```
maction_wf  THM

⊢  ∀Alph:Type, S:ActionSet(Alph), L:Alph*, s:S.car. (S:L←s) ∈ S.car
| by UnivCD THEN ListInd 3
|
|\
| 1. Alph : Type
| 2. S : ActionSet(Alph)
| 3. Alph*
| 4. s : S.car
| ⊢  (S:nil←s) ∈ S.car  by RecUnfold ‘maction‘ 0 THEN SplitOnConclITE
| |
| |\
| | .....truecase .....
| | 5. null(nil)
| | ⊢  s ∈ S.car  by Trivial
| |
| .\
| . .....falsecase .....
| . 5. ¬null(nil)
| . ⊢  S.act(hd(nil),(S:tl(nil)←s)) ∈ S.car  by Analyze 5
| . |
| . 4. S.car
| . ⊢  null(nil)  by AbReduce 0 THEN Trivial
|
.\
. 1. Alph : Type
. 2. S : ActionSet(Alph)
. 3. Alph*
. 4. s : S.car
. 5. u : Alph
. 6. v : Alph*
. 7. (S:v←s) ∈ S.car
. ⊢  (S:u.v←s) ∈ S.car  by RecCaseSplit ‘maction‘
. |
. |\
. | .....truecase .....
. | 8. u.v = nil
. | ⊢  s ∈ S.car  by Trivial
. |
. .\
. . 8. ¬u.v = nil
. . ⊢  S.act(u,(S:v←s)) ∈ S.car
. .   by Inst
. .      Thm* ∀T:Type, a:ActionSet(T). a.act ∈ T→a.car→a.car
. .      {aset_act_wf}
. .      [Alph;S]
END
```