

Table 1. Version number

Name	Version	Release	Date	Required for this Model
Aerospace Blockset	4.3	(R2020a)	18-Nov-2019	
Aerospace Toolbox	3.3	(R2020a)	18-Nov-2019	
Antenna Toolbox	4.2	(R2020a)	18-Nov-2019	
Audio Toolbox	2.2	(R2020a)	18-Nov-2019	
Bioinformatics Toolbox	4.14	(R2020a)	18-Nov-2019	
Communications Toolbox	7.3	(R2020a)	18-Nov-2019	
Computer Vision Toolbox	9.2	(R2020a)	26-Dec-2019	
Control System Toolbox	10.8	(R2020a)	18-Nov-2019	
Curve Fitting Toolbox	3.5.11	(R2020a)	18-Nov-2019	
DSP System Toolbox	9.10	(R2020a)	18-Nov-2019	
Data Acquisition Toolbox	4.1	(R2020a)	18-Nov-2019	
Database Toolbox	9.2.1	(R2020a)	18-Nov-2019	
Datafeed Toolbox	5.9.1	(R2020a)	18-Nov-2019	
Deep Learning Toolbox	14.0	(R2020a)	18-Nov-2019	
Econometrics Toolbox	5.4	(R2020a)	18-Nov-2019	
Financial Instruments Toolbox	3.0	(R2020a)	08-Dec-2019	
Financial Toolbox	5.15	(R2020a)	18-Nov-2019	
Fixed-Point Designer	7.0	(R2020a)	18-Nov-2019	
Fuzzy Logic Toolbox	2.7	(R2020a)	18-Nov-2019	
Global Optimization Toolbox	4.3	(R2020a)	18-Nov-2019	
Image Acquisition Toolbox	6.2	(R2020a)	18-Nov-2019	
Image Processing Toolbox	11.1	(R2020a)	22-Jan-2020	
Instrument Control Toolbox	4.2	(R2020a)	18-Nov-2019	
MATLAB	9.8	(R2020a)	18-Nov-2019	
MATLAB Report Generator	5.8	(R2020a)	18-Nov-2019	
Mapping Toolbox	4.10	(R2020a)	18-Nov-2019	
Model Predictive Control Toolb- ox	6.4	(R2020a)	25-Nov-2019	
Navigation Toolbox	1.1	(R2020a)	18-Jan-2020	
Optimization Toolbox	8.5	(R2020a)	18-Nov-2019	
Parallel Computing Toolbox	7.2	(R2020a)	18-Nov-2019	
Partial Differential Equation Toolbox	3.4	(R2020a)	18-Nov-2019	
Phased Array System Toolbox	4.3	(R2020a)	18-Nov-2019	
RF Blockset	7.4	(R2020a)	18-Nov-2019	
RF Toolbox	3.8	(R2020a)	18-Nov-2019	

Name	Version	Release	Date	Required for this Model
ROS Toolbox	1.1	(R2020a)	18-Nov-2019	
Reinforcement Learning Toolbox	1.2	(R2020a)	18-Nov-2019	
Risk Management Toolbox	1.7	(R2020a)	18-Nov-2019	
Robotics System Toolbox	3.1	(R2020a)	18-Nov-2019	
Robust Control Toolbox	6.8	(R2020a)	29-Nov-2019	
Signal Processing Toolbox	8.4	(R2020a)	18-Nov-2019	
SimBiology	5.10	(R2020a)	18-Nov-2019	
SimEvents	5.8	(R2020a)	18-Nov-2019	
Simscape	4.8	(R2020a)	18-Nov-2019	
Simscape Driveline	3.1	(R2020a)	18-Nov-2019	
Simscape Electrical	7.3	(R2020a)	18-Nov-2019	
Simscape Fluids	3.0	(R2020a)	18-Nov-2019	
Simscape Multibody	7.1	(R2020a)	18-Nov-2019	
Simulink	10.1	(R2020a)	18-Nov-2019	
Simulink 3D Animation	9.0	(R2020a)	18-Nov-2019	
Simulink Control Design	5.5	(R2020a)	18-Nov-2019	
Simulink Design Optimization	3.8	(R2020a)	18-Nov-2019	
Simulink Desktop Real-Time	5.10	(R2020a)	18-Nov-2019	
Simulink Report Generator	5.8	(R2020a)	18-Nov-2019	
Spreadsheet Link	3.4.3	(R2020a)	18-Nov-2019	
Stateflow	10.2	(R2020a)	18-Nov-2019	
Statistics and Machine Learning Toolbox	11.7	(R2020a)	18-Nov-2019	
Symbolic Math Toolbox	8.5	(R2020a)	18-Nov-2019	
System Identification Toolbox	9.12	(R2020a)	18-Nov-2019	
Text Analytics Toolbox	1.5	(R2020a)	18-Nov-2019	
Trading Toolbox	3.6.1	(R2020a)	18-Nov-2019	
Wavelet Toolbox	5.4	(R2020a)	18-Nov-2019	

