

# **Magnuson Intercooler Relocation**

- **Please read these instructions all the way through before beginning the installation. Doing so will definitely save you some rework.**
- Although this installation can be accomplished by one person, some of the steps are best done with a second set of hands involved.

## **Reasons for relocation and system application notes**

**The “standard” Magnuson intercooler mount location prevents the application of the Aux Fan. Relocating the intercooler to its new position allows for the Aux Fan to be installed in the standard position. The bracket provided to relocate the intercooler also has provision for an additional pusher fan to be mounted on the front of the intercooler.**

**The Intercooler Fan will be turned on any time the Aux Fan is operating.** Details of Aux Fan operation can be found on the first page of the Aux Fan Installation instructions. In all cases, operation of the tandem pusher fans will improve the low speed cooling of both the supercharger cooling loop and the engine cooling system. **These Fans will improve A/C operation in hot climates and in stop-and-go traffic.**

## **Relocation Bracket kit:**

1. Zinc plated Intercooler mount bracket
2. 4 self-drilling bracket mount screws
3. 2 #8 Pan head Phillips screws
4. 2 rubber isolation pads
5. 2 Black Nylon Tie wraps

## **Intercooler Pusher Fan kit:**

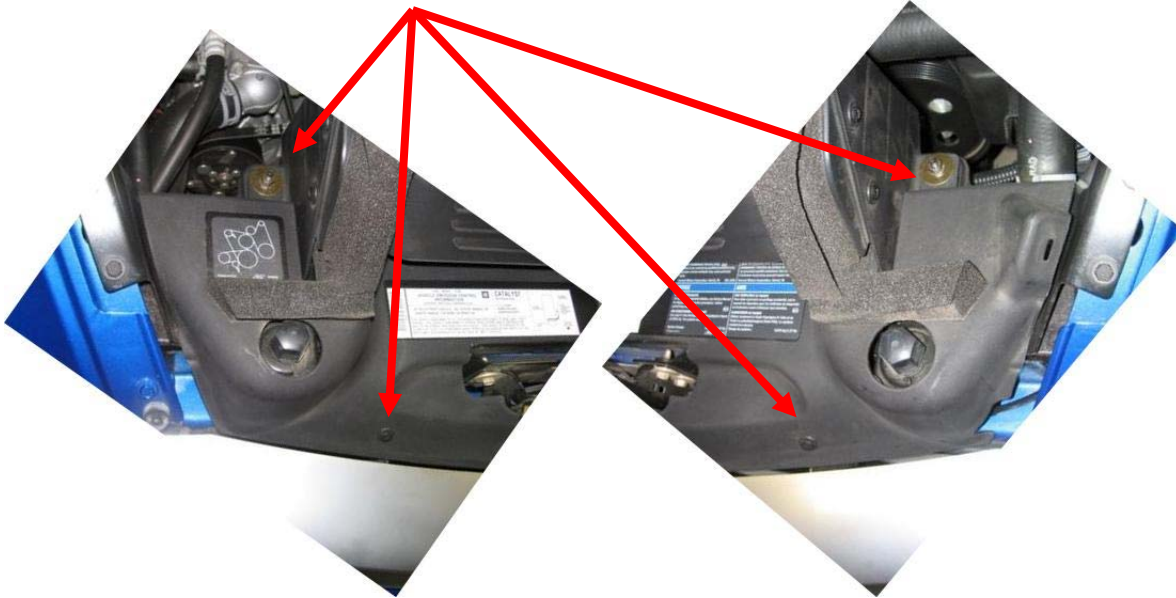
1. Fan with bracket and hardware
2. Lower stabilizer bracket

## **Tools Recommended:**

- 7 and 10mm socket and ratchet with your favorite long extension
- #2 Phillips screwdriver
- 12” long flat blade screwdriver
- Drill with attachment for driving 3/8” screws
- Hack saw & vise
- Masking tape

## **Remove Upper Radiator Panel Cover:**

1. Remove the two nuts and two plastic fasteners.



## **Remove Front Fascia:**

Follow the steps in the “**SSR Fascia Removal**” Instructions.

## **Modify Fascia Mount Brackets:**

1. Drill a small pilot hole as far down on the meaty part of the upper half of the support bracket as you can and still get the head of a screw on the flat section. This hole needs to extend through the frame as well. It will be used for re-alignment of the brackets after they are cut. Install a pan head Phillips screw in each hole you just drilled.



2. Remove the two brackets from the truck and cut off the bottom half of the brackets. Your cut should coincide with the center of the opening in the cross-member. Put a little paint on the cut area and re-install on the frame cross-member. Use the 10 mm bolts and the two pan head Phillips screws to fasten them back where they came from. Note: The Phillips screws are only used as a locator and do not carry any weight. You need not try to over-torque them.



### **Mounting the Intercooler:**

1. Drain and save the fluid from the intercooler system.
2. Remove the intercooler and the original Magnuson support brackets. Re-install the bolts through the end of the lower radiator support mounts where the bracket was attached to the frame.
3. Clean the bottom panel of the intercooler, peel the backing off and apply the two spacer pads to the outer edges of the center frame piece. Not onto the tanks.



