

TRANSMISSION OIL COOLER KIT INSTALLATION PROCEDURE

It is important to read all instructions before beginning work.

TRANSMISSION OIL COOLER KIT

A Transmission cooler is an air-cooler heat exchanger that cools the engine by routing hot transmission fluid through the cooler. When the cooler is installed properly, cooling air will flow over and through the fluid, just as air flows through a vehicle radiator. The fluid will cool and, consequently, the engine will cool. The job first requires mounting the cooler where it will receive good airflow, then running the hoses to connect the cooler to the transmission.

This Transmission Oil Cooler Kit is manufactured with top quality materials and is the result of superior engineering in both design and construction. Simply follow these instructions step by step to provide the maximum protection for your vehicle's transmission. The Kit includes:

Item		Quantity
1	Oil Cooler	1
2	11/32 inch Hi-temp Hose	4 1/2 inch
3	Zip Connector	1
4	Zip Straps	4
5	Hose Clamp, #6	4
6	Foam Pads	4

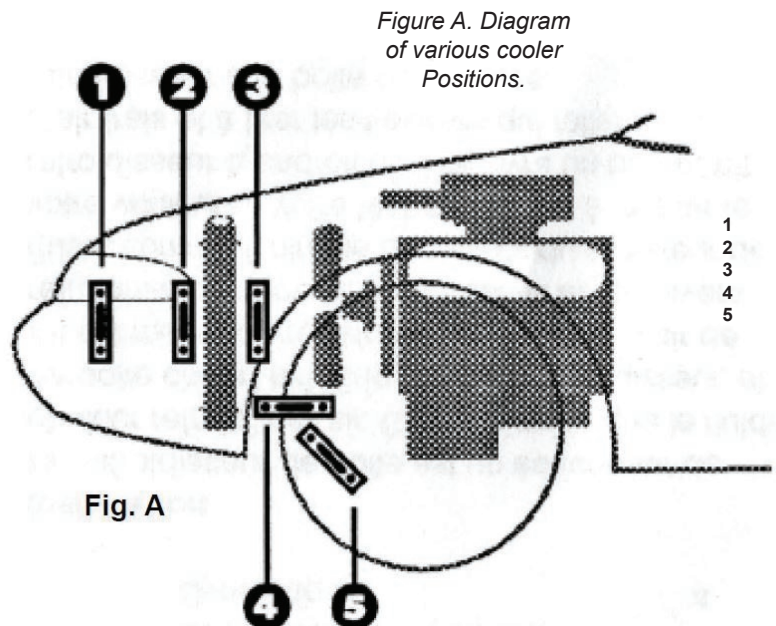
INSTALLING THE COOLER

Various cooler positions are illustrated in Figure A. Before choosing a position, the following notes should be reviewed:

This kit includes a 4 1/2 inch special hi-temp hose to connect the cooler to lines at the radiator. Therefore, the cooler must be positioned close to the radiator so the 2 hose lines can connect to the 2 steel lines from the transmission at the point where they enter the radiator.

Caution: Don't use any other hose. Serious damage may result. Mounting the cooler in front of the radiator and AC condenser is recommended, even though heat from transmission fluid will pass through the condenser and radiator. Mounting positions 4 or 5 may subject the cooler to flying objects.

Position 3 should be used with caution, especially if the car has a flexible-blade fan. Contact between the fan and the cooler in position 3, and at least 3/4 inch clearance between the cooler and the fan when using position 4.



After selecting a position trial-fit the cooler by holding it in the selected position. Do not position the cooler near the crankshaft pulley, fan blades, alternator belts, retracting headlight mechanisms or any other moving parts.

COOLER TO TRANSMISSION CONNECTION

It is now time to select from 2 methods of transmission connection. Remember that the original equipment transmission cooler is a water cooled oil cooler and it is located inside the radiator. So when extra weight and/or stop and go traffic produce high transmission heat, the engine coolant temperature also rises. The transmission heats the water, which was meant to cool your engine. In contrast, when the car is placed in neutral, engine temperature drops.

The cooler can operate in conjunction with the stock radiator-mounted cooler as seen in the “in-series installation”, Figure B, or bypass the stock cooler entirely, as shown in Figure C. The in-series method is recommended.

IN-SERIES INSTALLATION

1. Locate the steel lines coming from the transmission to the radiator (most commonly to side tank or bottom). Determine which is the return line by running the engine for 2 minutes, then feeling the lines near the radiator. The cooler of the 2 lines is the return line. Loosen the fitting where the return line enters the radiator, as shown in Figure B, and separate the steel line from the radiator.
2. Install, but do not tighten, the ZipConnector (#3) in the radiator in place of the steel line just removed. **Note:** The ZipConnector in all TorqFlo cooler kits is for most car applications. If your specific application does not use this type of adapter, please contact your local auto parts professional for additional options.
3. Slip a hose clamp (#5) over one end of the hi-temp hose and the ZipConnector over the other end and secure with a hose clamp.
4. Guide the hi-temp hose from the ZipConnector to the cooler. Avoid sharp bends in the hose. Cut the hose that connects to the cooler, slide the hose clamp over the hose, push the hose onto an open end of the cooler’s tubing and lock with the hose clamp.
5. Place a hose clamp over one end of the remaining hi-temp hose and secure to the remaining open end of the cooler tubing. Guide the hose from the cooler to the steel return line removed from the radiator in Step 1. Cut hose length and slip the hose clamp onto the hose. Push the hose onto the end of the steel return line and lock with a clamp.
6. Start the engine and check for leaks. Check transmission fluid level. Add fluid if necessary.

