



# INSTALLATION INSTRUCTIONS

Document# 19-0038

## 2004+ Lotus Elise (Series 2) Rear Clamshell Removal Kit

Safely support the vehicle. This is a two-person job. Allow 1 to 2 hours for initial disassembly. Have an area set aside to put the clamshell down when it is removed. Bag and tag everything that is removed. After the conversion is complete, it will take about 10 minutes to remove the rear clamshell.

1. Safely block the front wheels of the car.
2. Jack up the car and safely support it, remove rear wheels.
3. Remove the rear diffuser.
4. Remove the plastic fender liners from the rear wheel wells.
5. Disconnect and remove the battery from the trunk.
6. Remove all of the carpeting from the trunk.
7. Locate the tail light harness pass-thru behind the battery as well as the alarm connector for the deck lid hinge lock near the center of the trunk on the wall. Unplug both of these harnesses and push towards the pass-thru hole and into the left-side wheel well area.
8. Push the battery cables through the hole and into the wheel area as well. It may be necessary to remove the red rubber cap for the positive terminal in order to get them to pass through the hole.
9. Inside the trunk, on the floor, remove the four 10mm head M6 bolts.
10. From under the rear of the car, remove the two bolts holding the muffler heat shield to the rear panel immediately behind the license plate.
11. Remove the hard (or soft) top roof if applicable
12. Remove the two front seats from inside the car.
13. Remove the upper seatbelt anchor from each side.
14. Shown in picture, remove the black plastic hard top/soft top roof mounts from the roll bar (above each seat, 1 per side).
15. Cut the window rubber molding with a razor at the location shown in picture at right with white line.
16. Remove the rear speaker panel. Make sure to unplug the speakers and the interior light.
17. Remove the 5 Phillips head screws on the overhead roll bar foam cover. Caution: this part is fragile!
18. Remove the 2 Allen head bolts from overhead near the roll bar exposed from previous step. Save these bolts.
19. From inside car, remove and save the 4 rear deck lid hinge nuts and remove the rear deck lid from the clam.



20. From inside the car, reach around behind the roll bar to the back side of the clamshell circled in the picture. Remove the 10mm head M6 bolt from this area. One per side. These will not be reinstalled.



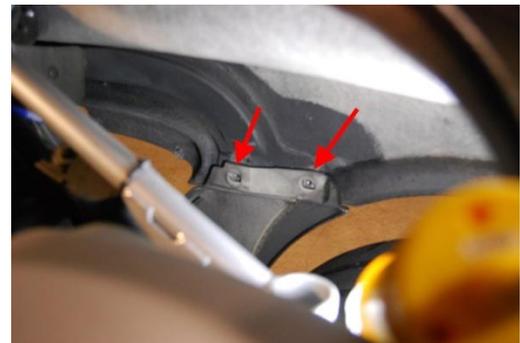
21. From the exterior, unplug the 3rd brake light wire harness.

22. Disconnect and cap the windshield washer motor outlet tube. Plug the hose. Remove windscreen washer fluid bottle by simply pulling up. It will slide off the bracket.

23. Locate the edge trim on the side ducts. Peel the upper (clam) section down and off of the body. This goes back on nicely later. Leave the lower section attached.

24. Remove the 6 Allen bolts on the aluminum fuel filler cover. Early models don't use encapsulated nuts so be careful not to lose these 6 loose nuts. Remove cover. Peel off the bezel from the back of the clamshell.

25. From inside each wheel well, at the forward side, remove the 10mm head M6 bolts in the rocker panels, 2 per side shown in the picture at right (viewed from engine bay).



26. Position yourself near the rear wheel well. Have a helper stand at the opposite wheel well. Gently lift up on the wheel well lip and lift the clam up off of the car. Check to make sure there are no parts snagged or fasteners that are still installed.

27. Lift the clamshell up and then back. Carry clamshell to a safe spot and gently set down. Ensure each of the four corners that touch the ground sit on pads such as E-Z move furniture sliders to avoid damage.

With the clamshell set aside, the modification process can begin:

A. Locate the factory clamshell shims that are taped to the rear chassis structure. Completely remove the tape and the shims at all four locations. These will not be reused.



B. Locate the shim washers at the upper mounting holes, above the rear window near the roll bar. Remove these shims. These will not be reused.



C. Remove the fuel filler bezel and hose from the fuel filler neck. The hose will be attached to the sub-frame. Cut the cable zip-tie to free up the hose. Remove the three Phillips head screws from the back side.



D. Separate the bezel into two pieces. On early models these are attached with an adhesive. Simply pry the 2 apart with a flat head screw driver or a chisel.

Using the smaller piece with the 6 threaded holes, reinstall the fuel filler aluminum cover back on to the rear clamshell. The fuel filler door hinge should be towards the front of the car. The large piece with the hose attached will not be reused.



E. From the kit, locate the small green spacers and M5 screws.

Locate the brackets shown in the picture in the upper section of the clamshell, near the 3rd brake light. Remove the factory screws and install the spacers and longer screws as shown, 2 screws and 2 spacers per bracket. This will space the bracket downward to make up for the loose washers previously on the top near the roll bar .



F. Locate the billet aluminum deck lid hinge brace and associated hardware. Install the deck lid with the brace as shown. Insert the included M6 countersunk screws from the bottom. Place the included M6 washers down first.

Note: These 4 connection points allows for deck lid adjustability front to back and side to side.

Secure the bolts in place using the four factory M6 locking nuts that were removed from the interior side of the hinge mount.



G. After all of the screws in the brace are tight, apply a piece of the included hook and loop (Velcro) to each pad on the brace, as shown.



