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2012 NISSAN Skyline Sedan OEM Service and Repair Workshop Manual

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MONITOR ITEM	UNIT	CONDITION	Values/Status
Ambient temperature	°C	Power switch ON	Displays ambient temperature status at that time
Available power in discharge	kW	Power switch ON	Displays dischargeable power at that time. Reference value: 0 kw to 400 kw
LBC status (CAN)	—	Power switch ON	Displays CAN communication error status of LBC at that time. <ul style="list-style-type: none"> • ECU status present • ECU status absent • ECU status confirmed absent
Water pump 1 request duty	%	During pump operation(based on water temperature, etc.)	Duty 80%: Pump speed 5700 rpm Duty 20%: Pump speed 800 rpm
Front traction motor inverter status	—	Power switch ON	Displays inverter (front) status at that time <ul style="list-style-type: none"> • Power OFF • Stand by mode • Power ON • Alternator mode • Sleep
Available charge power (high voltage battery)	kW	Power switch ON	Displays power that is changed based on high voltage battery charge level Reference value: 0 kw to 255 kw
Refrigerant pressure	bar	READY	A/C OFF: 7 bar
Front traction motor inverter voltage	V	Power switch ON or READY	READY: Display battery voltage Except READY: Almost 0 V
System main relay ON state	—	Power switch ON	Displays ON permission status from high voltage battery <ul style="list-style-type: none"> • Not authorized • Authorized
LBC activation status	—	READY	Displays LBC start status <ul style="list-style-type: none"> • WITHOUT • WITH
High voltage battery state request	—	This item is displayed but not used.	
Absolute time since first ignition	min	This item is displayed but not used.	
Grille shutter 1 set position	%	Power switch ON	Active grill shutter 1 fully open: 100%

MONITOR ITEM	UNIT	CONDITION	Values/Status
			Active grill shutter 1 fully close: 0%
Driver side door state	—	Power switch ON	Displays status of driver's door opening. <ul style="list-style-type: none"> • Close • Open
Shift position	—	Power switch ON	Displays shift position <ul style="list-style-type: none"> • R • N • 1 • 2 • 3 • 4 • 5 • 6 • 7 • P • D • Manual mode • Intermediate position (P/R, N/R) • Intermediate position (N/D) • Intermediate position
High voltage connection enable state	—	Power switch ON	Displays high power connection permission / prohibition status. <ul style="list-style-type: none"> • Not authorized: System main relay ON is not requested (including normal and abnormal). • Authorized: There is no abnormality in high voltage circuit or component, and system main relay ON is requested.
Water pump 2 request duty	%	Power switch ON or READY	Power switch ON: Pump stop: Duty 10% READY: Pump speed 800 rpm to 5700 rpm: Duty 20% to 80%
Cooling fan request duty	%	Power switch ON	Fan stop: 10% Fan full operation: 90%
High voltage ready available status	—	Power switch ON	Displays high voltage available status. <ul style="list-style-type: none"> • Unavailable

MONITOR ITEM	UNIT	CONDITION	Values/Status
			<ul style="list-style-type: none"> Available
Port lid open close command	—	This item is displayed but not used.	
Charge connector lock request	—	Power switch ON	Displays charge connector command status to lock actuator <ul style="list-style-type: none"> No request Unlock request Lock request
PHEV pump 1 counter	s	This item is displayed but not used.	
PHEV pump 3 counter	s	This item is displayed but not used.	
Power consumption (A/C)	W	This item is displayed but not used.	
Charge type	—	Power switch ON	Displays charge type <ul style="list-style-type: none"> No charge AC charge DC CHAdeMO charge DC Combo charge DC GBT charge Not used
Charge connector unlock request	—	Power switch ON	Displays charge connector unlock request status <ul style="list-style-type: none"> Unavailable Unlock request Unlock not requested
Charge connector connection detecting	—	Power switch ON	Displays lock status of AC charge plug or DCDC charge plug <ul style="list-style-type: none"> Not present present
Charge request status	—	Preform normal charge	Displays charge lock request status <ul style="list-style-type: none"> Standby Power on Charge Unavailable
On-board charger status	—	Preform normal charge	Displays charge status of in-vehicle charger

MONITOR ITEM	UNIT	CONDITION	Values/Status
			<ul style="list-style-type: none"> • Standby • Power On • Charge
Quick charge port high voltage	—	Preform quick charge	Displays whether high voltage is available on the quick charge port <ul style="list-style-type: none"> • Not present • present
AC charge voltage	V	Preform normal charge	Displays effective inlet voltage of AC charger Reference value: 70 V to 270 V
On-board charger error	—	Preform normal charge	Displays error status of in-vehicle charger <ul style="list-style-type: none"> • No error • Error 1 • Error 2 • Error 3 • Error 4 • Error 5 • Error 6 • Error 7
Charger communication (Vehicle)	—	Preform CCS quick charge	Displays communication status between charger and vehicle. Especially, it means the vehicle status in the charging sequence <ul style="list-style-type: none"> • No charge • Communication start • Parameter check • Cable check • Pre-charge • Power delivery request • Current demand request • Stop request • Welding detection request • Charge stop • Charge connector unplug
Charger request current	A	Power switch ON	Displays charge current value that vehicle requests charger

