DICBZ–01

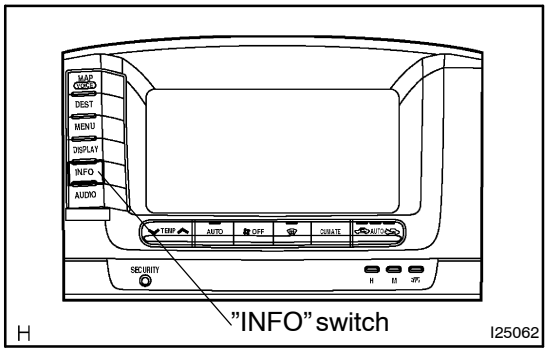
PRE–CHECK

1. DIAGNOSTIC START –UP/FINISH

HINT:

- The illustrations may differ depending on the device settings (option, etc.). Therefore, some detailed areas may not be shown exactly same as on the actual vehicle.
- After the ignition switch is turned on, check that the map is displayed before starting the diagnostic mode. Otherwise, some items cannot be checked.

(a) There are 2 methods to start diagnostic mode. Start the mode by using one of them.

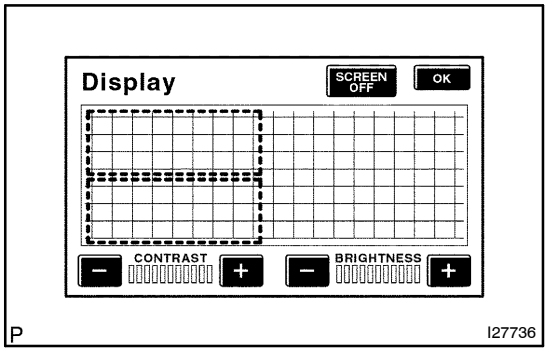


(b) Method 1

(1) Start the engine.

(2) While pressing and holding "INFO" switch, operate "TAIL" switch, OFF → TAIL → OFF → TAIL → OFF → TAIL → OFF.

(3) The diagnostic mode starts and "Service Check" screen will be displayed. Service inspection starts automatically and the result will be displayed.



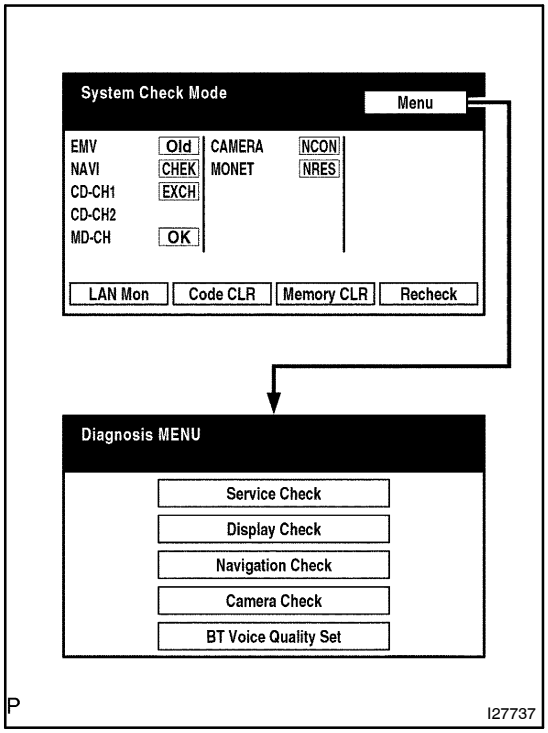
(c) Method 2

(1) Start the engine.

(2) Switch to the "Display Check" screen.

(3) From the display adjustment screen, touch the corners of the screen in the following order: upper left → lower left → upper left → lower left → upper left → lower left.

(4) The diagnostic mode starts and "Service Check" screen will be displayed. Service inspection starts automatically and the result will be displayed.



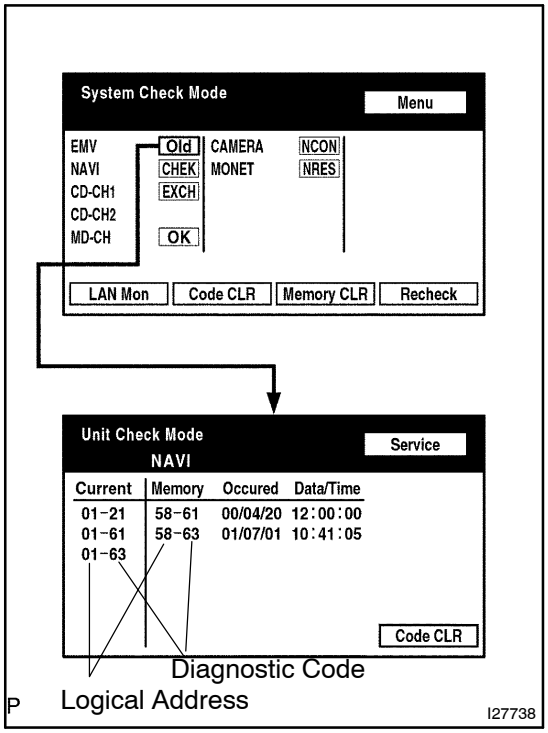
(d) Diagnosis MENU
Pressing the menu switch on the service check screen, diagnostic window will be displayed.

