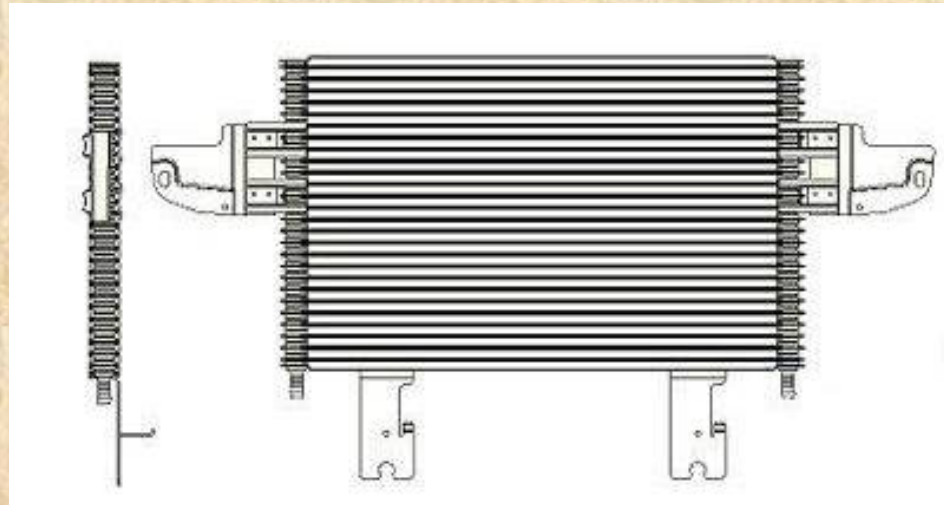


# ***6.0 Transmission Cooler Installation For 99-03 Superduty's***



By: Woodnthings8

The transmission cooler installed on 99-03 Superduty trucks is far from adequate when towing in warm weather. The 4R100 transmission in these trucks doesn't have the greatest reputation for being strong enough. Many Superduty owners tow with their trucks and prefer to upgrade the power of the 7.3L Powerstroke. By doing this it puts additional stresses on the transmission. Adding an aftermarket transmission cooler that is larger is one way of helping the transmission along. When Ford introduced the 6.0L Powerstroke and the 5R110 transmission, they also added a much larger cooler to the truck. The advantage to the 7.3L guys is they used the same mounting positions for both coolers.

Many get their hands on a 6.0L cooler and install it in their truck. This helps immensely when towing and often keeps the transmission temperature at a more reasonable level, when pulling long hills or in hot weather

The original cooler only had 9 rows of cooling. There are three different versions of the 6.0 cooler. The two most popular are the 26 and 31 row coolers. There is a 25 row cooler out there, but it was replaced by the 26 row cooler early on.

25 Row Cooler 5C3Z-7A095-CB *"Part number 5C3Z7A095CB was superseded by part number 5C3Z7A095CA."*

26 Row Cooler 5C3Z-7A095-CA

31 Row Cooler 5C3Z-7A095-B

Here is a picture of the original cooler and the 6.0 cooler for comparison.



The factory 9 row cooler is 2.88 times smaller than the 26 row cooler and 3.44 times smaller than the 31 row cooler!!!!!!!

Installation of the 6.0 cooler into a 7.3L truck is pretty straight forward. It does take a little bit of time to do, since access is not the greatest, but can be done in about 4 hours if you take your time.

List of supplies you will need:

6.0 L Cooler

½" Transmission Cooler Line (about 6')\*

3/8"- ½" Barbed Splice Fitting (2 Each) \*\*

Stainless Steel Hose Clamps (6 minimum)

5/16" Fender Washer (2 each) \*\*\*

Misc. Clamps (for the hose)

\* Since the original cooler is 3/8" line, you may choose to run 3/8" line to the cooler and use a short piece of ½" line as a splice. I choose to run ½" line all the way back to the hard lines to provide more flow and keep the connections where they are easier to get at later on. Either way works though.

\*\*These may need to be ordered online or ahead of time as not all stores carry them. You can make up a splice with 2-3 fittings available at most hardware stores.

\*\*\* If new cooler does not come with lower grommet's

To start off it is not required, but much easier to do this job with the bumper removed. This is the way I did mine and it wasn't hard to remove. Some have aftermarket bumpers that weigh a bunch more, so they may find it easier to work around the bumper.

