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00:00:00,000 --> 00:00:03,000

Msgt. Brian Boyce "B-Love", HH-60 Flight Engineer: It's unique because it's a space mission, I mean, there's o

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00:00:03,000 --> 00:00:08,890

place that they do this out of and that's over here and we happen to be fortunate enough to be located right ne

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00:00:08,890 --> 00:00:11,530

Kennedy Space Center to be able to take part in this.

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00:00:11,530 --> 00:00:14,430

Lt. Col. John Brodeur, C-130 Pilot: A lot of folks don't even know we exist during a shuttle mission.

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00:00:14,430 --> 00:00:17,470

S Msgt. Stephen Schwarz "Spike", Flight Engineer: It's unlike anything I've ever done before. I've been doing it

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00:00:17,470 --> 00:00:22,720

years now and it's just a joy to do and we just love doing it here.

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00:00:22,720 --> 00:00:28,890

NARRATOR: The space shuttle depends on an extensive supporting cast to safely get off the launch pad and i

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00:00:28,890 --> 00:00:35,500

and then return safely to Earth. But if something goes wrong and astronauts have to bail out of the shuttle,

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00:00:35,500 --> 00:00:39,370

there is another team of professionals standing by to rescue them.

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00:00:39,370 --> 00:00:43,160

MSgt. Rob Grande, C-130 radio Operator: You know, if we go to work somebody is having a really bad day.

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00:00:43,160 --> 00:00:50,090

So, sometimes we like it to be boring. But we're always prepared for the what-of scenario.

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00:00:50,090 --> 00:00:56,400

NARRATOR: These professionals are part of the Air Force Reserve's 920th Rescue Wing based at Patrick Air

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00:00:56,400 --> 00:01:01,030

in Florida just a few miles south of NASA's Kennedy Space Center.

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00:01:01,030 --> 00:01:07,640

Their tools are helicopters and airplanes carrying specialized gear to allow them to pull distressed astronauts

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00:01:07,640 --> 00:01:13,280

out of a swamp, away from the launch pad or rescue them miles out in the ocean.

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00:01:13,280 --> 00:01:17,950

The teams have not been needed for a real emergency during the space shuttle era,

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00:01:17,950 --> 00:01:21,700

but that does not keep them from taking their mission seriously.

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00:01:21,700 --> 00:01:23,690

Msgt. Shane Smith, C-130 Loadmaster: We're excited to be a part of the mission,

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00:01:23,690 --> 00:01:29,180

but we really hope that they don't have to use us. You know, we're as prepared as we could possibly be.

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00:01:29,180 --> 00:01:34,780

We're eager to get out and do the mission, but if somebody has to use us, that means something went wrong.

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00:01:34,780 --> 00:01:39,120

But the good thing is that we are there, we're ready, and we're completely prepared.

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00:01:39,120 --> 00:01:45,210

NARRATOR: The rescuers are equipped with everything from first aid supplies to defibrillators inside the helico

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00:01:45,210 --> 00:01:50,940

They also have specialized medical packs to take with them to stabilize a patient.

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00:01:50,940 --> 00:01:54,040

Msgt. Brian Boyce, HH-60 Flight Engineer: The biggest unique challenge is probably how we configure the air

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00:01:54,040 --> 00:01:56,440

specifically for the shuttle rescue mission.

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00:01:56,440 --> 00:02:01,640

We take equipment out. We take out our fuel tanks, we take out the seat for the gunner,

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00:02:01,640 --> 00:02:07,840

we put in boxes that are provided to us by NASA. We put in more medical equipment than we normally take in

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00:02:07,840 --> 00:02:13,420

NARRATOR: The equipment list also includes night vision goggles and sensors for the aircrew and aircraft so

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00:02:13,420 --> 00:02:16,220

find astronauts in the dark.

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00:02:16,220 --> 00:02:21,950

But perhaps the most specialized equipment is the pilots, aircrew and pararescuemen themselves.

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00:02:21,950 --> 00:02:28,330

Trained to rescue downed airmen behind enemy lines, the teams use many of the same skills and operate with

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00:02:28,330 --> 00:02:32,670

urgency to recover astronauts in an emergency.

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00:02:32,670 --> 00:02:38,510

Like all the armed forces' special operations forces, the PJs, as the pararescuemen are known,

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00:02:38,510 --> 00:02:45,550

go through demanding training that tests their mental toughness every bit as hard as their physical capabilities.

