



INSTALLATION GUIDE

2021+ BMW G80 M3/M4 CHARGE PIPES

SKU: MMICP-G80-21

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RESOURCES & CONTACT

-  **CALL 1-877-GOMISHI**
CUSTOMER SERVICE HOURS: MON-FRI 8:30AM-5:00PM EST
-  **MISHIMOTO**
-  **GOMISHIMOTO**
-  **MISHIMOTO**
-  **WEBSITE**
WWW.MISHIMOTO.COM
-  **ENGINEERING BLOG**
WWW.MISHIMOTO.COM/ENGINEERING

IMPORTANT SAFETY INFORMATION

- › Mishimoto recommends you use safety glasses and protective gloves during the installation of our products
- › 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
- › If you need any assistance while installing our products, reach out to our Customer Service Team at 1-877-GOMISHI

REQUIRED TOOLS

1/4" RATCHETING WRENCH	E18 EXTERNAL TORX SOCKET
3/8" RATCHETING WRENCH	T20 INTERNAL TORX SOCKET
1/2" RATCHETING WRENCH AND/ OR BREAKER BAR	T30 INTERNAL TORX SOCKET
8MM SOCKET	T40 INTERNAL TORX SOCKET
10MM SOCKET	17MM 12PT WRENCH OR DEEP SOCKET
10MM WRENCH	TORQUE WRENCH (1/4"-DRIVE AND 3/8"-DRIVE)
13MM SOCKET	BUCKET OR CONTAINER FOR COOLANT
15MM SOCKET	VACUUM COOLANT FILL KIT
16MM SOCKET	JACK AND JACK STANDS OR VEHICLE LIFT
21MM SOCKET	
PICK TOOL	
TRIM REMOVAL TOOL	
VARIOUS SOCKET EXTENSIONS	

INSTALLATION INSTRUCTIONS

WARNING: It is highly suggested to disconnect the negative (-) battery terminal during installation for safety purposes. The G80 battery is in the trunk.

01. Jack up the front of the vehicle and put the vehicle on jack stands or raise the vehicle on a vehicle lift. Never support the vehicle with only a vehicle jack. During this installation, you will need access to both the engine bay and underneath the vehicle. Remove the front wheels.

02. Remove the front diffuser by removing the 11x 10mm bolts.



03. Remove the front and front-side plastic undertrays by removing all the 10mm screws holding it to the vehicle. There are 3x screws in each of the wheel wells holding the undertray to the bumper and wheel well liners. Remove undertrays from the vehicle.



04. Remove the 10mm screws securing the rear undertrays to the vehicle. (Images on next page)

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05. In each wheel well, remove the 2x (4x total) 10mm screws securing the large aluminum undertray to the wheel well liners.



06. Remove the 2x 21mm bolts at the rear of the large aluminum undertray.



07. Remove the 11x 16mm bolts securing the large aluminum undertray to the vehicle. We suggest having a second person assist with removal as this undertray is quite large.



08. Remove the coolant reservoir cap from the main cooling system and then disconnect the lower hose from each of the auxiliary radiators to let the coolant drain into an appropriate container.



09. Remove the 4x 15mm bolts at 1x 13mm bolt holding the upper engine cross brace and V-brace then remove both braces from the vehicle. Remove engine cover from engine by pulling up. (Image on next page)

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10. Remove the air intakes and air intake boxes. The factory intakes have a worm gear clamp at the end of the pipe near the air box and a quick disconnect near the turbos. Remove the 2x pop clips that attach the front turbo intake to the core support.



