SPEED PERFORMANCE

Auxiliary Fan Controller

Installation Instructions for 2006-2007 Mazdaspeed 6

NOTE: DISCONNECT NEGATIVE BATTERY TERMINAL BEFORE STARTING INSTALL. Serious damage to your stock fan controller can result if you choose to skip this step. Please be advised this install should be done by an experienced person and all connections should be checked afterwards. We also have a video available on our website under the product description to show you how to adjust the controller once you finish install. This controller is not meant to band-aid cooling system problems and you should ensure your cooling system is in proper working order before you install this.
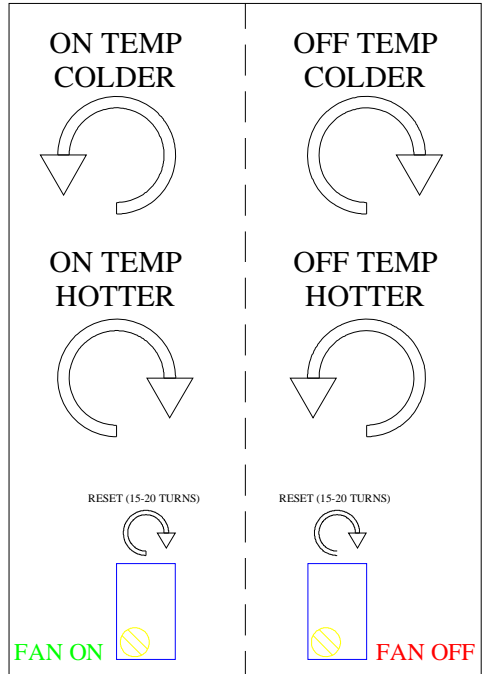
Tools Required:

Wire Strippers
Small Flathead Screwdriver
Small Phillips Head Screwdriver
Ability to View Engine Coolant Temp - Cobb AP/Dashhawk/Ultragauge

Relay Harness Wiring Diagram:

Red - +12V Ignition
Black Ring Terminal - Ground
Orange – OEM Fan Controller RED Wire
Purple – Not Used
White – ECT Sensor Green/Black Wire

