

2013+ FORD FOCUS ST

OIL COOLER KIT

PARTS LIST AND INSTALLATION GUIDE



PARTS INCLUDED

- 2PC** | APPLICATION-SPECIFIC MOUNTING BRACKET AND SPACER
- 1PC** | 19-ROW OIL COOLER (SILVER OR BLACK)
- 1PC** | 3/8" STAINLESS STEEL BRAIDED HOSE WITH STRAIGHT AND 90 DEGREE -10AN FITTINGS
- 1PC** | 2/11" STAINLESS STEEL BRAIDED HOSE WITH 45 DEGREE AND 90 DEGREE -10AN FITTINGS
- 1PC** | THERMOSTATIC SANDWICH PLATE (NON-THERMOSTATIC ALSO AVAILABLE)
- 1PC** | 3/4" X 16" STAINLESS STEEL SANDWICH PLATE ADAPTER
- 2PC** | M20 X -10AN STRAIGHT FITTINGS
- MOUNTING HARDWARE

TOOLS NEEDED

T30 TORX	8MM RATCHET WRENCH
5/16" SOCKET	10MM WRENCH
10MM SOCKET	1" WRENCH
1/2" SOCKET	FLATHEAD SCREWDRIVER
1/4" DRIVE 3" EXTENSION	PANEL TOOL
1/4" DRIVE RATCHET	TORQUE WRENCH
27MM DEEP SOCKET	FORD-APPROVED OIL (1QT)

INSTALL TIME 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.

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.

NOTE

Installing an oil cooler adds additional maintenance to vehicle ownership. All oil line connections should be regularly checked for leaks and re-torqued. The oil filter center bolt adapter must be re-torqued every time the oil filter is removed.

INSTALL PROCEDURE

01. 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 lift points if you are unsure.
02. Remove the headlight assemblies. Remove the two T30 Torx bolts that secure each of the headlights. Slide the headlight assembly towards the front of the vehicle, then lift it upwards. Disconnect the headlight electrical harness and remove the housings completely. (4x T30 Torx bolts)
03. Remove the two T30 Torx screws that secure the bumper cover to the radiator support. (2x T30 Torx screws)



04. Remove the four pop-clips along the top of the bumper cover located in the engine bay. (4x pop-clips)

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05. Remove the hood-release cable from the yellow hood-release latch under the hood. Use a screwdriver to pry the slotted plastic end of the cable up from the bumper cover, then slide the end of the cable out of the release latch.



06. Remove the Torx screws and pop clips that secure the fender liner to the front bumper cover on both sides of the vehicle. There are two screws and one pop-clip on each side. (4x T30 Torx screws, 2x pop-clips)

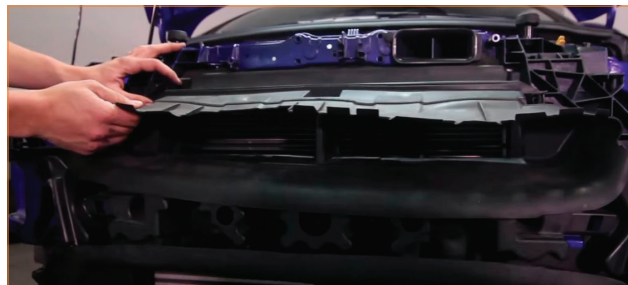


07. Remove the six pop-clips that secure the bottom of the front bumper cover to the front splash panel. (6x pop-clips)
08. Remove the lower air diverter strip. (3x T30 Torx screws)

09. Remove the rear splash panel by removing the eight Torx screws and sliding the panel forward to release the mounting tabs from the underbody. (8x T30 Torx screws)
10. Remove the forward splash panel. (4x T30 Torx screws)
11. Release the bumper cover from the fenders by gently pulling the edge of the bumper cover from inside the wheel well. Release the tabs that secure the front bumper cover to the crash beam, under where the headlights were mounted. Slide the bumper forward, then disconnect the fog light electrical connections before completely removing the bumper.



