```
con_free_g_wf  THM

⊢  ∀V,T:Type, G:Grammar(V;T). ConFreeG(G) ∈ Prop
| by Unfold ‘con_free_g‘ 0
|
1. V : Type
2. T : Type
3. G : Grammar(V;T)
4. ℕ||G.prod||
5. a : V
⊢  [inl(a)] ∈ (V+T List+)  by Analyze
|
.....set predicate .....
⊢  ||[inl(a)]||>0
| by Inst Thm* ∀a:A, as:A*. ||a.as|| = ||as||+1    {length_cons}
|    [V+T;inl(a);nil]
|
6. ||[inl(a)]|| = ||nil||+1
⊢   by RWH (HypC 6) 0
|
⊢  ||nil||+1>0  by Assert (||nil|| = 0)
|
|\
| .....assertion .....
| ⊢  ||nil|| = 0  by BackThru Thm* ||nil|| = 0    {length_nil}
|
.\
. 7. ||nil|| = 0
. ⊢   by Auto
END
```