Fan Controller Adjustment Reference

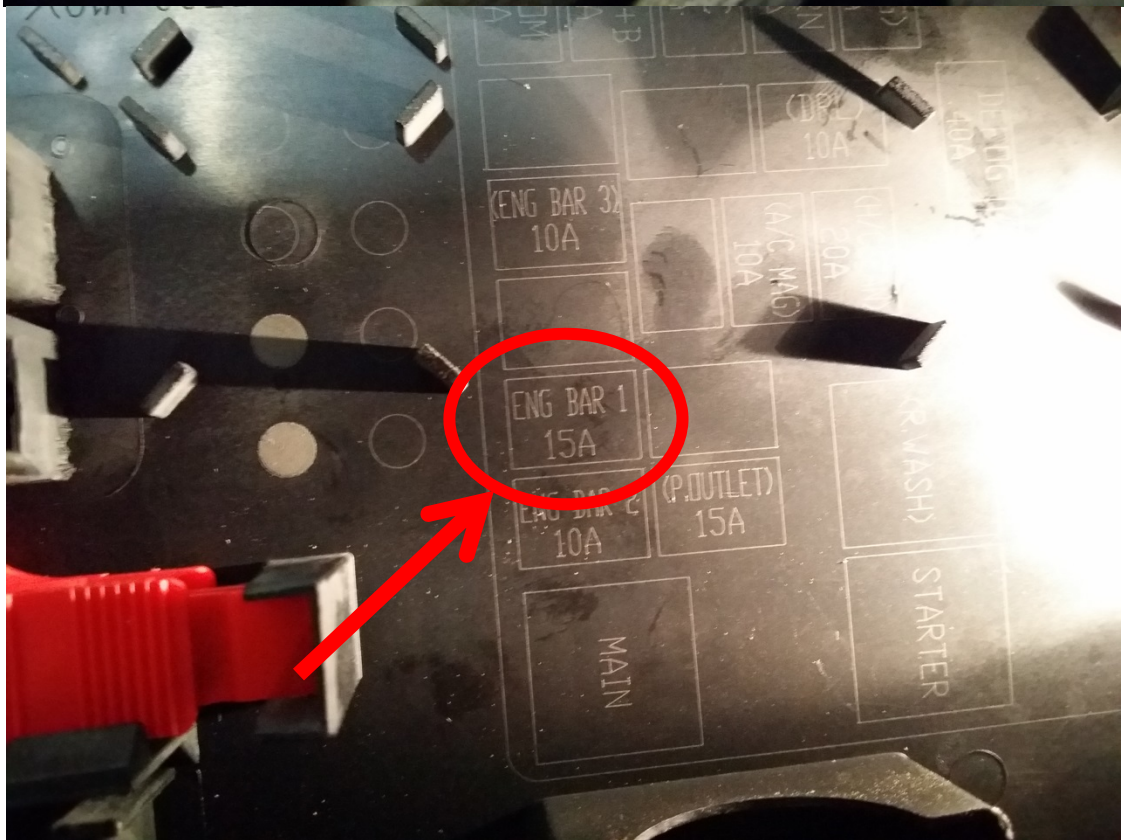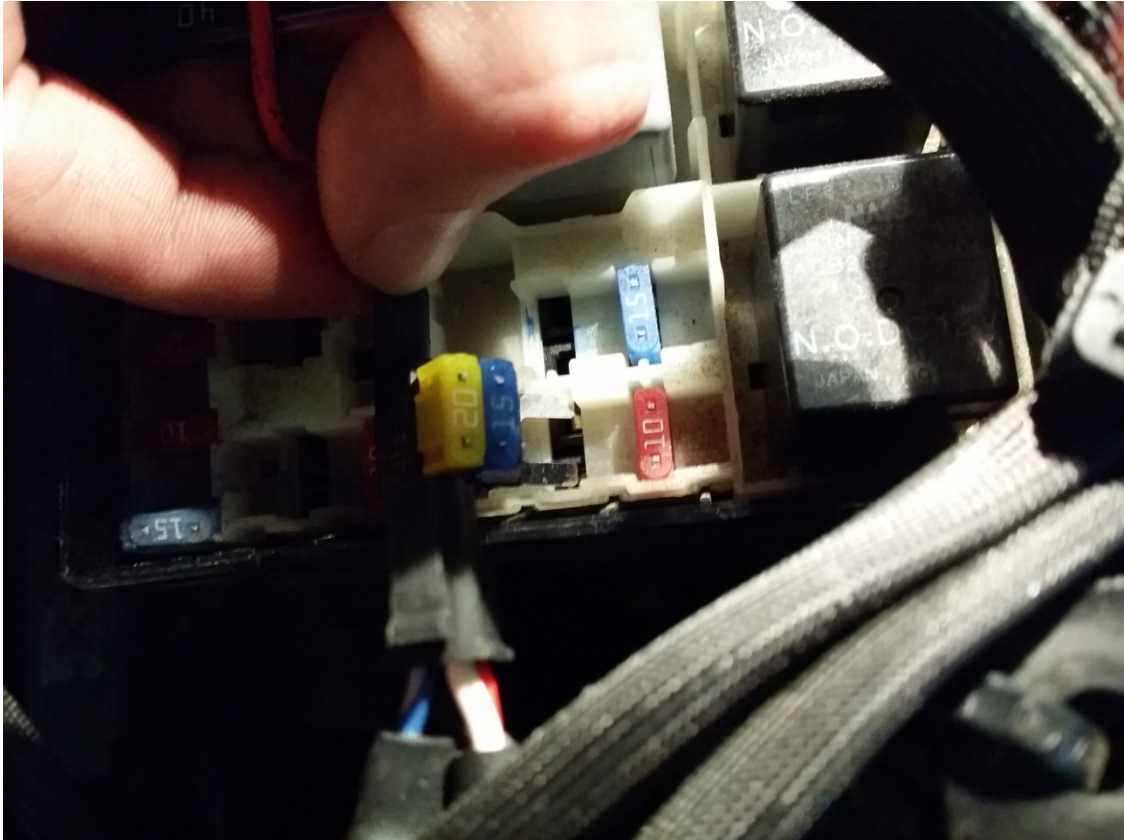|	
ON TEMP COLDER	OFF TEMP COLDER
ON TEMP HOTTER	OFF TEMP HOTTER
RESET (15-20 TURNS)	RESET (15-20 TURNS)
FAN ON	FAN OFF

Step 1

Find a suitable place to put your controller and relay that will keep it away from water/the elements. The circuit board is coated with a protective layer that will resist corrosion but efforts should still be taken to keep the board/box away from any water. Below is a great option for a mounting location.

