

SSR Transmission Cooler Installation

Perma-Cool Cooler

- Please read these instructions all the way through before beginning.

Tools Recommended:

- 10mm socket and ratchet
- 10mm box or open end wrench
- Needle-nosed pliers
- Scribe

Before starting:

- Using the “Fascia Removal Instructions”, remove and safely store the front fascia.
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Procedure:

- 1) Carefully observe the clamp orientation on the cooler prior to beginning installation. The system is shipped with the lines already oriented for proper installation and the two cooler clamps are mounted loosely.
- 2) Transfer the 2 clamps from the cooler to the crash bars. Be sure to observe the correct clamp orientation in the photo below.

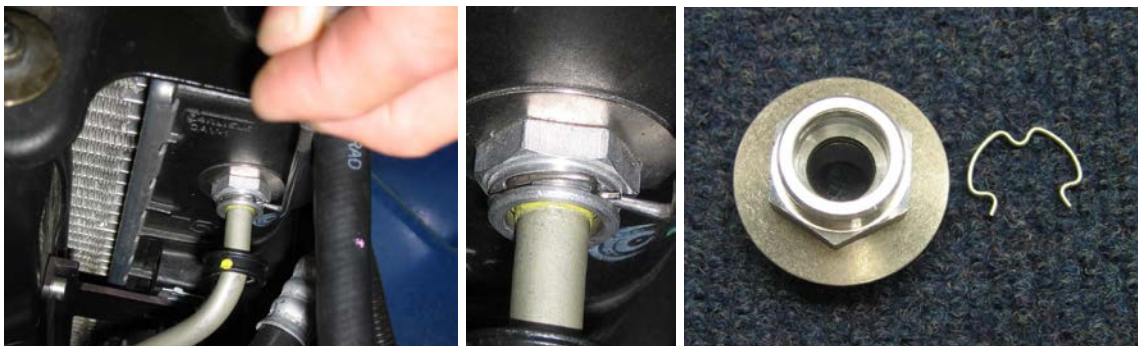


- 3) Install the cooler with the lines attached. Leave the paper in place to protect your hands and arms. Attach loosely at the two mounting points and center the cooler before tightening the clamps.



- 4) Remove the lower transmission cooler line from the radiator. **(NOTE: This is when the transmission fluid may start making a mess. Be prepared.)** To do so, you will need to pull the black retainer back from the fitting and **carefully** extract the retaining clip out of the fitting.

Note the photos of the clip and fitting below. Be forewarned.... if you pull the clip with a scribe, it will try to take off and hide if it gets a chance. **Don't lose it.** Put the clip back onto the fitting after pulling the line out. Be sure the three retaining bends are re-seated neatly into the three slots.



- 5) Using your hands, pull the fluid line down and carefully twist it outboard toward the right side of the truck. It should finally be just outboard of the A/C line. I typically use a #2 Phillips screwdriver inserted deep into the line for leverage and to keep from deforming the barbed end fitting. You will have to be forceful, but careful not to kink the line or damage the end of the line where it seals into the quick disconnect. See the photo below.



- 6) Now that the cooler line is outboard of the A/C line, you will need to install the #10 clamp onto the plastic covering on the A/C line. NOTE: Your plastic covering may not be exactly like the photo. This will be the anchor for the “butterfly” attachment of the cooler line. Ignoring the bottom edge of the plastic line covering, the bolt, jam nut and clamp should be oriented just like the photo below. Be certain that the bolt is about ½ inch below the bottom surface of the frame - - this is important.



- 7) With the anchor clamp in place and tight, install the #6 clamp onto the transmission line to complete of the butterfly. There should be sufficient space between the two lines to move the black plastic locking cover freely. The photo below actually has about 3/8" gap between the A/C and transmission line.



- 8) Install the female cooler connection to the cooler line and be sure it is fully seated. The black plastic locking cover should go onto the fitting completely. This will not seat unless the line is fully inserted and the retaining clip is fully nested. When done, it should look like the photo below: **Be certain that the black fittings are within 1/2" (13mm) of the bottom of the the frame, but not touching it.**



- 9) Snap the male connector into the radiator connection. Be sure that the clip is fully seated. Slide the black locking cover fully over the clip to be sure.



- 10) Install the intermediate support bracket to the flange above the radiator support. You will use the large hole and the large area washer. It should line up pretty well, but may need some “tweaking”. Please loosen the bolt holding the two clamps to move the hoses a little to adjust their fitment.
- 11) Make sure that nothing is rubbing on anything and that all of the hardware is tight. Run the engine for a few minutes and check for leaks.
- 12) Take the paper off the cooler fins and re-install fascia..... You're done.

My best regards,

Mike

P.S. Be sure to recheck for any fitting seepage after a short test run. I used some light lubricant when building the hoses, but they should be oil free. If they are not, contact me right away. 480-225-2123 or mike@simple-engineering.com.