



03-29-2009, 11:31 PM #1
 **babymog**
 Loose Cannon - No Balls
 Join Date: Jan 2006
 Location: Northeast Indiana
 Posts: 10,767
[View Photos By: babymog](#)

W124 Headliner Replacement Photos

I spent the evening catching up on a little work on Brutus, a '95 E320 Sedan. Replaced the inner door panels, and realized that Dave (Sixto) has really raised the bar on DIYs. So the next project was to replace a sagging headliner, installed a factory-new auto-dimming mirror while in there, repaired the visor mirror lids, installed the optional rear-seat reading lamps, and removed the optional (Special Edition) phone overhead display module.

This is for the later (bonded) headliner, starting in '90 I believe. The early one is a bit different, but less prone to sagging. Pardon me if I don't know how to integrate text with photos, I'll do my best.

First step is to open the sunroof half-way. Then carefully tug downward on the front edge of the inner-panel of the sunroof (don't pull carelessly and bend it), there are four "christmas tree" clips holding it to the sunroof steel panel. Once un-clipped, you can slide the inner panel forward. Open the sunroof the rest of the way, slide the inner panel forward until you can slide it up and out of the opening. (first two photos)



Gone to the dark side
 - Jeff
 Last edited by babymog; 03-29-2009 at 12:01 AM.

03-29-2009, 11:46 PM #2
 **babymog**
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 Join Date: Jan 2006
 Location: Northeast Indiana
 Posts: 10,767
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Next, you'll be removing the front header panel. Remove the two screws at the elbow of the sunvisor, then unclip the visor from the clip. Next open the little door on the clip (hinge is toward you), I use a knife blade to slide in and open it. Remove the screw and clip (first photo).

Next is the light assembly, there are two metal clips on the right side, press them toward the light with a thin-blade screwdriver (2nd pic). Swing the right side downward and out. You will now need to un-plug two larger plugs, one rubber hose, and a small 2-pin plug. Be careful with the hose and the two-pin plug so that you don't break the clips holding your temp sensor together. Also, blow through the temp sensor, you'll probably remove a good bit of dust. (no pic).

Grab the rear-view mirror with both hands, and give it a firm but controlled shove toward the windshield. It should pop loose from the bracket. Next, remove the three screws holding the mirror bracket (3rd pic).

Now remove the six screws holding the bright aluminum strip in the front edge of the sunroof opening (4th pic). Pull the inner weatherstrip (felt looking one) down in the front doorways, from the middle of the A pillar up, and around the rear of the openings. Be careful where it tucks into the door sill-plate as the plastic plates are ridiculously easy to damage, ... pull out, not up at the end of the plate (5th pic, showing the Special Edition plate though, not the regular plastic one).

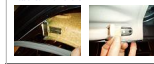


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03-29-2009, 11:58 PM #3
 **babymog**
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 Location: Northeast Indiana
 Posts: 10,767
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The header panel is almost free. Check along the windshield / front of the panel for urethane sealant. Sometimes when the glass is replaced some sloppy application of sealant will glue the panel to the glass. This will have to be cut free with a razor blade along the glass or equivalent. The next step is to pull the header rearward and upward, to free the clip that is inserted into the top of the A-pillar. I've removed the A-pillar before to make this easier, but more than half the time at least one of the clips in the A-pillar will break, I've found this easier. Slide the end of the header panel upward and rearward until it pops out of the A-pillar trim, it helps to push the A-pillar trim slightly away from the A-pillar while doing this. The second end is easier as is installation (first pic).

Now remove the four passenger-assist handles. The bezels on the ends are clipped in top and bottom, pop them free and you will find the bolts under the free flap of vinyl (second pic). You are now finished in the front of the car, move both seats fully forward and move to the rear.



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03-29-2009, 12:15 AM #4
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Remove the B-pillar trim. Start at the bottom, there are two phillips screws to remove (pic 1). Next remove the inner weather-strip by pulling inward, from the front of the sill-plate around to about mid-seatback.

The B-pillar trim has two clips half-way up, pop them free. The upper end of the B-pillar trim is held by a single clip, released by carefully pushing the trim downward and pulling the top of the trim away from the B-pillar. Do this carefully with the later (plastic) trim piece or you'll break the plastic holding the clip. Pull out some seatbelt and lay the trim down toward the center of the car, crossing the two pieces on the floor (left and right piece). Next comes the C-pillar trim or "sail panels". These are tricky, three clips along the front edge. I started at the top. Push the front edge rearward to release the hook of the clip and pull away from the C-pillar, one clip at a time and gently. These are easy to break so don't force it away from the car, push rearward until each clip releases (pic 2).

Once all three of these clips are free, you can slide the panel forward until the rear (metal) clip releases (pic 3) and the panel can be pulled away from the C-pillar as you slide it the rest of the way out of the seatback. Now remove the rear overhead light. Slide a thin-blade screwdriver into the (car's right) right side of the lamp assembly, pressing inward to release the clip and swing it down and out (pic 4). Unplug and remove.

Above the light assembly there is a bracket with a single screw, remove the screw (pic 5).

