INSTRUCTION TO SERVICE

ITS60634	02/10/2023
SECTION:	490-Entrance Door
WRITTEN BY:	Mark Reitz
SUBJECT:	D45CRT Single Leaf Masats Entrance Door
ISSUE:	Entrance Door Adjustment
SUMMARY:	Performing this procedure will ensure the entrance door is adjusted and operating properly.

ITS-60634

Ref. NHTSA Recall No.	Ref. Transport Canada Recall No.
Not Applicable	Not Applicable

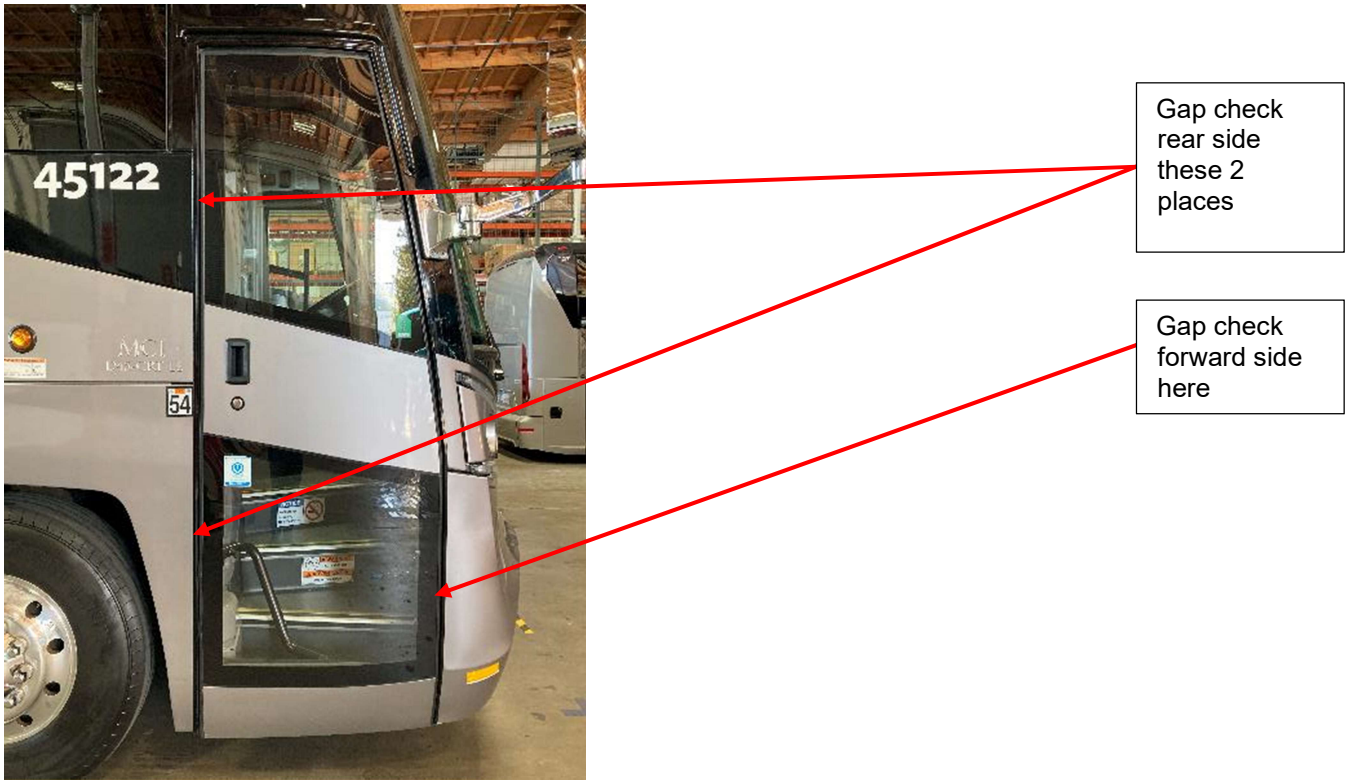
THIS ITS DOCUMENT SHOULD BE RETAINED AND REFERRED TO FOR FUTURE MAINTENANCE UNTIL THE PARTS AND/OR SERVICE MANUAL IS UPDATED TO REFLECT WORK DONE AS A RESULT OF THIS DOCUMENT. ENSURE THAT THIS DOCUMENT IS AVAILABLE FOR PARTS AND MAINTENANCE STAFF GOING FORWARD.

