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00:00:00,570 --> 00:00:03,910
\h NARRATOR: When astronauts climb into the space shuttle before launch,

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00:00:03,910 --> 00:00:08,070
\h they are thinking of many aspects of the liftoff and coming mission.

3
00:00:08,070 --> 00:00:12,460
\h That's why there is another astronaut on-hand to help the crew get strapped in

4
00:00:12,460 --> 00:00:14,250
\h and ready for the flight.

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00:00:14,250 --> 00:00:17,120
\h Stan Love, Astronaut: STS-122: You've got your mind on a lot of stuff when you're getting into

6
00:00:17,120 --> 00:00:23,040
\h the shuttle and getting ready to launch into space and hooking up connections isn't always top

7
00:00:23,040 --> 00:00:25,630
\h of your priority list.

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00:00:25,630 --> 00:00:29,350
\h NARRATOR: Following their basic astronaut training, many astronauts are assigned to

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00:00:29,350 --> 00:00:32,000
\h Astronaut Support Personnel duties.

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00:00:32,000 --> 00:00:34,210
\h Chris Hadfield, Former Astronaut Support Personnel: As an astronaut you try to learn so many

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00:00:34,210 --> 00:00:39,560
\h things so that as a rookie when you come up you know what to expect and there are only a few

12
00:00:39,560 --> 00:00:45,030
\h jobs that really teach you what to expect and one of them is to be working here at the Cape,

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00:00:45,030 --> 00:00:48,860

\h at the Kennedy Space Center as an astronaut support personnel.

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00:00:48,860 --> 00:00:52,720
\h NARRATOR: They are known then as ASPs, or Cape Crusaders, since they work at

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00:00:52,720 --> 00:00:57,420
\h NASA's Kennedy Space Center in Florida. They are also called C-squareds.

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00:00:57,420 --> 00:01:00,770
\h Chris Hadfield: Working at the Cape, Cape Crusader, C-squared, whatever you want to call it,

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00:01:00,770 --> 00:01:07,270
\h and I learned so much about how the vehicles get ready, about the attitude at KSC,

18
00:01:07,270 --> 00:01:10,750
\h and about what it is to be one of the crew members getting in and out of the vehicle.

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00:01:10,750 --> 00:01:13,300
\h Just a great job to have as a new astronaut.

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00:01:13,300 --> 00:01:17,880
\h NARRATOR: The ASPs work with the closeout crew, the handful of technicians who oversee

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00:01:17,880 --> 00:01:22,000
\h the pre-launch preparations and also help get the crew in place.

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00:01:22,000 --> 00:01:26,230
\h Before the crew arrives at the launch pad, the Closeout Crew sets the switches to launch

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00:01:26,230 --> 00:01:30,880
\h positions and readies the seats for the mission's astronauts.

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00:01:30,880 --> 00:01:35,230
\h Chris Hadfield: It's a very well-polished process. The Closeout Crew up in the White Room

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00:01:35,230 --> 00:01:36,610
\h really know their job.

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00:01:36,610 --> 00:01:40,960
\h They're expert and they see us astronauts roll through and they take good care of us and they

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00:01:40,960 --> 00:01:45,140
\h make sure we don't miss a step. And you as the astronaut support personnel,

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00:01:45,140 --> 00:01:50,960
\h you're helping with that process, but really those guys have the responsibility.

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00:01:50,960 --> 00:01:54,030
\h You get in, you make sure things are good and you make sure none of the switches are

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00:01:54,030 --> 00:01:57,310
\h bumped and you take care of the things that you're responsible for.

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00:01:57,310 --> 00:02:00,750
\h NARRATOR: The work is unusual because the space shuttle is standing on its tail,

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00:02:00,750 --> 00:02:06,010
\h so the crew compartment is tilted and the seats that would normally be on the floor appear to be

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00:02:06,010 --> 00:02:11,770
\h hung on the wall. This means the ASPs, technicians and astronauts have to step carefully and

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00:02:11,770 --> 00:02:16,950
\h literally climb into their seats, throwing their legs up over their heads to get into position.

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00:02:16,950 --> 00:02:19,780
\h Steve Swanson, Astronaut, STS-117, STS-119: We pretty much say we just lay there

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00:02:19,780 --> 00:02:23,290
\h and they do all the work for you. If you try to help, you actually hinder them,

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00:02:23,290 --> 00:02:25,350
\h one of those type of situations.

