

AI-04449 2009 Chevy Colorado AC Blower Issue

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Tags	Problem
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2009 Chevy Colorado AC v8, 4WD suddenly stopped blowing cold air at setting 1,2,3 but when placed to 4, it blows cold air. Perform a comprehensive check and diy step by step repair.

When a 2004–2012 Chevy Colorado's HVAC fan fails on speeds **1, 2, and 3** but works on **speed 4** (High), it is a classic indicator of a failed **Blower Motor Resistor** and/or a **melted wiring harness connector**.

Root Cause

- **Speeds 1, 2, and 3:** Power flows through the resistor block under the passenger dash to reduce current and lower the fan speed.
- **Speed 4:** The switch bypasses the resistor block entirely, delivering full battery voltage directly to the blower motor through the high-speed relay.
- **The "Colorado Trap":** High electrical resistance over time creates excessive heat in the resistor electrical connector, causing the plastic pigtail plug to melt or char. If you only replace the resistor block without replacing the burnt connector/harness, the new resistor will fail again within weeks.

1. Comprehensive Check (Diagnostic Steps)

Before buying parts, quickly confirm the diagnosis under the glovebox:

1. **Locate the Resistor Assembly:** Look underneath the passenger-side dashboard near the kick panel. You will see a plastic connector with wires plugging into a flat plate on the bottom of the HVAC heater box.
2. **Visual & Tactile Inspection:**

- Press the release tab and pull the wiring harness off the resistor.
- Look closely at the harness plug pins and female slots. You will almost certainly find **melted plastic, charred metal pins, or burnt wiring** on at least one pin.

3. Check the Blower Motor Current Draw:

- An aging blower motor whose bearings are wearing out will pull higher amperage than normal (often 15–20+ Amps on lower speeds), causing the harness and resistor to overheat and burn out. Spin the blower fan by hand; if it feels stiff or squeaks, plan to replace the blower motor along with the resistor.

2. Parts & Tools Needed

• Parts:

- **Blower Motor Resistor Block** (e.g., GM Part #15218254 or aftermarket equivalent).
- **Replacement Wiring Harness Pigtail / Connector** (GM Part #89019303 or matching aftermarket kit).
- *(Optional)* **Blower Motor Assembly** (if fan spins stiffly or squeaks).

• Tools:

- 7/32" or 5.5 mm socket with a 1/4" ratchet driver
- Wire strippers & crimper tool
- Heat shrink butt connectors (or solder + heat shrink tubing)
- Heat gun or lighter
- Safety glasses & work gloves

3. DIY Step-by-Step Repair

1.Safety Preparation:

Under hood, 2 min.

Disconnect the negative (black) battery terminal under the hood to eliminate any risk of shorting live wires during the splice work.

2.Remove the Damaged Resistor:

Passenger footwell, 5 min.

Unplug the wiring harness from the resistor block. Using a 7/32" (or 5.5 mm) socket, remove the 2 mounting screws holding the resistor module to the HVAC housing. Pull the old resistor straight down and out.

3.Inspect & Cut Damaged Wiring:

Pigtail harness, 10 min.

Examine the vehicle side harness wires. Cut off the damaged, melted plug about 1 to 2 inches back into clean, unburnt wire. Strip roughly 3/8" of insulation from each factory wire lead.

4.Splice New Pigtail Connector:

Color matching, 10 min.

Match the wires from the new pigtail connector to the existing factory harness color-for-color. Crimp each connection securely using waterproof heat-shrink butt connectors. Apply heat to seal the tubing around all splices.

5.Install New Resistor & Reconnect:

Under dash, 5 min.

Position the new resistor block into the HVAC box opening and reinstall the 2 mounting screws. Plug the newly spliced harness connector firmly into the new resistor until the locking clip clicks.

6.Reconnect Battery & Test:

Final check, 3 min.

Reconnect the negative battery cable. Turn the ignition on and verify fan operation across all 4 speeds (1, 2, 3, and 4). Verify cold air blows on all settings.