Table 2. Block Type Count

BlockType	Count	Block Names
Demux	1	Demux
FromWorkspace	1	FromWs
Gain	14	Damping, Inertia, Derivative Gain, Integral Gain, Filter Coefficient, Proportional Gain, Gain, Gain1, Gain2, Gain4, Gain5, Gain6, Gain7, Gain8

BlockType	Count	Block Names
Ground	13	Ground, Ground_D, Ground_D0, Ground_I, Ground_I0, Ground_N, Ground_P, Ground_Reset, Ground_TR, Ground_extTs, Ground, Ground, Ground
Inport	103	In1, u, preSat, postSat, P, preInt, preInt, preSat, postSat, P, err, D Gain, err, D Gain, Reset, U, N, D0in, Nout, Ts, U, Nout, Reset, D0in, N, Ts, D0, D0, err, I Gain, err, I Gain, In1, P Gain, In1, P Gain, In1, P Gain, In1, P Gain, U, I0in, Reset, U, Reset, I0in, I0, I0, N Gain, N Gain, U, N Gain, U, N Gain, P Gain, P Gain, err, P Gain, err, P Gain, Reset, Reset, In1, In1, In1, In1, P, I, D, P, I, D, fromP, fromState, fromD, fromP, fromState, fromD, uout, TR, uout, TR, fromIgain, fromTR, fromIgain, fromTR, U, Ts, U, Ts, U, Ts, U, Ts, feedback, forward, forward, feedback, feedback, forward, forward, feedback, In1
Integrator	7	Integrator, Filter, Integrator, Integrator, Integrator1, Integrator2, Integrator3
ModelReference	1	Cruise Control
Outport	49	output, Out2, Out1, Out1, Out1, Out1, Y, Y, Out1, Out1, Out1, Out1, Out1, Out1, state, out, state, out, Out1, y, Signal 1, Out1
PID 1dof (m)	1	PID Controller
Scope	2	Scope, Scope1
Sigbuilder block (m)	1	Road_Condition
SignalSpecification	21	Signal Specification2, Signal Specification, Signal Specification2, Signal Specification, Signal Specification1, Signal Specification, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1, Signal Specification1
Step	1	Step
SubSystem	50	Anti-windup, Passthrough, D Gain, Internal Parameters, Filter, Cont. Filter, Filter ICs, Internal IC - Filter, I Gain, Internal Parameters, Ideal P Gain, Passthrough, Ideal P Gain Fdbk, Disabled, Integrator, Continuous, Integrator ICs, Internal IC, N Copy, Disabled, N Gain, Internal Parameters, P Copy, Disabled, PID Compensator Formula, Parallel P Gain, Internal Parameters, Reset Signal, Disabled, Saturation, Passthrough, Saturation Fdbk, Disabled, Sum, Sum_PID, Sum Fdbk, Disabled, Tracking Mode, Disabled, Tracking Mode Sum, Passthrough, Tsamp - Integral, Passthrough, Tsamp - Ngain, Passthrough

