



COLD AIR SYSTEM

Installation Instructions for:
Part Number 21-563 & 21-564
2000-2003 Toyota Celica GTS
2000-2004 Toyota Celica GT

ATTENTION:

This installation procedure requires some body modifications and may require the use of specialized power tools. If you do not have the proper experience to handle these modifications please have an experienced mechanic perform this installation. **When using any power tools always use proper eye and hand protection.**

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Instruction Part Number: 10-393

2000-2003 Toyota Celica GT 1ZZ-FE C.A.R.B. E.O. #D-392-21

2000-2003 Toyota Celica GT-S 2ZZ-GE C.A.R.B. E.O. #D-392-21

2004 Toyota Celica GT 1ZZ-FE C.A.R.B. E.O.# D-392-24

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

The **AEM** Cold Air System is the result of extensive development on a wide variety of cars. Each system is engineered for the particular application. The **AEM** Cold Air System differs from all others in several ways. We take the inlet air from outside of the engine compartment where the inlet air is considerably cooler than the hot underhood air. The cooler inlet air temperature translates to more power during the combustion process because cool air is denser than warm air. **AEM** has conducted extensive inlet air temperature studies and we have seen temperature reductions of up to 50 degrees by pulling air from outside of the engine compartment. The air mass flow to the engine is increased because of the increased airflow *and* reduced inlet temperature, which translates to more power. The **AEM** Cold Air Systems are **50 states Street Legal** (some models and years still pending) and come with complete instructions for ease of installation.

Our system is constructed of lightweight aluminum and then painted with a zirconia based powder coat for superior heat insulating characteristics. The aluminum will not crack in extended use like plastic and it is actually lighter than plastic. The tube diameter and length are matched for each engine to give power over a broad rpm range. Unlike the plastic systems that use a continually diverging cross section, we take advantage of the acoustical energy in the duct to promote cylinder filling during the intake valve-opening event.

Our Dyno testing as well as **independent dyno tests** (see 7/97 Sport Compact Car Magazine) prove that the **AEM** Cold Air System produces as much as twice the power gain than any other system on the market.

Bill of Materials for: 21-563

1	21-202	2.75" Air Filter & Clamp
1	2-524	Inlet Pipe
1	8-105	1/8" Vacuum Cap
1	444.460.04	6mm Nut
1	559999	6mm x 25mm x 1mm Washer
1	1228599	Rubber Mount
1	5-273	2.75" to 3.00" Reducer
1	103-BLO-4420	2.75" Hose Clamp
1	103-BLO-5220	3.25" Hose Clamp
10	65128	Breather Hose 3/8"
2	4093-5	Hose Clamp, 3/4"
2	99024.032	Hose Clamp, 1"
1	1-115	Zip Tie 11.25" Long
2	1-2023	Socket Bolt M4 x .7 x 10mm
1	2-672	Celica ECU Hose Lower Adapter
1	2-673	Celica ECU Hose Upper Adapter
23"	65116	1/2" Breather Hose
1	10-904	Vacuum Routing Diagram
1	10-393	Instructions
2	10-922S	Regular AEM Sticker
1	10-400W	White License Plate Frame

Bill of Materials for: 21-564

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1	1228599	Rubber Mount
1	5-277	Rubber 15 Degree Elbow
2	103-BLO-4420	2.75" Hose Clamp
10"	65128	Breather Hose 3/8"
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23"	65116	1/2" Breather Hose
1	1-2065	Bolt, Hex M6x1.0x12
2	1-3018	Washer, M6
1	7-7318	Bracket, HID ballast
1	10-904	Vacuum Routing Diagram
1	10-393	Instructions
2	10-922S	Regular AEM Sticker
1	10-400W	White License Plate Frame

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

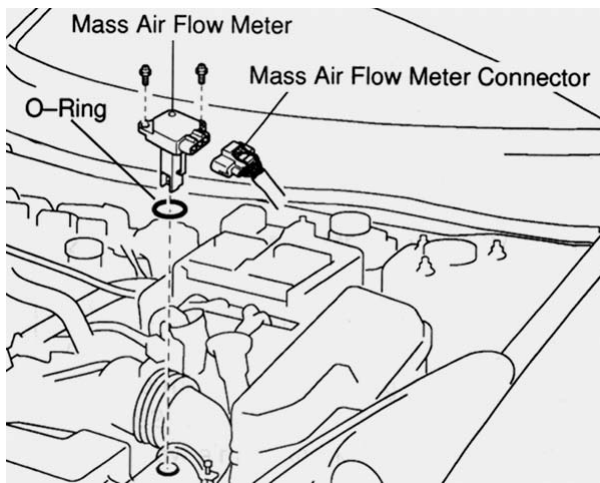
Note: This inlet pipe kit requires the removal and reinstallation of emissions related components. If you are not familiar with the installation and/or the operation of these components then please refer this installation to a qualified professional.

