reqs-between-acks[11,40]

$\forall es$:ES, ff:FIFO, is_req, is_ack:(E$\rightarrow \mathbb{P}$), $awaiting$, $owes\_ack$:(Id$\rightarrow$Id$\rightarrow$Id).
(ff.C $\subseteq$r Id)
$\Rightarrow$ ($\forall i$, j:ff.C. @i($awaiting(i,j)$:$\mathbb{B}$) & @i($owes\_ack(i,j)$:$\mathbb{B}$))
$\Rightarrow$ ($\forall i$:ff.C, e:E. (ff.R(i,e)) $\Rightarrow$ (loc$(e) = i \in$ Id))
$\Rightarrow$ ($\forall e$:E. Dec($is\_req(e)$) & Dec($is\_ack(e)$))
$\Rightarrow$ ($\forall i$, j:ff.C, e:E. Dec(ff.S(i,j,e)))
$\Rightarrow$ ($\forall i$, j:ff.C, e:E. (ff.S(i,j,e)) $\Rightarrow$ (loc$(e) = i \in$ Id))
$\Rightarrow$ plus-ify\{i:l\}(es;ff;is_req;is_ack;$awaiting$;$owes\_ack$)
$\Rightarrow$ ($\forall sndr$, $rcvr$:ff.C, e, e':E.
  [e: $rcvr$ $--is\_ack\rightarrow$ $sndr$]
  $\Rightarrow$ [e': $rcvr$ $--is\_ack\rightarrow$ $sndr$]
  $\Rightarrow$ ($e < e'$)
  $\Rightarrow$ $\exists x \in (e,e']$.[x: $rcvr$ $\leftarrow is\_req--$ $sndr$])