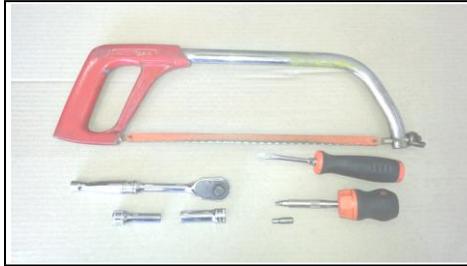


PWI53860 - Mazda BT50 & Ford Ranger 2012-onwards 2.2L / 3.2L 68mm Intercooler fitment instructions.



Tools required:

- 3/8" drive or similar ratchet with 8mm & 10mm long sockets.
- Flat blade screwdriver.
- T27 Torx bit with screw driver or similar.
- 5mm hex Allen key or Allen key bit.
- Hacksaw or very sharp blade knife for trimming 2mm thick plastic.

The vehicle isn't required to be raised for the removal of the stock intercooler or fitment of the PWR unit.

1. With the flat blade screwdriver, raise the heads of the 6 scrivets that retain the top main front bar grille cover tray and remove rivet assembly.
2. Once the scrivets are removed, proceed to place your hand up through the lower bar air opening (beside number plate) and reach up and press down on each of the lower grill clips (there are 5) while doing this apply a slight pulling pressure forward (toward front of vehicle). You will feel each clip undo. The grille and upper shield will then be free to be removed from the vehicle as one assembly.
3. Loosen the hose clamps leading into the driver's side and passenger side headlight areas, as shown below. Loosen, but no need to undo completely.



4. With the 10mm long ratchet socket, remove the upper and lower bolt retaining the driver's side intercooler air duct. Then remove the small retainer scrivet also located on the duct. Repeat this for the passenger side. Remove both ducts.
5. Remove the air temp sensor clip off the sensor located on the passenger side "cold" tank (circled in green below). Leave the sensor in the tank until the intercooler is removed.



6. Remove the 4 mounting nuts washers and rubbers circled in red with the 10mm long socket (circled in red above) Leave the intercooler sitting on the top studs for now.



7. Remove both RH and LH Bar / headlight brackets. With the 10mm socket, loosen and remove the bolt. Using the flat blade screwdriver, raise the scrivet head and remove scrivet. With the T27 Torx bit, loosen and remove the long screw. With the 12mm long socket, loosen the 12mm bolt inside the engine bay. There is a second 12mm bolt underneath this, that is reachable only from under the car. Loosen and remove both of these. Then remove the bar bracket completely.



8. Repeat step 7 on the passenger side, including the same 12mm bolt that is only accessed from the wheel arch.

9. With the bar brackets removed, the intercooler is free to be pulled forward off its upper mount studs and removed from the vehicle. Pulling the left side forward first then raising up.



10. While the intercooler is out, using the T27 Torx bit, loosen and remove the intercooler air temp sensor retainer screw. Carefully remove the air temp sensor. Place this sensor into the new PWR intercooler billet sensor boss and tighten the sensor with the 5mm Allen key bolt provided with the cooler.

11. Swap the 4 rubber mount insulators from the stock unit onto the PWR unit.
12. Lower the new cooler into the vehicle in reverse of removal (step 9)



13. Locate the intercooler onto the top mounting studs and proceed to tighten the 12mm nuts and then tighten the lower 12mm bolts.
14. Reconnect the cold side air temp sensor wire.
15. Refit the bar / head light brackets in reverse of removal (steps 7 & 8)



16. With the intercooler secure and bar brackets refitted, we now need a sharp blade or hacksaw. You will need to trim approximately 5mm off the front edge, 5mm off the top and 8mm off the bottom of the plastic air ducts, as shown to the left.

17. Repeat this with the passenger side unit. Proceed to fit these into position and check the cut is just a few mm off the intercooler core and top and bottom intercooler top and bottom plate.

18. Secure the intercooler air ducts with the factory 10mm bolts and single scrivet. Repeat this for the passenger side. (circled in red below)



19. Reaching over into the engine bay, proceed to fit both boost air pipes to the intercooler. This will be a tight fit, as the PWR unit is 2mm larger in diameter compared to the original, just to ensure a secure seal. Tighten clamps firm.

20. Refit the grill into place. Align the bottom clips to the slots in the bar opening and push into place till each clip clicks. Proceed to align the top grille duct into its original position and push scrivets back into place. Start engine and test run. Check boost air pipes after first run to confirm hose clamps are tight.

Congratulations, your PWR Intercooler is now fully installed.