1) Getting started

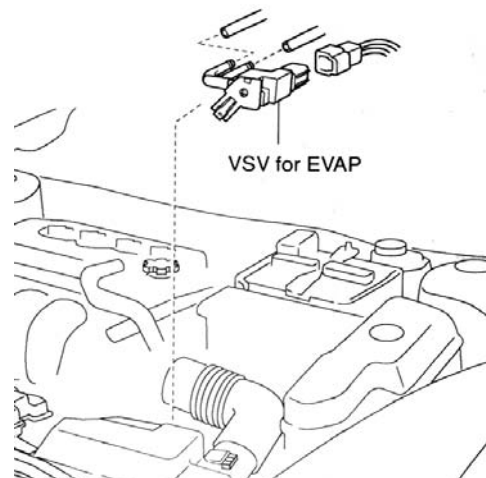
- a) Make sure vehicle is parked on a level surface.
- b) Set parking brake.
- c) Disconnect negative battery terminal.
- d) If engine has run within the past two hours let it cool down.
- e) Lift and support the front of the vehicle with properly rated jack stands. Remove the driver's side tire.

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 Vacuum Switching Valves (VSV), and one air flow meter that have electrical and/or vacuum connections going to them. Be sure to label these connections before disconnecting them. Refer to the following diagrams for the identification of these components.



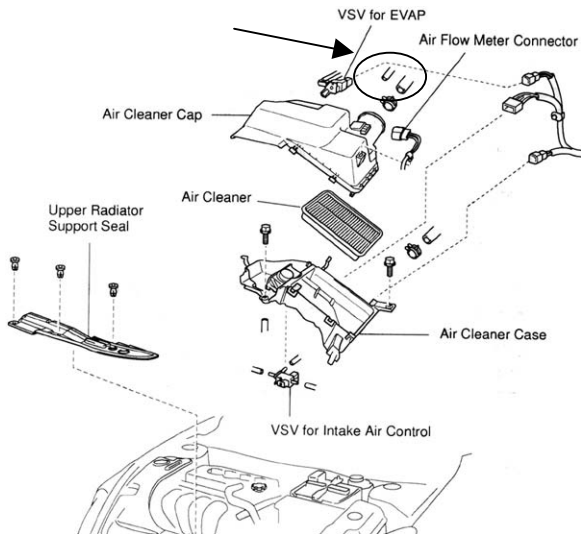
b) Remove the air flow meter connector, then remove the air flow meter by loosening the two screws. Be extremely careful with this component as it can be damaged easily. Set the air flow meter aside in a safe place.



c) Disconnect the wire harness and remove the Vacuum Switching Valve (VSV) for EVAP from the air cleaner cap. Do not disconnect the vacuum hoses from the VSV for EVAP. Remove the metal mounting tab from the VSV for EVAP, and save the mounting bolt for later use.



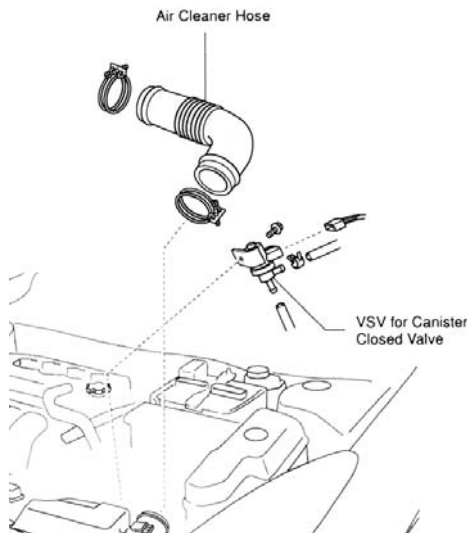
d) Remove the upper section of the ECU cooling duct. The upper piece should pull forward out of the ECU compartment; the other end will pull up off of the lower part of the duct.



