```
prop_to_bool_2_char  THM

⊢  ∀P:Prop. (↓_b P) ⟺ P  by Analyze 0
|
1. P : Prop
⊢  (↓_b P) ⟺ P  by Unab [‘prop_to_bool_2‘]
|
1. P : Prop
⊢  InjCase(lem_2(P) ; true_2; false_2) ⟺ P
| by Assert (∀v:P+(P→Void). InjCase(v ; true_2; false_2) ⟺ P)
|
|\
| .....assertion .....
| 1. P : Prop
| ⊢  ∀v:P+(P→Void). InjCase(v ; true_2; false_2) ⟺ P
| | by (Analyze 0) THEN (Last Analyze) THEN (Reduce 0)
| |
| 1. P : Prop
| 2. P→Void
| 3. P
| ⊢  False  by Analyze 2 THEN StrongAuto
|
.\
. 1. P : Prop
. 2. ∀v:P+(P→Void). InjCase(v ; true_2; false_2) ⟺ P
. ⊢  InjCase(lem_2(P) ; true_2; false_2) ⟺ P
.   by InstHyp [lem_2(P)] 2 THEN StrongAuto
END
```