

RAM AIR SYSTEM

Produce by Gruppem

Installation Instructions

ORS-0128

ALPINE A110 DFM5P EG: M5P 1.8 Turbo

Thank you for buying the Ram Air System

Before installation, verify that you have all of the parts in the Parts List on the right.



CAUTION

- Do not install on a road or other place that could interfere with automobile or pedestrian traffic.
- Park on flat, horizontal ground with the emergency brake on, to prevent the vehicle from rolling. Remove the key from the ignition and let the engine cool down completely before beginning installation.
- Wear work clothes suitable for the job. When necessary, wear protective gloves and glasses.
- After installation, regular maintenance is necessary. Periodically check for realignment, clearance, and tightening of all components.
- Gruppem Inc. will not be held responsible for installations to any motor vehicle model other than the one specified.
- Keep these instructions in a safe place after using them.

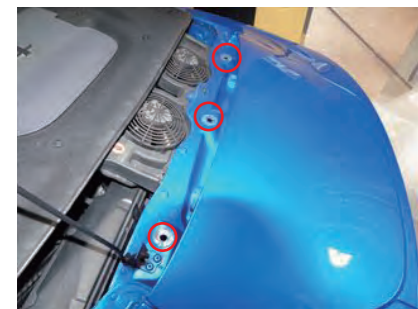
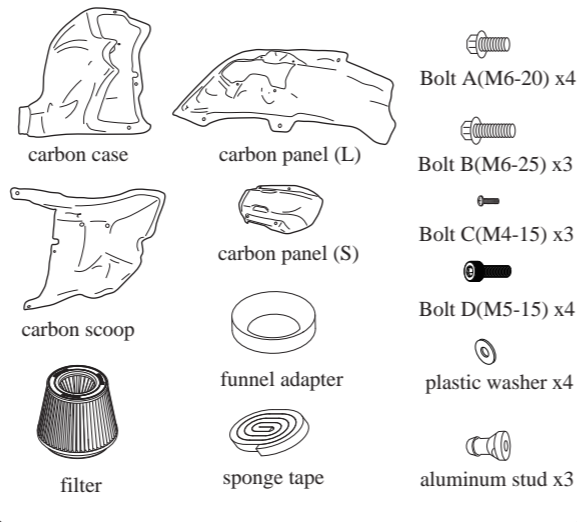
Speeding and reckless driving are completely unacceptable. Please use this product with care, following all traffic regulations.

Installation of ram air system

*It is a product that can process the engine hood to further increase the air chamber capacity when pursuing more power in engine tuning vehicles and racing vehicles.

Please refer to the attached additional instructions for processing and installation.

PARTS LIST



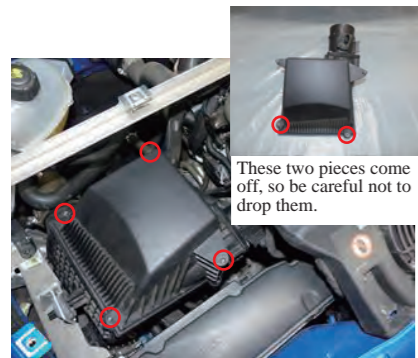
1. Remove 3 bolts from inside the trunk.



2. Loosen the bolts and remove the engine cover.



3. Remove the wire clamp and sensor coupler and loosen the suction hose band.



4. Loosen the 4 bolts and remove the top of the box.



5. Remove the air mass sensor by loosening the four bolts from the top of the box.



6. Loosen the hose band and remove the bottom of the box.



7. Fix the aluminum stud x3 to the carbon case with the bolt (B) x3.



8. Insert the funnel adapter into the case and fix the air mass sensor from the outside of the case with 4 bolts (A).



9. Fix the carbon scoop and the carbon case with bolts (C) x3, and paste the sponge tape on the red line in the above figure.



10. Remove the carbon scoop and place the carbon case in the engine room.



11. Tighten the hose band of the introduction duct.



12. Install the wire clamp and sensor coupler, and tighten the suction hose band.



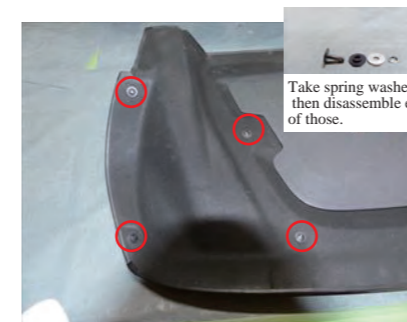
13. Attach the filter to the funnel adapter and tighten the hose band.



14. Reinstall the carbon scoop.



15. Secure the carbon panels (L) and (S) with 4x bolts (D) and 4x plastic washers.



16. Remove the 4 bolts from the engine cover. If you remove the spring washer behind the bolt, you can disassemble it and remove it.



17. Attach the engine cover to the vehicle and fix the red circle mark with the original bolt.



18. Fix the carbon panels (L) and (S) using the 4 genuine bolts that were disassembled. (Use only bolts, not washers)



CARS HATANO co.,Ltd 1-22-21 Yatsuka, Souka-shi, Saitama, Japan.

<https://cars-hatano.com/>

How to process the engine cover

*It is a product that can process the engine hood to further increase the air chamber capacity when pursuing more power in engine tuning vehicles and racing vehicles.

Please refer to the following description for processing and installation.



(1) Install up to the carbon panel once in the same way up to step 18 of the instruction manual. We will mark the cut line to cut the engine cover.



(2) Remove the original bolt and bolt (D)x4 while holding down the carbon panel (S).



(3) Remove the carbon panel (L) while holding down the carbon panel (S).



(4) Mark the semicircular part on the front side of the panel (S).



Draw a line only where the red line is.



(5) Mark the line on the engine cover so that it does not shift.



(6) The semicircular line is marked.



(7) Connect the ends of the lines with straight lines.



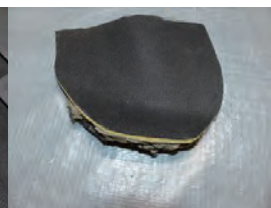
(8) The state where the ends of the line are connected with a straight line.



(9) Cut along the marked line.



(10) It is in a cut state.



cut pieces



(11) Finish the cut section with tape or the like.



(12) Finished cut cross section.



(13) Attach the engine cover and carbon panels (L) and (S) to complete the work.