Attached Thumbnails



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Last edited by babymog; 03-29-2009 at 09:07 PM.



03-29-2009, 12:31 AM



#5
Join Date: Jan 2006
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Your roof panel (if the later molded/bonded style) should now be free except for the sunroof opening. If the earlier stretched-style, you have two roof bows and the rear window to remove, been there too.

So on to the sunroof opening:

Remove the screws holding the bright stainless plates in the opening (left and right) (pic 1). The plates will slide forward and out. Keep left and right separate, they are different (pic 2).

Next there is another plate below the one you just removed, again different left and right, should just slide forward and out (pic 3).

Now you will see 7 metal tabs holding the headliner down. Slide the headliner inward to free it from these tabs (pic 4). The last two tabs are under the front of the sunroof, so be sure you get all of them. This should allow the headliner edge to be lifted upward.

The last step in freeing the headliner, if it hasn't fallen free already, is to slide forward the rear edge of the sunroof opening. There is an aluminum extrusion that is clipped to the rear of the sunroof opening, sometimes the glue releases and it is a separate piece.

This is what you should see, great time to check the sunroof drains, cable, anything else (pic 5).

To remove the headliner from the car, recline both seatbacks fully. Open both rear doors. Rotate the rear edge of the headliner out of one rear door, which should allow one front tip to clear the other rear doorway. With the one front tip out of the rear doorway, move the headliner forward and rotate the rear of the headliner out of the same doorway, pull it out of the car. You should not need to bend the headliner AT ALL to do this, if you are bending it, you will likely wrinkle and ruin your headliner. It is not necessary.

Attached Thumbnails



Gone to the dark side

- Jeff



03-29-2009, 12:35 AM



#6
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Here are a couple of photos of the removed headliner from the top (pics 1&2). Note the part number (for the gray/grau) and the aforementioned aluminum clip at the rear of the sunroof opening:

This is a photo of the headliner sagging. Southern cars have great steel, but the heat takes its toll on other parts (pics 3&4).

Attached Thumbnails



Gone to the dark side

- Jeff



03-29-2009, 12:50 AM



#7
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Installation is pretty much the reverse of the above. I did it in this order: sunroof opening rear, rear light & bracket, rear passenger assist handles, C-pillar panels, B-pillar panels (be careful to line up the seatbelt height adjuster handles) rear-door seals, move seats back, front assist handles, sunroof sides, header panel & end clips, header accessories, front door trim, sunroof trim.

Total time was around 4-1/2 hours. This included some "while I'm in there" projects such as running to the shop to get a rear reading lamp harness so that I could install the rear-seat reading lamps (pic 1).

A new front header panel with center visor instead of the optional phone control/display/microphone module. Trimming the new panel to accept the auto-dimming mirror mount plate (with wire hole). (pic 2).

Going through boxes in the basement to find my last remaining auto-dimming mirror and wire harness (pic 3, 4, & 5).

Attached Thumbnails



Gone to the dark side

- Jeff



03-29-2009, 12:56 AM



#8
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More photos of the auto-dimming mirror install, wiring fed through header steel (pic 1).

Wiring plugged into light wiring harness (basically a pass-through harness with ground and IGN tapped out) (pic 2).

As this mirror was my first design project on the 124 chassis, and already defined (I started in the middle of this project), I prefer my later re-design using the E-38 mirror head shape on a 22mm ball 124 mirror mount (pics 3&4) which I have installed in Nero. Brutus will have to be happy with the earlier auto-dim mirror.

Attached Thumbnails



Gone to the dark side

- Jeff



03-29-2009, 02:41 AM



#9
Join Date: Jun 2003
Location: Willow Glen
Posts: 299

Well done Jeff! If I might add for the early stretched / not glued to molded board version:

- Here is the bar in headliner channel that you need to pry out of the hole in the roof.
- The sides and rear have a sewn in seal that tucks over the metal edge.
- There are several ways to install the mirror but I found the easiest way is to compress the ball detent ends with channel lock pliers and insert coat hangers as shown. When the mirror is pushed in pull one hanger at a time to release the detents into the bracket.

Tell me more about the mirror upgrade...



'88 300TE, 175k, black RENNtech 3.6L Recaro C's AMG 1 SOLD
'92 500E, 110k, Spruce green, stock SOLD
'94 E320 Cabriolet, 130k, E500 wheels, Emerald green SOLD
'94 E320 Cabriolet, 110k, black, stock, SOLD
'88 300TE, 229k, dark grey, SOLD
'90 300CE, 212k, white, new paint, SOLD
'91 300E, 209k, white, rebuilt head SOLD
'74 914-6, grey, 2.7L 325hp twin turbo Audi conversion



10-29-2009, 03:13 AM

lvbizbroker
Registered User

Adding extra insulation

Is there enough clearance between the headliner and the body to add some radiant barrier heat insulation or DynaMat sound deadening material. It doesn't look very well insulated behind the headliner.



10-29-2009, 10:20 AM

pawsoD
Dreastochtiger

Wow....that is a lot of work! Looks great though!

