```
not_nil_cons2  THM

⊢  ∀'a:S, t:'a List, h:'a. nil = cons(h; t) ⟺ False
| by RepeatFor 3 (Analyze 0)
|
1. 'a : S
2. t : 'a List
3. h : 'a
⊢  nil = cons(h; t) ⟺ False  by Analyze 0
|
|\
| 1. 'a : S
| 2. t : 'a List
| 3. h : 'a
| ⊢  nil = cons(h; t) ⇒ False
| | by InstLemma_o (ioid !oid{not_nil_cons:s}) []
| |
| 1. 'a : S
| 2. t : 'a List
| 3. h : 'a
| 4. ∀'a:S, t:'a List, h:'a. ¬nil = cons(h; t)
| ⊢  nil = cons(h; t) ⇒ False  by Fold `not` 0
| |
| 1. 'a : S
| 2. t : 'a List
| 3. h : 'a
| 4. ∀'a:S, t:'a List, h:'a. ¬nil = cons(h; t)
| ⊢  ¬nil = cons(h; t)  by BackThru -1
|
.\
. 1. 'a : S
. 2. t : 'a List
. 3. h : 'a
. ⊢  (nil = cons(h; t)) ⇐ False  by Auto
END
```