PROCEDURE:

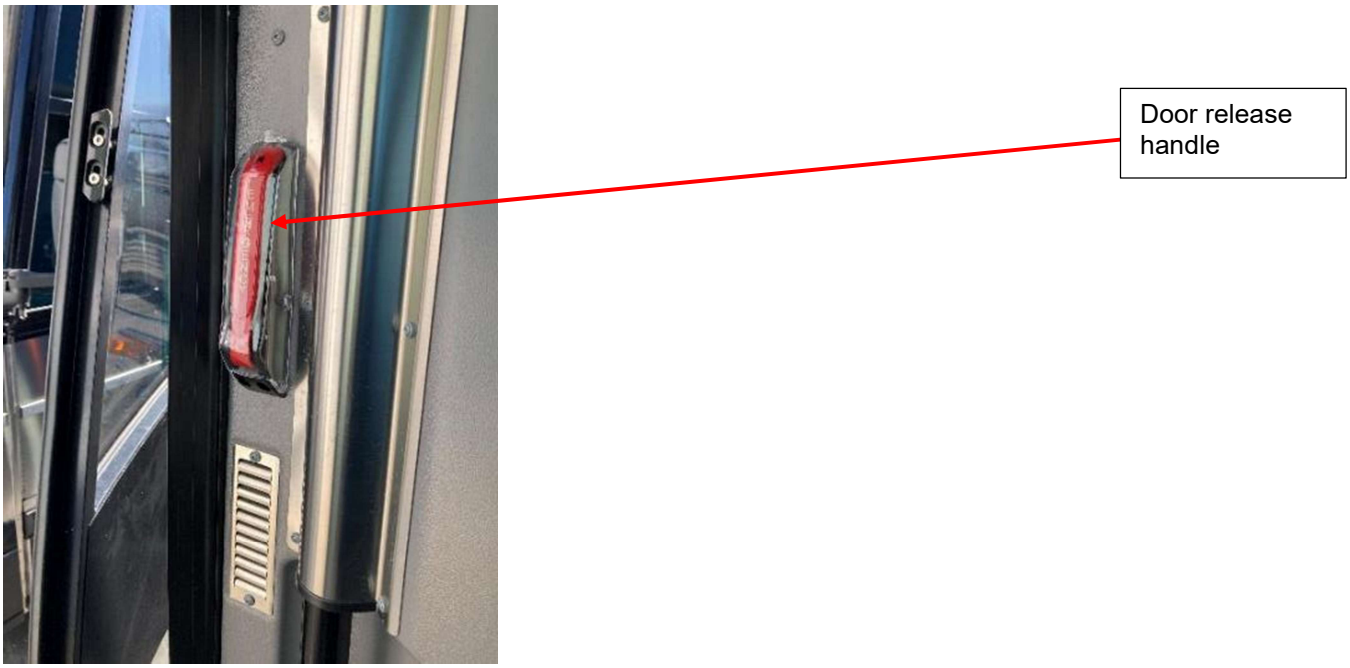
1. Set park brake and chock wheels.

2. Start the coach and turn on the HVAC system. From outside the coach operate the door switch to open and close the door. Observe if the door is closing properly. Note if the door bounces off of the door frame as it attempts to close. Note if the door is not fully seated with the door frame when in the closed position.

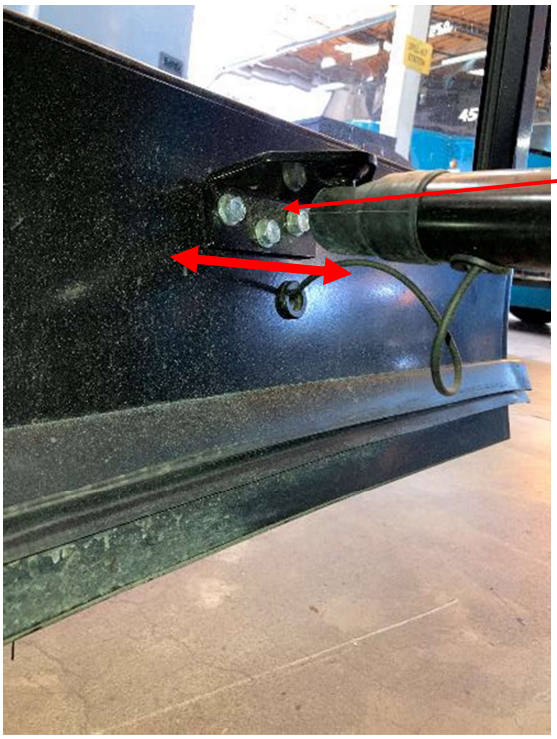
3. With the door closed note the gaps on the rear edge and the front edge of the door at the locations indicated in the photo below. The door gaps must be within 3mm forward side and rear side.



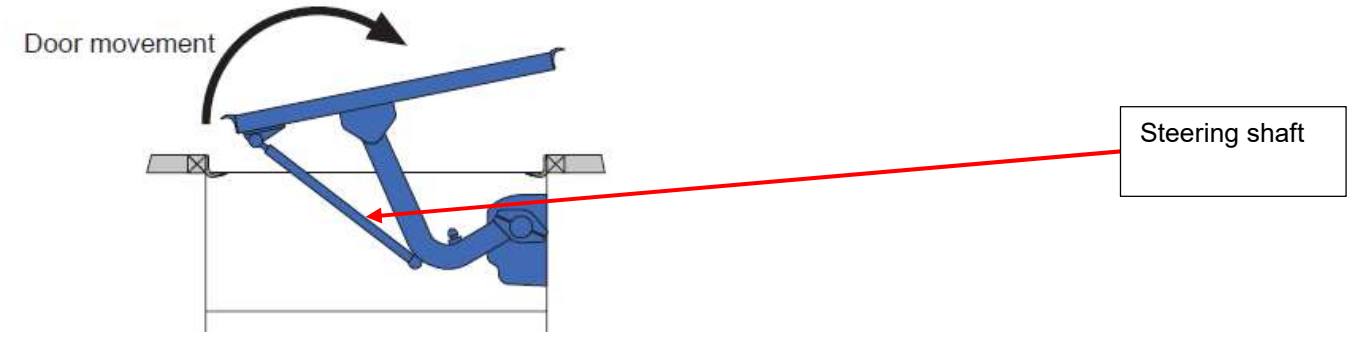
4. If the gap needs adjustment open the door then pull the manual door release handle.