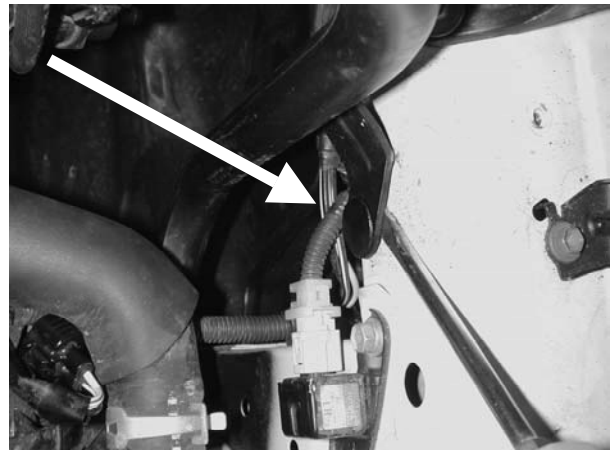
e) Remove the two vacuum hoses on the backside of the air cleaner cap. Disconnect the air cleaner hose from the throttle body, and remove the air cleaner cap and air cleaner element. Remove the upper radiator support seal. Remove the two bolts securing the lower air box. Lift the lower air cleaner case to gain access to the under side.



f) On the underside of the lower air cleaner case, unplug the blue wire connector from the VSV for Intake Air Control Valve (IACV) and the small vacuum line going to the nipple on the intake manifold just to the left of the throttle body. The VSV for IACV and associated vacuum lines will **not** be reused with the **AEM** inlet system.



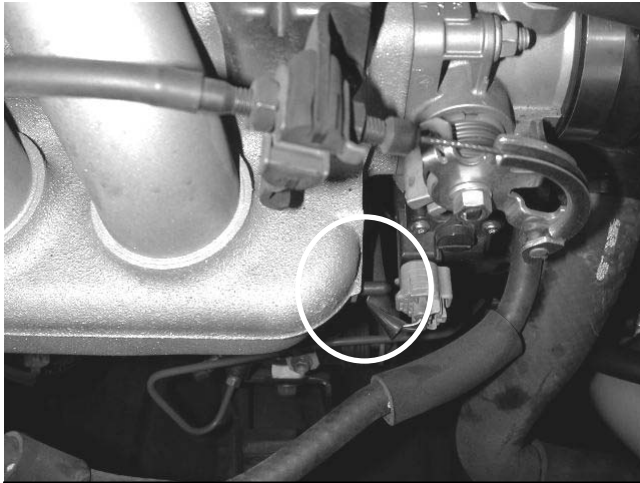
g) Remove the bolt that attaches the VSV for Canister Closed Valve (CCV) and remove the vacuum line from the lower port of the VSV for CCV. The vacuum line from the side port of the VSV for CCV to the hard line on the vehicle's chassis should be left in place. Remove the lower air cleaner case from the vehicle. The VSV for CCV should remain in the vehicle.



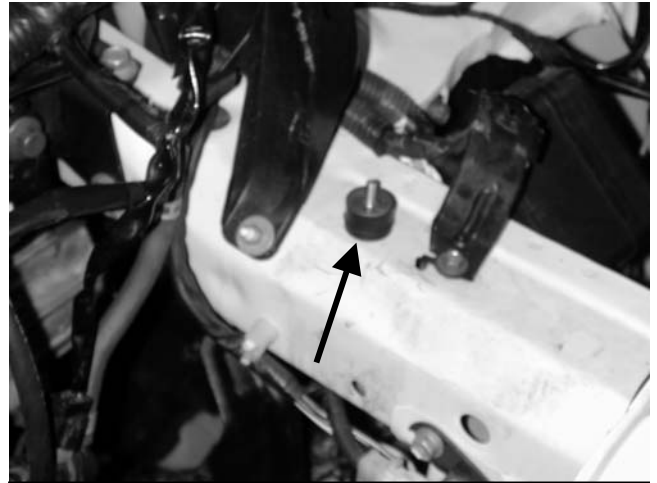
h) Pry the plastic rivet that secures the lower ECU cooling duct away from the engine bay. Pull the lower part of the duct out of the radiator fan shroud. Remove the entire lower ECU cooling duct from the engine bay.

