

Inference at * 2 1 1 2 1 2
of proof for Lemma before-adjacent:

....antecedent.... NILNIL

1. $T : \text{Type}$
2. $T \text{ List}$
3. $u : T$
4. $v : T \text{ List}$
5. $\forall x, y:T.$
 $\text{no_repeats}(T;v)$
 $\Rightarrow \text{adjacent}(T;v;x;y)$
 $\Rightarrow (\forall z:T. z \text{ before } y \in v \Rightarrow (z \text{ before } x \in v \vee (z = x)))$
6. $x : T$
7. $y : T$
8. $\text{no_repeats}(T;v)$
9. $\neg(u \in v)$
10. $0 < \|v\|$
11. $x = u$
12. $y = \text{hd}(v)$
13. $z : T$
14. $z \text{ before } y \in v$
- $\vdash \neg(z = \text{hd}(v))$
by ((FLemma ‘no_repeats_iff’ [8;-1])
CollapseTHEN (Auto·)).

1:

15. $\neg(z = y)$
 $\vdash \neg(z = \text{hd}(v))$

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