BlockType	Count	Block Names
		h, postSat Signal, Forward_Path, preSat Signal, Forward_Path, Suspension_System
Sum	6	SumD, Sum, Sum, Add, Add1, Add2
Terminator	32	Terminator, Terminator1, Terminator2, Terminator, Terminator, Terminator1, Terminator2, Terminator3, Terminator, Terminator, Terminator1, Terminator1, Terminator2, Terminator, Terminator1, Terminator3, Terminator, Terminator, Terminator1, Terminator1, Terminator2, Terminator3, Terminator1, Terminator3, Terminator, Terminator, Terminator, Terminator1, Terminator1

Model Advisor [./Report_pdf_files/image-305-ModelAdvisor.html]

Source: Model

Source Name: Problem_3

Table 3. Problem_3 Configuration Set

Property	Value
Description	
Components	[Problem_3 Configuration Set.Components(1) [4], Problem_3 Configuration Set.Components(2) [5], Problem_3 Configuration Set.Components(3) [6], Problem_3 Configuration Set.Components(4) [8], Problem_3 Configuration Set.Components(5) [10], Problem_3 Configuration Set.Components(6) [12], Problem_3 Configuration Set.Components(7) [12], Problem_3 Configuration Set.Components(8) [13], Problem_3 Configuration Set.Components(9) [15]]
Name	Configuration

Table 4. Problem_3 Configuration Set.Components [4](1)

Property	Value
Name	Solver
Description	
Components	
StartTime	0.0
StopTime	10
AbsTol	auto
AutoScaleAbsTol	on
FixedStep	auto
InitialStep	auto

MaxOrder	5
ZcThreshold	auto
ConsecutiveZCsStepRelTol	10*128*eps
MaxConsecutiveZCs	1000
ExtrapolationOrder	4
NumberNewtonIterations	1
MaxStep	auto
MinStep	auto
MaxConsecutiveMinStep	1
RelTol	1e-3
EnableMultiTasking	off
ConcurrentTasks	off
Solver	ode45
SolverName	ode45
SolverType	Variable-step
SolverJacobianMethodControl	auto
ShapePreserveControl	DisableAll
ZeroCrossControl	UseLocalSettings
ZeroCrossAlgorithm	Nonadaptive
SolverResetMethod	Fast
PositivePriorityOrder	off
AutoInsertRateTranBlk	off
SampleTimeConstraint	Unconstrained
InsertRTBMode	Whenever possible
SampleTimeProperty	
DecoupledContinuousIntegration	off
MinimalZcImpactIntegration	off
ODENIntegrationMethod	ode3

Table 5. Problem_3 Configuration Set.Components [4](2)

Property	Value
Name	Data Import/Export
Description	
Components	
Decimation	1
ExternalInput	[t, u]
FinalStateName	xFinal
InitialState	xInitial
LimitDataPoints	off

MaxDataPoints	1000
LoadExternalInput	off
LoadInitialState	off
SaveFinalState	off
SaveOperatingPoint	off
SaveFormat	Dataset
SaveOutput	on
SaveState	off
SignalLogging	on
DSMLogging	on
InspectSignalLogs	off
SaveTime	on
ReturnWorkspaceOutputs	on
StateSaveName	xout
TimeSaveName	tout
OutputSaveName	yout
SignalLoggingName	logsout
DSMLoggingName	dsmout
OutputOption	RefineOutputTimes
OutputTimes	[]
ReturnWorkspaceOutputsName	out
Refine	1
LoggingToFile	off
DatasetSignalFormat	timeseries
LoggingFileName	out.mat
LoggingIntervals	[-inf, inf]

Table 6. Problem_3 Configuration Set.Components [4](3)

