

RedlineGoods Shift Boot Installation Guide – Saturn Sky 2006-09



Overview

The factory vinyl shift boot on the Saturn Sky is prone to tearing and wearing out over time—in fact, my particular shift boot already had a hole in it when I purchased the car used. Upgrading to a premium real leather boot from **RedlineGoods** is a fantastic interior upgrade. On the Kappa platform (Sky/Solstice), the factory shift knob, boot, inner stalk, and mounting ring are often heavily glued or fused together from the factory. Many owners find it nearly impossible to separate the original boot and knob from the stalk without destroying them. Rather than tearing apart the factory setup, **this guide uses a 3D-printed replacement retainer frame alongside aftermarket shifter hardware**. This allows you to preserve your original knob, stalk, boot, and frame as an intact factory assembly while building a fresh, custom shifter setup with your new leather boot.

You can download the 3D printable shift boot retainer frame STL file here: [Saturn Sky Shift Boot Frame on Printables](#).

Parts & Supplies Needed

Replacement Shifter Components (M12 x 1.25 Threads):

- **RedlineGoods Leather Shift Boot:** [RedlineGoods Saturn Sky Boot](#)
- **3D-Printed Shift Boot Retainer Frame:** Printed in PCTG, PETG, ABS, or ASA ([Download STL on Printables](#))
- **Non-Threaded Shifter Adapter (M12x1.25):** [DEWHEL Universal Shifter Adapter](#)
- **2-Inch Shifter Extender (M12x1.25):** [Cheerock 2" Aluminum Extender](#)
- **Shift Boot Retainer / Collar Adapter (M12x1.25):** [DEWHEL Boot Adapter Collar](#)
- **5-Speed Manual Shift Knob:** [LAINLOY 5-Speed Leather Shift Knob](#)

Tools & Hardware:

- **Hex/Allen keys** (Included with the aftermarket parts)
- **Blue Thread locker (Loctite 242/243)**
- **3/16" Allen bit (or T25 Torx bit) & ratchet** (Breaker bar recommended for factory set screw)
- **JB Weld "AutoWeld" 6-Minute Two-Part Epoxy** (Black)
- **Small binder clips** (6–8 count)
- **Small zip tie or thin wire**
- **Wire cutters / scissors**
- **Soap, warm water, rubbing alcohol & microfiber towel**
- **Pen, center punch, or set-screw marring method** for indexing knob orientation
- **M5x10mm Set Screw (Optional upgrade):** Clamps directly onto the factory "D" keyed shaft flat spot (M5x8mm works, but M5x10mm is ideal).

Note: While you can complete the assembly using the set screws included with the adapter, swapping in this longer screw improves clamping force and serves as an external visual indexing mark.

Step-by-Step Installation

Step 1: Remove the Shifter Bezel:

Time: ~5 minutes.

You can remove the bezel without tools: grip the silver console surround and use your fingers to pull the bezel inward toward the shift stalk while applying steady upward pressure. Work your way around the perimeter until all factory retaining clips pop free. (Alternatively, a plastic trim tool can be used to gently pry around the edge). Lift the bezel up over the shift stalk.



Step 2: Remove the Factory Shifter Assembly Intact:

Time: ~15 minutes.

Lift the factory shift boot up to expose the lower collar of the shift knob. Located near the base of the knob is the factory set screw (typically a 3/16" Allen or T25 Torx).

Warning — Heavy Factory Thread locker (Loctite): The factory set screw comes coated in a **heavy amount of blue thread locker (Loctite)** from the factory, making it *extremely* tight and difficult to back out. A standard L-shaped key may not provide enough torque and can strip the screw head. Use a 3/16" Allen socket (or T25 Torx socket) on a ratchet paired with a handle extension or breaker bar for extra leverage to break the set screw free cleanly.

Once the screw is fully backed out, pull the complete factory shift assembly (knob, stalk, boot, and original frame) straight up and off the selector base. Set it aside intact.



Step 3: Separate and Clean the Chromed Bezel:

Time: ~5 minutes.

Once removed from the console, separate the chromed trim bezel from the surrounding outer console trim by carefully releasing the retaining tabs on the underside.

Take this opportunity to thoroughly wash the chrome bezel piece with warm water, mild soap, or an interior detailer. Cleaning out years of accumulated dirt, oils, and cabin dust from the crevices gives the chrome a bright, freshly polished finish when reinstalled alongside the new leather.

