

## GUIDE INTRODUCTION

The following guide is broken up into three sections. Each one provides the steps required to separately install the intercooler, the charge pipe kit, and the heat exchanger. We recommend fully reading over all sections before beginning your install. This will give you a complete representation of how to carry out installing the entire Power Pack at once.

It may help to watch video of the installs, which can be found on each product's web page:



[BMW F8X M3/M4 INTERCOOLER](#)



[BMW F8X M3/M4 CHARGE PIPE KIT](#)



[BMW F8X M3/M4 HEAT EXCHANGER](#)



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Air-to-Water Intercooler

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**GUIDE #3.....**2015–2020 BMW F8X M3/M4 Performance  
Heat Exchanger

INSTALL BEGINS ON FOLLOWING PAGE

# 2015–2020 BMW F8X M3/M4 PERFORMANCE AIR-TO-WATER INTERCOOLER PARTS & INSTALLATION GUIDE



## PARTS INCLUDED

- 1PC** Mishimoto Performance Intercooler
- 1PC** Mounting Hardware Pack
- 1PC** CARB Sticker

## TOOLS NEEDED

- 1/4" Drive Ratchet
- 1/4" Drive Extension
- T25 Torx
- 3mm Allen Key
- Pick Tool
- Pliers

**INSTALL TIME** 1 Hour

**INSTALL DIFFICULTY** Five wrench icons, with the first two being orange and the remaining three being grey, indicating a difficulty level of 5.

## 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.

## INSTALL PROCEDURE

1. Drain the expansion tank using a fluid transfer pump.



2. Disconnect the sensor on the side of the intercooler. Press the tab at the center of the connector to release the harness.



3. Loosen all the clamps on the intercooler pipes. (5x worm gear clamps)



4. Separate the quick-disconnects from the intercooler. Lift the clip on each one to free the connections. Place something underneath to catch residual fluid from these connections. (3x spring clips)

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## 2015-2020 BMW F8X M3/M4 PERFORMANCE AIR-TO-WATER INTERCOOLER INSTALLATION GUIDE



5. All connections to the intercooler at this point should be loose. Lift the cold side, and then slide the intercooler out at an angle.
6. Unscrew the expansion tank and temperature sensor from the intercooler. (4x T25 torx bolts)



7. Compress the clamp on the small hose connecting the expansion tank to the intercooler. Slide the small hose off the intercooler port. (1x spring clamp)



8. Detach the expansion tank from the intercooler.
9. Separate the brackets from the bottom of the intercooler. (5x T25 torx bolts)



10. Transfer the brackets to the Mishimoto intercooler. Secure them using the provided hardware. (5x M5 3mm Allen bolts)



11. Transfer the temperature sensor to the Mishimoto intercooler using the provided hardware. (2x M5 3mm Allen bolts)
12. Install the expansion tank to the intercooler using the provided hardware. (2x M5 3mm Allen bolts)
13. Attach the hose from the expansion tank to the intercooler. (1x spring clamp)
14. Place the intercooler in the engine bay. Align the pipes with the intercooler in the process.



15. Reattach the quick-disconnects. (3x spring clips)

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16. Secure the intercooler pipes to the intercooler.  
(5x worm gear clamp)
17. Reconnect the temperature sensor.
18. Refill the system with BMW-approved coolant.
19. For smog check purposes, affix the CARB  
E.O. Label on a visible location under the  
hood.

**Congratulations! You have finished  
installing the Mishimoto 2015–2020  
BMW F8X M3/M4 Performance  
Air-to-Water Intercooler.**



# 2015–2020 BMW F8X M3/M4 CHARGE PIPE KIT PARTS & INSTALLATION GUIDE



## PARTS INCLUDED

- 2PC** Mishimoto Charge Pipes
- 1PC** Mounting Hardware Pack
- 1PC** CARB Sticker

## TOOLS NEEDED

- 1/4" Drive Ratchet
- 1/4" Drive Extension
- 8mm Socket
- 10mm Socket
- 13mm Socket
- E11 Torx Socket
- 8mm Box Wrench
- Pick Tool

**INSTALL TIME** 1 Hour

**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.
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## INSTALL PROCEDURE

1. Reposition the two shroud pieces within the engine bay. Unscrew each quarter-turn screw, lift the edges tucked under trim pieces, and rotate the shroud pieces out toward the edge of the

engine bay. (6x 10mm plastic screws)



