



# **MANUAL SET UP OR REPAIR SYNCHRONIZING PROCEDURE FOR ROOM EXTENSIONS**

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# MANUAL SET UP OR REPAIR SYNCHRONIZING PROCEDURE FOR ROOM EXTENSIONS (PAGE 1 OF 3)

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The following information is for multiple cylinder room extension mechanisms that use a synchronizing cylinder.

Anytime after a new installation of a room extension system or a room cylinder, a synchronizing cylinder or a room extension hose assembly is replaced, the synchronize procedure should be followed. Severe racking of the room and damage to the room or coach can occur if the system is not synchronized properly.

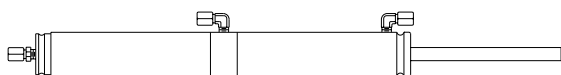
There are two basic types of room extension mechanisms: Type A: This mechanism will extend the room when the room cylinders extend. The room will retract when the room cylinders retract. Type B: This mechanism will extend the room when the room cylinders retract. The room will retract when the room cylinders extend.

The basic synchronizing procedure is the same for either type of room mechanism. No matter which type of room it is, the first motion during the synchronizing procedure, after the installation or making the repair, is to extend the room cylinders. If working on a type A room mechanism, the room control switch is pushed to ROOM EXTEND to extend the room cylinders when starting the synchronizing procedure. If working on a type B room mechanism, the room control switch is pushed to ROOM RETRACT to extend the room cylinders when starting the synchronizing procedure.

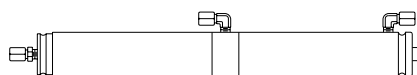
**FIRST:** All room cylinders must be disconnected from the room mechanism or if easier, the mechanism can be disconnected from the room. If doing an installation, the synchronizing procedure should be done before the room is attached to the mechanism. There must be ample room to run the cylinders or mechanisms without interfering with the coach or room when synchronizing the system. The room cylinders must be completely synchronized before they are reattached to the room.

**SECOND:** The synchronizing cylinder must be fully retracted before extending the room cylinders the first time after the installation or repair.

## OLD STYLE SYNCHRONIZING CYLINDER

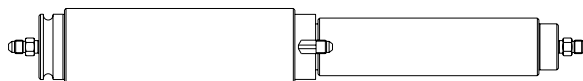


**SYNC CYLINDER  
EXTENDED**



**SYNC CYLINDER  
RETRACTED**

## NEW STYLE SYNCHRONIZING CYLINDER



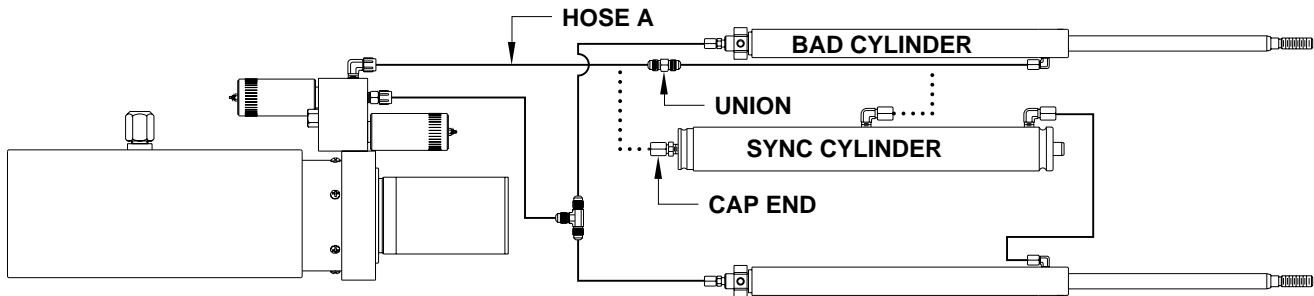
**NOTE:** The new style sync cylinder does not have a visible rod. New style sync cylinders are shipped in what would be the retracted position. For existing rooms, when the room cylinders are extended the sync cylinder will be in the retracted position.

**If installing a new room extension assembly,** install all components as shipped. Perform the synchronizing procedure as stated in the third part.

**If replacing a sync cylinder,** this is easily done by retracting the room cylinders before replacing the sync cylinder. The new sync cylinder will be shipped fully retracted and should be installed in that position.