Property	Value
Name	Optimization
Description	
Components	
BlockReduction	on
BooleanDataType	on
ConditionallyExecuteInputs	on
DefaultParameterBehavior	Tunable
InlineParams	off
UseDivisionForNetSlopeComputation	off
GainParamInheritBuiltInType	off

UseFloatMulNetSlope	off
DefaultUnderspecifiedDataType	double
UseSpecifiedMinMax	off
InlineInvariantSignals	off
OptimizeBlockIOStorage	on
BufferReuse	on
GlobalBufferReuse	on
GlobalVariableUsage	None
StrengthReduction	off
AdvancedOptControl	
ExpressionFolding	on
BooleansAsBitfields	off
BitfieldContainerType	uint_T
BitwiseOrLogicalOp	Same as modeled
EnableMemcpy	on
MemcpyThreshold	64
PassReuseOutputArgsAs	Structure reference
PassReuseOutputArgsThreshold	12
LocalBlockOutputs	on
RollThreshold	5
StateBitsets	off
DataBitsets	off
ActiveStateOutputEnumStorageType	Native Integer
ZeroExternalMemoryAtStartup	on
ZeroInternalMemoryAtStartup	on
InitFltsAndDblsToZero	off
NoFixptDivByZeroProtection	off
EfficientFloat2IntCast	off
EfficientMapNaN2IntZero	on
LifeSpan	auto
EvaledLifeSpan	Inf
MaxStackSize	Inherit from target
BufferReusableBoundary	on
SimCompilerOptimization	off
AccelVerboseBuild	off
OptimizeBlockOrder	off
OptimizeDataStoreBuffers	on
BusAssignmentInplaceUpdate	on
DifferentSizesBufferReuse	off

UseRowMajorAlgorithm	off
OptimizationLevel	level2
OptimizationPriority	Balanced
OptimizationCustomize	on
LabelGuidedReuse	off
MultiThreadedLoops	off
DenormalBehavior	GradualUnderflow
EfficientTunableParamExpr	off

Table 7. Problem_3 Configuration Set.Components 4

Property	Value
Name	Diagnostics
Description	
Components	
RTPrefix	error
ConsistencyChecking	none
ArrayBoundsChecking	none
SignalInfNanChecking	none
StringTruncationChecking	error
SignalRangeChecking	none
ReadBeforeWriteMsg	UseLocalSettings
WriteAfterWriteMsg	UseLocalSettings
WriteAfterReadMsg	UseLocalSettings
AlgebraicLoopMsg	warning
ArtificialAlgebraicLoopMsg	warning
SaveWithDisabledLinksMsg	warning
SaveWithParameterizedLinksMsg	warning
CheckSSInitialOutputMsg	on
UnderspecifiedInitializationDetection	Simplified
MergeDetectMultiDrivingBlocksExec	error
CheckExecutionContextRuntimeOutputMsg	off
SignalResolutionControl	UseLocalSettings
BlockPriorityViolationMsg	warning
MinStepSizeMsg	warning
TimeAdjustmentMsg	none
MaxConsecutiveZCsMsg	error
MaskedZcDiagnostic	warning
IgnoredZcDiagnostic	warning

SolverPrmCheckMsg	none
InheritedTsInSrcMsg	warning
MultiTaskDSMMsg	error
MultiTaskCondExecSysMsg	error
MultiTaskRateTransMsg	error
SingleTaskRateTransMsg	none
TasksWithSamePriorityMsg	warning
SigSpecEnsureSampleTimeMsg	warning
CheckMatrixSingularityMsg	none
IntegerOverflowMsg	warning
Int32ToFloatConvMsg	warning
ParameterDowncastMsg	error
ParameterOverflowMsg	error
ParameterUnderflowMsg	none
ParameterPrecisionLossMsg	warning
ParameterTunabilityLossMsg	warning
FixptConstUnderflowMsg	none
FixptConstOverflowMsg	none
FixptConstPrecisionLossMsg	none
UnderSpecifiedDataTypeMsg	none
UnnecessaryDatatypeConvMsg	none
VectorMatrixConversionMsg	none
FcnCallInpInsideContextMsg	error
SignalLabelMismatchMsg	none
UnconnectedInputMsg	warning
UnconnectedOutputMsg	warning
UnconnectedLineMsg	warning
UseOnlyExistingSharedCode	error
SFcnCompatibilityMsg	none
FrameProcessingCompatibilityMsg	error
UniqueDataStoreMsg	none
BusObjectLabelMismatch	warning
RootOutportRequireBusObject	warning
AssertControl	UseLocalSettings
AllowSymbolicDim	on
ModelReferenceIOMsg	none
ModelReferenceVersionMismatchMessage	none
ModelReferenceIOMismatchMessage	none
UnknownTsInhSupMsg	warning