3) Installing the AEM Cold Air Intake

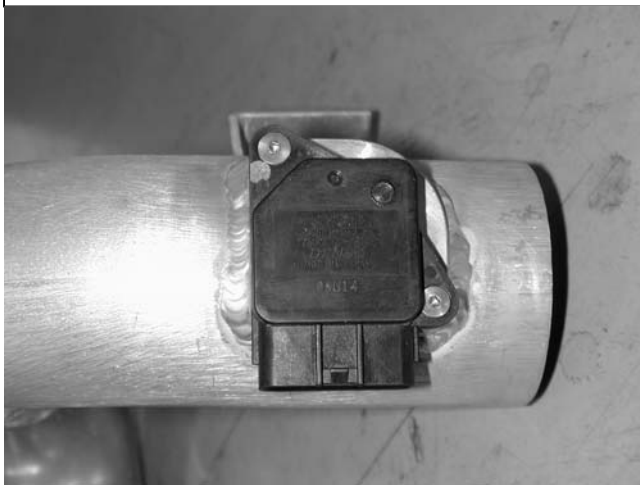
- a) When installing the Cold Air Intake System, DO NOT completely tighten the hose clamps or mounting tab hardware until instructed to do so later in these instructions.
- b) Check to see that the inside of the **AEM** inlet pipe and air filter are clean and free from any foreign objects and/or obstructions.



c) Install the 1/8" vacuum cap onto the vacuum port that was left exposed upon the removal of the vacuum line in step 2f.



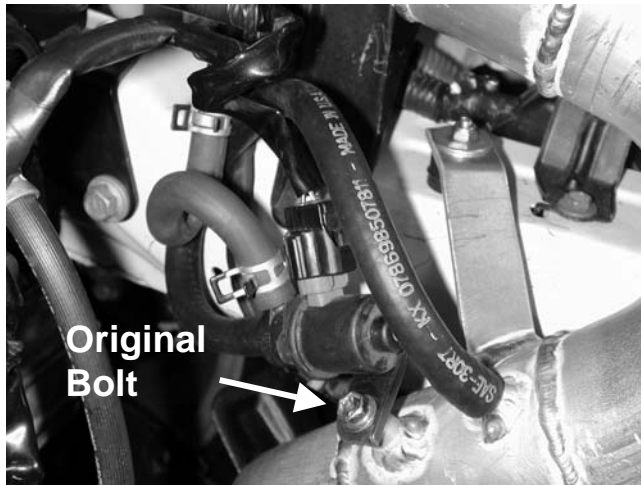
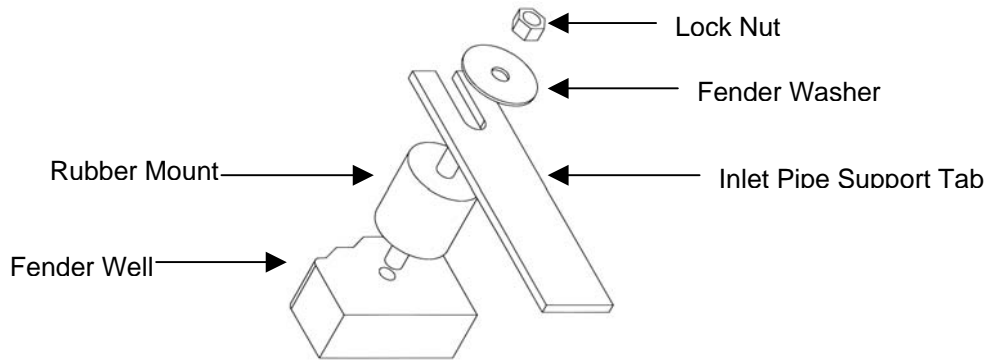
d) Thread the rubber mount into the hole that located the bottom of the air cleaner case.



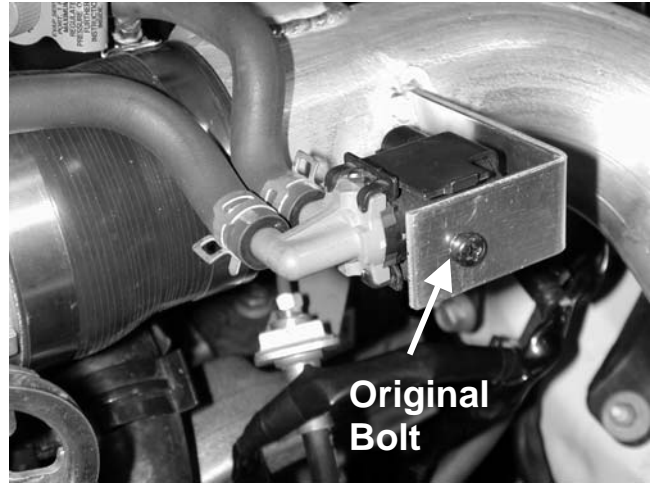
e) Install the MAF sensor into the **AEM** inlet pipe using the two supplied screws.