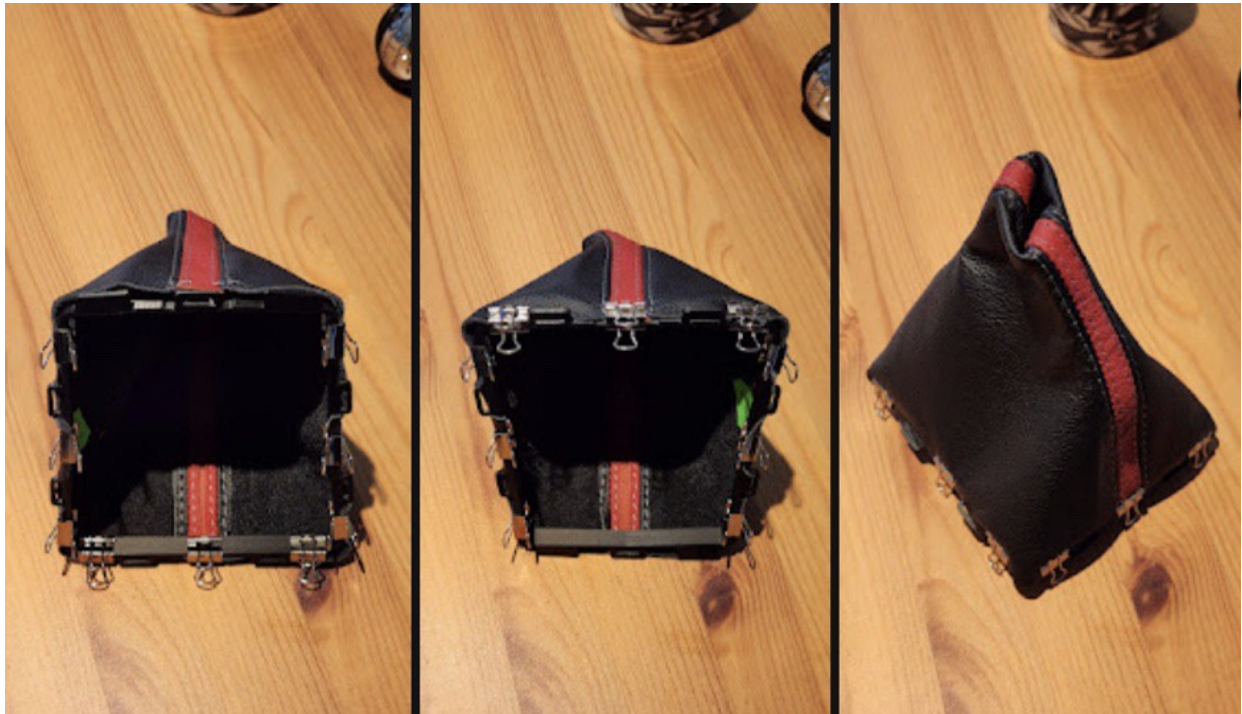


Step 4: Dry Test-Fit Boot on the 3D-Printed Frame:

Time: ~10 minutes.

Take your freshly 3D-printed retainer frame and align the new RedlineGoods leather boot along the bottom edge of the frame, securing it with **binder clips** around the perimeter.

- Verify the alignment of the leather cuts and seams with the 3D-printed frame tabs.
- Test-fit the clamped assembly back into the chrome bezel to confirm that the leather thickness and print dimensions allow the frame clips to snap into place properly.

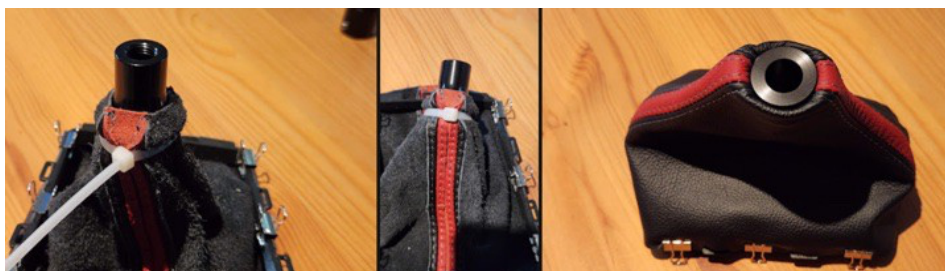


Step 5: Secure Boot Collar to the Shift Boot Retainer:

Time: ~5 minutes.

Before gluing the boot to the lower frame, secure the top neck of the boot to the aluminum boot retainer collar:

1. Turn the RedlineGoods boot **inside out**.
2. Push the narrow end of the boot retainer collar through the top hole of the boot until the recessed groove aligns with the leather collar edge.
3. Pull the leather snug around the groove (taking care not to burst or stress the seams).
4. Secure the leather in place by cinching a **small zip-tie** (or twisting a thin piece of wire) tightly around the boot right over the retainer's recessed groove. Snip off the excess zip-tie tail.
5. Flip the boot right-side out again. The zip-tie/wire will now be completely hidden inside, holding the boot collar tightly against the adapter.



Step 6: Two-Step Epoxy Gluing Process:

Time: ~2.5 hours (includes full cure time).

