

Transmission Cooler Line Instructions For 01-10 GM 6.6L Duramax Diesel

Before you begin, please review the checklist below to make sure you have all of the required components for your model.

01-05 LB7/LLY:

- (3) High Pressure Hoses
- (2) O-Rings
- (2) Large Washers
- (4) 7/8" Straight Fittings
- (2) 1 3/16" Straight Fittings
- (1) 7/8" Small 90°
- (1) Long 90° Fitting
- (1) Small 90° Fitting

06-10 LBZ/LMM:

- (3) High Pressure Hoses
- (2) O-Rings
- (2) Large Washers
- (3) Small 90° Fittings
- (1) Long 90° Elbow
- (1) Straight Line Fitting
- (1) 45° Line Fitting

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1. As usual you have to start somewhere, so let's start by removing the grille. On the GMC there is one bolt and six snap pin retainers that hold it on. First remove the cover by taking off the 6-8 plastic snap pin retainers.
2. Next remove the bolt for the grille. Then pop the two outer snaps on the outer ends of the grille (both sides) and then the four main snaps. Then Lift the grille out.
3. Remove the air filter box, the plate under it, the bracket under that, and the CAC (Charged Air Cooler/Intercooler) hose on the discharge side of the CAC so you will have access to the hoses and fittings going into the radiator and transmission cooler.
4. Remove the lines from the transmission. Remove the black caps and then use a flat blade screwdriver to remove the clips holding the aluminum hoses into the fitting and pull the hose out.

NOTE: Have a drain catch available in case there is any residual fluid in the lines.

5. Next remove the lines from the Transmission Cooler and the threaded fittings. Be careful when loosening the fittings, as the aluminum cooler is very soft and a counter torque is necessary to prevent twisting the ends of the cooler. Also there could be additional fluid drainage from the fittings at the cooler, and the other ends of the transmission. The fittings you use in the transmission cooler are the 90° short fittings.
6. We recommend replacing one line at a time. Start with the line going from the outlet of the Transmission Cooler back to the transmission (upper one). When removing the old line cut the flex hose and they should come out much easier. (Also there is a bracket that holds the hard lines next to the engine block that is a bit of a pain to remove. It has a 10mm bolt/nut on it that has to be removed to get the old lines out.) When you install the fittings in the Transmission, Radiator, and Transmission Cooler leave them slightly loose and after hooking up the hose do the final tightening and alignment, then tighten the fittings on both the hose, and the threaded body fittings.
7. Next remove and replace the transmission to the radiator line. When installing the threaded fittings into the transmission (there are four 90° fittings in the kit of which one is about a 1/2" longer) install the longer fitting on the bottom of the transmission as the shorter one will not work due to interference. When installing the fittings in the radiator use the two with the large washers. The 90° fitting goes in the upper bung and the 45° fitting goes in the lower bung. You will notice in the kit there was two extra "O"-Rings. Install these on the fittings that go into the radiator. That means there will now be two "O"-Rings on each fitting. This needs to be done as if you use just one "O"-Ring on the fitting the large washer will prevent the fitting from seating the "O"-Ring and the fitting will leak.
8. Now Remove the old radiator to transmission cooler line and replace it with the new line (straight fitting on one end, and a 90° fitting on the other end). Once again leave all the hose fittings loose until the final alignment (after all hoses are installed).
9. After all the lines are aligned, tighten all the fittings except the upper radiator fitting. Remember to use a wrench to counter torque your tightening on both transmission cooler fittings so you don't bend or distort it.
10. Re-install the CAC to the ENG hose, then you can align the upper radiator fitting and tighten it.
11. Last go back and make sure there isn't anything sharp rubbing on the hoses at any place. Start it up and let it run for a few minutes and check for leaks before re-installing everything else.

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