



INNOVATIVE
**HEAT & SOUND
CONTROL**
SOLUTIONS

INSTALLATION INSTRUCTIONS

PART #902411
HEAT & SOUND CONTROL KIT
2024 & UP POLARIIS XPEDITION
ADV NORTHSTAR 2-DOOR ENCLOSED

INSTALLATION QUESTIONS? CONTACT DEI AT 800-264-9472
OR VIA EMAIL AT TECH@DESIGNENGINEERING.COM

NOTE OF CAUTION: Wear eye and hand protection when installing all materials.

PARTS CHECKLIST

14 Pieces of Boom Mat Felt
22 Pieces of Boom Mat Damping
Piece # 351 - Roof Insulation
Piece # 352 - Roof Insulation
Piece # 353 - Boom Mat Felt
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Piece # 365 - Boom Mat Felt
Piece # 366 - Boom Mat Felt
Boom Mat Tape & Roller

NOTES

- Test fit all parts before sticking down and installing
- **SURFACE MUST BE CLEAN!**
- Install above 60°F

SURFACE PREP

Clean surfaces with Windex/glass cleaner/microfiber towels. **ALL SURFACES MUST BE CLEAN AND GREASE/DIRT FREE** for product to adhere properly to panels and surfaces.

TOOLS

Torx Screw Driver	Utility Knife
Flat Blade Screw Driver	Tape Measure
Straight Edge	Sharpie Marker

1. Open rear glass and tailgate. Remove the rear headliner. It is held in place with Torx screws. Once all the screws are removed, you can pull the headliner down and set on a table. (Fig 1 & Fig 2)



FIG 1



FIG 2

2. Find the smaller White insulation panel. This will sit on the top side of the headliner, between the headliner and roof. Set the fuzzy side down against the headliner, making sure to line up all the cut outs and holes. Fig 3

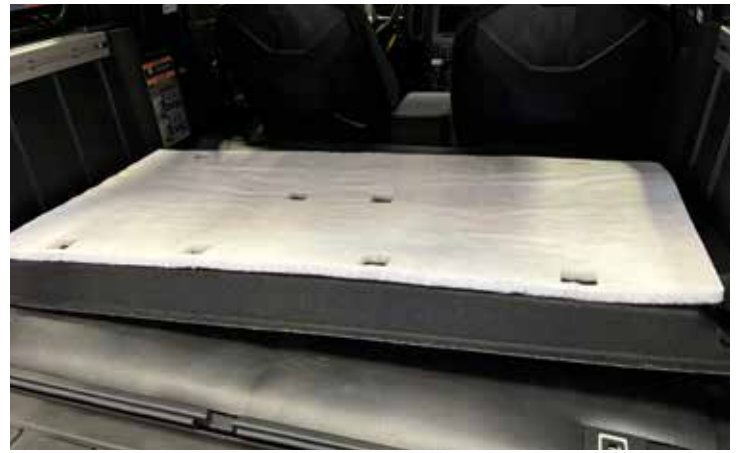
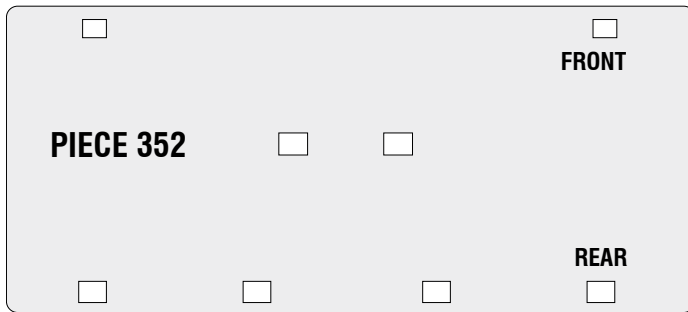


FIG 3

3. Fit the headliner back into place with the White insulation sandwiched between the headliner and roof. Start a few screws and push the edges back into place. Install the remaining screws and tighten, do not overtighten the screws, they only thread into the plastic roof, snug is good. Fig 4



FIG 4

4. Repeat the same procedure for the front headliner, you will have to remove the dome light, push the locking clip on the wire plug to remove. Fig 5 & Fig 6. Remove rear view mirror. The mirror uses two Allen screws. Fig 7



