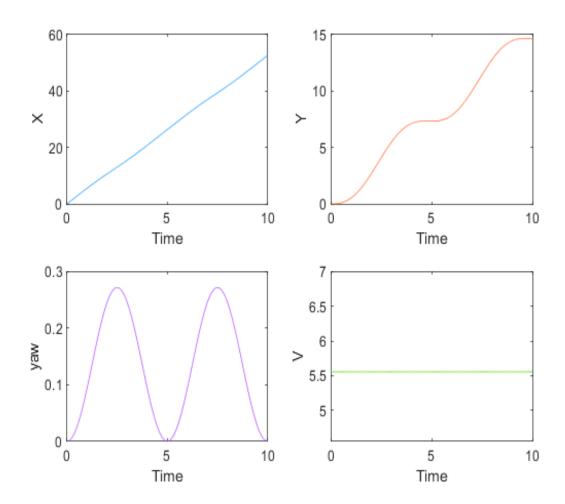
al\_steering.mat

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double	<del></del> _	Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration 1

External Input Name: Small\_sinusoidal\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Small\_sinusoid

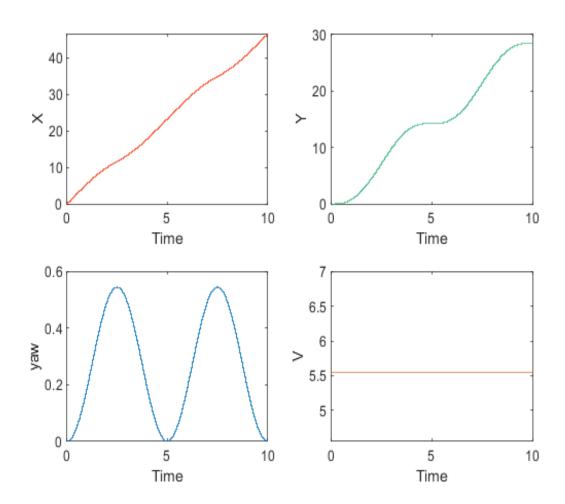
al\_steering.mat

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

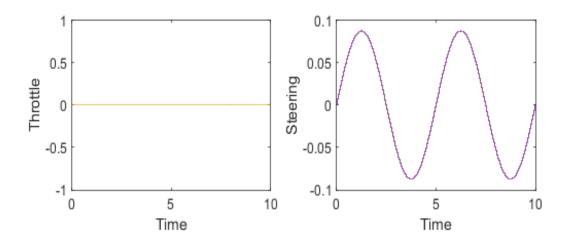
Name	Data Type	Units	Sample Time	Interp	Sync	Link
						to Plot
_ X	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
_ <u>Y</u>	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
yaw	double	<u> </u>	0.001	zoh	union	<u>Link</u>
_ <u>v</u>	double	 	0.001	zoh	union	<u>Link</u>
Throttle	double	 	0.001	zoh	union	<u>Link</u>
Steering	double	 	0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double		0.001	zoh	union
	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# Big sinusoidal steering

## **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:06:08

End Time: 15-Apr-2021 17:06:18

Outcome: Failed

Cause of Failure: Failed criteria: Equivalence

Description:

**Big sinusoidal steering** Test performed keeping the throttle equal to 0 and giving a sinusoidal steering angle signal with frequency 0.2Hz and amplitude 15°

### **Test Case Information**

Name: Big sinusoidal steering

Type: Equivalence Test

### **Iteration Settings**

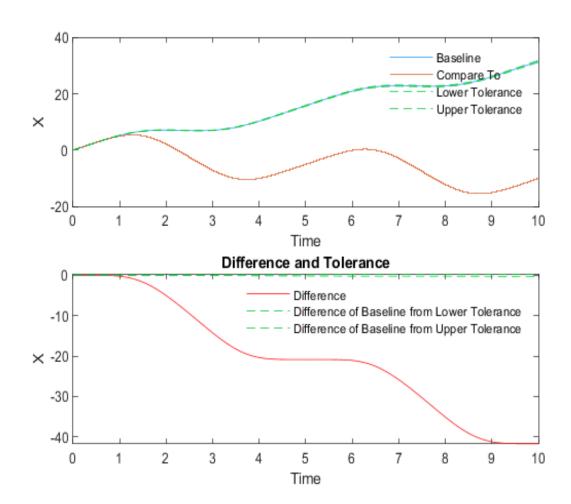
### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Big_sinusoi	
	dal_steering.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Big_sinusoi	
	dal_steering.mat	

