

# Kawasaki Ninja 650R / ER-6F (EX650A6F)

## User Guide and Installation Instructions for Cowling Panel Vibration Damper Kit (99999-0093 and 99999-0095)

This guide was started for the Kawasaki Ninja 650R / ER-6F Forum (<http://www.ninja650.com>) to solve the "fairing buzz" being experienced by many members. If you have any comments or corrections please email or PM me on the forum (Kiwi\_ER-6F) and I will update the guide. Shane ([shanetp@slingshot.co.nz](mailto:shanetp@slingshot.co.nz))

### Parts Required

The Kawasaki Factory Authorized Repair (FAR) consists of installation paperwork (pictures of where install the self adhesive foam dampers and two kits (part numbers - 99999-0093 & 99999-0095). The contents of both these kits are listed below:

#### Kit 99999-0093

Part No	Description	Qty
92161-0401	Damper	1
92161-0402	Damper	2
92161-0403	Damper	2
92161-0404	Damper	2
92161-1315	Damper	2
92160-1099	Damper	2

#### Kit 99999-0095

Part No	Description	Qty
92161-1315	Damper	2
92160-1099	Damper	2

Some of these dampers are available separately through your Kawasaki Dealer.

If you intend carrying out the "fix" yourself without the Kawasaki parts then substitute the dampers with self adhesive foam tape (I used door weather strip or draught stop foam tape) available from any hardware store and the loop side of 1 inch self adhesive Velcro tape.

### Tools Required

Flat Blade Screwdriver  
#1 Phillips Screwdriver  
#2 Phillips Screwdriver  
4 mm Hex Allen Key  
8 mm Socket or Spanner  
10 mm Socket or Spanner

### Before You Start

Remove components in the following order:

1. Windshield
2. Belly Pan (Both halves)
3. Cowling Upper Trim Panels
4. Meter Cover
5. Rear View Mirrors

6. Upper Cowling (After disconnecting the turn signal wires and headlamp connectors)
7. Main Cowling Panels left and right side
8. Main Cowling Inner Panels left and right side
9. Headlight Assembly

The pictures in the *Modification* section of this guide are taken from Kawasaki FAR; it's a good place to start. If you have the kits, install them as per the pictures. Unfortunately for some people (myself included) just installing the kit did not completely eliminate the problem. If you want to carry out further work and be sure of a complete cure, then follow the suggestions in the *Additional Information* section of this guide.

Keep all hardware (hex screws, washers, spacers, nuts and bolts) in order, separated and labeled, some parts although similar in appearance are in fact of different lengths (bolts) and thicknesses (washers).

Use care with painted and plastic parts, they are easily damaged. Work inside in a clear and well lit area. Store items carefully and out of harms way when they are not being worked on.

## 1. Windshield



Remove the four hex screws and clear plastic washers that secure the windshield to the upper cowling. Tilt the windshield forward to disengage the tang at the front.

## 2. Belly Pan



Remove the three plastic clips which secure the two halves of the belly pan. First pull the centre pin to it's out position using a flat blade screwdriver, use a spanner or another screwdriver shaft wrapped in a rag to act as a pivot point. Care should be taken not to damage the surrounding paint. With the centre pin pulled out, the clip can be removed by hand.



Remove the two hex screws and clear plastic washers on each side that secure belly pan to the left and right main cowling panels. Note these hex screws are longer than all other hex screws used, take care not to mix. Remove the lower rear hex screw, stepped washer and clear plastic washer on each side and remove the belly pan. The left and right main cowling panels have tangs which locate into their respective belly pan halves.

### 3. Cowling Upper Trim Panels



Remove the two hex screws and clear plastic washers on each side that secure the left and right cowling upper trim panels. Note these washers are thicker than all other washers used, take care not to mix. The left and right cowling upper trim panels have a tang which locates into the meter cover.

### 4. Meter Cover



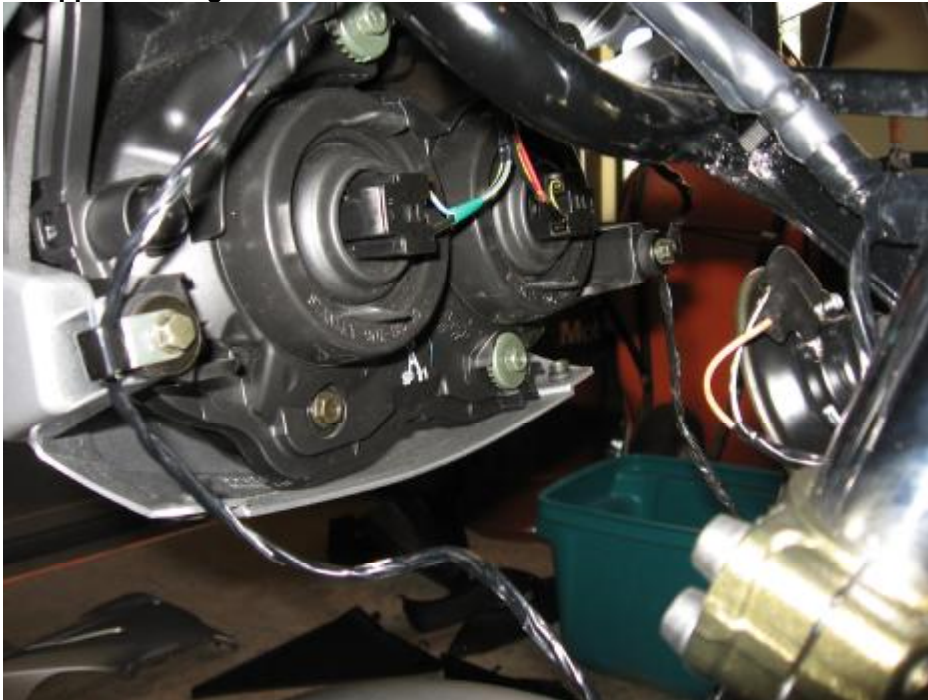
Remove the two #1 phillips screws and clear plastic washers on each of the meter; these secure the meter cove to the upper cowling. Pull the meter cover rearward to disengage it from the upper cowling.

