NO.1 INSUFFICIENT AIR (OR NO AIR) BLOWN FROM VENTS [FULL-AUTO AIR CONDITIONER]

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1	Insufficient air (or no air) blown from vents
DESCRIPTION	• Problem with each vent and/or duct • Airflow mode does not change
POSSIBLE CAUSE	• Malfunction in airflow mode actuator • Malfunction in VENT mode system • Malfunction in HEAT mode system • Malfunction in DEFROSTER mode system

- When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while performing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harnesses are connected correctly and undamaged.

Diagnostic procedure

STEP	INSPECTION		ACTION
1*	**INSPECT CLIMATE CONTROL UNIT POWER SUPPLY FUSE FOR B+ SIGNAL** • Is the climate control unit power supply fuse for B+ signal normal?	Yes	Go to the next step.
		No	Inspect for short to GND in blown fuse circuit Repair or replace as necessary. Install appropriate amperage fuse.
2*	**INSPECT TO SEE WHETHER MALFUNCTION (OPEN CIRCUIT) IS IN B+ SIGNAL WIRING HARNESS (BETWEEN FUSE BLOCK AND CLIMATE CONTROL UNIT) OR ELSEWHERE** • Disconnect the climate control unit connector (24-pin). • Switch the ignition ON (engine off or on). • Measure the voltage at climate control unit harness-side connector (24-pin) terminal 1E (B + signal). • Is the voltage **approx. 12V**?	Yes	Go to the next step.
		No	Repair wiring harness between fuse block and climate control unit, then go to Step 20.
3*	**INSPECT TO SEE WHETHER MALFUNCTION (LACK OF CONTINUITY) IS IN WIRING HARNESS (BETWEEN CLIMATE CONTROL UNIT AND GND) OR ELSEWHERE** • Climate control unit connector (24-pin) disconnected. • Verify that continuity between climate control unit harness-side connector (24-pin) terminal 1W and GND. • Is there continuity?	Yes	Go to the next step.
		No	Repair wiring harness between climate control unit and GND. Inspect GND point condition. Then go to Step 20.
4*	**INSPECT TO SEE WHETHER MALFUNCTION IS IN A/C UNIT OR AIRFLOW MODE ACTUATOR** • Switch the ignition ON (engine off or on). • Measure voltage at climate control unit terminal 1R (24-pin) when airflow mode at VENT and DEFROSTER. (See CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER].) • Is voltage normal?	Yes	Go to Step 16.
		No	Go to the next step.
5*	**INSPECT TO SEE WHETHER MALFUNCTION IS IN POSITION SENSOR OR ELSEWHERE** • Switch the ignition ON (engine off or on). • Measure voltage at climate control unit terminal 1P and 1N (24-pin) when temperature setting to MAX HOT and MAX COLD. (See CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER].) • Are voltages normal?	Yes	Go to Step 8.
		No	Go to the next step.

STEP	INSPECTION		ACTION
6*	**INSPECT TO SEE WHETHER MALFUNCTION (LACK OF CONTINUITY OR SHORT TO BATTERY POWER OR GND) IS IN POSITION SENSOR POWER SUPPLY (CLIMATE CONTROL UNIT TERMINAL 1H) OR ELSEWHERE** • Switch the ignition ON (engine off or on). • Measure voltage at climate control unit terminal 1H (24-pin). • Is voltage **approx. 5V**?	Yes	Go to the next step.
		No	Repair wiring harness between climate control unit terminal 1H and follows: • Airflow mode actuator terminal B • Driver side air mix actuator terminal G (L.H.D.) / E (R.H.D.) • Passenger side air mix actuator terminal E (L.H.D.) / G (R.H.D.) Then go to Step 20.
7*	**INSPECT TO SE WHETHER MALFUNCTION (LACK OF CONTINUITY OR OPEN) IS IN POSITION SENSOR GND (CLIMATE CONTROL UNIT TERMINAL 1X) OR ELSEWHERE** • Measure voltage at climate control unit terminal 1X (24-pin). • Is voltage **below 1.0V**?	Yes	Go to Step 11.
		No	Repair wiring harness for lack of continuity or open between climate control unit terminal 1X and follows: • Airflow mode actuator terminal A • Driver side air mix actuator terminal E (L.H.D.) / G (R.H.D.) • Passenger side air mix actuator terminal G (L.H.D.) / E (R.H.D.) Then go to Step 20.
8*	**INSPECT TO SEE WHETHER MALFUNCTION (SHORT TO POWER) IS IN WIRING HARNESS (AIRFLOW MODE POSITION SIGNAL) OR ELSEWHERE** • Is climate control unit terminal 1R voltage **approx. 12V**, at Step 4?	Yes	Repair wiring harness between climate control unit terminal 1R and airflow mode actuator terminal C. Then go to Step 20.
		No	Go to the next step.
9*	**INSPECT TO SEE WHETHER MALFUNCTION (LACK OF CONTINUITY) IS IN WIRING HARNESS (AIRFLOW MODE POSITION SIGNAL) OR ELSEWHERE** • Switch the ignition off. • Disconnect climate control unit and airflow mode actuator connectors • Verify continuity between climate control unit terminal 1R (24-pin) and airflow mode actuator terminal C at harness-side connector. • Is there continuity?	Yes	Go to next step.
		No	Repair wiring harness between climate control unit terminal 1R and airflow mode actuator terminal C. Then go to Step 20.
10*	**INSPECT TO SEE WHETHER MALFUNCTION (SHORT TO GND) IS IN WIRING HARNESS (AIRFLOW MODE POSITION SIGNAL) OR POSITION SENSOR COMMON (POWER SUPPLY OR GND) HARNESS** • Verify continuity between climate control unit harness-side connector terminal 1R (24-pin) and GND. • Is there continuity?	Yes	Repair wiring harness between climate control unit terminal 1R and airflow mode actuator terminal C. Then go to Step 20.
		No	Inspection and repair for open circuit following: • Between airflow mode actuator terminal B and junction point to each air mix actuator (position sensor power supply). • Between airflow mode actuator terminal A and junction point to each air mix actuator (position sensor GND). Then go to Step 20.
11*	**INSPECT TO SEE WHETHER MALFUNCTION (LACK OF CONTINUITY) IS IN AIRFLOW MODE ACTUATOR WIRING HARNESS (BETWEEN CLIMATE CONTROL UNIT AND AIR FLOW MODE ACTUATOR) OR ELSEWHERE** • Switch the ignition ON (engine off or on). • Measure voltage at the following terminals of climate control unit. (See CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER].) — Terminal 2K (12-pin, DEFROSTER mode motor drive signal) — Terminal 2I (12-pin, VENT mode motor drive signal) • Are voltages okay?	Yes	Go to the next step.
		No	Go to Step 13.