The bumper comes off by removing 4 bolts from the tow-hook area, and 1 from each fender well area. Remove the rubber splash shield on the bottom of the bumper first (If installed)

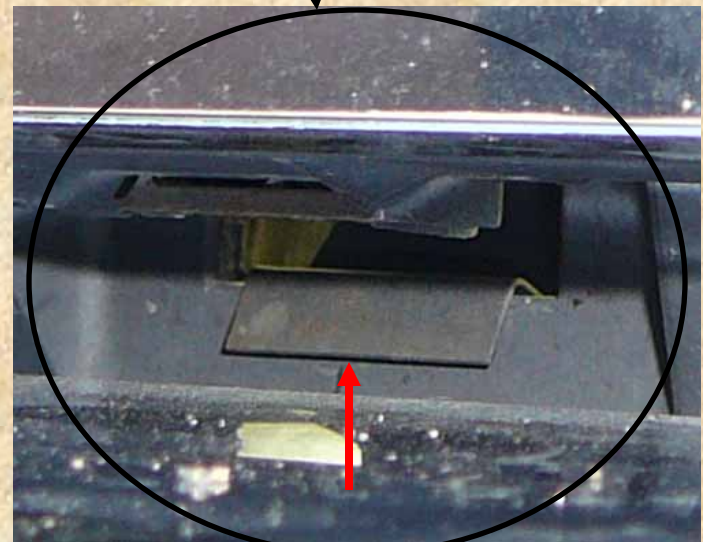


If you have factory fog lights and block heater cord, make sure you do not just pull the bolts and let the bumper drop. They are attached with push in plastic fasteners that must be removed. The bumper can hang on the tow hooks while you do this.

Remove the radiator to grill splash guard, by pulling the push in plastic fasteners out. There are some attached to the grille too. They can be left on the grille and this guard can be removed when the grille is removed. Or do it seperately, if you choose.



Now you can start removing the grille and upper splash guard. The grille is held in place by screws along the top, and two clips at the bottom.



Gently pry up with a flat screwdriver to release these clips

Now mark the hood latch location. This needs to come away from the support in order to get the cooler in and out of the vehicle. Mark it both vertically and horizontally so it lines right up when re-installed



Now that the bumper, grille, and splash guards are out of the way, you can remove the two upper condenser bolts. This will allow the condenser to rock forward a bit for more arm room.



Now that you can see the cooler better, you can see where the factory rubber lines attach to the cooler. I ended up just cutting the lines right behind the cooler. This made it much easier than trying to get the spring clamps loose. (I was not using the factory rubber lines again anyway).



Now you are ready to remove the cooler. Remove the two upper bolts and to lower bolts. Now you should be able to carefully reach between the condenser and radiator to pull the cooler out the top.

