Inference at * 1 1 2
 of proof for Lemma list_extensionality:

.....subterm..... T:t2:n

1. T : Type
2. T List
3. u : T
4. v : T List
5. $\forall b{:}(T\text{ List}).\ (\|v\| = \|b\|) \Rightarrow (\forall i{:}\mathbb{N}.\ (i < \|v\|) \Rightarrow (v[i] = b[i])) \Rightarrow (v = b)$
6. T List
7. u_1 : T
8. v_1 : T List
9. $(\|[u\ /\ v]\| = \|v_1\|)$
   $\Rightarrow (\forall i{:}\mathbb{N}.\ (i < \|[u\ /\ v]\|) \Rightarrow ([u\ /\ v][i] = v_1[i]))$
   $\Rightarrow ([u\ /\ v] = v_1)$
10. $\|v\|{+}1 = \|v_1\|{+}1$
11. $\forall i{:}\mathbb{N}.\ (i < (\|v\|{+}1)) \Rightarrow ([u\ /\ v][i] = [u_1\ /\ v_1][i])$

$\vdash v = v_1$
 by ((BackThruSomeHyp)
 CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 2:n
  ),(first_nat 3:n)) (first_tok SupInf:t) inil_term)))·

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12. i : $\mathbb{N}$
13. $i < \|v\|$

$\vdash v[i] = v_1[i]$

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