ZN6 / ZC6 Adjustable Carbon Thermoplastic Front Splitter

Install Manual

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Document Revisions

Rev	Date	Author	Description
01	2016/11/08	E.Hazen	Initial release of install manual.
02	2017/08/08	P. Lucas	Company name change from Velox to Verus
03	2021/07/01	C. Warner	Hardware Update

CONTENTS

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

1. Introduction

1.1. Overview: Detailed instructions on installing the adjustable, carbon thermoplastic, splitter for the ZN6/ZC6 chassis.

1.2. Difficulty: Moderate

1.3. Time Required: 4 hours

1.4. Tools Needed:

1.4.1.Splitter Install

- **1.4.1.1.** Jack and Jack Stands
- **1.4.1.2.** Screwdriver
- **1.4.1.3.** 10mm Socket
- **1.4.1.4.** Ratchet
- **1.4.1.5.** 5/32 Allen Wrench
- **1.4.1.6.** 5/64 Allen Wrench
- **1.4.1.7.** 5/16 Thin wall socket
- **1.4.1.8.** 3/8 wrench
- **1.4.1.9.** 7/16 wrench
- **1.4.1.10.** Drill
- **1.4.1.11.** Tape Measure
- **1.4.1.12.** Center Punch
- **1.4.1.13.** Starter Drill Bit or Pilot Sized Drill bit (1/8”)
- **1.4.1.14.** 1/4” Drill Bit
- **1.4.1.15.** 2” hole saw
- **1.4.1.16.** Touch up paint (optional)
- **1.4.1.17.** Level

1.5. Splitter Components

- **1.5.1.** Splitter
- **1.5.2.** (2) Two Inch Splitter Extension
- **1.5.3.** (2) One Inch Splitter Extension
- **1.5.4.** (7) Splitter Support Rod Assembly
- **1.5.5.** (6) Splitter Support Rod Extender
- **1.5.6.** (10) Support Rod Clevis
- **1.5.7.** (2) Left Core Support Bracket
- **1.5.8.** (2) Right Core Support Bracket
- **1.5.9.** (1) Hardware Bag
  - **1.5.9.1.** (12) M6 18mm Washer
  - **1.5.9.2.** (24) M6 Serrated Nut
  - **1.5.9.3.** (12) M6 12mm Washer
  - **1.5.9.4.** (18) M6 25mm BHCS
  - **1.5.9.5.** (16) M6 16mm BHCS

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

1.5.9.6. (10) 1/4" x 1.50” Fender Washer
1.5.9.7. (2) M6 60mm BHCS
1.5.9.8. (8) 6-32 Nyloc Nut
1.5.9.9. (8) 6-32 0.38” FHCS
1.5.9.10. (4) M6 5mm Nylon Spacer
1.5.9.11. (4) M6 10mm Nylon Spacer

2. Front Splitter Installation

2.1. Verus is not responsible for damage to you or your vehicle by following this manual and/or installing Verus Engineering products

2.2. Due to the mounting of this splitter, at certain points during the install, you may have to interpret your own specific mounting on the splitter.

2.3. We begin by jacking the car up on a level surface. Use of the e-brake and/or wheel chocks is suggested.

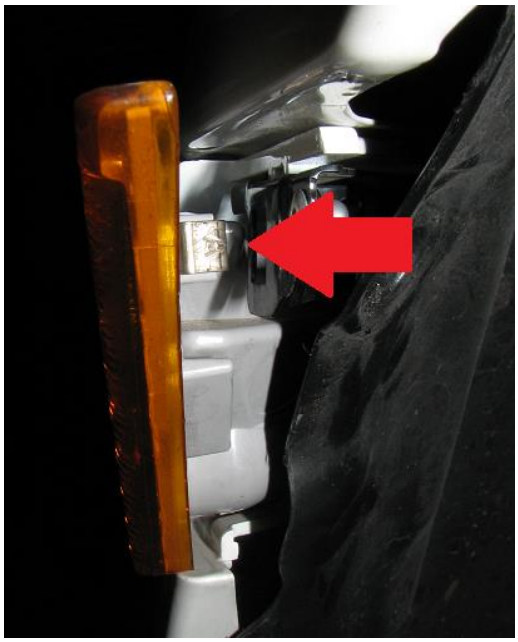
2.4. Secure the car with two jack stands with enough room to access all the area under the front bumper.