Step 2

Connect a switched 12V ignition source to the RED wire on the relay harness. We recommend using an add-a-fuse with the ENG BAR 1 fuse in the engine bay fuse box (use a 3-5A fuse for the controller power itself). If you choose to use this power source, your fans will stay on for an additional 15-20 seconds after you shut the car off for additional cooling.
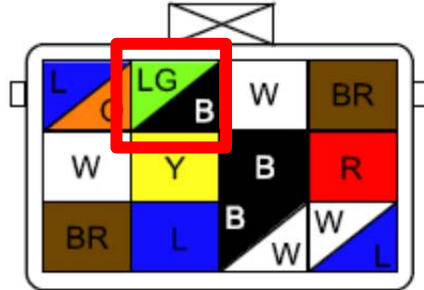
Step 3

Connect the ring terminal on the relay harness to a suitable ground point on the engine chassis. Make sure that there is no paint or any other material in between the ring terminal and the ground point that could cause a poor connection.

Step 4

Locate the BLACK engine harness connector just in front of the high pressure fuel pump. Using the supplied RED quick tap, connect the WHITE wire from the relay harness to the Light Green/Black wire of the connector. When using the quick tap, ensure that it has made good contact with the wire and that there is nothing blocking the metal pin inside from poking through the wire jacket. (Picture below is looking at the back of the connector where the wires enter)

Step 5

Locate the grey harness that is located to the left of the cooling fans if you're standing in front of the car. This harness is snapped in to the radiator shroud just in front of the dipstick. It should have a single red wire coming in and going out. Permanently disconnect the connector and using the supplied RED quick tap, connect the ORANGE wire from the relay harness to the RED wire that is located on the female side of the connector (the larger one). If you use the quick tap, ensure that it has made good contact with the wire and that there is nothing blocking the metal pin inside from poking through the wire jacket.
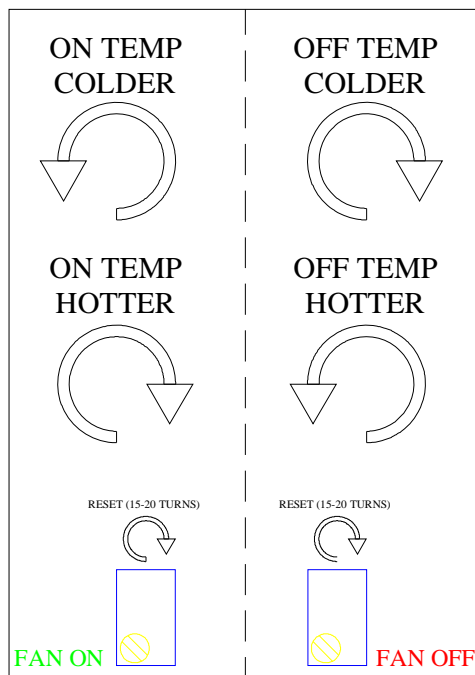

Step 6

Disconnect the relay harness from the fan control module box and unscrew the black screws from the front of the housing (the side with the hole for the harness) and remove the plate. Slide the circuit board out slightly to gain access to the potentiometer screws.

Step 7- Programming the Controller

- Orient the controller so that the potentiometers are on the bottom of the board closest to you.
- With a cold engine, turn on the car and let it idle.
- Monitor the engine coolant temp (ECT) using a dashhawk, AccessPORT, or similar until it gets to 185 DegF.
- Slowly turn the FAN OFF pot COUNTER-CLOCKWISE (the one on the right hand side) until the RED light on the controller begins to flicker and then turn solid red. Once it has become solid you can stop turning.
- Wait until the engine gets to your desired FAN ON setpoint (We recommend 200 DegF) and slowly start to turn the FAN ON pot COUNTER-CLOCKWISE (the one on the left hand side) until the GREEN light on the controller begins to flicker and then turn solid green. Once it turns solid green you can stop turning.
- Your fans should be on at this point and should run for approximately 15-20 seconds before shutting off.
- You are now done setting the controller, **please read the NOTES below**.

