

# How to Install Stebel Horn Hit by Excel Cycle Werkes

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I take no responsibility for ensuring the accuracy of any information (including procedures, techniques, parts numbers, torque values, tool usage, etc.), or further for any damage of any kind or injuries incurred or caused by anyone following the instructions or information found here.

It is the duty of the individual to either assume the liability himself for responsibly using the information found here, or to take the bike or accessory to a Dealer or other qualified professional service.

## I. Preface

- a. Motorcycle Model: 2011 BMW R1200GS Adventure with ESA
- b. The Stebel Horn kit was purchased from Excel Cycle Werkes  
[http://www.excelcyclewerkes.com/index\\_files/Page732.htm](http://www.excelcyclewerkes.com/index_files/Page732.htm)
- c. Many of the steps itemized in this install guide are modifications from the included instruction sheet from Excel Cycle Werkes
- d. There are two horn mounting options: Original mount location from Excel Werkes and my preferred location

## II. Tools Required

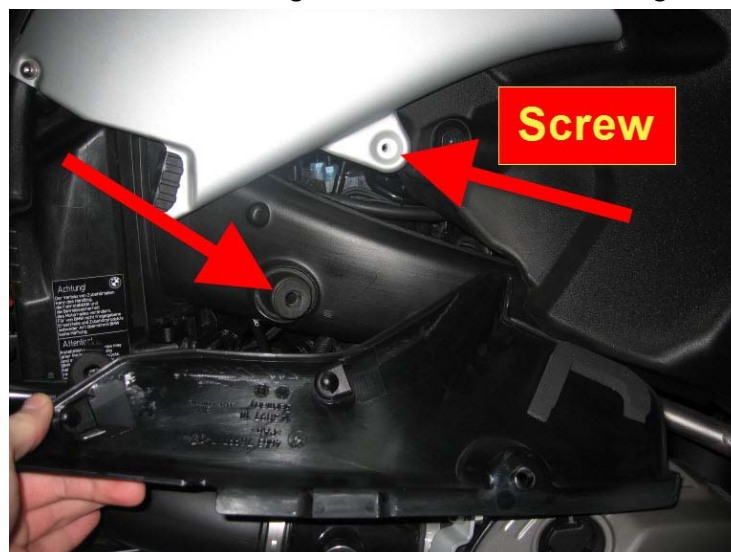
- a. 10mm & 13mm Socket
- b. 10mm & 13mm box wrench
- c. T20 & T25 Torx
- d. Vice Grip
- e. Heat Gun
- f. Zip Ties
- g. Friction or Electrical Tape
- h. Included Dielectric grease provided inside the Excel kit
- i. Included heat shrink tubing provided inside the Excel kit

## III. Steps

- a. Place bike on center stand and remove seats
- b. Remove panels from right side of the motorcycle
  - i. Start with the long panel that has the BMW badge on it.
    1. Remove the (3) screws.
    2. NOTE: The screw closest to the rider (under the #2 in 1200, is longer).



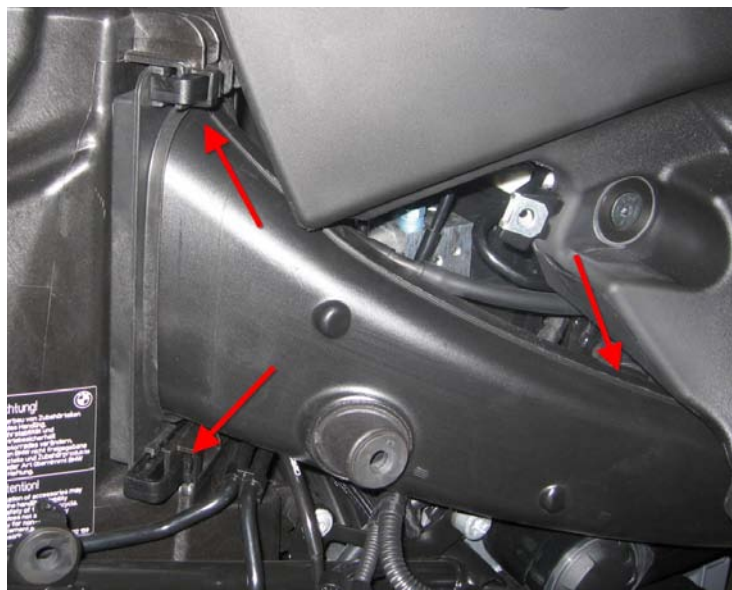
- ii. Remove the little black piece below the silver panel
  1. There is (1) screw and (2) rubber grommets.
  2. NOTE: The screw on right side black piece is longer than the others; however, it is shorter than the "longer" screw from the BMW badge body panel.