## 5. Rear View Mirrors



Remove the two 10mm nuts on each side that secure the mirror assemblies to the frame. Note there is rubber gaskets each side of the upper cowling. Remove the two #1 phillips screws which connect the centre cowling to the left and right main cowlings.

## 6. Upper Cowling



Disconnect the two headlight connectors from the headlight assembly. Open the tabs on each side that secure the wiring to the turn signals.



Disconnect the turn signal plugs on each side, these connectors are located under the inner panels between the main cowling and its respective inner panel. Squeeze the locking tang on the side of the connector, and at the same time gently pull the plug halves apart.

Thread the looms on each side back through the loops and allow them to dangle loose.



Remove the two #1 phillips screws and clear plastic washers on each of the left and right main cowlings. These are located above the front wheel. Note the upper cowling and headlight assembly is now only secured to the bike by tangs in the left and right main cowlings and the mirror mounting brackets. **Support the upper cowling and headlight assembly until you remove it.**

Ease apart the upper cowling and the left and right main cowlings until the tangs in the left and right main cowlings have disengaged. Lift the upper cowling clear.

To assist in providing some play in the left and right main cowlings loosen or remove the rear hex screws on each side of the left and right main cowlings.

### 7. Main Cowling



Remove the rear hex screw, stepped washer and clear plastic washer on each side and remove the left and right main cowling panel. The left and right main cowling panels have a pin which pushes through a rubber grommet in the frame.

### 8. Main Cowling Inner Panels



Remove the three #2 Phillips head self tapping screws on each side of the left and right main cowling panel.

