1
00:00:00,930 --> 00:00:03,710
Crew involved in quite
a bit of maintenance

2
00:00:03,710 --> 00:00:05,900
and experiment activity today.

3
00:00:05,900 --> 00:00:08,890
Don Pettit and Oleg
Kononenko are talking a look

4
00:00:08,890 --> 00:00:10,920
at the Amine Swingbed hardware

5
00:00:10,920 --> 00:00:13,850
which Pettit has been
working on last few hours.

6
00:00:13,850 --> 00:00:16,460
Starting off with some of
our activities, Kononenko,

7
00:00:16,460 --> 00:00:19,000
you can see off to the
right there of your screen,

8
00:00:19,000 --> 00:00:22,730
has been doing some Sokol launch
and entry suit leak checks.

9
00:00:22,730 --> 00:00:25,830
Those are the suits he,
Pettit and Kuipers will wear

10
00:00:25,830 --> 00:00:28,380
on their upcoming July 1 landing

11
00:00:28,380 --> 00:00:30,850
when they depart International

Space Station after spending

12
00:00:30,850 --> 00:00:33,110
over 190 days on orbit.

13
00:00:33,110 --> 00:00:35,950
Along with those leak checks
he will be doing some departure

14
00:00:35,950 --> 00:00:38,260
preparation and doing
some checkouts

15
00:00:38,260 --> 00:00:42,190
on their Soyuz vehicle,
the TMA-03M spacecraft.

16
00:00:42,190 --> 00:00:44,960
And then also wrapping
up his day

17
00:00:44,960 --> 00:00:46,080
with some routine maintenance

18
00:00:46,080 --> 00:00:50,410
on the Russian oxygen generation
system or the Elektron.

19
00:00:50,410 --> 00:00:53,080
Our second Russian
cosmonaut Gennady Padalka,

20
00:00:53,080 --> 00:00:58,490
a veteran astronaut of multiple
spaceflights doing quite a few

21
00:00:58,490 --> 00:01:02,300
experiment studies today,
starting with a veins study

22
00:01:02,300 --> 00:01:04,880
which is one of the many
biological experiments

23
00:01:04,880 --> 00:01:07,960
that the astronauts are engaged
in using their own bodies kind

24
00:01:07,960 --> 00:01:10,450
of as guinea pigs for
these research projects.

25
00:01:10,450 --> 00:01:13,440
He's also been working with
the Plasma Crystal experiment

26
00:01:13,440 --> 00:01:15,680
which looks to study
how dust structures

27
00:01:15,680 --> 00:01:18,930
and dust plasma structures
coalesce and form

28
00:01:18,930 --> 00:01:21,050
in that microgravity
environment.

29
00:01:21,050 --> 00:01:22,400
He'll also be involved

30
00:01:22,400 --> 00:01:27,470
in a pretty major replacement
operation alongside Sergei Revin

31
00:01:27,470 --> 00:01:30,260
working on the TVIS or
Treadmill with Vibration

32

00:01:30,260 --> 00:01:32,210
and Isolation Stabilization.

33
00:01:32,210 --> 00:01:33,380
They'll be changing out one

34
00:01:33,380 --> 00:01:35,690
of the wire ropes
and the gyroscopes.

35
00:01:35,690 --> 00:01:38,940
And as mentioned Sergei
Revin will be assisting him

36
00:01:38,940 --> 00:01:41,740
in that activity a
little bit later today.

37
00:01:41,740 --> 00:01:43,140
He's also been doing
some cleaning

38
00:01:43,140 --> 00:01:47,900
of the ventilation screens
throughout the air system all

39
00:01:47,900 --> 00:01:51,230
throughout the Russian segment.

40
00:01:51,230 --> 00:01:54,600
Moving on we have Joseph Acaba
who's doing some filter cleaning

41
00:01:54,600 --> 00:01:56,280
of his own over on
the U.S. segment,

42
00:01:56,280 --> 00:01:58,510
cleaning out the
bacteria filters.

43
00:01:58,510 --> 00:02:00,090
All these in place to ensure

44
00:02:00,090 --> 00:02:03,910
that the astronauts' atmosphere
onboard station is safe

45
00:02:03,910 --> 00:02:05,040
and breathable and free

46
00:02:05,040 --> 00:02:08,220
of any contaminants could
potentially cause detrimental

47
00:02:08,220 --> 00:02:09,630
health effects.

48
00:02:09,630 --> 00:02:14,060
He'll also be working with an
anti-microbial applicator inside

49
00:02:14,060 --> 00:02:16,400
of the JEMS internal
thermal control system.

50
00:02:16,400 --> 00:02:19,270
The JEM, the Japanese
Experiment Module,

51
00:02:19,270 --> 00:02:23,740
has been seeing quite a bit of
action today so, not only Acaba

52
00:02:23,740 --> 00:02:27,430
but Andre Kuipers has also been
in there quite a bit today.

53
00:02:27,430 --> 00:02:30,970

He's been working on the Fluid
Physics Experiment Facility

54
00:02:30,970 --> 00:02:35,590
which is a JAXA or Japan
Aerospace Exploration Agency

55
00:02:35,590 --> 00:02:37,700
subrack facility, and it's used

56
00:02:37,700 --> 00:02:40,980
to investigate a number
fluid physics phenomena

57
00:02:40,980 --> 00:02:42,640
in that microgravity
environment.

58
00:02:42,640 --> 00:02:47,570
Here you can see Kuipers working
inside the JEM on that FPEF

59
00:02:47,570 --> 00:02:50,350
or Fluid Physics
Experiment Facility.

60
00:02:50,350 --> 00:02:51,520
He'll also be doing some work

61
00:02:51,520 --> 00:02:53,680
with the Environmental
Health System.

62
00:02:53,680 --> 00:02:55,510
He'll be using a
surface sampler kit

63
00:02:55,510 --> 00:02:59,900
and a microbial air sampler
kit doing some analysis

64
00:02:59,900 --> 00:03:03,290
and taking some data for
teams down here on the ground

65
00:03:03,290 --> 00:03:06,670
to use again, ensuring that the
surfaces and the breathing air

66
00:03:06,670 --> 00:03:11,600
of the atmosphere onboard the
station are all checking out.

67
00:03:11,600 --> 00:03:14,350
Meanwhile Don Pettit
who we saw working

68
00:03:14,350 --> 00:03:16,800
on that Amine Swingbed
just a little while ago.

69
00:03:16,800 --> 00:03:20,330
That Swingbed is an
investigation which is hoping

70
00:03:20,330 --> 00:03:24,610
to determine if a vacuum
generated system can effectively

71
00:03:24,610 --> 00:03:28,020
remove carbon dioxide from the
International Space Station

72
00:03:28,020 --> 00:03:30,070
as that is one of
the vital tasks

73
00:03:30,070 --> 00:03:33,590
as these astronauts exhale
they're continuingly changing

74
00:03:33,590 --> 00:03:36,690
the composition of the
atmosphere from less oxygen

75
00:03:36,690 --> 00:03:40,180
and more carbon dioxide so it
consistently has to be scrubbed