MONITOR ITEM	UNIT	CONDITION	Values/Status
			Reference value: 30 A
Charger communication (Charger)	—	Preform CCS quick charge	<p>Displays communication status between charger and vehicle. Especially, it means the charger status in the charging sequence</p> <ul style="list-style-type: none"> • No charge • Communicationservice setting request sattet • Parameter check • Cable check • Pre-charge • Power delivery request state • Current demand request • Stop request • Welding detection request • Charge stop • Waiting for unlocking connector
High voltage battery maximum voltage (Vehicle)	V	Preform CCS quick charge	<p>Displays maximum voltage value of vehicle's high voltage battery, which vehicle informs charger at start of charging.</p> <p>Reference value: 370 V</p>
High voltage battery maximum current (Vehicle)	A	Preform CCS quick charge	<p>Displays maximum current value of high voltage battery allowed by vehicle, which vehicle informs to charger at start of charging.</p> <p>Reference value: 50 A</p>
High voltage battery target voltage (Vehicle)	V	Preform CCS quick charge	<p>Displays target voltage value of vehicle's high voltage battery, which vehicle informs charger at start of charging.</p> <p>Reference value: 400 V</p>
Quick charge relay (-) command	—	Preform quick charge	<p>Displays operation command of quick charger relay (-) side</p> <ul style="list-style-type: none"> • Quick charge ongoing: True (Close) • Except the above: False (Open)
CCS normal charge permit switch (Backup)	—	Preform normal charge	<p>Displays operation command of the switch (back up) that vehicle shows charge permission to the charger at AC/CCS charge.</p> <ul style="list-style-type: none"> • OFF: Charge ongoing • ON: Except the above
Quick charge relay (+) command	—	Preform quick charge	<p>Displays operation command of quick charger relay (+) side</p>

MONITOR ITEM	UNIT	CONDITION	Values/Status
			<ul style="list-style-type: none"> • Quick charge ongoing: True (Close) • Except the above: False (Open)
CCS normal charge permit switch	—	Preform normal charge	<p>Displays operation command of the switch that vehicle shows charge permission to the charger at AC/CCS charge.</p> <ul style="list-style-type: none"> • Open Request • Close Request
Charge connector status	—	Power switch ON	<p>Displays charge connector status.</p> <ul style="list-style-type: none"> • Connect • No connect • Connector lock • 2 connect
CCS quick charge terminal temperature	°C	Power switch ON	Displays ambient temperature at that time
DC box temperature	°C	This item is displayed but not used.	
Possible charge maximum power (Charger)	W	Preform CCS quick charge	<p>Displays chargeable maximum power that the charger informs the vehicle.</p> <p>Reference value: 0 W to 200 KW</p>
CCS quick charge communication	—	Preform CCS quick charge	<p>Displays established communication status with the charger at CCS charging.</p> <ul style="list-style-type: none"> • Not detect • Detect
Possible charge maximum voltage (Charger)	V	Preform CCS quick charge	<p>Displays maximum voltage allowed by charger, which charger informs to vehicle at start of charging.</p> <p>Reference value: 0 V to 1000 V</p>
Possible charge minimum current (Charger)	A	Preform CCS quick charge	<p>Displays minimum current allowed by charger, which charger informs to vehicle at start of charging.</p> <p>Reference value: 0 A to 400 A</p>
Possible charge maximum current (Charger)	A	Preform CCS quick charge	<p>Displays maximum current allowed by charger, which charger informs to vehicle at start of charging.</p> <p>Reference value: 0 A to 400 A</p>
Vehicle compatible normal charger	—	Power switch ON	<p>Displays the type of AC charger applied to the vehicle</p> <ul style="list-style-type: none"> • One phase • Two phases

