

Simulink Design Verifier Report

Eas_Integrated/Eas_Subsystem

SOMNATH

Simulink Design Verifier Report: Eas_Integrated/Eas_Subsystem

SOMNATH

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Chapter 1. Summary

Analysis Information.

Model:	Eas_Integrated
Release:	R2021a
Analyzed Subsystem:	Eas_Integrated/Eas_Subsystem
Checksum:	2364402400 1502429244 1830922972 2321936094
Mode:	Test generation
Model Representation:	Built on 29-Jul-2022 22:11:17
Test Generation Target:	Model
Status:	Completed normally
PreProcessing Time:	19s
Analysis Time:	14s

Objectives Status.

Number of Objectives:	114	
Objectives Satisfied:	114	(100%)

Chapter 2. Analysis Information

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Model Information

File:	Eas_Integrated
Version:	1.54
Time Stamp:	Thu Jul 28 22:48:44 2022
Author:	Admin

Analysis Options

Mode:	TestGeneration
Rebuild Model Representation:	IfChangeIsDetected
Test Generation Target:	Model
Test Suite Optimization:	Auto
Maximum Testcase Steps:	10000time steps
Test Conditions:	UseLocalSettings
Test Objectives:	UseLocalSettings
Model Coverage Objectives:	ConditionDecision
Add tests for the missing coverage:	off
Include Relational Boundary Objectives:	off
Maximum Analysis Time:	300s
Block Replacement:	off
Parameters Analysis:	off
Include expected output values:	on
Randomize data that do not affect the outcome:	on
Additional analysis to reduce instances of rational approximation:	on
Save Data:	on
Save Harness:	on
Save Report:	off

User Artifacts

Coverage Data:	n/a
Test Data:	n/a

Chapter 3. Test Objectives Status

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Objectives Satisfied

Simulink Design Verifier generated test cases that exercise these test objectives.