Pro-Tip on Ground Points:

GMT355 trucks (Colorado/Canyon) are known for high-resistance chassis ground connections. If speeds 1–3 still act intermittent after replacing the resistor and harness, inspect ground point **G106** (located on the inner fender

wall under the hood near the airbox). Unbolt the ground terminal, clean off oxidation with wire wool, and re-torque the bolt.

Can I run at 4 forever?

Technically? **Yes, the truck will happily run on Speed 4 indefinitely.**

Because Speed 4 bypasses the resistor entirely and routes full voltage directly through the high-speed relay, you won't melt or damage the *new* resistor by running it on High.

However, running it exclusively on 4 long-term comes with a few real-world trade-offs:

1. Accelerated Blower Motor Wear

- **Shorter Motor Lifespan:** The blower motor fan will be running at max RPM (around 3,000+ RPM) 100% of the time. This accelerates brush wear and bearing fatigue in the motor.
- **Higher Amperage Draw:** On Speed 4, the motor pulls a continuous 15–20 Amps through the circuit. If the motor's bearings are already old or stiff, that continuous high current draw will heat up the main wiring and the ignition/HVAC switch contacts over time.

2. Reduced Evaporator Efficiency (Warm Air Trade-off)

- **Heat Exchange Time:** Air conditioning works by passing humid cabin/outside air across the cold evaporator core inside the dash to absorb heat and condense humidity.
- **The High-Speed Issue:** When the fan is cranked to 4, air passes across the evaporator core so fast that it has less dwell time to transfer heat. Paradoxically, **Speed 2 or 3 often produces noticeably colder air at the vents** than Speed 4 on hot days because the air spends more time in contact with the freezing cold fins.

3. Cabin Comfort & Noise

- **Noise Fatigue:** The loud rush of air and motor hum on max speed gets tiresome fast on long drives.
- **Evaporator Freezing:** On long, humid highway runs, running max airflow continuously with low cabin heat load can occasionally cause moisture to freeze on the evaporator fins, choking off airflow until you turn the system off to let it thaw.

Bottom Line: You aren't going to break anything immediately by leaving it on 4 while you wait for parts or a free weekend to fix it. But replacing that \$20 resistor block and pigtail will give you back a quieter cabin, colder vent temperatures, and keep your blower motor from burning out prematurely.

Here are two excellent, step-by-step DIY YouTube videos specifically covering this repair for 2004–2012 Chevy Colorado / GMC Canyon trucks:

1. Full Resistor & Wiring Harness Replacement (Detailed Fix)

- **Video:** [Chevy Colorado Blower Motor Resistor and Harness Replacement](#) by *ManyPoints*
- **Why watch this one:** This video specifically addresses the burnt connector and melted wiring harness issue common on Colorados, showing how to access the harness behind the glovebox and side dash panel.

Key Timestamps to Jump To:

- **[00:00:33]** Explanation of why setting 4 works while 1–3 fail (bypassing the resistor).
- **[00:00:47]** Locating the resistor under the glovebox and observing charred/burned plastic.
- **[00:01:21]** Removing the 7/32" (5.5 mm) mounting screws holding the resistor module.
- **[00:02:14]** Removing the side access dash panel and 7mm glovebox screws for harness routing.
- **[00:03:36]** Disconnecting the factory wiring harness sub-assembly plug connections.

- **[00:05:58]** Applying dielectric grease and installing the new resistor and connector.
- **[00:06:36]** Testing fan speeds 1, 2, 3, and 4 to verify full speed control.

2. Quick Resistor Swap (Basic Module Removal)

- **Video:** How to Replace Blower Motor Resistor 2004-2012 Chevrolet Colorado by TRQ
- **Why watch this one:** A concise 3-minute visual guide focusing strictly on removing and reinstalling the resistor unit under the passenger footwell.

