

Apollo 13 research paper



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“Houston we have a problem” (Lovell). These are the words Commander Jim Lovell shared with mission control when terror struck the spacecraft two hundred thousand miles into its journey to the Moon. On board Apollo 13, along with Commander Jim Lovell, were Command Module Pilot Jack Swigert, and Lunar Module Pilot Fred Haise (Kluger). After given a command from Houston to turn on the hydrogen and oxygen tank stirring fans, the spacecraft’s Service Module exploded followed by loss of electrical power and control of the ship.

Forced to abort the mission, the crew faced many obstacles in attempt to return home safely. On Earth, “America watched the desperate efforts of mission control to bring the crew home in what many consider NASA’s finest hour” (Kluger). Apollo 13 was the seventh manned mission in the American Apollo space program (Cole). The spacecraft was broken into two different ships, the Command Module and the Lunar Module (Cole). The command Module was named Odyssey; and its purpose was to house the astronauts, and return them home through re-entry.

The Lunar Module was named Aquarius; and its purpose was to transport astronauts from the Command Module to the surface of the Moon (Kluger). The crew consisted of Commander Jim Lovell, Command Module Pilot Jack Swigert, and Lunar Module Pilot Fred Haise. Apollo 13 launched on April 11, 1970, at 13:13 from the Kennedy Space Center, Florida. Apollo 13 was intended to land at Fra Mauro, but after an explosion in the Service Module the ship was forced to abort and return home. Apollo 13 splashed down on April 17, 1970 in the South Pacific Ocean.

Only fifty-five hours into the flight, the Command Module suffered an explosion leaving the spacecraft crippled. This incident occurred fifty-nine seconds after Jack Swigert was ordered to give the oxygen tanks a stir to prevent an over intake by the crew of carbon dioxide. As the master alarm sounded off the crew knew they were in danger (NASA). Apollo 13 began to tumble and crash through space, while the crew desperately attempted to regain control. Several minutes later Commander Jim Lovell glanced out of window 1 on the command module to notice that they were venting oxygen into space (Kluger).

Along with this the Fred Haise and Jack Swigert had realized the battery life of ship was dropping dramatically. While back at home, mission control came to conclusion that the moon was out of the question and ordered and the crew to shut down the Odyssey to save power for time when the crew would re-enter the earth's atmosphere. The crew had now moved from the Command Module Odyssey to the Lunar Module Aquarius, using as a lifeboat (Cole). The Lunar Module was designed to only transport two astronauts for a short period of time.

With the events that occurred, Aquarius was now transporting three people, affecting the quality of air the astronauts were in taking. With too much carbon dioxide, the astronauts had to create a filter with items found on board Apollo 13 (NASA). The filter did work and in fact prevented any more increases in carbon dioxide. As the crew came closer to Earth had jettisoned the service module. With this the crew releases both the Lunar and Service Module leaving them in the Odyssey to return home (Kluger). When the ship prepared for re-entry they entered a stage of blackout.

During this time all radio contact with mission control is lost (Cole). Apollo 13 regained signal thirty three seconds longer than the standard four minutes, with all the crewmembers alive. The events that occurred onboard Apollo 13 caused many changes within the space program. A review board was assigned to study the cause of the accident that forced the crew to abort the mission (Kluger). It was determined that a damaged coil caused the explosion. This fault was established two years before the ship even left the earth. NASA developed an emergency return plan for situations such as the one Apollo 13 endured.

This brought home Apollo mission fourteen to eighteen homes safely (NASA). With this review board many missions followed Apollo 13 all learning from the minds of crewmembers Jim Lovell, Jack Swigert, and Fred Haise. Apollo 13 mission left many legacies behind with it. With the events the ship endured it allowed for future missions to learn from its mistakes. Before the Apollo 13, America's purpose of reaching the moon was to beat the Russians to the Moon (Kluger). After successfully completing this nation no longer saw returning to the moon as needed.

Many felt that flying to the moon was routine, and about as exciting as a trip to Pittsburg. After the world stood by and watched what Apollo 13 endured, people would no longer question the Apollo Space Program (Cole). The mission of Apollo 13 was known as the successful failure. It was given this name in that the crew returned home safely but never made it to the moon. After Apollo 13, men walked on the moon and returned home safely. Through changes of fortune thousands worked to bring the crew of Apollo 13 home. "

I look up at the Moon, and wonder when will we be going back and who will that be” (Lovell).