2.5. Remove the plastic panel located in-between the radiator and the front bumper. There will be six push pins (shown in red below) and three 10mm bolts to remove (shown in yellow below).

2.6. We will need to fully remove the front bumper for this install. To remove the front bumper, remove the strip of 10mm bolts and plastic push pins across the top of the front bumper.

2.7. On each side of the car in the wheel wells, we'll want to remove the (4) plastic screw pins. Three are located on the bottom portion of the wheel well (shown below) and the last one is near the side marker.

2.8. The turn signal has to be removed to expose the final plastic push pin and then the front bumper will come off. There is a metal tab that needs to be push towards the ***front*** of the car. The arrow in the picture shows this well. We use a flat head screwdriver to push this forward and then gently pried the signal away from the car.



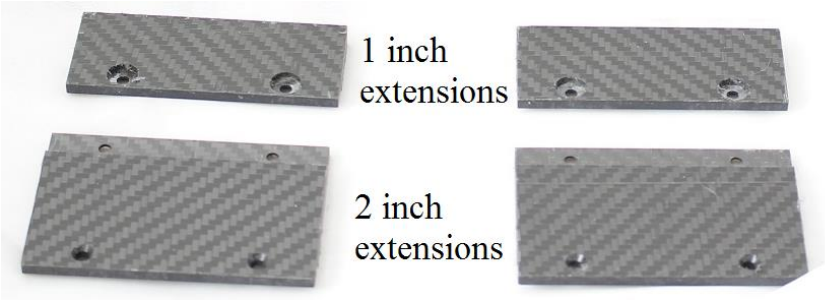
2.9. The final push pin is circled here. Remove this with a flat head screw driver.

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

2.10. Gently pry around the front bumper to remove it completely. Pull outward and forward. If it does not come easily, ensure all bolts/push pins/etc are completely removed!

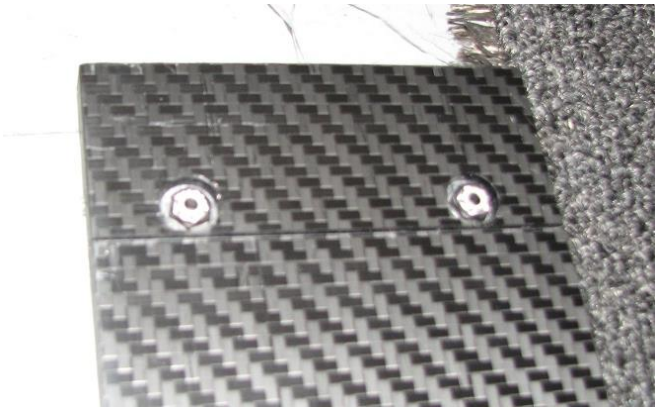
2.11. We are to the point where we can begin installing the actual splitter components! But first, we need to decide how far out from the front bumper you want the splitter to sit.

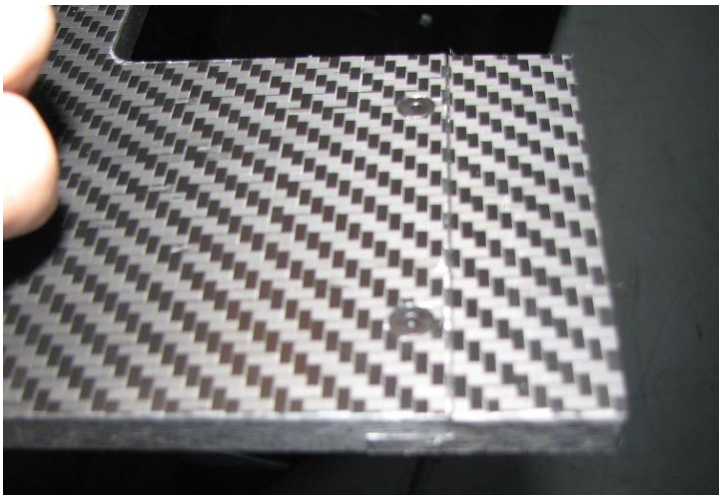
2.12. For an approximately 2" front splitter, you will not add any extensions, for the 3", you'll add the 1" extension, for 4" you'll add the 2" extension, and finally for 5", you'll add the 1" and 2" extensions.



