MACHINE M2
REFINES M0
SEES c_status
VARIABLES
status
beforecc
engrun
brkLvr
INVARIANTS
inv1: $brkLvr \in BOOL$
EVENTS
Initialisation ⟨extended⟩
begin
act1: $status := \{PO\}$
act2: $beforecc := \{UNDEFINED\}$
act3: $engrun := FALSE$
act4: $brkLvr := FALSE$
end
Event PedalOnly ⟨ordinary⟩ $\widehat{=}$
extends PedalOnly
when
grd1:
$status = \{PA\} \lor status = \{PC\} \lor$
$(status = \{CC\} \land beforecc = \{PO\})$
then
act1: $status := \{PO\}$
act2: $engrun := FALSE$
end
Event PedalAssist ⟨ordinary⟩ $\widehat{=}$
extends PedalAssist
when
grd1:
$status = \{PO\} \lor$
$(status = \{CC\} \land beforecc = \{PA\})$
then
act1: $status := \{PA\}$
act2: $engrun := TRUE$
end
Event PedalOnly2CruiseControl ⟨ordinary⟩ $\widehat{=}$
extends PedalOnly2CruiseControl
when
grd1: $status = \{PO\}$
then
act1: $status := \{CC\}$
act2: $beforecc := \{PO\}$
act3: $engrun := TRUE$
end
Event PedalAssist2CruiseControl ⟨ordinary⟩ $\widehat{=}$
extends PedalAssist2CruiseControl
when
grd1: $status = \{PA\}$
then
act1: $status := \{CC\}$
act2: $beforecc := \{PA\}$
act3: $engrun := TRUE$
end

Event PedalCharge ⟨ordinary⟩ $\widehat{=}$
extends PedalCharge
when
grd1: $status = \{PO\}$
then
act1: $status := \{PC\}$
act2: $engrun := TRUE$
end
Event PressBrkLvr_1 ⟨ordinary⟩ $\widehat{=}$
extends Brake
when
grd1: $status = \{PO\} \lor status = \{PA\} \lor status = \{PC\}$
then
act1: $status := \{BRAKE\}$
act2: $engrun := FALSE$
act3: $brkLvr := FALSE$
end
Event PressBrkLvr_3 ⟨ordinary⟩ $\widehat{=}$
extends BrakeCruiseControl2PedalOnly
when
grd1: $status = \{CC\} \land beforecc = \{PO\}$
then
act1: $status := \{PO\}$
act2: $engrun := FALSE$
act3: $brkLvr := TRUE$
end
Event PressBrkLvr_2 ⟨ordinary⟩ $\widehat{=}$
extends BrakeCruiseControl2PedalAssist
when
grd1: $status = \{CC\} \land beforecc = \{PA\}$
then
act1: $status := \{PA\}$
act2: $engrun := TRUE$
act3: $brkLvr := TRUE$
end
Event StopBrkLvr ⟨ordinary⟩ $\widehat{=}$
when
grd1: $brkLvr = TRUE$
then
act1: $brkLvr := FALSE$
end
END