2. Remove the bolts that secure the front and ends of the strut bar. (8x 13mm bolts)



3. Remove the bolt that secures the primary expansion tank to the strut bar. (1x 10mm bolt)



4. Slide the strut tower back to clear it from the engine bay.



5. Lift the cover off the engine.

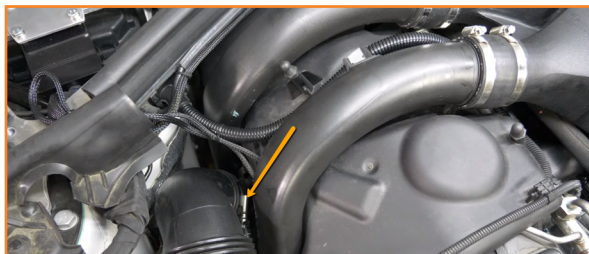
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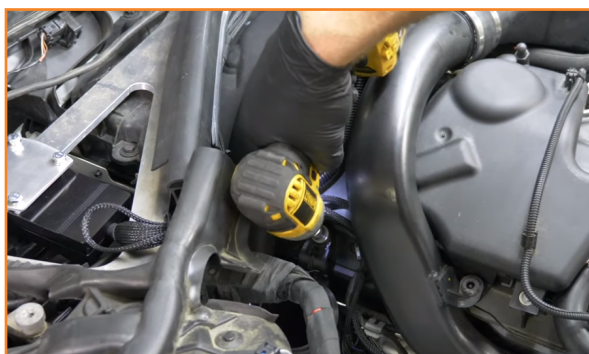
6. Loosen the clamp on the intake tube.  
(1x worm gear clamp)



7. Disconnect the MAF sensor. Depress the black tab at the center to release the connection. Then lift the airbox out of the way.



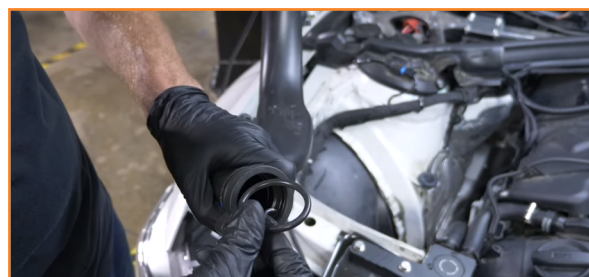
8. Remove the bolt that secures the remainder of the intake to the turbo. With the intake now free, remove it from the engine bay. (1x 10mm bolt)



9. Remove the bolts that secure the intercooler pipes to the turbo. (2x E11 torx bolts)
10. Loosen the clamps at the pipe and intercooler connections. (2x worm gear clamps)



11. Pull away and up to remove each intercooler pipe.
12. Remove the O-rings from the stock pipes. Be careful not to damage them in the process. Insert the O-rings into your Mishimoto pipes.



13. Attach a silicone coupler to the back intercooler pipe. Then set the back pipe on the turbo and slide the coupler onto the intercooler.  
(1x E11 torx bolt, 2x worm gear clamps)



14. Attach a silicone coupler to the front intercooler pipe. Then set the front pipe and slide the coupler onto the intercooler.  
(1x E11 torx bolt, 2x worm gear clamps)

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15. Tighten the clamps on both intercooler pipes.
16. Using an 8mm box wrench, tighten down the torx bolts on both intercooler pipes.
17. Reinstall the lower portion of the intake.  
(1x 10mm bolt)
18. Reinstall the rest of the intake.  
(1x worm gear clamp)
19. Reconnect the MAF sensor.
20. Place the cover over the engine.
21. Reinstall the strut bar. The two longer bolts secure the front of the bar. (8x 13mm bolts)
22. Secure the primary expansion tank to the strut bar. (1x 10mm bolt)
23. Align the corners of the upper shroud pieces. Slightly bend the edges so they are set underneath the liners.
24. Secure the shroud pieces with the original hardware. (6x 10mm plastic screws)
25. For smog check purposes, affix the **CARB E.O.** Label on a visible location under the hood.

**Congratulations! You have finished installing the Mishimoto 2015–2020 BMW F8X M3/M4 Charge Pipe Kit.**



# 2015–2020 BMW F8X M3/M4 PERFORMANCE HEAT EXCHANGER PARTS & INSTALLATION GUIDE



## PARTS INCLUDED

- 1PC** Performance Heat Exchanger
- 1PC** Stone Guard
- 1PC** Mounting Hardware Pack
- 1PC** CARB Sticker

## TOOLS NEEDED

- 8mm Socket
- 13mm Socket
- T20 Torx
- T25 Torx
- T30 Torx
- T45 Torx
- 1/4" Drive Ratchet
- 1/4" Drive Extension
- 3/8" Drive Ratchet
- Pick Tool

**INSTALL TIME** 3 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.
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## INSTALL PROCEDURE

1. Unscrew the cap for the secondary coolant reservoir.

2. Peel off the rubber weather stripping running along the top edge of the bumper. Then remove the bolts along the top edge of the bumper. (2x T20, 6X T30 torx)



3. Remove all the bolts on the lower splash shields and wheel well liners. (25x 8mm bolts, 2x 13mm bolts)



4. Pull back the wheel well liner to gain access behind it. Remove the bolts that secure the bumper to the edge of the fender. (4x 8mm bolts)