## **Equivalence Comparison**

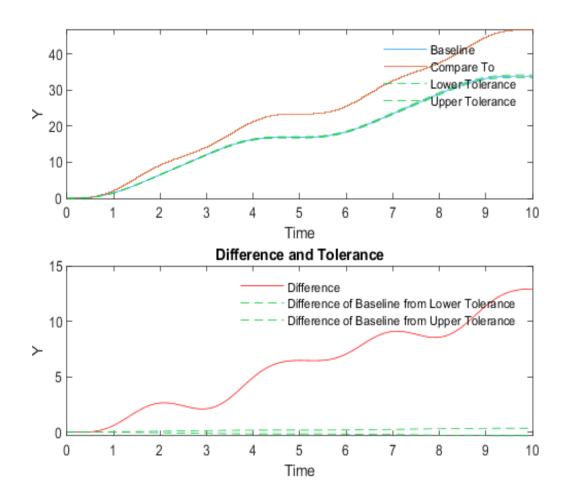
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Interp Syr	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1	Type 2	2	Time 2	inter p 3yr	to Plot
<b>8</b> X	0	0.01	0	0	41.7	double		Continuous	double		0.001	linear unio	on <u>Link</u>
<b>⊗</b> Y	0	0.01	0	0	12.9	double		Continuous	double		0.001	linear uni	on <u>Link</u>
🔕 yaw	0	0.01	0	0	0.86	double		Continuous	double		0.001	linear uni	on <u>Link</u>
<b>⊘</b> v	o	0.01	0	0	0	double		Continuous	double		0.001	linear uni	on <u>Link</u>

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
<b>8</b> X	0	0.01	0	0	41.7	double		Continuous	double		0.001	linear union



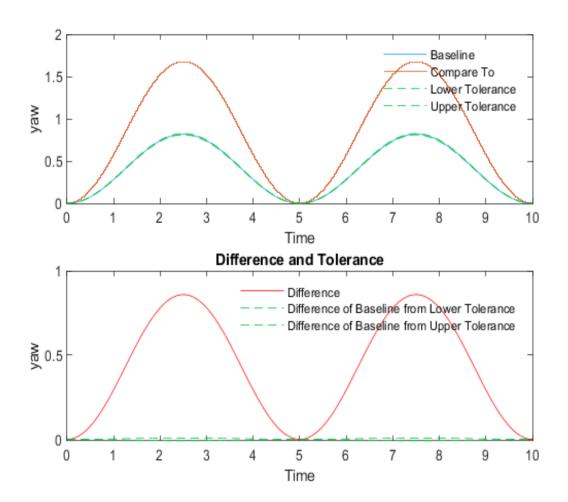
# Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	interp sync
<b>8</b> Y	0	0.01	0	0	12.9	double		Continuous	double		0.001	linear union



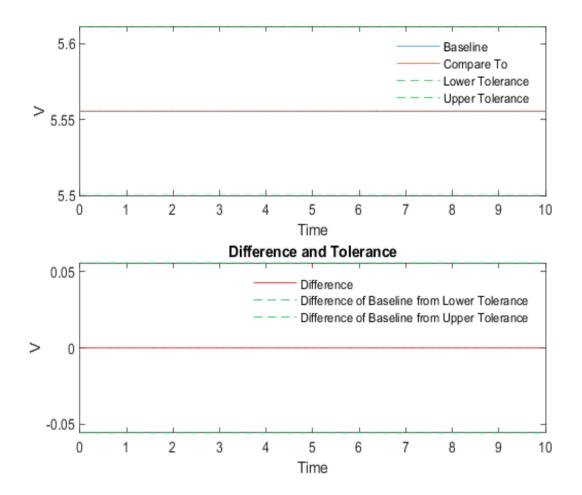
Back to Report SummaryBack to Criteria Results

