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list_in_mem_f_list  THM

⊢  ∀as:T*. as ∈ {x:T| mem_f(T;x;as) }*
| by RepD THEN (OnVar ‘as’ ListIndA) THEN (Reduce 0)
|
|\
| 1. T : Type
| ⊢  nil ∈ {T| False}*  by Auto
|
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. 1. T : Type
. 2. a : T
. 3. as : T*
. 4. as ∈ {x:T| mem_f(T;x;as) }*
. ⊢  a.as ∈ {x:T| a = x ∨ mem_f(T;x;as) }*  by Analyze
. |
. |\
. | ⊢  a ∈ {x:T| a = x ∨ mem_f(T;x;as) }  by Analyze
. | |
. | .....set predicate .....
. | ⊢  a = a ∨ mem_f(T;a;as)  by Sel 1 (Analyze 0)
. |
. .\
. . ⊢  as ∈ {x:T| a = x ∨ mem_f(T;x;as) }*  by Inclusion1 4
. . |
. . .....unproved set predicate from Inclusion .....
. . 4. as = as
. . 5. {x:T| mem_f(T;x;as) }*
. . 6. {x:T| mem_f(T;x;as) }*
. . 7. u : T
. . 8. mem_f(T;u;as)
. . ⊢  a = u ∨ mem_f(T;u;as)  by Sel 2 (Analyze 0)
END
```