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2015 NISSAN Titan XD Crew Cab OEM Service and Repair Workshop Manual

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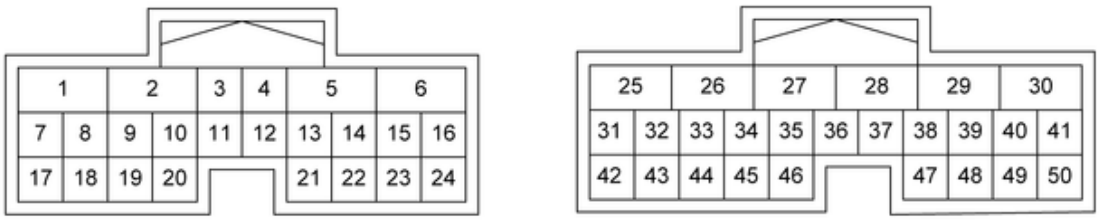
SIEMD-7198728

TERMINAL LAYOUT

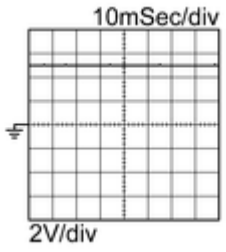


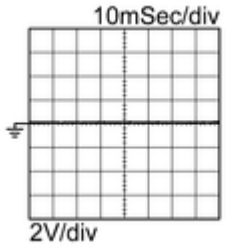
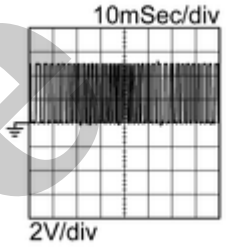
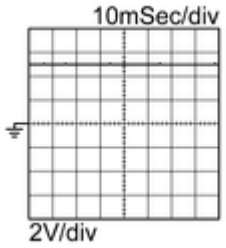
SIEMD-16420500626111-01-000175569

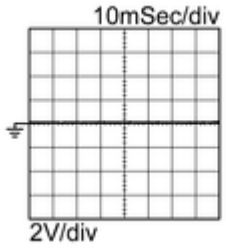
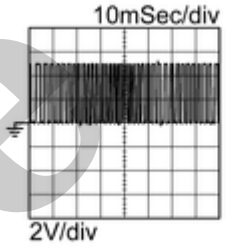
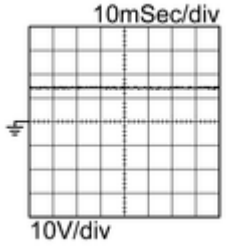
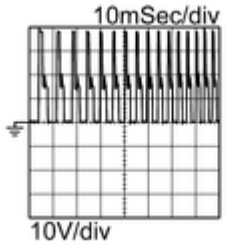
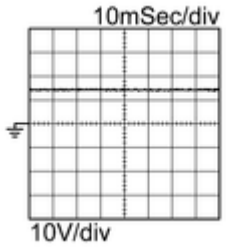
PHYSICAL VALUES

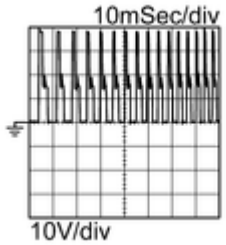
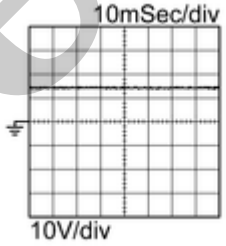
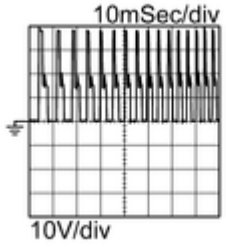
CAUTION:

- **When using circuit tester to measure voltage for inspection, be sure not to extend forcibly any connector terminals.**
- **Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped, when measuring/checking condition is READY state.**

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
3 (B)	Ground	Ground (SIG)	—	Always		0 V
4 (B)	Ground	Ground (SIG)	—	Always		0 V
6 (B)	Ground	Ground (PWR)	—	Always		0 V
8 (Y)	Ground	Battery power supply 1 (Auto ACC)	Input	Power switch: ON or ACC		9 – 16 V
				Power switch: OFF		0 V
9 (LG)	Ground	Power switch ON signal	Input	Power switch: ON		9 – 16 V
				Power switch: OFF		0 V
15 (GR)	Ground	Encoder signal B	Input	READY	Parking actuator: Inactive	 SIEMD-16420500626111-11-000175586 or