- f) Remove the inner fender liner to allow installation of the inlet pipe. ***If the liner or any other splashguard is removed, they must be re-installed. Failure to install the plastic splashguard will result in diminished performance and increase the potential for engine damage due to water ingestion in rainy conditions.***
- g) For GTS Models proceed to step **a)**, for GT Models proceed to step **b)**.
- a. GTS Models**
 - i. Install the 3" side of the reducer connector hose on the throttle body along with two hose clamps.
 - ii. Insert the pipe into the connector on the throttle body, and then position the inlet pipe so that the slot on the mounting tab goes over the rubber mount. The throttle body end on the pipe is the end with the air flow meter adapter.
 - iii. Install the washer and retaining nut onto the rubber mount stud but do not tighten.
 - b. GT Models**
 - i. Install the 15°-bend connector hose and two hose clamps onto the throttle body.
 - ii. Insert the inlet pipe into the 15°-bend connector hose, and then position the inlet pipe so that the slot on the mounting tab goes over the rubber mount. The throttle body end on the pipe is the end with the air flow meter adapter.
 - iii. Install the washer and retaining nut onto the rubber mount stud but do not tighten.

Note: On both GTS and GT models, please refer to the picture below for correct rubber mount installation.



h) Using the original bolt, mount the VSV for CCV onto the mounting tab on the **AEM** inlet pipe. Run the 10" section of vacuum hose, between the bottom port of the VSV for CCV (left open in step 2g) and the nipple on the inlet pipe. Secure both ends of the vacuum hose with the supplied hose clamps. **Note: The hose section used in this step is the smaller diameter and shorter length of the two hose sections supplied in the AEM kit.**



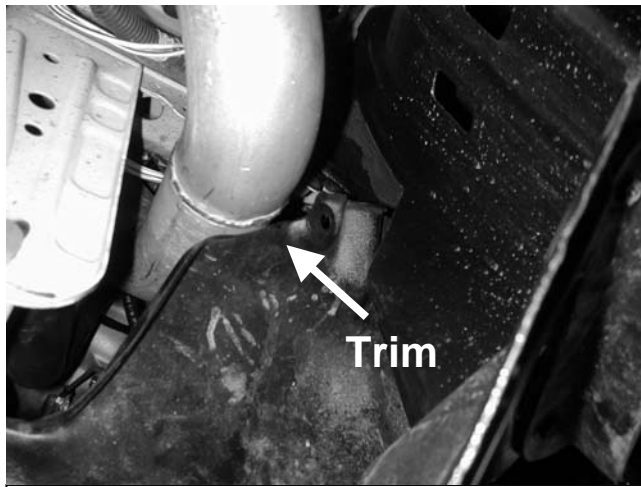
i) Using the original bolt, mount the VSV for EVAP to the bracket on the AEM inlet pipe near the throttle body. Reconnect the wire connector.



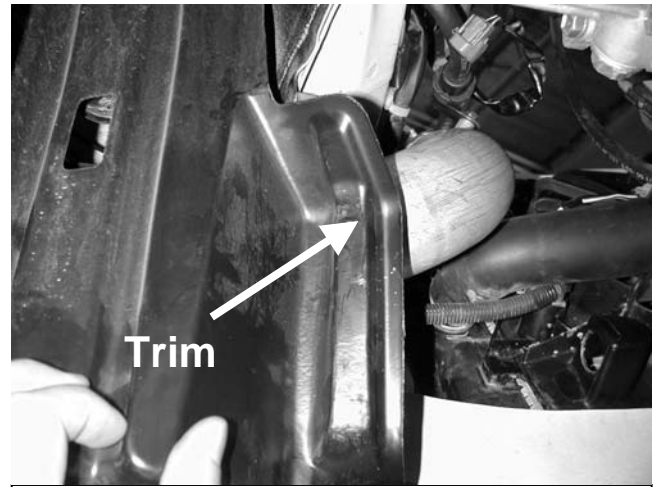
j) On some vehicles, the wire harness to the bumper light may interfere with filter placement. If this occurs, remove the plastic harness clip from the bracket near the tow hook to allow more clearance.



k) Install the **AEM** filter onto the end of the inlet pipe. **Note: 2004 Celica GT's equipped with HID headlights will need to relocate the HID ballast to allow clearance for the AEM air filter. Refer to the addendum at the end of these instructions.**



l) Trim the lower splashguard to clear the **AEM** inlet pipe. Hold the splashguard up to the pipe and trim only enough to clear the pipe. Re-secure the lower splashguard using the original hardware.



m) Trim the inner fender liner in the same manner. Re-secure the inner fender liner using the original hardware.