FIG 5



FIG 6



FIG 7



5. Remove the rest of the screws and headliner. Fig 8

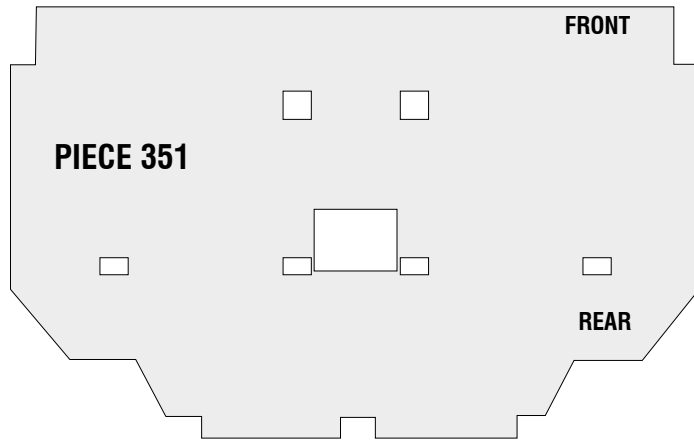


FIG 8

6. Install the White insulation fuzzy side down against the headliner, and reinstall the headliner. Fig 9, Fig 10 & Fig 11



FIG 9



FIG 10



FIG 11

7. Remove the bed floor liner using a flat blade screwdriver on the 4 screws. These are half twist screws; they do not come all the way out. Fig 12

Lift the bed floor liner out and set aside.

Remove both driver and passenger seats. They each have 2 Torx bolts in the front, remove these bolts and push the seats forward to release the rear mount.

Lift out and set aside the two factory sound absorbing material pieces, these will be reinstalled latter. Fig 13

8. Using the 12x12 Boom-Mat squares, layout a pattern on the cargo floor. Start in the middle rear of the bed, center two pieces making sure not to cover the rear bolts holding the bed floor. Before peeling the backing off, put two squares down and push the Boom-Mat into the grooves. Measure the distance to each side of the bed to make sure you are centered. (This is not critical; the goal is to cover the entire bed floor) make sure to overlap the squares slightly so you have no gaps. Once you are satisfied with the fit, peel a corner of the backing and stick to the floor. Then lift the remaining part of the square back up to peel the rest of the backing, pushing it into contact with the floor. Use the supplied roller to smooth and get good contact with the floor. You need good contact with the material to function properly. Fig 14



FIG 12



FIG 13



FIG 14

Center the first 2 12x12 Boom Mat squares but make sure to not cover bolts.

9. Using a tape measure or ruler, measure from the edge of the Boom Mat piece you just put down to the bedside. You will need to cut a piece of Boom Mat to fit this space. Fig 15 & Fig 16.

NOTE: Best to use a metal straight edge and a utility knife to cut Boom Mat material. It cuts cleaner with aluminum side facing up.



FIG 15

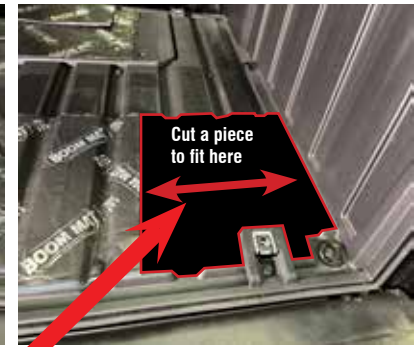


FIG 16

Measure these distances and cut pieces of Boom Mat damping material to fit each side

NOTE: You will have to notch around the hold down for the bed liner on both sides. Fig 17

10. Fit the cut part just like you did with the first two. Making sure to form it to the grooves before peeling the backing. When you install the part, start at the bedside and work towards the middle. You do not want to go up the bedside with the part. Repeat for the other side.



FIG 17

Notch Boom Mat material around hold downs for bed liner

11. Start on the next row, measure up to the access door, follow the same procedures to lay it down. Fig 18

NOTE: You will notice that you are covering up some bolts on the floor. You will need to cut around these using a utility knife after you have install the squares, just push with your finger to make an outline of the bolt head and then cut the material out.



NOTE TO TRIM OUT AROUND BOLT HEADS



FIG 18

12. After the bed floor is covered, remove the access hatch in the bed floor. It uses 4 half turn screws. Fig 19.

Measure and cut material to cover the entire hatch. Cover over the screws for now and use the roller to make good contact. Fig 21.

NOTE: Using your finger, make a depression around each screw, using a utility knife, cut around the screws and remove the material, exposing the screw heads. Install the hatch. Fig 20



FIG 19



FIG 20



FIG 21

NOTE: If you have small gaps, use the Boom-Mat tape provided to cover these areas.

