

SL-II MC75/3 - 79/3
Time: 10:17 a.m. CDT, 1:02:17 GET
5/26/73

SC Break, break. What have you got for us
on the probe. I'm scared we're going to get all this stuff
in and not get the probe stuff where we can get in there.
CC Okay we've only got a couple items, Pete,
and then Rusty has got some words for you on the probes.
SC Okay.
CC Okay on page 2-50 we don't want you to
close the hatch channel. We'd like for that to read Don
CHARCOAL MASS and then just place the hatch over the opening.
SC Okay.
CC And the last one is on page 2-60. On
the circuit breaker configuration, panel 614, on the righthand
side on duct 3 fans we want to keep all those open - the four
duct 3 fan circuit breakers, we'll only use 8 fans.
SC That's affirm.
CC Okay and Rusty has got some words for you
on the probe.
CC Okay Skylab we've got 3-1/2 minutes here
left in the pass for your information and let me tell you what
we want on the probe. There is a general caution note - I
don't know who is going to do it - but when you collapse the
probe for removal be aware of the fact that it may come com-
pletely free of the drogue right at that time.
SC Okay we are guessing that it will.
CC Right. That's what we're guessing also.
Okay when you get up in there Pete what we're interested in
finding out is what is the clocking of the center shaft latch
on the aft end of the probe relative to the CSM axes. If you -
what we're recognizing is pressing on with a normal probe
removal checklist but before you do anything look at the flats
on the center shaft and give us your orientation. And a good
reference, by the way, is systems checklist page 2-10, gives
you a look at the back end of that whole probe and you can
reference the flats to that.
SC Okay. Now you don't want us to put the
pyro cover back on with all the handles, huh?
CC Pete, we don't want it to go back on
permanently at this time but if that helps to determine the
orientation go ahead and do it, then take it off and then go
through the rest of the probe collapsing and removal.
SC Okay.
CC Okay now -
SC Rusty, the picture I'm looking at has the
cover on and I'm not sure I know what flats you're talking
about?
CC Okay, Paul, the shaft - it's a circular
shaft with a flat on each side and what we're recommending

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in a way is if you can draw a perpendicular through those flats and then give us the clocking of that line with respect to the command module or that diagram on 2-10, either one.

SC All right.

CC Okay. Now the only other things we want, when you vent the probe, is when you press the button to bleed the nitrogen out keep watching that shaft and let us know if it rotates. There is a possibility that it may rotate 30 to 40 degrees. We don't think it will but we would like to know if it does.

SC Unfortunately we vented it last night.

CC You vented the probe itself or the tunnel?

SC No we checked the docking latched, by the way it made all 12 of them and in the process of doing that we went ahead and bled the probe. And I have the feeling that you're right. Joe said the probe was quite free in there after he bled it and I have the feeling that the whole probe is just loose in there and we do not have any capture latches.

CC Roger. If you did then all we can get from you is the clocking of the shaft before you - Okay we're going to have LOS in about 15 seconds. We'll pick it up GARBLE in about 1 minute.

CC Skylab Houston how do you read?

END OF TAPE

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CC Skylab, Houston.

SC Go ahead.

CC Okay, we got about 5-1/2 more minutes
now through Bermuda, and for your info, the med conference
over Madrid has been scrubbed.

SC Okay, we're all healthy. And let's
hear from Rusty some more on that probe. We didn't catch
your last remark.

CC Okay.

CC All right. It sounds as though, since
you've already vented the probe, that the thing we're
looking for is the clocking on the center shaft, and other
than that - and the caution about the probe being free, you're
to press on with a normal probe removal as per the activation
checklist.

SC All right. And what's your opinion on
if we had to undock? How we'd go about doing it? Do you
think we could get the capture latches to cock?

CC Okay, we're thinking about that, Pete,
and we have a considerably longer procedure on verification
of the probe capability, that will come later in the mission
that'll answer that question specifically. One further comment
on the probe removal, and that is: In your judgment you'll
have to look at the back end of the probe, and if you feel
that it's going to be safer removing it with the pyro cover
back on, that is avoiding sharp edges, feel free to do so and
let us know.