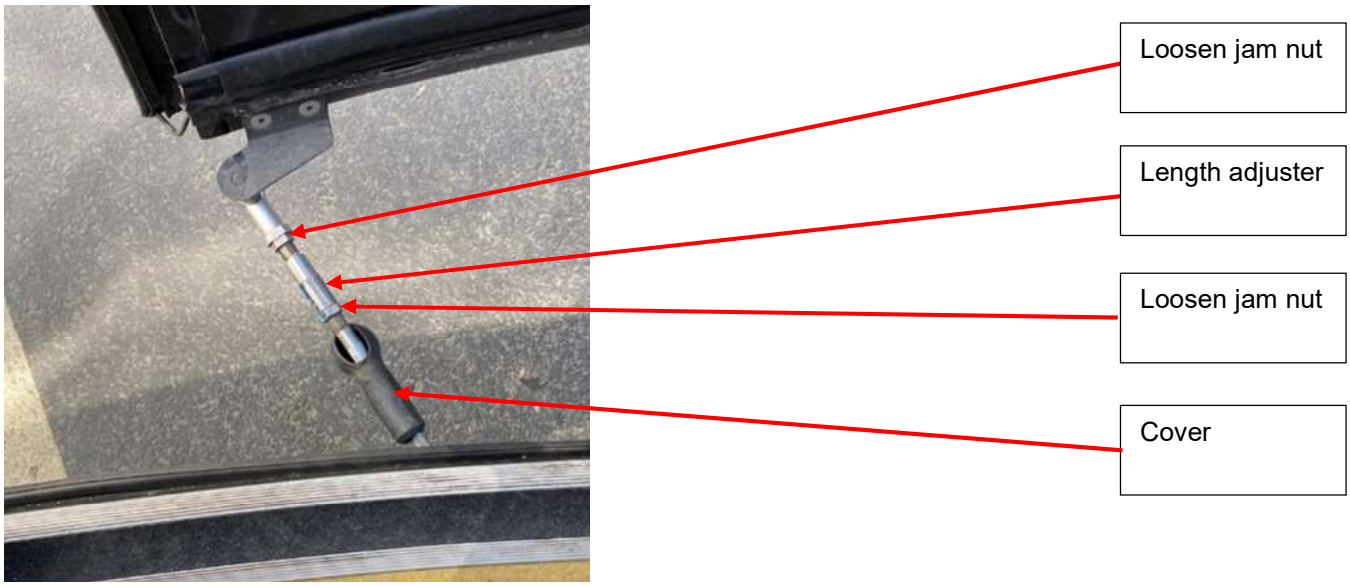
5. Locate the 6 fasteners on the inside of the door leaf that attach the door leaf to the upper and lower linkage arms. Completely loosen, but do not remove, 2 of the three bolts on the upper and lower mounting bracket. Slightly loosen the remaining screws just enough to be able to slide the door fore or aft in the door mtg slots. Have someone from the outside of the coach push the door closed and adjust the gaps evenly. Once the gaps are set, tighten all six bolts to 14-16 ft-lbs.



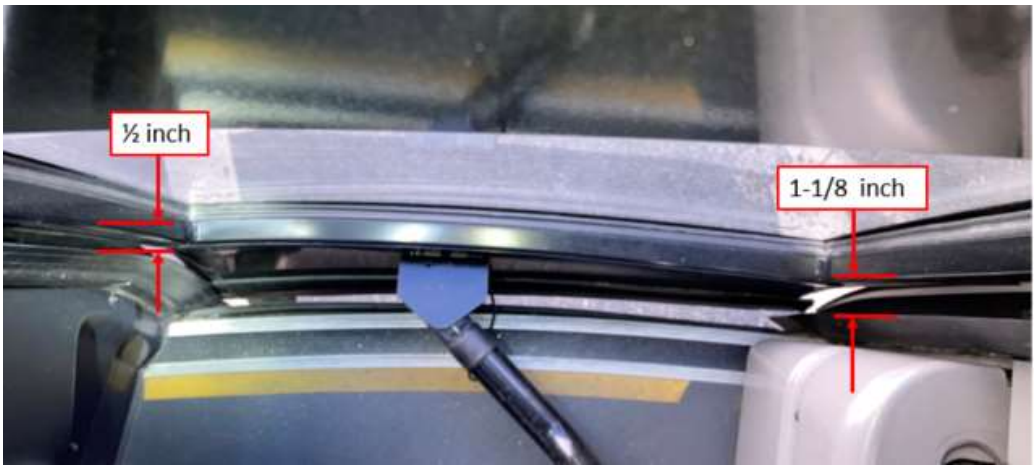
6. While closing the door note if the front side of the door closes before the rear side. The front side of the door must engage the door frame first.