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
						 SIEMD-16420500626111-12-000175587
					Parking actuator: During operation	 SIEMD-16420500626111-13-000175585
16 (V)	Ground	Encoder power supply	Output	Power switch: ON		5 V
				Power switch: OFF		0 V
18 (P)	Ground	Illumination (RING)	Output	Power switch: ACC		9 – 16 V
				Power switch: ON		0 V
19 (R)	Ground	Electric shift sensor power supply 1	Output	Power switch: ON		5 V
				Power switch: OFF		0 V
22 (L)	Ground	N position output (selector indicator)	Output	READY	N position	0 V
					Other than the above	2 – 4 V
23 (G)	Ground	Encoder ground	—	Always		0 V
24 (BG)	Ground	Encoder signal A	Input	READY	Parking actuator: Inactive	 SIEMD-16420500626111-05-000175586 or

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
						 SIEMD-16420500626111-06-000175587
					Parking actuator: During operation	 SIEMD-16420500626111-04-000175585
25 (B)	Ground	Ground (PWR)	—	Always		0 V
26 (R)	Ground	D position output (selector indicator)	Output	READY	D position	0 V
					Other than the above	2 – 4 V
27 (L)	Ground	Motor coil U-phase	Output	READY	Parking actuator: Inactive	 SIEMD-16420500626111-14-000175583
					Parking actuator: During operation	 SIEMD-16420500626111-15-000175584
28 (BR)	Ground	Motor coil V-phase	Output	READY	Parking actuator: Inactive	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
						SIEMD-16420500626111-16-000175583
					Parking actuator: During operation	 SIEMD-16420500626111-17-000175584
29 (Y)	Ground	Motor coil W-phase	Output	READY	Parking actuator: Inactive	 SIEMD-16420500626111-18-000175583
					Parking actuator: During operation	 SIEMD-16420500626111-19-000175584
30 (W)	Ground	R position output (selector indicator)	Output	READY	R position	0 V
					Other than the above	2 – 4 V
31 (GR)	Ground	CAN-H	Input/Output	—		—
32 (R)	Ground	CAN-L	Input/Output	—		—
33 (SB)	Ground	Parking actuator relay control signal	Output	Power switch: ON		0 V
				Power switch: OFF		9 – 16 V
34 (L)	Ground	Electric shift sensor No.1	Input	Power switch: ON	Selector lever: H (home position) and kept in the R and Nr position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
35 (Y)	Ground	Electric shift sensor No.2	Input	Power switch: ON	Selector lever: H (home position) and kept in the R and Nr position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
36 (P)	Ground	Electric shift sensor No.3	Input	Power switch: ON	Selector lever: H (home position) and kept in the Nr position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
37 (LG)	Ground	Electric shift sensor No.4	Input	Power switch: ON	Selector lever: H (home position) and kept in the Nr and Nd position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
38 (BR)	Ground	P position output (selector indicator)	Output	READY	P position	0 V
					Other than the above	2 – 4 V
39 (BG)	Ground	Electric shift sensor No.7	Input	Power switch: ON	Selector lever: H (home position) and kept in the Nd and D position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
40 (B)	Ground	Electric shift sensor No.8	Input	Power switch: ON	Selector lever: H (home position) and kept in the Nd and D position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
41 (B)	Ground	Electric shift sensor ground 1	—	Always		0 V
42 (BR)	Ground	Battery power supply 2 (Auto ACC)	Input	Power switch: ON or ACC		9 – 16 V
				Power switch: OFF		0 V
44 (G)	Ground	Electric shift sensor No.5	Input	Power switch: ON	Selector lever: H (home position) and kept in the Nr and Nd position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
45 (V)	Ground	Electric shift sensor No.6	Input	Power switch: ON	Selector lever: H (home position) and kept in the Nd position	1.4 - 2.0 V
					Other than the above	2.8 - 3.2 V
46 (SB)	Ground	P position switch No.1	Input	Power switch: ON	P position switch: Pressed	1.4 - 2.0 V
					P position switch: Released	2.8 - 3.2 V
47 (GR)	Ground	P position switch No.2	Input	Power switch: ON	P position switch: Pressed	2.8 - 3.2 V
					P position switch: Released	1.4 - 2.0 V
48 (W)	Ground	Electric shift sensor power supply 2	Output	Power switch: ON		5 V
				Power switch: OFF		0 V
50 (V)	Ground	Electric shift sensor ground 2	—	Always		0 V

NOTE:

There may be a difference between the value measured with a circuit tester and the CONSULT monitor value.

SIEMD-7198729

CAUTION:
Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped, when measuring/checking condition is READY state.

