

WING TIPS:

Baggage doors

By Dennis Wolter, Cincinnati, Ohio

Picking up on our last article about owner-performed cabin door adjustments, it's time to move on to baggage and cargo door adjustments. Baggage and cargo doors on Beech Models 33 through 58 were built in three distinctly different ways.

Beginning in 1947, most of the 35, 33 through 55 and 95 airplanes were manufactured with small baggage doors. With two different but simple and reliable latching mechanisms, these early doors have no provisions for, nor do they require, adjustment. Air and water leaks are managed by either repositioning or replacing rubber seals. Pay close attention to these seals, as we often find corrosion in the structure below the doors caused by uncorrected water leaks.

Large baggage door option

By the mid-'60s, Beech offered an optional large baggage door for 35 and 55 models that eventually became standard on all the later 33, 35 and 55 airplanes. Unlike the cabin doors, adjustments for these large baggage doors are internal and rarely require attention. That said, there are some tricks we can employ if you are having a problem with water leaks or getting the door to close, particularly when a new windlace cord or rubber seal is installed.

Start by lubricating the three-pin latching system. We use 3-in-One oil to lubricate the moving parts of the rotating handle mechanism and 'door-ease' lubrication sticks to lubricate the surfaces of the three latching pins where they contact the receiver plates. Next we turn our attention to the Durlon plastic receiver plates in the doorjamb. Since these Durlon plates are riveted in place, adjustment is accomplished by using a moto tool and small rotary file to taper the outer surface of the hole, allowing the tapered door latching pin to more easily guide itself into the Durlon receiver plate.



Using a router bit and a moto tool to taper the latch pin receiver.

If we find that the Durlon receiver plate is cracked (as we often do), we fabricate a new receiver plate using a more durable phenolic material that is easily machined and a lot stronger than the original plastic. Phenolic material is porous, allowing oil to penetrate into the fibrous material, providing a long-lasting source of lubrication.



New stronger phenolic latch pin receiver plate on left.

One final detail: We often find machining marks left on the surfaces of the tapered latching pins. In this case, we use fine sandpaper or emery cloth to polish the mating surfaces of the latching pins. Every bit helps.

You may need to be persistent. Large baggage doors can require several attempts of taper-reaming the receiver holes and lubricating to finally get them to close. If after completing these adjustment procedures, your door is tight to close, be patient. A few days sitting outside on a hot summer day will allow the new seal and windlace to set and make the door easier to close.

Dual utility doors

These are common to 36 and 58 model airplanes. They are delicate composite bonded doors and can be quite challenging to adjust, particularly after new seals or a larger diameter windlace cord (that actually seals) have been installed. The only external adjustment Beech provided for these doors is at the chrome-plated slotted steel receiver plate for the upper latch on the aft utility door.

As on the large single baggage doors, it's a very good idea to fabricate new phenolic latching pin receivers and taper them with a small moto tool rotary file to aid in closure. Beech also made U-shaped plastic stop blocks that attached to the doorjamb. These are easily broken. However, they can be fabricated as an owner-approved and owner-installed part. The dual utility doors do have several rarely needed internal adjustments that are best left to a technician familiar with the doors.

A word about owner-approved parts. The FAA has a provision in Part 43 of the regulations that will

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allow an owner to authorize a licensed mechanic to research and fabricate certain parts for certified airplanes when operated under Part 91. Owners of aircraft that are listed under a Part 135 certificate are not eligible for this provision. Partner with your mechanic if you consider fabricating phenolic components.

Closing techniques - No baggage and utility door discussion would be complete without mentioning techniques that will not only make closing these doors easier but will also save wear and tear on the doors themselves.

When closing large baggage doors, lean your shoulder into the aft portion of the door as you rotate the handle to the closed position. On the dual cabin doors, I like to push in on the top of each door with my left hand as



Leaning your shoulder against the door helps when latching a large baggage door.



Pushing with your left hand and latching with your right.

I rotate the handle to the locked position with my right. These procedures help to pre-compress the door seals as the locking mechanisms are pulling the door closed.

Speaking of seals, my next Wing Tips article will focus on the proper installation and maintenance of seals on doors and windows. 'Til then, fly safe! —Dennis

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