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If replacing a room cylinder, the new cylinder will be shipped fully retracted. Do not try to extend the replacement room cylinder before installing it. Extend the existing room cylinders before replacing the bad cylinder. This will retract the sync cylinder. The room cylinders can be extended before or after disconnecting the cylinders from the mechanism or the mechanism from the room, whichever is easier. In some cases, after extending the room cylinders, the bad cylinder may have to be retracted to remove it from the mechanism. This can be accomplished by removing hose A from the cap end of the sync cylinder. Then remove the hose between the sync cylinder and the bad cylinder at the sync cylinder. Connect the two hoses together with a union and push the room control switch to retract the cylinder. When the cylinder is retracted, reattach the hoses to the sync cylinder in the proper position.

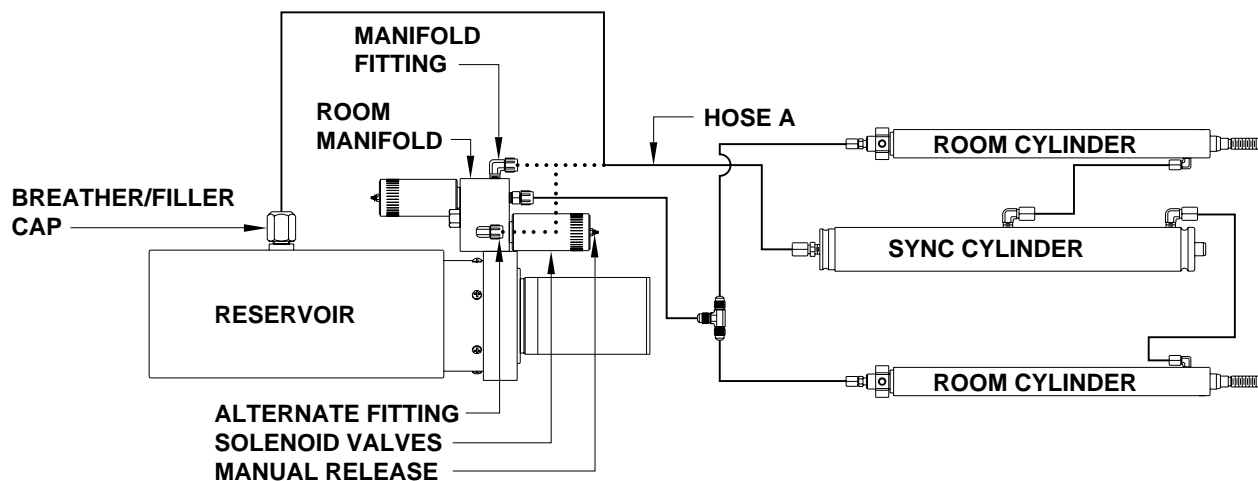


**HOSE TIGHTENING PROCEDURE:** When tightening a new hose end onto a fitting, first make the hose end snug onto the fitting with the flare of the fitting and hose end touching. Tighten the hose end 1/3 of a turn, 2 flats of the fitting. When tightening an existing hose end onto a fitting, make the hose end snug onto the fitting with the flare of the fitting and hose end touching. Tighten the hose end about 1/4 of a turn or between 1 and 1 1/2 flats of the fitting.

**THIRD:** After completing the installation of the mechanism or replacing the faulty part, disconnect hose A from the room manifold and cap the manifold fitting with a steel cap. Remove the breather/filler cap and direct hose A into the reservoir. Hose A may be directed into a bucket but if this is done, maintaining the reservoir fluid level will be critical.

**NOTE:** Make sure the reservoir is filled within 1 inch of the top of the reservoir and maintain this level while synchronizing the system. DO NOT allow the fluid level to become too low. This will introduce air into the system and slow the synchronizing process.

