

# Installing Rear Quarter Windows

Applicable to 55 Speedster and all 53-58 Starliner (K model) hardtops.

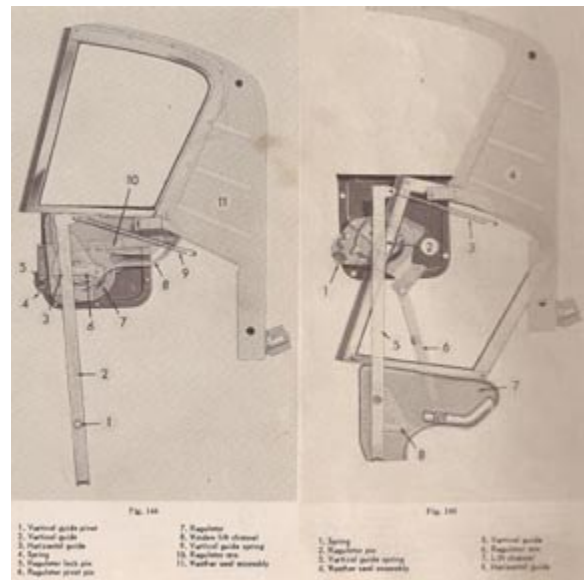
By Bill Clark

These notes will cover the rear quarter window assembly, comments on how the mechanism works, tips for getting the hardware ready to install, assembly instructions, then after it is all assembled, adjustment instructions. Please send comments to Bill Clark, [email](mailto:bill@fordclub.com)

## The Parts

The names below are from the 1955 Shop Manual Figure 144. More descriptive names are added in parentheses

1. Vertical Guide Pivot (Track pivot shoulder screw)
2. Vertical Guide (Vertical guide track)
3. Horizontal Guide
4. Spring (Lock spring)
5. Regulator Lock Pin
6. Regulator Pivot Pin
7. Regulator
8. Window Lift Channel
9. Vertical Guide Spring
10. Regulator Arm
11. Weather Seal Assembly. (Window run or Bat Wing)



## How it works

Turning the crank of the regulator mechanism pulls the window up the vertical guide until it raises high enough to clear the top of the B post and the window rotates forward to the door window and locks in position. A beefy spring keeps the window and vertical guide pulled toward the back of the car as the vertical guide and the weather seal assembly hold the window in position. The regulator mechanism moves the regulator arm through three different phases. Starting with the window all the way down, the first three turns of the crank are uneventful as the regulator arm simply hangs with the regulator stud in the vertical lift channel of the window frame and pulls the window up. At the start of the fourth turn, the regulator arm is contacted by a tang on the regulator and the regulator arm starts to rotate as the regulator turns. The window continues to go up but the stud on the regulator arm starts to move rearward in the window lift channel. At about 4 1/2 turns, the stud on the regulator arm slides far enough back in the window lift channel to move into the curved part of the channel. As the stud slides up this channel it tends to pull the window forward. At about 4 3/4 turns from the start, another stud on the regulator, the regulator lock pin, contacts the lock spring. When the cranking is done, this stud will have engaged the lock spring and lock the regulator from turning backwards by itself and should hold the window from being forced or jiggling open. There is another stud on the

mechanism that is stationary and engages the horizontal guide on the window frame as it moves by it. This guide keeps the window from coming forward too soon and prevents the window from dropping as it moves forward or moves back when it is opened. If all is adjusted right, when the cranking stops, the regulator lock pin will lock into the regulator lock spring and the window will be located correctly against the door window.

## **Getting ready**

These instructions are written for the case where the weather seal assembly has been removed, but apply equally as well for the case where the window was removed to remove the quarter panel.

Remove the weather seal assembly, grind off the rivets, bend open the stainless, rip out the old cloth if it is ripped or damaged, media blast and POR15 the rusty parts of the galvanized, go to JoAnn Fabrics and get new material, carefully glued it down, put the trim back on, hammer the stainless flat, pop rivet the two sides back together and grind the rivets flat. It is very important that the material for the inside back side of the box be like the felt that came in the boxes because the back of the window has to slide freely inside the box with the force of the quarter window spring pulling against it. Felt in a roll is available from Restoration Specialties. After the box is assembled, carefully glue the felt to the back of the box.

