Inference at $*$
of proof for Lemma linorder_lt_neg:

$\vdash \forall T$:Type, R:($T \to T \to \mathbb{P}$).
($\forall x$, y:T. Dec($R(x,y)$))
$\Rightarrow$ Linorder(T;x,y.$R(x,y)$)
$\Rightarrow$ ($\forall a$, b:T. ($\neg$strict_part(x,y.$R(x,y)$;a;b)) $\iff$ $R(b,a)$)
by ((((((RepD)
CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))·)
CollapseTHEN (ARepD [”compound”;”basic”]))·)

CollapseTHEN (Unfold ‘strict_part‘ 0))·

1:

1. T : Type
2. R : $T \to T \to \mathbb{P}$
3. $\forall x$, y:T. Dec($R(x,y)$)
4. $\forall a$:T. $R(a,a)$
5. $\forall a$, b, c:T. $R(a,b) \Rightarrow R(b,c) \Rightarrow R(a,c)$
6. $\forall x$, y:T. $R(x,y) \Rightarrow R(y,x) \Rightarrow (x = y)$
7. $\forall x$, y:T. $R(x,y) \vee R(y,x)$
8. a : T
9. b : T

$\vdash$ ($\neg$($R(a,b)$ & ($\neg R(b,a)$))) $\iff$ $R(b,a)$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_79226_{linorder_lt_neg}.html