NOTE:
The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition		Value/Status
Lever position 1	READY (Vehicle stopped)	Selector lever: R position	On
		Other than the above	Off
Lever position 2	READY (Vehicle stopped)	Selector lever: Nr position	On
		Other than the above	Off
Lever position 3	READY (Vehicle stopped)	Selector lever: H (home position)	On
		Other than the above	Off
Lever position 4	READY (Vehicle stopped)	Selector lever: Nd position	On
		Other than the above	Off
Lever position 5	READY (Vehicle stopped)	Selector lever: D/B position	On
		Other than the above	Off
P position 1	READY (Vehicle stopped)	P position switch: Pressed	On
		Other than the above	Off
System error type	READY (Vehicle stopped)	When the system is normal	Normal
Ignition power supply	Power switch: ON		Exist
	Power switch: OFF		No supply
Power supply voltage	Power switch: ON or ACC		9 – 18 V
	Power switch: OFF		Approx. 0 V
Travel distance	Power switch: ON		Nearly matches the odometer display
Target shift position	READY (Vehicle stopped)	P position	P
		R position	R
		N position	N
		D position	D
		B position	B
Actual shift position	READY (Vehicle stopped)	P position	P
		R position	R
		N position	N
		D position	D
		B position	B
Parking actuator relay	Power switch: ON		On
	Power switch: OFF		Off

Monitor item	Condition		Value/Status
Park lock state	READY (Vehicle stopped)	P position	Engaged
		Other than the above	Not engaged
Shift sensor 1	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the R and Nr position	On
		Other than the above	Off
Shift sensor 2	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the R and Nr position	On
		Other than the above	Off
Shift sensor 3	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the Nr position	On
		Other than the above	Off
Shift sensor 4	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the Nr and Nd position	On
		Other than the above	Off
Shift sensor 5	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the Nr and Nd position	On
		Other than the above	Off
Shift sensor 6	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the Nd position	On
		Other than the above	Off
Shift sensor 7	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the Nd and D position	On
		Other than the above	Off
Shift sensor 8	READY (Vehicle stopped)	Selector lever: H (home position) and kept in the Nd and D position	On
		Other than the above	Off
P position switch signal	READY (Vehicle stopped)	P position switch: Pressed	On (No.1)
		P position switch: Released	On (No.2)
Ignition signal	Power switch: ON		On
	Power switch: OFF		Off
Range shift inhibit	READY (Vehicle stopped)	When the system is normal	Normal
Shifter error status	READY (Vehicle stopped)	When the system is normal	Off
ECU control mode	READY (Vehicle stopped)	When the system is normal (Other than writing to EEPROM)	Actuator control
Motor control stop request	READY (Vehicle stopped)	When the system is normal	Off
Open control request	READY (Vehicle stopped)	When the system is normal	Off
Parking actuator relay OFF request	READY (Vehicle stopped)	When the system is normal	Off
Shift sensor 1 voltage	Power switch: ON	Selector lever: H (home position) and kept in the R and Nr position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
Shift sensor 2 voltage	Power switch: ON	Selector lever: H (home position) and kept in the R and Nr position	1.1 - 2.1 V

Monitor item	Condition		Value/Status
		Other than the above	2.7 - 3.2 V
Shift sensor 3 voltage	Power switch: ON	Selector lever: H (home position) and kept in the Nr position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
Shift sensor 4 voltage	Power switch: ON	Selector lever: H (home position) and kept in the Nr and Nd position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
Shift sensor 5 voltage	Power switch: ON	Selector lever: H (home position) and kept in the Nr and Nd position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
Shift sensor 6 voltage	Power switch: ON	Selector lever: H (home position) and kept in the Nd position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
Shift sensor 7 voltage	Power switch: ON	Selector lever: H (home position) and kept in the Nd and D position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
Shift sensor 8 voltage	Power switch: ON	Selector lever: H (home position) and kept in the Nd and D position	1.1 - 2.1 V
		Other than the above	2.7 - 3.2 V
P position switch 1 voltage	Power switch: ON	P position switch: Pressed	1.1 - 2.1 V
		P position switch: Released	2.7 - 3.2 V
P position switch 2 voltage	Power switch: ON	P position switch: Pressed	2.7 - 3.2 V
		P position switch: Released	1.1 - 2.1 V
Motor drive mode 1	READY (Vehicle stopped)	Parking actuator: During stop	Standby
Parking actuator working refusal	READY (Vehicle stopped)	Parking actuator: During stop	Off
CPU reset	READY (Vehicle stopped)	When the system is normal	Off
Motor drive mode 2	READY (Vehicle stopped)	Parking actuator: During stop	Standby
U voltage	READY (Vehicle stopped)	No shift operation	9 – 16 V
V voltage	READY (Vehicle stopped)	No shift operation	9 – 16 V
W voltage	READY (Vehicle stopped)	No shift operation	9 – 16 V
Power supply voltage (after filter)	Power switch: ON or ACC		9 – 16 V
	Power switch: OFF		Approx. 0 V
Motor control mode	READY (Vehicle stopped)	When the system is normal	Normal control
Current monitor	READY (Vehicle stopped)	When the system is normal	0 A
Current monitor (resistor diagnosis)	READY (Vehicle stopped)	When the system is normal	0 A
Encoder temporary error flag	READY (Vehicle stopped)	When the system is normal	Off