SC Okay. Stand by for the clocking. Pete's
looking at it.

CC Roger.

SC Houston, Skylab.

CC Go ahead.

SC Okay, the line perpendicular to the
flatch on that rod is rotated 15 degrees counterclockwise
from the plus-Z axis as we view it. Or from the Z-axis, I
should say.

CC Okay, understand. If you stand by just -
15 degrees counterclockwise from the Z-axis, and that's
counterclockwise looking up at the probe from down in
the command module?

SC That is correct.

SC (garble) talking about the removal (garble)

CC Roger. It has systems 2-10. Let me just
verify. In other words, you're saying that the - that that line
is essentially over the ratchet handle. By the extension of
the line you just talked about, it's over the ratchet handle.

SC That's right (garble).

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CC Okay, fine. Thank you. We have it, and go ahead and proceed with the removal then.

SC Okay, but that now, Rusty, is the line perpendicular to the flat.

CC Roger; we understand. That's the line perpendicular to the flat. Thank you.

PAO Skylab Control, Houston. We've been listening to Backup Commander Rusty Schweickart chat with the crew about the probe. Presently sitting at the CAP COM's console - -

CC Skylab, Houston. We're about 40 seconds from LOS. We'll pick you up over Madrid at 40.

SC Return at 40.

SC Did you read comm check on that one?

CC Roger. We heard Houston's comm check; we read you loud and clear, thank you.

CC Copy.

END OF TAPE

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Time: 10:39 a.m. CDT, 1:02:39 GET
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CC Skylab, Houston, through Madrid for
7 minutes.

SC Okay. We've got the probe out and the
capture latches were not engaged.

CC Roger. Understand.

PAO That's CAP COM Henry Hartsfield speaking
to the crew aboard Skylab on this Madrid acquisition, Paul
Weitz responding to that call.

SC Okay, Houston. Here's a data plate for
you, 2 capture latches are out and one capture latch is
stuck in.

CC Roger. Copy.

SC Hey, Houston.

CC Go ahead.

SC Another data plate on that probe. It
turned out that that one was squashed and the little ear,
when I kicked it, it came up. It looks, to me, like 2 of
them had captured and this one, for what ever re- you can
tell better on the ground than I can. It would not come up
and allow the little lever to trip and lock it. It looked
like something was out of sequence with the trigger on that latch.

CC Roger. Copy.

SC Now. We've got all three capture latches
latched and if I push on the end of the probe, it will re-
lease all three capture latches, they'll all fold and then
pull them all down. Now let's push that up. Now let it
go, they should all lock.

SC All down?

SC Yeah. Two of them are up and the third
one is stuck down and I can't answer for you, why, and so
is the little center button stuck down.

CC Pete, let me make sure I understand you.
You went through your little sequence there, at one point
you had all three capture latches out and you then tripped
it again, and they went in and one of them stayed in and
the button is - on the end of the probe is also staying
depressed.

SC With me Rusty?

CC Pete, do you read?

SC Yeah, go ahead.

CC Yes. Did you read my summary there?
Did it agree with what had happened?

SC No, I didn't read your summary, let me
give it to you again. When we took the probe out, 2 latches
were out and they were out, but appar - (loss of comm) -
Push the plunger in the end of the probe - -

SC Capture latch released.

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SC Capture catch released, but left side button, it sticks in now; and the one latch, capture latch stays flush and the other two pop up.

CC Okay, Pete. At one point you mentioned also, that the one that was flush, popped out when you kicked the trigger on it, is that correct?

SC Well, that's what I thought, but that's what's not doing it now.

SC Yes it is, too.

SC I take that back, it is. Paul just did it and it came up.

CC Okay. I'll tell you what, we're going to digest all that, Pete, and the boys in the backroom will be working and we'll probably come back to you at some later point. I suggest just going ahead with the time line.

