

<- Back

Forward ->

Document ID# 1215932

Print

A/C Not Cold Enough, A/C Blows Warm Air with Vehicle at Extended Idle (Install Auxiliary Electric Coolant Fan) #01-01-39-004A - (Dec 20, 2002)

A/C Not Cold Enough, A/C Blows Warm Air with Vehicle at Extended Idle (Install Auxiliary Electric Coolant Fan)

2002-2003 Cadillac Escalade

2000-2003 Chevrolet Suburban, Tahoe

2000-2003 GMC Yukon, Yukon XL

with 6.0L Engine (VINs U, N -- RPOs LQ4, LQ9)

This bulletin is being revised to add 2003 model year information and 2003 model year installation instructions. Please discard Corporate Bulletin Number 01-01-39-004 (Section 01 -- HVAC).

Condition

Some customers may comment that the A/C stops cooling and blows warm air when the vehicle is idling for an extended period of time such as sitting in traffic.

Cause

Inadequate airflow over the condenser may cause this condition.

Correction

The addition of an auxiliary fan in front of the condenser radiator assembly may help to alleviate this condition. The coolant fan will come on each time the A/C compressor is commanded on by the PCM. This fan will create a roaring sound when operating.

Follow the attached procedure to install an auxiliary electric cooling fan to the front of the condenser and radiator assemblies.

With the jumper harness, P/N 88880045, and connector kit, P/N 12126452, on the bench, perform the following modifications:

1. Using the electrical tool kit yellow handled tool, # 12014012-1 7J04848, remove the terminals and WHT wires from the connector of the connector kit, P/N 12126452.
2. Using your fingernail or a small screwdriver, spread the terminal wings that are over the weather pack seal.
3. Slide the blue weather pack seal onto the WHT wire in order to allow the removal of the metal terminal from both of the WHT wires. Save the blue weather pack seals.
4. Remove the green connector to relay locking tab of the jumper harness, P/N 88880045.
5. Disconnect the relay from the connector.
6. Remove the green TPA from the relay connector.

7. Remove the RED wire from cavity 87 of the relay connector.
8. Remove the electrical tape from each end of the conduit and the wires.
9. Identify the RED wire, with the small eyelet on the end, and pull this wire from the conduit. This is the wire that was in cavity 87 of the relay connector. By pulling on the end, the wire can be removed from the conduit quite easily.
10. Carefully strip the black insulator from the eyelet area of the RED wire you just removed from the conduit.
11. Cut the wire as close to the metal eyelet to wire crimp as possible.
12. Place one of the saved blue weather pack seals onto the RED wire (big end first).
13. Strip 5 mm (3/16 in) of the insulation from the end of the RED wire.
14. Using the proper crimping tool, install a terminal, P/N 12010182, to the RED wire.
15. To a piece of 14 or 16 gauge black wire about 178 mm (7 in) long, install the other saved blue weather pack seal from the other WHT wire (big end first).
16. Strip 5 mm (3/16 in) of the insulation from both ends of the BLK wire.
17. Using the proper crimping tool, install a terminal, P/N 12010182, to the end of the BLK wire with the blue weather pack seal.
18. On the other end of the BLK wire, install a ring terminal, P/N 02984172.
19. Slide a section of conduit, P/N 08919354, over the full length of the RED wire and secure with a wrap of electrical tape at both ends.
20. Insert the terminal of the RED wire into cavity B of the connector, P/N 12126452 (the one you removed the WHT wires from).
21. Insert the terminal of the BLK wire into cavity A of the connector, P/N 12126452 (the one you removed the WHT wires from).
22. Insert the terminal of the RED wire back into cavity 87 of the relay connector.
23. Inspect the wires going into the relay connector. On the bottom of the relay connector are corresponding numbers.
 - Number 30 and 87 should have RED wires in their cavities.
 - Number 86 should have a PPL wire.
 - Number 85 should be a BLK wire.
24. Measure 51 mm (2 in) from the base of the relay connector and place a wrap of electrical tape around the PPL and the RED wires, and then a couple wraps around the conduit (make it look like it did when you started).
25. Remove the relay-mounting bracket from the relay.
26. Place the relay-mounting bracket in a vise and straighten out the two 90 degree bends so that the bracket is straight.
27. Reinstall the bracket into the relay with the protruding bumps against the relay.
28. Remove the key from the lock cylinder.
29. Open the hood and install fender covers.
30. Remove the upper radiator baffle.
31. Remove the grille.
32. Remove the left fender to radiator core support brace.
33. Remove the left fender to cowl support.
34. Remove the battery and battery tray.
35. Remove the underhood electrical center covers.
36. Loosely install the bolt, which held the fender to radiator support, through the relay bracket and into the radiator support from which the bolt was removed.
37. Route the RED and PPL wires from the relay down to and under the PCM to frame bracket, along side the main harness and up to the right side of the underhood electrical center.
38. Lift the underhood electrical center and disconnect the Black C2 connector from the bottom of the underhood electrical center.
39. Locate the GRN wire in the underhood electrical center connector C2.
 - 2000-2002 models, Cavity B3.
 - 2003 models, Cavity A3.
40. Cut and remove the tie strap from around the wires of which the GRN wire is bundled.
 - 2000-2002 models, Cavity B3.