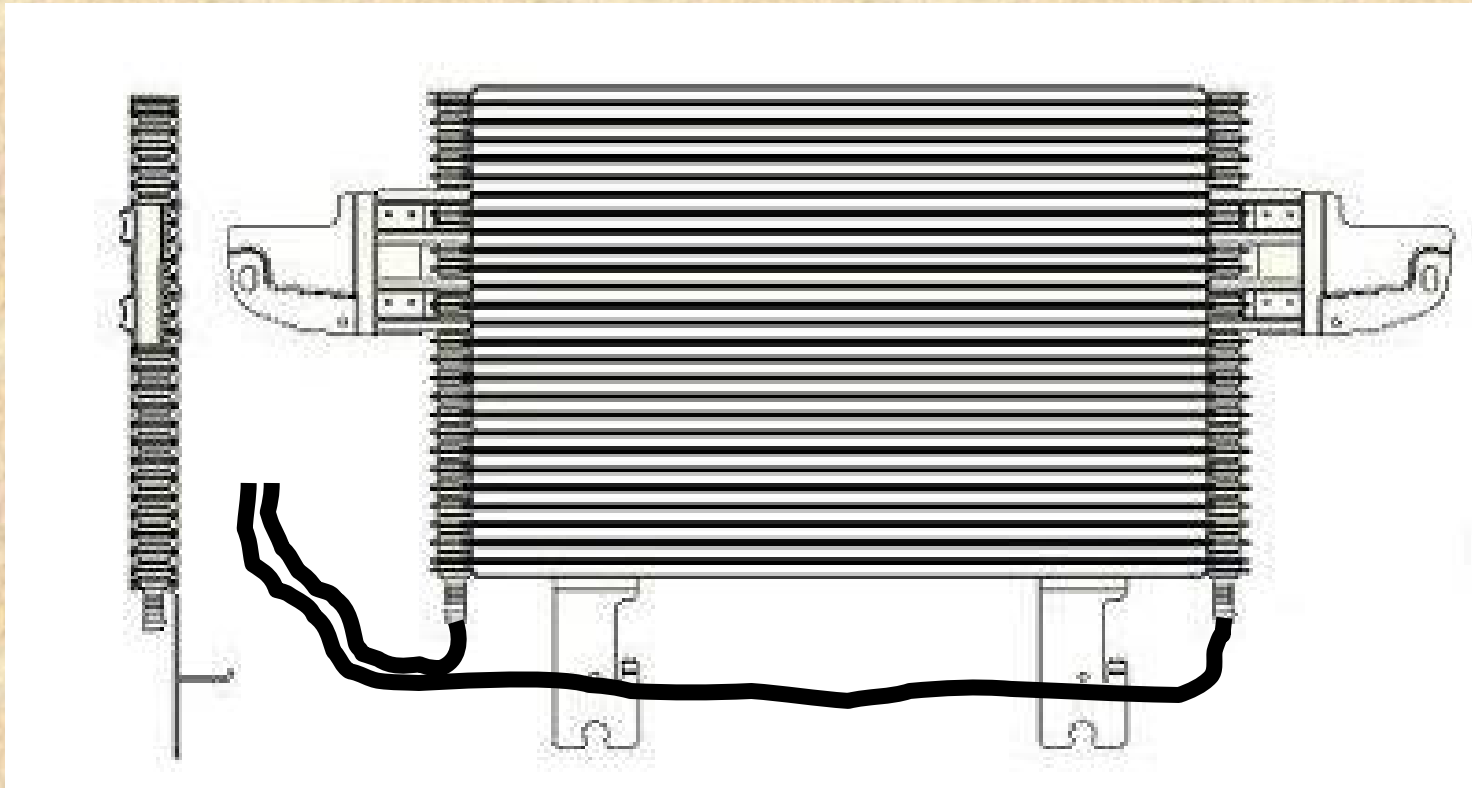


(this is actually a 6.0 cooler, but you get the point)

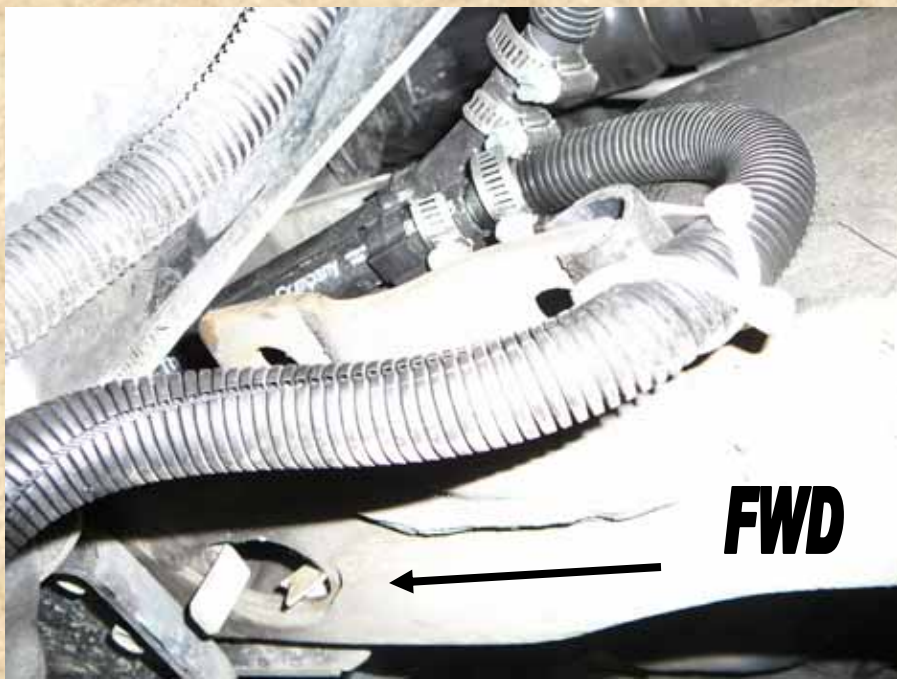
The only real difference in the mounting of the two coolers is the lower attachment. The original has a single slotted hole, while the 6.0 cooler is an open slotted style. The original bolts will work, if you use a fender washer over them. The 6.0 trucks have a mount that is used here, so you may want to get that too if ordering one from a dealer. You will need longer bolts with the 6.0 mount.