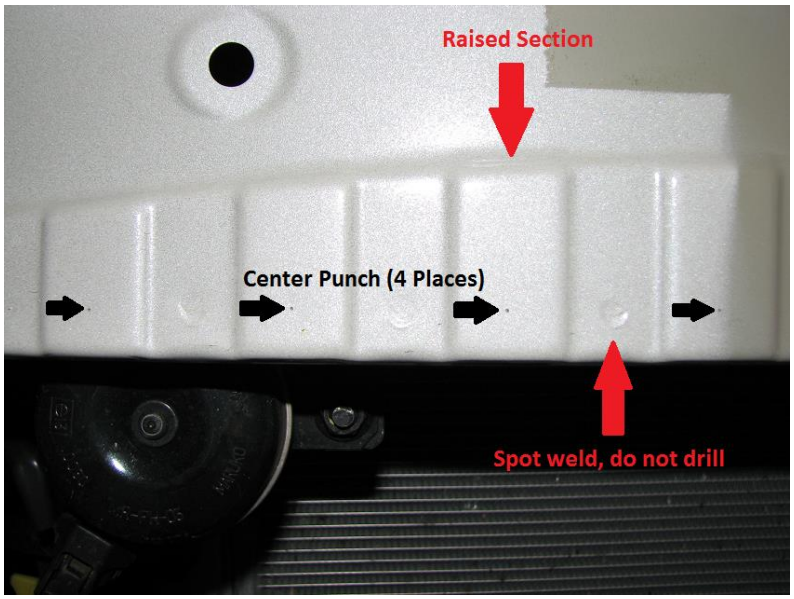
2.13. Once you decide which length you're interested in, it is time to install these extensions. Using a 5/64" allen wrench and a 5/16" thin wall socket, we can install the 6-32 hardware as shown below. We went with the 3" length currently, which is what you'll see below. These fasteners just need to be snug, as the nyloc should not back off.

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

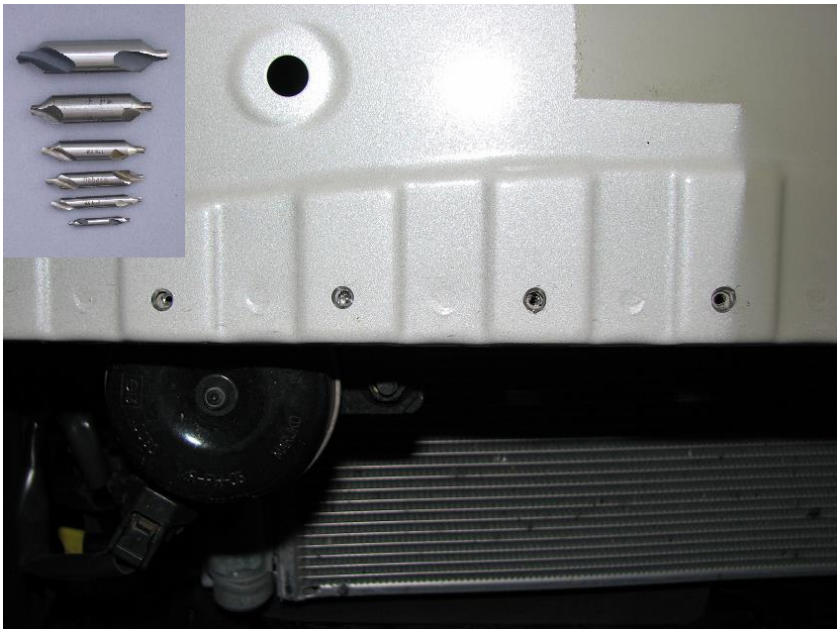




2.14. Starting with the core support front mounts, we can follow the same install procedure as our race upgrade. This starts with drilling the front crash beam. You will notice that there are raised portions of the crash beam and then portions with spot welds on it. You will want to drill the raised portions as drilling through a spot weld can get bad quickly. The splitter supports were designed around an **18.50" spread**, which leaves ***6 raised*** sections between the brackets. Center punch the next 4 raised portions, using the brackets to ensure that you can bolt them on the crash beam in the location necessary for a proper install with the grill.