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
🕴 yaw	0	0.01	0	0	0.86	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p sync
✓ v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

### **Input Information**

External Input Na Big\_sinusoidal\_steering.mat me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te st\Matlab scripts\SimulinkModels\Big\_sinusoidal\_ steering.mat

### **Input Information**

External Input Na Big\_sinusoidal\_steering.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Big\_sinusoidal\_

steering.mat

#### Simulation 1

### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1

External Input Name: Big\_sinusoidal\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Big\_sinusoidal\_

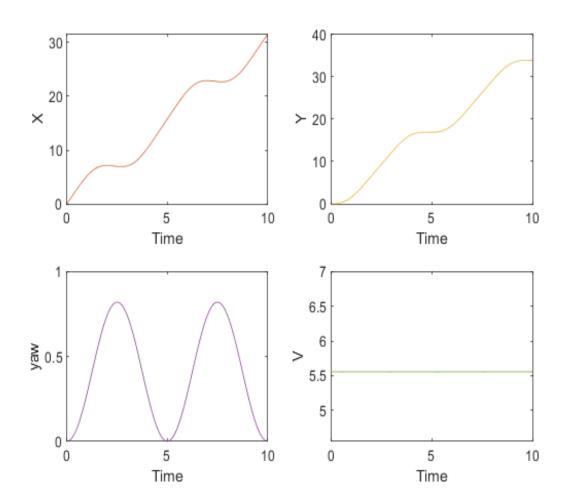
steering.mat

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double		Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration 1

External Input Name: Big\_sinusoidal\_steering.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_te

st\Matlab scripts\SimulinkModels\Big\_sinusoidal\_

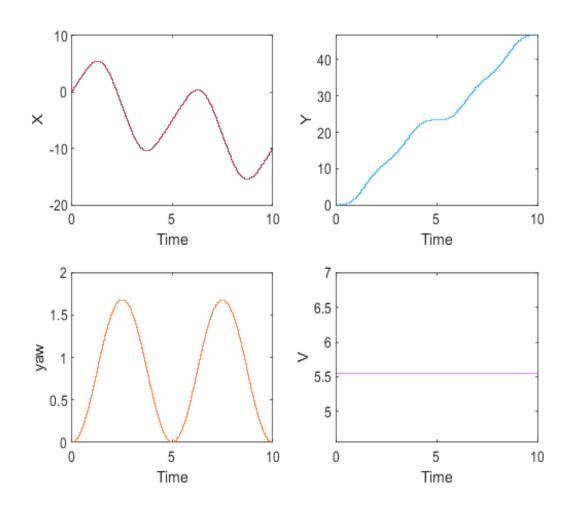
steering.mat

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

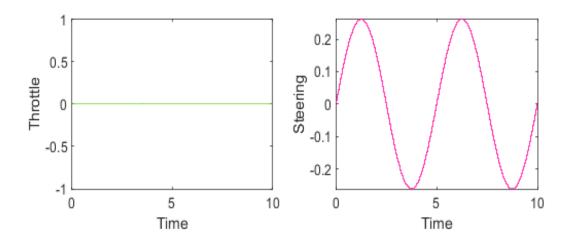
Name	Data Type	Units	Sample Time	Interp	Sync	Link
						to Plot
_ X	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
_ <u>Y</u>	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
yaw	double	<u> </u>	0.001	zoh	union	<u>Link</u>
_ <u>v</u>	double	 	0.001	zoh	union	<u>Link</u>
Throttle	double	 	0.001	zoh	union	<u>Link</u>
Steering	double	 	0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double	<del>_</del>	0.001	zoh	union
v	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# Combined 1