ModelReferenceDataLoggingMessage	warning
ModelReferenceSymbolNameMessage	warning
ModelReferenceExtraNoncontSigs	error
StateNameClashWarn	none
OperatingPointInterfaceChecksumMismatchMsg	warning
NonCurrentReleaseOperatingPointMsg	error
PregeneratedLibrarySubsystemCodeDiagnostic	warning
InitInArrayFormatMsg	warning
StrictBusMsg	ErrorLevel1
BusNameAdapt	WarnAndRepair
NonBusSignalsTreatedAsBus	none
SFUnusedDataAndEventsDiag	warning
SFUnexpectedBacktrackingDiag	error
SFInvalidInputDataAccessInChartInitDiag	warning
SFNoUnconditionalDefaultTransitionDiag	error
SFTransitionOutsideNaturalParentDiag	warning
SFUnreachableExecutionPathDiag	warning
SFUndirectedBroadcastEventsDiag	warning
SFTransitionActionBeforeConditionDiag	warning
SFOutputUsedAsStateInMooreChartDiag	error
SFTemporalDelaySmallerThanSampleTimeDiag	warning
SFSelfTransitionDiag	warning
SFExecutionAtInitializationDiag	warning
SFMachineParentedDataDiag	warning
IntegerSaturationMsg	warning
AllowedUnitSystems	all
UnitsInconsistencyMsg	warning
AllowAutomaticUnitConversions	on
RCSCRenamedMsg	warning
RCSCObservableMsg	warning
ForceCombineOutputUpdateInSim	off
UnderSpecifiedDimensionMsg	none
DebugExecutionForFMUViaOutOfProcess	off
ArithmeticOperatorsInVariantConditions	error

Table 8. Problem_3 Configuration Set.Components [4](5)

Property	Value
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Name	Hardware Implementation
Description	
Components	
ProdBitPerChar	8
ProdBitPerShort	16
ProdBitPerInt	32
ProdBitPerLong	32
ProdBitPerLongLong	64
ProdBitPerFloat	32
ProdBitPerDouble	64
ProdBitPerPointer	64
ProdBitPerSizeT	64
ProdBitPerPtrDiffT	64
ProdLargestAtomicInteger	Char
ProdLargestAtomicFloat	Float
ProdIntDivRoundTo	Zero
ProdEndianness	LittleEndian
ProdWordSize	64
ProdShiftRightIntArith	on
ProdLongLongMode	off
ProdHWDeviceType	Intel->x86-64 (Windows64)
TargetBitPerChar	8
TargetBitPerShort	16
TargetBitPerInt	32
TargetBitPerLong	32
TargetBitPerLongLong	64
TargetBitPerFloat	32
TargetBitPerDouble	64
TargetBitPerPointer	32
TargetBitPerSizeT	32
TargetBitPerPtrDiffT	32
TargetLargestAtomicInteger	Char
TargetLargestAtomicFloat	None
TargetShiftRightIntArith	on
TargetLongLongMode	off
TargetIntDivRoundTo	Undefined
TargetEndianness	Unspecified
TargetWordSize	32
TargetPreprocMaxBitsSint	32