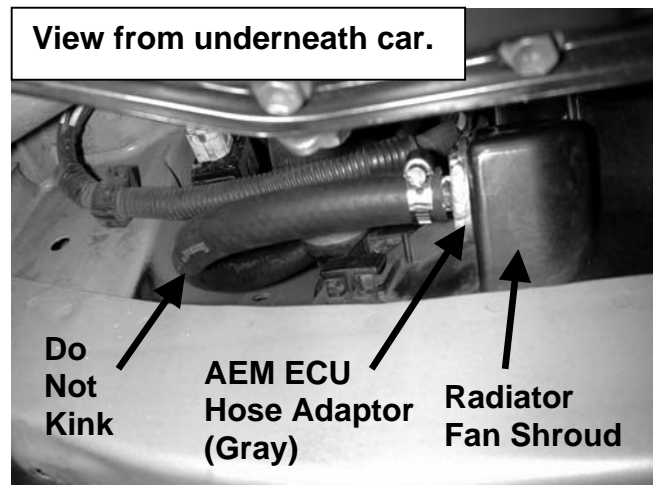
n) Position the inlet pipe for best fitment. Be sure that the pipe or any other components do not contact any part of the vehicle. Tighten the hose clamps at the throttle body and then tighten the nut on the rubber mount. Check for proper hood and radiator clearance. Readjust if necessary.



o) Insert the **AEM** upper ECU hose adaptor into the stock upper ECU duct. The upper adaptor is the one that is **black** in color.



p) Install the upper ECU duct back into the factory location. Attach the supplied section of $\frac{1}{2}$ " hose with one of the remaining $\frac{3}{4}$ " hose clamps. Route the hose as shown towards the bottom of the radiator fan shroud.



q) Install the AEM lower ECU hose adaptor (**gray** color) in to the radiator fan shroud. Push until it clicks into position. This process will require a moderate amount of force, but use care not to crack the radiator fan shroud. Attach the other end of the supplied hose with the remaining $\frac{3}{4}$ " hose clamp. Route the hose as shown to avoid kinks.

- q) Use the zip tie that is supplied in the kit to tie the loose wire that went to the VSV for Intake Air Control Valve in a safe location. **Make sure that the wire cannot get tangled in the shift linkage or the radiator fan.**
 - a. Note: The wire connector for the VSV for Intake Air Control Valve is blue.
- r) Replace the upper radiator support seal removed in step 2e.
- s) Affix the new Celica Vacuum Routing Diagram to the underside of the hood.
- t) Re-connect the negative battery cable.
- u) Start vehicle and check for proper operation of all the components that were removed.
 - a. Note: If vehicle was started without one of the VSV's or the air flow meter connected then the "Check Engine" light may come on. If this happens turn the engine off and disconnect the battery for one minute. Reconnect the battery and restart the engine.



Before

Caution: If you anticipate traversing deep water, install an *AEM BYPASS VALVE* or remove this system and replace it with the original equipment intake system. For this application, the *AEM BYPASS VALVE* Part #21-402S should be installed as shown in the figure below. Refer to the instructions included with the Bypass Valve for pipe modification instructions. Note: The Fuse & Relay Box adjacent to the Bypass valve location should be bent out of the way slightly to allow clearance of the Bypass Valve. Gently push the Fuse & Relay Box metal bracket away from the pipe until it no longer interferes with the Bypass Valve.



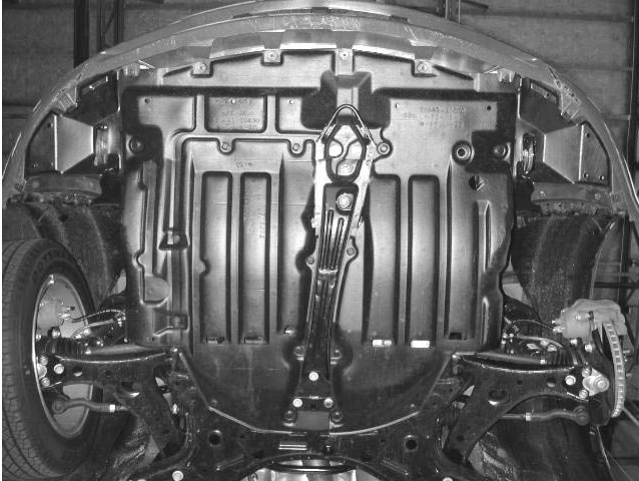
**For Technical Inquiries
E-Mail Us At
tech@aempower.com**

