

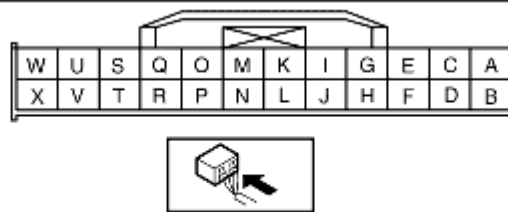
CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER]

B3E074061190W07

1. Turn the ignition switch to the ON position.
2. Connect the negative (-) lead of the tester to body ground.
3. By inserting the positive (+) lead of the tester into each climate control unit terminal, measure the voltage according to the terminal voltage table.

- If there is any malfunction, inspect the parts under "Inspection item (s)".
 - If the parts under "Inspection item (s)" are found to be normal (except for terminal F), replace the climate control unit.
 - For terminal F, first try replacing the power MOS FET. If there is still any malfunction, replace the climate control unit.

Terminal Voltage Table (Reference)



B3E0740W055

| Terminal | Signal name | Connected to | Measurement condition | Voltage (V) | Inspection item (s) |
|----------|-----------------|----------------------------|---|-------------|---|
| A | TNS signal | PJB | Headlight switch OFF | 1.0 or less | <ul style="list-style-type: none"> • Wiring harness: short circuit (Climate control unit-PJB: A-J-03 H) • Panel light control switch • Headlight switch |
| | | | Headlight switch ON | B+ | <ul style="list-style-type: none"> • Wiring harness: continuity, short circuit (Climate control unit-PJB: A-J-03 H) • Panel light control switch • Headlight switch |
| B | TNS signal | Panel light control switch | Headlight switch ON and panel light control switch at max. illumination | 1.0 or less | <ul style="list-style-type: none"> • Wiring harness: continuity (Climate control unit-panel light control switch: B-F) • Panel light control switch • Climate control unit: terminal voltage (A) |
| | | | Headlight switch ON and panel light control switch at min. illumination | 12 | <ul style="list-style-type: none"> • Wiring harness: short circuit (Climate control unit-panel light control switch: B-F) |
| C | Motor operation | Air mix actuator | Moving towards COLD | 12 | <ul style="list-style-type: none"> • Wiring harness: continuity, short circuit (Climate control unit-air mix actuator: C-D, E-F) • Air mix actuator |
| | | | Moving towards HOT | 1.0 or less | |

| | | | | | |
|---|--------------------------|-----------------------------------|-----------------------|-------------|---|
| D | Blower fan speed control | Power MOS FET | Fan stopped | 1.0 or less | • Climate control unit: terminal voltage (F) |
| | | | Fan: manual LO | 2.9 | |
| | | | Fan: manual HI | 9.7 | |
| E | Motor operation | Air mix actuator | Moving towards COLD | 1.0 or less | • Wiring harness: continuity, short circuit (Climate control unit-air mix actuator: E-F, C-D) • Air mix actuator |
| | | | Moving towards HOT | 12 | |
| F | Blower motor feedback | • Blower motor • Power MOS FET | Fan stopped | B+ | 1. Wiring harness: continuity, short circuit (Climate control unit-blower motor: F-B) (Climate control unit-power MOS FET: F-B, D-C) (Blower motor-blower relay: A-E) (Blower relay-fuse: A-HEATER 40 A, B-A/C 10 A) 2. Wiring harness: continuity (Power MOS FET-body ground: A-GND) (Blower relay-body ground: D-GND) 3. Power MOS FET 4. Blower motor 5. Blower relay 6. A/C 10 A fuse 7. HEATER 40 A fuse 8. Power MOS FET replacement |
| | | | Fan: manual LO | 9.8 | |
| | | | Fan: manual HI | 0.5 | |
| G | Motor operation | Airflow mode actuator | Switched to DEFROSTER | 12 | • Wiring harness: continuity, short circuit (Climate control unit-airflow mode actuator: G-F, I-D) • Airflow mode actuator |
| | | | Switched to VENT | 1.0 or less | |
| H | - | - | - | - | - |
| I | Motor operation | Airflow mode actuator | Switched to DEFROSTER | 1.0 or less | • Wiring harness: continuity, short circuit (Climate control unit-airflow mode actuator: I-D, G-F) • Airflow mode actuator |
| | | | Switched to VENT | 12 | |
| J | B+ | ROOM 15 A fuse | Under any condition | B+ | • Wiring harness: continuity, short circuit (Climate control unit- fuse: J-ROOM 15 A) • ROOM 15 A fuse |
| K | IG2 | A/C 10 A fuse | IG SW ON | B+ | • Wiring harness: continuity, short circuit (Climate control unit- fuse: K-A/C 10 A) • A/C 10 A fuse |
| | | | IG SW LOCK | 1.0 or less | • Wiring harness: continuity, short circuit (Climate control unit- fuse: K-A/C 10 A) |
| L | Potentiometer input | Airflow mode actuator | VENT | 4.5 | • Wiring harness: continuity, short circuit (Climate control unit-airflow mode actuator: L-C) • Airflow mode actuator • Climate control unit: terminal voltage (P) |
| | | | BILEVEL | 3.7 | |
| | | | HEAT | 2.9 | |
| | | | HEAT/DEF | 1.9 | |
| | | | DEFROSTER | 0.8 | |
| | | | Switched to | 1.0 or | • Wiring harness: continuity, |