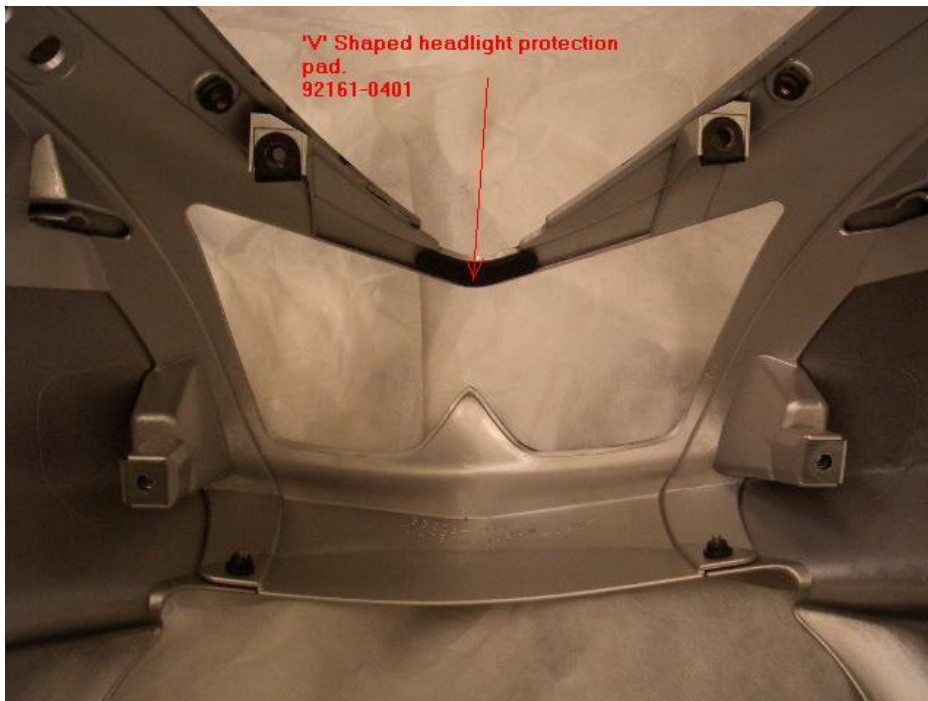
## 9. Headlight Assembly

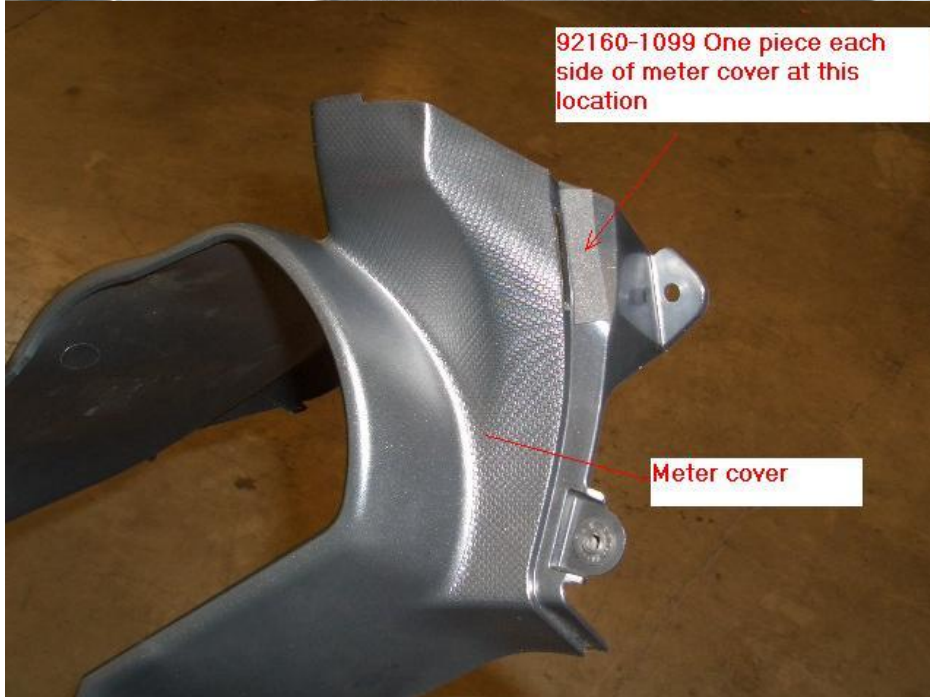
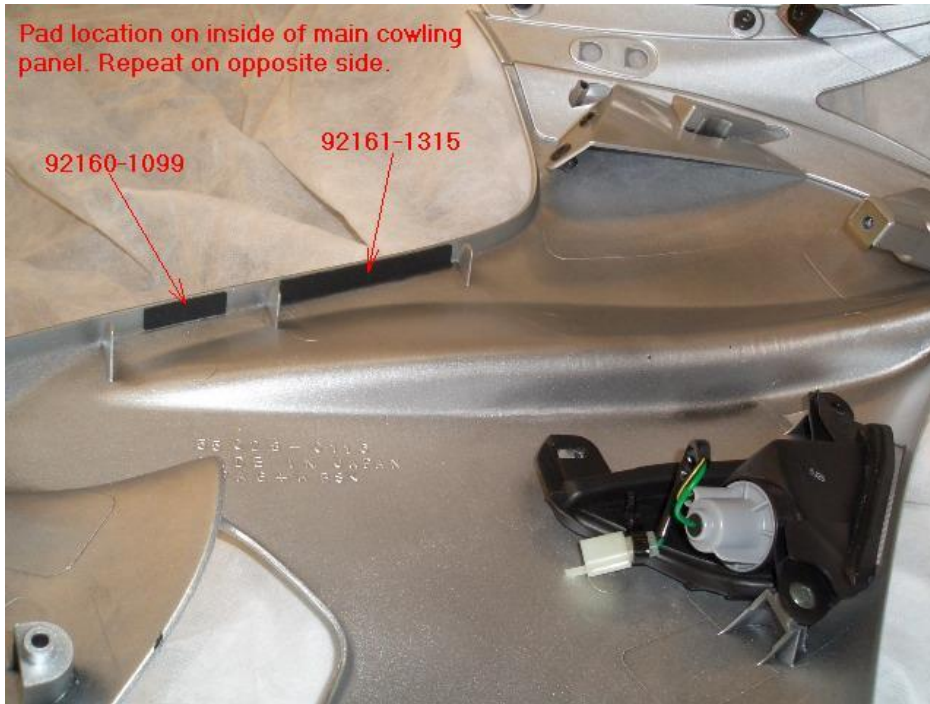


