Answer

Formula Inv_H does not assert anything about the "type" of pc. We don't know what the value of an expression $[pc \text{ EXCEPT } \ldots]$ is if pc is not a function, so we can't prove that an arbitrary $Next_H$ step preserves the truth of the last two conjuncts of Inv_H. To obtain an inductive invariant, we must conjoin a formula asserting that pc is a function whose domain contains 0 and 1. The simplest formula that works is:

$$pc \in [\{0, 1\} \to \{\text{“p1”}, \text{“p2”}, \text{“c1”}, \text{“c2”}\}]$$

CLOSE