



SHORT RAM SYSTEM

Installation Instructions for:
Part Number 22-441
1995-1998 Nissan 240SX

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Instructions Part Number: 10-271
1995-1998 Nissan 240SX KA24DE C.A.R.B. E.O. #D-392-18

Congratulations! You have just purchased the finest Air Induction & Filtration system for your car at any price!

The **AEM** Short Ram Air Intake System is the result of extensive development on a wide variety of cars. It is the most advanced short pipe air intake system on the market. Each system is specifically engineered for its application. All **AEM** Short Ram Air Intake Systems deliver maximum performance gains through lightweight, all-aluminum, mandrel-bent tubing that is tuned in both length and diameter. The aluminum will not crack in extended use like plastic. The tube length and diameter are matched for each specific engine to give power over a broad RPM range. Unlike plastic systems that use a continually diverging cross-section, we take advantage of the acoustical energy in the inlet duct to promote cylinder filling during the intake valve-opening event. Every intake is coated with a high-gloss, heat-reducing Zirconia based powder coating. This special blend of powder coating helps reduce heat penetration, which in turn reduces the temperature of the inlet air charge. The cooler inlet air temperature translates to more power during the combustion process because cool air is denser than warm air. The filter element has also been extensively developed. An integral part of all our filter elements is a built-in velocity stack. This velocity stack is specifically engineered to improve the aerodynamic efficiency of the intake system. We have seen airflow gains on a flow bench of 12-15% by using this velocity stack. The air mass flow to the engine is increased because of the increased airflow and reduced inlet temperature, which translates to more power.

QTY.	Part Number	Description
1	2-4411	Inlet Pipe
1	2-633	MAS Adaptor
1	32-3002	Lower MAS Mounting Bracket
1	32-3004	Upper MAS Mounting Bracket
1	21-102	2.75" AEM Air Filter & Clamp
2	5-257	2.75" to 2.50" Silicone Reducer
2	103-BLO-4020	2.50" Hose Clamp
2	103-BLO-4420	2.75" Hose Clamp
11"	65004	5/8" Breather Hose
2	99024.032	1.00" Hose Clamp
4	1-2042	M6 x 1 x 16 Socket Bolt
6	1-3018	M6 Washer
2	444.460.04	M6 Nylock Nut
3	559999	M6 Fender Washer
1	1228599	Rubber Mount
1	10-271	Instructions

Read and understand these instructions BEFORE attempting to install this product.

Note: This inlet pipe kit requires the removal and reinstallation of emissions related components. If you are not familiar with the installation and/or the operation of these components then please refer this installation to a qualified professional.

1) Getting started

- a) Make sure vehicle is parked on a level surface.
- b) Set parking brake.
- c) Disconnect negative battery terminal.
- d) If engine has run within the past two hours let it cool down.

2) Removing the stock air inlet system

- a) Before removing any of the O.E. components, **label each individual part so that no components become mixed up during the installation process.** There are three breather hoses, an Intake Air Temperature (IAT) sensor, and a Mass Air Flow Sensor (MAS). Refer to the following diagrams for the identification of these components. **(Fig. 1)**
- b) Unplug the MAS and IAT sensor connectors
- c) Disconnect the large upper breather hose from the valve cover.
- d) Disconnect the large lower breather tube from the intake tube. Do not lose the hose clamp.
- e) Disconnect the small breather hose from the intake tube. Do not lose the hose clamp.
- f) Remove the small breather hose from the plastic clamp on the intake tube. **(Fig. 2)**
- g) Release the four clips holding down the air box cover. **(Fig. 3)**
- h) Loosen the hose clamp on the throttle body. Remove the bolt from the radiator fan shroud and the mounting tab nut from the radiator support. **(Fig. 4)**
- i) Remove the air intake tube, intake tube mounting tab, MAS, and air box cover from the vehicle.
- j) Loosen the two nuts and one bolt that secure the lower air box. Remove the stock lower air box from the vehicle. **(Fig. 5) Note: It is not necessary to remove the stock resonator from inside the fenderwell.**
- k) Remove the IAT sensor from the stock air box. The IAT sensor is mounted with two bolts that thread through the air box into a threaded backing plate on the inside of the air box. Keep the mounting plate and the two mounting screws for use with the **AEM** MAS adaptor.
- l) Loosen the four mounting bolts and remove the MAS from the stock air box cover. Remove the stock air inlet tube from the MAS.