2.15. It is recommended to use a starter drill bit next (top left of picture) as these can greatly help cutting through sheet metal and ensuring that the drill is going through the material straight.



2.16. Using the 1/4" drill bit, drill through both parts of the sheet metal. Vacuum out all of the metal shavings you can. It is recommended to spray the holes with spray paint or touch up paint (at the very least) and underbody rust resistant if you have some. This ensures that the crash beam will not rust for years to come.

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

1.1. Ensure that the brackets will fit and that they can slide together till there is a 10mm gap between the two mounting holes for the splitter tie rods. Do this by using the (8) M6 x 1.0 x 16mm long BHCS, (8) M6 x 18mm, and the (8) M6 x 1.0 flanged nuts. You do not need to tighten these down, just enough to know if the brackets will work once the bumper is put back on. Once you ensure the holes were drilled properly, remove the brackets and reinstall the bumper in reverse order

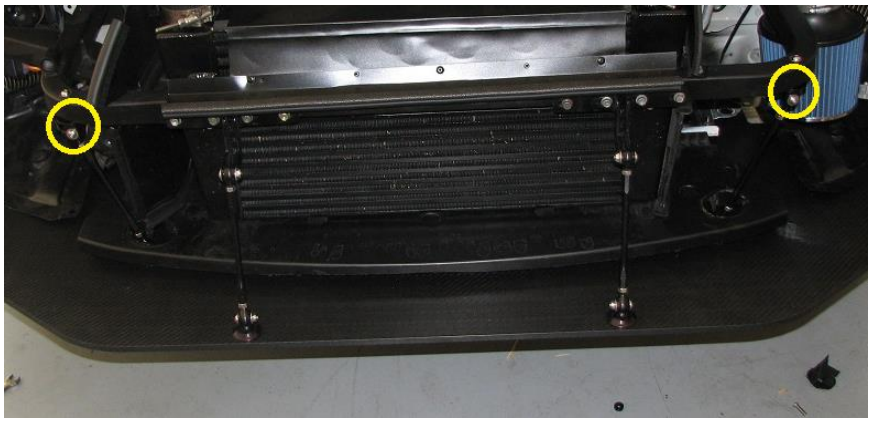
1.2. For the rear outside mounting locations, we need to lengthen the support rods, which are what the extension units are for. Fully tighten (3) of these onto the support rod. The support rod has a left hand and a right hand side thread, these go on the right hand thread side. ***Note: When tightening these into one another, use lubricant and/or anti-sieze. If you notice resistance, back out the unit, ensure the threads are clean, and try again.***

2.17. Install this lengthened support rod with a clevis in the location shown below. Use a 25mm BHCS, 12mm washer, and a serrated nuts to fasten the support rod to the clevis. Use a 16mm long bolt, 18mm washer, and the M6 flanged nut to tighten the clevis onto the car.

