

Alfa Romeo 147

GTA/Ti headlights conversion guide



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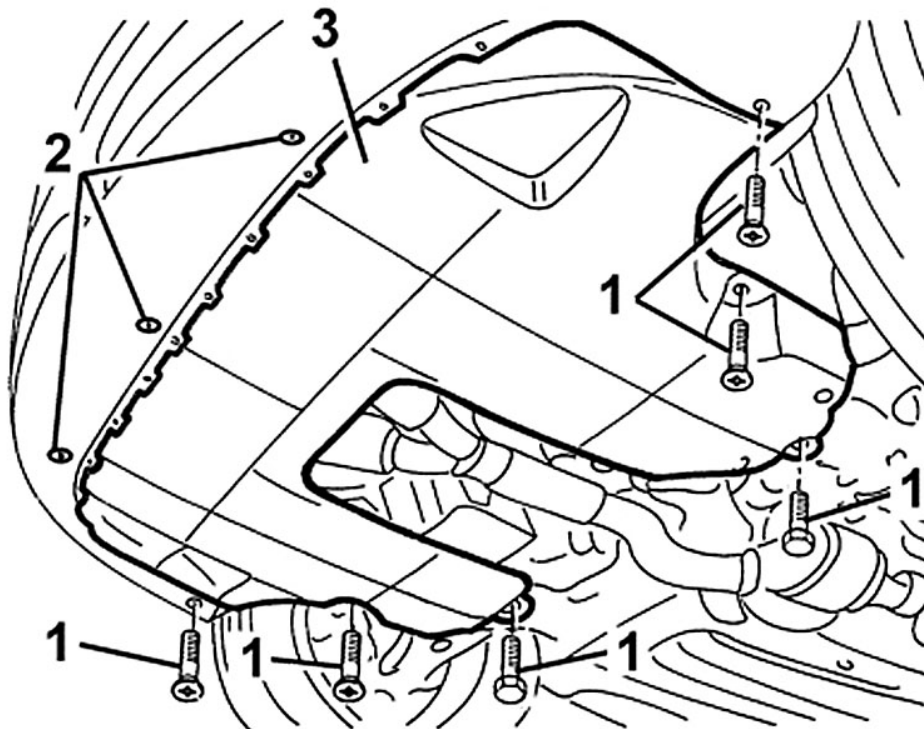
This guide will help you to convert the standard headlights on Alfa Romeo 147 into the GTA/Ti pack headlights with black inner plastic.

Quick guide (for advanced alfisti):

1. Lift the car
2. Remove the front wheels
3. Remove plastic inner wheel arches
4. Disconnect front turn indicators
5. Remove the front bumper (disconnect headlight washers first if you have them)
6. Remove headlights
7. Open the headlights and paint the inner plastic black or car color
8. Use silicone sealant to piece the headlight together
9. Install everything back in reverse order
10. Enjoy