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00:02:45,550 --> 00:02:52,410

Some of the 3-year training cycle is performed alongside Army Special Forces soldiers and Navy SEALs along

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00:02:52,410 --> 00:02:56,720

NASA at Kennedy Space Center's Launch Pad 39A.

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00:02:56,720 --> 00:03:03,500

They know how a rescue would go because of extensive practice for several rescue emergency situations.

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00:03:03,500 --> 00:03:05,920

Lt. Col Robert Haston, HH-60 pilot: When we do an open-ocean rescue, that's called a Mode 8.

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00:03:05,920 --> 00:03:09,710

We have seven other modes that start at the pad and work their way out.

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00:03:09,710 --> 00:03:16,860

That's more or less where we perform a medevac role. Then there's, Mode 6 is at the runway and Mode 7,

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00:03:16,860 --> 00:03:24,760

in terms of a real crisis situation can be a real problem given that a lot of the area up around NASA is swamp

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00:03:24,760 --> 00:03:31,520

and the orbiter has a lot of poisonous hypergolics and other chemicals.

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00:03:31,520 --> 00:03:37,900

NARRATOR: A full-scale ocean rescue dress rehearsal incorporates NASA's own booster recovery ships and

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00:03:37,900 --> 00:03:41,680

Navy vessels and Coast Guard aircraft.

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00:03:41,680 --> 00:03:46,540

Lt. Col. Phillip Kennedy "Hoss", HH-60 Pilot: Over the years we would do the mode training with NASA specific

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00:03:46,540 --> 00:03:55,760

Once every six months we'd do a land- or water-based trainer specifically with an exercise and what we do for

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00:03:55,760 --> 00:04:00,760

training for SAR is, over water, we do over water training weekly.

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00:04:00,760 --> 00:04:08,320

BOYCE: NASA has a way of, when they're preparing for their missions, that they set up some very interesting

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00:04:08,320 --> 00:04:15,260

for us to deal with. Some of them would be where they put the shuttle cockpit mock-up in the swamp and we w

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00:04:15,260 --> 00:04:16,570

have to deal with that.

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00:04:16,570 --> 00:04:21,690

NARRATOR: Hoisting astronauts from the ocean is quite a bit different from picking up stranded boaters.

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00:04:21,690 --> 00:04:28,560

SCHWARZ: An astronaut, you know, they wear those big orange suits and unfortunately if they go in the water

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00:04:28,560 --> 00:04:36,780

they fill up with water and that turns a 200-pound individual a 300- to 350-pound individual and that makes it ex

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00:04:36,780 --> 00:04:42,220

difficult to bring him up into the cabin of the helicopter.

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00:04:42,220 --> 00:04:46,810

Lt. Col. John Brodeur, C-130 Pilot: During a rescue operation, we've got PJs on board and a combat rescue of

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00:04:46,810 --> 00:04:50,940

We also carry three of their RAMZ packages, which we can deploy out the back of the aircraft.

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00:04:50,940 --> 00:04:55,440

And what we'll do is we'll deploy that package and then the PJs will follow outside right after that.

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00:04:55,440 --> 00:05:01,230

And then they'll land in their boats and try and find, take the boats to the astronauts that we've already spotted.

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00:05:01,230 --> 00:05:06,030

GRANDE: We do a lot of OJT just to get ourselves to the point where we can go out and successfully prosecut

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00:05:06,030 --> 00:05:09,860

time frame that the astronauts expect us to.

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00:05:09,860 --> 00:05:14,720

KENNEDY: We practice that on a regular basis, it's just now we're taking that skill set and applying it

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00:05:14,720 --> 00:05:16,670

to the shuttle mission.

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00:05:16,670 --> 00:05:22,190

NARRATOR: Helicopters are the preferred method for lifting astronauts out of danger because they can hover

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00:05:22,190 --> 00:05:26,560
person and basically act like a crane in the sky.

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00:05:26,560 --> 00:05:32,510
Known by their call sign "Jolly," rescue helicopters have been greeted enthusiastically by downed pilots,

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00:05:32,510 --> 00:05:36,410
stranded boaters and even hurricane survivors.

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00:05:36,410 --> 00:05:41,950
There are times, though, when rough seas or other conditions can make a simple hover very difficult.