4. Place the four rail mounted studs to align with the four holes in the mounting bracket. The intercooler should be snugly nested into the mounting bracket. Tighten the four mounting nuts.



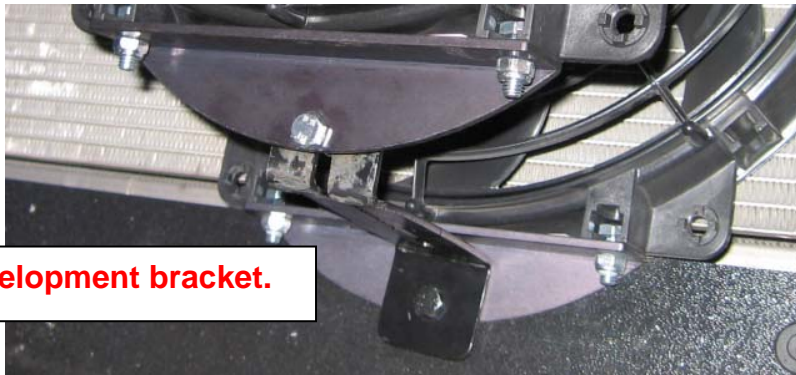
5. If you have a temperature sensor at the center of the wiring harness that runs across the bottom of the cross-member, cut the tape or tie wraps loose and place the sensor in the oval opening. This will position the wiring to be clear of the bracket in the next few steps.
6. Place the intercooler directly on top of the power steering cooler. The two rubber isolation pads will space the intercooler up off the power steering cooler. Note: These two pads are only used for locating the intercooler a safe distance from the power steering cooler. They will probably migrate out of their space over time and disappear. That's OK. We only need them once.
7. Position the intercooler as far to the driver's side of the cross-member as possible. The edge of the bracket should be right up against the seam of the frame. This should have the front edge of the intercooler mounting rail almost up against the back side of the crash bar.



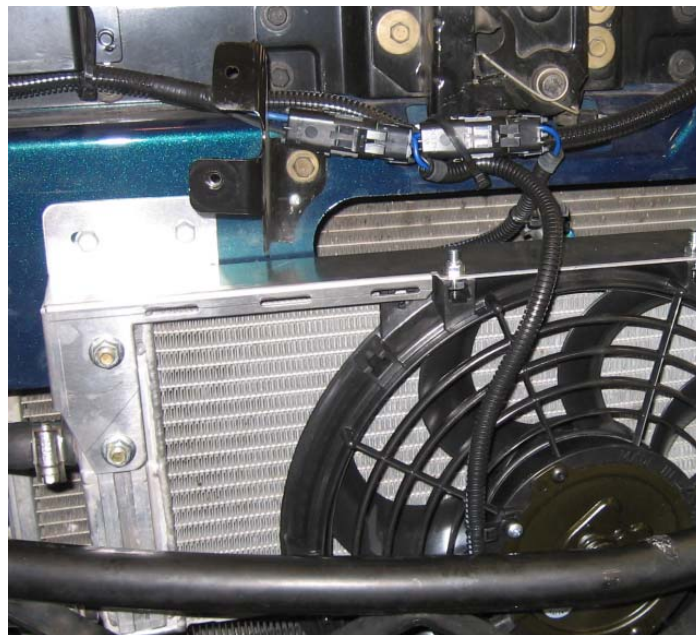
- Using a 3/8" socket (I mounted mine in my Makita), run the four mounting screws into the frame. This will anchor the intercooler to the cross-member. The screws are removable, but use care when tightening again, as they are sheet metal style and have the ability to strip out the hole if over-torqued too many times.
- Using one of the provided tie wraps, attach the temperature sensor to the tab at the back of the intercooler mount bracket.

### **Mounting the Intercooler Pusher fan:**

- Install the fan to the top front edge of the intercooler bracket with the hardware provided. Do not over-torque the nuts, as the heads of the bolts are in plastic.
- Attach the "Z" bracket from the back of the lower bracket on the intercooler pusher fan to the front of the lower bracket of the Aux Fan. One end is contoured to nest onto the Aux fan lower bracket. This little strip of metal does not carry any load, but is only there to stabilize the intercooler fan. You can tweak this bracket as necessary to get a fit you like.



- Run the fan power connector up and across the front of the intercooler pusher fan where it will connect into the harness for the Aux Fan. This will not overload the controller or fuse.



## **Other notes:**

- The wiring from the Aux Fan that will go to the main harness must go through the opening in the frame cross-member.
- The rubber hoses that connect the intercooler to the supercharger cooling loop will help stabilize the intercooler. Take care to be sure there are no kinks in the hoses. Use this opportunity to review their length.
- The intercooler relocation bracket comes with a zinc plated surface. This will do reasonably well by itself, but also makes an excellent base for a quick coat of your favorite paint.
- When mounting the zinc plated “Z” bracket, you will notice that the lower portion is painted black, as it will show from the very front of the truck when you are all done. The very bottom rear portion has a wrap around the lower flange.

Reassembly is pretty simple. Reverse the steps of the fascia removal and be sure you filter the sediment and floaters out of the coolant when you put it back in.

If you have any questions or problems, you can call me any time of day or night that is reasonable. Please remember that I'm in Phoenix. 480-225-2123

My best regards,

Mike