Instruction Addendum

2004 Toyota Celica GT equipped with HID Headlights

Kit Part Number

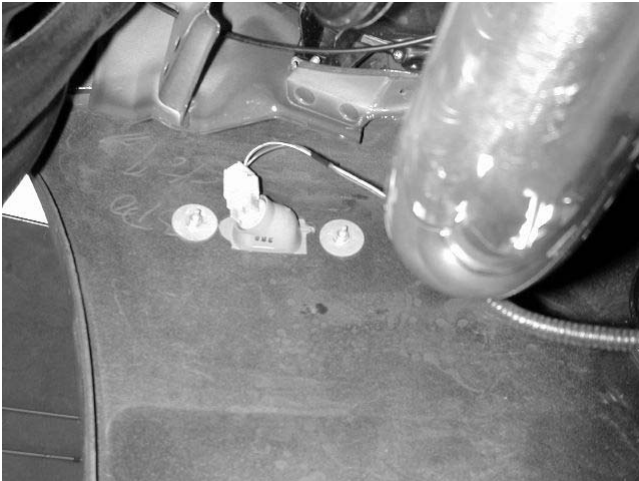
21-564 Only



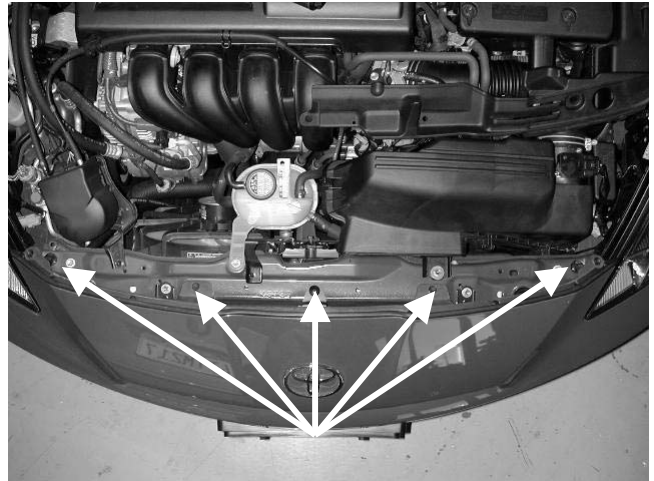
a) Remove the nuts and screws securing the underside of the front bumper.



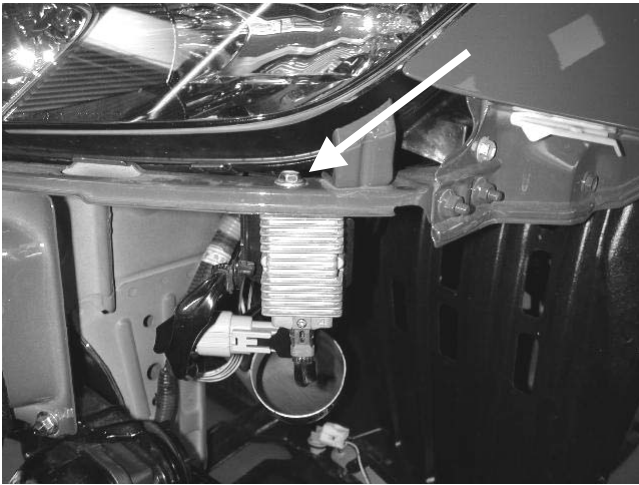
b) Remove the two screws in the upper corners of the front bumper (one on each side).



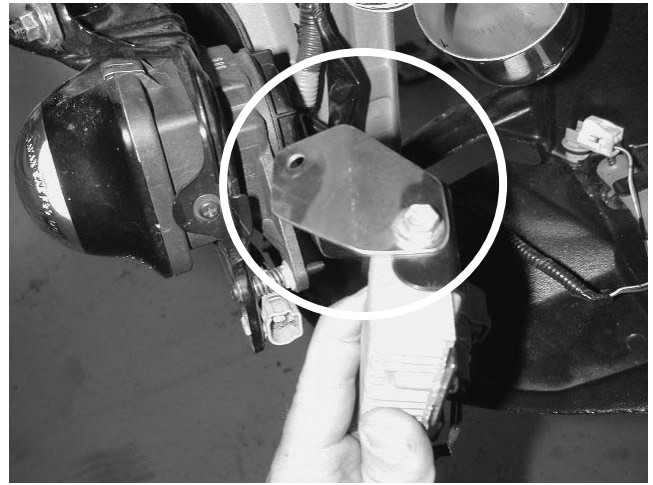
c) Unplug the bumper lights from inside the bumper (one on each side).