Key Timestamps to Jump To:

- **[00:00:12]** Locating the blower motor and resistor module under the passenger dash.
- **[00:00:26]** Unplugging the harness connector tab.
- **[00:00:44]** Removing the 5.5 mm retaining bolts with a ratchet and socket.
- **[00:01:22]** Proper orientation and installation of the replacement module.
- **[00:02:49]** Final testing across all fan speed settings (0, 1, 2, 3, 4).
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What is the GM part number to search of ac blower motor resistor?

For a 2009 Chevrolet Colorado, the official General Motors (GM/ACDelco) part numbers are:

1. Blower Motor Resistor

- **GM OEM Part Number:** 15218254 (*Replaces older part # 89018331*)
- **ACDelco Part Number:** 15-80521

- **Aftermarket Cross-References:** Dorman 973-434, Standard Motor Products RU-363

2. Wiring Harness / Pigtail Connector (Crucial companion part)

Because these connectors frequently melt on GMT355 trucks, GM sells both the connector pigtail and the full sub-harness assembly:

- **GM Pigtail Connector:** 15306069 (*ACDelco PT1231*)
- **GM Full Wire Sub-Harness:** 89019303 (*Replaces # 89019124*)
- **Aftermarket Cross-References:** Dorman 645-528, Standard Motor Products S-1352

Recommended Options

- ☐ 2009 Chevy Colorado HVAC Blower Motor Resistor (04-12 Colorado)
BX06700051-1\$19.99



This standalone **blower motor resistor** is an exact-fit replacement if your wiring connector is unburnt.

- ☐ Dorman HVAC Blower Motor Resistor Kit for 2004-2012 Chevrolet Colorado\$27.51·Dorman



This complete **resistor and connector kit** includes both the module and spliced pigtail, making it the most practical DIY solution.

☐ Pit66 A/C Heater Blower Motor Wiring Harness \$16.99



This direct replacement **blower motor wiring harness** matches GM Part # 89019303 for full plug-and-play installation without cutting wires.

If you prefer to buy locally, any auto parts store (AutoZone, O'Reilly, NAPA, Advance) can pull up these exact parts using either **GM Part # 15218254** or cross-referencing Dorman part numbers **973-434** (resistor) and **973-007** (resistor + harness kit).

I wiggled the connector and 1,2,3 started working, so is the resistor module broken on just loose? Explain how the schematic diagram of the resistor works.

That single test gives us a massive clue.

If wiggled wires make speeds 1, 2, and 3 instantly pop back to life, **your resistor module itself is likely fine — the issue is a burnt, corroded, or loose pin connection right inside the electrical connector plug.**

Here is what's happening mechanically and electrically:

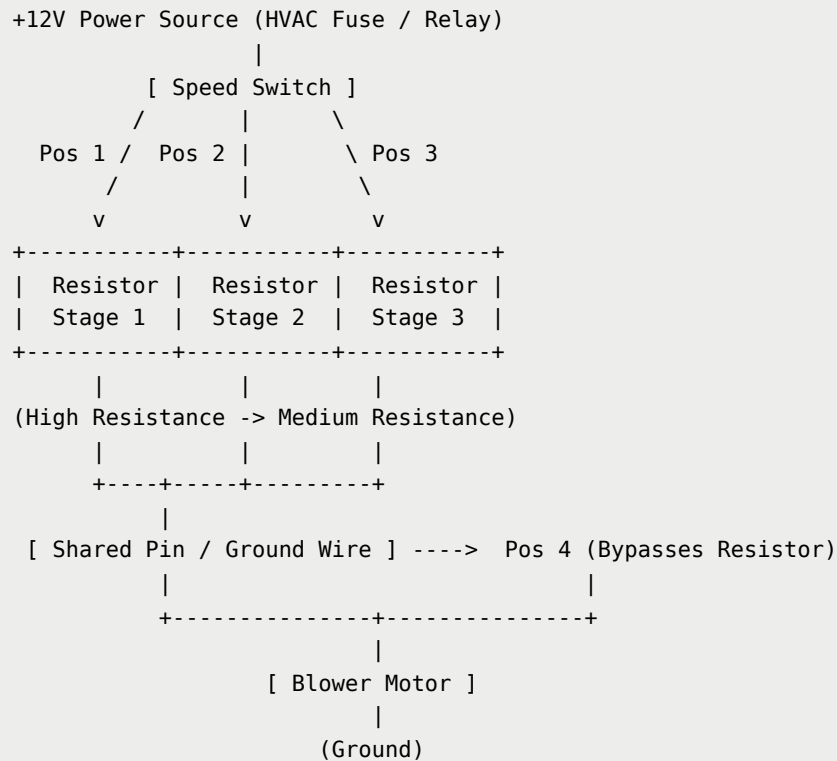
What the Wiggle Test Means

1. **The Resistor Coils Are Intact:** The resistor block uses internal wire coils (or ceramic printed circuits) to drop voltage. If a resistor coil was physically burnt out (like a blown lightbulb filament), wiggling the wire would **never** bring the fan back on because the circuit trace would be permanently broken.
2. **The Connector Pins Are Damaged/Melted:** The heat generated by high current draw causes the female metal spade terminals inside the plastic plug to spread apart, lose spring tension, or develop high-resistance carbon corrosion. Wiggling the plug momentarily forces the loose metal contacts back together, completing the circuit again.

Caution: Wiggling it temporarily gets you air, but a loose high-amperage connection creates severe resistance, which acts like a miniature heater element. If left unaddressed, it will continue to melt the plastic connector and could eventually short out.

How the Blower Motor Schematic Diagram Works

To understand why Speed 4 worked while 1, 2, and 3 failed, take a look at how GM wired the HVAC circuit on the Colorado:



1. Speeds 1, 2, and 3 (Series Resistance)

- Current travels from the speed selector switch on your dash down to the resistor module under the footwell.
- **Speed 1:** Current enters Pin A and travels through **all 3 resistor stages** in series. This maximum resistance drops the voltage down to ~4–6 Volts, spinning the fan slowly and quietly.
- **Speed 2 & 3:** Current enters through different pins, bypassing one or two resistor stages to deliver ~8V or ~10V to the motor for medium speeds.
- **The Shared Output Pin:** All three lower speeds route their reduced voltage through **one shared output wire/pin** on the plug to reach the blower motor. If *that single shared pin* gets loose or corroded, **speeds 1, 2, and 3 all die simultaneously**.

2. Speed 4 (The Direct Bypass)

- When you click the knob to **Speed 4**, the HVAC switch completely ignores the resistor block.
- It triggers a high-speed relay that sends a full **12.0+ Volts** directly to the blower motor through a completely separate wire path.
- That is why Speed 4 worked perfectly while 1, 2, and 3 were dead — it never used the loose, overheated resistor connector pin in the first place!

DIY Next Step

Since wiggling the plug restored power, you don't necessarily need to replace the metal resistor block right away!

1. **Unplug the connector** and look inside the plug with a flashlight.
2. You will likely see one charred female pin slot that has widened or melted the surrounding plastic.
3. You can either use a tiny pick to gently squeeze the female pin tight again as a temporary fix, or splice in a new **\$15–\$20 replacement pigtail connector** (like the Dorman 645-528 / GM 15306069) to solve the bad contact permanently.

From AutoZone

Yes, the Duralast BMR014KIT will fit your 2009 Chevy Colorado V8 4WD.

It is designed specifically for all 2004–2012 Chevrolet Colorado and GMC Canyon models (including 4WD and 5.3L V8 trim levels).

Key Installation Tip for This Kit:

- **Wire Color Matching:** The replacement pigtail included in the **BMR014KIT** uses **all-gray wires**.
- **Action:** When splicing the new connector onto the truck's wiring, cut and splice **one wire at a time** from the old factory harness directly to the matching position on the new plug so you don't swap pin positions.

Summary Card

☐ Duralast HVAC Blower Motor Resistor Kit BMR014KIT\$49.99•Duralast4.5(31)



This complete **resistor and pigtail kit** is an exact fit for your 2009 Chevy Colorado and comes with AutoZone's Limited-Lifetime Warranty.