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
1	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator	RelationalOperator: input1 >= input2 true	11	1 [0]
2	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator	RelationalOperator: input1 >= input2 false	11	1 [0]
3	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator1	RelationalOperator: input1 >= input2 true	11	1 [0]
4	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator1	RelationalOperator: input1 >= input2 false	11	1 [0]
5	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator2	RelationalOperator: input1 >= input2 true	11	1 [0]
6	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator2	RelationalOperator: input1 >= input2 false	11	1 [0]
7	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1	Logic: input port 1 true	11	1 [0]
8	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1	Logic: input port 1 false	11	1 [0]
9	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1	Logic: input port 2 true	11	1 [0]
10	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1	Logic: input port 2 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
11	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator3	RelationalOperator: input1 >= input2 true	11	1 [0]
12	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator3	RelationalOperator: input1 >= input2 false	11	1 [0]
13	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator4	RelationalOperator: input1 >= input2 true	11	1 [0]
14	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator4	RelationalOperator: input1 >= input2 false	11	1 [0]
15	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2	Logic: input port 1 true	11	1 [0]
16	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2	Logic: input port 1 false	11	1 [0]
17	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2	Logic: input port 2 true	11	1 [0]
18	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2	Logic: input port 2 false	11	1 [0]
19	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3	Logic: input port 1 true	11	1 [0]
20	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3	Logic: input port 1 false	11	1 [0]
21	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3	Logic: input port 2 true	11	1 [0]
22	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3	Logic: input port 2 false	11	1 [0]
23	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND	Logic: input port 1 true	11	1 [0]
24	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND	Logic: input port 1 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
25	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND	Logic: input port 2 true	11	1 [0]
26	Condition	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND	Logic: input port 2 false	11	1 [0]
27	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator	RelationalOperator: input1 >= input2 true	11	1 [0]
28	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator	RelationalOperator: input1 >= input2 false	11	1 [0]
29	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator1	RelationalOperator: input1 >= input2 true	11	1 [0]
30	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator1	RelationalOperator: input1 >= input2 false	11	1 [0]
31	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND	Logic: input port 1 true	11	1 [0]
32	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND	Logic: input port 1 false	11	1 [0]
33	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND	Logic: input port 2 true	11	1 [0]
34	Condition	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND	Logic: input port 2 false	11	1 [0]
35	Decision	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem	enable logical value true	11	1 [0]
36	Decision	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem	enable logical value false	11	1 [0]
37	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator	RelationalOperator: input1 == input2 true	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
38	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator	RelationalOperator: input1 == input2 false	11	1 [0]
39	Decision	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem	enable logical value true	11	1 [0]
40	Decision	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem	enable logical value false	11	1 [0]
41	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator1	RelationalOperator: input1 == input2 true	11	1 [0]
42	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator1	RelationalOperator: input1 == input2 false	11	1 [0]
43	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator2	RelationalOperator: input1 == input2 true	11	1 [0]
44	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator2	RelationalOperator: input1 == input2 false	11	1 [0]
45	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator	RelationalOperator: input1 >= input2 true	11	1 [0]
46	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator	RelationalOperator: input1 >= input2 false	11	1 [0]
47	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	Logic: input port 1 true	11	1 [0]
48	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	Logic: input port 1 false	11	1 [0]
49	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	Logic: input port 2 true	11	1 [0]
50	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	Logic: input port 2 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
51	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	Logic: input port 3 true	11	1 [0]
52	Condition	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	Logic: input port 3 false	11	1 [0]
53	Condition	Eas_Subsystem/DPF_Subsystem/Service_Regeneration/Relational_Operator3	RelationalOperator: input1 >= input2 true	11	1 [0]
54	Condition	Eas_Subsystem/DPF_Subsystem/Service_Regeneration/Relational_Operator3	RelationalOperator: input1 >= input2 false	11	1 [0]
55	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator1	RelationalOperator: input1 <= input2 true	11	1 [0]
56	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator1	RelationalOperator: input1 <= input2 false	11	1 [0]
57	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Relational_Operator1	RelationalOperator: input1 >= input2 true	11	1 [0]
58	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Relational_Operator1	RelationalOperator: input1 >= input2 false	11	1 [0]
59	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND	Logic: input port 1 true	11	1 [0]
60	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND	Logic: input port 1 false	11	1 [0]
61	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND	Logic: input port 2 true	11	1 [0]
62	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND	Logic: input port 2 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
63	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Switch	logical trigger input false (output is from 3rd input port)	11	1 [0]
64	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Switch	logical trigger input true (output is from 1st input port)	11	1 [0]
65	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator2	RelationalOperator: input1 >= input2 true	11	1 [0]
66	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator2	RelationalOperator: input1 >= input2 false	11	1 [0]
67	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator3	RelationalOperator: input1 <= input2 true	11	1 [0]
68	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator3	RelationalOperator: input1 <= input2 false	11	1 [0]
69	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Relational_Operator	RelationalOperator: input1 >= input2 true	11	1 [0]
70	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Relational_Operator	RelationalOperator: input1 >= input2 false	11	1 [0]
71	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1	Logic: input port 1 true	11	1 [0]
72	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1	Logic: input port 1 false	11	1 [0]
73	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1	Logic: input port 2 true	11	1 [0]
74	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1	Logic: input port 2 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
75	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Switch	logical trigger input false (output is from 3rd input port)	11	1 [0]
76	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Switch	logical trigger input true (output is from 1st input port)	11	1 [0]
77	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator4	RelationalOperator: input1 >= input2 true	11	1 [0]
78	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator4	RelationalOperator: input1 >= input2 false	11	1 [0]
79	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2	Logic: input port 1 true	11	1 [0]
80	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2	Logic: input port 1 false	11	1 [0]
81	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2	Logic: input port 2 true	11	1 [0]
82	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2	Logic: input port 2 false	11	1 [0]
83	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator5	RelationalOperator: input1 <= input2 true	11	1 [0]
84	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator5	RelationalOperator: input1 <= input2 false	11	1 [0]
85	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2	Logic: input port 1 true	11	1 [0]
86	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2	Logic: input port 1 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
87	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2	Logic: input port 2 true	11	1 [0]
88	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2	Logic: input port 2 false	11	1 [0]
89	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator	RelationalOperator: input1 >= input2 true	11	1 [0]
90	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator	RelationalOperator: input1 >= input2 false	11	1 [0]
91	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator6	RelationalOperator: input1 >= input2 true	11	1 [0]
92	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator6	RelationalOperator: input1 >= input2 false	11	1 [0]
93	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator1	RelationalOperator: input1 <= input2 true	11	1 [0]
94	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator1	RelationalOperator: input1 <= input2 false	11	1 [0]
95	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND	Logic: input port 1 true	11	1 [0]
96	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Pa-	Logic: input port 1 false	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
		parameter/Adblue_Quality_indication/AND			
97	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND	Logic: input port 2 true	11	1 [0]
98	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND	Logic: input port 2 false	11	1 [0]
99	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator7	RelationalOperator: input1 <= input2 true	11	1 [0]
100	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator7	RelationalOperator: input1 <= input2 false	11	1 [0]
101	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND	Logic: input port 1 true	11	1 [0]
102	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND	Logic: input port 1 false	11	1 [0]
103	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND	Logic: input port 2 true	11	1 [0]
104	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND	Logic: input port 2 false	11	1 [0]
105	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	Logic: input port 1 true	11	1 [0]
106	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	Logic: input port 1 false	11	1 [0]
107	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	Logic: input port 2 true	11	1 [0]

