```
order_functionality_wrt_iff  THM

⊢  ∀R,R':(T→T→Prop).
|  (∀x,y:T. R(x,y) ⟺ R'(x,y))
|  ⇒
|  (Order(T;x,y.R(x,y)) ⟺ Order(T;x,y.R'(x,y)))
| by RepD THEN Unfold `order` 0
|
1. T : Type
2. R : T→T→Prop
3. R' : T→T→Prop
4. ∀x,y:T. R(x,y) ⟺ R'(x,y)
⊢  Refl(T;x,y.R(x,y)) & (Trans x,y:T. R(x,y)) & AntiSym(T;x,y.R(x,y))
|  ⟺
|  Refl(T;x,y.R'(x,y))
|  & (Trans x,y:T. R'(x,y))
|  & AntiSym(T;x,y.R'(x,y))  by RWH (HypC 4) 0
|
⊢  Refl(T;x,y.R'(x,y))
   & (Trans x,y:T. R'(x,y))
   & AntiSym(T;x,y.R'(x,y))
   ⟺
   Refl(T;x,y.R'(x,y))
   & (Trans x,y:T. R'(x,y))
   & AntiSym(T;x,y.R'(x,y))  by Fold `order` 0
END
```