



1
00:00:34,150 --> 00:00:05,590
one minute to the launch now and

2
00:00:39,350 --> 00:00:35,750
less than 30 seconds now until the

3
00:00:43,110 --> 00:00:41,350
ground the auto sequence has started and

4
00:00:46,790 --> 00:00:43,120
the ground umbilical

5
00:00:52,950 --> 00:00:46,800
for the third stage and

6
00:00:54,790 --> 00:00:53,750
10

7
00:00:55,830 --> 00:00:54,800
9

8
00:00:56,709 --> 00:00:55,840
8

9
00:00:57,590 --> 00:00:56,719
7

10
00:00:58,549 --> 00:00:57,600
6

11
00:00:59,430 --> 00:00:58,559
five

12
00:01:00,389 --> 00:00:59,440
four

13
00:01:01,349 --> 00:01:00,399

three

14

00:01:13,590 --> 00:01:01,359

two

15

00:01:19,749 --> 00:01:15,990

and there you see uh progress 51 lifting

16

00:01:44,230 --> 00:01:19,759

off at uh 5 12 a.m central time from the

17

00:01:44,240 --> 00:01:48,789

everything going as planned

18

00:01:48,799 --> 00:01:55,830

40 seconds into today's lunch

19

00:02:00,230 --> 00:01:58,230

soyuz has three stages the first has uh

20

00:02:02,789 --> 00:02:00,240

four liquid engines strapped to the side

21

00:02:04,149 --> 00:02:02,799

of the poor vehicle

22

00:02:05,830 --> 00:02:04,159

and each of those will burn for about a

23

00:02:14,630 --> 00:02:05,840

minute and 58 seconds before they're

24

00:02:18,630 --> 00:02:16,470

everything continuing to look good as

25

00:02:21,510 --> 00:02:18,640

the progress 51 makes its way toward

26

00:02:41,190 --> 00:02:24,309

70 seconds now into

27

00:02:45,430 --> 00:02:43,190

continuing to see a good view of it here

28

00:02:50,390 --> 00:02:45,440

from the launch pad in baikonur where it

29

00:02:56,150 --> 00:02:53,110

just a moment ago and uh

30

00:02:58,710 --> 00:02:56,160

now 100 seconds into uh the flight and

31

00:03:17,589 --> 00:02:58,720

everything still looking

32

00:03:21,910 --> 00:03:19,350

and we've just heard that the first

33

00:03:24,550 --> 00:03:21,920

stage separation

34

00:03:27,110 --> 00:03:24,560

has been confirmed 130 seconds into

35

00:03:29,110 --> 00:03:27,120

today's flight

36

00:03:32,149 --> 00:03:29,120

the core of that first stage also serves

37

00:03:34,710 --> 00:03:32,159

as the second stage

38

00:03:45,190 --> 00:03:34,720

which continues to burn until the 4

39

00:03:49,990 --> 00:03:48,390

now 150 seconds into the

40

00:04:12,390 --> 00:03:50,000

flight of progress 51 everything

41

00:04:17,030 --> 00:04:14,470

view here inside the

42

00:04:18,949 --> 00:04:17,040

russian flight control room in corlev

43

00:04:20,550 --> 00:04:18,959

russia just outside of moscow where the

44

00:04:22,150 --> 00:04:20,560

ground controllers there are watching

45

00:04:23,590 --> 00:04:22,160

over

46

00:04:25,189 --> 00:04:23,600

progress's

47

00:04:27,749 --> 00:04:25,199

flight towards the international space

48

00:04:36,870 --> 00:04:29,909

everything continuing to go well as it

49

00:04:41,350 --> 00:04:39,189

second stage thrusters are

50

00:04:44,830 --> 00:04:41,360

performing normally

51
00:05:19,830 --> 00:04:48,629
a breakdown of the various phases of the

52
00:05:25,350 --> 00:05:21,830
all still

53
00:05:28,310 --> 00:05:25,360
makes its way into orbit that flight

54
00:05:30,070 --> 00:05:28,320
takes about nine minutes

55
00:05:31,749 --> 00:05:30,080
uh but it will take two days to reach

56
00:05:34,310 --> 00:05:31,759
the international space station unlike

57
00:05:45,270 --> 00:05:36,710
the three previous progresses we've seen

58
00:05:49,510 --> 00:05:47,590
the phasing and orbital mechanics of uh

59
00:05:50,950 --> 00:05:49,520
today's launch date didn't allow for the

60
00:05:53,830 --> 00:05:50,960
single day launch stocking that we've

61
00:05:55,990 --> 00:05:53,840
seen recently so it will take again the

62
00:05:58,070 --> 00:05:56,000
regular two days for this vehicle to

63
00:06:01,110 --> 00:05:58,080

reach the space station that is

64

00:06:05,749 --> 00:06:01,120

scheduled to uh dock to the station at 7

65

00:06:11,590 --> 00:06:07,909

and the second stage separation of the

66

00:06:15,909 --> 00:06:14,230

the third stage

67

00:06:17,430 --> 00:06:15,919

has a single engine that will burn for

68

00:06:18,950 --> 00:06:17,440

about four minutes and two seconds

69

00:06:20,870 --> 00:06:18,960

before shutting down

70

00:06:22,390 --> 00:06:20,880

at the nine minute mark of flight once

71

00:06:25,749 --> 00:06:22,400

it has

72

00:06:36,710 --> 00:06:25,759

once the progress has reached

73

00:06:40,790 --> 00:06:38,790

all systems continuing to perform

74

00:07:09,830 --> 00:06:40,800

nominally as progress makes its way into

75

00:07:13,670 --> 00:07:11,510

just under six minutes now into the

76
00:08:21,350 --> 00:07:13,680
progresses flat everything continually

77
00:08:21,360 --> 00:08:25,430
about two minutes left to go in

78
00:08:32,550 --> 00:08:28,550
the progress is flight

79
00:08:34,389 --> 00:08:32,560
to orbit it's preliminary orbit

80
00:08:36,230 --> 00:08:34,399
and again everything is continuing to

81
00:08:37,990 --> 00:08:36,240
work as planned and

82
00:09:23,910 --> 00:08:38,000
all systems are looking good as it does

83
00:09:26,710 --> 00:09:25,670
no more than eight minutes into its

84
00:09:58,949 --> 00:09:26,720
flight

85
00:10:00,389 --> 00:09:58,959
couple of seconds short of uh the

86
00:10:16,470 --> 00:10:00,399
nine-minute mark at which it will be in

87
00:10:20,790 --> 00:10:18,150
and we just got confirmation that the

88
00:10:23,509 --> 00:10:20,800

third stage separation

89

00:10:25,829 --> 00:10:23,519

has occurred as planned and uh

90

00:10:27,190 --> 00:10:25,839

vehicle has made its way into space

91

00:10:29,190 --> 00:10:27,200

successfully

92

00:10:31,030 --> 00:10:29,200

from the bakken baikonur cosmodrome