

```

----- MODULE PDieHard -----
EXTENDS Integers
 $Min(m, n) \triangleq$  IF  $m < n$  THEN  $m$  ELSE  $n$ 
*****

--algorithm DieHard{
  variables  $big = 0, small = 0$ ;
  { while ( TRUE )
    { either  $big := 5$       fill the big jug
      or     $small := 3$     fill the small jug
      or     $big := 0$       empty the big jug
      or     $small := 0$     empty the small jug
      or    pour from small to big
        with (  $poured = Min(big + small, 5) - big$  )
          {  $big := big + poured$ ;
             $small := small - poured$  }
      or    pour from big to small
        with (  $poured = min(big + small, 3) - small$  )
          {  $big := big - poured$ ;
             $small := small + poured$  }
    }
  }

*****
)

```

\ \* Modification History  
\ \* Last modified *Fri* May 30 10:20:45 *CST* 2014 by *yaojingguo*  
\ \* Created *Fri* May 30 09:55:01 *CST* 2014 by *yaojingguo*