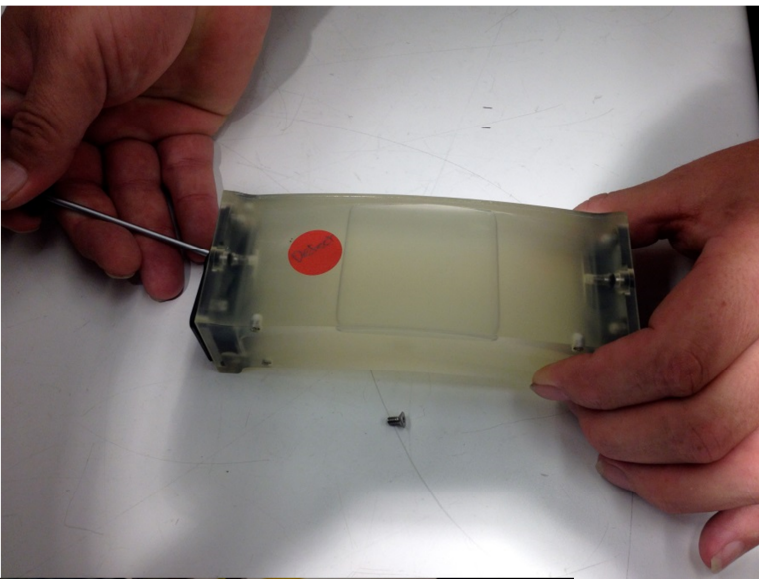


## Removing ARIS Lens Bubble

If a bubble has formed in the ARIS lens to the extent that it is interfering with acoustic imaging (generally only if looking up or down at a very steep angle), then use this procedure for temporary removal of the bubble. Returning the ARIS or lens to Sound Metrics would result in a longer term solution, as the internal fluid may then be de-gassed under vacuum to slow down the re-formation of the bubble.

1) Connect the ARIS to the Command Module and turn on the power, but do not connect to ARIScope. Wait until you hear the lens move to the "Home" position (or at least click) and for the blue light on the Command Module to be on steady. Then turn off the power and the lens housing may be removed (3mm hex driver, 2 screws at the top rear of the sonar, 2 screws at the middle of the front endcap of the sonar). Pull the housing straight up away from the sonar body.



2) Disassemble the lens from the lens housing using a 2mm hex driver to remove the screws. Then check that the bubble is not much larger than this at room temperature.

If the bubble is significantly larger than shown here, there may be a leak in the lens assembly and the lens should be returned to Sound Metrics for repair or replacement.



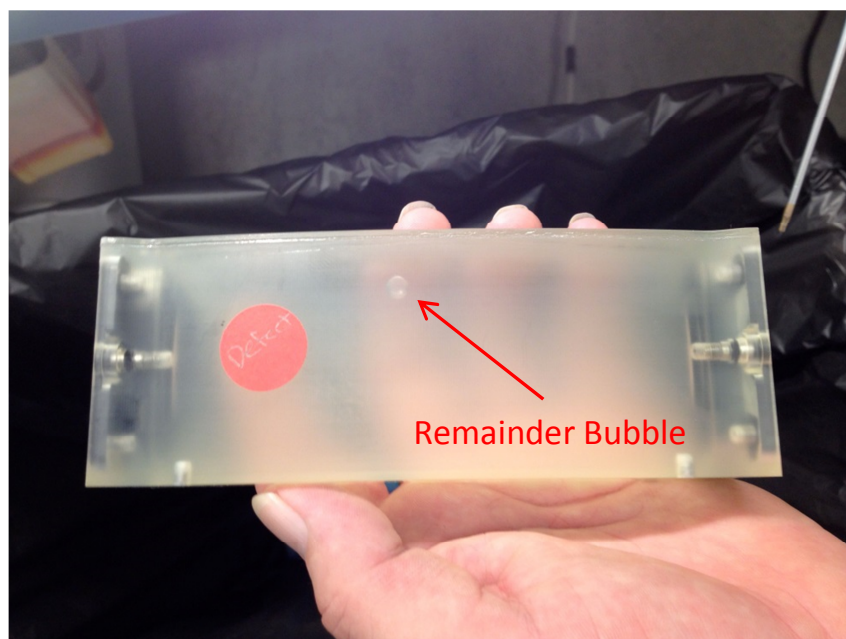
3) Remove the black plastic protective cover from one end of the lens with the 2mm hex driver. Replace the 2 screws to better secure the diaphragm after removing the black plastic protective cover.



4) Holding the lens at an angle of about  $30^\circ$  over a container that can collect any spilled lens fluid, back out the vent plug most of the way (but do not remove) on the end where the black plastic protective cover has been removed.

Gently press down the diaphragm with a finger while keeping the lens in a position where the air bubble can escape through the vent plug until it is mostly gone. Do not expect to remove 100% of the bubble.

5) Tighten the vent plug screw to re-seal the lens, and remove the two screws that held on the black plastic protective cover. Then replace the cover. The lens should now contain a bubble no larger than this, which will not interfere with the acoustic image in any significant way:



6) Mount the lens back into the ARIS lens housing. Make sure the focusing lens is back in its rear-most position before slipping the lens housing back over the main body of the ARIS, so that the pin extending up from the focus slot will engage with the hole in the focusing lens mounting bracket when the assembly is lowered vertically back onto the sonar main body.