

'03-'07 FORD 6.0L POWERSTROKE TRANSMISSION COOLER

PARTS LIST AND INSTALLATION GUIDE



PARTS INCLUDED

1PC | MISHIMOTO STACKED-PLATE TRANSMISSION COOLER
MOUNTING HARDWARE

TOOLS NEEDED

PANEL TOOL	LONG FLATHEAD SCREWDRIVER OR PRYBAR
5.5MM SOCKET	
8MM SOCKET	PLIERS
1/4" DRIVE EXTENSION	(2) LOCKING PLIERS OR HOSE-CRIMP TOOLS (OPTIONAL)
1/4" DRIVE RATCHET	DRAIN PAN
11MM SOCKET	FORD-APPROVED TRANSMISSION FLUID
3/8" DRIVE RATCHET	

INSTALL TIME 1.5 HOURS

INSTALL DIFFICULTY 🔧 🔧 🔧 🔧 🔧

DISCLAIMER

- Raise vehicle only on jack stands or on a vehicle lift.
- Allow vehicle to cool completely prior to attempting installation.
- Do not run the engine or drive the vehicle while overheating; serious damage can occur.
- Please dispose of any liquids properly.
- Mishimoto is not responsible for any vehicle damage or personal injury due to installation errors, misuse, or removal of Mishimoto products.
- Mishimoto suggests that a trained professional install all Mishimoto products.

CAUTION

Never work on the cooling system when it is hot. The coolant temperature in the radiator can be considerably higher than boiling, and the system may be under pressure. Opening a cooling

system that is hot or under pressure can result in serious injury. Always wait until the system has cooled completely before servicing it in any way.

INSTALL PROCEDURE

- 01.** Remove the nine tree-clips that secure the air diverter to the radiator support. Then remove the air diverter. (9x tree-clips)
- 02.** Mark the position of the hood latch. Remove the two bolts that secure the hood latch to the radiator support. The latch will still be tethered by the cable; simply move the latch out of the way for now. (2x 8mm bolts)
- 03.** Remove the two bolts that secure the AC condenser mounts to the radiator support, and then remove the mounts from the vehicle. (2x 8mm bolts)



- 04.** Remove the four screws that secure the top of the grille. (4x 5.5mm screws)



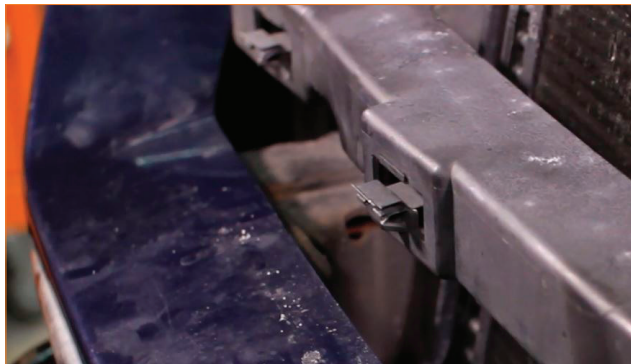
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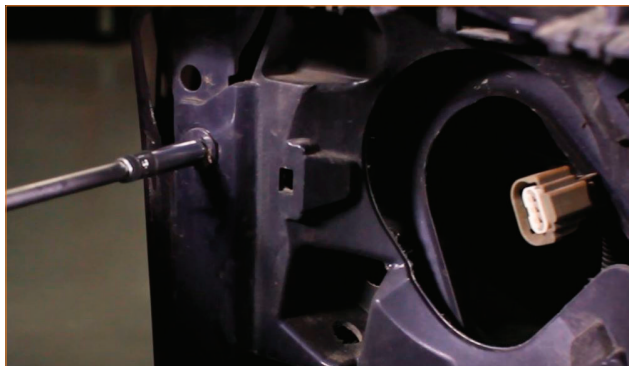
05. Release the clips that secure the bottom of the grille, and remove the grille from the vehicle. Once the grille is removed, check to make sure the clips are still attached to the radiator support. **Tip:** To release the clips, tilt the top of the grille away from the vehicle, and use a long screwdriver or pry bar and a twisting motion to release each clip individually.



