Inference at $*$
of proof for Lemma adjacent-cons:

$\vdash \forall T$:Type, x, y, u:T, L:(T List).
adjacent(T;[u / L];x;y) $\iff$ ((0 < $\|L\|$) & (($x = u$ & y = hd(L)) $\vee$ adjacent(T;L;x;y)))
by ((RepUR“adjacent“ 0)
CollapseTHEN (((MaAuto·)
CollapseTHEN (((ExRepD·)

CollapseTHEN (Auto’))·))·))·

1:

1. T : Type
2. x : T
3. y : T
4. u : T
5. L : T List
6. i : $\{0..((\|L\|+1) - 1)^{-}\}$
7. x = [u / L][i]
8. y = [u / L][(i+1)]
9. 0 < $\|L\|$

$\vdash$ ($x = u$ & y = hd(L)) $\vee$ ($\exists i$:$\{0..(\|L\| - 1)^{-}\}$. ($x = L[i]$ & $y = L[(i+1)]$))

2:

1. T : Type
2. x : T
3. y : T
4. u : T
5. L : T List
6. 0 < $\|L\|$
7. ($x = u$ & y = hd(L)) $\vee$ ($\exists i$:$\{0..(\|L\| - 1)^{-}\}$. ($x = L[i]$ & $y = L[(i+1)]$))

$\vdash \exists i$:$\{0..((\|L\|+1) - 1)^{-}\}$. ($x$ = [u / L][i] & y = [u / L][(i+1)])

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