## **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:06:18

End Time: 15-Apr-2021 17:06:29

Outcome: Failed

Cause of Failure: Failed criteria: Equivalence

Description:

### Combined 1

Throttle signal with a predefined shape and constant steering angle

### **Test Case Information**

Name: Combined 1 Type: Equivalence Test

## **Iteration Settings**

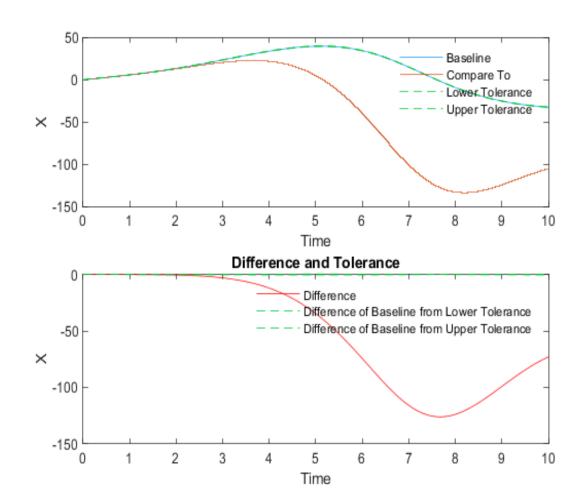
### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Combined1	
	.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Combined1	
	.mat	

# **Equivalence Comparison**

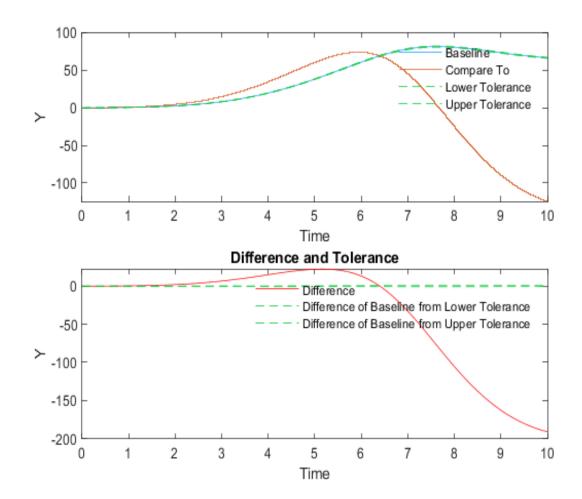
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Interp Syn	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1	Type 2	2	Time 2	inter p 3yii	to Plot
<b>8</b> X	0	0.01	0	0	126	double		Continuous	double		0.001	linear unic	n <u>Link</u>
<b>⊗</b> Y	0	0.01	0	0	191	double		Continuous	double		0.001	linear unio	n <u>Link</u>
🔕 yaw	0	0.01	0	0	2.01	double		Continuous	double		0.001	linear unio	n <u>Link</u>
<b>⊘</b> v	o	0.01	0	0	0	double		Continuous	double		0.001	linear unio	n Link

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sy	ync
<b>8</b> X	0	0.01	0	0	126	double		Continuous	double		0.001	linear un	nion



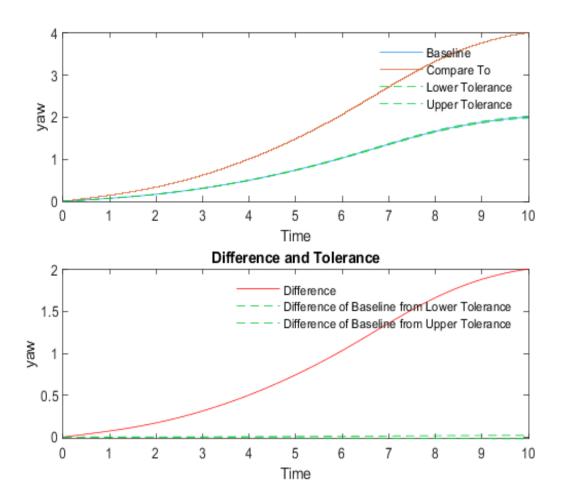
## Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p Sync
<b>⊗</b> Y	0	0.01	0	0	191	double		Continuous	double		0.001	linear union



