Inference at $*$ 2 3
of proof for Lemma adjacent-append:

1. T : Type
2. x : T
3. y : T
4. L_1 : T List
5. L_2 : T List
6. i : $\{0..(\|L_2\| - 1)^-\}$
7. $x = L_2[i]$
8. $y = L_2[(i+1)]$

$\vdash \exists i{:}\{0..(\|L_1 \mathbin{@} L_2\| - 1)^-\}.\ (x = (L_1 \mathbin{@} L_2)[i]\ \&\ y = (L_1 \mathbin{@} L_2)[(i+1)])$

```
 by ((((InstConcl [||L1||+i])
 CollapseTHEN (Auto'))·)
 CollapseTHEN (((
   RWO "select_append_back" 0)
 CollapseTHEN (((Auto')
 CollapseTHEN (((All ArithSimp)

    CollapseTHEN (Auto·))·))·))·))·

   .
```

http://www.nuprl.org/FDLcontent/p0_963683_/p39_372879_{adjacent-append}2_3.html