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This is a very basic repair hints file for the Atmos.

The two most important things in Atmos repair are to make sure the pendulum and fork are "poised". Poised is a fancy horological word for balanced.

The fork, especially because of the amount of bending it is usually put through in order to align it properly, MUST be poised. There is a picture in the repair notes from LeCoultre, which S. LaRose, Merritt's and others carry. For more information about clock material and supply houses, please see my file matclock.mcc. Placing the hands back on, places some added friction for the escapement to overcome, just like any other movement. There are all type of checks that I will not go into here but assuming the movement is properly assembled and you have poised the fork and pendulum, the addition of the poised hands should not affect anything. However, there is a brass bushing for the minute shaft and the front plate. A drop of the best synthetic oil should go there but only if the pendulum amplitude is under 540 (explained further below). This bushing sometimes gives problems because it also serves as a cap for the hour wheel and a drop of oil can go in between the hour tube and the bushing. That's ONLY one drop inside the bushing and one drop on the outside.

Now to the pendulum. Is it in beat? What is the "swing" in degrees of the pendulum when it does run? Have you ever fixed an Atmos before? :) How long did you ultrasound? Did you clean and lubricate the mainspring? Did you lubricated anything in the movement?

"In beat" is the same as a 400-day clock. The fork position, when the pendulum is at rest and there is no power on the movement, must be in the center or "dead" area where the escapement goes from "tick" to "tock". This also means that the pendulum roller must also be in that center position when it is at rest. Another way to look at it is that the amount of "after swing" should be the same on each rotation. This means that if the pendulum is making a 540 degree swing then the point where the pendulum stops and starts going the other way should be directly opposite (180 degrees) from each other. To "see" this better just remember that the front center or dead position is directly in front of the movement right as you look at the clock. This may be confusing but with a clock in front of you it should be crystal clear.

In total the pendulum should swing between 400 to 540 degrees. You could "get away" with 360 but none less. The swing refers to the total swing of the pendulum from the point from which the pendulum stops and reverses direction to the very next time it stops and reverses direction. In very general terms the 540 swing is ideal

If you ultrasound the disassembled movement it should only be for 1 minute or less. Any longer and the "plates" will dull. Treat the mainspring and bridle, as you would any and d/l my file spring.mcc for proper caring of the mainspring.

The only thing I advocate lubricating on the movement is the jewel pallets and VERY lightly. And, of course, the minute shaft brass bushing mentioned above if the balance swing is less than expected.

Finally, d/l my file bellows.mcc to learn all about that bugger. BTW if the clock had power when you first saw it then I'll bet the bellows is good. The only thing the bellows actually does in the clock sense is wind the mainspring. Again, the repair notes and my file should tell you how to determine if the bellows is good or needs replacing.

If you continue to have problems after viewing all of the above information both mentioned here and in the referring files, then please see my atmos.mcc file for my services and fees. I'm in the business of repair and I am always looking for Atmos clocks to overhaul world-wide.

A service from, E-mail address: Mike@atmos-man.com
Mike Murray Founder of Clocksmiths

A specialist in Atmos and 400-day clock repair.
Also, I overhaul most plug in electric clocks.
In continuous horological service since 04/01/1982.

Mike's Clock Clinic Membership: NAWCC
1600 Maryland Avenue
Myrtle Point, OR 97458-1508

541-559-1090 or 877-286-6762

My main Web site is located at "<http://www.atmosman.com/>"

Main FTP site is located at:
"<http://home.earthlink.net/~atmosman/earthftp.html>"

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