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00:05:41,950 --> 00:05:47,450
Sometimes the pilot has to chase the person as they bob up and down on large ocean waves.

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00:05:47,450 --> 00:05:52,610
HASTON: All I'm doing is, I'm flying the helicopter and listening to the engineer who has to tell me how to fly the

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00:05:52,610 --> 00:05:58,520
helicopter while he's trying to pick this guy up out of the water on a hoist and not bang him into anything.

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00:05:58,520 --> 00:06:05,050
NARRATOR: The helicopters also perform range clearing tasks offshore. It is up to the pilots and air crew to go

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00:06:05,050 --> 00:06:13,500
make contact with the offending vessel, whether it is a wayward pleasure boater or a cargo ship with a foreign

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00:06:13,500 --> 00:06:20,460
HASTON: There's been some really dark, scary nights dealing with ships and there's been some fishing tourna

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00:06:20,460 --> 00:06:28,750
guess you'd call them, generally speaking, and you're like a bouncer at a really big concert trying to keep all the

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00:06:28,750 --> 00:06:30,190
out of the way.

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00:06:30,190 --> 00:06:33,640

Lt. Col. Kurt Matthews "Junior", HH-60 Pilot, Cdr. 308th Squadron: It's fun to communicate with vessels that are

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00:06:33,640 --> 00:06:43,660

marine band or you have to resort to dropping written messages down or get low enough to try and communicate

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00:06:43,660 --> 00:06:46,570

hand signals with them.

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00:06:46,570 --> 00:06:52,830

NARRATOR: NASA and the Air Force Reserve can also employ up to three C-130 transport aircraft for shuttle

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00:06:52,830 --> 00:06:55,370

and landing alerts.

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00:06:55,370 --> 00:07:01,770

The C-130s, using the call sign "King," carry pararescuemen, a host of supplies that can be parachuted

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00:07:01,770 --> 00:07:10,160

to the ocean's surface, markers for recording locations and perhaps the most critical element for an ocean rescue

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00:07:10,160 --> 00:07:16,080

The C-130s are equipped with drogues that allow them to refuel helicopters in the air.

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00:07:16,080 --> 00:07:22,030

HASTON: We may be out there for hours looking for an astronaut that hasn't been located or is incommunicad

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00:07:22,030 --> 00:07:27,570

NARRATOR: Since a shuttle rescue would require substantial coordination, all the crews learned something in

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00:07:27,570 --> 00:07:34,650

with NASA's launch team: An ability to listen to and understand several conversations at the same time.

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00:07:34,650 --> 00:07:39,960

KENNEDY: I can be listening to five different radios at a time. Now we do share that within the helicopter,

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00:07:39,960 --> 00:07:44,340

you know, we'll share it between the two pilots and even the FE and the gunner in the back.

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00:07:44,340 --> 00:07:47,250

GRANDE: We've got, oh, I can't tell you how many radios, like 10 different inputs,

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00:07:47,250 --> 00:07:53,560

20 different conversations going on all at once and I've got to pick out the little bits and pieces of information that

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00:07:53,560 --> 00:08:00,510

airplane needs or the airplane next to me, or the guy in the back running the show, who's the air boss.

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00:08:00,510 --> 00:08:06,700

I've got to put all that stuff together so everybody can get a good picture of what's going on outside the airplane

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00:08:06,700 --> 00:08:11,290

NARRATOR: The Air Force's space rescue operations did not begin with the space shuttle.

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00:08:11,290 --> 00:08:16,090

Units were used or on-call for all of NASA's manned space programs.

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00:08:16,090 --> 00:08:22,080

After all, before shuttle, the Mercury, Gemini and Apollo astronauts counted on landing in the ocean

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00:08:22,080 --> 00:08:24,000

to end their missions.

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00:08:24,000 --> 00:08:28,560

And they counted on ships and helicopters to reel them in safely.

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00:08:28,560 --> 00:08:32,640

KENNEDY: The mission itself, how we execute it, how we do it, has not really changed,

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00:08:32,640 --> 00:08:38,280

but the visibility has changed over the years. You bring home a son, a daughter,

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00:08:38,280 --> 00:08:45,070

a dad or a mother when you rescue somebody and you're saving a life. In the peacetime rescue world,

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00:08:45,070 --> 00:08:46,460

that's outstanding.