



2012 & Up Camaro ZL1
Heat Exchanger 80283PRO
Installation Instructions



AFCO RACING

P.O. Box 548,
Boonville, IN 47601

(800)-632-2320
www.AFCOracing.com

Lit-710 Rev. 3

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2012 & Up Camaro ZL1 Heat Exchanger 80283PRO

Installation Instructions

Please read and understand each of the steps involved with the installation of the 80283PRO heat exchanger prior to getting started.

Parts List (80283PRO)

- Heat exchanger (Qty. 1)
- 10" Fan (Qty. 2)
- Dual relay wiring harness (Qty. 1)
- 3M 3-way Scotchlock connector (Qty. 1)
- Wire tie (Qty. 4)
- M6 x 16mm bolt (Qty. 1)
- Spacer .40" diameter (Qty. 4)
- Spacer 1.00" diameter (Qty. 4)
- Blue grommet (Qty. 4)
- 1/4" - 20 Socket head bolt (Qty. 1)
- 1/4" - 20 nut (Qty. 1)
- 1/4" Lock washer (Qty. 1)
- M8 x 1.25 x 50mm bolt (Qty. 4)
- M8 x 1.25 Nylock nut (Qty. 4)
- M8 x 24mm Washer (Qty. 8)
- Lit-710 Installation manual (Qty. 1)

Tools Needed

- 7mm Socket
- 10mm Socket
- 13mm Socket
- 1/4" Drive ratchet
- 1/4" Extension
- 10mm Wrench
- 13mm Wrench
- 5/16" Drill bit
- Torx head screwdriver
- Pliers
- Wire cutters
- Socket and wrench to remove lug nuts
- 5/16" Transfer punch

WARNING:

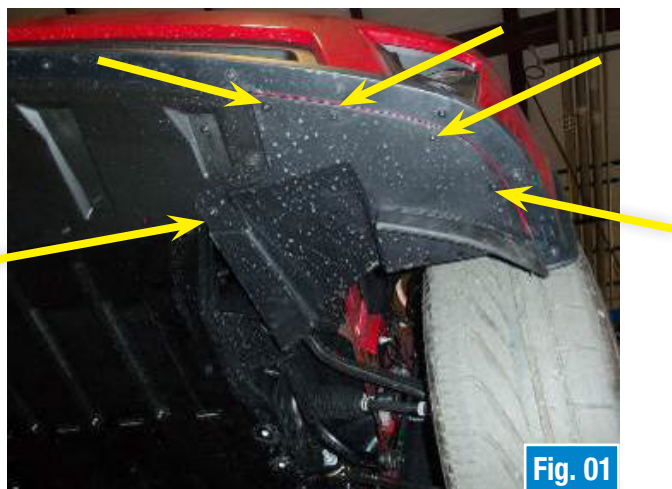
1. Radiator fluid must be handled properly. Please observe local ordinances with regards to handling and disposal.
2. Allow vehicle and components to cool a minimum of 1 hour before handling.
3. Never attempt to open the radiator cap when hot.
4. Do not allow any tools or limbs to contact fans—SERIOUS INJURY MAY RESULT.
5. Always follow directions and disconnect the battery before attempting installation.
6. Retailer is not responsible for personal injury or damage to vehicle resulting from improper installation of this product.
7. Due to vehicle variations / tolerances it is ultimately up to the installer to determine proper installation.

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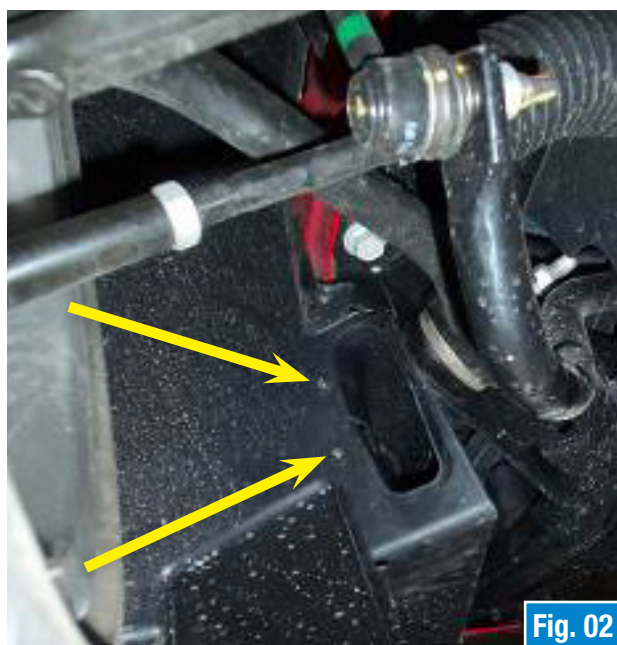
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Removal of the Stock Heat Exchanger

1. Disconnect the negative battery terminal.
2. Lift the front of the vehicle, secure on jack stands, and remove the front tires of the vehicle to gain access to the inner fender splash guards.
3. Remove the five Torx head screws from the bottom of the inner fender well (from underneath the bumper of the car) (Fig. 01).