3) Installing the Short Ram Air Intake System

- a) When installing the Short Ram Air Intake System, DO NOT completely tighten the hose clamps or mounting tab hardware until instructed to do so later in these instructions.
- b) Check to see that the inside of the **AEM** inlet pipe and air filter are clean and free from any obstructions.
- c) Install the 2.75" side of a reducer coupler onto the throttle body using a 2.75" hose clamp.
- d) Install one 2.50" hose clamp onto the other end of the reducer coupler.
- e) Slide the throttle body end of the **AEM** inlet pipe into the coupler on the throttle body. The throttle body end is the end nearest the breather hose nipples on the **AEM** inlet pipe.
- f) Install the IAT sensor into the **AEM** MAS adaptor using the original screws and backing plate. **(Fig. 6 & 7)**
- g) Remove the rubber bushing assembly from the factory air box mounting tab. Remove the metal sleeve first, then the rubber piece will pull out. **(Fig. 8)**
- h) Install the bushing and metal sleeve into the **larger** hole of the lower MAS mounting bracket. **(Fig. 9)**

- i) Mount the **AEM** MAS adaptor to the MAS using the four supplied M6 socket head bolts and washers. Position the adaptor so that the MAS and IAT sensor are oriented as they were originally.
 - i) Mount the IAT sensor connector bracket to the MAS mounting hole that it was originally bolted to.
 - ii) Mount the lower MAS mounting bracket to the MAS mounting hole below the IAT sensor connector bracket. The bend in the bracket should angle away from the MAS sensor and towards the round end of the MAS adaptor. **Do not tighten this screw. (Fig. 10)**
- j) Thread the supplied rubber mount into the MAS adaptor.
 - i) Note: The threaded ends on the rubber mount are different lengths. The **shorter** end threads into the MAS adaptor.
- k) Remove the nut from the far right of the radiator support.
- l) Place two large fender washers over the exposed stud. **(Fig. 11)**
- m) Use the original nut and a supplied M6 washer to secure the upper MAS bracket to the stud. **Do not tighten. (Fig. 12)**
- n) Install the reducer coupler onto the end of the **AEM** inlet pipe with a 2.50" hose clamp.
- o) Install the MAS into the reducer coupler using a 2.75" hose clamp.
 - i) The rubber mount stud should line up with the hole in the upper MAS bracket. Install an M6 washer and nylock nut. Do not tighten.
 - ii) The lower MAS bracket should line up with one of the lower air box mounting studs. Install a large fender washer and nylock nut. Do not tighten. **(Fig. 13)**
- p) Install the **AEM** air filter onto the MAS adaptor using a 2.75" hose clamp.
- q) Connect the small breather hose to the small nipple on the **AEM** inlet pipe.
- r) Connect the **lower** large breather hose to the lower nipple on the AEM inlet pipe. Use the original hose clamp.
 - i) The **lower** large breather hose will need to be cut for proper fitment. When cut just after the first bend in the hose, the **lower** large breather hose should line up with the lower nipple on the **AEM** inlet pipe. **(Fig. 14)**
- s) Replace the **upper** large breather hose with the supplied 5/8" hose and the two 1" Hose clamps. **(Fig. 15)**

4) Re-assemble the vehicle

- a) Position the pipe for best fitment.
- b) Check that the **AEM** pipe and filter are not touching any part of the vehicle.
- c) Check for proper hood clearance.
- d) Tighten all hose clamps, mounting bracket bolts/nuts, the nut on the rubber mount, and the MAS mounting bolts.
- e) Re-adjust pipes if necessary.
- f) Re-connect the wiring harness to the MAS and IAT sensor.
- g) Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tight.
- h) Start engine and perform a final inspection before driving the vehicle.

