

## star-append-iff<sup>11,40</sup>

$\forall T:\text{Type}, P, Q:((T \text{ List}) \rightarrow \text{prop}\{i:l\}), L:(T \text{ List}).$   
 $(\text{star-append}(T; P; Q)(L))$   
 $\iff ((Q(L))$   
 $\quad \vee (\exists L_1, L_2:T \text{ List}. ((L = \text{append}(L_1; L_2)) \wedge (P(L_1)) \wedge (\text{star-append}(T; P; Q)(L_2))))))$