pre-init1-p^{0,22}

pre-init1-p(es;i;x;X;x_0;a;T;P)
$\equiv_{\text{def}}$ $((\exists v{:}T.\ P(x_0,v)) \Rightarrow (\exists e{:}\text{E}.\ \text{loc}(e) = i))$
& vartype(i;x) $\subseteq \rho\ X$
& $\forall e@i.\ \text{kind}(e) = \text{locl}(a) \Rightarrow \text{valtype}(e) \subseteq \rho\ T$ & $P((x \text{ when } e),\text{val}(e))$
& $\forall e@i.\ \exists e{\leq}e'.\text{kind}(e') = \text{locl}(a) \vee (\forall v{:}T.\ \neg P((x \text{ after } e'),v))$
& $@i\ x$ initially $x_0{:}X$

clarification:

pre-init1-p(es;i;x;X;x_0;a;T;P)
$\equiv_{\text{def}}$ $((\exists v{:}T.\ P(x_0,v)) \Rightarrow (\exists e{:}\text{es-E}(es).\ \text{es-loc}(es;\ e) = i \in \text{Id}))$
& es-vartype(es; i; x) $\subseteq \rho\ X$
& alle-at(es;i;e.es-kind(es; e) = locl(a) $\in$ Knd
$\Rightarrow$ es-valtype(es; e) $\subseteq \rho\ T$ & P(es-when(es; x; e),es-val(es; e)))
& alle-at(es;i;e.existse-ge(es;e;e'.es-kind(es; e') = locl(a) $\in$ Knd
$\vee$ ($\forall v{:}T.\ \neg P$(es-after(es; x; e'),v))))
& init-p(es; i; X; x; x_0)

http://www.cs.cornell.edu/Info/Projects/NuPrl/FDLcontent/p0_286125_/p48_183780_{pre-init1-p}.html