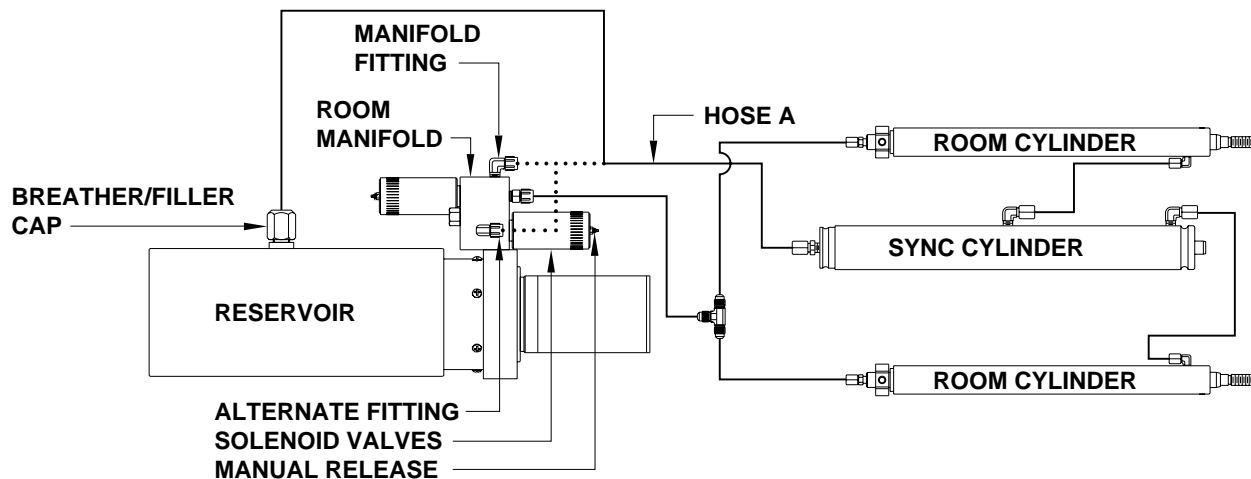
**NOTE:** Always relieve the pressure in the system before removing hoses. This decreases the chances of causing hydraulic spills. This is done by opening the manual release on the solenoid valves. The large valves have a T-handle. Turn the T-handle counter-clockwise until the T-handle stops turning. The small valves have a 1/4" release nut. DO NOT exceed 4 and 1/2 full turns counter-clockwise. The new style large valve has a dust cap in the center that has to be removed. Turn the 1/4" nut one full turn counter-clockwise. DO NOT over tighten the manual release when closing the valve.



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**NOTE:** On many systems, hose A goes to an alternate fitting that may be on either end of the room manifold.

**FOURTH:** Push the room control switch to extend the room cylinders. Continue to hold the switch about five (5) seconds after all room cylinders are fully extended. Reconnect hose A to the room manifold fitting. Extend and retract the room cylinders until they are moving synchronized plus at least 3 complete cycles. Hold the room control switch about five (5) seconds each time the cylinders are fully extended or retracted. The cylinders **MUST** be moving synchronized before reattaching them to the room.

When all the room cylinders are moving synchronized, reattach the cylinders to the room or reattach the mechanisms to the room so the room can be extended and retracted. **PAY CLOSE ATTENTION TO THE ROOM WHEN FIRST EXTENDING AND RETRACTING THE ROOM AFTER REATTACHING THE CYLINDERS TO THE ROOM. IF EITHER SIDE OF THE ROOM STOPS MOVING, OR THE ROOM STARTS TO RACK MORE THAN ONE (1) INCH, RELEASE THE CONTROL SWITCH IMMEDIATELY.** Extend and retract the room several times to make sure the room is moving fairly smooth. One (1) inch or less of a racking motion is acceptable. Note: Due to weight differences in the room and manufacturing tolerances of the room and vehicle which HWH cannot control, it is possible to have differences in movement greater than 1 inch as long as the room extends and retracts fully and there is no damage to the mechanism, room or vehicle. Always hold the room control switch to the extend or retract position for several seconds after the room is fully extended or retracted.

The only adjustment, if any, that may need to be made after replacing a room cylinder is the out stop adjustment for the room. When replacing a sync cylinder, no adjustment to the room should be necessary after the repair is complete.

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Over the years of running a mobile RV repair service, having a dedicated place to access service manuals for all the different appliances and components found on RVs was something that I always had a desire to create.

I hope this resource makes your RV repairs easier, as it has mine, but please be careful and follow proper safety practices when attempting to repair your own RV.

If in doubt, please consult with a professional RV technician!



DARREN KOEPP - OWNER, MY RV WORKS, INC.

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