H. Apply the mating Velcro pieces to the two locations on the firewall that the deck lid hinges originally attached to, just below the rear window.



I. Locate the four black aluminum shim plates in the kit. Lay them out in the locations of the previous taped-on factory steel shims as shown. Note: your shims make look slightly different from the ones shown in these instructions.

Clean the surface to remove the adhesive residue left from the tape.



J. Line up the larger hole in the shims with the threaded holes in frame. Make a mark on the frame at the smaller countersink shim holes with pen. Repeat this process at all four locations.



K. Drill holes at the locations marked with the pen. Start with a small drill bit and work your way up to a 9/32" drill bit.



L. Insert one of the included flat-head Allen bolts through the shim and into the hole drilled in the previous step. Ensure that the large hole in the shim lines up with the threaded hole in the frame. If not, a larger may be in order.



M. Reach your hand, or use a long wrench, into the frame rail and install one of the included lock nuts to the bolt inserted in the previous step. A trick is to use a closed end 10mm wrench and tape one of the sides to encapsulate the nut. Tighten the bolt. Do this at all four locations.



N. With clamshell still off the car, the foam roll bar cover on the interior can be installed. But first, two slots will need to be cut into the cover where the 2 Allen bolts screw into the bottom side of the upper portion of the clam shell.



O. Luckily the cover's underside already has a molded edge (line) drawn for you to cut along. A hand held rotary tool such as Dremel is good to use for this step. Use a multi-purpose cutting bit.

Shown in the picture are the two slots (in red) that should be cut into the roll bar cover.

The complete interior can now be reinstalled.



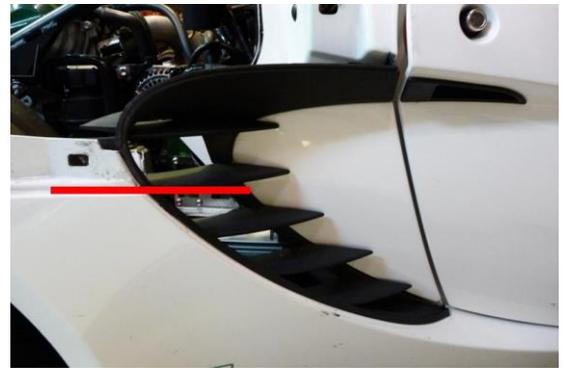
## Optional tips to speed removal time

-Enlarge tail light harness and battery cable access holes to allow the wires to pass through easier. Or better yet, use a compact battery and relocate it to behind passenger seat (as shown), or to the frame rail near fuel filler pipe. This cleans up the engine bay wiring as well.



-Use fewer fasteners to hold the rear diffuser to the rear panel. Or better yet, install quarter-turn (Dzus) fasteners in place of the M5 bolts holding the rear diffuser to the rear panel.

-Using a razor blade, cut the edge trim molding on each side duct at the seam where the clamshell separates from the lower body panel. Install the upper section of molding back on to the clamshell. This saves ~2 minute, but more importantly, 2 steps.



- Use less plastic push rivets in fender liners where they connect to the clamshell. Or better yet, trim the rear 1/3 section off the fender liners so that it no longer engages with the rear clamshell. Saves ~10 min clam removal time.



-Relocate or remove windscreen washer fluid bottle.



The clamshell is now ready to be put back on the car. Open the two doors to avoid scratching the door paint. When placing the clamshell back on, make sure it does not sit on the tail light harness and battery cables. Have these ready to feed through the access holes and into the trunk. Pay close attention to the lip of the clamshell that passes in front of the roll bar. This lip is easy to get the clamshell hung-up on.

Once the clamshell is sitting back in place perform the following to complete the installation:

1. Feed tail light harness and battery cables through access holes and into trunk. The battery cables go through the inboard hole, the tail light harness goes through the outboard hole.
2. Install the four bolts with washers into the trunk floor. Do not tighten at this time.
3. From the interior, install the two overhead Allen bolts near the roll bar, through the holes cut in step O. Once these are tight, tighten the trunk floor bolts.
4. Install the hard top/soft top mounts.
5. Install the side bolts in the front of the wheel well (shown at right). To save steps and time, only install the rear-most bolt in each side.
6. Install the fender liners.
7. Reinsert and press the driver and passenger side vent edge trims back onto the clam shell.
8. Install the rear diffuser.
9. Install the battery and connect battery cables. Pay close attention to the battery terminal polarity.
10. Connect tail light harness in trunk.
11. Connect third brake light and tuck the harness above rear window.
12. Install wheels and drop the car back on ground. Don't forget to torque the wheels.



With all of the modifications in place, and car back to its fully assembled state. Follow this procedure for removing the clamshell:

1. Remove soft top or hard top roof. Remove the roof mounts at the roll bar.
2. Remove battery and push cables through the pass-through hole.
3. Disconnect the tail light and deck lid alarm harness and push it through the pass through hole.
4. Remove the diffuser bolts along the back edge of the diffuser (11 in total).
5. Remove the two Allen head bolts near the roll bar from the interior of the car that pass through the foam holes made in step O.
6. Remove all four 10mm hex head bolts in trunk floor.
7. Disconnect third brake light.
8. Remove plastic fasteners that hold the rear of the fender liners to the clamshell. Note: fender liners will stay on car when clam is removed.
9. Remove the side bolts at the front of each wheel well, 1 on each side.
10. Peel the side vent trims off the clamshell portion

Perform these steps in reverse to reinstall the clamshell.

For Questions, Contact Radium Engineering at: [info@radiumauto.com](mailto:info@radiumauto.com)