

CAC Intercooler Boot Installation Instructions



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IMPORTANT: Before starting installation, please be sure that all items which were supplied with the kit are accounted for.

- (2) Riffraff Diesel Intercooler Boots
- (2) Riffraff Diesel Spider to CAC Boots
- (2) Riffraff Diesel Spider to Plenum Boots
- (4) Stainless Steel T-Bolt Clamps (used with Riffraff PRI's)



Recommended Tools:

- *10mm-14mm Sockets and Wrenches
- *Long socket extensions
- *Assorted screwdrivers

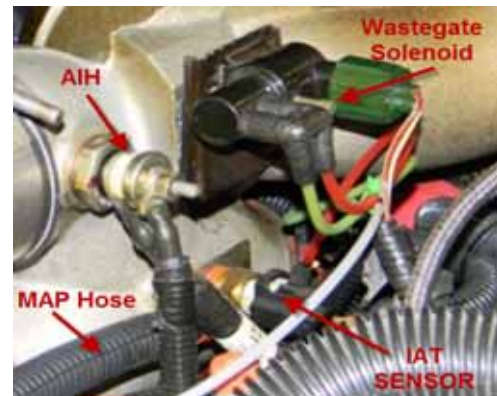
- 1) Disconnect both batteries
- 2) Remove the air cleaner box assy. and snorkel (If Installed)
- 3) Remove the (3) bolts from the Degas Bottle (fig 1)
- 4) Remove the HPOP reservoir cover with a 13mm deep well socket. (if installed)
- 5) At the Intake Manifold (Spider) loosen the (4) Marmon T-Bolt clamps. Slide the intake boots off of the spider and move the CAC pipes out of the way. (fig 2)
- 6) Remove the Air Intake Heater (AIH) power and ground connections by removing the 13mm nut from the AIH element. (Fig 3)
- 7) Remove the 10mm bolt holding the waste-gate solenoid to the spider.
- 8) Disconnect the Intake Air Temp (IAT) sensor connector.
- 9) Disconnect the Manifold Air Pressure (MAP) hose, by squeezing the clamp with pliers and sliding the clamp up the hose.
- 10) Remove the pressure hose from the spider to the waste-gate solenoid.



(fig 1)



(fig 2)



(fig 3)

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11) Remove the clamp at the back of the spider to the turbocharger flange. You may need to use a common screwdriver to free the clamp from the two flanges. Place the screwdriver between the flanges and the clamp and apply pressure to release. (fig 4)



(fig 4)

12) Loosen the (4) clamps at the bottom of the spider to the plenums. Make sure you wipe any dirt/debris off of the boots to ensure it does not fall in the plenum during removal. (fig 5)



(fig 5)

13) Remove the intake spider from the engine.

14) Insert a rag into each of the plenums to make sure nothing gets dropped into the intake tract.

15) Remove the (2) intake boots from the plenums.

16) On the drivers side CAC, loosen the (2) Marmon T-Bolt clamps at the intercooler. (fig 6)



(fig 6)

17) Remove the CAC pipe from the intercooler and remove the boots from the pipe. Note: Oil may be present inside the pipe and in the boots.

18) On the passenger side CAC, loosen the (2) Marmon T-Bolt clamps at the intercooler. (fig 7)



(fig 7)

19) Remove the (3) nuts holding the MAP sensor onto the studs, and place the MAP sensor out of the way. (fig 8)



(fig 8)

20) Remove the transmission fluid level dip stick from the tube.

21) Remove the passenger CAC pipe from the compartment by moving aft and up, as the pipe becomes free the aft end will move forward in a "U" shape motion. (fig 9)



(fig 9)

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- 22) Remove the boots off of the CAC pipe. Note: Oil may be present inside the pipe and in the boots. (fig 10)
- 23) Ensure the pipes, plenums, intercooler inlet/outlet, and spider are cleaned thoroughly where the boots will be clamped. Use brake or carburetor cleaner to make sure all oils are removed.
- 24) Install the Riffraff Diesel intercooler boots (long boots) onto the inlet and outlets of the intercooler. Slide (2) over each boot but leave loose. (fig 11)
- 25) Slide (2) Marmon clamps and (1) CAC boot (medium length) onto each CAC pipe and lightly tighten the clamp to hold it in place. (Clamps with springs are used on the "Hot" side) (fig 12)
- 26) Install the Riffraff Diesel plenum boots onto the plenums, slide clamps over the boots and leave loose. (lower clamps can be tightened down to hold boot in position is desired) **Caution: If you are not using Riffraff Diesel PRI's, do not over tighten the plenum clamps as the plenum will be deformed!**
- 27) Remove the rags from the plenums.
- 28) Re-install the spider into the plenum boots, one flange will slide in easily, the other flange will have to be worked into the boot carefully. A common blade screw driver or a cotter pin removal tool work well to manipulate the boot around the spider flange. Be careful not to damage the boot. Note: The Riffraff Diesel Boots are longer than the OEM boots, you will have some extra engagement at all locations. (fig 13)
- 29) Making sure the O-ring is in the turbo outlet flange, align the spider with the turbo and install the clamp around both clamp flanges. This is critical to have aligned properly to ensure no leaks or damage happens. Once aligned, snug down the clamp and verify clamp is positioned properly. (fig 14)
- 30) Reinstall the drivers and passenger side CAC pipes into the new intercooler boots and place clamps (2) for each boot in position for tightening.



(fig 10)



(fig 11)



(fig 12)



(fig 13)



(fig 14)

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- 31) Position the drivers and passenger side CAC pipes to the spider and slide the boots onto the spider (make sure clamps are on the boots loosely). Slide the boots onto the spider until they reach the stops. Once the boots are positioned properly, tighten down the (4) clamps. (fig 15)
- 32) Position the clamps on the spider to plenum boots and tighten. (fig 16)
- 33) Position the clamps on the drivers and passenger side intercooler inlet and outlet and tighten. (fig 17 & 18)
- 34) Reinstall the MAP sensor to the studs and tighten the (3) nuts down.
- 35) Reinstall the waste-gate pressure hose, MAP sensor Hose, IAT Sensor connector, and waste-gate solenoid onto the spider.
- 36) Re-install the AIH power and ground leads to the AIH assy. (build up should be ground, isolator, then power with nut.)
- 37) Reinsert the transmission fluid level dip stick into the tube.
- 38) Reinstall the Degas Bottle with the (3) bolts and tighten.
- 39) Reinstall the air cleaner box assy. and snorkel (if removed)
- 40) Reinstall the HPOP reservoir cover (if desired)
- 41) Verify everything is tightened down securely.
- 42) Reconnect the batteries.
- 43) Start the engine and check to make sure everything is correct.
- 44) Test drive and enjoy your new Riffraff Diesel Intercooler Boots!



fig (15)



fig (16)



fig (17)



fig (18)

Credit for pictures and information to Ken (Woodnthings), and the whole FTE crew. Thanks!

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