#	Type	Model Item	Description	Analysis Time (sec)	Test Case
108	Condition	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	Logic: input port 2 false	11	1 [0]
109	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Injection_System	enable logical value true	11	1 [0]
110	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Injection_System	enable logical value false	11	1 [0]
111	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Relational_Operator1	RelationalOperator: input1 == input2 true	11	1 [0]
112	Condition	Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Relational_Operator1	RelationalOperator: input1 == input2 false	11	1 [0]
113	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Switch2	logical trigger input false (output is from 3rd input port)	11	1 [0]
114	Decision	Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Switch2	logical trigger input true (output is from 1st input port)	11	1 [0]

Chapter 4. Model Items

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This section presents, for each object in the model defining coverage objectives, the list of objectives and their individual status at the end of the analysis. It should match the coverage report obtained from running the generated test suite on the model, either from the harness model or by using the `sldvruntime` command.

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator

#:	Type	Description	Status	Test Case
1	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
2	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator1

#:	Type	Description	Status	Test Case
3	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
4	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator2

#:	Type	Description	Status	Test Case
5	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
6	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1

#:	Type	Description	Status	Test Case
7	Condition	Logic: input port 1 true	Satisfied	1 [0]
8	Condition	Logic: input port 1 false	Satisfied	1 [0]
9	Condition	Logic: input port 2 true	Satisfied	1 [0]
10	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator3

#:	Type	Description	Status	Test Case
11	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
12	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator4

#:	Type	Description	Status	Test Case
13	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
14	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2

#:	Type	Description	Status	Test Case
15	Condition	Logic: input port 1 true	Satisfied	1 [0]

#:	Type	Description	Status	Test Case
16	Condition	Logic: input port 1 false	Satisfied	1 [0]
17	Condition	Logic: input port 2 true	Satisfied	1 [0]
18	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3

#:	Type	Description	Status	Test Case
19	Condition	Logic: input port 1 true	Satisfied	1 [0]
20	Condition	Logic: input port 1 false	Satisfied	1 [0]
21	Condition	Logic: input port 2 true	Satisfied	1 [0]
22	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND

#:	Type	Description	Status	Test Case
23	Condition	Logic: input port 1 true	Satisfied	1 [0]
24	Condition	Logic: input port 1 false	Satisfied	1 [0]
25	Condition	Logic: input port 2 true	Satisfied	1 [0]
26	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator

#:	Type	Description	Status	Test Case
27	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
28	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator1

#:	Type	Description	Status	Test Case
29	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
30	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND

#:	Type	Description	Status	Test Case
31	Condition	Logic: input port 1 true	Satisfied	1 [0]
32	Condition	Logic: input port 1 false	Satisfied	1 [0]
33	Condition	Logic: input port 2 true	Satisfied	1 [0]
34	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem

#:	Type	Description	Status	Test Case
35	Decision	enable logical value true	Satisfied	1 [0]

#:	Type	Description	Status	Test Case
36	Decision	enable logical value false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator

#:	Type	Description	Status	Test Case
37	Condition	RelationalOperator: input1 == input2 true	Satisfied	1 [0]
38	Condition	RelationalOperator: input1 == input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem

#:	Type	Description	Status	Test Case
39	Decision	enable logical value true	Satisfied	1 [0]
40	Decision	enable logical value false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator1

#:	Type	Description	Status	Test Case
41	Condition	RelationalOperator: input1 == input2 true	Satisfied	1 [0]
42	Condition	RelationalOperator: input1 == input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator2

#:	Type	Description	Status	Test Case
43	Condition	RelationalOperator: input1 == input2 true	Satisfied	1 [0]
44	Condition	RelationalOperator: input1 == input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator

#:	Type	Description	Status	Test Case
45	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
46	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND

#:	Type	Description	Status	Test Case
47	Condition	Logic: input port 1 true	Satisfied	1 [0]
48	Condition	Logic: input port 1 false	Satisfied	1 [0]
49	Condition	Logic: input port 2 true	Satisfied	1 [0]
50	Condition	Logic: input port 2 false	Satisfied	1 [0]
51	Condition	Logic: input port 3 true	Satisfied	1 [0]
52	Condition	Logic: input port 3 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Service_Regeneration/Relational_Operator3

#:	Type	Description	Status	Test Case
53	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
54	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator1

#:	Type	Description	Status	Test Case
55	Condition	RelationalOperator: input1 <= input2 true	Satisfied	1 [0]
56	Condition	RelationalOperator: input1 <= input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Relational_Operator1

#:	Type	Description	Status	Test Case
57	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
58	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND

#:	Type	Description	Status	Test Case
59	Condition	Logic: input port 1 true	Satisfied	1 [0]

#:	Type	Description	Status	Test Case
60	Condition	Logic: input port 1 false	Satisfied	1 [0]
61	Condition	Logic: input port 2 true	Satisfied	1 [0]
62	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Switch

#:	Type	Description	Status	Test Case
63	Decision	logical trigger input false (output is from 3rd input port)	Satisfied	1 [0]
64	Decision	logical trigger input true (output is from 1st input port)	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator2

#:	Type	Description	Status	Test Case
65	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
66	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator3

#:	Type	Description	Status	Test Case
67	Condition	RelationalOperator: input1 <= input2 true	Satisfied	1 [0]
68	Condition	RelationalOperator: input1 <= input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Relational_Operator

#:	Type	Description	Status	Test Case
69	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
70	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1

#:	Type	Description	Status	Test Case
71	Condition	Logic: input port 1 true	Satisfied	1 [0]
72	Condition	Logic: input port 1 false	Satisfied	1 [0]
73	Condition	Logic: input port 2 true	Satisfied	1 [0]
74	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Switch

#:	Type	Description	Status	Test Case
75	Decision	logical trigger input false (output is from 3rd input port)	Satisfied	1 [0]
76	Decision	logical trigger input true (output is from 1st input port)	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator4

#:	Type	Description	Status	Test Case
77	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
78	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2

#:	Type	Description	Status	Test Case
79	Condition	Logic: input port 1 true	Satisfied	1 [0]
80	Condition	Logic: input port 1 false	Satisfied	1 [0]
81	Condition	Logic: input port 2 true	Satisfied	1 [0]
82	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator5

#:	Type	Description	Status	Test Case
83	Condition	RelationalOperator: input1 <= input2 true	Satisfied	1 [0]
84	Condition	RelationalOperator: input1 <= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2

#:	Type	Description	Status	Test Case
85	Condition	Logic: input port 1 true	Satisfied	1 [0]
86	Condition	Logic: input port 1 false	Satisfied	1 [0]
87	Condition	Logic: input port 2 true	Satisfied	1 [0]
88	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator

#:	Type	Description	Status	Test Case
89	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
90	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator6

#:	Type	Description	Status	Test Case
91	Condition	RelationalOperator: input1 >= input2 true	Satisfied	1 [0]
92	Condition	RelationalOperator: input1 >= input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator1

#:	Type	Description	Status	Test Case
93	Condition	RelationalOperator: input1 <= input2 true	Satisfied	1 [0]
94	Condition	RelationalOperator: input1 <= input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND

