```
append_firstn_lastn  THM

⊢  ∀T:Type, L:T List, n:{0...||L||}. (firstn(n;L) @ nth_tl(n;L)) = L
  by RepeatFor 2 (D 0 THENA Auto) THEN ListInd (-1) THEN

       RecUnfold `firstn` 0 THEN RecUnfold `nth_tl` 0 THEN Reduce 0

       THEN Auto
  THEN SplitOnConclITE THEN Auto

       THEN SplitOnConclITE THEN Auto
  THEN Reduce 0 THEN Auto

       THEN EqCD THEN Auto THEN EasyHyp
END
```