- iii. Remove the Silver "GS" panel.
  1. There are (2) screws holding it in place.



- iv. The air filter intake is held in place by (2) clips and (1) rubber grommet.
  1. Depress the latches and slide them outward.
    - a. This may require the use of a small flat screwdriver.
  2. Take two hands and grab the intake. Place one hand closer to the front of the bike near the grommet and place the other at the latches.



3. Pull straight outward; the grommet may take some force.
- c. Now that the panels and intake are off, you have access to the canal under the tank to run the wires for the horn.

#### IV. Steps using Excel kit

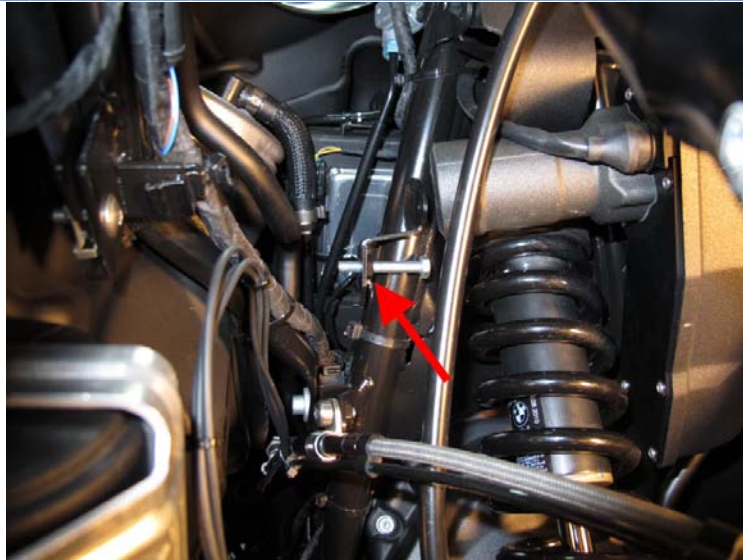
- a. Unplug the stock horn and remove it using the 13mm socket



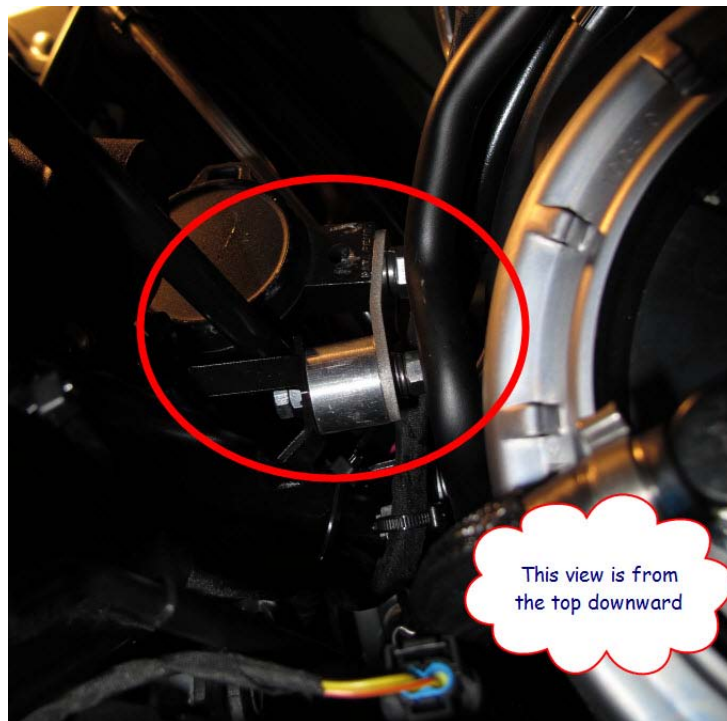
- b. Remove the OEM extension bracket that is attached to the main bracket
  - i. The extension bracket is attached using a T-20 torx screw that goes into the welded nut
  - ii. I found that the clearance for normal tools was limited, so I took a T-20 torx bit and placed it into my vice grips, allowing me to tediously remove the screw