#:	Type	Description	Status	Test Case
95	Condition	Logic: input port 1 true	Satisfied	1 [0]
96	Condition	Logic: input port 1 false	Satisfied	1 [0]
97	Condition	Logic: input port 2 true	Satisfied	1 [0]
98	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator7

#:	Type	Description	Status	Test Case
99	Condition	RelationalOperator: input1 <= input2 true	Satisfied	1 [0]
100	Condition	RelationalOperator: input1 <= input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND

#:	Type	Description	Status	Test Case
101	Condition	Logic: input port 1 true	Satisfied	1 [0]
102	Condition	Logic: input port 1 false	Satisfied	1 [0]
103	Condition	Logic: input port 2 true	Satisfied	1 [0]
104	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3

#:	Type	Description	Status	Test Case
105	Condition	Logic: input port 1 true	Satisfied	1 [0]
106	Condition	Logic: input port 1 false	Satisfied	1 [0]
107	Condition	Logic: input port 2 true	Satisfied	1 [0]
108	Condition	Logic: input port 2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Injection_System

#:	Type	Description	Status	Test Case
109	Decision	enable logical value true	Satisfied	1 [0]
110	Decision	enable logical value false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Relational_Operator1

#:	Type	Description	Status	Test Case
111	Condition	RelationalOperator: input1 == input2 true	Satisfied	1 [0]
112	Condition	RelationalOperator: input1 == input2 false	Satisfied	1 [0]

Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Switch2

#:	Type	Description	Status	Test Case
113	Decision	logical trigger input false (output is from 3rd input port)	Satisfied	1 [0]
114	Decision	logical trigger input true (output is from 1st input port)	Satisfied	1 [0]

Chapter 5. Test Cases

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This section contains detailed information about each generated test case.

Test Case 1

Summary.

Length: 0.18 second (19 sample periods)

Objectives Satisfied: 114

Objectives.

Step	Time	Model Item	Objectives
1	0	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator2 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator3 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator4 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND	2. RelationalOperator: input1 >= input2 false [0] 3. RelationalOperator: input1 >= input2 true [0] 6. RelationalOperator: input1 >= input2 false [0] 7. Logic: input port 1 true [0] 10. Logic: input port 2 false [0] 12. RelationalOperator: input1 >= input2 false [0] 14. RelationalOperator: input1 >= input2 false [0] 16. Logic: input port 1 false [0] 20. Logic: input port 1 false [0] 24. Logic: input port 1 false [0] 28. RelationalOperator: input1 >= input2 false [0] 30. RelationalOperator: input1 >= input2 false [0] 32. Logic: input port 1 false [0] 36. enable logical value false [0] 40. enable logical value false [0] 54. RelationalOperator: input1 >= input2 false [0] 57. RelationalOperator: input1 >= input2 true [0] 64. logical trigger input true (output is from 1st input port) [0]

Step	Time	Model Item	Objectives
		Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem Eas_Subsystem/DPF_Subsystem/Service_Regeneration/Relational_Operator3 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Relational_Operator1 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Switch Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Relational_Operator Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Switch Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator1 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Injection_System Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Relational_Operator1	70. RelationalOperator: input1 >= input2 false [0] 75. logical trigger input false (output is from 3rd input port) [0] 79. Logic: input port 1 true [0] 82. Logic: input port 2 false [0] 90. RelationalOperator: input1 >= input2 false [0] 93. RelationalOperator: input1 <= input2 true [0] 96. Logic: input port 1 false [0] 102. Logic: input port 1 false [0] 110. enable logical value false [0] 112. RelationalOperator: input1 == input2 false [0] 113. logical trigger input false (output is from 3rd input port) [0]

Step	Time	Model Item	Objectives
		Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Switch2	
2	0.01	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator1 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND	29. RelationalOperator: input1 >= input2 true [0] 89. RelationalOperator: input1 >= input2 true [0] 95. Logic: input port 1 true [0] 97. Logic: input port 2 true [0]
3	0.02	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/Relational_Operator1 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Quality_indication/AND	94. RelationalOperator: input1 <= input2 false [0] 98. Logic: input port 2 false [0]
4	0.03	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Relational_Operator Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Scr_temp_indication/Switch Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND	69. RelationalOperator: input1 >= input2 true [0] 76. logical trigger input true (output is from 1st input port) [0] 81. Logic: input port 2 true [0] 101. Logic: input port 1 true [0] 104. Logic: input port 2 false [0]
5	0.04	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND	103. Logic: input port 2 true [0] 109. enable logical value true [0]