12. Remove the upper air shroud by releasing the two clips at the outside edges.



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13. Remove the lower air shroud by removing the two T30 Torx screws that secure it at the upper edge. (2x T30 Torx screws)



14. Disconnect the electrical connector for the active grille shutters. Release the two tree clips that secure the connector and harness to the vehicle. (2x tree-clips)
15. Remove the plastic guard from the crash panel by squeezing the tabs that lock it in place.
16. Loosen the screw clamp on the driver-side intercooler coupler and slide the coupler off the intercooler.
17. Using the same process, remove the passenger-side intercooler coupler.
18. Unplug the MAP sensor located on the passenger side of the intercooler.



19. Remove the intercooler. Remove the two bolts that secure the intercooler. Then pull the intercooler forward and lower it to remove it completely. (2x 8mm bolts)



20. Remove the active grille shutters. The shutters are held in by four clips that secure it to the AC condenser. These can be released by hand. Then slide the active grille shutters down and remove them completely. They will not be reinstalled.



21. Reinstall the intercooler and secure it with the two 8mm bolts. (2x 8mm bolts)

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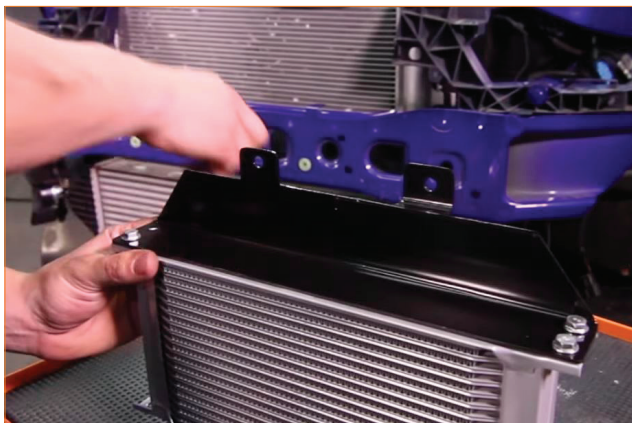
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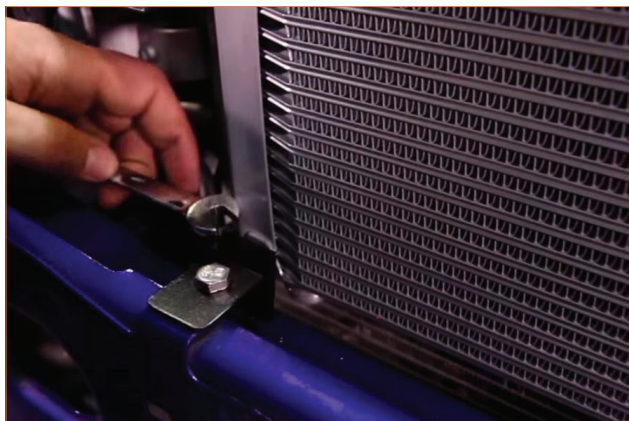
- 22. Reconnect the MAP sensor.
- 23. Reinstall both intercooler couplers and secure them with the screw clamps.
- 24. Install the oil cooler to the mounting bracket. Secure the oil cooler with the provided hardware. (4x 10mm bolts, 4x 10mm nuts)



- 25. Locate the two unthreaded holes along the upper edge of the radiator support. The oil cooler mounting bracket will align with these holes. Carefully tap these holes with the provided self-tapping screws. Run the screws in by themselves to create threads. Make sure the self-tapping screws are driven in straight to avoid damaging the radiator support. Then remove the self-tapping screws and install the oil cooler and bracket. (2x self-tapping screws)



- 26. Install the lower mounting bracket onto the oil cooler using the supplied 10mm nuts and bolts. This bracket installs on the passenger side of the oil cooler and attaches it to the crash beam. (3x 10mm nuts, 3x 10mm bolts)



- 27. Place an oil drain pan or similar container under the oil filter and remove the filter from the vehicle.
- 28. Assemble the Mishimoto sandwich plate by installing the two straight fittings and fully tightening them. (2x straight fittings)



- 29. Lubricate the rubber seal on the sandwich plate using clean motor oil, and wipe off the mating surface on the engine where the oil filter was removed.

