FACTORY MANUALS

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# Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

## 2010 NISSAN Tiida/Versa Sedan OEM Service and Repair Workshop Manual

Go to manual page

Sample

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## 17. CHECK INVERTER (FRONT)

Check for short between inverter (front) terminals (H6 side).

| Inverter (front) | | Resistance |
|---|---|---|
| + | − | |
| Terminal | | |
| P | N | Larger than 3 kΩ |

YES>>

GO TO 18 .

NO>>

Replace inverter (front), GO TO 18 . Refer to INVERTER (FRONT) : Removal & Installation.

## 18. REPLACE BATTERY JUNCTION BOX

Replace battery junction box. Refer to Disassembly & Assembly(66kWh LI-ION BATTERY), Disassembly & Assembly(91kWh LI-ION BATTERY).

>>

INSPECTION END

# AWD models

**WARNING:**

**Hybrid vehicles and electric vehicles equipped with high voltage batteries may cause an electric shock or a short circuit if handled in an inappropriate way. When you inspect and service a vehicle, follow the work procedure and perform the correct tasks.**

**WARNING:**

- **When you inspect and service the high voltage wiring harnesses and components, make sure to remove the service plug in order to shut off the high voltage circuit.**
- **When you have removed the service plug, be sure to carry it in your pocket, or store it in the tool box in order to keep someone from accidentally connecting it during work.**
- **When performing high voltage system operation, be sure to wear insulating protective equipment.**
- **During tasks involving high voltage systems, clarify a person in charge of the tasks and do not let others touch the vehicle. When the vehicle is not being serviced, use protective items such as an electric-proof cover sheet for covering the high voltage components so as to keep someone from accidentally touching the vehicle.**
- **Refer to HIGH VOLTAGE PRECAUTIONS : Precautions.**

**CAUTION:**

- **Setting the vehicle to the READY state with the service plug removed may cause malfunctioning. Avoid setting the vehicle to the READY state unless otherwise specified in the service manual.**
- **When you turned the power switch ON with the service plug removed, be sure to erase all the DTCs after trouble diagnosis.**

Sample

## 1. CHECK DTC PRIORITY

If DTC P1692-92 is displayed with P168A-11, P168A-12, P168A-13, P168B-73, P168C-72, P168D-11, P168D-12, P168D-13, P168D-73, P168E-11, P168E-12, P168E-13 or P168E-73, first perform the trouble diagnosis for P168A-11, P168A-12, P168A-13, P168B-73, P168C-72, P168D-11, P168D-12, P168D-13, P168D-73, P168E-11, P168E-12, P168E-13 or P168E-73.

Is applicable DTC detected?

YES>>

Perform trouble diagnosis for applicable DTC. Refer to DTC Index.

NO>>

GO TO 2 .

## 2. PERFORM SELF-DIAGNOSIS OF INVERTER (FRONT)

With CONSULT

Check self-diagnostic result in "MOTOR CONTROL".

Is DTC detected?

YES>>

Perform diagnosis for detected DTC. Refer to DTC Index.

NO>>

GO TO 3.

## 3. PERFORM SELF-DIAGNOSIS OF INVERTER (REAR)

With CONSULT

Check self-diagnostic result in "REAR MOTOR CONTROL".

Is DTC detected?

YES>>

Perform diagnosis for detected DTC. Refer to DTC Index.

NO>>

GO TO 4.

## 4. PRECONDITIONING

**WARNING:**
**Follow the instructions below before starting the procedure.**

1. Disconnect high voltage circuit. Refer to HOW TO DISCONNECT HIGH VOLTAGE : Precautions.
2. Check voltage in high voltage circuit. Refer to CHECK VOLTAGE IN HIGH VOLTAGE CIRCUIT : Precautions.

>>

GO TO 5.

Sample

## 5. CHECK HIGH VOLTAGE HARNESS CONNECTOR INSTALLATION CONDITION

Check high voltage harness connector installation condition visually and tactually.

**CAUTION:**
**When reconnecting the high voltage harness connector, insert it slowly and directly.**

Is the inspection result normal?

YES>>

GO TO 6.

NO>>

Repair or replace error-detected parts.

