```
l_disjoint_cons  THM

⊢  ∀T:Type, a,b:T List, t:T.
|  l_disjoint(T;[t / a];b) ⟺ ¬(t ∈ b) & l_disjoint(T;a;b)
| by (Unfold `l_disjoint` 0)
|    THEN
|    (RWO
|     Thm* ∀l:T List, a,x:T. (x ∈ [a / l]) ⟺ x = a ∨ (x ∈ l)
|     {cons_member}
|     0)
|
|\
| 1. T : Type
| 2. a : T List
| 3. b : T List
| 4. t : T
| 5. ∀x:T. ¬(x = t ∨ (x ∈ a) & (x ∈ b))
| ⊢  ¬(t ∈ b)  by Obvious
|
|\
| 1. T : Type
| 2. a : T List
| 3. b : T List
| 4. t : T
| 5. ∀x:T. ¬(x = t ∨ (x ∈ a) & (x ∈ b))
| 6. x : T
| ⊢  ¬((x ∈ a) & (x ∈ b))  by Obvious
|
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. 1. T : Type
. 2. a : T List
. 3. b : T List
. 4. t : T
. 5. ¬(t ∈ b)
. 6. ∀x:T. ¬((x ∈ a) & (x ∈ b))
. 7. x : T
. ⊢  ¬(x = t ∨ (x ∈ a) & (x ∈ b))  by Obvious
END
```