

Significant Work Remains to Begin Operational Missions to the Space Station

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Highlights of GAO-20-121, a report to congressional committees

Why This Matters

Since retiring the Space Shuttle in 2011, NASA has depended on Russia to transport astronauts to the International Space Station (ISS). NASA's Commercial Crew Program is a multibillion dollar effort to re-establish a U.S. capability to get a crew to space, but it is years behind schedule. NASA may have to continue to rely on the Russian transport option or risk losing access to the ISS in 2020.

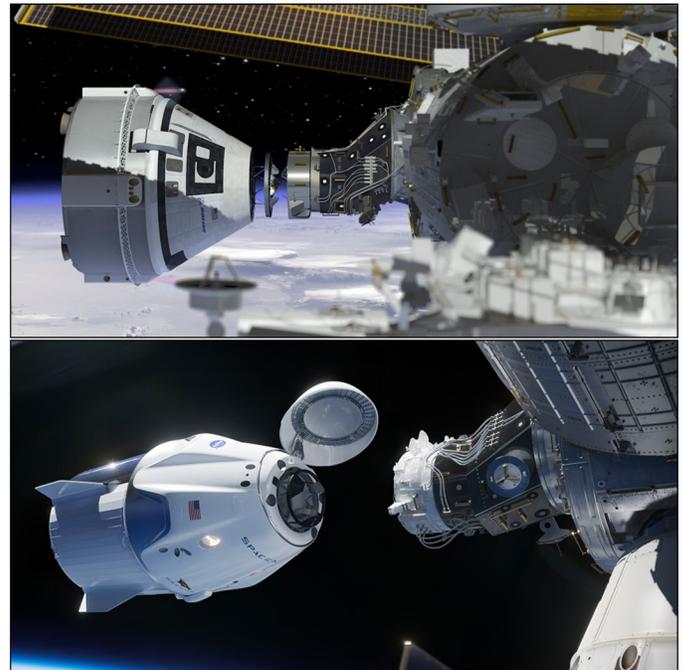
Key Takeaways

NASA will have fewer astronauts on the ISS in 2020 unless the Boeing and SpaceX spacecraft are ready to fly missions, but significant work remains for both. NASA has few back-up options if delays continue and will have only one astronaut on the U.S. side by April 2020. Most of this astronaut's time will be spent on maintenance activities rather than on research and development.

To fly as soon as possible, NASA has been planning to complete its reviews of the contractors' systems under aggressive time frames. This approach is risky because it assumes the contractors will complete multiple activities on time. Boeing and SpaceX must conduct additional test flights, train astronauts, and get a license from the Federal Aviation Administration (FAA).

FAA licenses cover the contractors' launch and reentry activities. FAA may grant waivers for changes to the license that do not jeopardize public safety. For example, FAA may grant waivers for changes in launch trajectory. NASA needs to know when such changes have been made in case they affect the crew. While NASA and FAA have coordinated on launch licensing for years, they have not yet decided how they will communicate about waivers. As a result, NASA may not have all the information it needs for launch decisions.

Artists' Depictions of Boeing (top) and SpaceX (bottom) Spacecraft Docking with the International Space Station



Source: Boeing (top) and SpaceX (bottom). | GAO-20-121

What GAO Recommends

We recommended in 2018 that NASA develop a plan to maintain access to the ISS; this recommendation has yet to be implemented. In this report, we add two recommendations to improve communications on waivers between NASA and FAA. Both agencies agreed.

How GAO Did This Study

We reviewed NASA and FAA's memorandum of understanding and joint program management plan, and program and contract documents. We interviewed NASA, FAA, Boeing, and SpaceX officials to understand progress toward the mission and the extent to which NASA and FAA have coordinated.

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