# 2.4 Safety and Security 2

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| System element or activity | Hazard/threat | No. | Hazardous event (what, where, when) | Cause (triggering event) | Consequence | Risk | | | Risk -reducing measure | Responsible | Comment |
| Freq | Cons | RPN |
| Docking | Mechanical fail | D1 | Fuel leakage | Sensor fail  Software fail  Manufacturing fail  Wear or degeneration | Fuel spill, larger expenses | 2 | 2 | 4 | Pressure sensors | Part manufacturers  System developers |  |
| Propulsion motor | Mechanical | P1 | Loss of propulsion | Wear/tare, aging  Manufacturing fail | Risk of other damage to system  Possible lowering of defences | 2 | 4 | 6 | Redundant motors  Extra manufacturing tests | Part manufacturers  System developers |  |
| P2 | Improper propulsion | Wear/tare, aging  Manufacturing fail  Fuel shortage | Risk of other damage to system  Possible lowering of defences  Risk of harming environment | 1 | 3 | 4 | Multiple propulsion steps  Redundant motors  Emergency fuel storage | Part manufacturers  System developers |  |
| Navigation system | Software | N1 | Bad route calculation | Bad algorithm  Sensor fail  Sabotage | Higher risk of collisions  Unnecessary use of fuel  Lowered defences | 3 | 2 | 5 | Multiple route simulation  Code revision | Software developer |  |
| N2 | Soft locked route |  |  |  |  |  |  |  |  |
| Battery | System fail | B1 | Loss of power |  |  |  |  |  |  |  |  |
| Wear | B2 | Acid spillage |  |  |  |  |  |  |  |  |