When I installed my cooler I attached a 6' section of ½" transmission cooler line to the cooler pipes. I just left it in a loop and this kept it sealed from debris. Once I got the cooler bolted up, I cut the hose into something like a 60/40 ratio to account for the cooler width. This way the lines would easily be long enough to route in the same area as the original lines. Now you can secure the line from the drivers side along top of the power steering cooler and over to the passenger side.



Some choose to use a 90 degree fitting off of the cooler to keep the line from kinking. I managed to get mine in with no issues after I worked on it for a bit and clamped securely.



In these pictures you can see the routing of the hoses next to the radiator. There is a plastic clamp on the frame rail that the OEM 3/8" lines are routed through. You can reuse this clamp with the 1/2" lines, it just takes a good snap to get it connected. The 3/8"-1/2" splice fitting is installed at the frame rail and provides easy access in the future. I wrapped my hoses with a piece of inner tube rubber where they run between the radiator and the support. This will keep them from rubbing through the hose, and causing a leak.



Once you are done connecting the hoses up, start the truck up and look for leaks. You will need to add a small amount of your favorite transmission fluid to get it back up to where it should be. This will be less than a quart in most cases, as you will lose very little fluid while doing this. I put some makeshift plugs in the lines (3/8" bolts) while I did the work, just to keep it from dripping on me when I was under the truck.

After you verified, no leaks you can go ahead and re-assemble the bumper, grille, and splash guards that were removed for the job.

Now you can enjoy cooler transmission temperatures while towing, or just driving down the road. My temperature gauge used to run 160-170 while empty and now is 130-140. When towing I had seen up to 220 degrees. Now the most I have seen is 170. Your transmission will run about 60-80 degrees over ambient with a 6.0 cooler installed.

Always make sure you do not run it above 225 degrees. This will help keep it alive. If you are running in that temperature range, you need to be looking for a place to pull over and let the truck idle in park. If you have the capability of holding a high idle, let it run at the high idle position to help it cool down.

# Transmission Cooler Hose



## Assembly Fabrication Guide

### Transmission Oil Cooler Hose

Provides a safe, heat and oil resistant connecting line between oil cooler and transmission.

- One fiber braid reinforcement over an oil resistant NBR rubber tube.
- Oil and abrasion resistant black neoprene cover.
- Meets or exceeds SAE J1019 requirements.
- Can be stacked on shelf or hung on pegboard.
- Easy-to-follow instructions in each package.
- Handy hose diameter indicator on package.
- Package is recyclable.

Maximum temperature rating: +275°F (+135°C) constant; +300°F (+150°C) intermittent  
Packaging: 3 ft. lengths in retail package; 50 ft. lengths individually cartoned.



I.D. (In.)	Work. Press. (psi)	Burst	3 Foot Length Part No.	25 Foot Length Part No.	50 Foot Length Part No.
5/16	400	1600	27056	27058	27060
3/8	400	1600	27057	27059	27061
1/2	400	1600	27065	27066	27067



www.RockAuto.com

Jeg's carries the Gates Hose under the part numbers in the picture. RockAuto.com also has it for about half the price Jeg's is asking. (\$9.13 vs. \$19.99) for the 3' piece.

I have found that most auto parts stores do not stock 1/2" transmission cooler hose. This is something they all can order for you within a day or so. I ordered 6' from my local Carquest store. They had it for me in a few hours from another store. So plan ahead when you are doing this job.

# Other Hose Options

It is not entirely out of the question to custom fabricate rigid tubing for this job. It will take more skill and planning than rubber hose, but I think it would more rewarding when done.

Another option I have seen used, is to go to the dealer or wrecking yard and get cooler lines out of a 6.0L truck. They are form fitted and work nicely. If you use wrecking yard parts, make sure you clean them very good before installing on the truck. The hoses could have debris inside and it would go straight to your transmission.