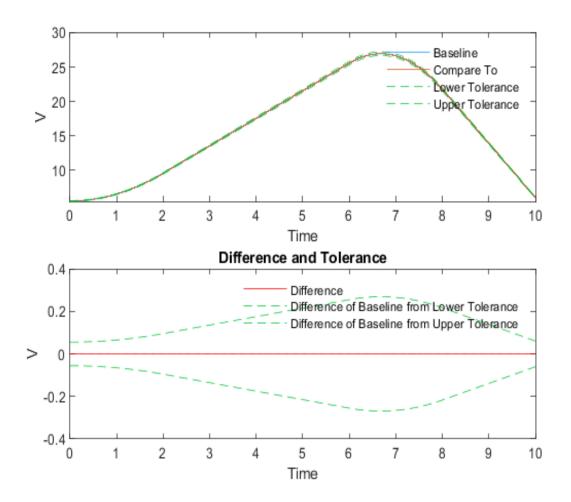
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Ivalile	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	Jitter p Sylic
🕴 yaw	0	0.01	0	0	2.01	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p sync
✓ v	0	0.01	0	0	0	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

### **Input Information**

External Input Na Combined1.mat me:

 $\label{limit} External\ Input\ File: C:\Users\gianv\Documents\GitHub\Compliance\_t\\ est\Matlab\ scripts\Simulink\Models\Combined1.m\\ at$ 

### **Input Information**

External Input Na Combined1.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Combined1.m

at

#### Simulation 1

### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Combined1.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Combined1.m

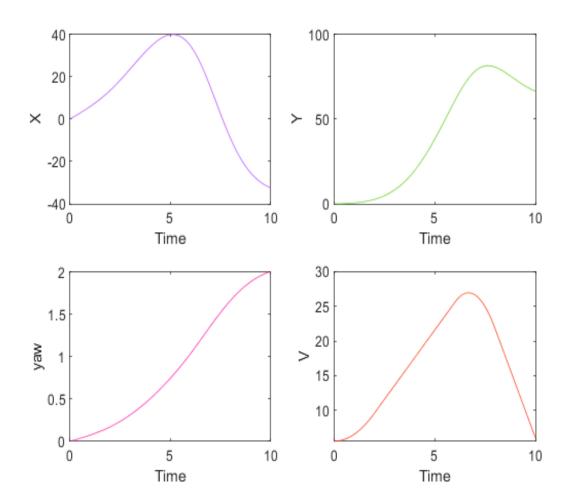
at

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double		Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1 External Input Name: Combined1.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Combined1.m

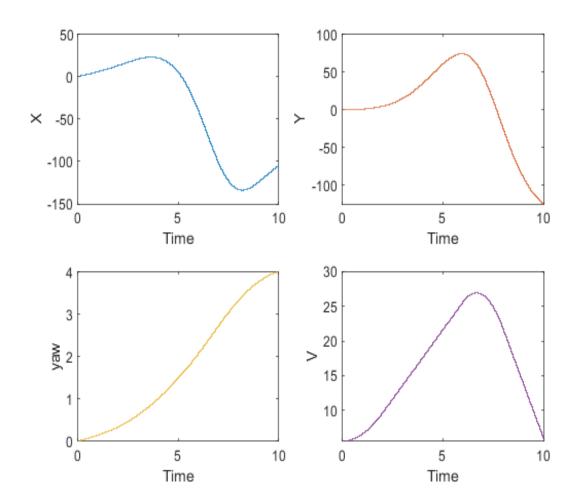
at

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

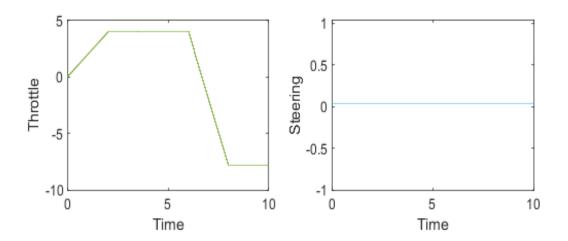
Name	Data Type	Units	Sample Time	Interp	Sync	Link
						to Plot
_ X	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
_ <u>Y</u>	double	<u> </u> 	0.001	zoh	union	<u>Link</u>
yaw	double	<u> </u>	0.001	zoh	union	<u>Link</u>
_ <u>v</u>	double	 	0.001	zoh	union	<u>Link</u>
Throttle	double	 	0.001	zoh	union	<u>Link</u>
Steering	double	 	0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double		0.001	zoh	union
v	double		0.001	zoh	union



