



## INSTRUCTION TO SERVICE

ITS: 58848	
<b>SECTION:</b>	526 – Seats & Stanchions
<b>WRITTEN BY:</b>	Scott Geier
<b>SUBJECT:</b>	R & R Driver's Barrier Upper Door Frame Assembly

# ITS-58848

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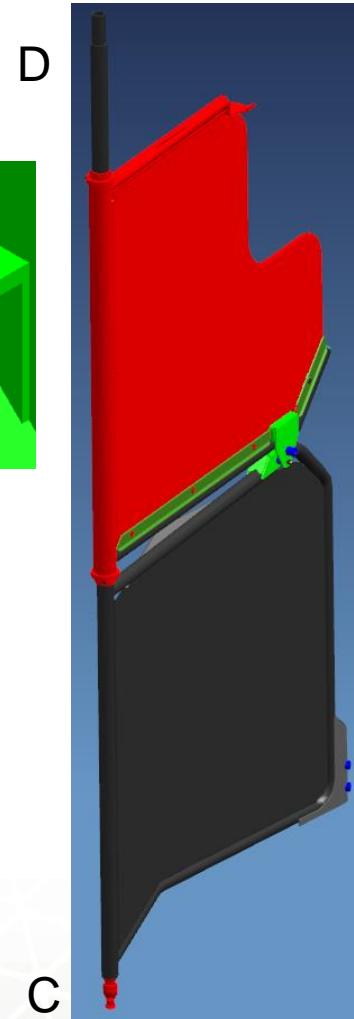
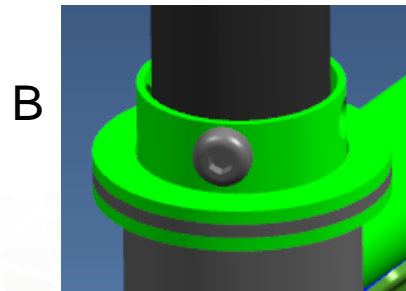
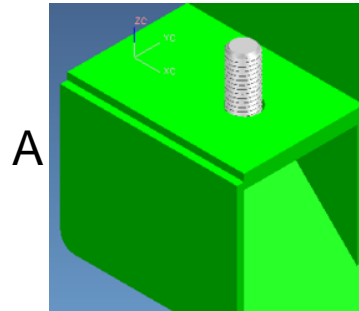


- This procedure outlines the sequences to remove and replace the 545971 Upper Door Frame on New Flyer buses.
- A complete list of the tools and parts required are at the end of this presentation.
- Recommended PPE are cut resistant gloves, safety glasses, shoes, high visibility work vest and lower back support brace.
- Observe and make note of any other issues related to door structure and operation.
- Follow all safety signs while walking around bus depots.

## MAJOR PART NOMENCLATURE

A - LOWER SUPPORT BRACKET  
B - 501245 COLLAR

C - 12mm INLINE BALLJOINT  
D - TOP PIVOT TUBE  
E - TOP FRAME AND BARRIER GLASS



*Rendered model appearance not indicative of actual parts.*

## Sequence 1: Sleeve Set Screw Removal

### **Process:**

Remove the self tapping screw with the appropriate tool.

### **Potential Problem(s):**

If the head of the screw is stripped or the screw is seized, use a cold chisel or pliers to remove.

### **Solution:**

When ready to reinstall the ball joint sleeve use a 5/32" bit to drill out screw. Install a new or equivalent self tapping screw (NF PN: 36S00012).



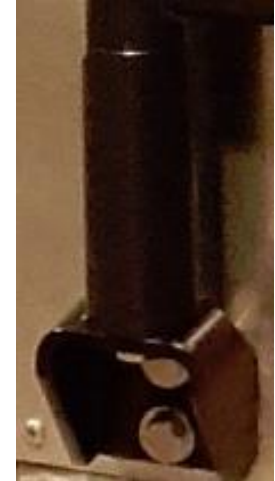
## Sequence 2: Loosen Ball Joint

### ***Process:***

With the ball joint tube-cover raised and out of the way, partially loosen the ball joint from the mounting bracket using a  $\frac{3}{4}$ " (19mm) or equivalent wrench. One to one and a half revolutions should suffice.

### ***Potential Problem(s):***

Observe the door mount flange for any looseness. Tighten as required.



## Sequence 3: Barrier Glass Removal

### **Process:**

Remove the 3/16" and 5/32" allen head bolts with the appropriate impact socket and ratchet. Remove the mounting brackets and set aside. Remove the glass from the frame and set aside. The glass may be stuck in the frame, use care to pry it out from the frame.

