

Installation Instructions

SKYROOF® LSS Electric Spoiler Sunroof with Sliding Panel Shade

Part No. SL5100-SS

These instructions are for installing a **SKYROOF® LSS** spoiler sunroof with sliding shade in a vehicle with a hardboard headliner. **RECOVERING the HEADLINER is REQUIRED!**

For instructions on the quick-fit SKYROOF® LS, refer to instructions printed on the template.



SUNROOF KIT CONTENTS

- sunroof main frame with glass and clamp frame attached
- shade track assembly with sunshade panel and (4) attached glides
- sunshade stiffener [Not Shown - kit may include either a molded stiffener panel w/ screws or the shade panel has pre-installed metal stiffener strips]
- Fitting Kit: (24) M5x12 thread forming screws, (1) M5x12 screw, (4) 2.9x22 screws, (1) M3x6, (1) motor cover plate, (2) louvers, (8) louver retainer clips, (1) shade handle, (2) 2.9x13 screws
- Box: motor, wiring harness, (2) screws, (2) wire connectors, (1) switch, (1) switch bezel
- (2) black foam headliner gap fill strips [13-1/4 x 1-5/8 inches]
- (1) coil headliner trim strip (knock-in bead)
- (1) roll foam sealing tape
- (1) paper template

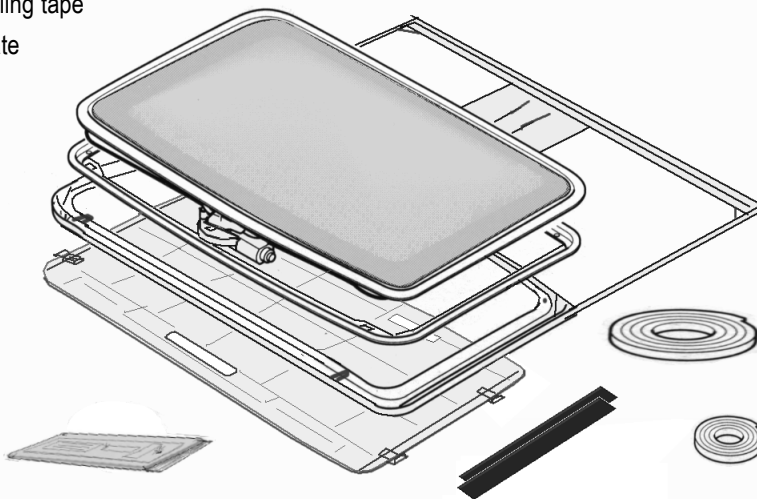
24x M5x12

1x M5x12

4x 2.9x22

1x M3x6

2x 2.9x13



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PREPARATION before you begin, carefully read the instructions and ensure that you have all the necessary tools and supplies on hand.



TOOLS: marking pencil, tape measure, razor knife, scratch awl, file, fiber stick or plastic squeegee, hand held metal snips, pop-rivet tool, scissors, powered sheet metal shear or other suitable metal cutter, electric drill and bits, cordless screw gun with #2 phillips screwdriver bit

SUPPLIES: 2 inch masking tape, bare metal primer, headliner material, headliner adhesive with glue pot and spray gun, wax/grease remover, glass cleaner

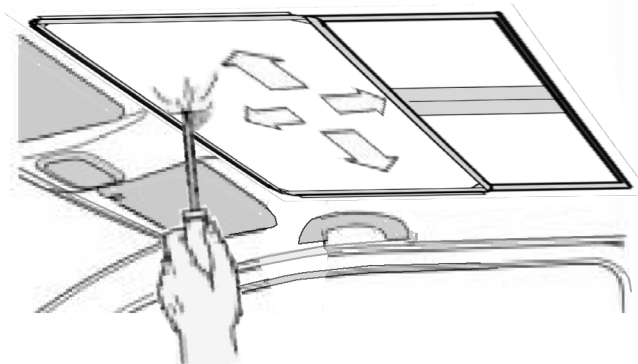
SUNROOF KIT PREPARATION

1. *Verify that sunroof kit is complete and undamaged.*
2. Bench test the sunroof to ensure proper operation. Close the glass fully before continuing.
3. Cover the vehicle interior to keep clean and prevent damage.