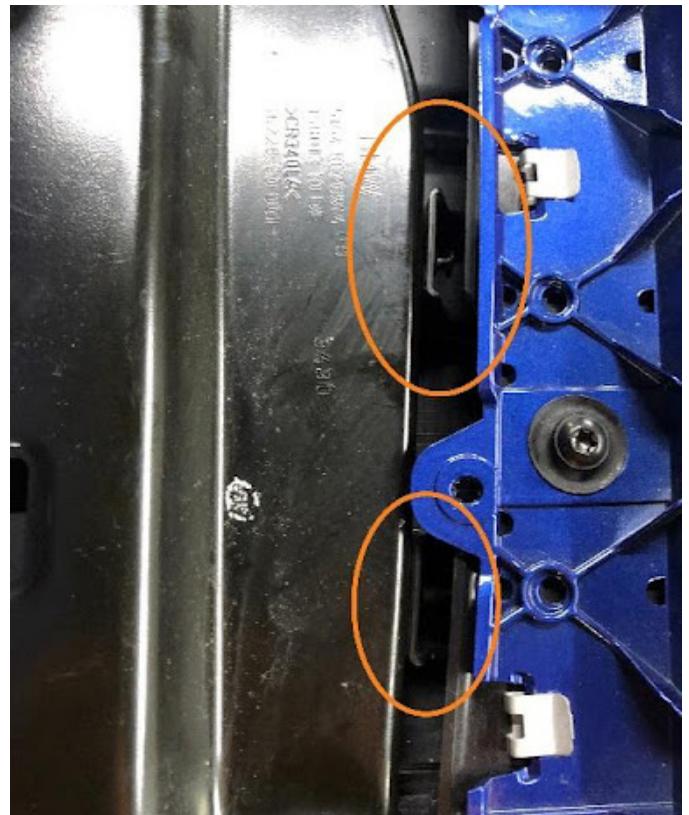
11. Remove the front hood seal by pulling up on the seal. Remove the 6x pop clips securing the front plastic panel to the vehicle and remove.



12. Remove the 6x 13mm bolts holding the radiator support panel. Remove the 4x silver T40 bolts, 5x black T30 bolts and move the hood latch cable out of the clips as shown.

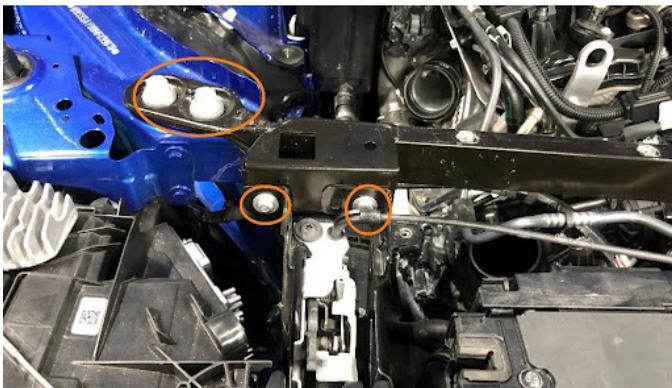


13. Remove the 4x pop clips behind the bumper that hold the radiator shroud to the radiator support panel. These clips may require you to pull back on the bumper for better access to the pop clips. Remove the radiator support panel from the vehicle.