Step	Time	Model Item	Objectives
		Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Injection_System	
6	0.05	Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Relational_Operator1 Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/Adblue_Level_indication/Switch Eas_Subsystem/SCR_Regeneration_Subsystem/Scr_Regeneration_Parameter/AND2 Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Relational_Operator1 Eas_Subsystem/SCR_Regeneration_Subsystem/Adblue_Level2/Switch2	58. RelationalOperator: input1 >= input2 false [0] 63. logical trigger input false (output is from 3rd input port) [0] 80. Logic: input port 1 false [0] 111. RelationalOperator: input1 == input2 true [0] 114. logical trigger input true (output is from 1st input port) [0]
7	0.06	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1 Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/Relational_Operator Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Service_Regeneration/Relational_Operator3	4. RelationalOperator: input1 >= input2 false [0] 8. Logic: input port 1 false [0] 27. RelationalOperator: input1 >= input2 true [0] 31. Logic: input port 1 true [0] 34. Logic: input port 2 false [0] 53. RelationalOperator: input1 >= input2 true [0]
8	0.07	Eas_Subsystem/DPF_Subsystem/Regn_Display_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator2 Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	33. Logic: input port 2 true [0] 35. enable logical value true [0] 37. RelationalOperator: input1 == input2 true [0] 41. RelationalOperator: input1 == input2 true [0] 44. RelationalOperator: input1 == input2 false [0] 47. Logic: input port 1 true [0] 49. Logic: input port 2 true [0] 52. Logic: input port 3 false [0]

Step	Time	Model Item	Objectives
		Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	
9	0.08	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator3 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator3 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator4 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator5 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator6 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator7	11. RelationalOperator: input1 >= input2 true [0] 15. Logic: input port 1 true [0] 18. Logic: input port 2 false [0] 39. enable logical value true [0] 43. RelationalOperator: input1 == input2 true [0] 45. RelationalOperator: input1 >= input2 true [0] 51. Logic: input port 3 true [0] 56. RelationalOperator: input1 <= input2 false [0] 59. Logic: input port 1 true [0] 62. Logic: input port 2 false [0] 66. RelationalOperator: input1 >= input2 false [0] 67. RelationalOperator: input1 <= input2 true [0] 72. Logic: input port 1 false [0] 78. RelationalOperator: input1 >= input2 false [0] 83. RelationalOperator: input1 <= input2 true [0] 86. Logic: input port 1 false [0] 92. RelationalOperator: input1 >= input2 false [0] 99. RelationalOperator: input1 <= input2 true [0] 106. Logic: input port 1 false [0]

Step	Time	Model Item	Objectives
		Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	
10	0.09	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator3 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator4 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator5 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator6 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	65. RelationalOperator: input1 >= input2 true [0] 68. RelationalOperator: input1 <= input2 false [0] 71. Logic: input port 1 true [0] 74. Logic: input port 2 false [0] 77. RelationalOperator: input1 >= input2 true [0] 84. RelationalOperator: input1 <= input2 false [0] 85. Logic: input port 1 true [0] 88. Logic: input port 2 false [0] 91. RelationalOperator: input1 >= input2 true [0] 105. Logic: input port 1 true [0] 107. Logic: input port 2 true [0]
11	0.1	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator7 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND3	100. RelationalOperator: input1 <= input2 false [0] 108. Logic: input port 2 false [0]
12	0.11	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND2	87. Logic: input port 2 true [0]
13	0.12	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND1	73. Logic: input port 2 true [0]
14	0.13	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND	55. RelationalOperator: input1 <= input2 true [0] 61. Logic: input port 2 true [0]
15	0.14	Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/Relational_Operator Eas_Subsystem/DPF_Subsystem/Post_Regn_Subsystem/AND	46. RelationalOperator: input1 >= input2 false [0] 60. Logic: input port 1 false [0]