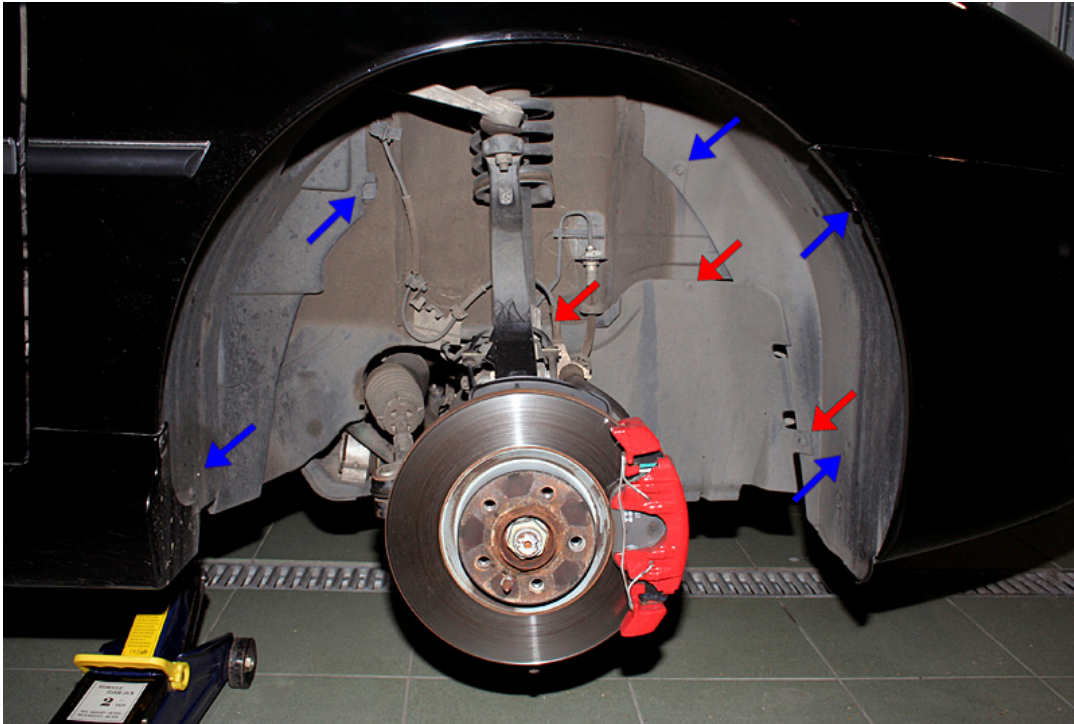
Step by step guide:

1.
 - Raise the vehicle.
 - If you can't raise the vehicle completely, secure the car against movement (pull handbrake, cog the rear wheels) and lift the front with two hydraulic jacks.
 - Remove the bolts fixing under engine protection and remove the protection.



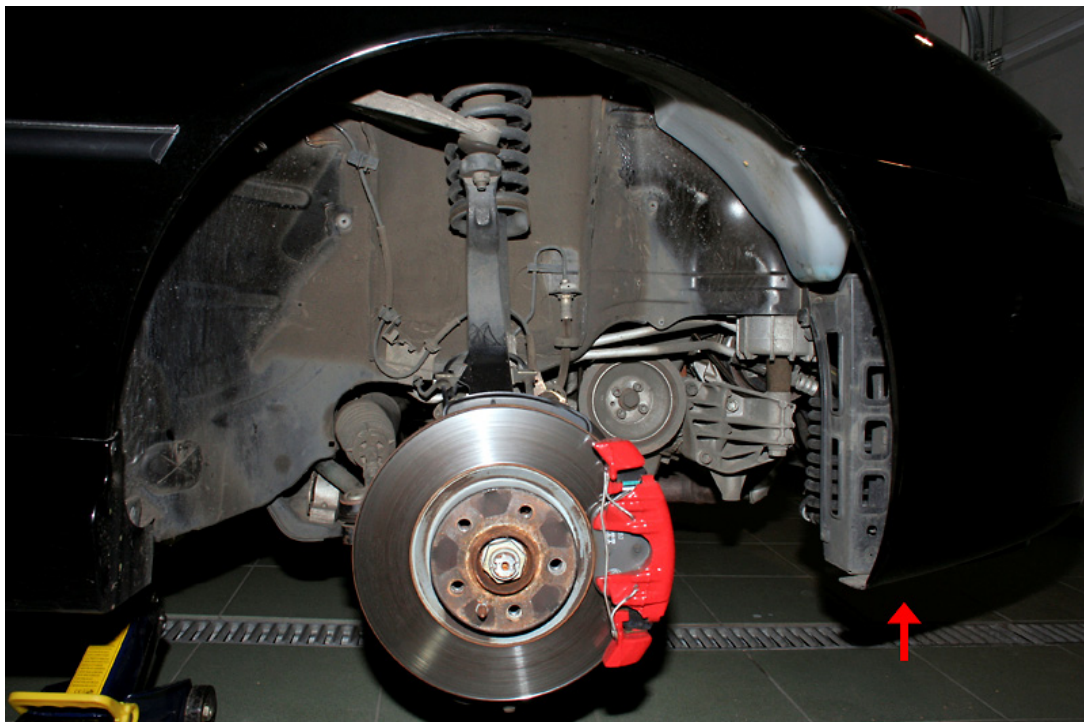
2.