SUNROOF INSTALLATION

4. *Position the sunroof:* Place the interior shade tray against the interior headliner and position to avoid any obstructions, allowing 4 inches clearance in front for the motor. Consider obstructions hidden by the headliner such as roof header, side rails and cross bows. **NOTE:** motor can be located above most consoles.

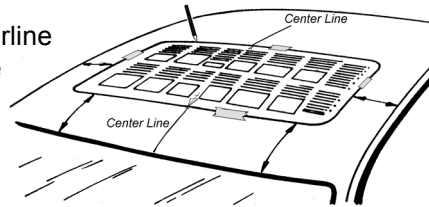
Place the point of a scratch awl against the center inside front lip of the headliner ring (inside edge of the shade tray). Pierce the headliner, and make a slight dent in the roof panel that will be easily visible on top of the vehicle.



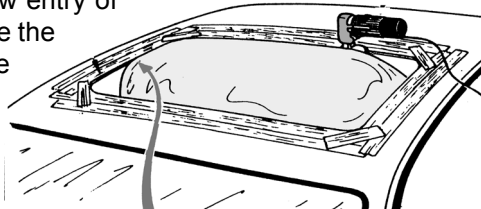
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5. Carefully remove the entire headliner board from the vehicle.
6. If applicable, remove anti-flutter roof bows from the inside of the roof. *Do not remove, cut or modify any structural braces, headers or side rails.*
7. Measure and mark a front-to-rear center line on the outside of the roof with a marking pencil. Draw a "reference mark" crossing the center line at the roof dent made in step 4. Measure and mark the front cut line 1¼ inches in front of this reference mark.

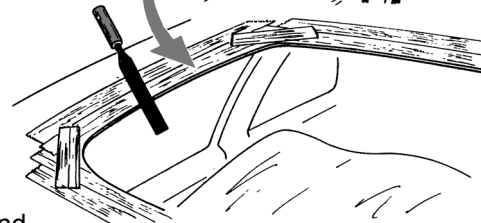
8. Align the template centerline to centerline on roof. Align front arrow on the template to front cut line mark. Tape template in place, and apply 2 inch wide masking tape around the outside of the cut line to protect the paint while cutting the roof panel.



9. Make a hole large enough to allow entry of the cutting tool, 1 to 3 inches inside the cut line. If necessary, enlarge the hole using hand held metal snips. Cut the sunroof opening with a suitable metal cutting tool.



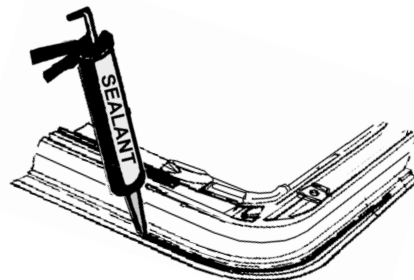
10. Use a file to clean up any rough edges or burrs around the sunroof opening.



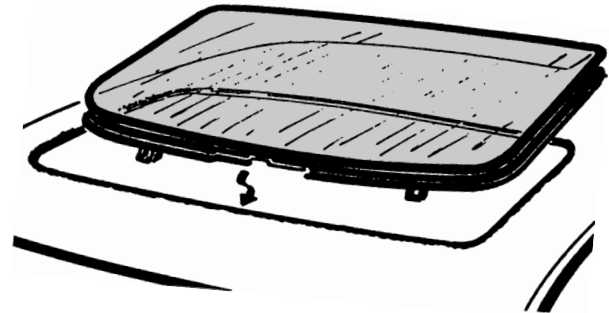
11. Test fit the sunroof. Trim the hole if required and retest. There should be approximately 1/8 inch (4 mm) clearance front to rear, and side to side. Once proper fit has been achieved, remove the masking tape [*peel inward, toward the opening*] and marking pencil lines from the roof.