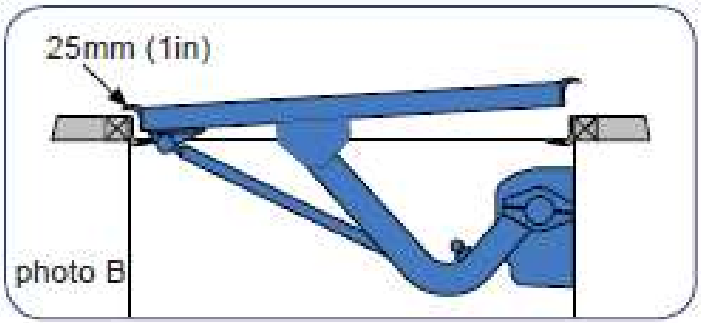
7. If adjustment is needed slide the cover from the steering arm rod-end and loosen the two jam nuts on the steering arm shaft.



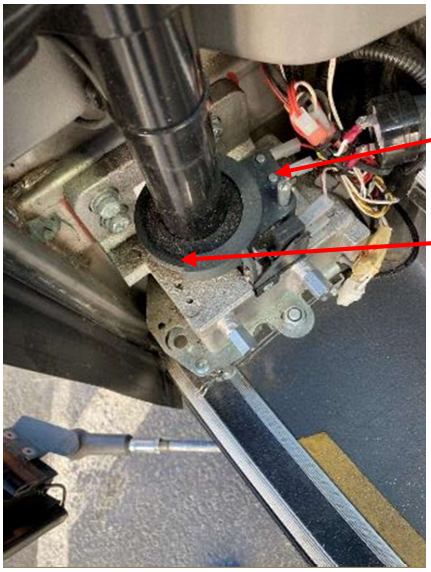
8. Turn the adjuster in ½ turn increments until the front of the door frame is 1/2” from the seal and the rear door frame is 1-1/8” from the seal. Once the gaps are achieved do not yet tighten the jam nuts.



9. Manually close the door slowly and observe the stepwell light going off and note how close the front edge of the door is to the door frame. The door should be 1” from the door frame when the step light goes out. If not, proceed to the next step.



10. To adjust the switch, open the door, remove the two screws holding the motor cover and locate the switch adjustment cam.