- Take off your front wheels.
- Unscrew the engine dust protection retaining bolts (red arrows) and remove the protection.
- Unscrew the 5 wheel arch bolts (blue arrows), detach the wheel arch and remove it.

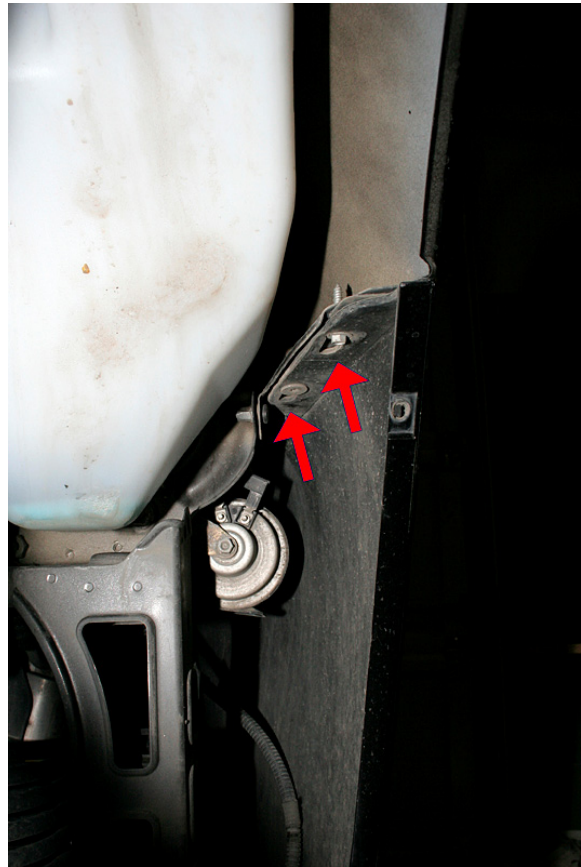


3.

- This is how the right inner wing looks like without the wheel arch. Follow the same procedure for the left side of the vehicle.
- Remove the lower bolt holding the bumper on the sides (red arrow)



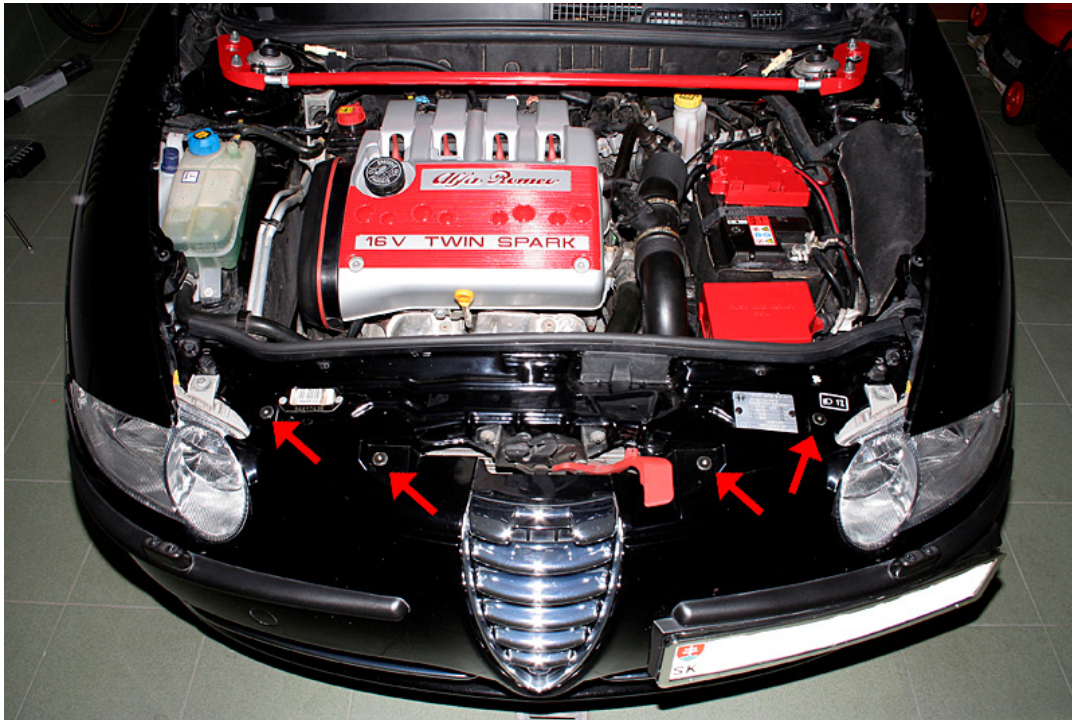
4. Working from under the wing remove the two bolts on the inner side of the bumper (red arrows).