TargetPreprocMaxBitsUint	32
TargetHWDeviceType	Specified
TargetUnknown	off
ProdEqTarget	on
UseEmbeddedCoderFeatures	on
UseSimulinkCoderFeatures	on
HardwareBoardFeatureSet	EmbeddedCoderHSP

Table 9. Problem_3 Configuration Set.Components [4](6)

Property	Value
Name	Model Referencing
Description	
Components	
UpdateModelReferenceTargets	IfOutOfDateOrStructuralChange
EnableRefExpFcnMdlSchedulingChecks	on
CheckModelReferenceTargetMessage	error
EnableParallelModelReferenceBuilds	off
ParallelModelReferenceErrorOnInvalidPool	on
ParallelModelReferenceMATLABWorkerInit	None
ModelReferenceNumInstancesAllowed	Multi
PropagateVarSize	Infer from blocks in model
ModelDependencies	
ModelReferencePassRootInputsByReference	on
ModelReferenceMinAlgLoopOccurrences	off
PropagateSignalLabelsOutOfModel	on
SupportModelReferenceSimTargetCustomCode	off

Table 10. Problem_3 Configuration Set.Components [4](7)

Property	Value
Name	Simulation Target
Description	
Components	
SimCustomSourceCode	
SimCustomHeaderCode	
SimCustomInitializer	
SimCustomTerminator	

SimReservedNameArray	
SimUserSources	
SimUserIncludeDirs	
SimUserLibraries	
SimUserDefines	
SFSimEnableDebug	off
SFSimEcho	on
SimCtrlC	on
SimIntegrity	on
SimUseLocalCustomCode	on
SimParseCustomCode	on
SimAnalyzeCustomCode	off
SimBuildMode	sf_incremental_build
SimGenImportedTypeDefs	off
CompileTimeRecursionLimit	50
EnableRuntimeRecursion	on
MATLABDynamicMemAlloc	on
MATLABDynamicMemAllocThreshold	65536
CustomCodeFunctionArrayLayout	
DefaultCustomCodeFunctionArrayLayout	NotSpecified
CustomCodeUndefinedFunction	FilterOut

Table 11. Problem_3 Configuration Set.Components [4](8)

Property	Value
Name	Code Generation
Description	
SystemTargetFile	grt.tlc
HardwareBoard	None
ShowCustomHardwareApp	off
ShowEmbeddedHardwareApp	off
TLCOptions	
GenCodeOnly	off
MakeCommand	make_rtw
GenerateMakefile	on
PackageGeneratedCodeAndArtifacts	off
PackageName	
TemplateMakefile	grt_default_tmf
PostCodeGenCommand	
GenerateReport	off

RTWVerbose	on
RetainRTWFile	off
ProfileTLC	off
TLCDebug	off
TLCCoverage	off
TLCAssert	off
RTWUseLocalCustomCode	on
RTWUseSimCustomCode	off
CustomSourceCode	
CustomHeaderCode	
CustomInclude	
CustomSource	
CustomLibrary	
CustomDefine	
CustomBLASCallback	
CustomLAPACKCallback	
CustomFFTCallback	
CustomInitializer	
CustomTerminator	
Toolchain	Automatically locate an installed toolchain
BuildConfiguration	Faster Builds
CustomToolchainOptions	
IncludeHyperlinkInReport	off
LaunchReport	off
PortableWordSizes	off
GenerateErtSFunction	off
CreateSILPILBlock	None
CodeExecutionProfiling	off
CodeExecutionProfileVariable	executionProfile
CodeProfilingSaveOptions	SummaryOnly
CodeProfilingInstrumentation	off
CodeCoverageSettings	Problem_3 Configuration Set.Components(-8).CodeCoverageSettings [16]
SILDebugging	off
TargetLang	C
IncludeERTFirstTime	off
GenerateTraceInfo	off
GenerateTraceReport	off
GenerateTraceReportSl	off