NOTES:

- There is a noticeable LAG between the actual temperature of the coolant and what your AP/Dashhawk displays. The coolant temp will continue to drop for a few seconds even after your fans have turned off. This is totally normal and not something to be alarmed about.

- The temp might not hit your exact FAN ON setpoint on the first cycle but you can adjust the FAN ON pot slightly as needed using the below chart. Be sure to adjust it BEFORE the light turns green or else you must wait until the fans turn off and the temp reaches your FAN ON setpoint again.

- Make sure you watch the fans cycle on and off a few times before putting everything back together.

- After you reach your FAN OFF setpoint of 185 DegF for the first time, it may take quite a while for the car to warm up enough to reach your FAN ON setpoint. Revving the motor slightly will help this but don't go too crazy, just be patient.

- Make sure to monitor ECT over the next few weeks to ensure that everything is working properly and that your car is not overheating. You should always periodically check this temp just to be on the safe side.

- To RESET the controller and start the process over, turn both pot's CLOCKWISE until you feel a slight resistance or a click (approx. 15-20 turns MAX). DO NOT turn the pot past this point as it will cause damage to the pot and your warranty will be void on the controller.
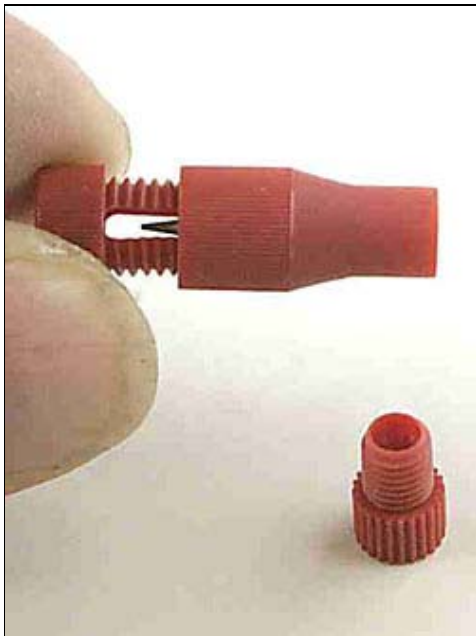
Posi-Tap Installation Instructions
(from a Customer Review)

Note: Regular Posi-Lock Products install the same way as the small cap of the Posi-Tap. Click here to see how to install a regular Posi-Lock.

Note: Larger Posi-Locks require 1/2" of stripped wire, and smaller ones require 3/8" of wire to be stripped. These photos show a Posi-Tap 1824, which requires 3/8" stripped on the tapping wire only. The tapped wire is not stripped.
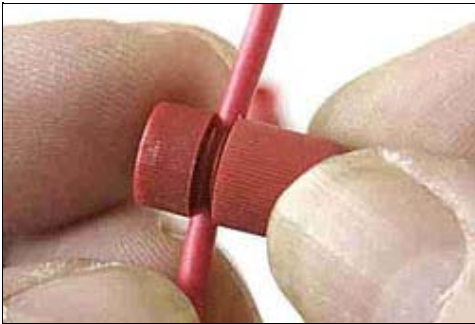

Here is a side view showing the point that pierces the wire for the tap. Remove this large cap and the smaller cap. Start by inserting fully the wire to be tapped as shown in the next photo below.

Slide the large cap over the wire as far as it will go. Here, the wire to be tapped is inserted and ready to tap.
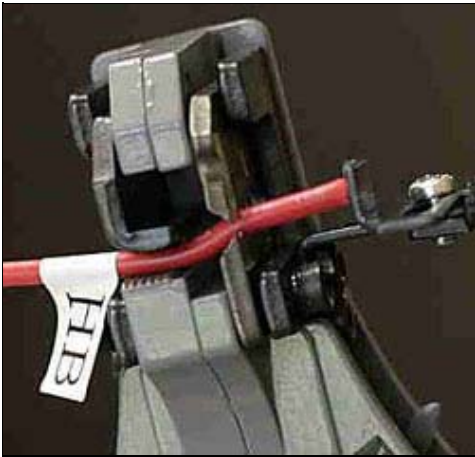

Here the tap is started carefully onto the threads of the large cap. Make sure the pin is centred on the wire when the pin contacts the wire. Keep the Posi-Tap straight to do this.

