```
\A rmi \in RM : \sim([type |-> "Prepared", rm |-> rmi] \in msgs) \/ (\sim(rmState[rmi] = "working"))
                    ~([type |-> "Commit"] \in msgs) \/ (~(tmState = "init"))
                     ~([type |-> "Abort"] \in msgs) \/ (~(tmState = "init"))
\A rmi \in RM : ([type |-> "Prepared", rm |-> rmi] \in msgs) \/ (~([type |-> "Commit"] \in msgs))
       \Lambda \ rmj \in RM : ([type | -> "Prepared", rm | -> rmj] \in msgs) \/ (~(tmPrepared = RM))
        \A rmi \in RM : \sim([type |-> "Abort"] \in msgs) \/ (\sim(rmState[rmi] = "committed"))
              \A rmi \in RM : ~(rmState[rmi] = "committed") \/ (~(tmState = "init"))
```

```
\A rmi \in RM : ([type |-> "Prepared", rm |-> rmi] \in msgs) \/ (~(tmPrepared = tmPrepared \cup {rmi}))
                        (tmPrepared = RM) \ (\sim([type | -> "Commit"] \ in msgs))
           \A rmi \in RM : ([type |-> "Commit"] \in msgs) \/ (~(rmState[rmi] = "committed"))
                                                                                                                               TCConsistent
                  \A rmi \in RM : ~(rmState[rmi] = "working") \/ (~(tmPrepared = RM))
                  ~([type |-> "Abort"] \in msgs) \/ (~([type |-> "Commit"] \in msgs))
           \A rmi \in RM : ~([type |-> "Commit"] \in msgs) \/ (~(rmState[rmi] = "aborted"))
```