

## **DEUTSCH NINE GTS headlight kit fitting guidance**

Dear customer

Thanks for purchasing the DEUTSCHNINE GTS headlight kit. Below you may find the fitting instructions which describe how we recommend to fit the GTS headlights into your car. Please note that these instructions are to be considered as guidance only and that you may have or find other preferred procedures to fit them.

### **I. Removing the old pop up headlights**

1. Position the car in horizontal position in front of a wall in about 5 meters distance, turn the pop-up-lights on and make marks on the wall to note the light adjustment (you will need this reference to adjust your new GTS headlight units again)
2. Secure the car, jack it up and remove the wheel housing protection on both sides
3. Open the bonnet and turn the lights on so that the pop up headlights are extended.
4. Remove the rubber cover strip that sits between the badge panel and the headlight unit (picture 1)
5. Loosen the 2 screws that now are visible when looking from the top (picture 2)
6. Loosen the screw which bolts the wing together with the badge panel on both sides (picture 3)
7. Loosen the opposite screw which is hidden under the badge panel (picture 4)
8. You may now slide out the badge panel by equally pulling it to the front. Pay attention you don't cause any scratches to your front bumper while doing this.
9. Remove the inner triangular bracket by loosening the 3 screws bolting it to the cars bodywork (picture 5)
10. Do the same with the outer triangular bracket, you have to access the 3 screws via the outer side of the fender
11. Remove the lock ring from the lift bar mechanism as well as all other components from the lift bar mechanism...

You now have successfully removed the old headlight units.



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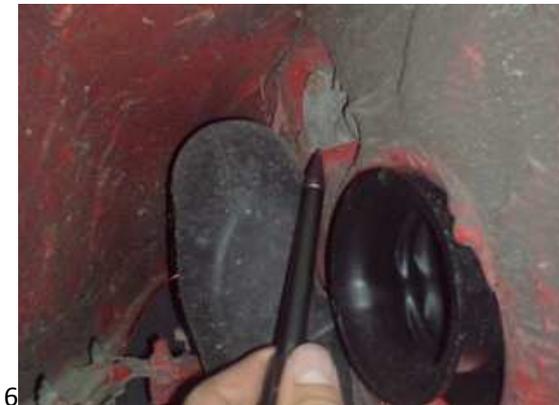


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## **II. Preparing the light units and the buckets**

1. Preassemble the Hella headlight units with the hardware included in the kit, some of the 6 grub screws are already pre-installed for your reference (see picture1). You have to install three grub screws per side (see picture 2). Important note: Secure the 2 inner bolts that attach the grub screw to the Hella headlight unit attachment bracket using some heavy duty loctite or similar before installing the unit in the housing. Also make sure that whenever you adjust the headlight units on a later date you make sure to hold against the momentum you apply by using a hex driver which you can insert into the rear of the grub screw. In order to fit the headlight units into the housings there might be the need for a little sanding on the housing, this is due to manufacturing tolerances.
2. Mark and drill the 3 holes (5mm) for the grub screws (M4) in each headlight housing.
3. Install the headlight units in the housings. Note: There has to be one washer on the front and one on the rear part of the housing so that the load is transferred equally to the FRP. Please note: You might have to shorten the inner spring that was included in the scope of delivery in order to adjust the headlight properly. Try to adjust the headlight units orientation as good as possible before you proceed.

## **III. Installing the buckets**

1. Remove the 4 bushes (#477 805 623) from the pop up headlight swivel frame (pictures 3 and 4)
2. Gently sand the 4 bushes in order to prepare their surface for a perfect glue connection. Then also sand the inner side of the prepreg carbon fiber mounting tubes that were included in the scope of delivery.
3. Glue the bushes into the mounting tubes using 2 component epoxy glue or similar. Let harden / dry and check if the connection is solid.
4. Slide the triangular brackets in the units pre-assembled as described in III 1-3. See picture 5 to understand how the headlights will be fitted.
5. Test-install the mounting units preassembled as described in III. 1-4 in the car, orientate the triangular brackets as pictured in pictures 7 and 8 (showing the righthand unit). Note: The outer triangular bracket is rotated 120° clockwise (for the righthand unit) compared to the stock configuration.

Important tip: The triangular brackets offer good adjustability. In order to benefit from it, make sure that you test-install them in the middle position which you can determine by gently tightening the bolts and sliding them up-and down as well as for- and backwards – stop in the middle position and tighten them so that they rest in this position.

