```
compose_iter_point_id  THM

⊢  ∀A:Type, f:(A⟶A), u:A. f(u) = u ⇒ (∀i:ℕ. f{^0i}(u) = u)
| by Guarding (∀i:<type>. <prop>) (UnivCD ...wℕ)
|
1. A : Type
2. f : A⟶A
3. u : A
4. f(u) = u
⊢  ∀i:ℕ. f{^0i}(u) = u  by NatInd Concl
|
|\
| .....basecase .....
| ⊢  f{^00}(u) = u
|   by BackThru:
|      Thm*  ∀f:(A⟶A), x:A. f{^00}(x) = x
|      {compose_iter_zero} ...wℕ
|
.\
. .....upcase .....
. 5. i : ℤ
. 6. 0<i
. 7. f{^0i-1}(u) = u
. ⊢  f{^0i}(u) = u
. | by Rewrite by
. |    Thm*  ∀f:(A⟶A), i:ℕ+, x:A. f{^0i}(x) = f(f{^0i-1}(x))
. |    {compose_iter_pos}
. |    Using:[A:= A] ...wℕ
. |
. ⊢  f(f{^0i-1}(u)) = u  by Rewrite by Hyp:7 ...wℕ
. |
. ⊢  f(u) = u  by Hypothesis
END
```