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Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



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# **Combined 2**

## **Test Result Information**

Result Type: Test Iteration Result
Parent: Comparison Tests
Start Time: 15-Apr-2021 17:06:29

End Time: 15-Apr-2021 17:06:40

Outcome: Failed

Cause of Failure: Failed criteria: Equivalence

Description:

### Combined 2

Ramp steering angle signal with a constant throttle

### **Test Case Information**

Name: Combined 2

Type: Equivalence Test

### **Iteration Settings**

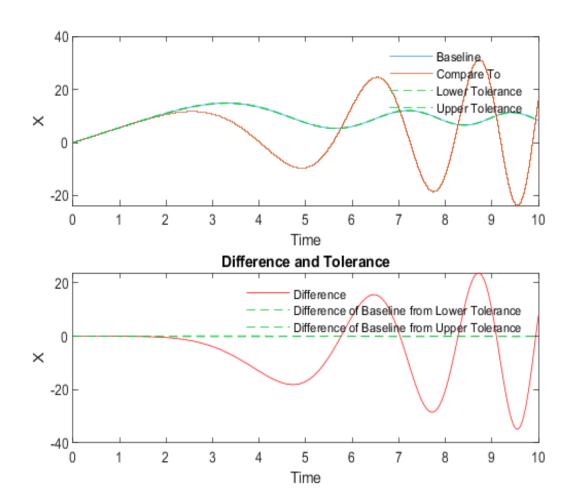
### **Test Overrides**

Parameter Name	Value	Simulation Index
ExternalInput	C:\Users\gianv\Doc	1
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Combined2	
	.mat	
ExternalInput	C:\Users\gianv\Doc	2
	uments\GitHub\Co	
	mpliance_test\Matl	
	ab scripts\Simulink	
	Models\Combined2	
	.mat	

## **Equivalence Comparison**

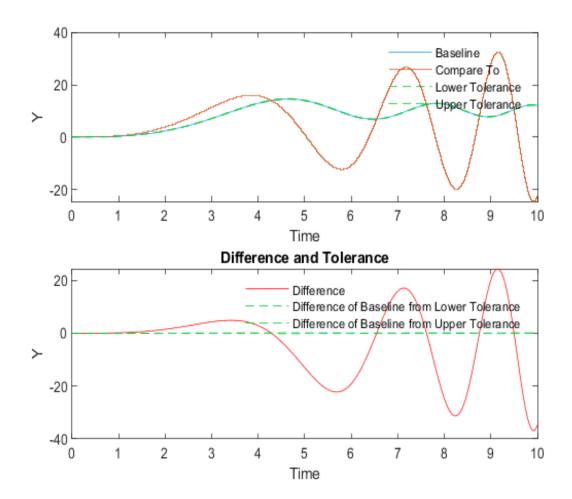
Name	Abs	Rel	Lead	Lag	Max	Data	Units	Sample	Data	Units	Sample	Intown Crm	Link
Name	Tol	Tol	Tol	Tol	Diff	Type 1	1	Time 1	Type 2	2	Time 2	Interp Syn	to Plot
<b>⊗</b> x	0	0.01	0	0	34.9	double		Continuous	double		0.001	linear unio	n <u>Link</u>
<b>⊗</b> y	0	0.01	0	0	36.9	double		Continuous	double		0.001	linear unio	n <u>Link</u>
🔕 yaw	0	0.01	0	0	9.86	double		Continuous	double		0.001	linear unio	n <u>Link</u>
<b>⊘</b> v	0	0.01	0	0	8.88e-16	double		Continuous	double		0.001	linear unio	n Link