12. Apply bare metal primer to the cut edge to prevent the metal from rusting.

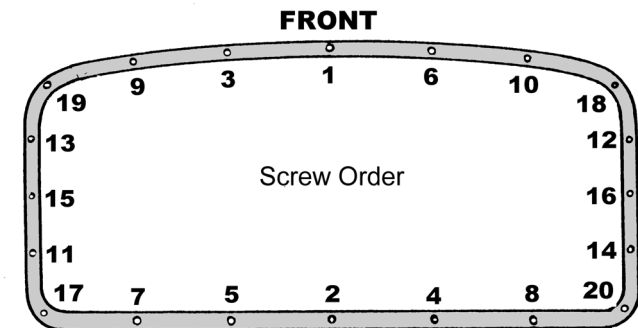
13. Clean underside of main frame with wax/grease remover. Apply sealant to the inside lip of the main frame. Use non-acidic silicone, butyl, or the supplied foam tape. *If using foam or butyl tape, fully overlap the ends in the rear center at a screw hole. Kit includes foam sealant tape, however some technicians prefer silicone or butyl.*



14. Insert the sunroof into the opening, making sure the motor bracket fits underneath vehicle sheet metal.

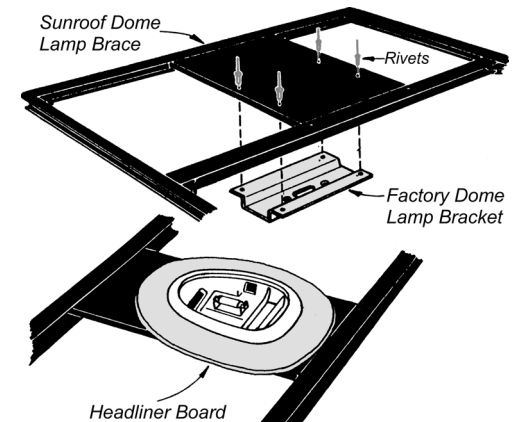


15. From the inside, hook the clamping ring above the motor bracket. Install the screws in the sequence shown – first install the screws hand tight [light clutch setting], then fully tighten in the same order. *Do Not Overtighten!*



16. Clean any excess sealant that may have squeezed out from underneath the frame. Clean the roofskin and outer glass.

17. Relocate the factory dome light (where applicable). Attach the factory dome lamp bracket onto the sunroof dome light brace from the top with pop-rivets (as shown). Cut a section of the molded factory headliner which surrounds the factory dome light (approximately 1½" around the base of the light) and adhere to the cut portion of the factory dome light bracket already installed onto the sunroof dome light brace. Relocate the factory dome light wires to reach the new dome light location (extend the wires and ground as necessary).

