```
switch_inv_safety  THM

⊢  ∀E:TaggedEventStruct. safetyR(E) preserves switch_inv(E)
| by Unfolds ``preserved_by R_safety`` 0 THEN Reduce 0
THEN Auto

|    THEN InstLemma `iseg_select` [|E|;y;x] THENA Auto

|    THEN SimpHyp (-1) THEN ExRepD
THEN MoveToHyp 0 (-4)
|
|
1. E : TaggedEventStruct
2. x : |E| List
3. y : |E| List
4. y ≤ x
5. ||y||≤||x||
6. ∀i:ℕ. i<||y|| ⇒ y[i] = x[i]
7. switch_inv(E)(x)
⊢  switch_inv(E)(y)
  by ...
THEN RepeatFor 3 (ParallelOp (-1) THEN Thin (-3))

     THEN Subst y[i] = x[i] 0 THENA Auto THEN EasyHyp
THEN Subst y[j]
                                                                    =
                                                                    x[j]
      0 THENA Auto THEN EasyHyp
THEN Subst y[k] = x[k]
      0 THENA Auto THEN EasyHyp
THEN RepeatFor 6 (ParallelOp (-1))

     THEN Subst y[k'] = x[k'] 0 THENA Auto THEN EasyHyp
END
```