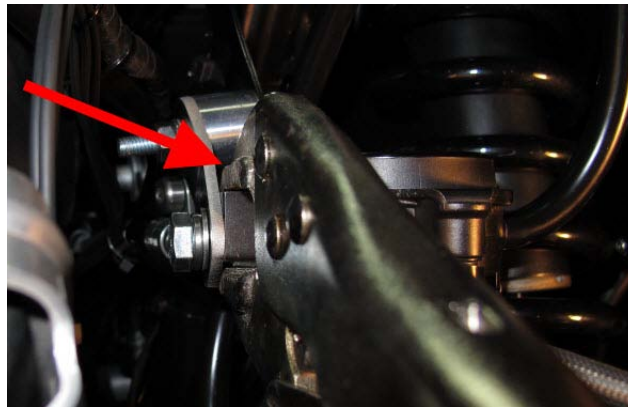
- c. I found it easier to thread the smaller 6mm bolt through the backside of the welded nut going from right to left (there is not much room to work in this area, so have patience)



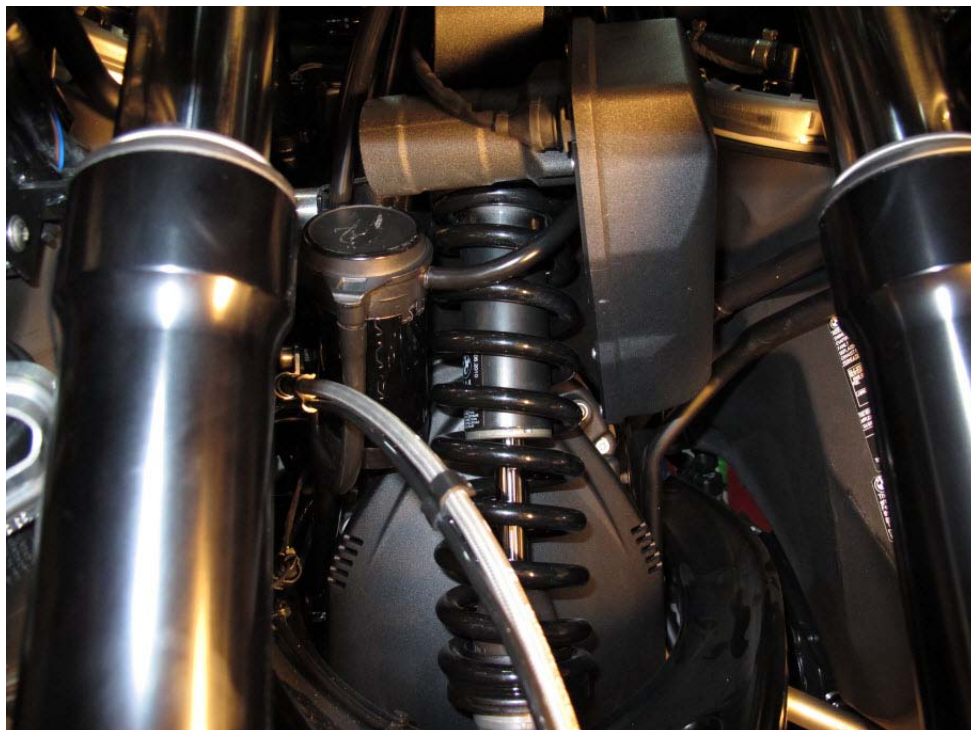
- d. NOTE: The provided extension bracket inside the Excel kit has two different sized holes and is angled in one direction
- e. After you have threaded the 6mm bolt all the way through the welded nut, place the included items onto the bolt in the following order (this is on the left side of the OEM standard bracket) from right to left; tightening firmly so the bracket angle can be adjusted later
  - i. Cylindrical spacer
  - ii. New extension bracket
    - 1. NOTE: The angle of this bracket will go to the left when facing the bike
  - iii. Plain washer
  - iv. Lock washer
  - v. Nut