4. Remove the two Torx head screws holding the inner fender splash guard to the brake duct (Fig. 02).



5. Remove the five Torx head screws, three located in the front and two in the rear of the fender well (Figs. 03-05).

Fig. 03



Fig. 04



Fig. 05

6. Remove the five plastic clips holding the inner fender well splash guard to the vehicle and then remove the inner fender splash guard (Fig. 03 Yellow Circles).
7. Use a 7mm socket to remove the bolt attaching the bumper to the fender (Fig. 06).



Fig. 06

8. Use a 10mm socket to remove the bolt on the back side of the marker light in the bumper; do not remove the nut (Fig. 07).



Fig. 07

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9. Remove the three 10mm bolts that hold the front nose to the fender (Fig. 8).



10. Repeat steps 3-9 on the opposite side of the vehicle.
11. Unplug the wiring for the front bumper. This is located in the passenger fender well above the fog light (Fig. 9).



Fig. 09

12. Remove the five 10mm bolts in the bottom of the bumper. (Fig. 10).

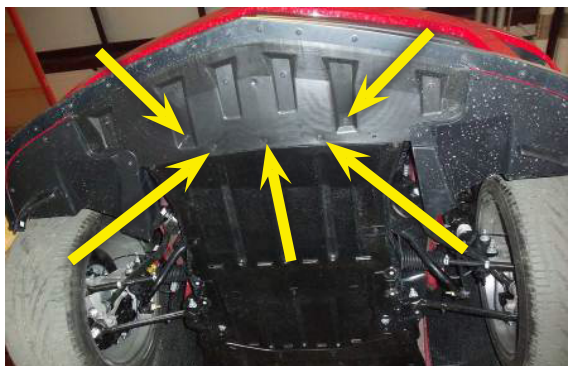


Fig. 10

13. From the top side of the car, remove the six plastic snaps that hold the bumper cover to the radiator support (Fig. 11).



14. Remove the two 10mm bolts at the corner of the nose and radiator support (Fig. 12).



15. At this point, the nose of the car should be removed and set aside (Fig. 13).
16. Remove six 13mm bolts that hold the steel bumper on, and remove the bumper (This is not mandatory but will aid in the removal and installation of the heat exchanger) (Fig. 13 & 14).



Fig. 13

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Fig. 14

17. Remove the two plastic snaps holding the air deflector to the radiator support (Fig. 15 & 16). Remove the air temperature sensor from the backside of the plastic air deflector.

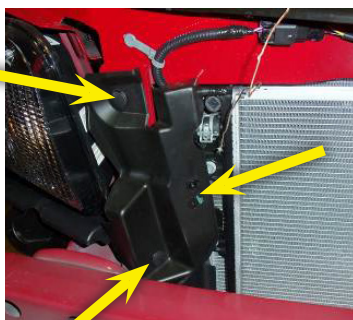


Fig. 15



Fig. 16

18. Remove the two plastic snaps that hold the driver side air deflector in place (Fig. 17).

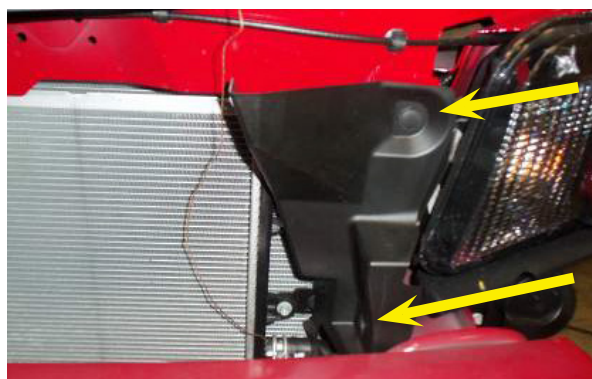


Fig. 17

19. The air deflectors removed in steps 17 and 18 will not be used after the heat exchanger is installed.

20. Drain the coolant from the heat exchanger by removing the 3/8" hex plug located on the driver side of the heat exchanger (Fig. 18).