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00:02:25,350 --> 00:02:28,730

\h NARRATOR: Astronauts have long supported their peers leading up to launch.

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00:02:28,730 --> 00:02:34,060
\h More than 50 years ago, astronaut John Glenn helped Alan Shepard get inside the small

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00:02:34,060 --> 00:02:38,230
\h Mercury capsule before the launch on May 5, 1961,

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00:02:38,230 --> 00:02:41,520
\h that would make Shepard the first American in space.

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00:02:41,520 --> 00:02:48,310
\h Astronaut Doug Hurley led the ASP crew that helped the STS-107 crew strap in before the

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00:02:48,310 --> 00:02:54,820
\h launch of Columbia in January 2003. When that crew was lost to an accident during re-entry,

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00:02:54,820 --> 00:03:00,110
\h Hurley said he thought a lot about seeing them for the last time on the launch pad.

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00:03:00,110 --> 00:03:03,280
\h Doug Hurley, Lead ASP, STS-107: Obviously it was hard on the entire country and on the

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00:03:03,280 --> 00:03:08,350
\h astronaut corps, but to lose seven people, you know, that you're close to and then it makes you

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00:03:08,350 --> 00:03:17,760
\h kind of dig deep and look down inside yourself and ask if this is really what you want to do and if

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00:03:17,760 --> 00:03:25,560
\h it's worth it and if it's the right thing and I was convinced it was, but still it was a very tough few

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00:03:25,560 --> 00:03:29,640
\h years to get through that, the aftermath of the accident.

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00:03:29,640 --> 00:03:33,050
\h NARRATOR: When the crew of Discovery boarded the spacecraft for the return to flight

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00:03:33,050 --> 00:03:38,930
\h mission, STS-114, fellow astronauts were at their side to strap them into their seats.

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00:03:38,930 --> 00:03:45,360
\h Hurley worked with the second return-to-flight mission, STS-121, as the ASP.

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00:03:45,360 --> 00:03:50,420
\h Along with the personal help from the ASPs comes a generous dose of technical expertise.

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00:03:50,420 --> 00:03:55,130
\h Stan Love: There are numerous communication checks with the flight director in Houston,

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00:03:55,130 --> 00:04:00,230
\h with the OTC and NTD here at the Cape and they all have names and you can never remember

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00:04:00,230 --> 00:04:04,280
\h who it is and it's wonderful to have the C-squareds and the strap-in crew there,

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00:04:04,280 --> 00:04:06,090
\h leaning right over you, leaning in your face saying

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00:04:06,090 --> 00:04:10,900
\h "Your OTCs name is such and such, you're going to tell them this at this time "

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00:04:10,900 --> 00:04:17,370
\h and so it's really a great help to have them walking you through this step by step on a day when

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00:04:17,370 --> 00:04:19,560
\h you're really trying to think about other things.

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00:04:19,560 --> 00:04:23,470
\h NARRATOR: Other aspects of the work involve simple camaraderie.

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00:04:23,470 --> 00:04:27,130
\h Steve Swanson: But it's a fantastic thing and the ASP, the person who puts you in,

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00:04:27,130 --> 00:04:31,510

\h the one who actually buttons you up, who tightens you up, all the belts,

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00:04:31,510 --> 00:04:35,730
\h is usually a friend of yours too. So it's kind of nice to have that face as the last face as they go

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00:04:35,730 --> 00:04:37,930
\h out the door and close the hatch, that that's who you see.

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00:04:37,930 --> 00:04:41,770
\h NARRATOR: As they work on the precision steps that go with getting their crew ready to

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00:04:41,770 --> 00:04:45,250
\h launch, the ASPs know they will get a chance themselves to climb in

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00:04:45,250 --> 00:04:47,010
\h for a space flight themselves.

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00:04:47,010 --> 00:04:50,520
\h Chris Hadfield: It's really nice when then it's your turn to be wearing the pumpkin suit and

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00:04:50,520 --> 00:04:56,330
\h standing there and having those guys joke with you as they put all the harness and everything

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00:04:56,330 --> 00:05:00,490
\h on and have yourself basically bolted into the vehicle to get ready for launch.

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00:05:00,490 --> 00:05:04,820
\h NARRATOR: The ASPs and technicians know how important their work is to a successful

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00:05:04,820 --> 00:05:10,450
\h launch day, though it is part of the precise choreography involving specialists, technicians and

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00:05:10,450 --> 00:05:13,160
\h engineers from across many fields.