STEP	INSPECTION		ACTION
12*	**INSPECT TO SEE WHETHER MALFUNCTION (LACK OF CONTINUITY) IS IN AIR FLOW MODE ACTUATOR OR WIRING HARNESS (BETWEEN CLIMATE CONTROL UNIT AND AIR FLOW MODE ACTUATOR)** • Verify continuity at following terminals between airflow mode actuator and climate control unit. — Climate control unit terminal 2K — airflow mode actuator terminal F (12-pin, DEFROSTER mode motor drive signal) — Climate control unit terminal 2I — airflow mode actuator terminal D (12-pin, VENT mode motor drive signal) • Is there continuity?	Yes	Go to Step 17.
		No	Repair wiring harness between climate control unit and airflow mode actuator. Then go to Step 20.
13*	**INSPECT TO SEE WHETHER MALFUNCTION IS IN AIR FLOW MODE ACTUATOR OR ELSEWHERE** • Airflow mode actuator and climate control unit connectors disconnected. • Measure voltage at the following terminals of climate control unit. (See CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER].) — Terminal 2K (12-pin, DEFROSTER mode motor drive signal) — Terminal 2I (12-pin, VENT mode motor drive signal) • Are voltage okay?	Yes	Go to Step 16.
		No	Go to the next step.
14*	**INSPECT TO SEE WHETHER MALFUNCTION IS IN WIRING HARNESS (SHORT TO B+ BETWEEN CLIMATE CONTROL UNIT AND FLOW MODE ACTUATOR) OR ELSEWHERE** • Measure voltage at the following terminal of the climate control unit harness-side connector. — Terminal 2K (12-pin, DEFROSTER mode motor drive signal) — Terminal 2I (12-pin, VENT mode motor drive signal) • Are voltages **approx. 0V**?	Yes	Go to the next step.
		No	Repair wiring between climate control unit and airflow mode actuator. Then go to the Step 20.
15*	**INSPECT TO SEE WHETHER MALFUNCTION IS IN WIRING HARNESS (SHORT TO GND BETWEEN CLIMATE CONTROL UNIT AND AIRFLOW MODE ACTUATOR) OR ELSEWHERE** • Switch the ignition off. • Verify that continuity at the following harness-side connector terminals between climate control unit and GND. — Terminal 2K (12-pin, DEFROSTER mode motor drive signal) — Terminal 2I (12-pin, VENT mode motor drive signal) • Is there continuity?	Yes	Repair wiring harness between climate control unit and airflow mode actuator. Then go to the Step 20.
		No	Go to the next step.
16	**INSPECT AIRFLOW MODE ACTUATOR** • Inspect airflow mode actuator. (See AIRFLOW MODE ACTUATOR INSPECTION [FULL-AUTO AIR CONDITIONER].) • Is airflow mode actuator normal?	Yes	Go to the next step.
		No	Replace the airflow mode actuator. (See AIRFLOW MODE ACTUATOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) Then go to the Step 20.

STEP	INSPECTION		ACTION
17	**INSPECT AIRFLOW MODE LINK** • Inspect airflow mode links. — Is grease on link? — Are links securely and properly installed? — Are links free of obstructions and hindrances? • Are above items okay?	Yes	Go to the next step.
		No	Apply grease to links. If any links are damaged, replace malfunctioning part. Then go to the Step 20.
18	**INSPECT TO SEE WHETHER MALFUNCTION IS IN CLIMATE CONTROL UNIT OR AIRFLOW MODE DOOR** • Inspect A/C unit airflow mode door. — Is door free of obstructions, cracks and damage? — Are door securely and properly installed? • Are above items okay?	Yes	Go to the next step.
		No	Remove the obstruction, or install door in proper position. If any doors are cracked or damaged, replace them. Then go to the Step 20.
19	**VERIFY THAT DUCTS INSTALLATION CONDITION** • Are following ducts installed properly? — Dashboard ducts — Defroster ducts	Yes	Inspect ducts for clogging, deformity, and air leakage, then go to the next step.
		No	Install the suspected ducts properly, then go to the next step.
20	**CONFIRM THAT MALFUNCTION SYMPTOM DOES NOT RECUR AFTER REPAIR** • Does air blow out?	Yes	Troubleshooting completed. Explain repairs to customer.
		No	Recheck malfunction symptoms, then repeat from Step 1 if the malfunction recurs.