

Door Bushing Replacement & Latch Adjustment

Monaco Group Coaches

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Symptoms:

- To open the door, you find that you need to pull the handle out and then all the way to the left. This gets progressively worse over time.
- You may need to push on the door while pulling on the door handle to get the latches to fully release.

Replacing the bushing VS. Adjusting the latch rods.

The above symptoms can be a result of 2 different problems:

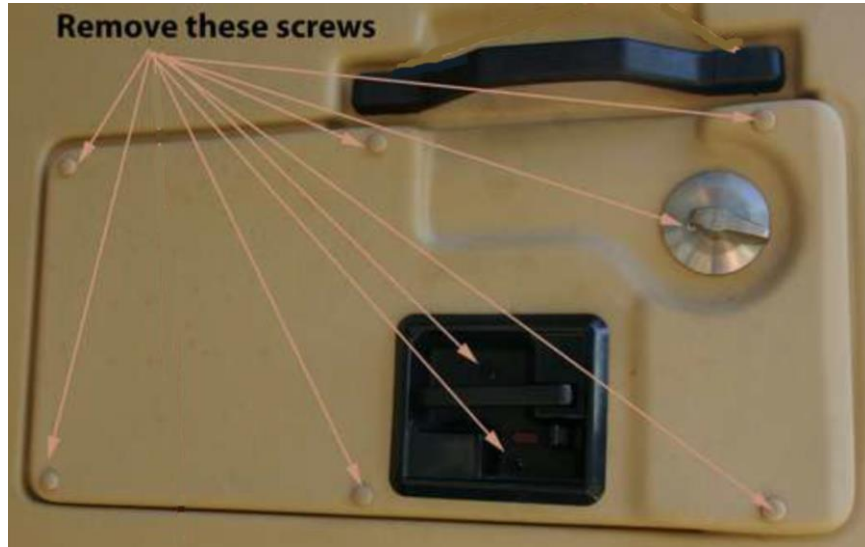
- 1) Worn or damaged bushing.
- 2) Door Latch Rods out of adjustment.

Before adjusting the actuator rods, it is recommended to check the condition of the brass/copper bushing on the lock mechanism. The reason for this is:

- If the bushing is worn, it will result in the symptoms listed above.
- The bushing serves to protect the hard steel parts (*lock tab and bushing spindle*) from wear.
- If the bushing fails, the steel parts will wear excessively, resulting in permanent damage and ultimately the failure of the mechanism.

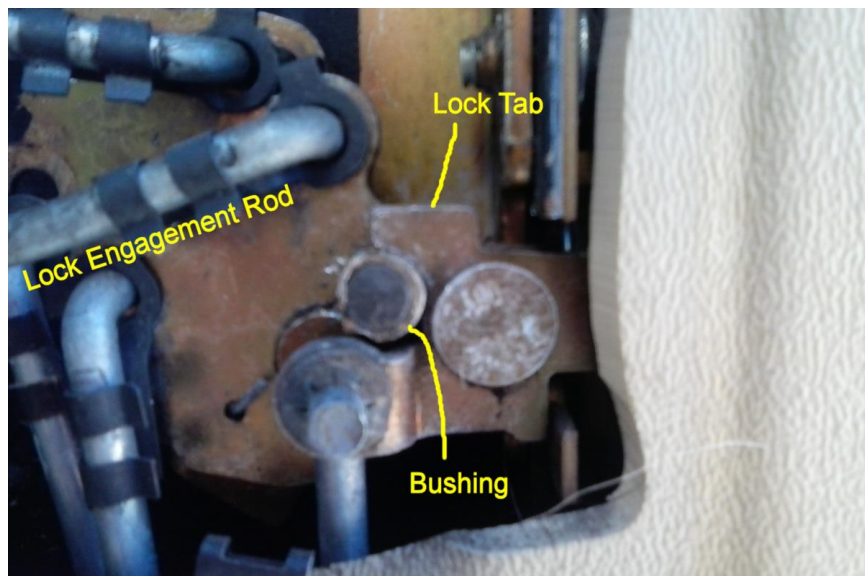
The bushing can be easily inspected by removing the door access panel. It is not necessary to remove the inside door skin at this point.

