MACHINE
Deliveries
SETS
ITEM; *ADDRESS*
VARIABLES
items, *deliveries*, *nogo*
INVARIANT
$items \subseteq ITEM \wedge$
$deliveries \in items \rightarrow ADDRESS \wedge$
$nogo \subseteq ADDRESS$
INITIALISATION
$items := \emptyset \;||\; deliveries := \emptyset \;||\; nogo :\in \mathbb{P}(ADDRESS)$
OPERATIONS
load(ii,aa) $\widehat{=}$
PRE
$ii \in ITEM - items \wedge$
$aa \in ADDRESS$
THEN
$items := items \cup \{ii\} \;||$
deliveries(ii) $:= aa$
END;

$it, ad \leftarrow drop \;\widehat{=}$
PRE
$items \neq \emptyset$
THEN
ANY ii
WHERE $ii \in items$
THEN
$items := items - \{ii\} \;||$
$deliveries := \{ii\} \lhd deliveries \;||$
$it, ad := ii, deliveries(ii)$
END
END;

endofday $\widehat{=}$
CHOICE
$items, deliveries := \emptyset , \emptyset$
OR
skip
END;

warning(aa) $\widehat{=}$
PRE
$aa \in ADDRESS$
THEN
IF $aa \in nogo$

THEN
CHOICE
$nogo := nogo - \{aa\}$
OR
$deliveries := deliveries \rhd \{aa\} \;||$
$items := items - deliveries^{-1}[\{aa\}]$
END
ELSE
IF
$aa \notin \mathbf{ran}(deliveries)$
THEN
$nogo := nogo \cup \{aa\}$
END
END
END

END