- 2003 models, Cavity A3.
- 41. Remove the CPA for this section of the C2 connector.
- 42. Remove the terminal for the GRN wire from connector C2.
 - 2000-2002 models, Cavity B3.
 - 2003 models, Cavity A3.
- 43. Cut the terminal from the GRN wire removed from Connector C2.
 - 2000-2002 models, Cavity B3.
 - 2003 models, Cavity A3.
- 44. Strip 5 mm (3/16 in) of the wire insulation from the GRN wire removed from Connector C2.
 - 2000-2002 models, Cavity B3.
 - 2003 models, Cavity A3.
- 45. Strip 5 mm (3/16 in) of the insulation from the PPL wire of the jumper harness.
- 46. Place the stripped portion of the GRN wire, removed from Connector C2, and the stripped portion of the PPL wire into a new terminal, P/N 12110842.
 - The wires must not protrude past the area of the crimp wings, or the CPA cannot be reinstalled.
 - Using the proper tool, crimp the terminal around the wires.
- 47. Install the new terminal in the original cavity of the C2 connector.
- 48. Reinstall the CPA for this section of the C2 connector.
- 49. Install a new tie strap in the original location around the wires.
- 50. Re-position the electrical connector #2 to the underhood electrical center.

Tighten

Tighten the screw to 6 N·m(53 lb in).

- 51. Re-position the underhood electrical center into its proper location.
- 52. Remove the retainer (nut) securing the RED wire to the right side of the underhood electrical center. Place the eyelet from the fusible link/RED wire over the terminal and re-secure the retainer.

Tighten

Tighten the retainer to 9 N·m(80 lb in).

- 53. Re-install the battery tray.

Tighten

Tighten the battery tray bolts to 9 N·m(80 lb in).

- 54. Reinstall the battery, but do not hook up the battery cables.
- 55. Place the fender to radiator support bolt through the fender to radiator support, the relay ground (BLK wire), and then into the relay bracket in a way which positions the relay under the top radiator support.
- 56. The RED wire you installed the new convoluted tubing to will be routed to the front of the condenser assembly in the following locations:
 - Under the radiator support upper bar
 - Between the radiator and the rubber seal
 - Between the condenser and the power steering oil cooler
 - Behind the transmission oil cooler
- 57. Position the fan assembly to the front of the vehicle, to the right of the hood latch assembly. The bottom leg of the fan assembly will go to the front side of the hood latch support cross beam (the angle brace to which the transmission oil cooler is attached). Mark the location of the hole that needs to be drilled in the hood latch support cross beam.
- 58. Place a scrap piece of material between the cross beam and the condenser in order to protect the condenser from the drill bit.
- 59. Drill a 6.4 mm (1/4 in) hole at the marked location.
- 60. Mount the fan assembly to the cross beam with a rivet, P/N 9436175.
- 61. Connect the wiring harness to the fan motor connector.

62. Remove the bolt from the right end of the cross beam of the hood latch, install the eyelet of the black wire, and reinstall the bolt.
63. Place a tie strap around the cross beam and wiring harness on each side of the transmission cooler and one on the A brace left leg where the wiring harness passes over it.
64. Reinstall the grille.
65. Remove the upper fan support bracket. Place the bracket in a vise to straighten the bends in the two legs of the bracket.
66. Reinstall the bracket to the fan assembly.
67. Carefully bend the two legs of the fan assembly bracket. Starting with the left leg, bend it so the leg comes into contact with the radiator support top bar.
68. Then fit the right leg to the radiator support top bar.
69. When you feel the legs have been properly formed, try to re-install the upper radiator baffle, do not install the retainers, when satisfied everything will fit properly. Drill two 6.4 mm (1/4 in) holes into the upper radiator support and install a rivet in each hole in order to retain the upper bracket of the fan assembly to the radiator upper bar.
70. Make sure the fan spins freely. If not, adjust the mounting to allow the fan to spin freely.
71. Reinstall the upper radiator baffle.
72. Reinstall the underhood electrical center covers.
73. Remove the bolt supporting the new relay and place the bolt through the support brace, the ground wire for the relay, and then the relay bracket. Reinstall the bolt into the radiator support, then reinstall the bolt in the fender end.

Tighten

Tighten the brace bolts to 25 N·m(18 lb ft).

74. Connect the battery cables.

Tighten

Tighten the battery terminal bolts to 17 N·m(13 lb ft).

Parts Information

Part Number	Description	Qty	Sold as package of
02984172*	Terminal, Ring	1	10
08919354	Conduit	2 feet	20 feet
9436175	Rivets	3	20
12110842 *	Terminal, Wiring	1	1
12126452	Kit, Connector	1	1
12337820	Strap, Black Tie	3	10
12010182* or 12058989* or 12354970*	Terminal, Wiring	2	10
15717423	Fan Asm - Aux Eng. Cool	1	1
88880045	Kit, Harness	1	1

(*) Part numbers may be found in the wiring terminal repair kit (J 38125 A) which was previously supplied to your dealership.

Parts are currently available from GMSPO.

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
D1323*	Fan and/or Motor, A/C Condenser - Install	1.4 hrs

*This is a unique labor operation number for use only with this bulletin. This number will not be published in the Labor Time Guide.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



WE SUPPORT
VOLUNTARY
TECHNICIAN
CERTIFICATION

© Copyright General Motors Corporation. All Rights Reserved.

[<- Back](#)[Forward ->](#)

Document ID# 1215932

[Print](#)