5. By now, you should have removed all five bolts from under the bumper. The three in the front (red arrows) you should have removed in step 1 with the under engine protection. The two on the sides you should have removed in the step 3.



6. Remove the four bolts on the top of the bumper, under the bonnet (red arrows)



7.

- Before removing the bumper, disconnect the front turn indicators (red arrow). You can get to the connector very easily from under the bumper.
- Put some blanket on the ground under the bumper so that it doesn't scratch itself when you remove it.



- Start removing the bumper. It should go very easy. Start on the side, from the wheel arch. There are two pins on each side holding the bumper. When the bumper comes off them, the rest is not difficult.

- If you have headlamp washers, remove the bumper only partially, so that you can get to the pipe connector. It is fine if you can ask second person to hold the bumper for you till you unplug the connector. You have to unplug the hose entering pressure distributor. That's the thing where the hose splits into two separate ones. Use pliers to move the safety-catch upwards on the hose and unplug the hose (blue arrow) from the pressure distributor. When you do this, water starts running out of the hose till the water reservoir is empty. You will need a bucket to catch it. If you don't want to loose 5,3 liters of your screen washing liquid, you can have some sort of plug prepared to stop the water running out.

8. Remove the headlights. Each one is held by three screws (red arrows). Remove them, pull the headlights partially out and disconnect the connector on the back. To disconnect it easier, plug the connector fully in as this will loosen the plastic catch inside the connector. Than push the pin on the back side backwards and unplug the connector.



9.

- With a sharp knife or small flat screwdriver try to get out as much sealant as you can from the groove between plastic headlight body and the glass (it is plastic too, but I will further refer to it as glass)
- There are three pins holding the light together (and sealant of course). Two pins at the bottom and one on the top of the light cluster (red arrow).
- Start dismantling the light from the bottom side, as bottom pins are shorter and easier to open as the upper one. You will probably need to use wide flat screwdriver as a lever to loosen the sealant at more places
- Don't rush or use excessive force!!!! The headlight body isn't made of very hard plastic and you can scratch the glass easily too. Take your time and prise off the glass very slowly.
- The sealant is very sticky and likes to smudge the glass, your hands and everything around.
- When you take the headlight apart, take out the inner chromed plastic of the glass.
- Clean the edge of the glass of the sealant. First mechanically, then use some solvent. I used benzine for technical purposes and it worked quite well. You can clean the glass completely, but be careful not to scratch it.
- Clean the headlight body groove of the sealant. This hasn't to be perfect, but you have to make the groove wide and clean enough to be able to fill it with new sealant.



10.

- Paint the headlight plastic black or body color if you like.
- Don't forget to degrease it before painting
- I used two-compound black polyurethane paint as primer and black glossy spray as final finish, but you can probably use any primer suitable for plastic and coating. The temperature inside the light never reaches 100 °C and most paints are able to sustain this.



