

2006-2010 CHEVROLET/GMC 6.6L DURAMAX INTERCOOLER

PARTS LIST AND INSTALLATION GUIDE

PARTS LIST

- 1PC | MISHIMOTO INTERCOOLER
- 2PC | LOWER AC CONDENSER BRACKETS
- 2PC | ALUMINUM SPACERS
- 2PC | M8 X 1.25 BOLT AND WASHER

TOOLS NEEDED

- | | |
|------------------------------|------------------------------|
| PICK TOOL | 3/8" DRIVE RATCHET EXTENSION |
| 1/4" DRIVE RATCHET | 8MM WRENCH |
| 1/4" DRIVE RATCHET EXTENSION | 10MM WRENCH |
| 7MM SOCKET | 1 1/8 WRENCH |
| 10MM SOCKET | POP-CLIP PLIERS |
| 11MM SOCKET | LINEMAN'S PLIERS |
| 13MM SOCKET | FLATHEAD SCREWDRIVER |
| 15MM SOCKET | COOLANT |
| 3/8" DRIVE RATCHET | COOLANT FUNNEL |

DISCLAIMER

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

INSTALLATION INSTRUCTIONS

01 | REMOVING THE FACTORY INTERCOOLER

1. On the passenger's side, disconnect the inner fender splash shield from the bumper and fender by removing the two pop clips that secure it.
2. Pull this shield to the side to gain access to the lower radiator hose. This radiator is not factory equipped with a drain plug, so the fluid must be drained using the lower radiator hose. Loosen the clamp and slowly slide the hose off the radiator to drain the fluid, and then remove the lower hose from the radiator.
3. Loosen the clamp and remove the upper coolant hose from the radiator.
4. Remove the two 15mm bolts securing the engine splash shield to the truck.

5. Disconnect the lower coolant hose from the engine and ancillary ports.



6. Move to the engine bay of the truck and disconnect the mass airflow sensor.
7. Loosen the two clamps securing the air intake pipe to the airbox assembly.
8. Remove the air intake pipe and airbox from the vehicle.



9. Completely remove the inner splash shields from both front wheel wells. The shields are secured by four pop clips and five 7mm bolts.
10. You should now have access to the connections of the intercooler and piping. On the driver's side, loosen the clamps that hold the hot-side pipe to the intercooler, and then separate the boot from the intercooler.
11. Remove the cold-side intercooler pipe. This pipe is secured with retaining clips at both the intercooler and intake manifold and will require a pick tool for removal. Once the clips have been removed, the cold-side pipe can be removed from the vehicle.
12. Remove the eight pop clips securing the radiator shroud to the radiator support. Remove the shroud from the vehicle.
13. Remove the four 10mm upper bolts securing the grill to the radiator support.
14. Carefully unclip the grill from the front of the truck. The plastic can be quite brittle, even in newer-model trucks.

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INSTALLATION GUIDE

01 | REMOVING THE FACTORY INTERCOOLER CONT.

15. Remove the four 10mm bolts that hold each headlight in place. Disconnect the headlight wiring pigtails and remove the headlights from the truck.



16. Disconnect the electrical connections located on the hood latch support.

17. Remove the two 10mm bolts that hold the transmission cooler to the hood-release frame.

18. Remove the four 10mm bolts securing the base of the hood release frame.

19. Remove the two 10mm bolts securing the upper portion of the hood-release frame to the radiator support. These bolts are located between the hood-release frame and the AC condenser.

20. Remove the cable from the hood-release mechanism.

21. Remove the hood-release frame assembly from the front of the vehicle.



22. Remove the two 10mm bolts securing the AC condenser to the upper radiator support.

23. Remove the two 10mm bolts securing the upper fan shroud to the radiator.

24. Remove the pop clip that holds the fan control module to the fan shroud. Move the module to the side.

25. Remove the four pop clips that secure the upper fan shroud to the lower fan shroud. The upper shroud can now be removed from the vehicle.

26. Disconnect the coolant overflow hose from the radiator.

27. Unseat the lower fan shroud from the radiator. This is accomplished by pulling upward on the tabs on each side of the shroud.

28. Remove the two transmission cooler lines from the radiator. First slide the dust shield away from the fitting and down the line. Next use a pick tool to remove the retaining clip from the radiator. Once the clip is removed pull the line away from the radiator to separate the two.

29. Remove the two 13mm bolts that secure the intercooler assembly from the radiator support.



30. Remove the 10mm bolt that secures the fender support bracket to the radiator support. The support bracket bolt located on the fender must be loosened so the bracket can slide away from the radiator support and towards the engine.