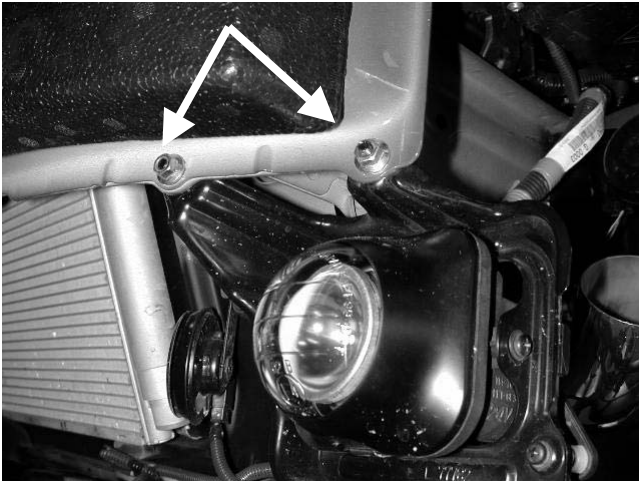
d) Remove the four bolts and one plastic rivet securing the front bumper to the upper radiator support. Remove the front bumper cover carefully, making sure all bolts have been removed and necessary wires unplugged.



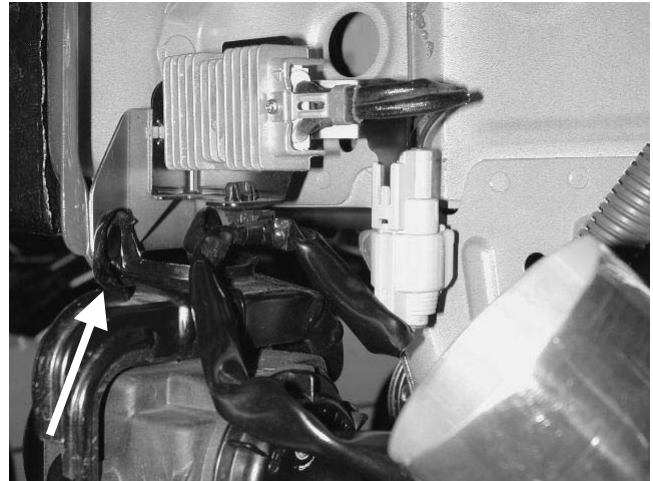
e) Remove the HID ballast bolt under the driver's side headlight.



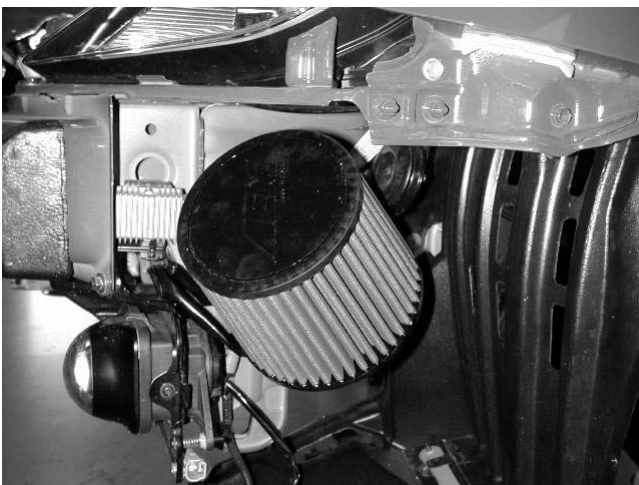
f) Attach the supplied HID ballast bracket as shown using the original bolt. The bend in the bracket should bend towards the HID ballast.



g) Remove the outer fog light nut. Loosen the inner one.



h) Install the HID ballast bracket between the fog light and the radiator support. Tighten the fog light mounting nuts. **On vehicles not equipped with factory fog lights, use the supplied M6 bolt, nut, and washers to mount the HID ballast bracket to the outer fog light hole.**



i) Install the **AEM** air filter on to the end of the inlet pipe. Tighten the hose clamp. Make sure the HID ballast wires are not stretched or rubbing against any part of the car or air filter. Reinstall the front bumper cover in the reverse order of removal. Return to step **31** of the instructions above.