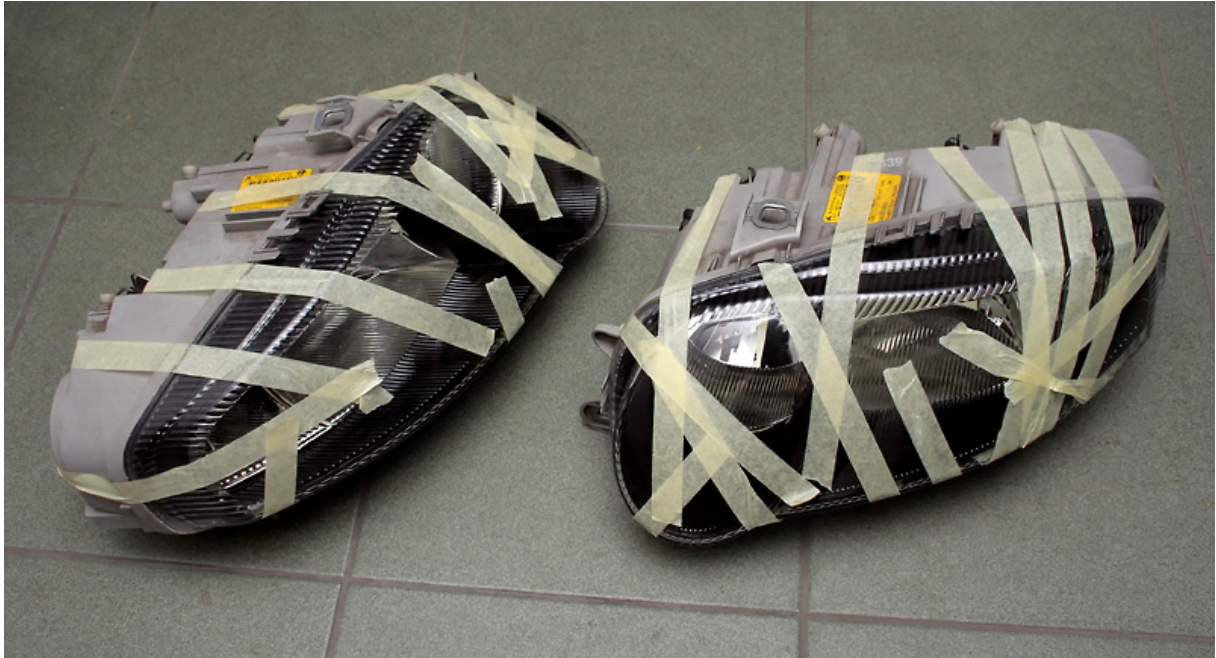
11. Install the painted plastic into the glass. Work in clean environment, as all dirt will be visible in your headlight when you seal it.



12. Fill the groove in the headlight body with silicone sealant. I used universal transparent silicone, as it can be used with almost all materials and stands up from -60C to +150C. Another good idea is to use silicone for aquariums or neutral silicone that isn't so acid. I am sure there are some better sealants, but I had nothing other available at the moment.
- Never touch the mirror coating on the reflectors parabola. It is delicate and scratches or turns matt easily. Don't clean it with cloth, as dust particles could scratch the surface. If there is dirt on its surface, try to blow it away with compressed air. If you really have to clean it, use microfibre cloth and liquid used for cleaning optical instruments, like photographic lenses. Don't use any liquids that leave residues. You don't want the surface to turn matt.



- Put the headlamps together. Bind them with some tape and let the sealant dry. You should open the back side of the headlamp and take out all the bulbs so that the light was vented. Some sealants release vapors when they are drying and this could cause a dim film on the glass or parabola. This stands for the plastic you painted too. Although most paints are quickly dry for the touch, they can release some vapors in the next hours during the process of hardening. If you seal the painted plastic too early into the headlight, it can't breathe. Let it dry outside overnight.



- Enjoy the result



15. Complete the installation of headlights, bumper, inner arches and wheels following steps 1-8 in reverse order.





Disclaimer:

This guide describes how I did the conversion. It may not be complete or something might be not described detailed enough. Follow this guide at your own risk. Please only attempt this if you feel you are competent. I'm not responsible for any damage you might cause. Always use common sense not excessive force. Don't blame me or this guide if you break something. It was your choice to try this.

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