- Remove deadbolt if installed.
- Remove 6 screws on door panel.
- Remove inside handle back plate.

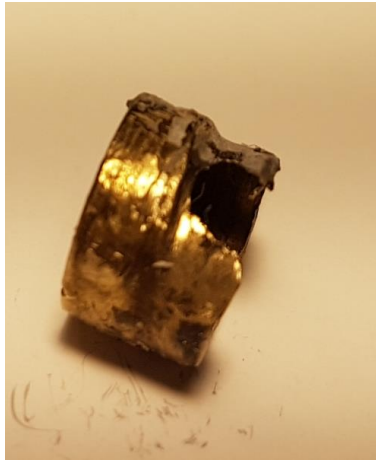


CAUTION: When operating the entry door, ensure the dead bolt latch is fully unlocked prior to closing. Failure to do so can result in damage to the dead bolt and or entry door.

- Inspect bushing for damage or excessive wear.



Note: Note the wear starting on the lock tab against the top of the failed bushing.

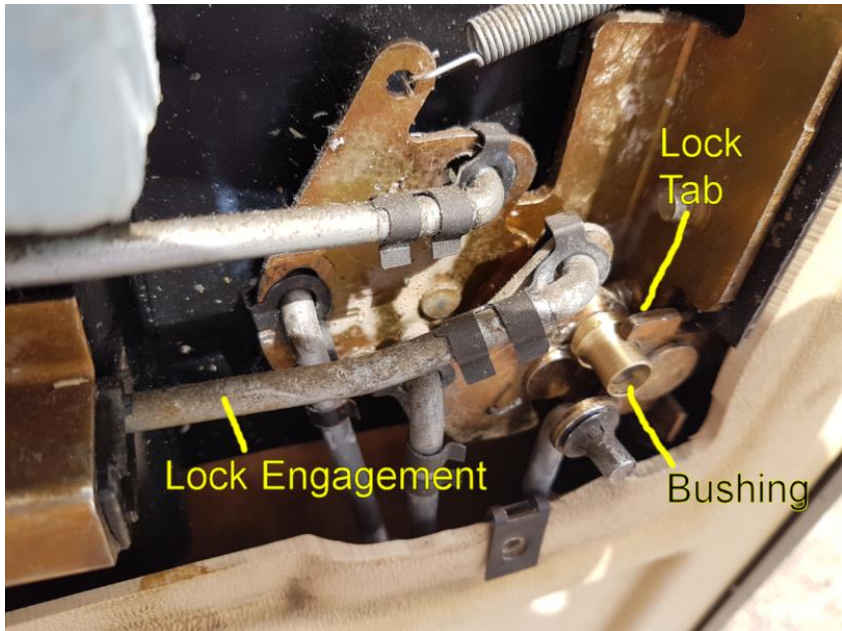


Example of Damaged Bushing

If the bushing is found to be in good condition, proceed to "[Door Latch Rod Adjustment](#)" Section.

How the bushing works.

- ❑ If the lock engagement bar is in the locked position (to the left), it pulls the bushing out of the lock tab and the door handle will not actuate the latches.
- ❑ When the lock engagement bar is moved to the right to the unlocked position, the bushing engages the lock tab. When the door handle is opened, the bushing pushes up on the lock tab, which in turn moves the actuator rods which unlatch the door.



- ❑ If the bushing is damaged, then the door handle has to move further to move the lock tab. A damaged bushing also creates more wear on the lock tab resulting in more play in the mechanism over time. Due to the design of the mechanism, even a small amount of wear on the internal parts will result in a noticeable change in how far the exterior handle has to be moved.

Replacing the bushing.

Replacing the bushing is a very simple job. However, I have not found a source for the bushing so it must be fabricated.

Check and/or remove the old bushing.