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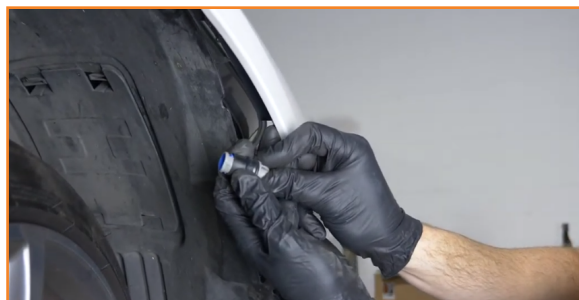
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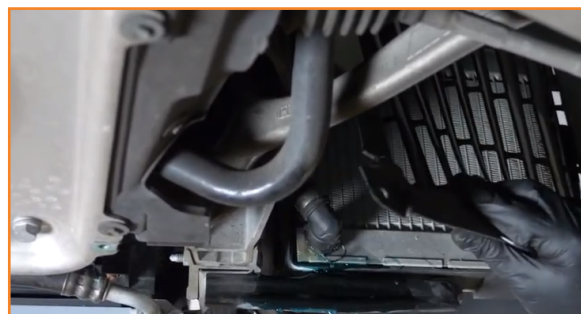
5. With the liner back, separate the window washer quick-disconnect within the wheel well. Slide the black tab back to release the connection.



6. Disconnect the electrical harness within the wheel well.



7. Pull the bumper from the front of the vehicle.
8. Separate the quick-disconnect from the passenger-side auxiliary cooler in the wheel well. Have a bucket prepared for when coolant spills from the free line.



9. Release the foam cover from the crash beam.
10. Remove the bolts that secure the crash beam. There are brackets under the crash beam. Be sure to hold on to these for later. With the beam free, pull it off the front of the vehicle. (4x 13mm bolts)



11. Release the lower ducting. (4x pop-clips)



12. Remove the bolts that secure the cross brace and slide it out from behind the upper ducting. (6x T45 torx)

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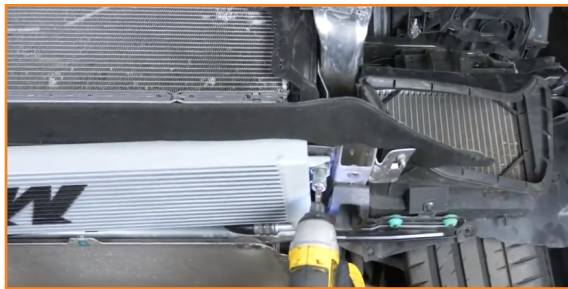
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13. Separate the quick-disconnects along the passenger side of the heat exchanger.



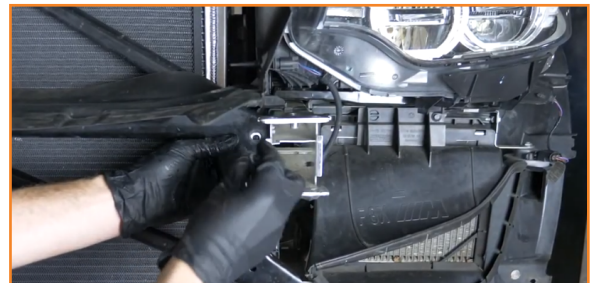
14. Remove the bolts that secure the oil cooler. (3x 13mm bolts)



15. Remove the bolts on the lower part of the clam shell. (2x T25 plastic screws)



16. Release the heat exchanger and lower it out of the vehicle.  
17. Should you choose to do so, remove the stone guard from the face of the heat exchanger at this time. (2x 2.5mm Allen screws)  
18. Lift the Mishimoto heat exchanger into place.  
19. Slide the quick-disconnects onto the ports of the heat exchanger.  
20. Reinstall the bottom part of the clam shell to secure the heat exchanger. (2x T25 plastic screws)  
21. Check that the drain plug on the heat exchanger is snug.  
22. Reinstall the oil cooler. (3x 13mm bolts)  
23. Reattach the quick-disconnect to the passenger-side auxiliary cooler. (1x spring clip)  
24. Reinstall the cross brace. Secure it with the original bolts and provided washers. The washers go between the body and the cross brace. (6x T45 torx, 4x washers)



25. Reattach the lower ducting. (4x pop-clips)  
26. Reinstall the crash beam, placing the rubber clip on the tab at the center. (4x 13mm bolts)  
27. Connect the foam cover to the crash beam.  
28. Slide the bumper back onto the front of the vehicle. See that the lower ducting goes into the groove at the bumper's bottom edge.  
29. Reconnect the harness and window washer connector in the wheel well.  
30. Secure the front bumper to the fender. (4x 8mm bolts)  
31. Reinstall the lower splash shields and wheel well liners. (25x 8mm bolts, 2x 13mm bolts)

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32. Secure the top edge of the front bumper.  
(2x T20 torx, 6 T30 torx)
33. Reinstall the rubber weather stripping.
34. Refill the coolant in your system. Once full, start the car with the cap off. Let it idle to allow the coolant to circulate through the system. Continue to top off the coolant as there will be some bleed off. Close the tank and then take the car for a drive. Let the vehicle cool off when you return and top off the coolant again.
35. For smog check purposes, affix the CARB E.O. Label on a visible location under the hood.

**Congratulations! You have finished  
installing the Mishimoto 2015–2020 BMW  
F8X M3/M4 Performance Heat Exchanger.**