

# **GUIDE INTRODUCTION**

The following guide is broken up into two sections. Each one provides the steps required to install the intercooler and both the hot-side and cold-side intercooler pipes. We recommend fully reading over both sections before beginning your install. This will give you a complete representation of how to carry out installing the entire kit at once.



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



FORD FOCUS ST INTERCOOLER PIPE KIT



# CONTENTS

**GUIDE #1.....**2013+ Ford Focus ST Performance Intercooler *4 total pages consisting of 40 steps* 

**GUIDE #2.....**2013+ Ford Focus ST Intercooler Pipe Kit *3 total pages consisting of 16 steps* 

INSTALL BEGINS ON FOLLOWING PAGE

#### FORD FOCUS ST 2013+ PERFORMANCE INTERCOOLER PARTS LIST & INSTALLATION GUIDE



## **PARTS INCLUDED**

1PC Mishimoto Intercooler1PC T25 Torx Bolt for Sensor

## **TOOLS NEEDED**

1/4" Drive Ratchet 1/4" Extension 7mm Socket 8mm Socket T25 Torx T30 Torx Pick Tool Flathead Screwdriver

# INSTALL TIME 2.5 HOURS INSTALL DIFFICULTY

- Allow vehicle to cool completely prior to attempting installation.
- 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**

 Using a flathead screwdriver, remove the pop-clips on the top of the bumper cover located in the engine bay. (4x pop-clips)



2. Disconnect the hood-release cable.

- 3. Now you can set the vehicle on an automotive lift or raise it with a jack and place it securely on jack stands. Refer to your owner's manual for safe lifting points if you are unsure.
- Unseat the fender liner by unscrewing the hardware within the passenger-side wheel well. Repeat this step on the driver side. (4x T30 torx, 2x pop-clips)
- 5. Remove the pop-clips under the front bumper. (6x pop-clips)
- 6. Remove the lower air diverter. (3x T30 torx)



7. Remove the plastic undertray panel. (8x T30 torx)



8. Remove the final plastic under-panel that's directly under the front bumper. (4x T30 torx)



- 9. Pull back both edges of the front bumper to release them.
- 10. Remove the two screws securing each headlight. (4x T30 torx)



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- 11. Remove the last two screws next to the headlights securing the top edge of the bumper. (2x T30 torx)
- 12. Slide each headlight forward and disconnect the electrical connector to remove the headlights from the vehicle.



13. Pull up on the two tabs holding the front bumper. You can then lift the front bumper and slide it forward to separate it, but before completely removing the bumper, disconnect the fog light electrical connector.



14. Remove the upper air shroud by releasing the two clips that hold it in place.



15. Remove the lower air shroud, which is held by two screws.



 Disconnect the electrical connector for the active grille shutters, and then pull out the tree-clips holding the wire. (2x tree clips)



17. Squeeze the four tabs to release the bumper guard.



18. Loosen the clamps on the cold- and hot-side pipes connected to the intercooler. (2x worm gear clamps)



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19. Release the electrical harness for the sensor on the cold side of the intercooler. To disconnect this harness, depress the tab at the top of the clip and separate the two pieces.



20. Remove the two bolts that secure the intercooler to the lower mounts. (2x 8mm bolts)



21. Use a pick tool to loosen the connection between the pipes and end tanks on the intercooler. Then, slide each pipe off the port.



22. Tilt the bottom of the intercooler upward, and then lower it from the vehicle.



23. Remove the sensor from the end tank on the stock intercooler. (1x T25 torx screw)



24. Install the sensor removed from the stock end tank onto the Mishimoto intercooler. Secure it with the bolt from your kit.(1x T25 torx bolt)



25. Install the Mishimoto intercooler, making sure as you lift it into position to slide the tabs on the radiator into the upper intercooler hangers. Then, push the bottom of the intercooler forward and allow it to sit on the mounts.



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#### Step 25 continued...





- 26. Secure the intercooler to the lower mounts using the original bolts. (2x 8mm bolts)
- Slide the cold-side pipe over the outlet on the Mishimoto intercooler. Make sure it is fully seated and the clamp is square before tightening it down. (1x worm gear clamp)
- 28. Reconnect the electrical harness above the cold-side pipe.
- 29. Install the hot-side pipe to the Mishimoto intercooler. Make sure the pipe is fully seated and the clamp is square before tightening it down. (1x worm gear clamp)
- 30. Reinstall the bumper guard. You will hear it click when fully in place.
- 31. Reinstall the rubber shrouding above the bumper guard. There are tabs on each side of the shrouding that slide into clips on the frame.
- 32. Reinstall the lower shrouding over the face of the intercooler using the original hardware.(2x T30 torx bolts)
- 33. Reconnect the fog lights and reinstall the bumper cover. Make sure to only connect the front part of

the bumper for now.

