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2013 NISSAN NP300 Pickup Double Cab OEM Service and Repair Workshop Manual

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| Priority | Detected items (DTC) |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | P0BF1-1C Drive Motor B Phase U Current Sensor P0BF5-1C Drive Motor B Phase V Current Sensor P0BF9-1C Drive Motor B Phase W Current Sensor P0C02-11 Drive Motor B Current P0C02-12 Drive Motor B Current P0C0E-01 Drive Motor B Inverter Power Supply P0C0E-04 Drive Motor B Inverter Power Supply P0C0E-1C Drive Motor B Inverter Power Supply P0C0E-A2 Drive Motor B Inverter Power Supply P2BD8-11 Motor Electronics Coolant Temperature Sensor B P2BD8-13 Motor Electronics Coolant Temperature Sensor B P3081-44 Resolver Offset Value Error P3082-44 Rotor Resistance Value Error P3083-44 Immobilizer P30E6-11 Drive Motor B Excitation Current P30E6-12 Drive Motor B Excitation Current P30E6-1C Drive Motor B Excitation Current P30E7-01 Drive Motor B Excitation Current Sensor P30E7-18 Drive Motor B Excitation Current Sensor P30E7-1D Drive Motor B Excitation Current Sensor |
| 4 | P0C02-18 Drive Motor B Current P2D3B-92 Hybrid/EV Discharge System |


NOTE:

If some DTCs are displayed at the same time, perform inspections one by one based on the priority as per the following list. Refer to [DTC Inspection Priority Chart](#).

| DTC *1 | | Items (CONSULT screen terms) | EV system warning lamp | Reference |
|--------|----|-------------------------------------------|------------------------|---------------------------------|
| P030A | 62 | Ignition A Control Signal | — | DTC Description |
| P0A1C | 01 | Drive Motor B Control Module | ON | DTC Description |
| | 03 | | ON | DTC Description |
| | 04 | | ON | DTC Description |
| | 05 | | ON | DTC Description |
| | 44 | | — | DTC Description |
| P0A30 | 11 | Drive Motor B Temperature Sensor | ON | DTC Description |
| | 13 | | ON | DTC Description |
| | 4B | | ON | DTC Description |
| P0A45 | 04 | Drive Motor B Position Sensor | ON | DTC Description |
| | 1C | | ON | DTC Description |
| P0A55 | 01 | Drive Motor B Current Sensor | ON | DTC Description |
| P0A79 | 48 | Drive Motor B Inverter | ON | DTC Description |
| | 62 | | ON | DTC Description |
| P0A8B | A2 | 14 Volt Power Module System Voltage | ON | DTC Description |
| P0AF2 | 11 | Drive Motor Inverter Temperature Sensor B | — | DTC Description |
| | 13 | | — | DTC Description |
| | 1C | | — | DTC Description |
| | 4B | | ON | DTC Description |
| P0BF1 | 1C | Drive Motor B Phase U Current Sensor | ON | DTC Description |
| P0BF5 | 1C | Drive Motor B Phase V Current Sensor | ON | DTC Description |

| DTC*1 | | Items (CONSULT screen terms) | EV system warning lamp | Reference |
|---------|----|----------------------------------------------------------------------|---------------------------|-------------------------------------|
| P0BF9 | 1C | Drive Motor B Phase W Current Sensor | ON | DTC Description |
| P0C02 | 11 | Drive Motor B Current | ON | DTC Description |
| | 12 | | ON | DTC Description |
| | 18 | | ON | DTC Description |
| P0C0E | 01 | Drive Motor B Inverter Power Supply | ON | DTC Description |
| | 04 | | ON | DTC Description |
| | 1C | | ON | DTC Description |
| | A2 | | ON | DTC Description |
| P0DA3 | 17 | Drive Motor B Inverter Voltage Sensor A | ON | DTC Description |
| P0DA9 | 00 | Hybrid/EV Battery Voltage/Drive Motor B Inverter Voltage Correlation | ON | DTC Description |
| P161D*2 | 61 | Immobilizer | — | DTC Description |
| P161E*2 | 68 | Immobilizer | — | DTC Description |
| P161F*2 | 64 | Immobilizer | — | DTC Description |
| P2BD8 | 11 | Motor Electronics Coolant Temperature Sensor B | — | DTC Description |
| | 13 | | — | DTC Description |
| P2D3B | 92 | Hybrid/EV Discharge System | ON | DTC Description |
| P3081 | 44 | Resolver Offset Value Error | ON | DTC Description |
| P3082 | 44 | Rotor Resistance Value Error | ON | DTC Description |
| P3083 | 44 | Immobilizer | — | DTC Description |
| P30D0 | 11 | Drive Motor B Coolant Temperature Sensor | ON | DTC Description |
| | 13 | | ON | DTC Description |
| | 4B | | ON | DTC Description |
| P30E5 | 04 | Drive Motor B Coolant Pump Control | ON | DTC Description |
| | 81 | | ON | DTC Description |