Step	Time	Model Item	Objectives
16	0.15	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator1 Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	42. RelationalOperator: input1 == input2 false [0] 50. Logic: input port 2 false [0]
17	0.16	Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/Relational_Operator Eas_Subsystem/DPF_Subsystem/Manual_Regn_Subsystem/AND	38. RelationalOperator: input1 == input2 false [0] 48. Logic: input port 1 false [0]
18	0.17	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator2 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND1 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/Relational_Operator4 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND2 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND	1. RelationalOperator: input1 >= input2 true [0] 5. RelationalOperator: input1 >= input2 true [0] 9. Logic: input port 2 true [0] 13. RelationalOperator: input1 >= input2 true [0] 17. Logic: input port 2 true [0] 19. Logic: input port 1 true [0] 21. Logic: input port 2 true [0] 23. Logic: input port 1 true [0] 25. Logic: input port 2 true [0]
19	0.18	Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND3 Eas_Subsystem/DPF_Subsystem/Auto_Regeneration/AND	22. Logic: input port 2 false [0] 26. Logic: input port 2 false [0]

Generated Input Data.

Time	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19
Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Co ola nt_ Tem p	-49	-70	-42	-30	25	-8	-13	-24	55	36	-25	0	79	-58	-9	-78	48	32 64 0	32 64 0
Ve hi cle _Sp	77	85	71	94	60	72	25	50	32	41	91	27	5	49	1	78	34	19 2	64

Test Cases

Time	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19
Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
eed																				
rpm	10	31	39	10	2	27	89	90	73	88	99	55	53	59	2	30	53	63 48 8	15 36	
So ot_ De po- si- tio n_ Au- to	74	3	16	13	43	77	42	72	93	89	17	4	92	83	47	5	86	12 8	12 8	
DP F_ Te mp _A uto	73	43	91	30	2	79	72	1	25	42	86	64	13	19	50	18	56	25 4	12 8	
So ot_ De po- si- tio n_ Ma nu al	79	0	0	0	0	0	12 8	12 8	12 8	12 8	12 8	12 8	12 8	12 8	12 8	12 8	12 8	28	79	
DP F_ Te mp _M an ual	-71	12 16	12 16	25 6	20 0	25 6	-32 76 8	32 51 2	32 51 2	32 51 2	32 51 2	32 51 2	32 51 2	32 51 2	32 51 2	32 51 2	32 51 2	46	-91	
Br ea k_P ed al	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	
Ac- cel era tor	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	

Time	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19
Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
_Pedal																			
Clutch_Pedal	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Crank_Angle	56	97	85	76	30	65	6	18	85	568	65088	370	190	16	0	85	25	92	11
Soot_Deposition_Service	10	94	8	40	40	40	128	55	61	79	13	44	70	79	20	5	69	14	96
Nox_Sensor	20	7	95	36	96	85	82	44	17	28	8	75	15	47	42	48	11	21	95
Scr_Temp_Sensor	94	64	64	65280	65472	79	82	68	58	17	12	61	20	57	66	70	98	62	68
Adblue_Level	41	240	240	224	248	0	8	24	26	31	33	34	35	31	4	68	2	48	47
Adblue_Quality	3.0809	31.8	33.4	-1.3752	31.8	-9.3507	0.82203	-3.7333	-8.8499	1.4953	-0.76453	7.1612	-8.6468	5.8234	2.0344	5.5969	-6.5803	3.7277	5.2173

Expected Output. Inputs that do not affect the test objectives (- in the table above) were given random values.

Test Cases

Time	0-0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18
Step	1-4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Auto_Regeneration_ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Press_Regeneration_Button	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0
Manual_Regeneration_Start	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0
Post_Injector2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Post_Injector1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Post_Injector4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Post_Injector3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Visit_Works_hop_Imme-	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

Test Cases

Time	0-0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18
Step	1-4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
diately																
Adb lue_ In- jec- tion_ Ti me	0	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1	3.60 1
Adb lue_ lev- el_d is- pla y	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_L ow	adb lue_ ca- pac- ity. Adb lue_ Lev el_L ow	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_L ow	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_L ow	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh	adb lue_ ca- pac- ity. Adb lue_ Lev el_h igh