```
same_range_sep_inj_eqv  THM

⊢  EquivRel on A inj→ B, same_range_sep(A; B)  by Auto
|
1. A : Type
2. B : Type
⊢  EquivRel on A inj→ B, same_range_sep(A; B)
| by (A inj→ B) ⊆ (A→B)  By Def of A inj→ B
|    THEN
|    BackThru: equivrel_characterization
|    THEN
|    GenUnivCD
|    THEN
|    OnAllClauses Try⁰ReduceSOAps THEN OnAllClauses Try⁰Reduce
|
|\
| 3. (A inj→ B) ⊆ (A→B)
| 4. u : A inj→ B
| ⊢  ∀j:B. (∃i:A. u(i) = j) ⟺ (∃i:A. u(i) = j)  by Auto
|
|\
| 3. (A inj→ B) ⊆ (A→B)
| 4. u : A inj→ B
| 5. v : A inj→ B
| 6. ∀j:B. (∃i:A. u(i) = j) ⟺ (∃i:A. v(i) = j)
| ⊢  ∀j:B. (∃i:A. v(i) = j) ⟺ (∃i:A. u(i) = j)  by Rewrite by Hyp:-1
|
.\
. 3. (A inj→ B) ⊆ (A→B)
. 4. u : A inj→ B
. 5. v : A inj→ B
. 6. ∀j:B. (∃i:A. u(i) = j) ⟺ (∃i:A. v(i) = j)
. 7. z : A inj→ B
. 8. ∀j:B. (∃i:A. v(i) = j) ⟺ (∃i:A. z(i) = j)
. ⊢  ∀j:B. (∃i:A. u(i) = j) ⟺ (∃i:A. z(i) = j)  by Rewrite by Hyp:-1
END
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