ISPCS

SpaceX Commercial Crew Summary

10/8/2015 | Garrett Reisman

SpaceX Commercial Crew Program Overview

- SpaceX is developing a complete, safe, and reliable Crew Transportation System:
  - Crew Dragon vehicle
  - Falcon 9 launch vehicle
  - Ground launch system
  - All Operations: Crew, Launch, Mission, Ground, and Recovery
- System highlights:
  - Carries up to 7 crew members, or 4-5 crew members plus cargo bags and powered lockers
  - Dragon has a state-of-the-art integrated abort system
  - SpaceX crew missions will launch from the fully upgraded historic Pad 39A
  - Dragon designed for propulsive landing and rapid reusability
    - Primary certification for parachute-to-water landing and new Dragons each mission
  - Capable of 210-day stay on ISS
- Flights:
  - Demo-1 to ISS, without crew
  - In-Flight Abort Test
  - Demo-2 to ISS, with crew
  - Up to 6 Post Certification Missions (PCMs)

Pad Abort Test Dragon

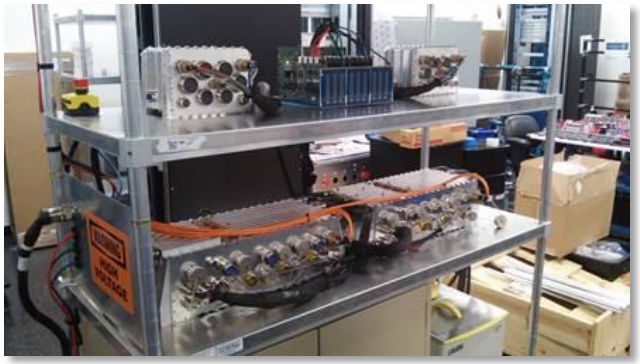
LC-39A with Renovations in Progress

On schedule to restore U.S. crew carrying capability by 2017

Milestone Status

- Recent completions:
  - Certification Baseline Review (Dec 2014)
  - Pad Abort Test (May 2015)
  - Avionics Test Bed Activation (June 2015)
- Major 2015 milestones:
  - Critical Design Review
  - Docking system qualification
  - Launch Site Operational Readiness, LSORR
  - Initial Propulsion Module Testing
  - Propulsive Land Landing Testing
- Major 2016 milestones:
  - LSORR for Crew
  - ECLSS Integrated Test
  - Validation Propulsion Module Testing
  - Space Suit Qualification
  - **Demo 1 autonomous flight to ISS**
- Major 2017 milestones:
  - Parachute Qualification Complete
  - Design Certification Review
  - Certification Review
  - **In-Flight Abort Test**
  - **Demo 2 flight to ISS with crew**

Avionics Test Bed



Initial Propulsion Module Hot-Fire

Hangar and Launch Pad at LC-39A

Crew Dragon On Orbit