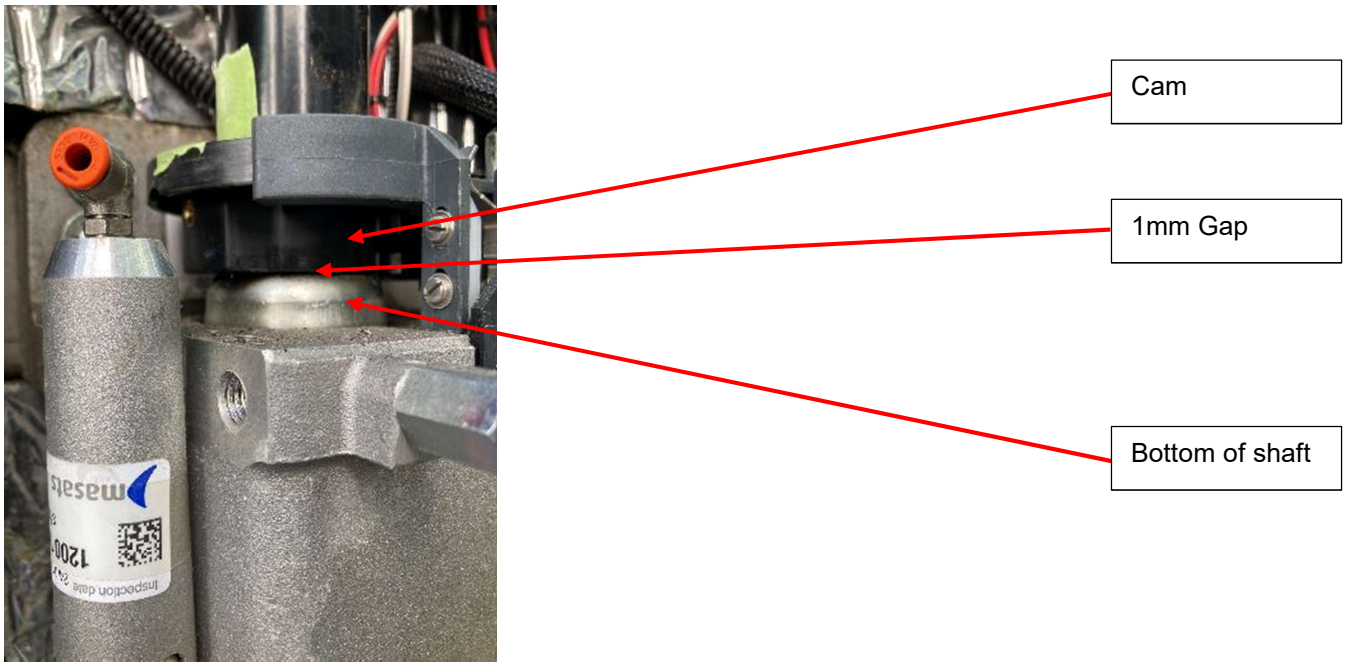
Cover screws

Motor cover

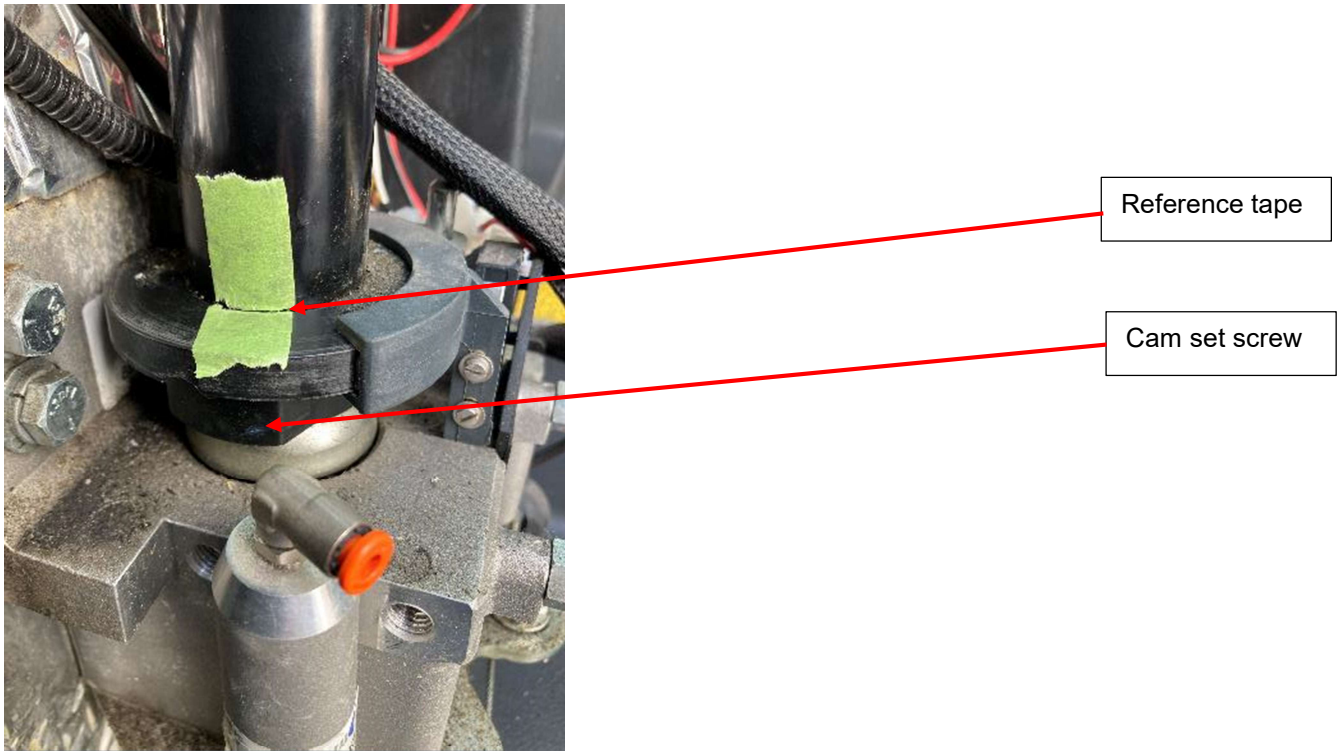
Microswitch

Switch cam

11. Check that there is 1mm of gap between the bottom of the door shaft and the adjustment cam. If not, raise or lower the cam to the desired gap after slightly loosening the 3mm set screw only enough to rotate the cam.

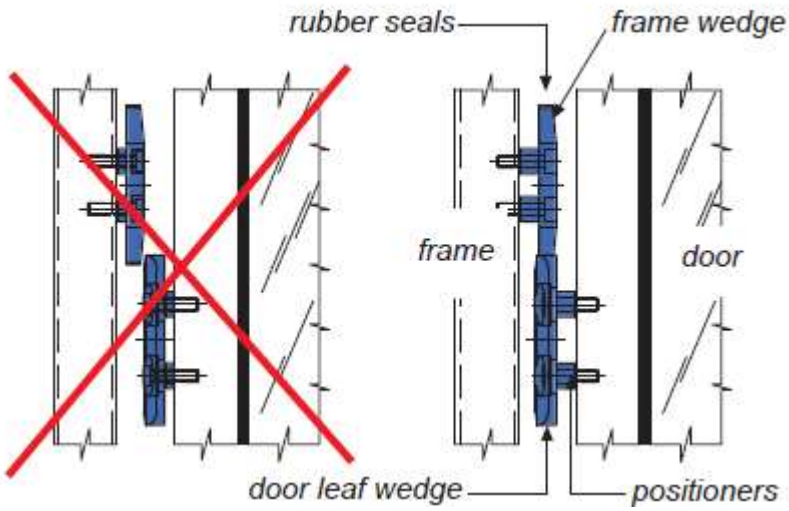


12. Mark the adjustment starting point with a piece of tape and cut around the shaft as shown. Only make slight rotations to the cam(approx. 1deg) then check where the stepwell light goes out. Continue adjusting the cam until the door is about 1" from the frame when the stepwell light goes out (ref. Step 9 diagram). When complete tighten the set screw to 30-32 in-lbs.