The bushing is a friction fit.

- Remove dead bolt inside cover if so equipped. Once the access cover is removed, replace the deadbolt inside cover so that the deadbolt is kept in place.
- Remove the inside door handle and lock bar face plate.
- Remove the door access panel. At this point, do not remove the inside door skin until the condition of the bushing has been determined.
- Slide the door lock tab to the left to disengage the bushing from the lock tab.
- Inspect the bushing for noticeable wear. If no wear is detected, continue to adjust the latch actuator nut(s).
- Using a small flat screwdriver, pry the rear of the bushing outward. If necessary, use pliers to pull the bushing off. Take care not to crush the bushing if you are going to use it as a template to have a replacement fabricated.

New Bushing.

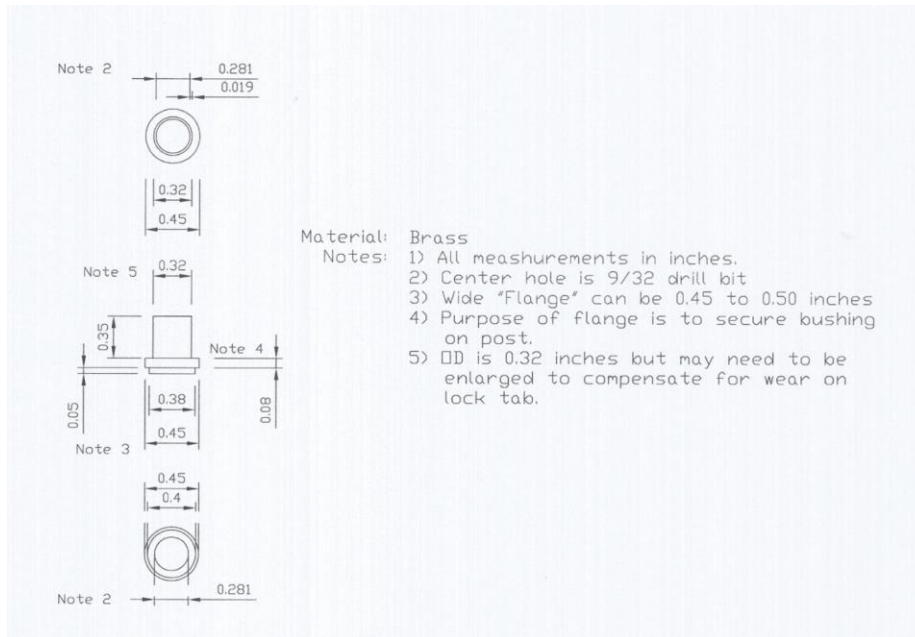
You may be able to find a replacement bushing from the original manufacturer. An alternative which is close in size is available from Home Depot, Lowes and Ace Hardware. The following illustration shows the bushing available from Ace Hardware.



Some modifications will be required:

- Drill out the center using a 9/32 inch drill.
- You may need to shave the outside diameter to fit your door latch. See the following fabrication drawing for dimensions. Note: The door lock tab may be worn requiring a larger O/D. Measure before modifying.

If you can find a replacement, then proceed to installing the bushing. If not, then use the following drawing to have a new bushing fabricated. Any machine shop can do this. The cost should not be excessive as the time required to fabricate on a lathe is less than 15 minutes. I would recommend that you have several made so you have a spare.



Notes:

- 1) The bushing design is different from the original because in my case, the bushing was so badly damaged that it was not possible to use it as a template. In your case, you may be able to take the old bushing to the machine shop and have it duplicated. If so, the important dimension is the inside diameter so that it is a friction fit and will not slip off the spindle.
- 2) If your lock tab is worn excessively, it may be necessary to increase the outside diameter from 0.32" as necessary to compensate. The idea is that the bushing should connect with the locking tab with as tight a fit as possible without affecting the ability to lock and unlock the door
- 3) The purpose of the larger section on the bushing in the drawing is to keep the bushing from sliding off the spindle. I built my bushing on a cheap Harbor Freight hobby lathe and did not have the tools to create a reliable friction fit.