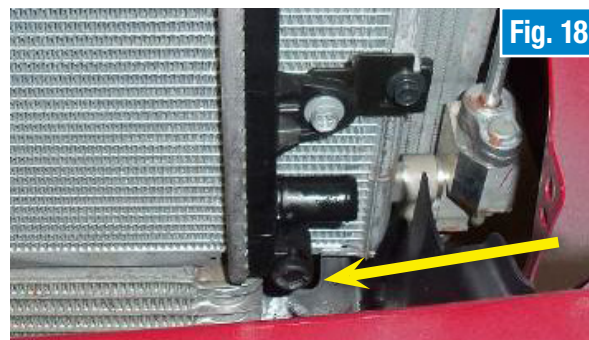


Fig. 18

21. Remove the upper and lower coolant hoses from the heat exchanger. Then, remove the four 10mm bolts holding the heat exchanger to the condenser (Fig. 19).



Fig. 19

22. The heat exchanger should be removed at this time.

Installation of the AFCO Heat Exchanger

23. Place all four rubber grommets onto the heat exchanger. Insert the .40" diameter aluminum spacer into the center of each grommet. (Fig. 20).

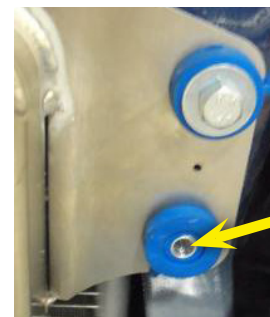
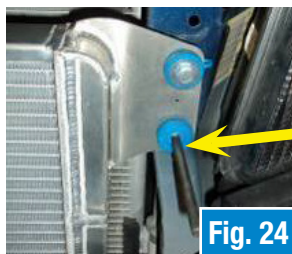


Fig. 20

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24. Next, mount the heat exchanger into the existing lower two holes in the radiator support with only the top bolts. Place the .20" thick spacers between the radiator support and the rubber grommets on the heat exchanger. Tighten the heat exchanger into place (Fig. 21- 23).



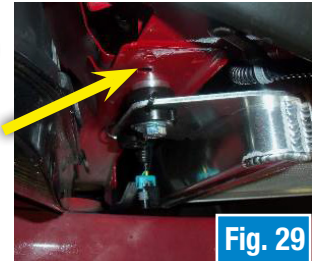
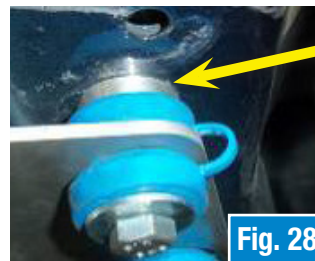
25. A transfer punch should be used to mark the location of both bottom holes (Fig. 24).
26. Remove the heat exchanger and then drill the bottom two holes (marked in step 25) with a 5/16" drill bit. Deburr the holes after drilling (Fig. 25).



27. The upper hose for the AFCO heat exchanger should be routed before installing the heat exchanger. This is the factory hose that ran to the upper passenger side inlet of the factory heat exchanger. The hose should be removed from the plastic clamp and routed on the outside of the front air dam up to where the upper heat exchanger inlet will be located on the driver side (Fig. 26 & 27). The plastic air dam may need trimmed for additional clearance for the lower hose on the heat exchanger.



28. The heat exchanger can be installed at this point. The fans should go towards the rear of the car. First, attach the upper and lower hoses to the heat exchanger before bolting it in place. Then, place the four supplied .20" thick round spacers between the radiator support and each rubber grommet that mounts the heat exchanger to the radiator support (Fig. 28).



29. Insert all four bolts with a washer at the head and a washer at the nut. The bolts should be inserted from front to rear. Tighten the bolts until it compresses the blue grommet approximately 1/16" or until the bolt bottoms out on the aluminum spacer (Fig. 28).
30. The air temperature sensor will have to be installed into the upper hole above the heat exchanger on the passenger side radiator support (Fig. 29).
31. The wiring harness and components were mounted as far away from the engine and heat sources as possible to provide longer component life. AFCO recommends installing the harness per these instructions.
32. First, mount the dual relays. One should be mounted under the passenger side headlight (7mm socket) and the other under the horn (10mm wrench) (Fig. 30).



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33. Use the supplied M6 x 16mm bolt to attach the fuse holders to the inner fender in the existing tapped hole. (Fig. 31).