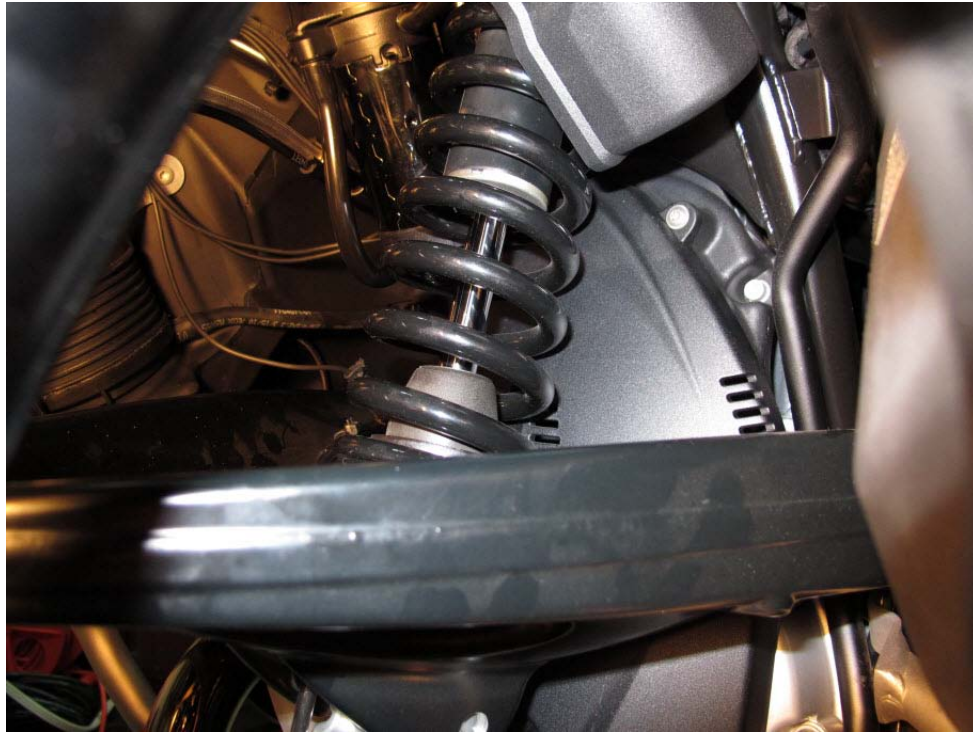


- f. Now thread the larger 8mm bolt through the hole on the bracket in the following order from left to right
  - i. Bolt head
  - ii. Lock washer
  - iii. Bracket
  - iv. Nut
- g. Slide the horn compressor U-shape notch over the nut from the right side of the bracket
- h. Now here is where I found a trick to keep the nut from twisting out of the compressor while tightening the bolt
- i. Take the vice grips and lock them over the U-shape notch and nut, holding it place while you use the 13mm box wrench to firmly tighten the bolt; allowing for it to be adjusted later

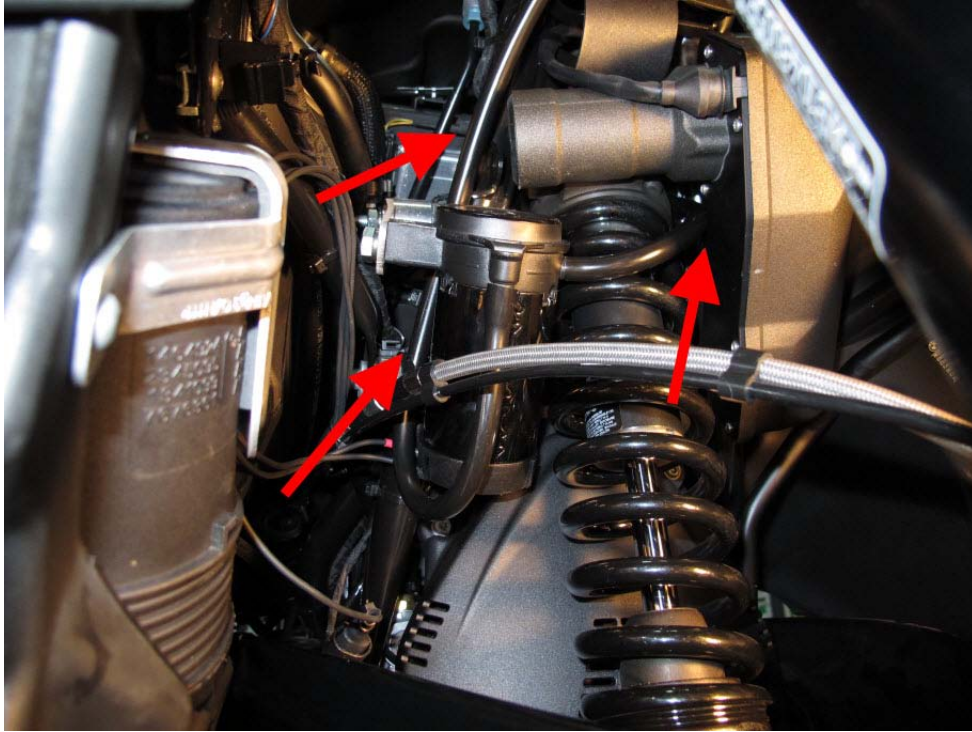


- j. Now angle the bracket and horn down so that it clears the shock spring (I had about 1-2mm of clearance) and clears the right fork tube when fully locked
- k. The bottom of the compressor is angled slightly back towards the bike, allowing for the bottom of the compressor to clear the A-frame swing arm when the shock compresses upward