Installing the new bushing.

- Slide the door lock tab to the left to disengage the bushing from the lock tab.
- Slide the new bushing on to the spindle. If the bushing was fabricated using the above drawing, you may need to push the lock tab to the right
- Test both the lock function and observe how far the door handle needs to be pulled to open the door. In my case, I had to work the lock back and forth to seat the bushing into the lock tab.
- Using white lithium grease, lubricate the outside of the bushing and inside of the locking tab.

Summary

Replacing the bushing may correct the door problem, and adjustment of the latch rods may not be necessary.

If the door still does not open easily without requiring the outside door handle to be pulled too far, continue with the next steps.

Door Latch Rod Adjustment

The following information is based on a document that has been posted on multiple forums. I have been unable to locate the original author. If you recognize it and are the original author, please contact <mailto:monaco.parts@visualsc.com?subject=Author of door latch rod adjustment procedure>.

Check Striker Bolts

The two striker bolts which protrude from the door frame should be tight.

- Tighten them down, then back off a quarter turn but make sure they move up and down.
- Once they are tight you should be able to grab either striker bolt and with some effort, the bolts, along with the back plate, should move up and down.

If the bolts are too tight they will not 'float' and won't properly adjust and align with the door when closed.

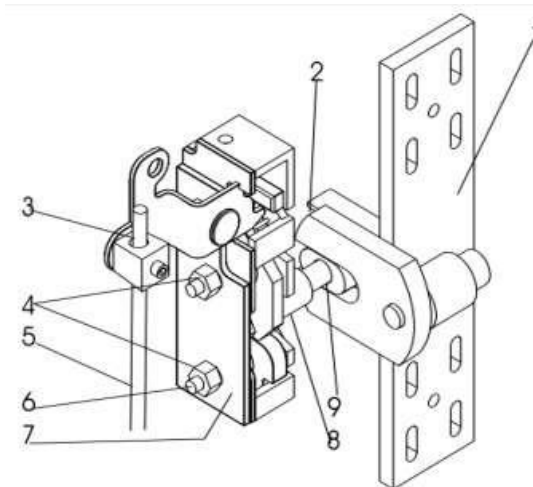
Check door operation, then proceed to next step.



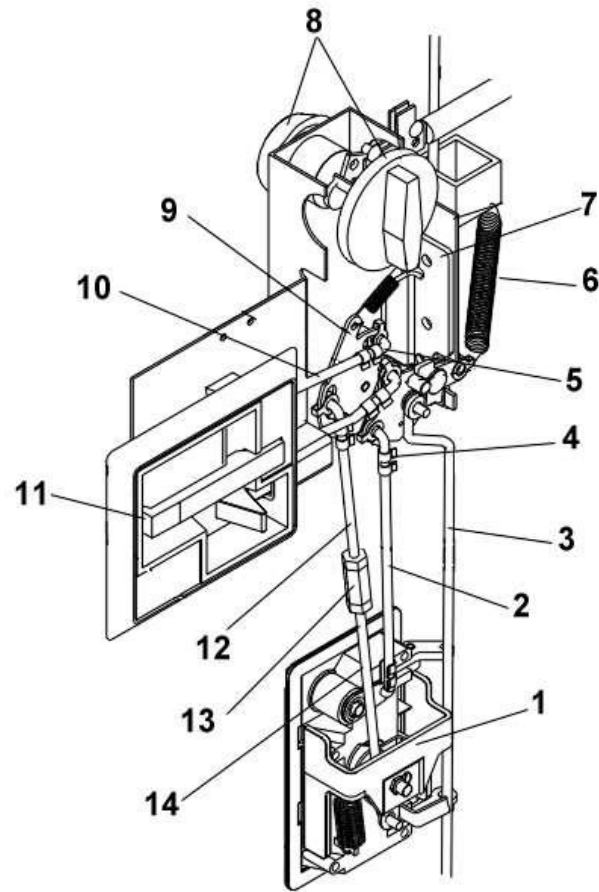
Adjusting the Entry Door Latch:

Determine which latch, top or bottom, needs adjustment.