REPLACEMENT INSTALLATION

1. Examine the side or bottom tank to find the steel lines connecting the transmission to the radiator. Loosen the fittings at the radiator to disconnect both lines from the radiator.
2. Fluid may stream through the cooler in either direction. Slide a hose clamp (#5) over either end of the hi-temp hose (#2), then push the same end of the hose over one open tube end on the cooler. Lock with the hose clamp. Route hose to either steel line disconnected from the radiator. Cut hose length, slip on a hose clamp and secure hose to steel line. Avoid sharp edges in hi-temp hose.
3. Repeat Step 2, using the hi-temp hose and hose clamps to connect the remaining steel line and cooler opening.
4. Start the engine and check for leaks. Check transmission fluid level. Add fluid if necessary.

Figure B. Diagram of the "in-series" installation, where the cooler operates with the stock radiator-mounted cooler.

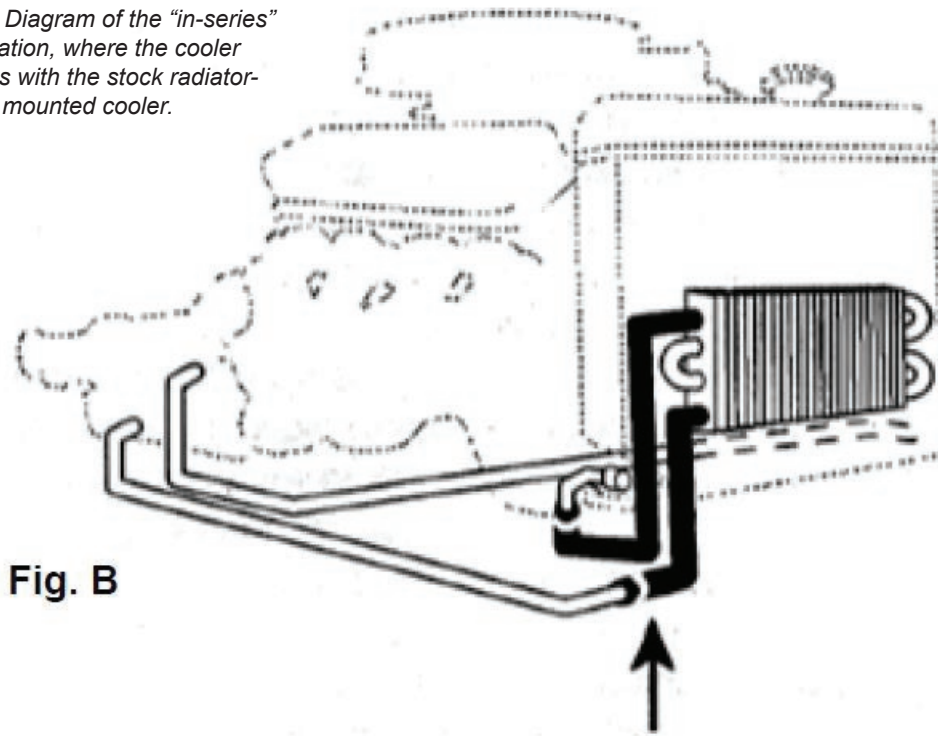


Fig. B

Figure C. Diagram of how a cooler operates by passing the stock cooler entirely.

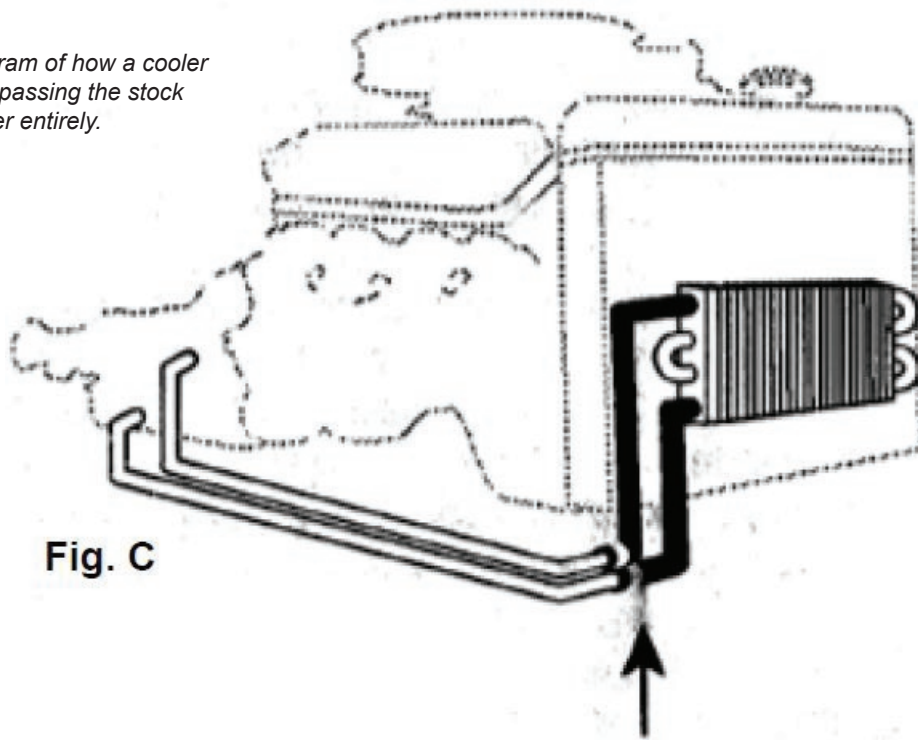


Fig. C