Inference at $*$ 1 1 2 1
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 : $\{0..(\|L_1 \mathbin{@} L_2\| - 1)^-\}$
7. $x = (L_1 \mathbin{@} L_2)[i]$
8. $y = (L_1 \mathbin{@} L_2)[(i+1)]$
9. $i < \|L_1\|$
10. $\neg(i < (\|L_1\| - 1))$

$\vdash (0 < \|L_1\|)$ & $(0 < \|L_2\|)$ & $x = \text{last}(L_1)$ & $y = \text{hd}(L_2)$
by ((((RWO "select_append_front" (-4))
CollapseTHENA (Auto'))·)
CollapseTHEN (((
RWO "select_append_back" (-3))
CollapseTHENA (Auto'))·))·

1:

7. $x = L_1[i]$
8. $y = L_2[((i+1) - \|L_1\|)]$
9. $i < \|L_1\|$
10. $\neg(i < (\|L_1\| - 1))$

$\vdash (0 < \|L_1\|)$ & $(0 < \|L_2\|)$ & $x = \text{last}(L_1)$ & $y = \text{hd}(L_2)$

.

---

http://www.nuprl.org/FDLcontent/p0_963683_/p39_372879_{adjacent-append}1_1_2_1.html