The spring for the rear quarter window is stiffer than a screen door spring. I think the correct spring is 5 1/8 long, 1/2" OD, made of .059' wire and has about 57 turns. Using a wimpy spring will allow the window to want to move forward too early complicating the adjustments. The good stiff spring makes the motion more predictable and the adjustments easier.

In some cases, the damn vertical guide track will scratch the outside of the stainless trim on the window. It can be fixed two ways. First, tweaked the top of the track just a bit so it bends away from the window, that is shut the top of the guide in a vise with the open part away from you and pull the track toward yourself. This bends the ends in just a bit. I doubt the length of the track was out of flat more than .100" when I got done. Put a flat washer under the top track slide stud so the track sets away from the window a bit. The combination of these two things helps ensure the track does not hit the window frame. Assemble the track into the window frame and make sure the phenolic blocks slide freely in the vertical guide track. Lay the frame and track down, track side up and be sure the track does not contact the stainless frame when the track slides over the trim.

## **Lubrication (or what works for me)**

- Spray the regulator mechanism down with spray lube
- Grease the regulator arm stud, and the stationary horizontal guide stud.
- Be sure the lock spring stud turns and put some oil on it.
- Oil the vertical guide track

## **Installing the windows**

1. In order to align the rear quarter window with the door window, have the door window installed and where you want it before starting on the rear quarter window.

2. Screw the dew wipes to the car and to the regulator. Use 4 40 pan head sheet metal screws and bury the head of the screw in the fuzz. Make sure there is no screwdriver rash on the screw heads that is going to peak through the felt and scratch the frame.
3. Be sure the vertical guide slot in the window frame where the regulator stud is going to slide is clean and free of rust or POR15 buggers so that the stud and washer on the regulator arm can move in it freely.
4. Put the outside stainless steel trim piece on.
5. Remove the horizontal guide plate from the window frame before starting.
6. Although the window will come out with the weather seal installed, it is easier once the weather seal assembly is out to throw the window in first and let it drop to the bottom.
7. Put the weather seal assembly in and as you do, put the window now sitting in the bottom of the inner quarter, in the weather seal assembly, leaving the window resting on the bottom of the inner quarter. Install and tighten all the weather seal assembly screws. Fold back the front end of the felt, put the screw in the front top of the box and cover the screw head with the felt from the end of the track. Be sure the top end screw that goes into the roof is buried under the felt and that the top track is seated in the roof so that the window can slide freely and is not jammed in the top of the box. Feel in the track for any screw heads, rivet heads or other goobers the window might catch on.
8. Connect the vertical guide to its sliding nut in the bottom of the inner quarter panel. Be sure the track is free to pivot and does not hit the sheet metal. If you have replaced the inner quarter, there may be some interference between the lower end of the track and the inner quarter. If it hits a little, make an adjustment to the sheet metal with a hammer to make clearance. If it hits a lot, you can shim it out by using a longer shoulder screw made from a 1/4" pan had bolt and a piece of 1/4" gas line and some washers. (Why do I know about this?) If you put the window up to the top and slide it forward onto the top of the B post and stuff a rag behind the window it will stay up out of the way while you put the screw in the track. Slide the pivot to the rear and snug it up. If you start with the pivot to the front, it will raise the front of the window and the front edge of the window will dive into the felt on the top of the box and cause the window to hang up. Start with the pivot point to the back.
9. Be careful connecting the spring. Let the window go to the bottom and connect the spring to the spring loop in the top of the vertical guide track. Pull the window back up and hold it up as described above. Make a spring hook from a cheap easily bendable coat hanger by bending a hook on one end and bending a loop on the other end so you don't poke your eye out. Go into the rear most opening in the rear quarter and feed the wire through and catch the spring loop. Pull the spring back. You may have to push the wire to the outside. When the spring is pulled back so the spring loop is near where you can hook it to the bracket in the inner quarter, bend the coat hanger forward over the inner quarter to hold the spring in position. Hook the spring loop over the spring anchor in the inner quarter and remove the coat hanger.
10. Before inserting the regulator, crank it to the down position. (This is a good time to admire the lock spring and how it works.) Insert the regulator and panel together, being careful not to beat up the glass, then tighten the screws that hold the panel to the inner quarter. There is no adjustment to the panel.
11. Move the window to the bottom and attach the washer and roller clip on the regulator stud.
12. Crank the window up until you can hold it. With a crank on the regulator, loosen the regulator screws and hold the window with one hand. Wiggle the crank with the other until the regulator screws slip in the slot and try to get them in the middle of the adjustment. Snug up the screws.