7. Use sponges, towels, foam or similar to put under the headlight housing and position the housing in the car. Align it perfectly with the cars lines, also put the headlight cover on to check the alignment. There might be little sanding required on the edges around the headlight housing in order to make the cover perfectly fit on it. If you have test-fitted to your satisfaction, mark the area where the mounting

tubes meet the housing and sand the surface area of the housing there. Then use a hot-glue gun to punctually test fit the white re-inforcement plates to area and once this is test-fitted also put some hot glue between the reinforcement plate and the tube. Put the headlight cover on again. You will notice that the housing exceeds the cover by a millimeter or so in the front and / or back when looking from the top. Mark these excess areas and gently sand them away until the cover fits the housing perfectly. The cover replicates the OEM metal covers shape exactly, so do not modify the cover but only the housings!

8. Once you have done this and are happy with the alignment you can mark each mounting tubes position on the housing using a pencil, remove all hot glue and drill a hole to accept the screws that are required to install the screws for the mounting tubes. Assemble the screws as illustrated in picture 9. Then put enough 2 component epoxy glue on the screw-washer-nut assembly and slide the mounting tubes over it and reinforce the connection between the housings and the tubes additionally using some more glue.

The metal sheet that was point welded to the tubes serves only for reinforcement purposes, the main structural strength has to result from the epoxy and FRP joint between the mounting brackets and the housing.

9. Remove the housing with the mounting tubes now attached to it. Then use a Dremel and a Cut off disc to extend the inner installation slot of the badge panel (for non S2 / turbo models there has to be a hole drilled in the position illustrated in picture 9): Extend it towards the fender so that you can install the L-shaped front carrier thread bar included in the scope delivery (picture 9). Make sure you put a spacer on top and on bottom of the bodywork area.

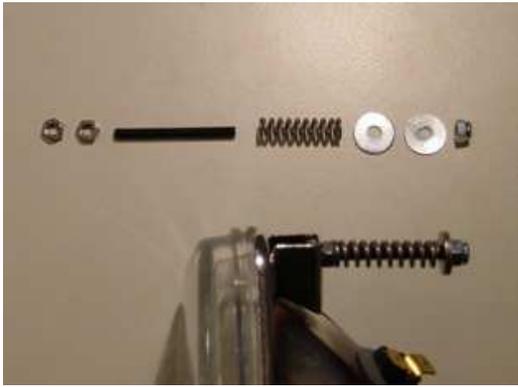
10. Reinstall the headlight housing and adjust the height of the front L-thread bar so that the headlight unit aligns perfectly again, you can easily adjust the height by turning the upper and lower nuts. Note that the L-shaped thread bar has always got to point to the front! Test fit the badge panel back on the car, also put the headlight covers on, you may fix them using some tape (see picture 10). Perfect alignment should look like picture 11. Please note that the covers need gentle pressure to fit perfectly. Due to the process of manufacturing they tend to have some space in between the housing and the area alongside the cover (see pictures 12 (no pressure applied) and 13 (slight pressure applied))

11. Then lift the headlight housing on the front and put some glue on top of the aluminium tube that fits on the L-shaped thread bar to the headlight housing. Gently push the housing down and let the glue dry.

12. Remove the headlight housings by loosening the triangular brackets and sliding it out via the front (same as the badge panel). Then sand the area around the aluminium tube and use the FRP matt included in the scope of delivery to reinforce the junction between the tube and the housing

13. Reinstall the housings in the car and check again the alignment with the covers and the bodywork.

14. If everything looks perfect adjust the headlight units by putting power on and light against a wall, use the reference marks from I.1.



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4b



GTS Headlight inner sidewall

4c



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10



11



12



13

#### IV. Mounting the covers

1. If you are happy with the fitment of the units and have adjusted the headlights properly, test fit the covers again and secure them with tape. Power the lights on and verify the alignment again.
2. If everything looks good and you are happy with the result, clean the inner side of the housings and make sure everything is fitted correctly and all screws are solidly fitted. Should you have made some scratches into the inside of the buckets you can re-spray the buckets using a black matt spray can.
3. For racing purposes we recommend to fit the covers using silicone. Important note: Apply silicone both on the lower side of the cover and on the top edge of the housing (you can use sufficient amounts

as this area will not be visible thanks to the black frame of the covers). Work carefully as this connection has to be water proof.

Please note that there are other options to secure the covers. You can also secure them by drilling holes through them (Makrolon of which the covers are made of is a very easy material to work on) and bolting them to the housings if you glue some reinforcement elements to the inner side of the top edge of the headlight housings.

We recommend the fitment using silicone as it is the fastest and aesthetically most pleasing way of doing so.

When installation is finished, we heavily recommend covering the GTS headlight covers with a protection film like Venture Shield or a 3M product:

<http://www.ventureshield.com/>

[http://solutions.3m.com/wps/portal/3M/en\\_US/Scotchgard-PPF/Home/For\\_the/Consumer/](http://solutions.3m.com/wps/portal/3M/en_US/Scotchgard-PPF/Home/For_the/Consumer/)

Thanks again for purchasing DEUTSCH NINE products.