

**Use Case 1: Monitor Pre-Launch****Scenario:** Monitor the Launching Mechanism**Scope:** LaunchSimulator**Level:** Flight Controller Goal**Primary Actor:** Flight Controller**Related Use Cases:** None**Stakeholders & Interests:**

- Flight Contoller: Wants to monitor the Launching Mechanism to determine the validity of the Pre-Launch (continue, hold or abort)
- Engineer/Technitians: Wants to monitor the Launching System during pre-launch to ensure the the System Integrity
- Astronaut: Wants to monitor the Launching System to monitor the Launching System Integrity

**Pre-Conditions:** The Countdown has started, and in Pre-Launch**Post-Conditions:** The Countdown at 0, the System transiitoned to Initiate Launch**Main Success Scenario:**

Flight Controller	System
	1. Reports the weight of the rocket
	2. Reports the directions of the Forces
	3. Reports the magintude of the forces at each support
	4. Repeats 1 through 3 for the durra-tion of the Countdown
	5. Reports Countdown at 0
6. Initiate Launch	
	7. Transitions to Initiate Launch

**Alternative Flows:**

- 1a. If the System reports anomalies in rocket weight, then the System reports the Anomalies to the Flight Controller. Flight Controller determines course of action.
- 2a. If the System reports anomalies in the direction of the rocket forces (upward force when should be down, wrong directoin of the force), then the System reports the anomaly to the Flight Controller, Flight Controller determines course of action.
- 3a. If the System reports unbalanced forces (unbalanced weight distribution) in the rocket, then the System reports the anomaly to the Flight Controller, Flight Controller determines course of action.

**Special Requiements:** None

**Technology & Variations List:**

- The Launching Mechanism supports the weight of the rocket. Force measurement will vary
- Force measurements and anomaly determination depends on mechanism
- This is literally a vectoral measurement

**Frequency of Occurence:** Depends on the frequency of the launch

**Open Issues:**

- What constitutes an anomalous pre-launch force measurement?
- What constitutes an anomalous pre-launch direction measurement?