31. Remove the six 10mm bolts which hold the upper radiator support beam to the lower portion of the radiator support.

32. Remove the upper radiator support beam from the vehicle.

33. Remove the radiator and intercooler assembly from the vehicle. It is heavy, so you might want a second set of hands to help with removal.

02 | PREPARING THE MISHIMOTO INTERCOOLER

1. Separate the intercooler from the radiator by removing the four 13mm bolts securing the two together.

2. Transfer the three nut clips from the factory intercooler to the Mishimoto.

3. Transfer the two upper and two lower grommets from the factory intercooler to the Mishimoto intercooler.

4. Reconnect the radiator to the intercooler. The bolt nearest to the cold-side intercooler outlet will need to be replaced by the Mishimoto supplied M8 x 1.25 bolt and washer. The other three mounting locations will reuse the factory hardware.

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02 | PREPARING THE INTERCOOLER CONTINUED

5. The truck will require minor modifications to accept the larger size of the Mishimoto intercooler. Remove the lower AC condenser brackets from the radiator support. Use a pry bar to pull the bracket towards the bumper until it snaps off.



03 | INSTALLING THE MISHIMOTO INTERCOOLER

1. Install the intercooler and radiator assembly into the vehicle. Be sure the lower mounting grommets fit into the proper position. You will most likely need assistance to lift the heavy assembly.



2. Reinstall the upper radiator support beam. This beam is held in place with six 10mm bolts.

3. Install the two 13mm bolts that secure the intercooler assembly to the radiator support beam. The included Mishimoto spacers will be needed at this time. The spacer is necessary between the radiator support and the intercooler to provide proper clearance. Insert the bolts through the radiator support from the engine bay side and place the spacer over the bolt as it comes through the beam. Once the spacer is in place on the bolt you can thread the bolt into the intercooler.

4. Now reinstall the transmission cooler lines. These lines feature a quick disconnect, so the clips we removed earlier need to be reinstalled. Once the clips are installed the lines can be pushed back into the radiator. An audible click will indicate that the lines are properly seated in the radiator and clips. Once this is done slide the dust shields back over the fittings.



5. Place the upper fan shroud over the radiator assembly.

6. Secure the upper fan shroud to the lower fan shroud using four pop clips.

7. Reinstall the two 10mm bolts that hold the upper fan shroud to the radiator.

8. Use pop clips to reinstall the control module to the fan shroud.

9. Reconnect the coolant overflow hose to the radiator.



10. Reconnect the upper radiator hose to the radiator.

11. From underneath the vehicle, reinstall the lower radiator hose and reconnect the ancillary lines.

12. Reinstall the lower engine splash shield using the two 15mm bolts.

13. Reinstall the fender support bracket in the proper location with the 10mm bolt that was removed. Be sure to tighten the bolt located on the fender.

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03 | MISHIMOTO INTERCOOLER INSTALL CONT.

14. Reconnect the hood release cable to the hood release mechanism.



15. Install the two 10mm bolts that secure the upper AC condenser brackets to the radiator support. Do not tighten these bolts at this time.

16. Install the Mishimoto lower AC condenser brackets. Use the four 10mm bolts that secure the hood release frame to the lower radiator support. Secure the AC condenser brackets with these bolts, which will be mounted on top of the hood release frame.



17. Install the two 10mm bolts securing the hood release frame to the upper radiator support bracket.

18. Reinstall the two 10mm bolts securing the front transmission cooler to the hood release frame.



19. Tighten the two 10mm bolts securing the upper AC condenser brackets to the radiator support.

20. Reinstall both headlights at this time. Be sure to install all four 10mm bolts and reconnect the headlamp pigtailed.

21. Reconnect the various electrical connectors located on the hood release frame.



22. Reinstall the clips on the cold-side intercooler pipe and install the pipe on the intercooler and intake manifold.

23. Reconnect the hot-side intercooler pipe boot to the intercooler and tighten the clamps.

24. Reinstall the wheel well splash shields. These are secured in place with four pop clips and five 7mm bolts.

25. Reinstall the front grill and secure in place with four 10mm bolts.

26. Reinstall the plastic upper radiator cover using eight pop clips.

27. Reinstall the airbox and air intake pipe; be sure to tighten the clamps.

28. Reconnect the mass airflow sensor.

29. Refill the coolant system with a 50/50 mix of coolant and distilled water.

30. Start the vehicle and turn the heat on high. This will help remove any air bubbles from the cooling system. Be sure to check for any leaks at this time.

31. You have now successfully installed the Mishimoto Chevrolet/GMC 6.6L Duramax Intercooler. Enjoy!

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