| DTC*1 | | Items (CONSULT screen terms) | EV system warning lamp | Reference |
|-------|----|------------------------------------------|---------------------------|-------------------------------------|
| | 87 | | ON | DTC Description |
| P30E6 | 11 | Drive Motor B Excitation Current | ON | DTC Description |
| | 12 | | ON | DTC Description |
| | 1C | | ON | DTC Description |
| P30E7 | 01 | Drive Motor B Excitation Current Sensor | ON | DTC Description |
| | 18 | | ON | DTC Description |
| | 1D | | ON | DTC Description |
| U2143 | 82 | CAN communication error (VCM/HCM) | May turn ON | DTC Description |
| | 83 | | May turn ON | DTC Description |
| | 87 | | May turn ON | DTC Description |
| U2144 | 82 | CAN communication error (Li-ion battery) | May turn ON | DTC Description |
| | 83 | | May turn ON | DTC Description |
| | 87 | | May turn ON | DTC Description |
| U2150 | 87 | CAN communication error (AIRBAG) | — | DTC Description |

*1: These numbers are rescribed by SAE J2012/ISO 15031-6.

*2: These DTCs are the immobilizer-related DTCs.

1. INSPECTION OF THE HARNESS CONNECTOR 1

1. Turn OFF the power switch.
2. Check mating conditions of the harness connector for the inverter (rear).

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair or replace the malfunctioning parts.

2. INSPECTION OF THE HARNESS CONNECTOR 2

Check mating conditions of the harness connector for the rear traction motor oil pump.

Is the inspection result normal?

YES>>

[GO TO 3.](#)

NO>>

Repair or replace the malfunctioning parts.

3. INSPECTION OF THE CONNECTOR TERMINALS 1

1. Disconnect the harness connector of the inverter (rear).
2. Check the inverter (rear) connector for water intrusion, or damage or corrosion of the terminals.

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Repair or replace the malfunctioning parts.

4. INSPECTION OF THE CONNECTOR TERMINALS 2

1. Disconnect the harness connector of the rear traction motor oil pump.
2. Check the wiring harness connector of the rear traction motor oil pump for water intrusion, or damage or corrosion of the terminals.

Is the inspection result normal?

YES>>

[GO TO 5.](#)

>>

Repair or replace the malfunctioning parts.

5. INSPECTION OF THE REAR TRACTION MOTOR OIL PUMP POWER SUPPLY

1. Turn ON the power switch, or set to READY.
2. Check the voltage between the harness connector of the rear traction motor oil pump and the body ground.

| + | | - | Voltage |
|------------------------------|----------|-------------|----------|
| Rear traction motor oil pump | | | |
| Connector | Terminal | | |
| B298 | 4 | Body ground | 9 - 16 V |

Is the inspection result normal?

YES >>

[GO TO 14.](#)

NO >>

[GO TO 6.](#)

6. INSPECTION OF THE OIL PUMP POWER SUPPLY CIRCUIT IN THE REAR TRACTION MOTOR 1

1. Inspect the 15A fuse (#96).
2. Remove the traction motor oil pump relay.
3. Check the continuity between the wiring harness connector for the traction motor oil pump relay and the wiring harness connector for the rear traction oil pump.

| Traction motor oil pump relay | | Rear traction motor oil pump | | Continuity |
|-------------------------------|----------|------------------------------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| E128 | 5 | B298 | 4 | Existed |

Is the inspection result normal?

YES >>

[GO TO 7.](#)

NO >>

Repair or replace the malfunctioning parts.

7. INSPECTION OF THE OIL PUMP POWER SUPPLY CIRCUIT IN THE REAR TRACTION MOTOR 2

Check the continuity between the harness connector of the traction motor oil pump and the body ground.

| Rear traction motor oil pump | | - | Continuity |
|------------------------------|----------|-------------|-------------|
| Connector | Terminal | | |
| B298 | 4 | Body ground | Not existed |

Is the inspection result normal?

YES >>

[GO TO 8.](#)

NO>>

Repair or replace the malfunctioning parts.

8. INSPECTION OF THE TRACTION MOTOR OIL PUMP RELAY 1

Check the voltage between the harness connector of the traction motor oil pump relay and the body ground.

| + | | - | Voltage |
|-------------------------------|----------|-------------|----------|
| Traction motor oil pump relay | | | |
| Connector | Terminal | Body ground | 9 – 16 V |
| E128 | 2 | | |
| | 3 | | |

Is the inspection result normal?