13. Using Boom-Tape, cover the area of the bed that wraps down behind the seat. Go only to the break where the bed floor meets the back firewall. Fig 22.

NOTE: Cut around the bolts to remove material.



FIG 22

14. Continue fitting squares of Boom-Mat down the passenger side firewall behind the seat and under the seat. Fig 23

NOTE: Cut around any bolts to remove material.

**Rear firewall behind
passenger seat**



FIG 23

15. When going under the seat. Make sure to leave room for the seat to hook the rear fastening bar. You want to cover as many openings and gaps and still have the seat fit back down. Use squares and tape as needed. Fig 24

**Make sure to leave room
for the seat to hook the rear
fastening bar.**



FIG 24

16. Remove the fuel tank cover and cover it with damping material, shaping material as needed and cutting out over the screw hold down. Fig 25



FIG 25

17. Reinstall the factory sound absorbing material removed earlier. Fig 26



FIG 26

18. Add Boom-Mat tape to open areas as needed. Fig 27



FIG 27

19. Repeat the process on the driver side. The drivers side has an access panel for the ECM. It is held in place by push pins, use a flat blade screw driver to remove the pins. Fig 28



FIG 28

20. Cover the panel just like you did for the other panel and hatches. Reinstall using the push pins you removed. Use Boom-Mat tape and squares to cover the rest of the firewall behind the driver seat, reinstall the factory sound absorbing material removed earlier. Fig 29



FIG 29

21. Remove and cover the battery box cover under the driver seat. Fig 30

NOTE: Cut around any bolt/push pins to remove material.