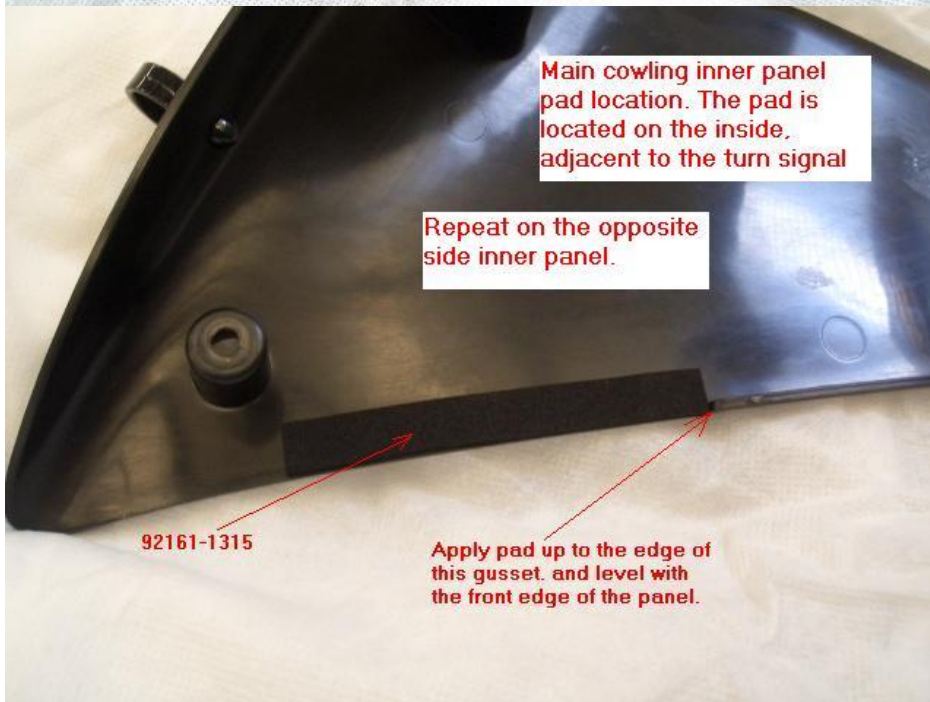
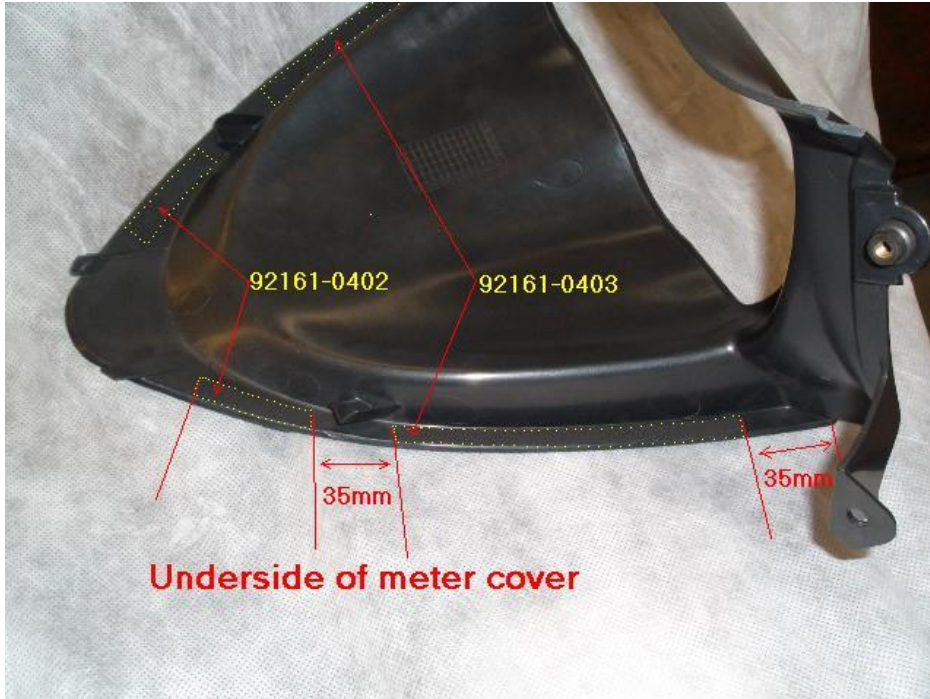
Remove the four 8 mm bolts that secure the headlight assembly to the upper cowling. Note: Do not touch any other bolt, these are used for headlight adjustment.

## 10. Modification

Using the following photos as a guideline, install the foam dampers in the positions indicated:









## 11. Reassembly

Reassemble the cowling in the reverse order of disassembly.

Use caution when tightening inner panel screws and headlight bolts. The cowling brackets are thin and can break easily.

Do not over-tighten phillips or hex head bolts, insert screws gently as the captured nuts are rubber mounted and can push through requiring disassembly to refit.

The rubber mounted captured nuts can turn this sometimes makes screw starting difficult, gently hold the captured with your fingers until started.

Allow at least a couple of hours to carry out this work.

## 12. Additional Information

Unfortunately from my experience and a number of other forum members just installing the Kawasaki Kit has not completely solved the "fairing buzz". Additional work is required to completely eliminate the problem.

Following are posts from the forum detailing areas where additional dampers or tape can be installed. Some members including myself have use weather strip or draught stop which is a adhesive backed foam tape available from most hardware stores and the loop side of self adhesive Velcro tape.

As of mid June 2006 there are posts on Kawasaki Ninja 650R / ER-6F Forum (<http://www.ninja650.com>) indicating that another kit P/N 99999-0097 is available. What this kit is or consists of is unknown.

It may help to read the posts in reverse, the latest information is at the end.

**Posted: Fri Mar 03, 2006 4:21 am (Methuselah)**

Firstly, the lower cowl was NOT vibrating at all, and there was no need to bend the bracket. The bracket fits nicely on the INSIDE of both fairing segments, so from inside to outside the order is Bracket-Top Fairing-Bottom-Cowl.

1. The "horizontal dash" pieces have three vertical support tabs underneath that buzz and rattle (mainly around the 2K / 4K frequency.) I could see chafe marks on the underside of the dash and abrasion patches on top where it meets the underside of the fairing lip. Added pieces over the tabs only . . . presses up against the outside fairing now.