← (Click to see the Gates website)

# Kits Available !!!!

Beans Diesel Performance has a kit available online that you can order to make your 6.0 Cooler install go quicker. They have done the work of collecting the price and offer both 26 & 31 row coolers with installation parts.



Brian's Truck Shop (BTS) also offers a kit similar to this, but you will have to call them for a price. **Phone:870-422-(FORD)3673**



## Product Information

The factory 7.3L Super Duty transmission cooler can be upgraded by replacing it with a 6.0L cooler. Recommended by BTS, this OEM Ford transmission cooler comes in two sizes: 26 row or 31 row. The 26 row cooler is a sufficient upgrade for most applications but the 31 row is available for maximum efficiency for \$100 more.

Includes the hardware to mount in a 99.5-03 Super Duty, transmission fluid lines and clamps. We recommend the use of [Schaeffer's All Trans](#) for best results when looking to upgrade or extend the life of your transmission.

**Price: \$425.00**

Click here to go to their website to order



**Buy it, Build it, Tune it, at Bean's Diesel Performance**

A collage of four images: a close-up of a diesel engine component, a close-up of a diesel engine block, a white pickup truck in a garage, and a white pickup truck driving on a road.

**www.BeanDieselPerformance.com**

31 Row Cooler



More Rows Here

26 & 31 Row Coolers Difference

26 Row Cooler



Something else to think about when doing this mod is to install an inline filter as part of the job. It is a simple task and you already have the lines apart.

You have a few choices for this, but the easiest is a by installing a Magnefine Filter.



[Link to the Write-up on it.](#)







Magnefine Filter  
Qty:  Price: \$16.00  
Size:   
Smart Connects:   
Note: "Smart Connect" fittings are only suggested if a hose section is not available for installation or if you are doing a hard line install.  
[Add To Shopping Cart](#)

Or you can install something like I did for mine!

# Fitting Choices

Straight Reducing Coupling, Beverage Fitting, Tube Size 3/8 In x 1/2 In, Barbed Connection, Material of Construction 303 Stainless Steel, Pressure 275 PSI @ 72 F PSI, Temp. Range 0 To 750 F, Length 1.750 In, Standards ASTM A581 And A582, NSF and FDA

Grainger Item #	4HFL3
Price (ea.)	\$3.41
Brand	THOGUS
Mfr. Model #	TPC3138-5-G
Ship Qty. 	1
Sell Qty. (Will-Call) 	1
Ship Weight (lbs.)	0.04
Usually Ships** 	1-3 Days
Catalog Page No.	3800 
Country of Origin (Country of Origin is subject to change.)	USA



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Qty.



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Price shown may not reflect your price. [Sign in](#) or [register](#).

Tech Specs	Additional Information	Compliance & Restrictions	MSDS	Required Accessories	Optional Accessories	Alternate Products	Repair Parts
Item	Straight Reducing Coupling						
Type	Beverage Fitting						
Tube Size	3/8 x 1/2"						
Connection	Barbed						
Material of Construction	303 Stainless Steel						
Pressure (PSI)	275 PSI @ 72 F						
Temp. Range	0 To 750 F						
Length	1.750"						
Standards	ASTM A581 And A582, NSF and FDA						
Package Quantity	1						

# WWW.Grainger.Com



3/8 x 1/2 Hose Splicer

7423

\$3.34

<http://kegman.net/hose.htm>



**1/2" NPT to 3/8" Barbed**

\$2.50

[Add to Cart](#)



**Pipe Coupling 1/2" FNPT**

\$2.50

[Add to Cart](#)



**1/2" NPT to 1/2" Barbed**

\$2.50

[Add to Cart](#)



**Stainless- 1/2" FPT x  
1/2" Barb**

H618B

[Read More](#)

**Temporarily Out of Stock**

Click here to be notified  
when the item is back in  
stock.

**Price:** \$5.95



**Stainless - 1/2" mpt x  
3/8" Barb**

H616

For insertion into  
stainless ball valve for  
connecting 3/8" ID line.

[Read More](#)

**Price:** \$4.95

**Order Qty:**

1

[+ Add To Cart](#)

[http://morebeer.com/search/102353/beerwinecoffee/coffeewinebeer/Threaded Barbed Fittings](http://morebeer.com/search/102353/beerwinecoffee/coffeewinebeer/Threaded%20Barbed%20Fittings)

Hopefully this will clarify the many questions that come up with the 6.0 cooler install. Good luck with your install!!