NOTE: CUT AROUND BOLTS/PUSH PINS

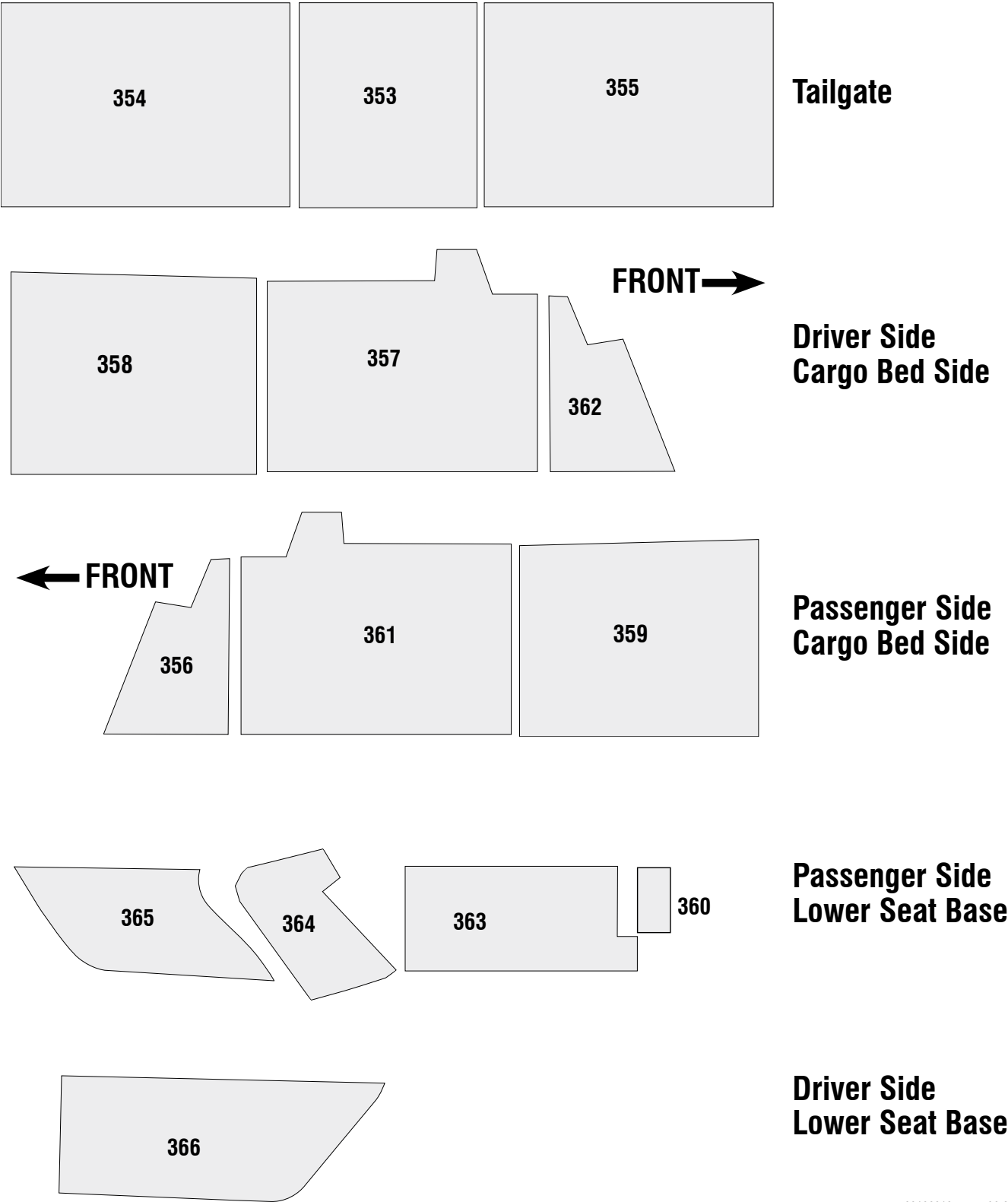


FIG 30

INSTALLING THE FELT COVERED BOOM MAT BED PIECES

The kit includes pre-cut pieces; lay all the parts out in the location they will go before you start to stick any pieces down. This will ensure you have them all in the correct location.

NOTE: Start by Cleaning the tail gate and bed sides. All panels must be clean for the Boom Mat to adhere correctly.



22. Starting with the Tailgate, find the three pieces, these will be marked 354, 353 and 355. The smaller part 353 will be the center of the Tailgate. The other two will be the sides. Fig 31

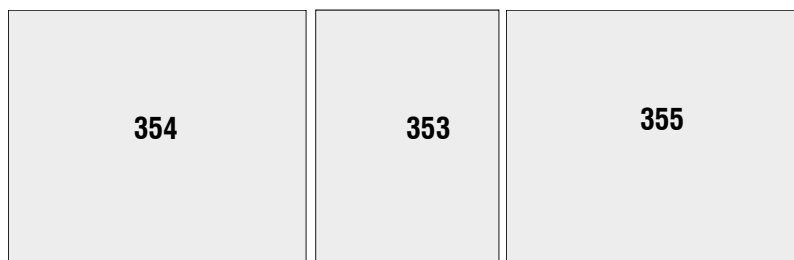


FIG 31

23. Lay the tailgate side pieces (piece 354 & piece 355) on the tailgate and then lay down the middle tailgate piece. (Piece 353) Line them up so you have an even spacing left to right. Once you have them lined up, remove the driver side piece (piece 354) and leave the other two in place. They will act as your guide to install the first piece. Fig 32



FIG 32 TAILGATE FOLDED DOWN VIEWED FROM REAR

24. Peel back about an inch of the release liner on the under side, and fold it over. Fig 33.

Place the piece back in place, making sure not to move the other two. Push down on the piece to stick the area in place that you peeled the release liner from. Once that is stuck down, check your alignment once more. If everything looks good, lift the piece up from the end that still has the release liner on the back and slowly peel the rest of the liner off as you stick the piece down. Once completely down firmly press to make sure you have good contact. Repeat the for the other two Tailgate pieces. Fig 34



FIG 33 Peel back small section of backing, set piece in place and press down. When you are sure the piece is exactly lined up, peel the rest of the backing off and press down.



FIG 34

25. Starting with the driver's side bedside. Locate the three pieces 358, 357 & 362. Fig 35

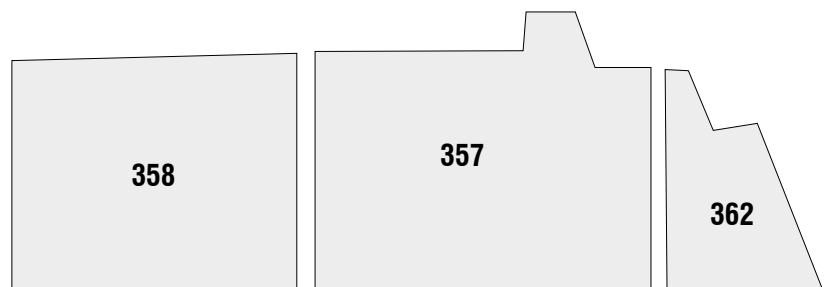


FIG 35

26. Hold them in place to see how they fit. Start with the rear piece (PIECE 358). Hold it in place lining it up with the rear tailgate edge. When it is in the correct position, using a masking tape, tape that piece in place. Then place the middle piece (piece 357) against the bed side and when it is lined up, tape it in place. Finally take the front piece (piece 362) place that against the bed side and when that is lined up, tape that piece in place as well. Fig 36