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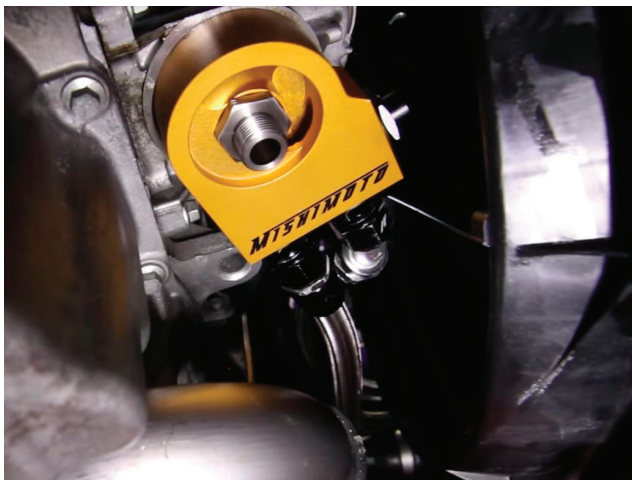
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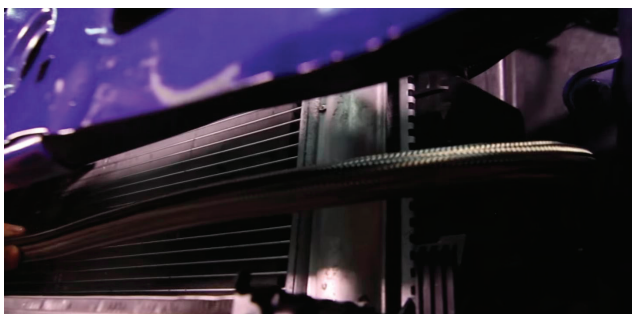
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30. Install the Mishimoto sandwich plate with the provided center bolt adapter, but do not fully tighten the center bolt yet. The fittings will face towards the driver side of the car, angled slightly towards the front bumper.



31. Locate the longer oil cooler line in your kit. Route this line along the top of the intercooler, and attach the 90-degree fitting to the passenger-side fitting on the oil cooler, but do not fully tighten. Loop the line directly around the radiator on the driver side.



32. Locate the shorter oil cooler line in your kit. Route this line next to the first line, and attach the 90-degree fitting to the driver-side fitting on the oil cooler, but do not fully tighten. Loop the line directly around the radiator on the driver side.

33. On the sandwich-plate side of the lines, install the straight fitting to the fitting farthest from the radiator.
34. Install the final angled fitting to the last fitting on the sandwich plate. You may need to rotate the fittings or sandwich plate to get everything to line up nicely. Now tighten all four oil line fittings.
35. Tighten the center bolt adapter on the sandwich plate. (27mm socket, torque spec: 30 ft-lb)
36. Install the supplied heat shields onto the oil cooler lines to protect them from the heat of the lower radiator hose. Wear gloves when working with the heat shielding material. It contains fiberglass.
37. Lubricate the oil filter gasket with fresh motor oil and install the oil filter onto the sandwich plate.
38. Check the engine oil level and top off as needed. You need to replace the oil that was lost from the filter change as well as add additional oil to fill the cooler. Start the engine and allow it to run for 5–10 seconds to build oil pressure, then shut off the engine and check the engine oil level. Top off as needed with Ford-approved oil. Start the engine again and allow the vehicle to warm up to operating temperature. While the engine is running, inspect around the sandwich plate and at every connection for oil leaks. Once you are sure the system is fully sealed and the vehicle has reached operating temperature, shut off the engine and check the oil level one more time.
39. Install the plastic guard on the crash beam by pushing it into place.
40. Install the top shroud with the two clips on either end.
41. Install the lower shroud. (2x T30 Torx screws)
42. Reconnect your fog lights and slide the bumper cover into place, but don't lock it in yet.

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- 43. Connect the headlight electrical harness, then install the headlight assemblies. (4x T30 Torx bolts)
- 44. Now clip in both sides of the bumper cover where it meets the fenders.
- 45. Install the upper bumper bolts. (2x T30 Torx bolts)
- 46. Install the pop-clips along the upper edge of the bumper cover. (4x pop-clips)
- 47. Install the hood-release cable.
- 48. Install the fender liner hardware on both sides. (4x T30 Torx screws, 2x pop-clips)

- 49. Reinstall the forward splash panel. (4x T30 Torx screws, 6x pop-clips)
- 50. Reinstall the rear splash panel. (8x T30 Torx screws)
- 51. Reinstall the air diverter. (3x T30 Torx screws)

Congrats! You just finished installing the 2013+ Ford Focus ST Oil Cooler Kit.