**For Technical Inquiries
E-Mail Us At
tech@aempower.com**

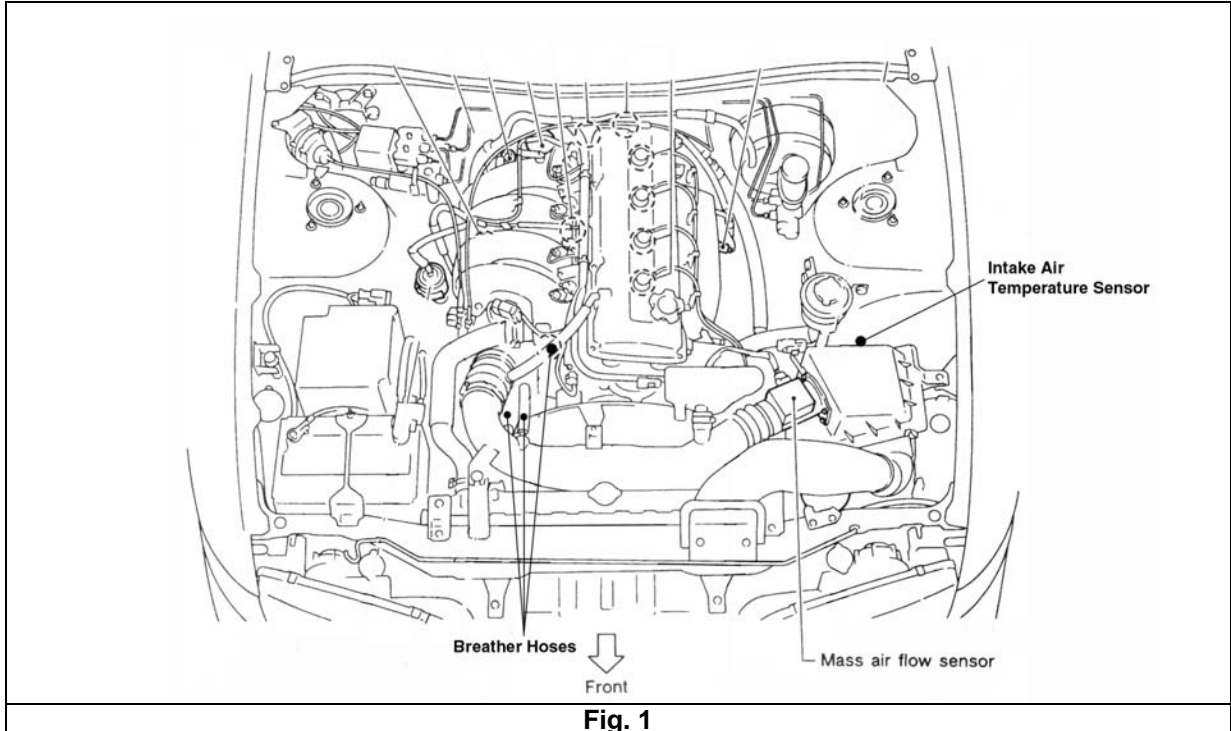


Fig. 1



Fig. 2

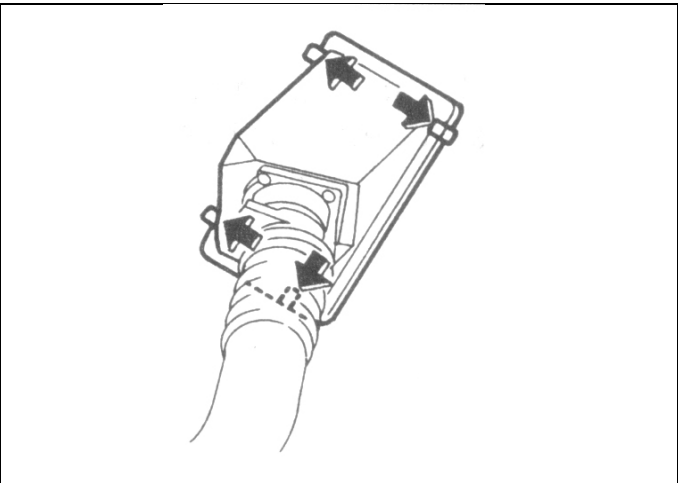


Fig. 3

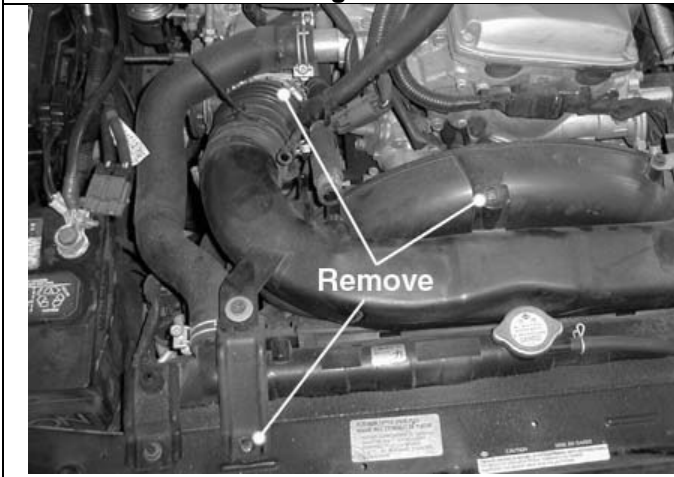


Fig. 4



Fig. 5



Fig. 6



Fig. 7