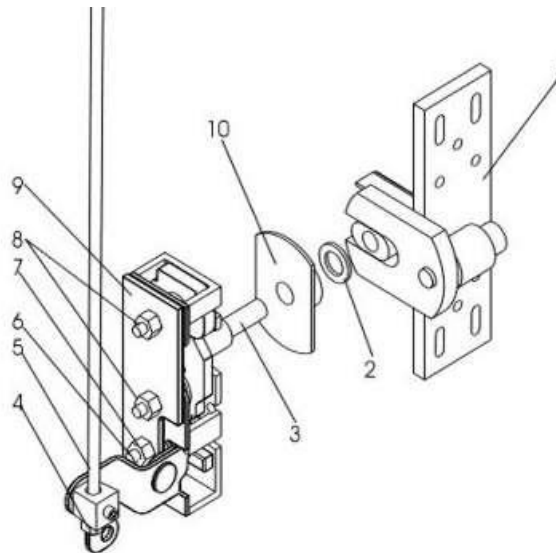
- Slowly close each latch to the first position. Now pull the outside handle slowly to see if the two latches open at the same time.
- If they do not, or if the handle is at the fully pulled position, the latches need adjustment.
- Take note of which latch releases last.



Top Latch



Main Latch c/w interior and exterior handles



Bottom Latch

How the Door Latch Rods Work

The top and bottom latch have a nut on the end of a long connecting rod. This nut is what is adjusted using a 7/16" open end wrench. You will not need to turn the nut much to reach adjustment.

Whichever latch releases last (as noted above) is the one you need to adjust. Normally it is not necessary to adjust both top and bottom latches.

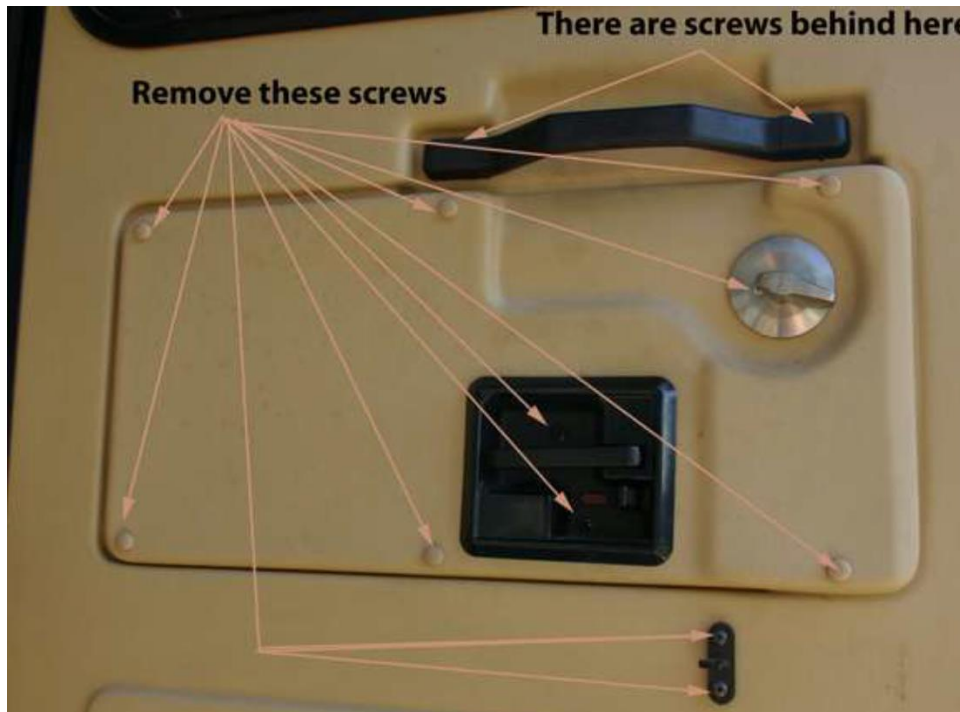
You want the latches to release when the handle still has a little travel left.

