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rnext-one-one  THM

⊢  ∀R:(Id→𝔹), in,out:(|R|→IdLnk).
|  ring(R;in;out) ⇒ (∀i,j:|R|. n(i) = n(j) ⇒ i = j)
| by Auto THEN All (Unfolds [‘ring‘;‘rnext‘]) THEN ExRepD
|    THEN
|    InstHyp [i] 4
|    THEN
|    InstHyp [j] 4
|    THEN
|    ExRepD
|    THEN
|    AssertBY (in(destination(out(i))) = in(destination(out(j))))
|    Analyze
|    THEN
|    AssertBY (out(i) = out(j)) Auto
|    THEN
|    AssertBY (source(out(i)) = source(out(j))) Analyze
|    THEN
|    AssertBY (i = j) Auto
|
1. R : Id→𝔹
2. in : |R|→IdLnk
3. out : |R|→IdLnk
4. ∀i:|R|.
   R(source(in(i))) & R(destination(out(i)))
   & source(out(i)) = i
     & destination(in(i)) = i
     & in(destination(out(i))) = out(i)
     & out(source(in(i))) = in(i)
5. ∀i,j:|R|. ∃k:ℕ+. λx.destination(out(x))^k(i) = j
6. |R|
7. i : |R|
8. j : |R|
9. destination(out(i)) = destination(out(j))
10. R(source(in(i)))
11. R(destination(out(i)))
12. source(out(i)) = i
13. destination(in(i)) = i
14. in(destination(out(i))) = out(i)
15. out(source(in(i))) = in(i)
16. R(source(in(j)))
17. R(destination(out(j)))
18. source(out(j)) = j
19. destination(in(j)) = j
20. in(destination(out(j))) = out(j)
21. out(source(in(j))) = in(j)
22. in(destination(out(i))) = in(destination(out(j)))
23. out(i) = out(j)
24. source(out(i)) = source(out(j))
25. i = j
⊢  i = j
  by StrongHypSubst -1 0 THEN DVar ‘j’ THEN Unfold ‘rset‘ 0
     THEN
     Analyze
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     THEN
     HypSubst -1 0
END
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