CC And one further question. What's the status of the pyro cover? Did you put it on, or do you still have it off?

SC It's off.

CC Okay, fine. We'll assume it'll stay off, then and you're going to let us know where you stow it temporarily?

SC Yeah. We'll put the pyro cover in with the probe in the bag.

CC Okay, thanks.

CC Skylab, Houston. We're about 40 seconds from LOS. We'll pick you up again at Honeysuckle at 2.5.

SC Okay.

PAO Skylab Control, Houston, at 15 hours 52 minutes Greenwich mean time, our next station to acquire will be Honeysuckle. We're out of range, now with Madrid and that will be approximately 34 minutes from this time. This is Skylab Control, Houston.

END OF TAPE

intermittent malfunctions.

SL-II MC-78/1

Time: 11:04 a.m. CDT, 01:03:04 GET
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PAO Skylab Control, Houston; 16 hours 4 minutes Greenwich mean time. During our Madrid pass, we had a momentary communications dropout. However, we have recovered the tape, and we'll play that tape for you now.

CC Yes. Did you read my summary there; did it agree with what had happened?

SC No, I didn't read your summary. Let me give it to you again. When we took the probe out, two latches were out. Add they were out, but apparently not locked. One was flush. Okay. Now, if we push the plunger in the end of the probe - -

SC Capture latch release - -
SC - - capture latch release left side, but it sticks in now, and the one latch, capture latch, stays flush, and the other two pop up.

PAO Skylab Control, Houston. That completes our tape playback.

END OF TAPE

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Time: 11:24 a.m. CDT, 01:03:24 GET

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PAO Skylab Control, Houston, at 16 hours 25 minutes Greenwich mean time, less than a minute away now from acquisition with Honeysuckle. The Skylab presently in an orbit of 239 nautical miles by 235 nautical miles. We will stand by to pick up conversation at that time when CAP COM, Henry Hartsfield, calls up the crew of Skylab.

CC Skylab, Houston, to Honeysuckle for about 9 minutes.

CC Skylab, Houston, to Honeysuckle for 9 minutes.

SC Roger, Houston. And be advised we had a MAIN A undervolt, which sucked the voltage down to about 25 volts, and it turns out to be a heater cycle, as best we can determine it. We must have had all the heaters on at one time. If you can look at your low bed rate, if you'd add that on, maybe you can come up with a better scheme for configuring these heaters for us. We just spent 10 minutes sorting that one out.

CC Roger.

SC And we've got about 5 minutes to go on the TDI sampling. We've gotten out sample and we're waiting the 15 minutes.

CC Roger; copy. And we got a couple of things for you too. It looks like we missed a couple of checklist changes here that we should have gotten.

SC Okay, hold it, and let me bring you up. We've got the secondary glycol evap dried out and the primary evap is on its way. Would you like E-memory dumped?

CC Stand by.

CC While we get set down here, we're - just for your information, we're going to do a CMG reset at 16:33 at about 6 minutes from now. Maximum excursion, we expect, is about 35 degrees in roll and 5 degrees each in pitch and yaw.

SC Okay. Go ahead with your checklist changes.

CC Okay, on page A-9, we had a comment earlier about whether you want to close the latch handle, the hatch handle, and that same comment applies there. On panel 312, we just want that to read to close the hatch.

SC Okay, just close the hatch; don't lock it, is what you're saying.

CC We don't - well, we had you closing in the hatch handle then laying the hatch over on the dogs. We didn't want to do that, we just want to strick that out so it just says close the hatch.

SC Oh, okay.

CC But don't lock the hatch. And we're ready for the E-memory dump any time.

CC And the only other checklist change we got for you is on page 2-51.