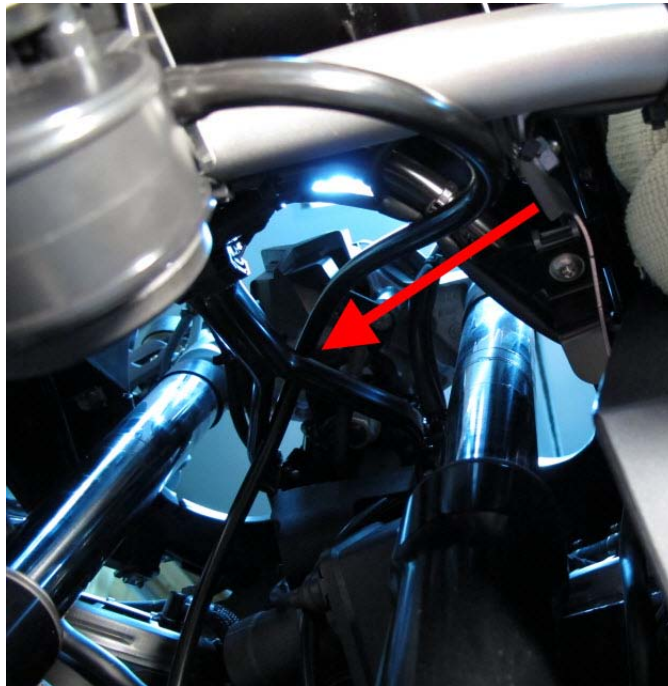
- l. Fully tighten both bolts, ensuring the spring and fork tube clearance (about 1cm between the compressor/spring and about 1.5 cm below the ESA)
- m. Now attached the black horn tubing to the compressor and route the black tube down and then up through the opening between the cylinder spacer and compressor mounting bolt (NOTE: I found it easier to slide the tubing onto the compressor nipple after heating it up slightly with the heat gun)
- n. Route the horn tubing up and over the triangular frame mount that is above the ESA controller
- o. Route the smaller black intake hose up to the right (facing the bike) and stick it between the spring and ESA controller



## Horn Mount Option #1 (original instructions from Excel Werkes)

NOTE: Please review the following forum thread on several alternative horn mounting locations. I have included the original mounting location; however, I opted for Option #2 in this PDF.

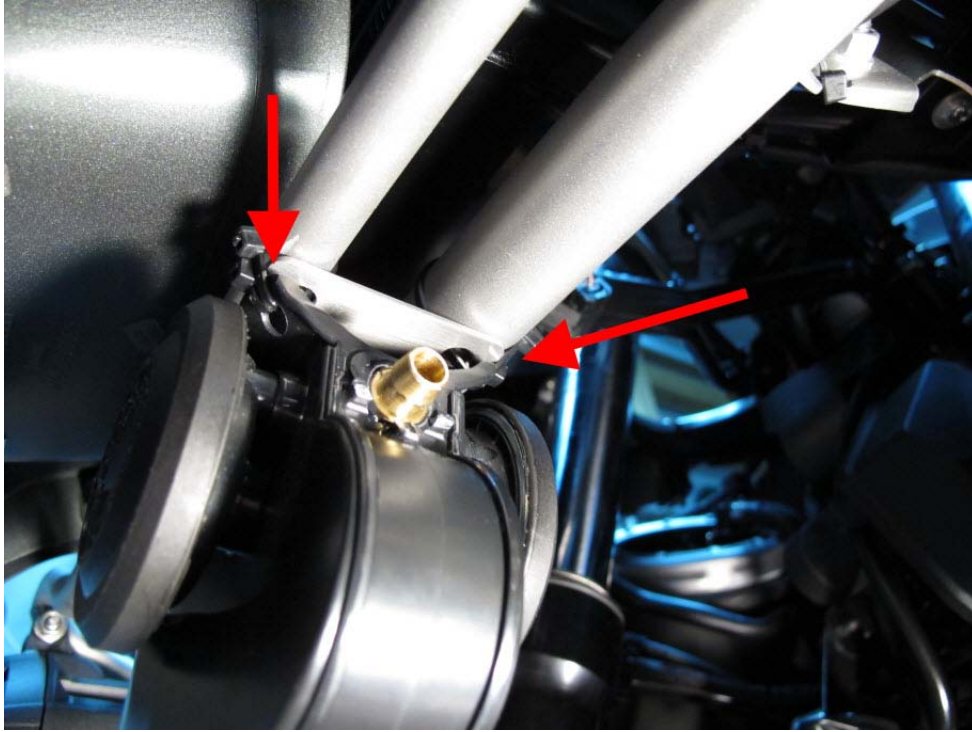
<http://advrider.com/forums/showthread.php?t=670165>



- a. Now take a T-25 torx and remove the screw that connects the fog light support bar to the main crash bars. This screw is in the center under the bill of the front fender.
- b. Mount the horn using the attached stainless bracket into this location using the stock screw



- c. I found that the right side of the horn vibrated slightly because of the angle it was mounted. I added two additional zip ties to secure it to the bars.



