```
rel_mng_2_addprime  THM

⊢  ∀r:rel(), rho,ds,da,de,e,s,s',a,tr:Top.
|  rel_mng_2((r)'; rho; ds; da; de; e; s; s'; a; tr
|            ) ∼ [[r]] rho ds da de e s' a tr
| by UnivCD THENA Auto

|    THEN Unfolds ``rel_addprime rel_mng_2 rel_mng`` 0
THEN D 1

|    THEN Reduce 0
THEN GenConcl [[name]] rho 2of(e)  = z
THENA Auto
|
THEN Thin (-1)
THEN MoveToConcl (-1)
THEN ListInd 2

|    THEN All Reduce
THEN Try (Complete Auto)
|
|
1. relname()
2. Term List
3. Top
4. Top
5. Top
6. Top
7. e : Top
8. s : Top
9. s' : Top
10. a : Top
11. tr : Top
12. u : Term
13. v : Term List
14. ∀z:Top.
|   list_accum(x,t.x([[t]] 1of(e) s s' a tr);z;map(λt.
|   (t)';v)) ∼ list_accum(x,t.x([[t]] 1of(e) s' a tr);z;v)
⊢  ∀z:Top.
|  list_accum(x,t.x
|                ([[t]] 1of(e) s s' a tr);...;map(λt.
|  (t)';v)) ∼ list_accum(x,t.x
|                           ([[t]] 1of(e) s' a tr);...;v)
| by D 0 THENA Auto
|
|
1. relname()
2. Term List
3. Top
4. Top
5. Top
6. Top
7. e : Top
8. s : Top
9. s' : Top
```

```
10. a : Top
11. tr : Top
12. u : Term
13. v : Term List
14. ∀z:Top.
|   list_accum(x,t.x([[t]] 1of(e) s s' a tr);z;map(λt.
|   (t)';v)) ∼ list_accum(x,t.x([[t]] 1of(e) s' a tr);z;v)
15. z : Top
⊢  list_accum(x,t.x
|                 ([[t]] 1of(e) s s' a tr);...;map(λt.
|  (t)';v)) ∼ list_accum(x,t.x
|                            ([[t]] 1of(e) s' a tr);...;v)
| by Subst  [[(u)']] 1of(e) s s' a tr ∼ [[u]] 1of(e) s' a tr 0
|
|\
| .....equality .....
| 1. relname()
| 2. Term List
| 3. Top
| 4. Top
| 5. Top
| 6. Top
| 7. e : Top
| 8. s : Top
| 9. s' : Top
| 10. a : Top
| 11. tr : Top
| 12. u : Term
| 13. v : Term List
| 14. ∀z:Top.
|     list_accum(x,t.x([[t]] 1of(e) s s' a tr);z;map(λt.
|     (t)';v)) ∼ list_accum(x,t.x([[t]] 1of(e) s' a tr);z;v)
| 15. Top
| ⊢  [[(u)']] 1of(e) s s' a tr ∼ [[u]] 1of(e) s' a tr
|   by BackThruLemma `term_mng2_addprime` THEN Auto
|
.\
. 1. relname()
. 2. Term List
. 3. Top
. 4. Top
. 5. Top
. 6. Top
. 7. e : Top
. 8. s : Top
. 9. s' : Top
. 10. a : Top
. 11. tr : Top
. 12. u : Term
. 13. v : Term List
. 14. ∀z:Top.
.     list_accum(x,t.x([[t]] 1of(e) s s' a tr);z;map(λt.
.     (t)';v)) ∼ list_accum(x,t.x([[t]] 1of(e) s' a tr);z;v)
. 15. z : Top
. ⊢  list_accum(x,t.x
```

```
.                   ([[t]] 1of(e) s s' a tr);...;map(λt.
.    (t)';v)) ∼ list_accum(x,t.x
.                              ([[t]] 1of(e) s' a tr);z
.                                                     (...);v)
.   by BackThruSomeHyp
END
```