### **Potential Problem(s):**

Care must be taken to not drop the glass out of the frame during disassembly.



## Sequence 4: Upper Flange Removal

**Process:**

Remove the allen head bolts with a ratchet and place in a recycle bin.

**Potential Problem(s):**

Care must be taken to not strip out the head of the screw.

**Solution:**

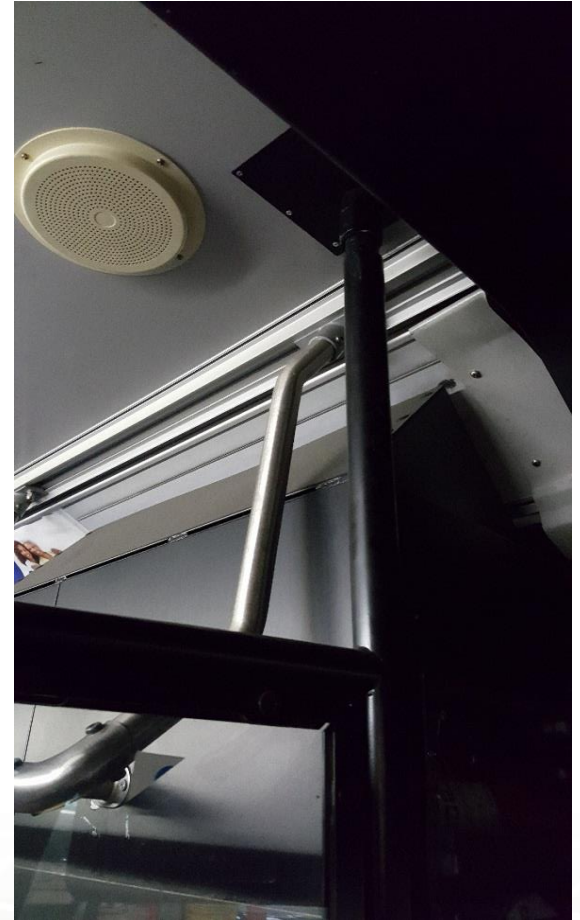
If the head of the screw is stripped this can be remedied after door removal, with the use of pliers.



## Sequence 5: Remove Door

### ***Process:***

Once the previously loosened ball joint is removed from the support bracket, remove the top pivot tube from the ceiling flange. Again, have a partner support the door assembly during this operation.



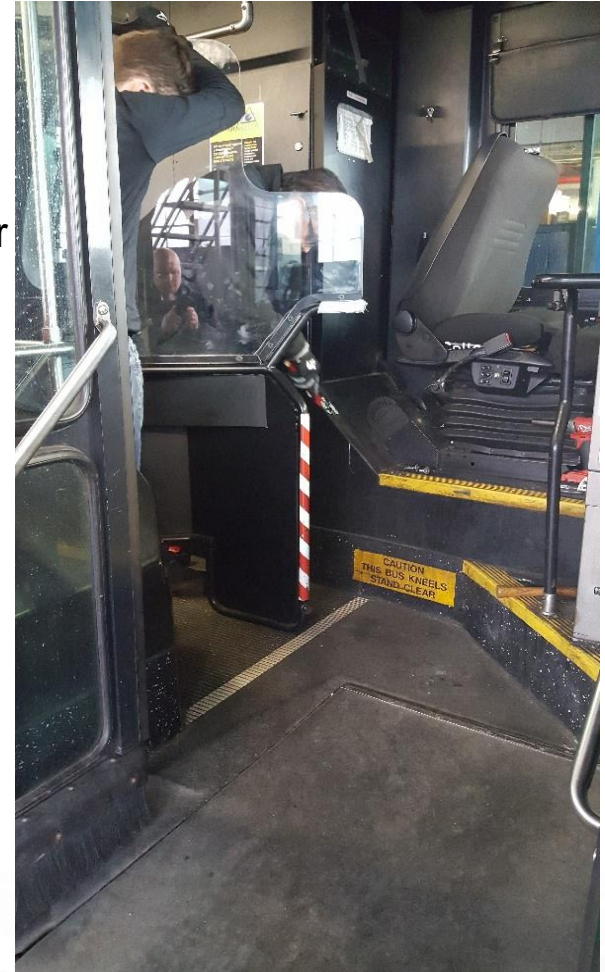
## Sequence 6: Set door aside and support.

### **Process:**

The door assembly can be moved to a stable area on the floor of the bus for top frame removal. Remove the upper door flange and bushings for recycling.