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

1.3. Install the lengthened support rod on the other side as well.

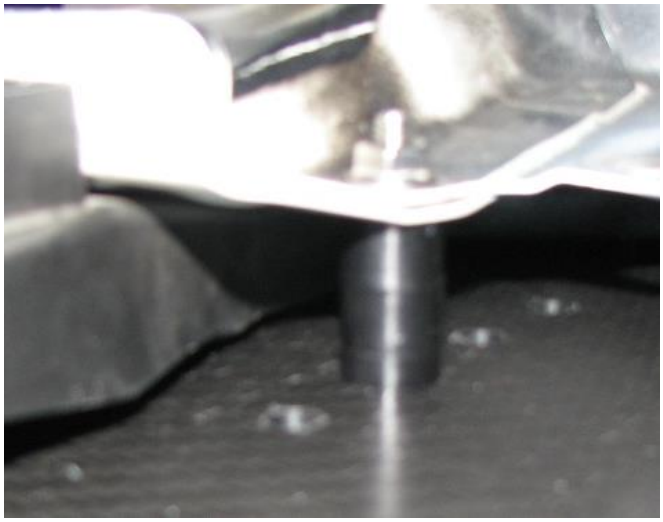
1.4. The last two location are the middle two points. These are not necessary light use; but for heavy use we recommend adding these to further strengthen the splitter's support system.



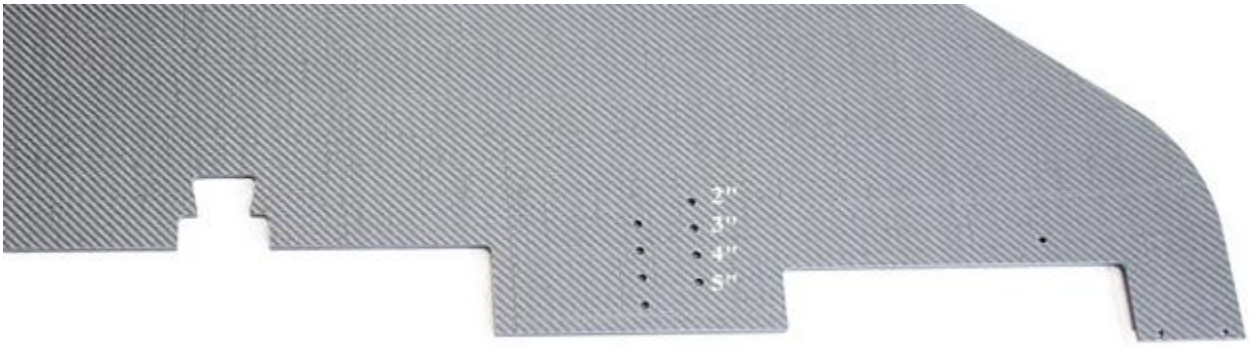
1.5. To install these middle two locations, you'll need to drill holes into the core support on the bottom side. The clevis will go on the bottom side and a BHCS and washer will tighten the clevis from the top. ***You will need to ensure that the location you choose will allow the support rod to be long enough to fasten to the splitter yet.***

1.6. We recommend installing the splitter at this time to make a few more holes, so install the front support rods to the brackets on the core support at this time.

1.7. Temporarily install the splitter via the rear two points and the front most two points. The rear two points receive the 60mm long BHCS, large fender washer, spacers, and the serrated nut on top as shown below. We recommend using the outer hole locations.