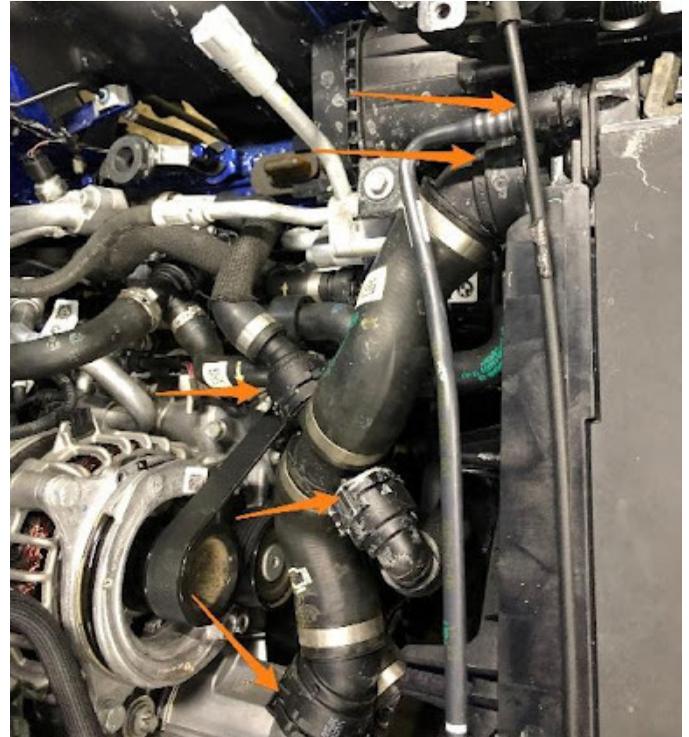


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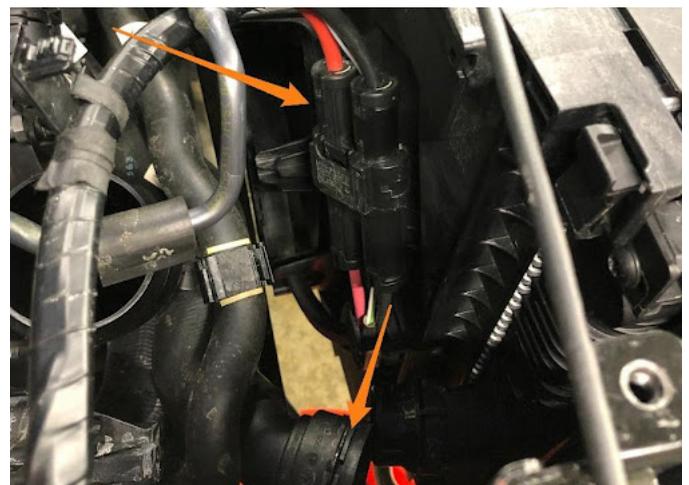
14. Remove the core support bar. Remove the 2x wire harness clips holding the fan shroud wiring to the core support bar. Remove the 4x (2x per side) E18 external torx bolts, 4x T30 bolts, and 1x 13mm bolt in the center for the lower V-brace. It may be helpful to mark the outline of the bolts for easier alignment on reinstallation.



15. Remove the upper radiator pipe from both the engine and the radiator, as well as the two smaller hoses attached to it. In addition, remove the small overflow line going from the radiator to the coolant reservoir.

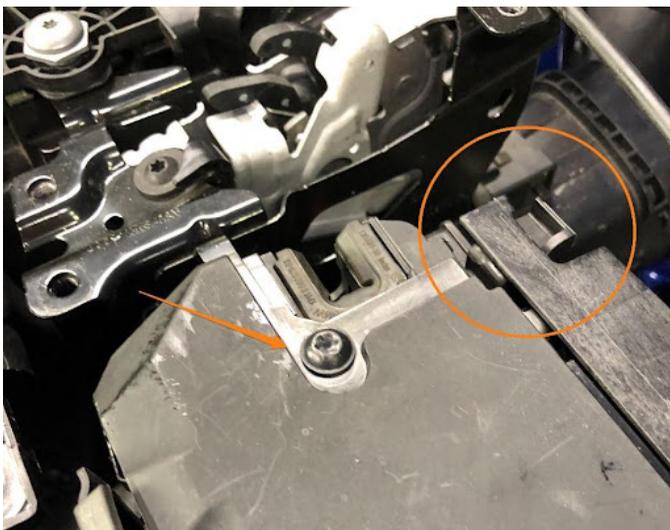


16. Remove the lower radiator hose from the radiator and the fan shroud electrical harness. Place the electrical harness to the side.

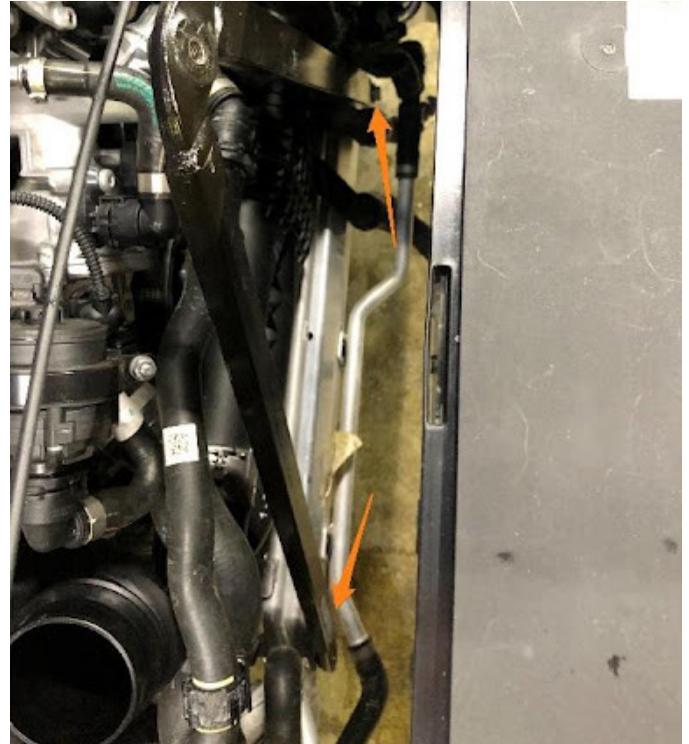


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17. Remove the 3x T30 screws holding the fan shroud to the radiator and the radiator cover to the radiator assembly. Unlatch the fan shroud then pull it up and out of the vehicle.