Name	Abs Tol	Rel Tol	Lead Tol	Lag Tol	Max Diff	Data T ype 1	Units 1	Sample Time 1	Data T ype 2	Units 2	Sample Time 2	Interp Sync
🛭 X	0	0.01	0	0	34.9	double		Continuous	double		0.001	linear union



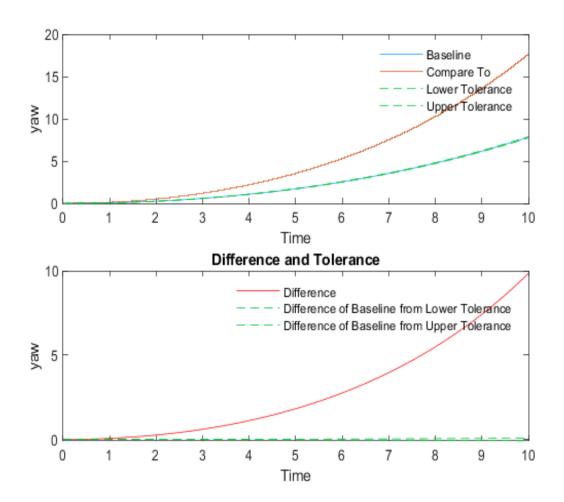
# Back to Report SummaryBack to Criteria Results

	Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
	Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p Sync
ĺ	<b>⊗</b> Y	0	0.01	0	0	36.9	double		Continuous	double		0.001	linear union



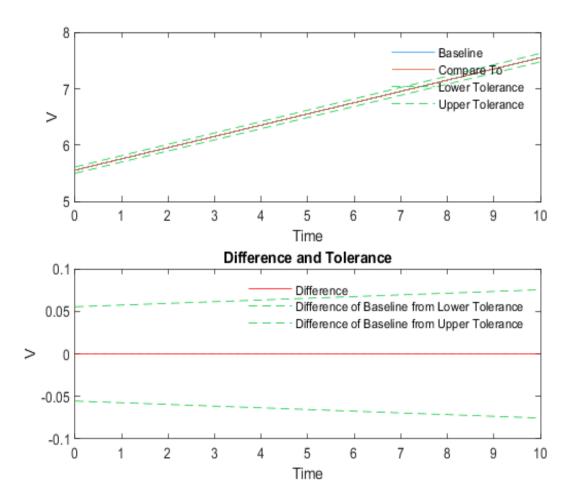
Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	inter p oyne
🕴 yaw	0	0.01	0	0	9.86	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

Name	Abs	Rel	Lead	Lag	Max	Data T	Units	Sample	Data T	Units	Sample	Interp Sync
Name	Tol	Tol	Tol	Tol	Diff	ype 1	1	Time 1	ype 2	2	Time 2	interp sync
✓ v	0	0.01	0	0	8.88e-16	double		Continuous	double		0.001	linear union



Back to Report SummaryBack to Criteria Results

### **Input Information**

External Input Na Combined2.mat me:

 $\label{limit} External\ Input\ File: C:\Users\gianv\Documents\GitHub\Compliance\_t\\ est\Matlab\ scripts\Simulink\Models\Combined2.m\\ at$ 

### **Input Information**

External Input Na Combined2.mat

me:

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Combined2.m

at

#### Simulation 1

### **System Under Test Information**

Model: Model\_compare\_SLX

Harness: Model\_comparison\_dynamic

Harness Owner: Model\_compare\_SLX/Dynamic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1
External Input Name: Combined2.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Combined2.m