| | | | | | |
|---|-------------------------------------|---|--|------------------|---|
| M | Motor operation | Air intake actuator | RECIRCULATE | less | short circuit (Climate control unit-air intake actuator: M-G, O-E, Q-C) • Air intake actuator |
| | | | Switched to FRESH | 12 | |
| N | Potentiometer input | Air mix actuator | Set temperature at MAX COLD | 0.8 | • Wiring harness: continuity, short circuit (Climate control unit-air mix actuator: N-C) • Air mix actuator • Climate control unit: terminal voltage (P) |
| | | | Set temperature at MAX HOT | 4.5 | |
| O | Motor operation | Air intake actuator | Switched to RECIRCULATE | 12 | • Wiring harness: continuity, short circuit (Climate control unit-air intake actuator: M-G, O-E) • Air intake actuator |
| | | | Switched to FRESH | 1.0 or less | |
| P | +5 V | • Air mix actuator • Airflow mode actuator • Solar radiation sensor | IG SW ON | 5.2 | • Wiring harness: short circuit (Climate control unit-air mix actuator, airflow mode actuator, solar radiation sensor: P-A, B, A) • Air mix actuator • Airflow mode actuator • Solar radiation sensor • Climate control unit: terminal voltage (K, V) • Climate control unit replacement |
| | | | IG SW LOCK | 0 | |
| Q | Motor operation | Air intake actuator | Switched to RECIRCULATE | 1.0 or less | • Wiring harness: continuity, short circuit (Climate control unit-air intake actuator: Q-C, M-G) • Air intake actuator |
| | | | Switched to FRESH | 12 | |
| R | Cabin temperature sensor input | Cabin temperature sensor | Compared with temperature detected by cabin temperature sensor | Refer to graph 2 | • Wiring harness: continuity (Climate control unit-cabin temperature sensor: R-D, U-B) • Wiring harness: short circuit (Climate control unit-cabin temperature sensor: R-B) • Cabin temperature sensor • Climate control unit: terminal voltage (K, V) |
| S | Solar radiation sensor input | Solar radiation sensor | Incandescent light (approx. 60 W) shined directly on the solar radiation sensor from a distance of approx. 100 mm {3.9 in} | 4.0 | • Wiring harness: continuity (Climate control unit-solar radiation sensor: S-B, P-A) • Climate control unit: terminal voltage (P) • Solar radiation sensor |
| | | | Blocking light to solar radiation sensor | 1.0 or less | |
| T | Evaporator temperature sensor input | Evaporator temperature sensor | Compared with temperature detected by evaporator temperature sensor | Refer to graph 1 | • Wiring harness: continuity (Climate control unit-evaporator temperature sensor: T-B, U-A) • Wiring harness: short circuit (Climate control unit-evaporator temperature sensor: T-B) • Evaporator temperature sensor |

| | | | | | |
|---|------------|--|---------------------|-------------|---|
| | | | | | • Climate control unit: terminal voltage (K, V) |
| U | Sensor GND | <ul style="list-style-type: none"> • Cabin temperature sensor • Evaporator temperature sensor • Air mix actuator • Airflow mode actuator | Under any condition | 1.0 or less | • Climate control unit: terminal voltage (V) |
| V | GND | Body ground | Under any condition | 1.0 or less | • Wiring harness: continuity (Climate control unit-GND: V-GND) |
| W | Signal | - | - | - | - |
| X | Signal | - | - | - | - |