18. Remove the 2x 16mm bolts from the lower V-Brace and remove from the vehicle. There will be a coolant hose clipped to the driver's side of the brace. Remove the hose from the clip before removing brace from the vehicle.



19. Locate the auxiliary water pump next to the alternator and remove the 1x 10mm nut. Lift up on the water pump to free it from its mount. This will make it easier to access the sensors in the charge pipe.



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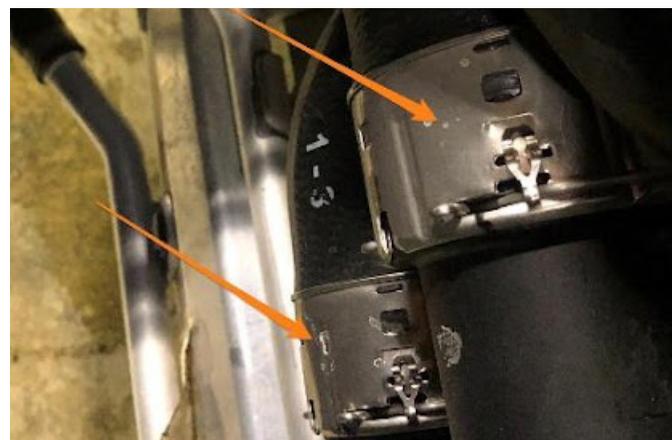
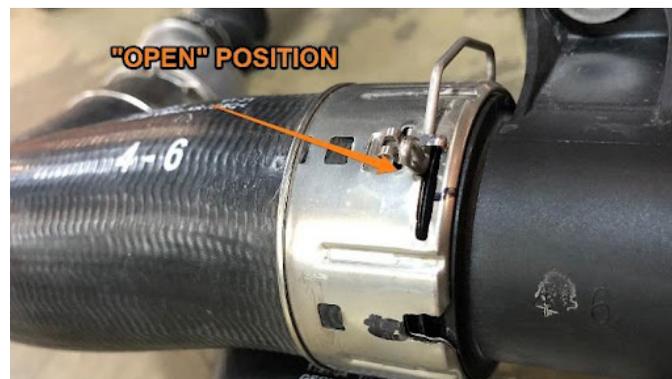
20. Locate the 4x 10mm bolts holding the main charge pipe Y to the engine and remove. There are two bolts on the top, and two on the bottom. The bottom bolts are easier to access from underneath the vehicle.



21. Locate the MAP sensor and temperature sensor in the outlet of the Y-pipe, next to the A/C compressor. Disconnect both electrical connectors. Moving the auxiliary water pump out of the way will help give access to the connectors. Both connectors have a white locking tab that must be pulled back to remove the connector.

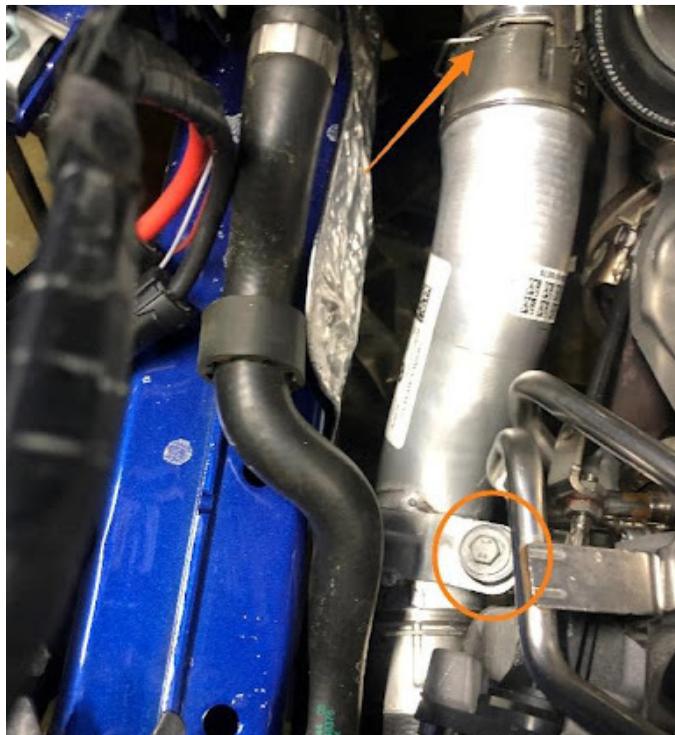


22. Remove the two inlet pipes and one outlet pipe from the large plastic Y-pipe by pulling the quick-disconnect clip back on both sides so that it locks into the "open position" then pull away from the pipe. The outlet pipe may be easier accessed from underneath the vehicle. Remove the Y-pipe from the vehicle.