-diesel is not just a fuel, its a way of life-
'15 GLX250 Bluetec 93k - mine - (OC-97,400)
'17 Metris(VITO) - 19k - wifes (OC-25k)
'01 E320 Wagon - 161k - mine (OC-165,000)
'07 E350 Wagon - 137k - dad's (OC-139,500)
'01 SL500 - 84k(km) - dad's (OC-94,000km)
'16 E400 4matic Sedan - 91k - Brothers (OC-98,500)



10-29-2009, 02:19 PM

babymog
Loose Cannon - No Balls

I considered that, being a dark color, but I'm currently in Michigan so it's not a big deal (use the sunroof far more than the A/C).

It seemed like there are many pockets in which to put perhaps 1/4" to 1/2" heat barrier. The down-side would be that the roof steel would get hotter when parked, not able to dissipate any heat down, probably not an issue as it works okay on the hood. Find a really good high-heat adhesive!

Quote:

Originally Posted by **lvbizbroker**
Is there enough clearance between the headliner and the body to add some radiant barrier heat insulation or DynaMat sound deadening material. It doesn't look very well insulated behind the headliner.



Gone to the dark side

- Jeff



10-29-2009, 02:19 PM

babymog
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Thanks, well worth it IMO.

Quote:

Originally Posted by **pawsoD**
Wow....that is a lot of work! Looks great though!



Gone to the dark side

- Jeff



10-29-2009, 02:37 PM

babymog
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I like your hanger method on the mirror install.

When we first designed the mirror, I was installing them on cars for prototype/testing and for photos. My method was a simple one (for an Engineer anyway):

I put the right side of the mirror mount into position. Sitting in the driver's seat (front edge), I put my right palm up and against the flat of the mount (left side), pushing upward with my right arm. With my open left hand, I give a hammer-hit upward on my right elbow to pop the mount home.

Worked every time.

Stretched headliner: The front tips, B-pillar, and C-pillar areas are attached by christmas-tree clips into the steel. The door openings are easy to remove also, plastic clip-edge just pulls away. The bows/bars aren't too difficult to remove once you get your hand in there. Biggest problems I had with the stretched versions were:

Avoid tearing around the sunroof opening, big stress at the rear corners / easy to tear (did that)

Rear window opening, I believe that you need to remove the rear window to get it un-hooked from the body steel. I sent a car to the crusher with the headliner hanging only from the rear-window opening, just wasn't worth it to me to pull the window for a spare headliner (should have).

The mirror upgrade:

I've never seen one on a US car. It was an option in the '90s, I don't remember when it started. I have seen them in cars in England, but not in the US. My '94s don't have the cut-out mount plate, the '95 does, not sure why.

It is an electrochromic mirror, like most new ones (Gentex), variable dimming with photocells front and rear to compare light through the glass (including dimming feedback) to the ambient light from the front sensor. The circuit board has drive output for outside EC (auto-dimming) mirrors also IIRC, but it was never offered on the 124 chassis. I have some R129 outside EC mirrors I had intended to modify for my '91 (sold in '96 though), never did it. Maybe now. The mirror circuit also has a "reverse override" feature built in that will clear the mirror for backing up regardless of light conditions (+12v signal), but Mercedes didn't use it on the 124s.

I don't know where you'd find one used, but GB/England seems like the place I've seen them, perhaps DE/Germany also. Be especially careful of buying one from a wreck, direct impact wouldn't do good things and could breach the seal / let the EC fluid leak out. If the mirror looks good, it's probably still functional but showing its age / UV exposure. If you can see a line through it (bubble / waterline type thing) it has probably started to leak. The fluid is what darkens, if it's leaking it's junk. Competitive mirrors from Donnelly (Land Rover et al) had (in my experience) much bigger problems with seals failing, very difficult to find a good used one for my Land Rover when mine leaked. Anyway, that is the only thing I know to look for.

Wiring is simple: Ign +12 and ground will turn it on. There is IGN and GND in the dome light / seatbelt warning circuit.

Quote:

Originally Posted by **picat2**
Well done Jeff! If I might add for the early stretched / not glued to molded board version:

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Tell me more about the mirror upgrade...



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10-23-2009, 06:35 PM

Pavka007
Alba Gu Bràth

THANK YOU BABYMOG :)

I would like just to say THANK YOU.

Fantastic article. After reading very carefully I was able to replace my headliner (E420) for 1.40 hour.

The total time out was 25 min. Clean the old glue 10 min.

I have the new material ready (\$16.00 from a local custom interior shop) Cut and glue; 30 min (drying 3 hours) and everything back in the car for 35 min.

First I went to 4 different interior shops. The cheapest quote was \$349.00, the most outrageous one was \$905.00. They told me that is "A lot of work, it will take about 7 hours".

The local Mercedes Dealer quoted me \$ 750.00 with the new Mercedes headliner.

Join Date: May 2009
Location: Here, there...
Posts: 247

What can I say.... Thanks for the people like you out there.

My babe looks as good as new. The color of the new one is exactly the same as the original, so there is no difference at all..... wait... there is. I HAVE around \$330 in my pocket 🍀 thanks to you.



Once again THANK YOU.



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