- d. Attach the routed black tube to the horn nipple (NOTE: Again, for ease I heated the tube with the heat gun)

## Horn Mount Option #2 (The location I chose for mounting)

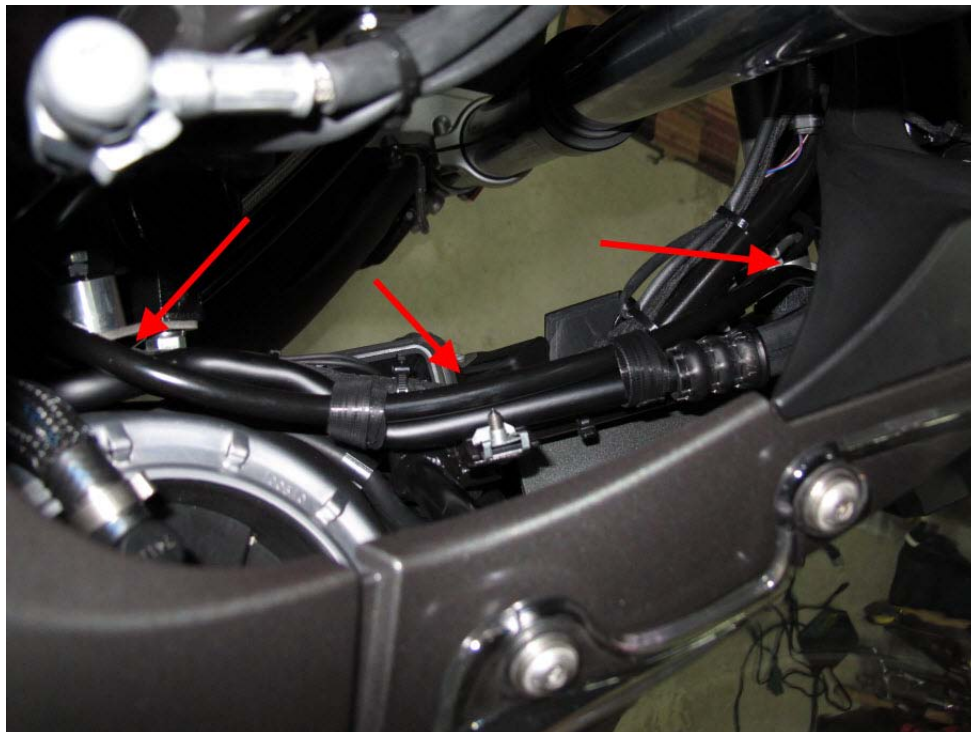
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### Additional items needed

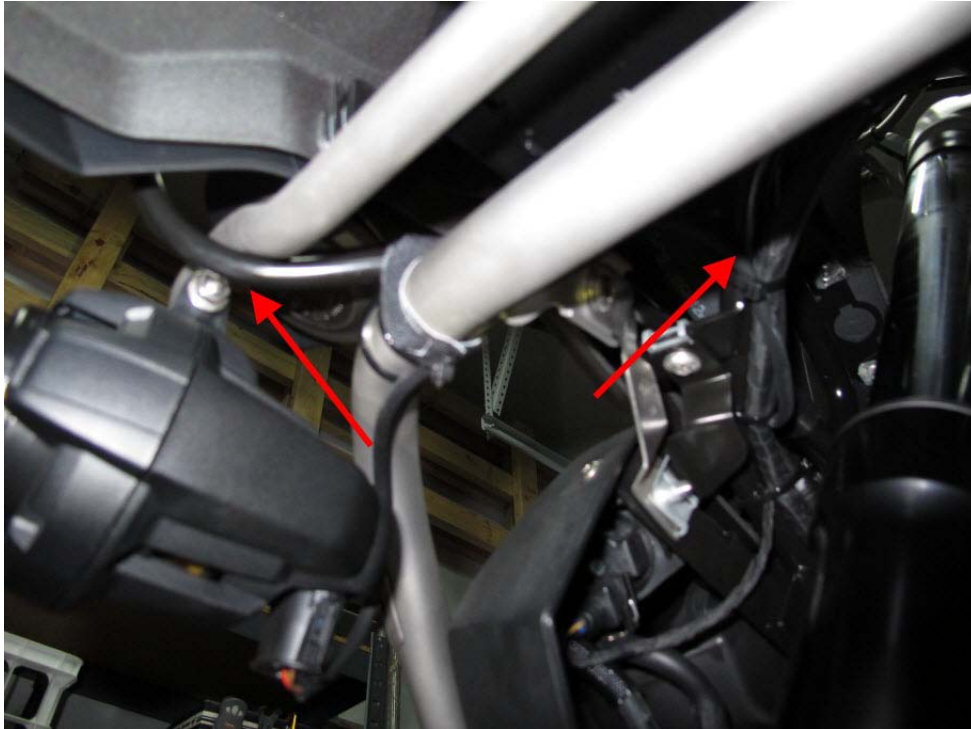
1. Qty. 3 - #10 Stainless washers
  - a. Now take a T-25 torx and remove the screw that connects the “nose” body panel to the upper body panel on the right hand side. The screw is just above the fog light crash bar