13. From outside the coach manually close the door slowly and observe the gap between all 4 lock wedge pairs. Lock wedge gap should be even at all 4 pair locations. Ideal gap should be between 2-4mm. First attempt to adjust the gap by loosening the bolts on the door side wedge and sliding the wedge. If more adjustment is needed, then loosening the frame side wedge bolt and continue adjusting the gap. Be careful not to remove the frame side bolt letting the T-nut slide down. Tighten wedge bolts to 5 ft-lbs and go to the next step.

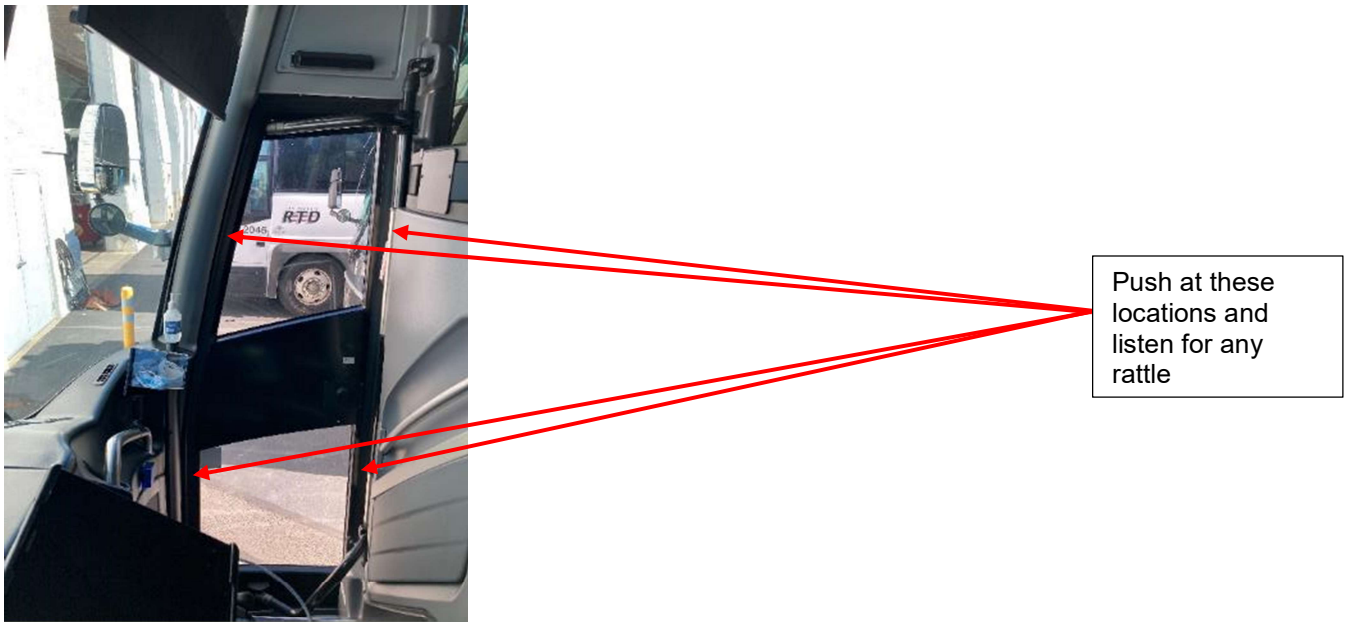
14. Check the wedge pair alignment and note if any of the lock wedge pairs do not overlap fully. See figure.



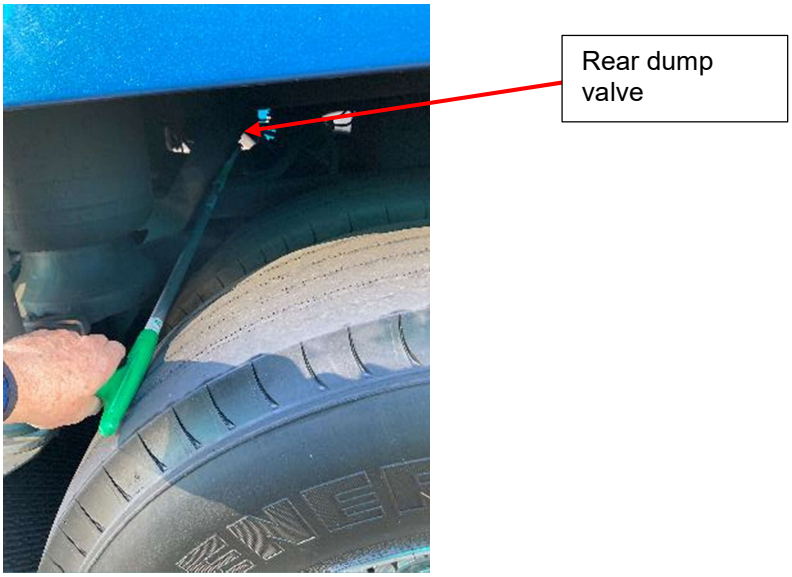
15. If wedge pair alignment needs to be adjusted then add washers under the door side wedge or subtract washers under the frame side wedge as needed for proper overlap. On the frame side wedge be careful not to let the T-nut slide down the track. Tighten all the wedge bolts to 17-19 ft-lbs.

