```
ring_wf  THM

⊢  ∀R:(Id→𝔹), in,out:(|R|→IdLnk). ring(R;in;out) ∈ Prop
| by Auto THEN Unfold ‘ring‘ 0 THEN All (Unfold ‘rset‘) THEN Analyze
|    THENL
|    [Analyze THENL [Auto THEN Analyze;Id];Auto;Auto]
|
.....subterm .....
1. R : Id→𝔹
2. in : {i:Id| R(i) }→IdLnk
3. out : {i:Id| R(i) }→IdLnk
4. ∀i:{i:Id| R(i) }.
   R(source(in(i))) & R(destination(out(i)))
   & source(out(i)) = i
     & destination(in(i)) = i
     & in(destination(out(i))) = out(i)
     & out(source(in(i))) = in(i)
⊢  (∀i,j:{i:Id| R(i) }. ∃k:ℕ+. λx.destination(out(x))^k(i) = j) ∈ Type
  by GenConcl ((λx.destination(out(x))) = f) THEN Analyze
     THEN
     InstHyp [x] 4
     THEN
     ExRepD
END
```