2. The vertical "side cover" inside the fairing (part 14091-0596) was making contact with a 1/4" slightly raised section just before the bottom corner of the indicator housing / bracket. Added a strip there. When the cover is replaced, the mouse pad-sliver starts where the cover lip ends to make space for the indicator housing anyway. (There is also some rattle buzz inside the flicker unit I didn't solve)

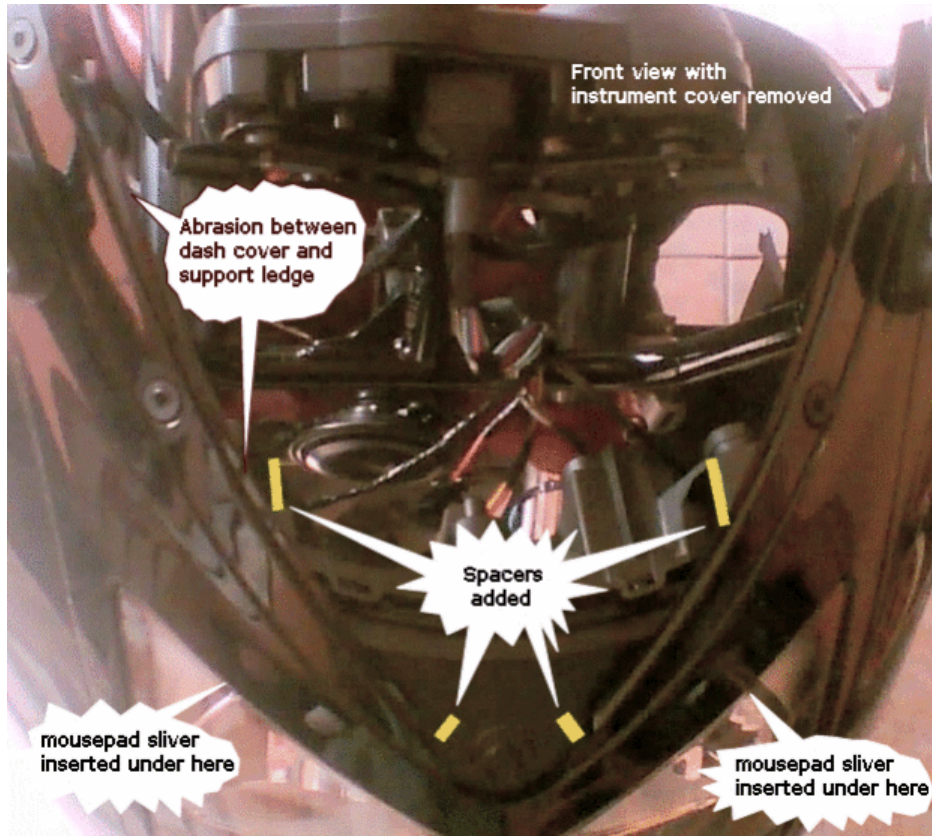
3. The fairing "nose" which goes all around the headlights had the loudest, angry buzz at the 4K mark. This segment is actually quite loose-fitting in that you can see background light almost all the way around. The nose of the gray V-shaped instrument "dash-cover" (part 55028-0081) has two small tabs that slot under the fairing ridge to hold it down. In addition, the windscreen nose slots in there as well. When you hold the screen as some have reported, this action often lifts the screen and instrument cover off the headlight assembly, solving the buzz. I decided to simply keep it all lifted up, inserting two 3-inch long sections under the fairing nose plastic that encircles the headlight - roughly above each of the headlight bulbs.

I also added two bits under the place where the tabs were chaffing.

There were three other vibration patches visible between the "instrument dash" and the fairing it rested on (pics will help, I know ). There was also a Z-shaped tab on the underside of this dash that did NOT make contact with anything - so I really don't know what it was for. It nestles close to the top of the headlight assembly, so I added some tape there to prevent any left-right movement. This made a very snug fit, which was further enhanced by two strips towards the top of the V, where it rested on the fairing tray. (yes, it bulged up slightly, but is hard to see, especially with the screen attached.)

I didn't do anything with the windscreen other than put it back on.





**Posted: Sun Mar 12, 2006 12:05 pm (Kiwi\_ER-6F)**

Very possibly there is more than one part vibrating, my worst one was up the front and holding the windscreen appeared to affect it, but not remove it.

After another ride yesterday (Saturday) the buzz still remains. I was determined to fix it so I went for a number of rides around the suburb I live in, each time removing another item until "bingo" with the headlight assembly removed the noise stopped.

I then fitted a strip of adhesive foam (door draught stop) around the headlight assembly following the contours of the lamp where it would touch the plastic nose trim but far enough back so as not to be visible with the assemble fitted. The draught stop is exterior quality so won't disintegrate with moisture and starts and ends at the foam Kawasaki have already fitted in the V of the lamp assembly.

The headlight assembly is now completely cushioned against the nose fairing and I can't hear any noise in the 4000-5000 rpm range except the intake and exhaust growl.

The white draught stop is just visible between the lamp and the fairing but not at all noticeable.

**Posted: Fri Mar 24, 2006 7:50 am (TGM65)**

I got some 3/16" neoprene (rubber) washers at Home Depot and put them on ALL of the bolts that hold the upper fairing on, including the separate "top" sections of the fairing on each side of the gas tank. Where it was possible, I put washers on both sides of the fairing (inside and outside) to separate the fairing slightly from the mounting points. Buzzing gone!

