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| **FMEA (Failure Modes and Effects Analysis)** | | | | |
| Product: Mars rover | | Organization Name : Jet Propulsion Lab | | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | # | Function | Potential Failure Modes | Potential Failure Effects | Potential Causes of Failure | Recommend Actions | Responsible Person | Taken Actions | | 1 | Propel Rover | No torque to wheel | Wheel stops turning | Motor failure | Ensure motors have high reliability – at least 99.9% reliability for 100 hours | Tim Smithson, Electronics Div. | Vendor required to submit failure test results | | 2 |  |  | .. | Motor failure | Test ability to propel Rover with 1 or 2 drive wheels inoperative | Barb Rojo | Prototype tested with 2 motors off line | | 3 |  | Wheel jambs against rock | Wheel stops turning | Inability to sense rocks | Develop ability to sense and avoid rocks or feedback torque increase | B.J. Smith | Work in Progress | | 4 |  |  | Wheel damages surface | Wheel surface too soft | Specify surface that can withstand abrasion | N. Knovo | Hard test developed | | | | | |
| Team member: B. Rojo | Team member: | | Prepared by:N Knovo | |
| Team member: B. J. Smith | Team member: | | Checked by: | Approved by: |
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