16. Fully open the door and re-engage the door release handle to lock the door to the gear motor. With the coach running and the HVAC system ON (voltage and cabin air pressure have an influence on how the door closes). Using the door switch, open and close the door. At this time there may need to be fine tuning with the steering adjuster to ensure all 4 lock wedge pairs are engaging properly.

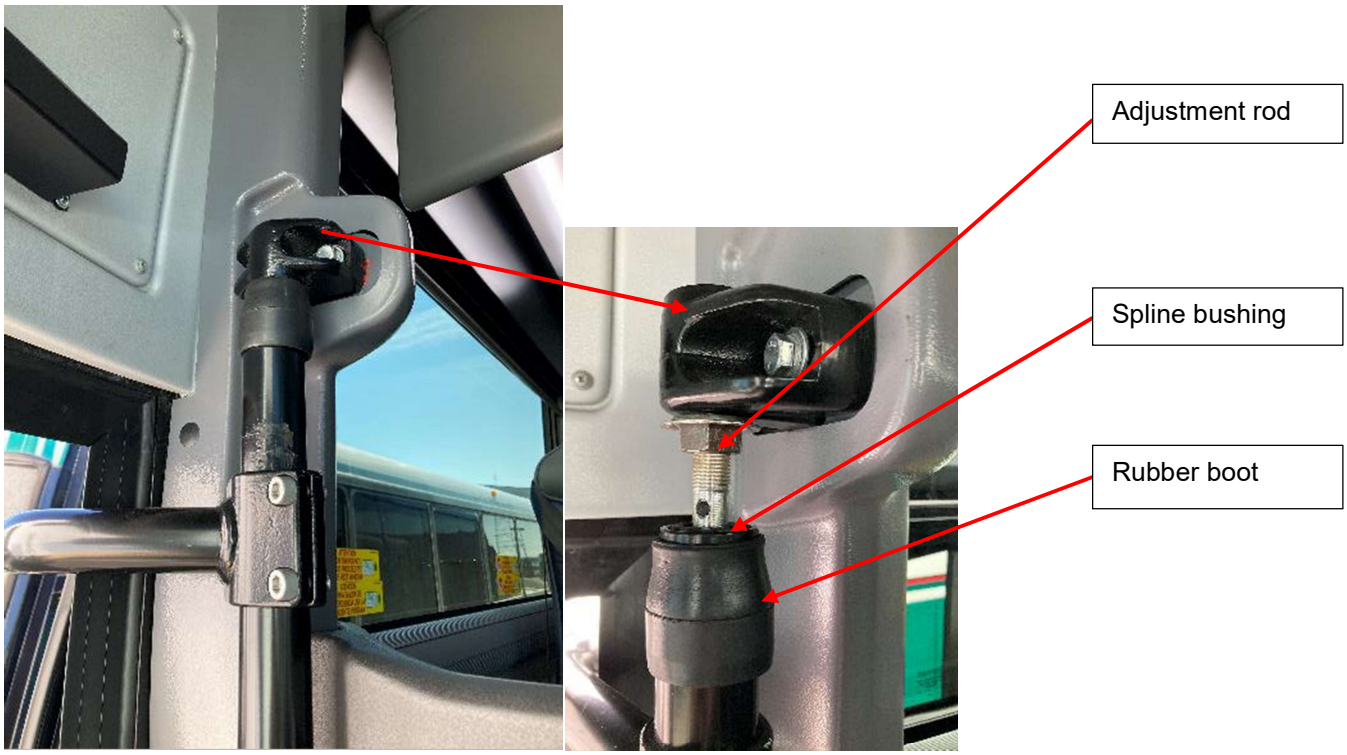
17. From inside the coach push on the door at the wedge lock pair locations. If one of the wedges has not engaged properly, you will hear a rattle of the wedges contacting each other. Reduce the wedge gap slightly at that location.



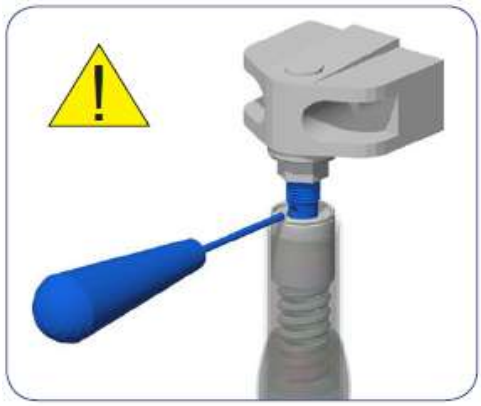
18. Put the coach into “High Ride”. Then using the air dump valves remove the air in the front and rear suspension on the RH side of the coach so the coach is leaning to curbside.