GenerateTraceReportSf	off
GenerateTraceReportEml	off
GenerateWebview	off
GenerateCodeMetricsReport	off
GenerateCodeReplacementReport	off
RTWCompilerOptimization	off
ObjectivePriorities	
RTWCustomCompilerOptimizations	
CheckMdlBeforeBuild	Off
Components	[Problem_3 Configuration Set.Components-(8).Components(1) [16], Problem_3 Configuration Set.Components(8).Components-(2) [18]]

Table 12. Problem_3 Configuration Set.Components [4](9)

Property	Value
Description	Simulink Coverage Configuration Component
Components	
Name	Simulink Coverage
CovEnable	off
CovScope	EntireSystem
CovIncludeTopModel	on
RecordCoverage	off
CovPath	/
CovSaveName	covdata
CovCompData	
CovMetricSettings	dwe
CovFilter	
CovHTMLOptions	
CovNameIncrementing	off
CovHtmlReporting	off
CovForceBlockReductionOff	on
CovEnableCumulative	on
CovSaveCumulativeToWorkspaceVar	off
CovSaveSingleToWorkspaceVar	off
CovCumulativeVarName	covCumulativeData
CovCumulativeReport	off
CovSaveOutputData	on
CovOutputDir	slcov_output/\$ModelName\$

CovDataFileName	\$ModelName\$_cvdata
CovShowResultsExplorer	on
CovReportOnPause	on
CovModelRefEnable	off
CovModelRefExcluded	
CovExternalEMLEnable	on
CovSFcnEnable	on
CovBoundaryAbsTol	1.0000e-05
CovBoundaryRelTol	0.0100
CovUseTimeInterval	off
CovStartTime	0
CovStopTime	0
CovMetricStructuralLevel	Decision
CovMetricLookupTable	off
CovMetricSignalRange	off
CovMetricSignalSize	off
CovMetricObjectiveConstraint	off
CovMetricSaturateOnIntegerOverflow	off
CovMetricRelationalBoundary	off
CovLogicBlockShortCircuit	off
CovUnsupportedBlockWarning	on
CovHighlightResults	off
CovMcdcMode	Masking

Table 13. Problem_3 Configuration Set.Components(8) [13].CodeCoverageSettings

Property	Value
TopModelCoverage	off
ReferencedModelCoverage	off
CoverageTool	None

Table 14. Problem_3 Configuration Set.Components(8).Components [15](1)

Property	Value
Name	Code Appearance
Description	
Components	
ForceParamTrailComments	off
GenerateComments	on

CommentStyle	Auto
IgnoreCustomStorageClasses	on
IgnoreTestpoints	off
MaxIdLength	31
ShowEliminatedStatement	off
OperatorAnnotations	off
SimulinkDataObjDesc	off
SFDataObjDesc	off
MATLABFcnDesc	off
MangleLength	1
SharedChecksumLength	8
CustomSymbolStrGlobalVar	\$R\$N\$M
CustomSymbolStrType	\$N\$R\$M_T
CustomSymbolStrField	\$N\$M
CustomSymbolStrFcn	\$R\$N\$M\$F
CustomSymbolStrFcnArg	rt\$I\$N\$M
CustomSymbolStrBlkIO	rtb_\$N\$M
CustomSymbolStrTmpVar	\$N\$M
CustomSymbolStrMacro	\$R\$N\$M
CustomSymbolStrUtil	\$N\$C
CustomSymbolStrEmxType	emxArray_\$M\$N
CustomSymbolStrEmxFcn	emx\$M\$N
CustomUserTokenString	
CustomCommentsFcn	
DefineNamingRule	None
DefineNamingFcn	
ParamNamingRule	None
ParamNamingFcn	
SignalNamingRule	None
SignalNamingFcn	
InsertBlockDesc	off
InsertPolySpaceComments	off
SimulinkBlockComments	on
BlockCommentType	BlockPathComment
StateflowObjectComments	off
MATLABSourceComments	off
EnableCustomComments	off
InternalIdentifier	Shortened
InlinedPrmAccess	Literals