## 6. CHECK HIGH VOLTAGE HARNESS CONNECTOR

1. Disconnect high voltage harness connector (H5) from Li-ion battery.
2. Check high voltage harness connector installation condition visually and tactually.

Is the inspection result normal?

YES>>

GO TO 7.

NO>>

Replace error-detected parts.

## 7. CHECK HIGH VOLTAGE CIRCUIT

Check for continuation between Li-ion battery harness connector and high voltage junction box harness connector.

| + | | − | | |
|---|---|---|---|---|
| Li-ion battery | | High voltage junction box | | Continuation |
| Connector | Terminal | Connector | Terminal | |
| H5 | 37 | H10 | N | Existing |
| | 38 | | P | |

Is the inspection result normal?

YES>>

GO TO 8.

NO>>

Replace the error-detected part between the Li-ion battery and the high voltage junction box.

## 8. CHECK HIGH VOLTAGE HARNESS-1

1. Disconnect high voltage junction box harness connector (H11).
2. Check for short between high voltage junction box harness connector terminals.

Sample

| Connection point | High voltage junction box | | | Resistance |
|---|---|---|---|---|
| | Connector | + | − | |
| | | Terminal | | |
| Electric compressor | H11 | 18 | 19 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 10.

NO>>

GO TO 9.

## 9. CHECK ELECTRIC COMPRESSOR

1. Disconnect electric compressor high voltage harness connector (H9).
2. Check for short between electric compressor connector terminals.

| Electric compressor | | Resistance |
|---|---|---|
| + | − | |
| Terminal | | |
| 7 | 8 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

Replace the error-detected high voltage harness, GO TO 21.

NO>>

Replace electric compressor, GO TO 21. Refer to Removal & Installation.

## 10. CHECK HIGH VOLTAGE HARNESS-2

1. Disconnect high voltage junction box harness connector (H1).
2. Check for short between high voltage junction box harness connector terminals.

| Connection point | High voltage junction box | | | Resistance |
|---|---|---|---|---|
| | Connector | + | − | |
| | | Terminal | | |
| PTC heater | H1 | 13 | 14 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 12.

NO>>

GO TO 11.

## 11. CHECK PTC HEATER

Sample

1. Disconnect PTC heater high voltage harness connector (H2).

2. Check for short between PTC heater terminals.

| PTC heater | | Resistance |
|---|---|---|
| + | − | |
| Terminal | | |
| 1 | 2 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

Replace the error-detected high voltage harness, GO TO 21.

NO>>

Replace PTC heater, GO TO 21. Refer to Removal & Installation.

## 12. CHECK HIGH VOLTAGE HARNESS-3

1. Disconnect Li-ion battery high voltage harness connector (H5).

2. Check for short between Li-ion battery high voltage harness connector terminals.

| Connection point | Li-ion battery | | | Resistance |
|---|---|---|---|---|
| | Connector | + | − | |
| | | Terminal | | |
| Inverter (front) | H5 | 38 | 37 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 13.

NO>>

GO TO 14.

## 13. CHECK BATTERY COOLANT HEATER (BATTERY PTC HEATER)

1. Disconnect battery coolant heater (battery PTC heater) high voltage harness connector (LB24).

**NOTE:**
**For battery coolant heater (battery PTC heater) connector position. Refer to Harness Layout(66kWh LI-ION BATTERY), Harness Layout(91kWh LI-ION BATTERY).**

2. Check for short between battery coolant heater (battery PTC heater) terminals.

| Battery coolant heater (battery PTC heater) | | Resistance |
|---|---|---|
| + | − | |
| Terminal | | |
| P | N | Larger than 3 kΩ |

Is the inspection result normal?

Sample

YES>>

Since there is a possibility that the Li-ion battery internal high voltage circuit is shorted, check the Li-ion battery internal high voltage circuit, GO TO 21.

NO>>

Replace battery heater, GO TO 21. Refer to Disassembly & Assembly(66kWh LI-ION BATTERY), Disassembly & Assembly(91kWh LI-ION BATTERY).

## 14. CHECK HIGH VOLTAGE JUNCTION BOX

1. Remove high voltage junction box. Refer to HIGH VOLTAGE JUNCTION BOX : Disassembly & Assembly.
2. Check for short between high voltage junction box terminals.

| High voltage junction box | | |
|---|---|---|
| + | − | Resistance |
| Terminal | | |
| P | N | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 15.