06. It is possible to remove the transmission cooler without removing the grille support, but it is a tight fit. If you want to skip removing the grille support, proceed to step 13.
07. Remove the eight screws that secure the headlights to the vehicle. On each headlight, there are two screws along the top edge, and two along the bottom edge. (8x 5.5mm screws)



08. Pull the headlights away from the vehicle, and disconnect the electrical harness from the light sockets. Alternatively, you can leave the connectors attached to the sockets, and remove the sockets from the headlight. Then set the headlights aside.
09. Remove the eight bolts that secure the grille support to the vehicle. Pass the headlight electrical harness through the grille support. (8x 10mm bolts)



10. Release the four tree-clips that secure the shrouding to the grille support. There are two clips on each side of the grille opening. (4x tree-clips)



11. Remove the grille support from the vehicle, taking care to avoid damage to the AC condenser.

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12. Remove the two bolts that secure the bottom of the engine oil cooler to the radiator support. (2x 8mm bolts)



13. Remove the two bolts that secure the power steering cooler to the radiator support. Allow the power steering cooler to hang from the lines. (2x 8mm bolts)

14. Compress the clamps that secure the transmission cooler lines to the factory cooler, and move them down the hoses. Place a drain pan or bucket underneath the hoses, and then work the hoses off the cooler's inlet and outlet. **Tip:** Use a hose-crimp tool or locking pliers to pinch off the cooler lines and reduce fluid loss during this part of the installation.

15. Remove the two bolts that secure the sides of the factory transmission cooler. **Tip:** If you didn't remove the grille support, you can access these bolts through holes in the grille support using an extension. (2x 11mm bolts)



16. Gently lift the AC condenser out of the mounts that support it and rest the free end on the bumper, using a rag to protect the paint. Reach behind the condenser and remove the transmission oil cooler.

17. Install the two provided bushings to the Mishimoto transmission cooler. Slip the bushings into the brackets, and then insert the metal collars from the front of the cooler. (2x bushings, 2x metal collars)



18. Lower the Mishimoto transmission cooler into place behind the AC condenser, and install the two bolts that support the sides of the cooler, but do not fully tighten them yet. (2x 11mm bolts)

19. From underneath the vehicle, install the two bolts that secure the bottom of the cooler. Then go back and tighten the two bolts that secure the side of the transmission cooler. (2x 11mm bolts)

20. Attach the transmission cooler lines to the cooler. Then slide the clamps up the lines to secure them. Make sure the clamp is situated over the bead roll on the cooler inlet and outlet.

21. Move the power steering cooler into position, and secure it with the original hardware. (2x 8mm bolts)

22. Install the grille support (if you removed it). Move the grille support into place, and lead the wiring harness for the lights through it. There is an alignment pin on either side of the grille support that fits into the body of the car. Align the grille support using these pins, and secure it with the eight original bolts. **Tip:** To maintain original fitment, line up the washers on the bolts with the impressions they made on the grille support. (8x 10mm bolts)

23. Reattach the shrouding to the grille support with the four original tree-clips. (4x tree-clips)

24. Move the AC condenser back into place. Make sure the power steering cooler lines are clear, and seat the bottom of the condenser back into the mounts that support it. Install the mounts that support the top of the AC condenser, and secure them with the original hardware. (2x 8mm bolts)

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25. Reinstall the hood latch, and secure it with the two original bolts. **Tip:** To maintain original fitment, line up the washers on the bolts with the impressions they made on the hood latch. (2x 8mm bolts)
26. Connect the electrical harness to the headlights, and install the headlights to the vehicle. Then secure the headlights with the eight original screws. (8x 5.5mm screws)
27. Lower the grille into place. Align the tabs on the bottom of the grille with the clips on the grille support, and press the grille support into them to engage the clips. Then secure the top of the grille with the original hardware. (4x 5.5mm screws)
28. Reinstall the air diverter, and secure it with the nine tree-clips. (9x tree-clips)
29. Start the vehicle and allow it to idle while in park. Inspect the transmission-line connections at the cooler for leaks. Ensure that the vehicle is parked on level ground to get an accurate reading. Pull out the transmission fluid dipstick and wipe it

off with a clean rag. Insert the dipstick to its full depth, and then immediately remove it. Check the fluid level and top it off with Ford-approved transmission fluid until it reaches the cold mark on the dipstick. Step on the brake and move the gear selector through each of the transmission ranges, stopping in each range for a few seconds, and then return it to the park position. Note that after adding fluid, there will be residual fluid in the filler tube that can result in a false reading. Allow the fluid to drain into the pan before attempting another reading. Let the vehicle run until it reaches operating temperature, and check the fluid level again. Top off the fluid level until it reaches the hot mark, but do not overfill.

Congrats! You just finished installing the 2003–2007 Ford 6.0L Powerstroke Transmission Cooler.

