```
no_repeats_reverse  THM

⊢  ∀T:Type, L:T List. no_repeats(T;rev(L)) ⟺ no_repeats(T;L)
| by InductionOnList THEN (Reduce 0) THEN (Try (Complete Auto))
|
1. T : Type
2. T List
3. u : T
4. v : T List
5. no_repeats(T;rev(v)) ⟺ no_repeats(T;v)
⊢  no_repeats(T;rev(v) @ [u]) ⟺ no_repeats(T;[u / v])
| by (RWO
|     Thm* ∀l:T List, x:T.
|          no_repeats(T;[x / l]) ⟺ no_repeats(T;l) & ¬(x ∈ l)
|     {no_repeats_cons}
|     0)
|    THEN
|    (RWO
|     Thm* ∀l1,l2:T List.
|          no_repeats(T;l1 @ l2)
|          ⟺
|          l_disjoint(T;l1;l2) & no_repeats(T;l1) & no_repeats(T;l2)
|     {no_repeats_append_iff}
|     0)
|    THEN
|    (RWO
|     Thm* ∀a,b:T List, t:T.
|          l_disjoint(T;b;[t / a]) ⟺ ¬(t ∈ b) & l_disjoint(T;b;a)
|     {l_disjoint_cons2}
|     0)
|    THEN
|    (RWO
|     Thm* ∀x:T, L:T List. (x ∈ rev(L)) ⟺ (x ∈ L)    {member_reverse}
|     0)
|
1. T : Type
2. T List
3. u : T
4. v : T List
5. no_repeats(T;rev(v)) ⟺ no_repeats(T;v)
⊢  ¬(u ∈ v) & l_disjoint(T;rev(v);nil)
   & no_repeats(T;rev(v))
   & no_repeats(T;[u])
   ⟺
   no_repeats(T;v) & ¬(u ∈ v)  by Obvious
END
```