**Posted: Fri Mar 10, 2006 8:38 pm (Kiwi\_ER-6F)**

Anyway I think the problem lies in the way the upper fairings lock into the centre headlight fairing. Basically there is only four screws securing all this, two at the front (underside) and two at the rear each side. The fairings locate and lock together with three tab like moldings (male in the side

fairing and female (indents) or holes in the headlight fairing.

I have wrapped the three tabs on each side with fiberglass tape so there is no plastic to plastic contact. I have also removed the headlight assembly and run some tape around the inside of the fairing where the headlight might touch the fairing and buzz. All this is hidden from view.

Result is the buzz has gone. I need to try it on the road but as it running and revving in the garage all I can here is the exhaust and induction growl.

**Posted: Fri Apr 07, 2006 4:43 pm (Mark)**

I started this thread stating I fixed the buzz, but I didn't.

I called the dealer Saturday, he called Kawasaki on Monday, the kit came today. I told the dealer I wanted to put the kit on, and he told me if I did install it I was on my own. I told him I had the fairing off something like 15 to 20 times, so I figured I have probably done it more than his mechanic (who later told me he has yet to work on a Ninja 650)

I took my time, Kawasaki's instructions were clear and concise. The neoprene dampers are very high quality. I also really, really wanted to see for myself where the friggin buzz was coming from, so just getting a quiet bike back from the dealer was not enough for me.

So, the biggest culprit? The inner panel that attaches to the main cowling, right where the turn signal is. The turn signal had multiple scratch/abrasions right where it meets up with the inner panel. The right one was worse than the left, by far. After putting on all the dampers, the fairing buttons down a little tighter, and I like that.

**Posted: Wed May 03, 2006 4:35 pm (Mark)**

I put a little sticky foam tape on each of the three posts on the top/side fairings that the inner panels sit on when you bolt them on. No buzz, at all, at any RPM. It seems like the posts pushed into the piece of foam at the edge of the panels, and were contacting the plastic.

**Posted: Tue May 02, 2006 8:24 pm (Kiwi\_ER-6F)**

Even with the kit fitted I can still hear some buzz, I intend to fit further dampers and anti-chaff strips when time permits. One I have already fitted where I could see chaff marks is on the inner side of both L/H & R/H main cowlings where the forward wiring hoop (for the indicator wiring) is chaffing.

**Posted: Wed May 03, 2006 8:52 pm (Kiwi\_ER-6F)**

I mentioned in my last post and after riding about 1700 km over the last weekend I still have a slight buzz in the 4000-5000 range (although not as bad as before I installed the kit).

I decided to remove upper cowling again and have a look for chaffing marks. Here's where they are:

1. Both sides on the L/H & R/H main cowling just forward of where the lower attachment screws (above the front wheel) for the upper cowling are located. The upper cowling has small raised areas that are designed to contact the L/H & R/H main cowlings, these are chaffing so I have placed thin fiberglass tape over the chafes. I have also taped these raised areas up top as well.
2. Chaffing is evident on most of the lugs (three each side) which locate the L/H & R/H main cowlings to the upper cowling. I have placed fiberglass tape on the lugs and inside the recesses for the forward lugs on the upper cowling.
3. Headlight assy, no chaffing evident but I placed foam strip around the lens, on the black portion so it can't be seen.
4. Noticed the windshield was chaffing against the meter cover, there is already one small

damper at the top (each side, there from manufacture) of the meter cover so I have added clear prop tape ( a thick clear weather resistant tape we use on aircraft prop heater elements) down each side and a couple of small strips at the bottom. This separates the windshield from the meter cover.

**Posted: Mon May 15, 2006 1:04 pm (Darklogic)**

Well, I did have it stripped down again this weekend. This time I did the search systematically, revving to 4K rpm and listening for the buzz and then going out for a short ride with the bike in various stages of undress so that I could listen while riding. I removed piece after piece until only the headlight assembly and upper cowling remained. The buzz was still there, as angry as ever.

After some experimentation, I found that the upper cowling directly underneath the headlight seemed to be making the noise. It seemed that the insulation I'd done there was not good enough.

I took some soft rubber strip a few millimetres wide (dunno what it is used for - found it in the hardware store; neoprene would work well too, as this was quite similar to neoprene in terms of weight and compressibility) and using double sided tape, stuck it to the bottom part of the upper cowling assembly just below the headlight. For good measure, I added some to the top part too, as indicated in the picture below.



The key to eliminating the buzz in my case was to ensure that the rubber that I put onto the cowling just below the headlight protruded a couple of millimetres so that when the headlight was put back in place and mounted using the bolts, it sandwiched the rubber between the headlight and the cowling. The following picture shows the rubber protruding enough to create a reasonable damping effect:



Remount everything, and hey presto! the buzz is gone.

As Shane pointed out earlier, the cabling for the instruments and lights runs quite close to the meter cover. I cable tied it so that there was no chance of it touching the meter cover. There's a hole in the mounting assembly just below the cable that you can use to pass a cable tie through. In the pic below, the cable tie I added is in the bottom middle of the image:



So, for the record, I think that the rubber on the bottom part of the cowling underneath the headlight did the trick. The two others are superfluous. Anyway, thanks to Shane and all the others for the help and comments.

Posted: Wed May 17, 2006 10:15 am (Kiwi\_ER-6F)

Upper Cowling - Item No. 55028A/B - This is the front centre fairing which holds the headlight assembly & Mirrors (Item No. 56001 & 56001A).