Continue to thread by hand until the wire is tightly tapped.

Now, complete the Posi-Tap install, by stripping and installing the tapping wire, as shown below.
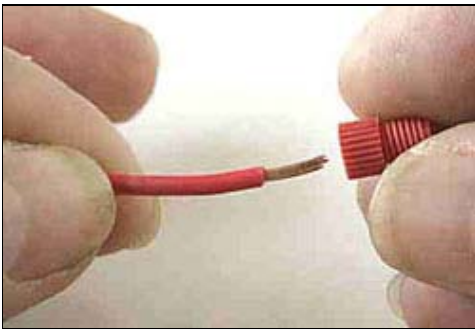
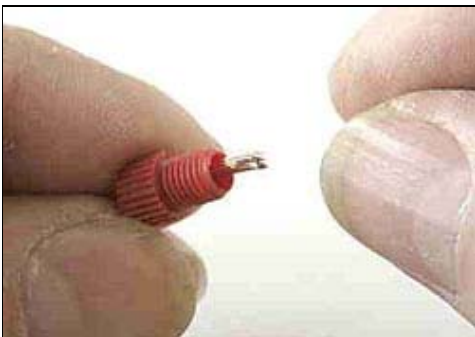## Regular Posi-Lock Install - Posi-Tap Continued

First, carefully strip the wire the proper amount depending on the Posi-Product. Be careful not to nick or cut any strands!

Tip: Even on a decent wire stripper as shown here, it's easy to break or nick a wire if you're not careful. I usually choose the next larger size to strip, which avoids nicking a wire. You might want to practise stripping if you haven't done it before. Many kinds of low cost strippers will do a job if you are careful.

I use a Patco Thermal Wire Stripper, which makes it easier and faster to get perfect stripping every time. I always inspect each strip with a 10x loupe after stripping. If you cut a wire strand, you should cut the wire off and strip it again.
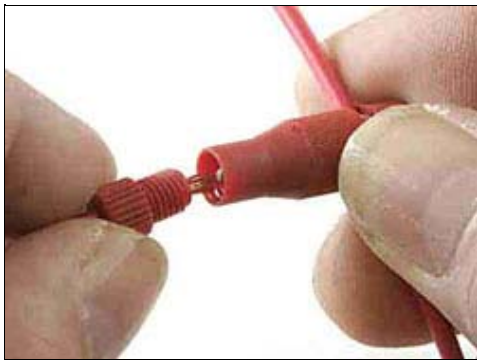

Unscrew the cap and insert the wire end. Be careful to get all the strands through the cap.

Tweak the strands to one side with your thumbnail.

Insert the wire strands into one side of the metal core.

Push and turn until the threads catch, then screw in tightly by hand - make sure the wire does not slip back in the cap

Note - on large Posi-Locks I finish tightening with a pair of pliers. Be careful not to strip the threads.

On the small Posi-locks tighten firmly by hand, but if you are very stong, you can strip the threads so don't overtighten the small Posi-Locks.
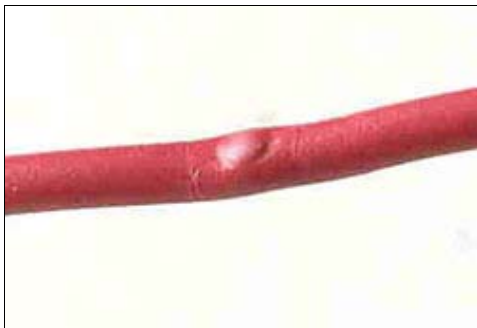
With the larger Posi-Locks you can tighten very firmly with a pair of pliers to finish the job.

Completed Posi-Tap Install

Tapped wire after removal.

Backside of tapped wire.

Other Posi-Lock Products install the same way as the small cap of the Posi-Tap. Smaller Posi Products require 3/8" stripped, larger products require 1/2" stripped.