NO>>

Replace high voltage junction box, GO TO 21. Refer to HIGH VOLTAGE JUNCTION BOX : Disassembly & Assembly.

## 15. CHECK ON-BOARD CHARGER

1. Remove on-board charger. Refer to ON-BOARD CHARGER : Disassembly & Assembly.
2. Check for short between on-board charger terminals.

| On-board charger | | |
|---|---|---|
| + | − | Resistance |
| Terminal | | |
| 13 | 14 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 16.

NO>>

Replace on-board charger, GO TO 21. Refer to ON-BOARD CHARGER : Disassembly & Assembly.

## 16. CHECK DC/DC CONVERTER

1. Remove DC/DC converter. Refer to DC/DC CONVERTER : Disassembly & Assembly.
2. Check for short between DC/DC converter terminals.

| DC/DC converter | Resistance |
|---|---|

Sample

| + | − | |
|---|---|---|
| Terminal | | |
| 8 | 9 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 17.

NO>>

Replace DC/DC converter, GO TO 21. Refer to DC/DC CONVERTER : Disassembly & Assembly.

## 17. CHECK HIGH VOLTAGE HARNESS-4

1. Disconnect inverter (front) harness connector (H6).
2. Check for short between inverter (front) harness connector terminals.

| Connection point | Inverter (front) | | | Resistance |
|---|---|---|---|---|
| | Connector | + | − | |
| | | Terminal | | |
| Li-ion battery | H6 | P | N | Larger than 3 kΩ |

3. Disconnect inverter (front) harness connector (H12).
4. Check for short between inverter (front) harness connector terminals.

| Connection point | Inverter (front) | | | Resistance |
|---|---|---|---|---|
| | Connector | + | − | |
| | | Terminal | | |
| High voltage junction box | H12 | P | N | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 18.

NO>>

Replace the error-detected high voltage harness, GO TO 21.

## 18. CHECK INVERTER (FRONT)

Check for short between inverter (front) terminals (H6 side).

| Inverter (front) | | Resistance |
|---|---|---|
| + | − | |
| Terminal | | |
| P | N | Larger than 3 kΩ |

YES>>

GO TO 19.

Sample

NO>>

Replace inverter (front), GO TO 21. Refer to INVERTER (FRONT) : Removal & Installation.

## 19. CHECK HIGH VOLTAGE HARNESS-5

1. Disconnect Li-ion battery high voltage harness connector (H7).
2. Check for short between Li-ion battery high voltage harness connector terminals.

| Connection point | Li-ion battery | | | Resistance |
|---|---|---|---|---|
| | Connector | + | − | |
| | | Terminal | | |
| Inverter (rear) | H7 | 41 | 40 | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

GO TO 21.

NO>>

GO TO 20.

## 20. CHECK INVERTER (REAR)

1. Disconnect inverter (rear) high voltage harness connector (H8).
2. Check for short between inverter (rear)  connector terminals.

| Inverter (rear) | | Resistance |
|---|---|---|
| + | − | |
| Terminal | | |
| P | N | Larger than 3 kΩ |

Is the inspection result normal?

YES>>

Replace the error-detected high voltage harness, GO TO 21.

NO>>

Replace inverter (rear), GO TO 21. Refer to Removal and Installation.

## 21. REPLACE BATTERY JUNCTION BOX

Replace battery junction box. Refer to Disassembly & Assembly(66kWh LI-ION BATTERY), Disassembly & Assembly(91kWh LI-ION BATTERY).

>>

INSPECTION END

Sample

SIEMD-7196762

# DTC DETECTION LOGIC

| DTC | | CONSULT screen | DTC detecting condition | |
|---|---|---|---|---|
| P0504 | 00 | Brake Switch | Diagnosis condition | Power switch ON |
| | | | Signal | Stop lamp switch signal |
| | | | Threshold | The brake pedal state that is determined from the stop lamp switch signal that is input to the VCM and the brake pedal state that is received from the BCM by CAN are not matching |
| | | | Detection time | — |

# POSSIBLE CAUSE

- Harness and connector (Stop lamp switch circuit is open or shorted)
- BCM
- VCM
- Stop lamp switch

# FAIL-SAFE

Not applicable

Sample