

The astronauts flew to the Moon in Saturn V rockets, the tallest, heaviest and most powerful rockets ever launched. These were also the most expensive and most complicated machines ever built, and among the fastest with a top speed of around 24,000 miles an hour. Each one had three million components so there was plenty that could go wrong. As the Saturn V also carried thousands of tonnes of highly explosive fuel, enough to travel a million miles, even the tiniest malfunction could have caused a complete disaster.

The first few launches went according to plan, but a couple of days after Apollo 13 blasted off from the launch pad at Florida's Cape Canaveral in April 1970 the three-man crew heard a loud bang.

When one of the astronauts looked out of the window he could see a jet of gas shooting out of the back of the spacecraft. This was the crew's oxygen supply disappearing into space, and there was nothing he could do to stop it. One of those tiny malfunctions had occurred and it looked like it was going to turn into a disaster.

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At the time of the explosion, Commander Jim Lovell, Jack Swigert and Fred Haise were nearly 200,000 miles from home. It was obvious at once that they wouldn't be able to land on the Moon now, but they weren't at all sure they would be able to make it back to Earth either. Every manned spacecraft needs adequate supplies of oxygen, not just for the crew to breathe but because it is used to make water and to generate electricity (using a device called a fuel cell).

Commander Lovell sent an urgent radio message to Mission Control at Houston in Texas explaining that they'd had a problem. He sounded calm,