- b. With the screw removed, place the (3) Stainless #10 washers into the depression to give the body panels support with the Excel bracket placed against them
- c. The screw goes through two body panels into a "c" clip that is connected to a metal support bar. Screw the provided horn mount into this same location.
- d. Place (1) additional zip tie through the back hole on the provided Excel bracket down and around the larger crash bar. This will give the horn more stability and it should not move around now.
- e. Route the air hose from the compressor along the black metal tube

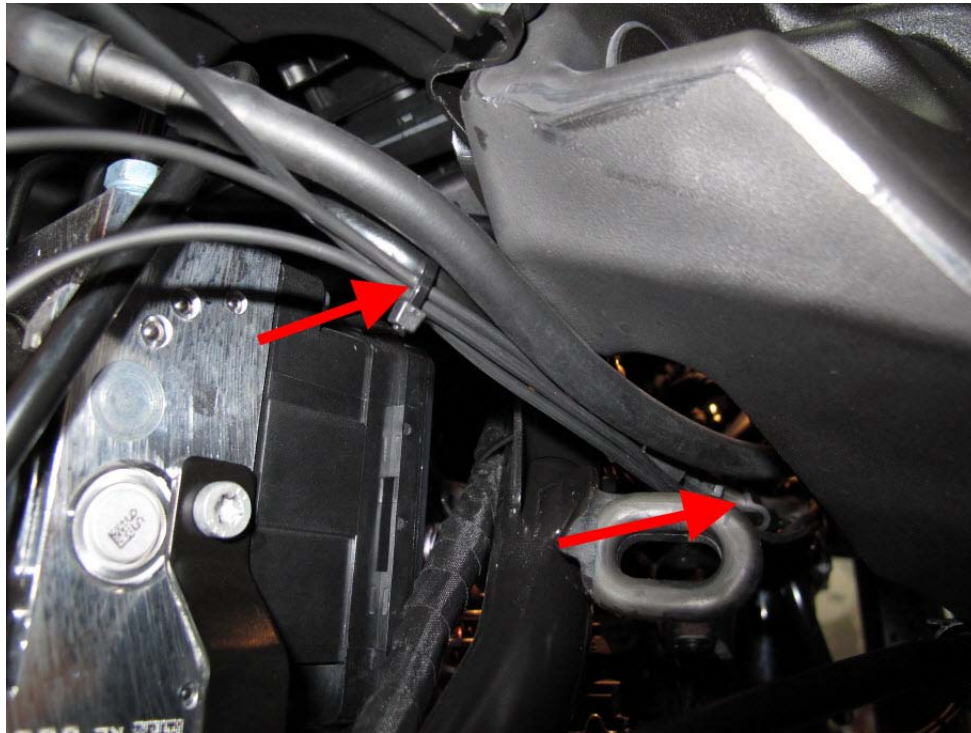


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- f. Route the final loop of the air hose down and under the crash bar to keep the arc of the hose to the horn large enough to prevent kinking