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23. Remove the 10mm bolt from the rear turbo outlet pipe and disconnect the quick-connect clamp, then remove the pipe from the vehicle. Remove the quick-connect clamp from the front turbo and remove the front turbo elbow from the vehicle. (Not shown)



24. Remove the quick-connect clamp from the elbow connected to the throttle body and remove the elbow from the vehicle.



25. Remove the 3x T30 bolts from the throttle body adapter and remove the throttle body adapter from the vehicle.



26. With a 17mm 12-point socket or wrench, remove the air temp sensor from the factory Y-pipe. Remove the T20 screw from the MAP sensor and remove the MAP sensor from the Y-pipe.



27. Install the temperature sensor in the Mishimoto Y-pipe. The sensor may need to be fully threaded in with a wrench but don't worry, it will not damage the threads. The sensor should be torqued to approx. 16 in-lbs.

28. Install the MAP sensor in the Mishimoto Y-pipe with the included 16mm long M6 bolt and torque to approx. 9 lb-ft. (Image next page)

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29. Install 4x grommets into the charge pipe. Remove the metal insert from each grommet, install the rubber piece into the charge pipe, and then reinstall the metal insert as shown.



30. From underneath the vehicle, remove the spacer for the lower right side Y-pipe attachment point with a 17mm wrench or socket and replace with the included longer spacer. Torque to approx. 8 lb-ft.



31. Install the included throttle body adapter onto the throttle body with the factory bolts. Torque bolts to approx. 8 N-m (6 lb-ft). The adapter should only be able to be installed in the correct orientation.



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32. Install the throttle body boot onto the throttle body adapter with one of the 65-89 mm worm gear clamps. The shorter side of the throttle body boot will go onto the throttle body adapter and the longer side will go on the outlet of the Mishimoto Y-pipe. Tighten the worm gear clamp to keep the boot on the adapter but do not fully tighten to allow it to be adjusted. Put the other provided 65-89 mm worm gear clamp on the other side of the throttle body boot in an orientation where it is accessible.



33. Install the front turbo adapter onto the outlet of the front turbo. There should be an audible click when the wire clip is fully seated.



34. Install the last provided grommet into the bracket on the rear turbo pipe and install onto the rear turbo outlet. Make sure the bracket on the rear turbo pipe is on top of the bracket on the vehicle as shown. (Image on top right)



35. Install the front turbo boot onto the front turbo adapter. The slightly smaller end will go onto the front turbo adapter and the slightly larger end will go onto the lower inlet of the Y-pipe. Install the rear turbo boot onto the rear turbo pipe. The shorter end will go onto the rear turbo pipe and the longer end will go onto the Y-pipe. Refer to the parts diagram for further details. Install 2x 40-64mm worm gear clamps onto each boot, but do not tighten.

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36. Lower the Y-pipe into the vehicle. First, connect the outlet of the Y-pipe to the throttle body boot and then connect the front turbo and rear turbo boots according to the parts diagram. Then, install the 4x 10mm bolts onto the Y-pipe and tighten to approx. 10 N-m (7 lb-ft). It may not be possible to get a torque wrench on all four bolts.



37. Install the 10mm bolt to secure the rear turbo pipe bracket. Tighten bolt to approx. 10 N-m (7 lb-ft).



38. Adjust all 3x boots to ensure each boot is fully seated on each pipe. Then tighten each worm gear clamp to approx. 4 N-m (35 in-lbs) with an 8mm socket or flathead screwdriver. Make sure that each clamp is behind the bead roll on the pipes. The clamps and boots are not accessible in the engine bay once installed so it is critical that each clamp and boot is adjusted and properly tightened now.



39. Reconnect and lock the electrical connectors for the intake temperature sensor and MAP sensor on the outlet of the Y-pipe.



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40. Place the auxiliary water pump back in place and reinstall the 1x 10mm nut and tighten to 8 N-m (~6 lb-ft).

41. Reinstall the lower V-brace and tighten the 2x 16mm bolts to 56 N-m (41 lb-ft).

42. Reinstall the fan shroud and re-connect the electrical connection. Reinstall the 3x T30 screws and tighten to approx. 6.5 N-m.

43. Lubricate the O-ring on the inside of each of the coolant hoses with coolant and re-connect both the upper and lower radiator hoses. You should hear an audible click when they have been fully installed.