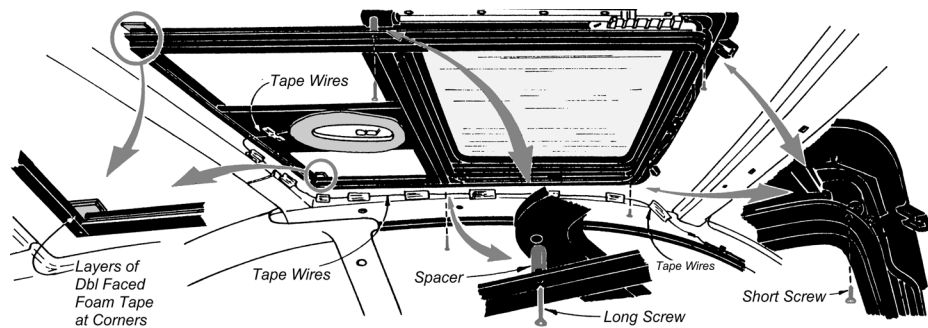


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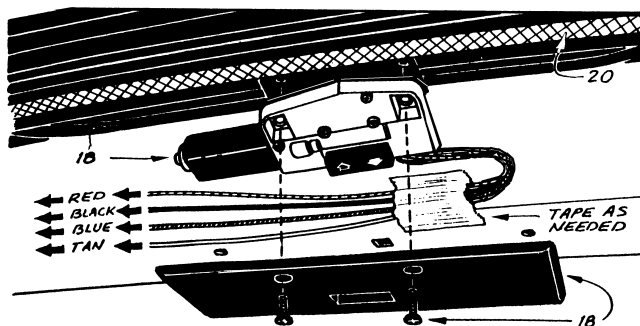
18. Install the sunshade track assembly using the short screws at the front mounting points, and the long screws with spacers at the rear.

IMPORTANT: *Hand tighten only!*

NOTE: If the sunshade track is tight against the inside surface of the vehicle roof, use several layers of double faced foam tape to insulate the sunshade track from the roof and prevent noise and roof dents.



19. Using the supplied hardware, install the sunroof motor and cover plate.



WIRING THE MOTOR & SWITCH

20. Sunroof kits contain one of two different wiring harnesses.

Four Wire Harness: Connect RED & BLUE to ignition switched Hot (min. 15A). Connect BLACK to Ground. *Do not connect TAN wire. (NOTE: the electronic control module option has been discontinued)*

Two Wire Harness: Connect RED to ignition switched Hot (min. 15A). Connect BLACK to ground. Connect the in-line fuse on the RED wire

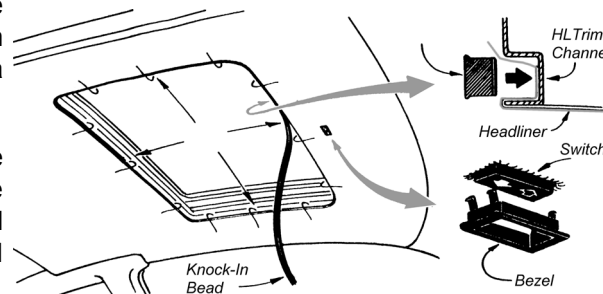
21. Test sunroof to confirm proper operation. Verify glass is seated squarely within the frame and locking hooks are fully engaged. Occasionally, timing adjustment may be required: *Drive panel open 1 inch beyond vent position. Remove motor. Remove gearbox cover plate and gear. Holding the front edge of glass at each side, push panel to rear until it reaches a hard stop on both sides. Insert gear, attach gearbox cover plate and motor. Drive panel closed. This will correct any timing issues.*

22. Adhere the gap fill strips (thin black foam sheet) to the sides of the inner sunroof headliner ring to block light from showing through headliner material.
23. Apply adhesive tape or glue to the inner sunroof headliner ring, and around the switch hole in the motor cover plate.

RECOVER THE HEADLINER:

24. If the headliner is old or damaged, remove the original cloth by peeling off the facing, then use a stiff wire brush to remove the remaining soft foam. Brush off or blow clean with an air hose. *This step is not required on a newer headliner.*
25. Trim the factory headliner board as needed to accommodate the sunroof opening and shade tray. Apply masking tape around the hole to create a clean line from which to stretch the cloth to the sunroof opening.
26. Cut a piece of color matched headliner material to suitable size for installation.
IMPORTANT: use 1/8" foam-back material - thicker material will interfere with the sliding shade.
27. Spray a thin coat of headliner adhesive onto the headliner board, and allow to set according to adhesive manufacturer's instructions. Remove the masking tape. *A glue pot and spray gun are recommended - aerosol adhesives often don't hold up to summer heat. Follow the adhesive manufacturer's instructions for setup time between bonding.*
28. Apply a fine spray of glue to the foam side of the headliner material, and allow to set according to adhesive manufacturer's instructions.
29. Smooth headliner material over the entire headliner board.
30. Apply glue to the interior roof of vehicle as needed, and to the headliner board around the dome lamp mount on the shade tray.
31. Mount the re-covered factory headliner board back into the vehicle.