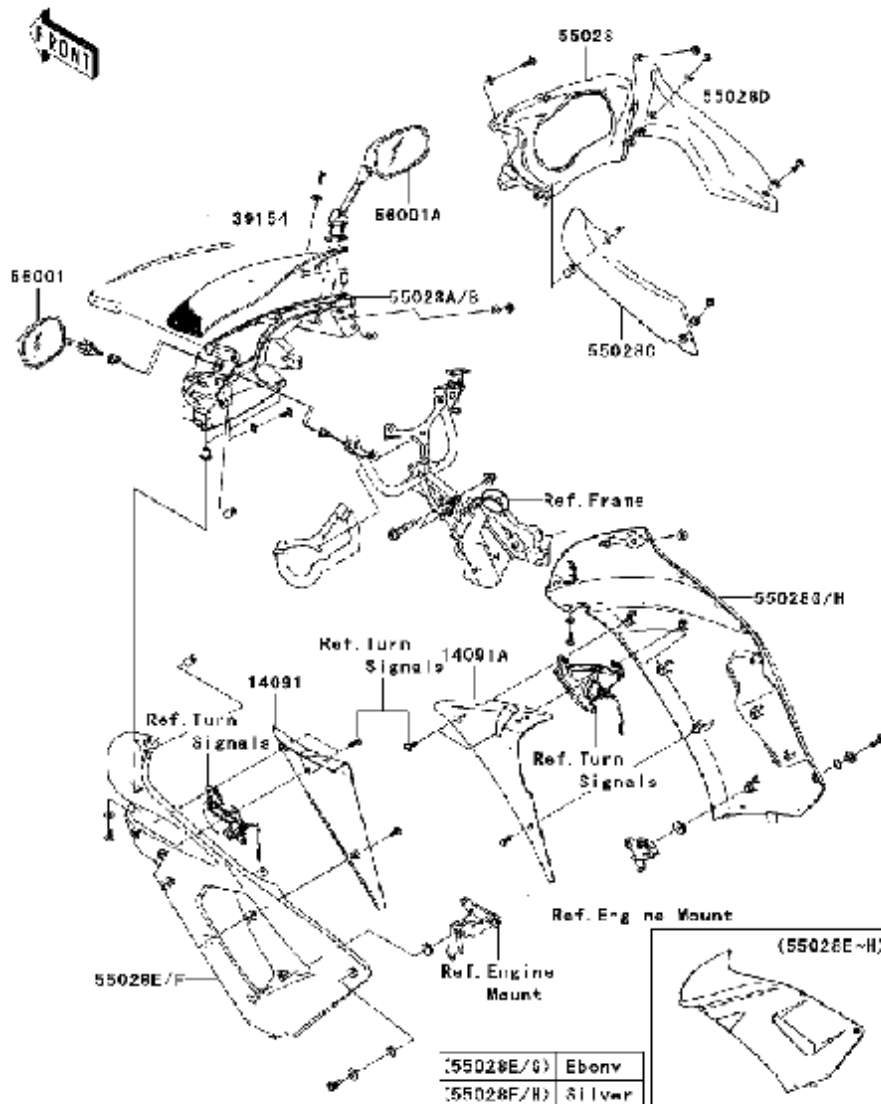
L/H & R/H Main Cowlings - L/H Item No. 55028E/F & R/H Item No. 55028G/H - These are the large main fairings on each side of the motorcycle.

L/H & R/H Cowling Upper Trim Panels - L/H Item No. 55028C & R/H Item No. 55028D - These are the horizontal side fairings on top of the Main Cowlings.

L/H & R/H Main Cowling Inner Panels - L/H Item No. 14091 & R/H Item No. 14091A - Cover panels located on the inside of the Main Cowlings covering the back of the indicators.

Meter Cover - Item No. 55028 - Covers the instrument cluster, underneath the windshield (Item No. 39154)

Belly Pan - A fairing in two halves which connects to the lower edge of the Main Cowlings, covering the exhaust, lower crankcase & oil filter.



**Posted: Sat Jun 17, 2006 10:24 am (Kiwi\_ER-6F)**

**BikelessAnt wrote:**

Has anyone else seen the 99999-097 part number for the fairing buzz damping kit?  
Then this would be FDM #2? Would like to verify then place the info in the FAQ thread.

To clarify things for those who are following this thread. The original Kawasaki Factory Authorized Repair (FAR) paperwork had only one kit part number mentioned - 99999-0093, later paperwork had two kit part numbers - 99999-0093 & 99999-0095. The contents of both these kits make up the original FAR and are just a collection of self adhesive dampers and the paperwork.

What I am trying to say is that as far as I can see the FAR itself doesn't have a number as such, only a title - EX650A6F Installation Instructions for Cowling Panel Vibration Damper Kit (99999-0093 & 99999-0095). The two kits required to carry out the repair are: P/N 99999-0093 & P/N 99999-0095.

What we need is copy or scan of the latest paperwork so we can see what Kit P/N 99999-0097 actually is. It may be another (additional) FAR, it may be just the P/N of the original FAR with the two kits (ie: no changes, the FAR now has a P/N). Until I can view a copy I can't tell.