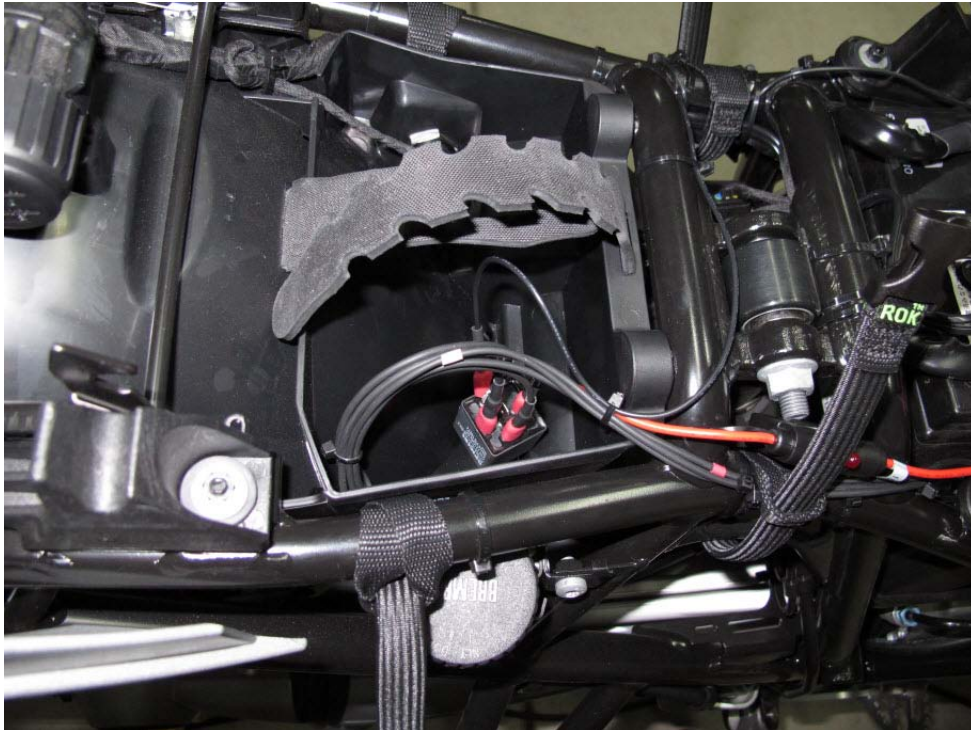
## V. Steps Excel kit wiring

- a. I routed the wires through the cavity that is visible when the air filter intake is removed and attached the wires to the brake line with zip ties



- b. Take the wire with the red band and attach the right angle pan connector to the positive (+) terminal of the compressor (the positive will be the right terminal on the compressor when facing the bike and if the compressor is mounted in the above fashion)
- c. Take the black ground wire and attach the right angle pan connector to the negative (-) terminal of the compressor (left side of compressor when facing the bike)
- d. Take the wire with the pin and black plastic ball and insert the wire into the stock horn connection. The pin will go into the hole that has the green wire going to it (see the Excel website for the pdf with pictures <http://www.excelcyclewerkes.com/images/trigger-709.pdf>)
- e. Take the supplied larger shrink tubing and slide it over the black ball and inside the stock connector, pushing it in as far as possible (NOTE: I found it a little easier to take the heat gun and slightly shrink the one end of the tubing in order to help it fit inside the stock horn connector)
- f. Secure all the wiring making sure you have proper slack before finalizing the connections and wiring to the battery or fuse box
- g. Back by the air filter, route the (3) wires down and around various tubes, routing the wires to the tray area where the tool pouch will go
- h. The cavity under the tray is where I put the horn relay and wire connections (I did not have my fuse box installed during the time of this write up)
- i. Attach the pan connectors and shrink tubing to the following wires
  - i. Red band positive (+) wire = Right angle connector
  - ii. White band wire = Right angle connector
  - iii. Black negative (-) wire = Piggy back connector
  - iv. Inline fuse = Pan connector

- v. Inline fuse other side = Positive battery terminal connector
- vi. Additional black negative (-) wire = Pan connector
- vii. Additional black negative (-) wire other side = Negative battery terminal connector (My kit was missing this wire, so I had to grab a wire from my stock; ~8 inches of wire needed)
- j. Connect the following wires to the horn relay numbers as follows (apply dielectric grease to all connections)
  - i. Red band positive (+) wire = Relay #87
  - ii. White band horn switch wire = Relay #86
  - iii. Black negative (-) wire = Relay #85 using the piggy back pan connector
  - iv. Additional black negative (-) wire = Relay #85 to the piggy back pan connector
  - v. Inline fuse pan connector = Relay #30
- k. Attach the additional black negative (-) wire to the negative battery terminal
- l. Attach the inline positive (+) wire to the positive battery terminal



- m. Insert the fuse into the inline fuse adapter
- n. Turn on the bike and test the new horn
- o. After the testing is successful, wrap the horn relay and wires in either friction tape or electrical tape
- p. Put the bike panels back together and enjoy the loud horn