32. Using a razor knife, cut a hole in the headliner fabric, around the sunroof opening, leaving at least 2 inches of cloth overlapping the headliner ring. Stretch and wrap the headliner material around the sunroof opening, leaving up to 3/4 inches of material overlapping the trim finisher channel. Install the knock-in trim bead into the trim finisher channel with a light mallet to secure the headliner around the sunroof opening. Trim excess material with a razor knife.

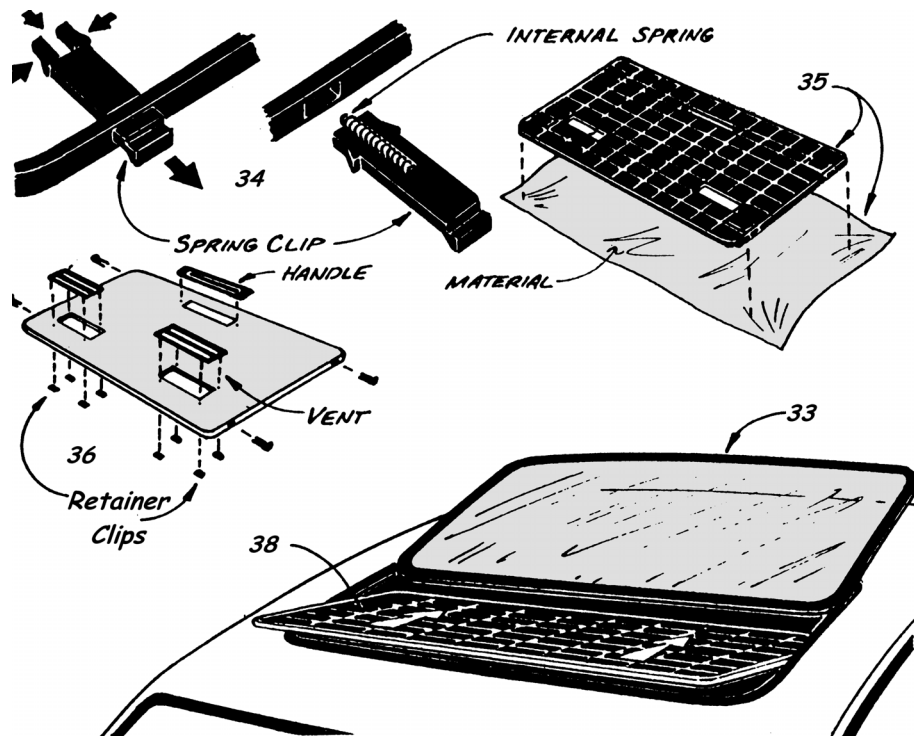


33. Trim and overlap the material around the switch opening. Install the switch bezel and switch.

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SUNSHADE PANEL

34. Carefully remove the spring clips from the sunshade by squeezing the tips together and pulling straight out. Don't lose the springs mounted inside the clips.
35. Cover the sunshade with matching headliner material, making sure to trim and wrap the material around the vent openings and the spring clip openings. *To prevent finger impressions from showing in the cloth, use glue sparingly, and allow to dry before handling sunshade.*
36. Install the vent louvers using the supplied retainer clips. Install the sunshade handle using the supplied screws. Install the spring clips back into the original retracted positions.



37. Newer kits include a molded shade stiffener panel instead of the pre-mounted metal stiffeners strips. *Apply a thin coat of headliner adhesive to the back of the shade and stiffener panel, and allow to tack before attaching the stiffener panel to the back side of the shade using the 15 supplied screws*
38. Open the sunroof. Insert the sunshade into the track from the top. Push the spring clips into shade track to seat the sunshade in place.
39. Operate the sunshade with the glass closed and open to test for proper operation.

40. Re-install any previously removed interior components not already put back.
41. Inspect and clean the sunroof and vehicle. You may wish to wash the vehicle roof for a gleaming presentation.
42. Instruct your customer on proper sunroof operation then provide a written receipt with a completed warranty card.

DONMAR recommends using SEMA's owner information packet envelopes for all warranty and user instructions



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