



1  
00:00:00,150 --> 00:00:07,000

\h Music

2  
00:00:07,000 --> 00:00:11,080

\h Space shuttle Discovery turned night into day along Florida's east coast

3  
00:00:11,080 --> 00:00:15,610

\h with a launch at one minute before midnight on August 28.

4  
00:00:15,610 --> 00:00:19,410

\h The spectacular liftoff began Discovery's 37th mission.

5  
00:00:19,410 --> 00:00:23,130

\h Two days after launch, Commander Rick Sturckow carefully guided the

6  
00:00:23,130 --> 00:00:27,080

\h 100-ton space shuttle toward successful rendezvous and docking with the

7  
00:00:27,080 --> 00:00:33,270

\h 350-ton space station as they orbited 225 miles above Earth.

8  
00:00:33,270 --> 00:00:36,750

\h With three spacewalks on the agenda during their eight days of docked

9  
00:00:36,750 --> 00:00:41,000

\h operations, the crews of shuttle and station got down to work with supply

10  
00:00:41,000 --> 00:00:44,920

\h and equipment transfers that would stretch throughout the mission.

11  
00:00:44,920 --> 00:00:49,250

\h In addition to supplies and research facilities, the flight delivered a new

12  
00:00:49,250 --> 00:00:51,850

\h crew member to the International Space Station.

13  
00:00:51,850 --> 00:00:56,680

\h Tim Kopra ended his time on board the space station, swapping places

14

00:00:56,680 --> 00:01:00,740

\h with Nicole Stott who joined the six-member Expedition 20 crew.

15

00:01:00,740 --> 00:01:04,960

\h The crew used the station's robotic arm to move the Leonardo Multi-

16

00:01:04,960 --> 00:01:08,590

\h Purpose Logistics Module from Discovery's payload bay to the Earth-

17

00:01:08,590 --> 00:01:11,160

\h facing port on the station's Harmony node .

18

00:01:11,160 --> 00:01:15,740

\h From there, they unloaded 15,000 pounds of cargo from the module.

19

00:01:15,740 --> 00:01:20,890

\h Danny Olivas and Nicole Stott spent about six and a half hours performing

20

00:01:20,890 --> 00:01:25,000

\h the mission's first spacewalk, replacing an empty ammonia tank assembly

21

00:01:25,000 --> 00:01:28,720

\h and retrieving two science experiments.

22

00:01:28,720 --> 00:01:33,470

\h Inside the station, newly delivered crew and science equipment was installed.

23

00:01:33,470 --> 00:01:37,270

\h On the mission's second spacewalk, it took Olivas and the European

24

00:01:37,270 --> 00:01:41,460

\h Space Agency's Christer Fuglesang about six and a half hours to install

25

00:01:41,460 --> 00:01:47,070

\h the new ammonia tank on the station and stow the depleted 1,295-pound

26

00:01:47,070 --> 00:01:49,680

\h tank in the shuttle's payload bay.

27

00:01:49,680 --> 00:01:53,650

\h The new tank provided 600 pounds of fresh ammonia to circulate through

28

00:01:53,650 --> 00:01:56,140

\h the station's port cooling system.

29

00:01:56,140 --> 00:02:00,350

\h Olivas and Fuglesang also were paired for the mission's third and final

30

00:02:00,350 --> 00:02:04,580

\h spacewalk. During the seven-hour session, they deployed a payload

31

00:02:04,580 --> 00:02:09,460

\h attachment system on the station's truss, replaced a rate gyro assembly, a

32

00:02:09,460 --> 00:02:13,330

\h power control module and two GPS antennas.

33

00:02:13,330 --> 00:02:17,860

\h Using the station's robotic arm, the crew returned the logistics module to

34

00:02:17,860 --> 00:02:21,190

\h Discovery's payload bay before the two crews parted and the shuttle

35

00:02:21,190 --> 00:02:24,620

\h undocked from the station.

36

00:02:24,620 --> 00:02:28,350

\h A weather delay kept Discovery and crew in space an extra day, and also

37

00:02:28,350 --> 00:02:31,800

\h prevented them from returning to Earth where their mission began at

38

00:02:31,800 --> 00:02:33,560

\h Kennedy Space Center.