FIG 36

27. Once all three bedside pieces are in place and you have the location of each piece where it should be, start by peeling a corner of the adhesive backing off the rear piece (piece 358) and stick that to the bed side. Making sure the other pieces do not move, slowly peel the rest of the backing off the rear piece and press it against the bedside. Repeat this process for the middle piece (piece 357) and the front piece (piece 362). The front piece (piece 362) bends around the corner, so just press it firmly onto the surface. Fig 37



FIG 37

28. Repeat the same process for the passenger side with the passenger side pieces rear piece (piece 359), Middle piece (piece 361) front piece (Piece 356) Fig 38



FIG 38

29. Locate the driver side outside seat base piece (piece 366) Fig 39

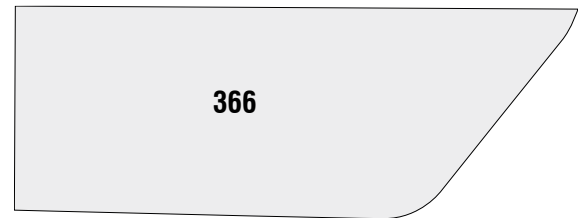


FIG 39

30. Piece 366 starts along the rear of the driver seat base, and goes along the side of the seat base, and wraps around to the front. Fig 40 & Fig 41

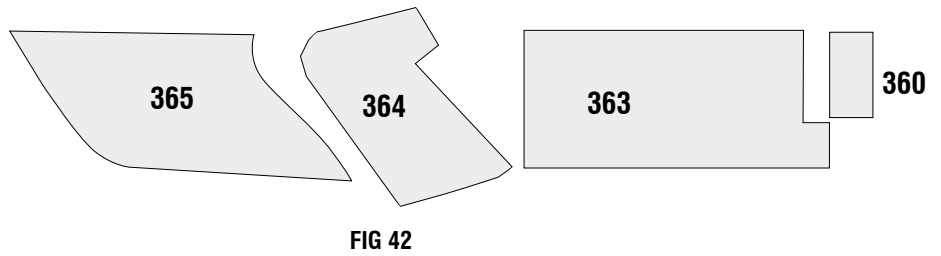


FIG 40



FIG 41

31. On the Passenger side the kit has 4 pieces for the seat base. Piece 365, Piece 364, Piece 3631, Piece 360. Fig 42



32. Mockup all the pieces before sticking any part down. Start with the outer piece, (Piece 111)hold it in place and then peel about an inch on the release liner, stick the part in place and then peel the rest of the liner off and firmly press to adhere. Fig 43 & Fig 44



33. The next piece will be the corner part (PIECE 364), repeat the same process, making sure to fit the edge to the piece you just installed. Fig 45



FIG 45

34. Continue with the larger piece that goes on the front center of the passenger seat base (Piece 363) Fig 46



FIG 46

35. Then the last small piece that goes on the passenger seat base and goes the edge goes up against the center console (Piece 360) Fig. 47

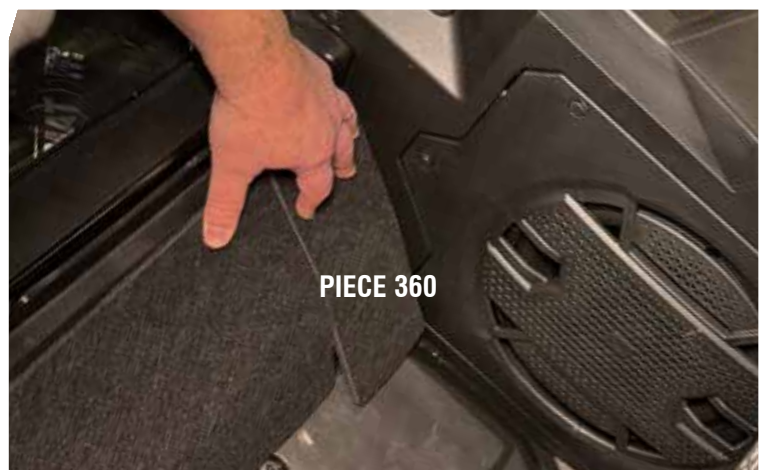


FIG 47

36. Reinstall the seats, Torquing the factory bolts to the factory torque specification

Kit installed with all pieces and rear floor removed to show Boom Mat damping material installed.



Kit installed with all pieces and rear floor in place to show final installation.