Please if someone can get a copy please PM or email me so I can update the guide.

**Posted: Fri Jun 30, 2006 3:37 pm (dongarii)**

I have completed eliminated the buzz and all RPM. The faring kit from Kawasaki only eliminated part but not all. Here is what I did to eliminate the remaining buzz. It comes from multiple areas.

1. Get some 1/4" insulation from your local hardware store.
2. Take all the fairings, windshield, dash, headlight assembly, etc apart as indicated in the faring removal directions from the damping kit from Kawasaki.
3. Headlight assembly vibrates against the nose faring. Completely surround the open where the headlight fits into the faring with the insulation. I placed it on the faring so not to be seen but will press against the headlight assembly when screwed into the faring. This is the biggest buzz area but there are others.
4. The side-marker vibrates against the inner faring. There is not enough damping material there put some extra insulation there on top of the original damping material. Make sure to run it the length of the sidelight and a little more. This eliminates this buzz.
5. There is a hoop wire holder towards the front of the inner faring. It sits on top of the inner faring. This vibrates on the main upper faring. Place insulation to prevent this from vibrating.
6. The upper dash will have 3 strips of damping material on each of the V shape sides. Place an additional piece of insulation on top of the damping material that is at the widest part of the V on both sides. When you install the windshield, the windshield will press against the upper dash and stop it from vibrating on the nose faring.
7. I also placed additional insulation on the upper faring where the left and right horizontal covers touch the underside of the upper faring.

Start the baby up and rev it up to 4000-4200 RPM and enjoy the quiet sound of the motor.

**Posted: Tue Jul 11, 2006 10:28 am (Kiwi\_ER-6F)**

I've been following this thread (and any others relating to the infamous fairing buzz) since the start. My bike buzz started at about 600-700 kms. It was bad! At its worst I could hear it over the engine and wind noise at 120 km/hr. I tried some fixes myself, tape, foam strip etc. Things improved but never fully. I obtained the Kawasaki kit and followed it to the letter, results were about the same as my own attempts probably because the kit only addressed issues I had already identified.

I have since tried further mods, more dampers from Kawasaki under the windshield between it and the instrument cover, tape on chaff marks, more foam tape etc... Each and every time there was less buzz but it would come back.

The kit address the big buzz but will not remove all of it, the problem is that as time goes on and more miles are covered the buzz increases again.

My last attempt (probably 5th time I have completely removed the fairings) has finally fixed the buzz, no buzz! None what-so-ever!!!

It's great, all I hear is engine and induction noise, even when I pass thru the dreaded 4000-5000 rpm zone, even in that zone at lower speeds when there is less wind noise.

Fortunately I have a silver bike and the chaffs show up as black marks, I used the loop (wooley) side of self adhesive velcro and self adhesive foam tape (draft stop).

Places I have put stuff:

Completely around the headlight cutout of the upper cowling, as close to the edge as possible and especially in the V.

Around the headlight assy.

Around the three protrusions (tabs) which locate the upper cowling to the L/H & R/H main cowlings.

On the underside of the upper cowling where the instrument cover and windshield touches.

A number of other chaffs on the L/H and R/H main cowlings where they touch other parts and the lower cowlings.

I have now covered 500 kms, with no noise. I can't believe how much this actually irritated me until it went away.

**Posted: Tue Jul 11, 2006 6:09 pm (Kiwi\_ER-6F)**

OK, now I have some more time I'll fully list all the places I have found chaffing:

1. Headlight assembly and upper cowling, I believe this is the major cause of the buzz. I found chaffing along the lower edge of this fairing where it rubs against the headlight. I have placed adhesive backed foam tape (draft stop) completely around the edge of the headlight aperture and around the headlight itself, if you use light foam strip it will compress a lot.

2. With the upper cowling off the bike and headlight assy removed slide in the instrument cover, you'll see where it touches the upper cowling, I have fitted dampers as per the Kawasaki kit to the underside of the instrument cover, on the upper cowling I have fitted Velcro over the upper headlight mounting posts, at the front where the tabs of the instrument cover slide in I have also fitted Velcro.

3. On the upper cowling where the tab at the front of the windshield fits I have placed Velcro.

Cut the Velcro down the middle to make narrow strips if needed.

4. At the back of the instrument cover where it touches the upper cowling I fitted another small strip of Velcro.

5. The L/H and R/H main cowlings locate into the upper cowling using three tabs. The front is C shaped and fits in a socket, this was chaffing so I have fitted Velcro around the inside of the socket. The second tab slides thru a hole, this is covered in Velcro and the rear tab is small and round, this is also covered in Velcro.

With these covered the fit of the cowlings is not good so a little force (gentle) is needed to make everything line up during assy.

6. On the L/H and R/H main cowling inner panels I fitted dampers as per the Kawasaki FAR and fitted a small foam strip between the front indicator wiring hoop and the fairing.

7. L/H & R/H Cowling Upper Trim Panels had chaffs at the back so some Velcro fitted there, also I noticed that even with the FAR dampers fitted the support tabs on the L/H & R/H main cowling for the Trim Panels caused fretting, I wrapped the tabs with Velcro.

8. Look for chaffing marks on the L/H & R/H Main Cowlings I found a couple of random spots so these all got some Velcro.