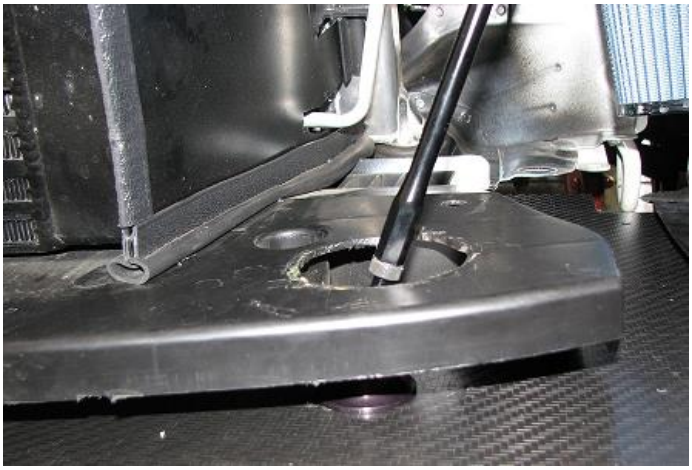


1.8. The holes are marked below for location on how far forward the front splitter will sit.

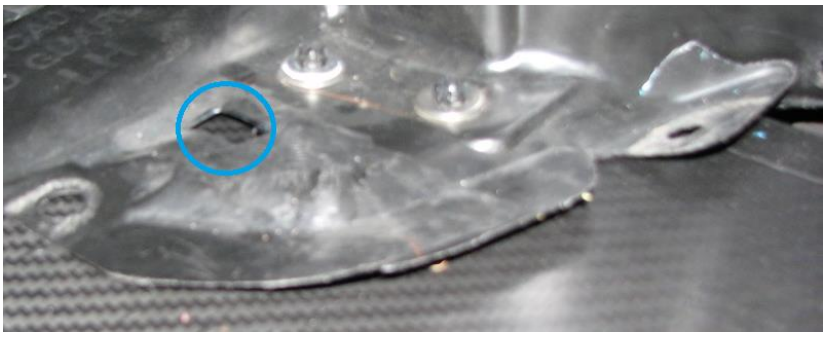


1.9. Temporarily install the front two locations as well.

1.10. If you plan to use the middle two locations with the plastic piece that is under the radiator, which we recommend, you'll need to punch two holes out of this. Using a hole saw, make two cuts in the plastic based off the hole location on the splitter. This is shown below.



1.11. Moving to the rear outside two locations, we'll need to cut holes in the fender liner so that we can fasten the splitter to the support rod here.

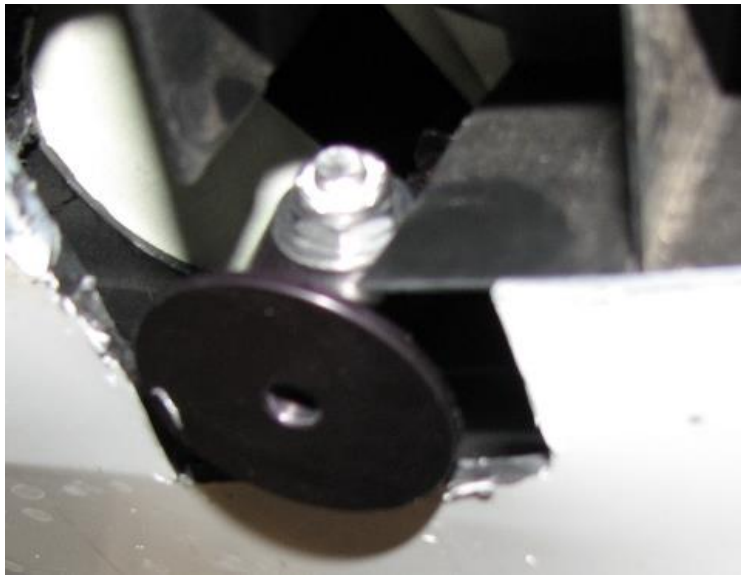


1.12. With the splitter off, this cut out looks like this from below.

1.13. With the bumper off still, fasten the splitter to all (6) support rods and using the level, level the splitter to the best of your abilities as the height it will be installed at. Lengthen the support to move the splitter down, shorten the support to bring it upward.

1.14. Reinstall the bumper and ensure fitment of the splitter to the bumper looks and fits well. Adjust as necessary and then remove the bumper for step 2.33.

1.15. Depending on how far forward you install the splitter, the bumper may need a bit of clearance for the clevis to bolt to the splitter. This is shown below.



1.16. When fitment is to your liking, tighten all the support rod locking nuts and tighten the rod ends to the clevis. Remember, one side is right hand thread, the other is left hand thread.

1.17. Once all the support rods are fully tightened, we can install the bumper and splitter for the last time.

1.18. Reinstall the bumper in reverse order and bolt the splitter onto the support rods. Utilize 25mm BHCS and the 1/4" fender washers.

1.19. These bolts only need tightened to roughly 8-14 ft-lbs, just past snug.

ZN6/ZC6 Chassis Adjustable Carbon Thermoplastic Front Splitter

1.20. Congratulations, you've successfully installed the Velox adjustable carbon thermoplastic splitter! Enjoy the increase in front end downforce. Please let Velox know of any feedback, concerns, and questions via our e-mail, sales@verus-engineering.com.