Materials & Tools Needed

- Contact cement to glue door gasket corners during reassembly.
- Painters tape (3")
- 7/16" wrench
- Phillips screw driver.

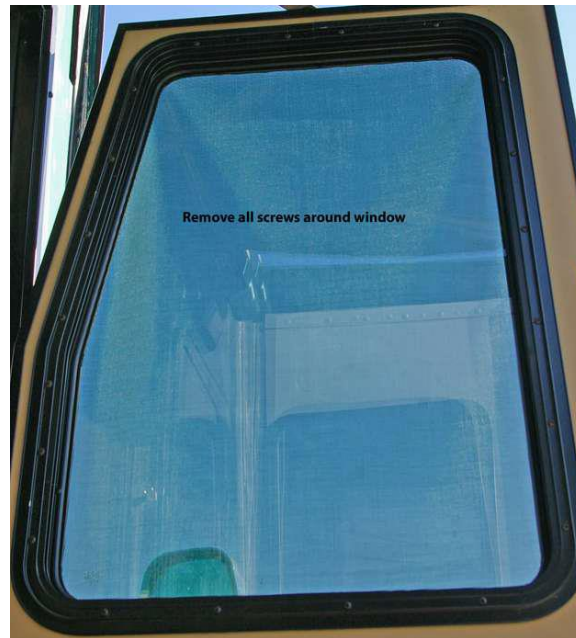
Remove Door Panel, End Plate and Inside Door Skin

- Open the door and remove the end plate by removing 8 screws. Note there is a rubber gasket on the outer edge of the door and at the top and bottom corners of the end plate the gasket is cut at a 45-degree angle and then glued to a similar gasket along the top and bottom of the door. Use a sharp razor and cut the gasket along the 45-degree glue line, and remove the end plate.
- Remove all the remaining screws as pictured below.



- Using 'painters' tape secure outside window frame to prevent it from falling out after inside screws are removed.

- ❑ Remove the screws on the inside frame, and the frame itself. Be careful not to push on the window with the screws removed.



Window Inside Frame

- ❑ Pull the interior panel back at the top and bottom latch assembly. There is a long rod that extends to each latch.
- ❑ Adjust the rod on the latch which opened last as determined in the [previous step](#).
- ❑ Tighten the 7/16" nut on the rod a turn or two, and check the latch timing. Both latches should release at the same time when the outer handle is no more than ¾ open.
- ❑ Continue adjusting as necessary. Ensure that you do not tighten nuts such that door does not latch securely.



Top Latch



Bottom Latch

Reassembly

- Reinstall inside window frame. Remove painters tape.
- Apply contact cement on the door gasket 45° corners to glue the gasket back together. Allow to dry as per directions on glue package.
- Replace the door edge plate.
- Press the door gasket corners together tightly for a few seconds. The contact cement should hold the gasket immediately.
- Check operation of door latch to ensure it is functioning correctly.
- Check remote lock function to ensure that door locks and unlocks without binding.
- Replace inside door panel c/w 6 screws and covers.
- Replace inside door handle backing plate.
- Replace dead bolt and ensure that it functions correctly.

Alternate Entry Point (Optional)

Because there is only one entrance door, some people will modify one window so that in an emergency, the window can be opened to give access to the coach if the door latch fails and cannot be opened.

- Select a window that can be reached and is not blocked on the inside such that it would prevent someone entering the coach.
- Inspect the window latch to locate a place that a hole could be drilled in the outside frame such that a small rod could be inserted to push the latch open.
- Locate a small rod or screwdriver that could be used to push open the window latch. Locate where it can be accessed from outside the coach. The smaller the diameter, but better.
- Drill a small hole in the outside frame as determined above.
- After testing to ensure the window latch can be released through the small hole, use black silicone to seal the hole to minimize detection by others.