13. Crank the window up and down a few times. If the window pulls into the B post put more oil in the window regulator track and be sure you are using the right spring. If the window jams at the top, see if it is catching the felt and move the vertical guide pivot to the rear as noted above. The window should go up and down easily and not hit anything although it might not be all that smooth.

## **Adjusting the windows**

There are three adjustments to be made:

1. Tilting the window to align with the door.
2. Moving the stop point of the window forward and back to align with the door.
3. Adjusting the almost useless horizontal guide plate.

At this point the window may not be square to the door window. Turn the crank until the window is up and forward to the position where it should stop on the door. To square the window up, loosen the vertical guide pivot screw at the bottom of the inner quarter and slide the vertical guide pivot screw and the track forward and back. Like magic, the window will square up with the door. Tighten the pivot screw.

The forward and back adjustment is taken care of by turning the regulator. Look in the hole in the inner quarter to the top and rear of the regulator and when the window is near the top you can see the regulator stud in the track. The forward and back is controlled by how far up the track the stud goes. Note that the position where the arm stops in the mechanism is controlled by the lock spring and stud. When the lock spring and stud are engaged, the arm is no longer free to rotate down until the crank turns the lock pin out of the spring. To adjust the rotation of the regulator, the lock spring must first be engaged, then the regulator assembly is rotated with the mechanism locked until the window is located correctly.

The three regulator adjustment screws in the panel should be tight. Put a piece of tape on the top inside stationary window frame and another on the moving window frame. Move the window to the position where it should stop and make lined up marks on both pieces of tape. Install the crank so that when the window is up, the crank is at the top. (This makes the instructions work for both sides) Turn the crank forward until the spring lock stud locks into the lock spring. Wiggle the knob back. The window may fall back, but after a while you can tell when the window is locked in place. Loosen the three regulator screws in the panel. Don't touch the window crank, but grab the window and move it until the two marks align and tighten the three regulator adjustment screws. Crank the window open a bit and close it and check the alignment. This step might have to be repeated a couple times until the marks align. You might have to move the window forward of the stationary mark a quarter inch or so before tightening the screws. When you can open the window and close it and the marks align tighten the screws and you're the winner.

You may have to go back and square up the window with the door. At this point the window should go up and down and should stop at the top where you want it.

Once the window is moving up and down freely and is adjusted where you want it, install the horizontal guide plate. The horizontal guide plate keeps the window from going forward too soon and holds the window up when it starts to move forward or is cranked down. If you have everything lubed up and are using the big honking spring, the vertical part of the horizontal

guide plate will never get used, in fact when everything is lubed up and working, the window mechanism can function fine without the horizontal guide plate. Start with the plate pushed to the rear and up and snug up the screws. Raise the window and see how much up and down wiggle there is. Crank down the window and adjust the guide up so as to eliminate most of the wiggle. Try it a few times. The window should now move up and down sort of smooth but will drop when the horizontal stud leaves the horizontal guide plate. I expect it will always be a bit jerky as the regulator moves through its various lifting, shoving, turning and locking modes but the window should open, close and lock closed, simply by operating the crank.