ReqsInCode	off
UseSimReservedNames	off
ReservedNameArray	
EnumMemberNameClash	error

Table 15. Problem_3 Configuration Set.Components(8).Components [15](2)

Property	Value
Name	Target
Description	
Components	
IsERTTarget	off
TargetLibSuffix	
TargetPreCompLibLocation	
GenFloatMathFcnCalls	NOT IN USE
TargetLangStandard	C99 (ISO)
CodeReplacementLibrary	None
UtilityFuncGeneration	Auto
MultiwordTypeDef	System defined
MultiwordLength	2048
DynamicStringBufferSize	256
GenerateFullHeader	on
InferredTypesCompatibility	off
ExistingSharedCode	
GenerateSampleERTMain	off
GenerateTestInterfaces	off
ModelReferenceCompliant	on
ParMdlRefBuildCompliant	on
CompOptLevelCompliant	on
ConcurrentExecutionCompliant	on
IncludeMdlTerminateFcn	on
CombineOutputUpdateFcns	on
CombineSignalStateStructs	off
GroupInternalDataByFunction	off
SuppressErrorStatus	off
IncludeFileDelimiter	Auto
ERTCustomFileBanners	off
SupportAbsoluteTime	on
LogVarNameModifier	rt_

MatFileLogging	on
MultiInstanceERTCode	off
CodeInterfacePackaging	Nonreusable function
PurelyIntegerCode	off
SupportNonFinite	on
SupportComplex	on
SupportContinuousTime	on
SupportNonInlinedSFcns	on
RemoveDisableFunc	off
RemoveResetFunc	off
SupportVariableSizeSignals	off
ParenthesesLevel	Nominal
CastingMode	Nominal
ModelStepFunctionPrototypeControlCompliant	off
CPPClassGenCompliant	on
GRTInterface	off
GenerateAllocFcn	off
UseToolchainInfoCompliant	on
GenerateSharedConstants	on
LUObjectStructOrderExplicitValues	Size,Breakpoints,Table
LUObjectStructOrderEvenSpacing	Size,Breakpoints,Table
ArrayLayout	Column-major
UnsupportedSFcnMsg	error
ERTHeaderFileRootName	\$R\$E
ERTSourceFileRootName	\$R\$E
ERTDataFileRootName	\$R_data
ExtMode	off
ExtModeStaticAlloc	off
ExtModeTesting	off
ExtModeStaticAllocSize	1000000
ExtModeTransport	0
ExtModeMexFile	ext_comm
ExtModeMexArgs	
ExtModeIntrfLevel	Level1
RTWCAPISignals	off
RTWCAPIParams	off
RTWCAPISates	off
RTWCAPIRootIO	off

GenerateASAP2	off
MultiInstanceErrorCode	Error

Table 16. All Variables in all Models

Variable Name	Parent Blocks	Calling character vector	Value
b	Damping Cruise Control Suspension_System Gain1 Gain5	b b b b b	50
k1	Suspension_System Gain2 Gain7	k1 k1 k1	50000
k2	Suspension_System Gain4 Gain8	k2 k2 k2	50000
m	Inertia Inertia Cruise Control	1 / m m m	1000
m1	Gain Suspension_System Gain	1 / m1 m1 m1	2500
m2	Gain6 Suspension_System Gain6	1 / m2 m2 m2	320
u	Step	u	500

Table 17. All Functions in all Models

Function Name	Parent Blocks	Calling character vector
P	PID Controller Parallel P Gain Internal Parameters Proportional Gain	P P P P
pi	Integrator Filter Integrator Integrator Integrator1 Integrator2 Integrator3 Integrator Filter Integrator Integrator Integrator1 Integrator2	-pi -pi -pi -pi -pi -pi -pi -pi pi pi pi pi pi pi

Function Name	Parent Blocks	Calling character vector
	Integrator3	pi

Name. Cruise_Control