```
fpf-compatible-singles  THM

⊢  ∀A:Type, eq:EqDecider(A), B:(A→Type), x,y:A, v:B(x), u:B(y).
|  (x = y ⇒ v = u) ⇒ x : v || y : u  by Auto
|
|\
| 1. A : Type
| 2. eq : EqDecider(A)
| 3. B : A→Type
| 4. x : A
| 5. y : A
| 6. v : B(x)
| 7. u : B(y)
| 8. x = y ⇒ v = u
| ⊢  x : v || y : u
| | by Repeat
| |    (Unfolds [`fpf-ap`;`fpf-compatible`;`fpf-dom`;`fpf-single`] 0
| |     THEN
| |     Reduce 0)
| |    THEN
| |    AllHyps
| |    (λh.
| |     RW assert_pushdownC h THEN ElimOrFalse h
| |     THEN
| |     RWO "deq_property<" h)
| |
| 1. A : Type
| 2. EqDecider(A)
| 3. B : A→Type
| 4. x : A
| 5. y : A
| 6. v : B(x)
| 7. u : B(y)
| 8. x = y ⇒ v = u
| 9. x@0 : A
| 10. x = x@0
| 11. y = x@0
| ⊢  v = u
|   by Analyze -4 THEN StrongHypSubst -1 0 THEN Try (Fold `member` 0)
|      THEN
|      DoSubsume
|      THEN
|      SubtypeRelEq
|      THEN
|      Analyze
|
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. .....unproved Inclusion subgoal .....
. 1. A : Type
. 2. EqDecider(A)
. 3. B : A→Type
. 4. x : A
. 5. y : A
. 6. B(x)
. 7. u : B(y)
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. 8. x = y
. ⊢  u ∈ B(x)  by DoSubsume THEN HypSubst -1 0
END
```