44. Check the lower hoses on each of the auxiliary radiators to ensure that they are reconnected. Do not forget to reinstall the small vent line going from the radiator to the coolant reservoir.

45. Reinstall the large core support bar. To ensure that it is properly lined up, install the upper V-brace and loosely install the bolt. Install the 4x E18 External torx bolts, the 4x T30 bolts, and the 1x 13mm bolt for the lower V-brace hand tight. First, tighten the lower V-brace 13mm bolt to 56 N-m (41 lb-ft). Then, tighten the 4x E18 bolts to 56 N-m (41 lb-ft). Last, tighten the 4x T30 bolts for the hood latch mechanisms to 12 N-m (9lb-ft).



46. Reinstall the upper radiator support panel. First, reinstall the 4x pop clips. Then, install the 6x 13mm bolts, 4x T40 silver bolts, and 5x black T30 bolts hand tight. Then, torque the 3x black T30 bolts holding the bumper to the support panel to 4.6N-m.

47. Tighten the 6x 13mm bolts to 28N-m. Then, tighten the 4x silver T40 bolts to 28N-m. Finally, torque the remaining 2x black T30 bolts to 12 N-m (9 lb-ft). Reinstall the hood latch cable into its bracket. Reconnect the 2x clips holding the fan shroud wiring to the back of the radiator core support.

48. Reinstall the plastic panel above the upper radiator support panel. Reinstall the 6x expanding rivets and the hood seal.

49. Remove the upper V-brace and reinstall both intakes and intake boxes.

50. Reinstall engine cover, upper V-brace, and the straight brace above the engine cover. Torque the 13mm bolt to 56 N-m (41 ft lbs) and the 15mm nuts to 28 N-m (21 lb-ft).

51. Reinstall the large aluminum undertray. Torque the large 21mm bolts to 100 N-m (74 lb-ft) and the 16mm bolts to 56 N-m (41 lb-ft).

52. Reinstall all the remaining plastic undertrays back on the vehicle. Do not forget to install the front diffuser and do not forget the 5 screws in each front wheel well.

53. Refill and bleed cooling system. We highly recommend using a vacuum fill system to fill the cooling system. Do not forget to reinstall the cooling reservoir cap.

Congratulations! You have finished your installation!

DISPOSAL INSTRUCTIONS

- › Do not dispose of any product as unsorted municipal waste. Use separate collection facilities. Contact your local authority for information regarding the collection systems available.
- › Never improperly dispose of any coolant, oil, or other chemicals.

WARRANTY INFORMATION



- › All claims must be accompanied with a picture of the Mishimoto product showing the issue for which the claim is being submitted.
- › Mishimoto asks that the customer inspect their purchased item for any damage immediately upon arrival.
- › Any product deemed dead on arrival (DOA) must be claimed within 14 business days of delivery. Claims outside of this time frame will not be covered under the Mishimoto Lifetime Warranty.
- › This warranty does not include payment and/or reimbursement of the cost of labor in connection with the removal of any product returned pursuant to the warranty policy or in connection with the installation of any replacement items provided under the warranty policy.
- › Mishimoto has the right to refuse a claim at any time.

- › When Mishimoto accepts a claim, Mishimoto retains full discretion to choose if it will: (i) repair or replace purchaser's original Mishimoto product; (ii) replace purchaser's original Mishimoto product with the most current available model; or (iii) provide the purchaser with a gift card redeemable on [Mishimoto.com](https://www.mishimoto.com) in the amount of the original purchase price of the original Mishimoto product. The provision of a replacement of a Mishimoto product is subject to availability and Mishimoto retains the right to substitute any warranty claim item with a comparable item or credit at any time.
- › If Mishimoto determines that it will provide a replacement item in connection with a claim under this warranty policy, and such item is out of stock, Mishimoto will place the customer on backorder and ship the replacement product to the purchaser once it becomes available.
- › Mishimoto is not liable for incorrect shipments in connection with a claim if a claim form is completed incorrectly, or if a model number is not included in a claim.
- › If you have a vehicle equipped with an automatic transmission, please make sure to specify this within the text box on the claim form. Mishimoto is not responsible for incorrect replacement shipments if transmission type is not indicated.



WARNING
Cancer and
Reproductive Harm
www.P65Warnings.ca.gov

This product can expose you to chemicals which are known to the state of California to cause cancer. For more information visit: www.p65warnings.ca.gov