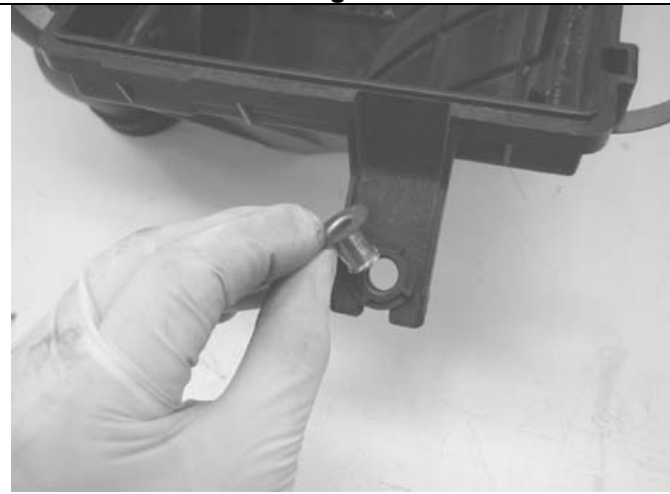


Fig. 8



Fig. 9

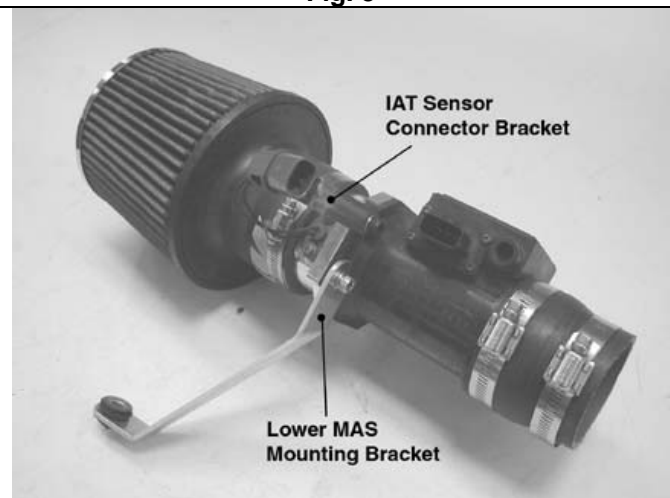


Fig. 10



Fig. 11



Fig. 12



Fig. 13

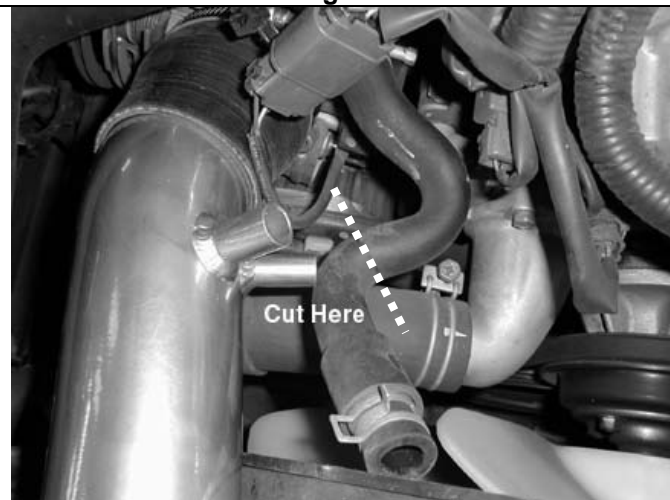


Fig. 14

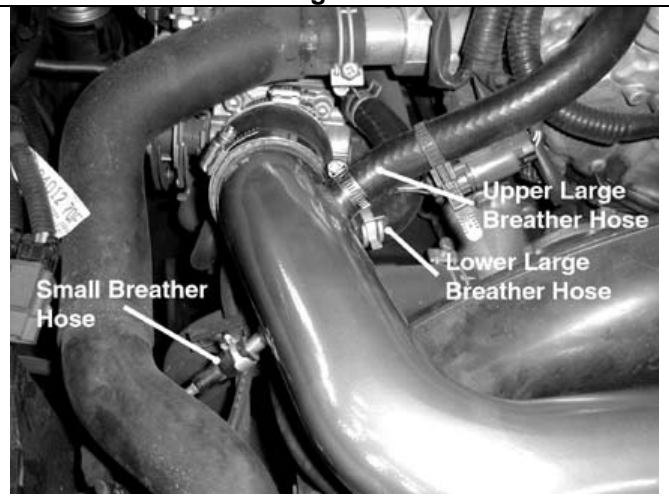


Fig.15

