Inference at $*$
of proof for Lemma trans_rel_func_wrt_sym_self:

$\vdash \forall T$:Type, $R$:($T \to T \to \mathbb{P}$).
Trans($T$;$x$,$y$.$R(x,y)$)
$\Rightarrow$ {$\forall a$, $a'$, $b$, $b'$:$T$.
Symmetrize($x$,$y$.$R(x,y)$;$a$;$b$) $\Rightarrow$ Symmetrize($x$,$y$.$R(x,y)$;$a'$;$b'$) $\Rightarrow$ ($R(a,a') \iff R(b,b')$)}
by ((((Unfolds "symmetrize guard" 0)
CollapseTHENM (GenRepD))·)
CollapseTHENA (
(Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))·

1:

1. $T$ : Type
2. $R$ : $T \to T \to \mathbb{P}$
3. Trans($T$;$x$,$y$.$R(x,y)$)
4. $a$ : $T$
5. $a'$ : $T$
6. $b$ : $T$
7. $b'$ : $T$
8. $R(a,b)$
9. $R(b,a)$
10. $R(a',b')$
11. $R(b',a')$
12. $R(a,a')$

$\vdash R(b,b')$

2:

1. $T$ : Type
2. $R$ : $T \to T \to \mathbb{P}$
3. Trans($T$;$x$,$y$.$R(x,y)$)
4. $a$ : $T$
5. $a'$ : $T$
6. $b$ : $T$
7. $b'$ : $T$
8. $R(a,b)$
9. $R(b,a)$
10. $R(a',b')$
11. $R(b',a')$
12. $R(b,b')$

$\vdash R(a,a')$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_81393_{trans_rel_func_wrt_sym_self}.html