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SC Who's it for?
CC That's for the PLT.
SC Ready.
CC Okay, there on panel 390 in the aft lock
activation, we want to turn heat exchanger pans 1 ON. And
the reason we're doing that, Paul, is we want to stir up the
air there prior to getting a sniff sample there.
SC The E-MOD's coming at you.
CC Roger.
SC Okay, Joa, you want the number 1 fan,
or do you want them all on?
CC Just the number 1.
SC Okay. And we chose - like you to look
at how we got that great big load on MAIN A because, as we remember
at it, it just sort of kinda of took care of itself there. We
were turning heaters on and off. But whatever heater cycle
it was on, or maybe you'll see something on the data, but I'll tell
you, we had one big load on that bus for a minute.
CC Roger. We'll take a look at it.
CC And, for info, our attitude plan is, after
we do the CMG reset here at Honeysuckle - at Hawaii, we're going
to command a small pitch maneuver to get a little more power
in preparation for activation.
CC Roger.
SC And, Pete, we got one more probe question
for you here in trying to psyche this one out.
SC Go ahead.
CC Okay. If the probe is not bagged yet,
*see p3 if you'll look, minus X along the probe and using the strut
with the yellow end on it as a 12 o'clock reference, I wonder
if you could give us the clocking of the capture latch which
is sticking in.
SC Hey, Rusty, on page 2-11 is the one you
can't see on that picture.
CC Okay, I've got it. And let me ask you
another question. Have you rotated the head of the probe?
Or do you think it's the same as it was for docking attempts?
SC We haven't touched that, and I'm sure it's
the same. It's just the way we took it out of there.
CC Okay. Fine. So that's - looking in the
direction, I was saying that's something like 7 or 8 o'clock.
SC I don't know. It's in the bag now.
CC Okay, fine. We've got it. Thank you.
SC (Garble), Houston.
CC Go ahead.
SC Okay, we passed the TDI monitor check
with flying colors. It's pure white. Nothing that we could
see at all.

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Time: 11:24 a.m. CDT, 01:03:24 GET
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CC Roger; copy. That's good news.
SC And we're on our way to the MDA. I wish
I had a poloroid picture to send down to you guys from the
inside of this command module with three suits, all that gear,
a drogue, a probe, and a hatch, Joe, Paul, and Pete.
CC Roger. I'd like to see that myself.
SC It's unbelievable.
CC Okay, the CMG maneuver is coming up and
we got the E-memory dump; you're cleared to do the power down
now.
SC Okay, going to P06.

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CC And, Pete, if you have the docking
index angles available, we'd like to get those.
SC It's minus 1.5.
CC Roger; copy. Minus 1.5.
CC Skylab, Houston. We're about 15 seconds
from LOS. Looking good going over the hill. We'll see you
at Hawaii at 45.
SC Okay, we've done the E-Mode. The (garble)
is deactive and (garble) proceed the MDA hatch opened.
CC Roger; copy.
SC Paul just went in, and he said it's
very cold in there with the (garble).
CC 50 in there, I think.
SC Yeah, boy, and it looks great. He just turned
on the lights.

PAO Skylab Control, Houston, at 16 hours
35 minutes ground elapsed time. We've just had loss of sig-
nal with Honeysuckle. Hawaii will be the next station to
acquire. We heard the rather lengthy discussion over Honey-
suckle with the crew aboard Skylab, Pete Conrad reporting the
TDI sample tube completely white. At that point they pro-
ceeded to open the hatch to the multiple docking adapter. You
heard the remarks that it was quite cold in there, in the order
of 50 degrees. The lights in the multiple docking adapter
apparently working. The main A undervolt, referred to as in
the command service module, Conrad speculating that possibly
a configuration of all the heaters on at once could have
caused this. This data will be looked at on the ground.
Meanwhile, as we approach Hawaii, a maneuver is planned to
pitch the vehicle down 11 degrees to an attitude of 36 degrees,
and this providing for a better electrical power system, which
will be utilized in the course of the activation today. This
pitch-down maneuver has been computed by the EGIL flight controller
in the Mission Control Center, and the command will be given
by the ASCO console. We're at 16 hours 37 minutes Greenwich
mean time, and this is Skylab Control, Houston.

END OF TAPE