To achieve clean, straight edges without fighting leather tension, glue the boot to the 3D-printed frame in **two distinct stages** using **JB Weld AutoWeld 6-Minute Epoxy (Black)**, allowing a full 1-hour cure time for each stage:

1. **First Half (Side Centers):** Mix a small batch of AutoWeld. Apply epoxy **ONLY** along the center section of all four straight sides of the plastic frame. Align the edge of the leather flush with the edge of the frame (no need to fold it over), clamp tightly with binder clips in the middle of each side, and let set for a **full hour** to achieve a maximum strength cure.
2. **Second Half (Beside Corners):** Once the straight centers are fully cured and locked in place, work around the frame toward the corners. Gently pull and gather any excess leather toward the corners, apply epoxy along the frame edges right beside the corners, and align the leather edge flush to the frame. Clamp with binder clips and allow another **full hour** to cure completely.
3. **Crucial Detail: Leave the actual corners unglued.** Keeping the corners free allows the leather to drape naturally without binding, keeping all four visible edges completely clean, tight, and straight!



Step 7: Assemble & Index the Custom Shifter Stack:

Time: ~20 minutes.

1. **Sleeve Fitment:** Work the thickest-walled rubber boot sleeve (included with the shift knob) onto the exposed male threads of the 2" extender by hand until fully seated.
2. **Capture the Retainer:** Insert the smooth end of the 2" extender into the top of the boot retainer collar. Thread the non-threaded adapter up from the bottom through the retainer and directly into the extender.
(Note: The retainer collar is not captured by its own threads; the 2" extender captures and clamps the retainer against the adapter).
3. **Indexing Screw Mod:** Replace one of the adapter's standard set screws with a longer **M5x10mm set screw** (an M5x8mm works as well, but M5x10mm is ideal). This extended screw is designed to clamp directly into the flat side of the factory selector's "D" keyed shaft to prevent rotation, while double-duty serving as an external visual index mark.
(Note: If you don't have an M5x10mm screw, the included set screws will also work).
4. **Orientation Alignment:** With the stack hand-tightened, the assembly can still rotate within the boot. Hold the chrome bezel so its short edge faces directly toward you, then rotate the inner stack so the longer M5 set screw points **directly left** (aligning with the flat side of the "D" shaft).
5. **Mark Knob Alignment:** Remove the silver lower collar from the shift knob and back out its set screws (using the included Allen key). Slide the knob all the way down onto the rubber sleeve until it meets the retainer. Align the 5-speed gear pattern straight relative to the bezel, then mark the knob's set screw locations onto the rubber sleeve/extender using a **pen, a center punch, or by snugging the set screws to mar/indent the surface**.
6. **Lock in the Alignment:** Remove the knob and unscrew the 2" extender. Slide the knob back onto the extender, align it with your set screw marks/indents, apply **blue Loctite**, and securely tighten the set screws. Thread the decorative silver collar back onto the knob to hide the screws.
7. **Final Stack Verification:** Thread the extender (now with the knob attached) back into the captured adapter stack. Confirm that the gear pattern aligns perfectly straight relative to the bezel. If it's slightly off, back the extender out, adjust the knob's position on the sleeve, and re-test. *(Note: Blue Loctite takes up to **24 hours to fully cure**, so minor adjustments made soon after assembly can easily be done before the threadlocker locks permanently).*
8. **Thread Prep & Final Lock:** After confirming the orientation, remove the extension one more time. Clean the inner female threads of the extension with a solvent (like rubbing alcohol). Also remove the adapter and clean its exposed male outer threads. Apply blue Loctite to the main threads, reassemble, and tighten down securely.



Step 8: Final Installation & Bezel Reassembly:

Time: ~10 minutes.

1. Remove all binder clips from the lower 3D-printed frame.
2. Snap the leather-wrapped 3D-printed retainer frame into the underside of the clean, polished chrome bezel assembly.
3. Lower the pre-indexed shifter stack down onto the bare selector shaft in the car. Align the longer M5x10mm set screw directly against the flat spot of the "D" keyed shaft, apply **blue Loctite** to all adapter set screws, and tighten them down firmly. **Note:** If the shift knob orientation or stack alignment needs slight tweaking once mounted to the shaft, you can still adjust it **now** before the blue Loctite cures (remember, Loctite takes up to 24 hours to set fully).
4. Lower the entire console bezel and boot assembly down over the installed shifter stack.
5. Reattach the chrome bezel assembly back into the outer console surround trim.
6. Press down firmly around the outer console trim until all factory clips snap securely back into the center console.
7. Gently push the leather down around the shifter so it folds and drapes naturally.



Step 9: Final Cure & Road Test:

Cure & Enjoy.

Make sure you give the blue Loctite sufficient time to fully cure (~24 hours recommended for maximum strength). Once cured, hit the road and enjoy the fresh look and tactile feel of your custom leather shifter!



Filament & Assembly Pro-Tip: I printed my replacement frame out of **PCTG**, which offers exceptional toughness and heat resistance inside the car cabin. **PETG, ABS, or ASA** are also great choices, but **do not use PLA** or other low-temperature filaments due to summer heat warping! Swapping one set screw for an M5x10mm screw gives the adapter a solid mechanical bite on the factory "D" shaft's flat spot while serving as an unmistakable reference point when indexing the 5-speed knob pattern off the car.

Useful tip

Make sure to condition your boot properly, using the proper care products for the material you've chosen for your RedlineGoods item (leather and Alcantara require different treatments) and you'll enjoy it for years!