MONITOR ITEM	UNIT	CONDITION	Values/Status
			<ul style="list-style-type: none"> • Three phases • Unavailable value
Normal charge input current	A	Preform normal charge	Displays AC input current Reference value: 0 A to 51 A
AC charge available power	kW	Preform normal charge	Displays AC chargeable power Reference value: 0 kw to 24 kw
Vehicle states	—	This item is displayed but not used.	
Engine drying has timed out	—	This item is displayed but not used.	
Engine drying request	—	This item is displayed but not used.	
Rear traction motor inverter permission regenerative torque 2	N·m	READY	300 Nm when the vehicle is stopped (the battery level is sufficient) decreases as vehicle speed increases
Rear traction motor inverter permission regenerative torque 1	N·m	READY	300 Nm when the vehicle is stopped (the battery level is sufficient) decreases as vehicle speed increases
Insulation resistance (high voltage battery)	Ohm	READY	Displays insulation resistance value of high voltage battery Reference value: 1000 kohm (1000 kohm is normally displayed, when insulation is secured.)
High voltage battery temperature	°C	Power switch ON	Displays ambient temperature at that time. Reference value: -40°C to 80°C
High voltage battery external available power	kW	READY	Displays power that high voltage battery can supply externally Reference value: 0 kw to 400 kw
High voltage connection request	—	READY	Displays high voltage connection request status <ul style="list-style-type: none"> • Emergency disconnections • Not used • Normal connection • Normal disconnection
System main relay 2 operation request	—	READY	Display rotation command status to system main relay 2 (-) side <ul style="list-style-type: none"> • no request • Request
Insulation check for charge feedback	—	This item is displayed but not used.	
Front traction motor speed	rpm	Driving after READY	Display front traction motor speed

MONITOR ITEM	UNIT	CONDITION	Values/Status
			Reference value: -20000 rpm to +20000 rpm
Rear traction motor speed	rpm	Driving after READY	Display rear traction motor speed Reference value: -20000 rpm to +20000 rpm
Rear traction motor inverter permission power torque	N·m	Driving after READY	300 Nm when the vehicle is stopped (the battery level is sufficient) decreases as vehicle speed increases
Front traction motor inverter permission power torque	N·m	Driving after READY	300 Nm when the vehicle is stopped (the battery level is sufficient) decreases as vehicle speed increases
Charge duration memorized 01	min	This item is displayed but not used.	
Charge duration memorized 02	min	This item is displayed but not used.	
Charge duration memorized 03	min	This item is displayed but not used.	
Charge duration memorized 04	min	This item is displayed but not used.	
Charge duration memorized 05	min	This item is displayed but not used.	
Charge duration memorized 06	min	This item is displayed but not used.	
Charge duration memorized 07	min	This item is displayed but not used.	
Charge duration memorized 08	min	This item is displayed but not used.	
Charge duration memorized 09	min	This item is displayed but not used.	
Charge duration memorized 10	min	This item is displayed but not used.	
Control pilot frequency	Hz	Charge ongoing	Displays frequency of control pilot signal, which is used for normal charge or quick charge (CCS) as a value according to the charge status.
Control pilot duty	%	Charge ongoing	Displays duty of control pilot voltage which is used for normal charge or quick charge (CCS) as a value according to the charge status.
Control pilot voltage	V	Charge ongoing	Displays control pilot voltage which is used for normal charge or quick charge (CCS) as a value according to the charge status.
Charge connector connection detecting voltage	V	Power switch ON	Displays charge connector voltage value of normal charger. Reference value: 3.5 V (MAX. 5 V, lower during interlock)
AC charge test	—	This item is displayed but not used.	
DC charge test	—	This item is displayed but not used.	
Insulation failure status	—	Power switch ON	Displays status that insulation resistance is decreasing <ul style="list-style-type: none"> • No insulation failure state • Insulation failure state level 1

MONITOR ITEM	UNIT	CONDITION	Values/Status
			<ul style="list-style-type: none"> Insulation failure state level 2 Insulation failure state level 3
Connection detecting 1	—	Power switch ON	Displays status according to vehicle lock detection status
Connection detecting 2	—	Power switch ON	Displays status according to vehicle lock detection status
Power consumption (PTC)	W	Heater is operating	Displays power consumption of pre heater Setting temperature and full hot: 0 W to 9000 W
HV1-CAN clock error (BMS)	—	Power switch ON	Displays CAN communication error status at that time. Inform the confirmed error of Clock diagnosis
PT-FD frame loss (HFM)	—	Power switch ON	Displays CAN communication error status at that time. Inform the confirmed error of unreceived diagnosis
Water pump 2 status	—	Power switch ON or READY	Displays status of water pump 2 (high voltage battery cooling system) <ul style="list-style-type: none"> Life beat status Insufficient speed status Over temperature status Over temp warning status Internal error over and under voltage status Dry run state No pump feed back status
Pump1 cooling flow rate	—	This item is displayed but not used.	
Driver seat belt status	—	Power switch ON	Displays driver's seat belt status <ul style="list-style-type: none"> Not monitored OK NG
Driver seat belt buckle status	—	Power switch ON	Displays driver's seat buckle status <ul style="list-style-type: none"> Not monitored Not fastened Fastened
PT-FD frame loss (AIRB)	—	Power switch ON	Displays CAN communication error status at that time.