- 34. Reinstall the headlights, but first reconnect the headlight connector for each side. (4x T30 torx)
- 35. Clip on both sides of the front bumper. Secure the upper edge of the bumper with the original pop-clips and screws. (4x pop-clips, 2x T30 torx)
- 36. Reinstall the hood-release cable.
- 37. Secure the fender liner within each wheel well using the original hardware.(4x T30 torx, 2x pop-clips)
- Reinstall the front under-panel. (4x T30 torx, 6 pop-clips)
- 39. Reinstall the undertray panel. (8x T30 torx)
- 40. Reinstall the lower air diverter. (3x T30 torx)

#### Congratulations! You have finished installing the Mishimoto 2013+ Ford Focus ST Performance Intercooler.



#### **2013+ FORD FOCUS ST** INTERCOOLER PIPE KIT PARTS LIST & INSTALLATION GUIDE



### **PARTS INCLUDED**

#### **Hot Side**

- **1PC** Aluminum Intercooler Pipe
- **2PC** Silicone Couplers
- **4PC** High-Torque Worm Gear Clamps

Cold Side 1PC Silicone Pipe 2PC High-Torque Worm Gear Clamps

# **TOOLS NEEDED**

7mm Socket 8mm Socket 10mm Socket 13mm Wrench 1/4" Drive & Extensions Pick Tool

# INSTALL TIME 1-2 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.

# ATTENTION

The first part of this installation consists of steps for the hot-side intercooler pipe. The second half is for the

cold-side intercooler pipe. Follow the correct steps depending on which side you're working on. If you are installing the full kit, we recommend following the steps in the order that they are listed.

# **INSTALL PROCEDURE**

 Remove the two nuts that secure the hot-side pipe to the transmission. (1x 10mm nut, 1x 13mm nut)





 Loosen the clamp on the coupler between the hot-side pipe and turbo. (1x worm gear clamp)





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3. Loosen the clamp on the connection between the hot-side pipe and the intercooler, and then separate the pipe from the port. Use a pick tool to loosen the pipe around the end tank. Then, remove the hot-side pipe. (1x worm gear clamp)



4. Slide a clamp over the shorter coupler in your kit and install it to the turbo. Leave the clamp loose for now. (1x worm gear clamp)



 Install the intercooler pipe to the open end of the coupler you just installed to the turbo. (1x worm gear clamp)



 Align the pipe so it will fit in the crease between the transmission and oil pan without touching either. Rest the two brackets welded to the pipe on the studs you removed nuts from earlier. Secure the pipe with those original nuts. (1x 10mm nut, 1x 13mm nut)



- 7. Slide two clamps over the larger coupler in your kit. The longer end of the coupler will attach to the hot-side pipe and the shorter end goes to the intercooler. (2x worm gear clamps)
- 8. Install the coupler to the pipe first, and then to the intercooler. Tighten the clamp at the intercooler connection. Do not overtighten the clamp or else it will become stripped.



- 9. When tightening the second clamp, make sure it is over the pipe's bead roll. Do the same with the clamp securing the connection between the first coupler and hot-side pipe.
- 10. Remove the engine cover.
- 11. Loosen the clamp securing the stock cold-side pipe to the intercooler end tank. Then, separate the pipe from the end tank. Use a pick tool to



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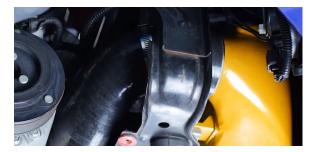
help release the pipe. (1x worm gear clamp)



12. Loosen the clamp securing the stock cold-side pipe to the throttle body. Pull down on the pipe to separate it from the throttle body, and then lower it from the vehicle. (1x worm gear clamp)



- 13. Slide a clamp over each end of your Mishimoto cold-side pipe. We recommend tightening the clamps enough so they sit on the coupler and do not move out of position. (2x worm gear clamps)
- 14. Install the end with a bend onto the intercooler first. Use a lubricant spray to help get the pipe over the port.



15. Rotate the coupler up and install it onto the throttle body.



16. Tighten each clamp, making sure that the coupler is fully seated and the clamp isn't on the bead roll of either port. Reinstall the engine cover.

Congratulations! You have finished installing the Mishimoto 2013+ Ford Focus ST Intercooler Pipe Kit.