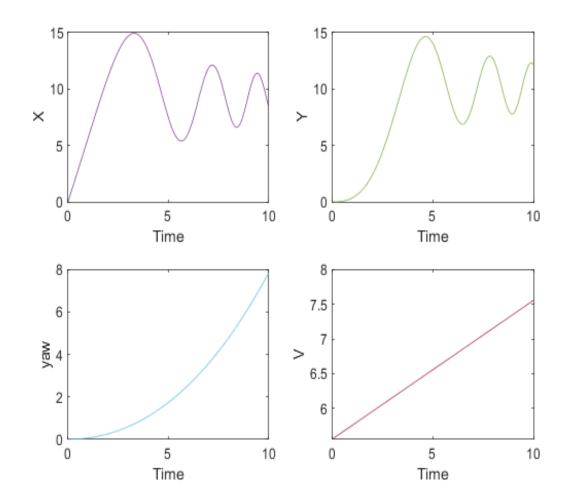
at

Start Time: 0 Stop Time: 10

Checksum: 4152128412 1859814811 142259360 3035885348

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		Continuous	linear	union	<u>Link</u>
Y	double		Continuous	linear	union	Link
yaw	double		Continuous	linear	union	<u>Link</u>
V	double		Continuous	linear	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		Continuous	linear	union
Y	double		Continuous	linear	union
yaw	double		Continuous	linear	union
v	double	<del></del> _	Continuous	linear	union



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## Simulation 2

# **System Under Test Information**

Model:

Model\_compare\_SLX Model\_comparison\_kinematic Harness:

Harness Owner: Model\_compare\_SLX/Kinematic\_model

Simulation Mode: normal

Override SIL or PIL Mod 0

e:

Configuration Set: Configuration1 External Input Name: Combined2.mat

External Input File: C:\Users\gianv\Documents\GitHub\Compliance\_t

est\Matlab scripts\SimulinkModels\Combined2.m

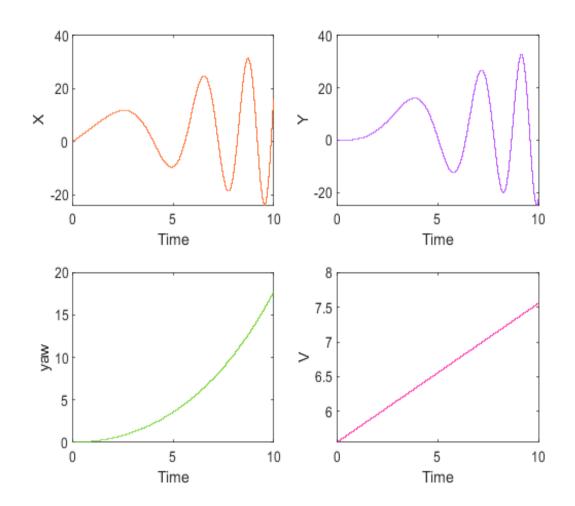
at

Start Time: 0 Stop Time: 10

Checksum: 2799456273 4233424247 1463475084 743274136

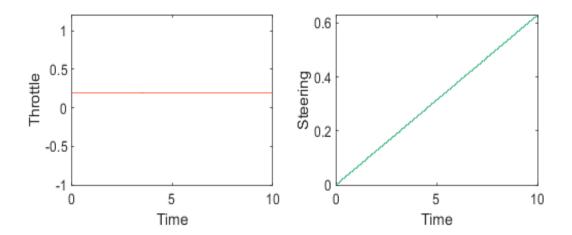
Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
X	double		0.001	zoh	union	<u>Link</u>
Y	double		0.001	zoh	union	<u>Link</u>
yaw	double	 	0.001	zoh	union	<u>Link</u>
V	double		0.001	zoh	union	<u>Link</u>
Throttle	double		0.001	zoh	union	<u>Link</u>
Steering	double		0.001	zoh	union	<u>Link</u>

Name	Data Type	Units	Sample Time	Interp	Sync
X	double		0.001	zoh	union
Y	double		0.001	zoh	union
yaw	double		0.001	zoh	union
V	double		0.001	zoh	union



Back to Report SummaryBack to Signal Summary

Name	Data Type	Units	Sample Time	Interp	Sync
Throttle	double		0.001	zoh	union
Steering	double		0.001	zoh	union



# Back to Report SummaryBack to Signal Summary