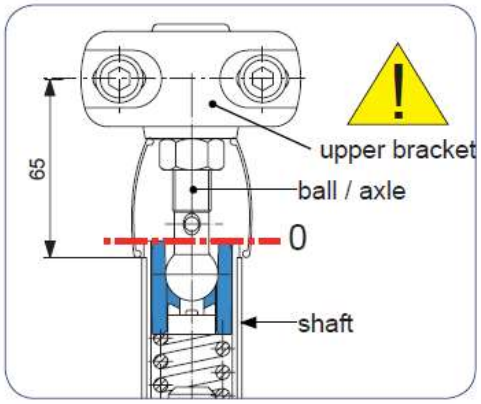


19. Open and close the door with the door switch 3-4 times. Observe function. If the door closes properly no further adjustment is needed. If the door bounces off the frame or does not engage the lock wedge pairs then adjustment of the door tension spring is necessary.
20. Fully open the door by using the manual release lever. Locate the top adjustment rod. Remove the rubber boot and note the location of the spline bushing above or below the tube edge.

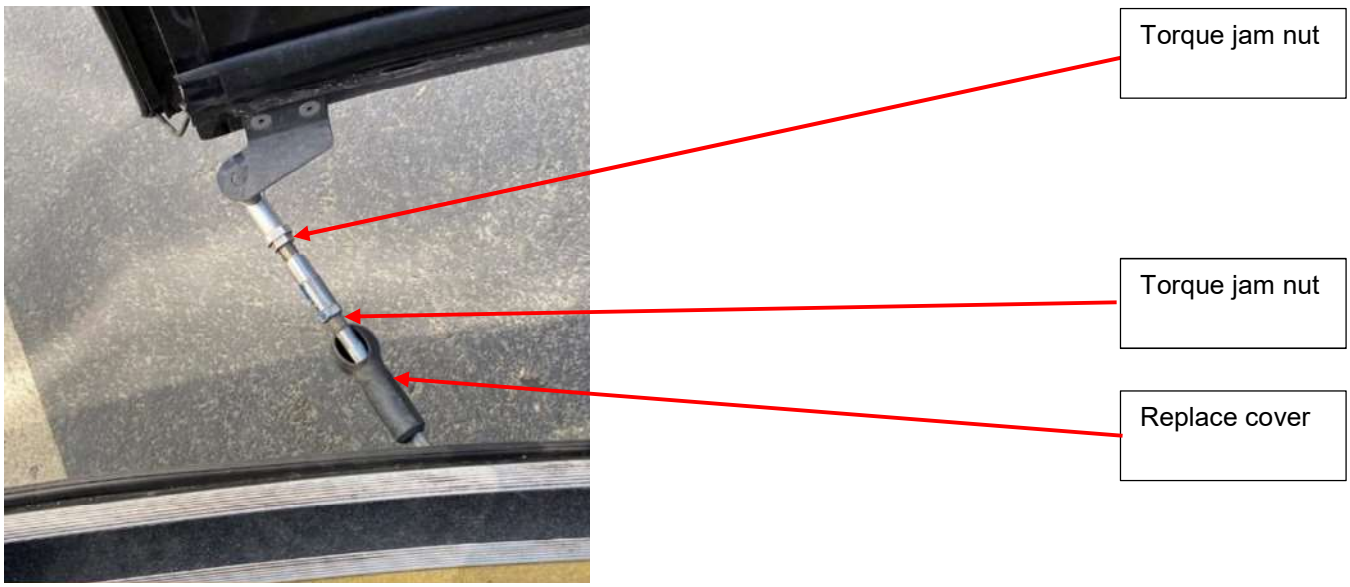


21. If the spline bushing is below the top of the tube edge, loosen the jam nut and turn the adjustment rod until the spline bushing is at the tube edge. See figure. Tighten jam nut to 92 ft-lbs. Re-engage manual door release lever and test door open-close operation 3-4 times for proper closing. If more adjustment is necessary, repeat this step by raising the spline bushing above the tube edge 1mm at a time and repeating the open-close test until the door closes on the lean. Replace the rubber boot.





22. Once the door closes and locks well, carefully tighten the steering arm jam nuts 37 ft-lbs. During tightening it is possible to change the adjustment. Replace the cover on the rod-end.



23. Perform door operational inspections every 6 months or 50,000 miles.

LABOUR ESTIMATE				
	Operation	Number of Technician(s)	Hours	Labor Time T X HR
1	Perform door operation inspection and adjustments	1	1	1

PARTS REQUIRED					
Item	Part Number	Description	Qty. per Coach	Units	Notes
1			1	EA	

SPECIAL TOOLS REQUIRED					
Item	Part Number	Description	Qty.	Units	Notes
1					