YES>>

[GO TO 10.](#)

NO>>

[GO TO 9.](#)

9. INSPECTION OF THE TRACTION MOTOR OIL PUMP RELAY 2

Inspect the following items:

- Disconnection or short circuit between the 12V battery and the traction motor oil pump relay
- 10A fuse (#90)
- 30A fusible link (#P)

>>

Repair or replace the malfunctioning parts.

10. INSPECTION OF THE TRACTION MOTOR OIL PUMP RELAY

Inspect the traction motor oil pump relay. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

[GO TO 11.](#)

NO>>

Repair or replace the malfunctioning parts.

11. INSPECTION OF ACTIVATION SIGNAL FOR THE TRACTION MOTOR OIL PUMP RELAY

1. Install the traction motor oil pump relay.
2. Check the output signal of VCM connector terminal No. 97. Refer to [Physical Values](#).

Is the inspection result normal?

YES>>

[GO TO 12.](#)

NO>>

Repair or replace the malfunctioning parts.

12. INSPECTION OF THE ACTIVATION SIGNAL CIRCUIT FOR THE TRACTION MOTOR OIL PUMP RELAY 1

1. Remove the traction motor oil pump relay.
2. Disconnect the VCM wiring harness connector.
3. Check the continuity between the harness connector of the traction motor oil pump relay and the VCM harness connector.

| Traction motor oil pump relay | | VCM | | Continuity |
|-------------------------------|----------|-----------|----------|------------|
| Connector | Terminal | Connector | Terminal | |
| E128 | 1 | E48 | 97 | Existed |

YES>>

[GO TO 13.](#)

NO>>

Repair or replace the malfunctioning parts.

13. INSPECTION OF THE ACTIVATION SIGNAL CIRCUIT FOR THE TRACTION MOTOR OIL PUMP RELAY 2

Check the continuity between the harness connector of the traction motor oil pump relay and the body ground.

| Traction motor oil pump relay | | - | Continuity |
|-------------------------------|----------|-------------|-------------|
| Connector | Terminal | | |
| E128 | 1 | Body ground | Not existed |

Is the inspection result normal?

YES>>

Replace the VCM. Refer to [VCM : Removal & Installation.](#)

NO>>

Repair or replace the malfunctioning parts.

14. INSPECTION OF THE OIL PUMP GROUND CIRCUIT FOR THE REAR TRACTION MOTOR

Check the continuity between the harness connector of the rear traction motor oil pump and the body ground.

| Rear traction motor oil pump | | - | Continuity |
|------------------------------|----------|-------------|------------|
| Connector | Terminal | | |
| B298 | 1 | Body ground | Existed |

Is the inspection result normal?

YES>>

[GO TO 15.](#)

NO>>

Repair or replace the malfunctioning parts.

15. INSPECTION OF THE OIL PUMP COMMUNICATION CIRCUIT FOR THE REAR TRACTION MOTOR 1

Check the resistance between the harness connector of the rear traction motor oil pump and the body ground.

| Rear traction motor oil pump | | - | Resistance |
|------------------------------|----------|-------------|----------------|
| Connector | Terminal | | |
| B298 | 2 | Body ground | 200 kΩ or more |
| | 3 | | |

Is the inspection result normal?

YES>>

[GO TO 16.](#)

NO>>

Repair or replace the malfunctioning parts.

16. INSPECTION OF THE OIL PUMP COMMUNICATION CIRCUIT FOR THE REAR TRACTION MOTOR 2

1. Check the resistance between the wiring harness connector for the inverter (rear) and the wiring harness connector for the rear traction motor oil pump.

| Inverter (rear) | | Rear traction motor oil pump | | Resistance |
|-----------------|----------|------------------------------|----------|-------------|
| Connector | Terminal | Connector | Terminal | |
| B297 | 19 | B298 | 2 | 1 Ω or less |
| | 29 | | 3 | |

2. Inspect the wiring harness for a short circuit.

| Inverter (rear) | | Rear traction motor oil pump | | Resistance |
|-----------------|----------|------------------------------|----------|----------------|
| Connector | Terminal | Connector | Terminal | |
| B297 | 19 | B298 | 3 | 100 kΩ or more |
| | 29 | | 2 | |

Is the inspection result normal?

YES>>

[GO TO 17.](#)

NO>>

Repair or replace the malfunctioning parts.

17. REPLACEMENT OF THE REAR TRACTION MOTOR

1. Replace the rear traction motor. Refer to [Removal and Installation.](#)