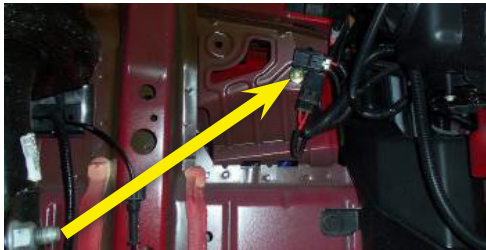


Fig. 31

34. Attach the black and gray ground wires to the passenger side radiator support next to the frame using the supplied bolt and nut. (Fig. 32).



Fig. 32

35. Connect the two red fuse leads to the main power supply of the fuse box (Fig. 33). Make sure to check clearance between the wires and the lid of the fuse box (Fig. 33).



Fig. 33

36. The orange wire should be removed from the wire loom to allow enough length to reach the coolant pump wiring harness. The coolant pump is located on the K-member of the car. The orange wire will be connected to the white power wire of the coolant pump (Fig. 34 & 35). Cut the power wire approximately 2" from the pump connector. Insert the two ends of the power wire from the coolant pump and the orange wire into the blue/clear 3M Scotchlock 3-way splice connector supplied.

Note: It is not necessary to strip the wires, and the order of the wires inserted does not matter. Once the button is depressed, the connector is difficult to reuse. Be sure the wires are inserted completely. Using slip joint pliers (or similar tool) press the blue button down into the connector until the button locks. The connector is filled with EG-3 sealant. Just wipe off any excess with a rag. You may wrap the connection with electrical tape, although it is not necessary (Fig. 36). Reconnect the electrical connector to the coolant pump.



Fig. 34



Fig. 35



Fig. 36

37. Run the remainder of the wiring from the relays above the frame and across the top of the radiator core support (Fig. 37). Zip tie the wire harness to the core support above the heat exchanger.



Fig. 37

38. The fans should be connected to the weatherpack connectors on the harness at this time.
39. Verify all bolts, nuts, and hose connections are tight. Also, verify there are no leaks.
40. Fill the coolant system with the recommended OEM coolant.
41. Reconnect the negative battery cable, start the vehicle, and allow the car to idle until warm. The heat exchanger coolant pump and fans will not turn on until the air charge is warm. When the fans turn on, hold a rag or piece of paper in front of each fan to verify the fans are pulling the air and not pushing. The rag or paper should pull towards the front of the heat exchanger. If the rag or paper blows away from the front of the heat exchanger, contact AFCO customer service at 1.800.632.2320, option 2.
42. Once the pump turns on, the level in the radiator will drop. Continue adding coolant until the recommended level is achieved. This system will hold approximately 1/4 – 1/2 gallons of coolant.
43. Continue to run the vehicle for 5 minutes to verify that all air is purged from the system. Check the system for leaks while waiting.
44. Once the system is checked, install all of the components in reverse order of removal. The air deflectors in steps 17 and 18 will not be reinstalled.

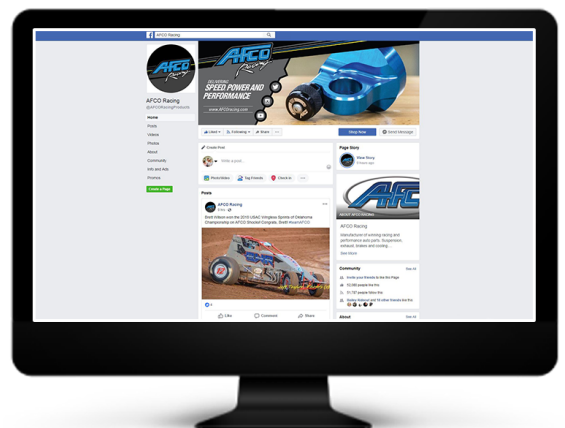
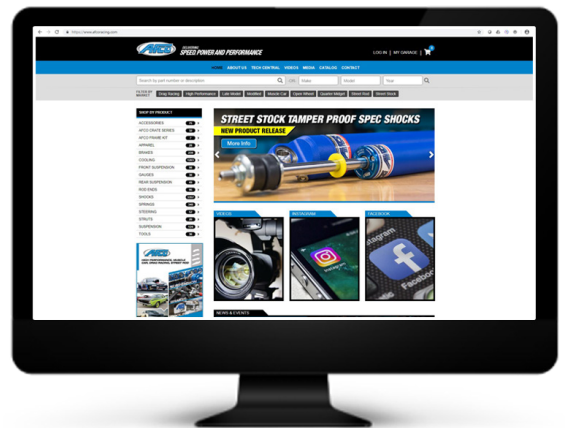


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