The main barrier tube can be properly lubricated at this time for future reassembly.

Remove upper door frame and transport to a workstation along with glass and hardware for upper door reconstruction.



## **Sequence 7: Rebuild upper door with new upper frame.**

### ***Process:***

Reinstall safety shield on to the new upper door frame. Secure the safety shield using the existing 3/16" and 5/32" allen head bolts hardware. Apply 1-2 drops of Loctite (NF PN: 081034) on the thread and torque hardware to 80-88 in-lbs.

Install the new Delrin bushing (NF PN: 698035) to the upper and lower tube assembly.



## Sequence 8: Replace Upper Door Assembly

### ***Process:***

Slide new assembled upper door onto existing lower frame. Insure proper Delrin bushing fit and install split ring collar (NF PN: 701428), leave collar loose.



## Sequence 9: Re-attach barrier door.

### **Process:**

Install the rebuilt door. Installation is the reverse of disassembly.

- Install main tube into upper ceiling mount. Insure the screws are tight on the cup mount to ceiling location.

**NOTE:** Upper and lower door assembly mounting hardware should be torque per installation drawing.

- Tighten split ring collar as required.
- Apply Loctite (NF PN: 081034) to the first few threads of the main bj bolt.
- Align ball joint, and reinstall with washers. Install main bj bolt and tighten to 5 ft-lb. of torque.



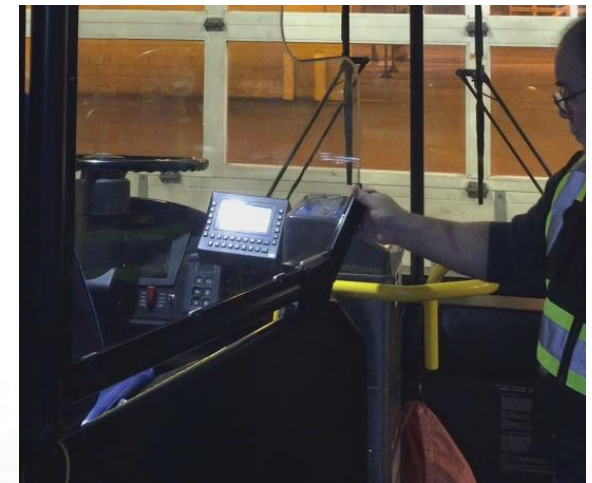
## Sequence 10: Adjust latches ensure smooth operation.

Process:

Swing upper door into the closed position behind the driver's seat, adjust the door tab up or down as required.

Swing entire door into the latched driver's position, adjust the door as required.

Open the upper door assembly and replace the latch cover.



## **Sequence 14: Final inspection and clean up.**

- Perform a final inspection of the door latching mechanism.
- Verify door swings open and closes accordingly.
- Ensure all surfaces are wiped clean.
- Verify all fasteners are in place and tightened accordingly.
- Remove all tools, trash and old parts from bus.

## Tool List

- Cordless Wrench
- 8.0V Batteries and Chargers
- Philips #2 Screw Driver
- ¾" or equivalent 19 mm wrench
- 3/16" and 5/32" Allen wrench and bits
- Vise grip pliers
- Pry Bar (Optional)
- Chisel (Optional)
- Cordless Drill
- 5/16" Drill Bit
- 7/16" Drill Bits
- Screw Extractor (Optional)
- 3/8 – 16 Tap (Optional)
- Isopropyl Alcohol (Optional)
- Rags / Towels
- 3/8 – 16 Tap (Optional)
- Isopropyl Alcohol (Optional)
- Rags / Towels
- 3/8" Drive Torque Wrench – 4 to 20 ft.-lb. Range
- Socket Adapter. 3/8 Female Sq, ½: Square
- Torque Seal Indicator Paste.



<b>LABOUR ESTIMATE</b>				
Item	Operation	Men	Hours	Labour Time M X HR
1	R & R Drivers Door Assembly	2	0.50	1

<b>PARTS REQUIRED</b>					
Item	Part Number	Description	Qty. per Coach	Units	Notes
1	545971	Frame assembly, upper door	1	EA	
2	081034	Loctite – 243 Medium 10ML	.010	EA	
3	698035	Bushing – Door, Delrin	2	EA	
4	698171	Grease-Ball Joint Lube	0.010	EA	
5	701428	Collar-Door, Upper Panel	1	EA	
6	36S00012	SCREW PH TPG. #10 32 UNF X 3/4" LG.	1	EA	



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