(e) There are 2 methods to exit. Use one of them.
(1) Turn the ignition switch off.
(2) Press the ”Display” switch for 3 seconds.

2. SYSTEM CHECK MODE (DTC CHECK)

HINT:
The illustrations may differ depending on the device settings (option, etc.). Therefore, some detailed areas, may not be shown exactly same as on the actual vehicle.

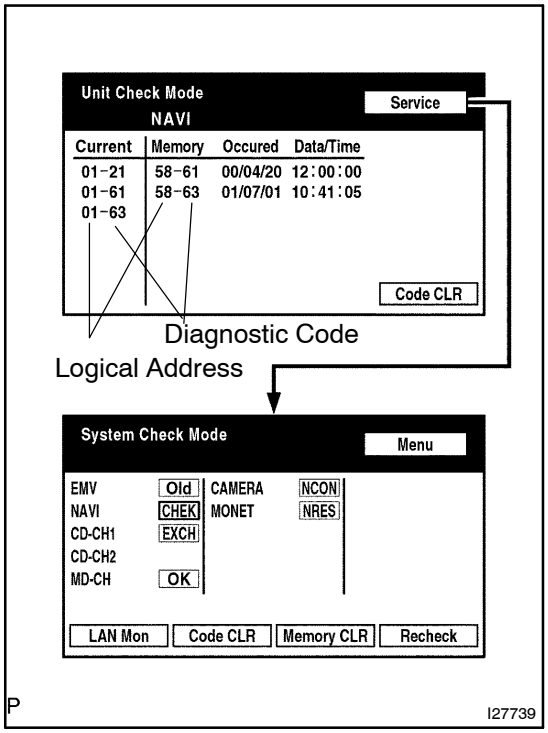
(a) Start the diagnostic mode.



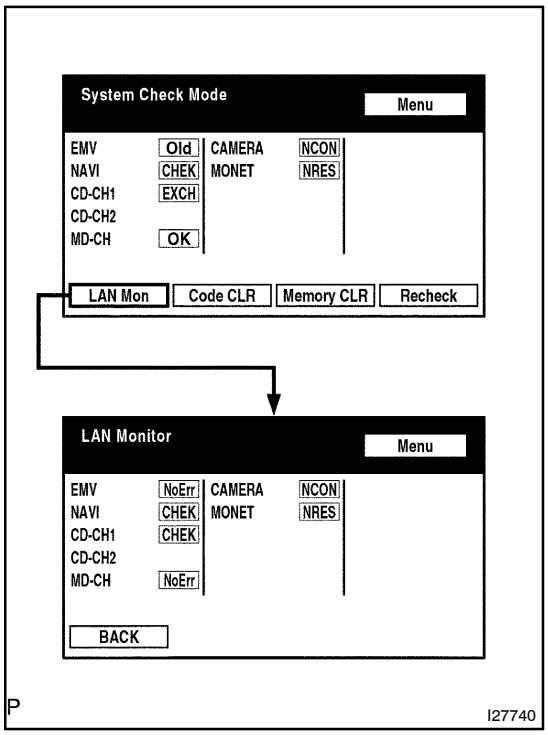
(b) Read the service check result.
If all devices report is ”EXCH”, ”CHEK” or ”Old” touch the display to check the contents on the ”Unit Check Mode” screen and fill them on the customer problem analysis check sheet.

HINT:

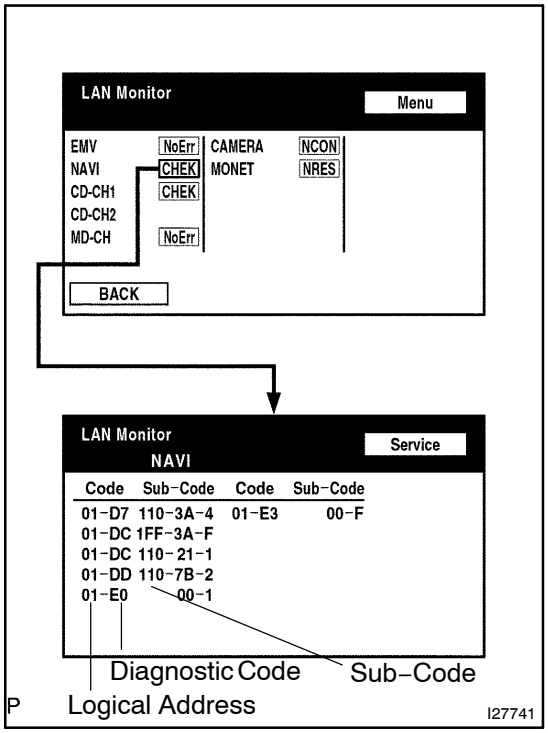
- If all check results are ”OK” go to communication DTC check (Go to step 3).
- If a device name is not known, its physical address is displayed.



HINT:
If ”EXCH”, ”CHEK” and ”Old” as well as ”OK” exist, press the service switch to return to the ”System Check Mode”. Then, check the ”Unit Check Mode” screen and fill them in on the customer problem analysis check sheet.



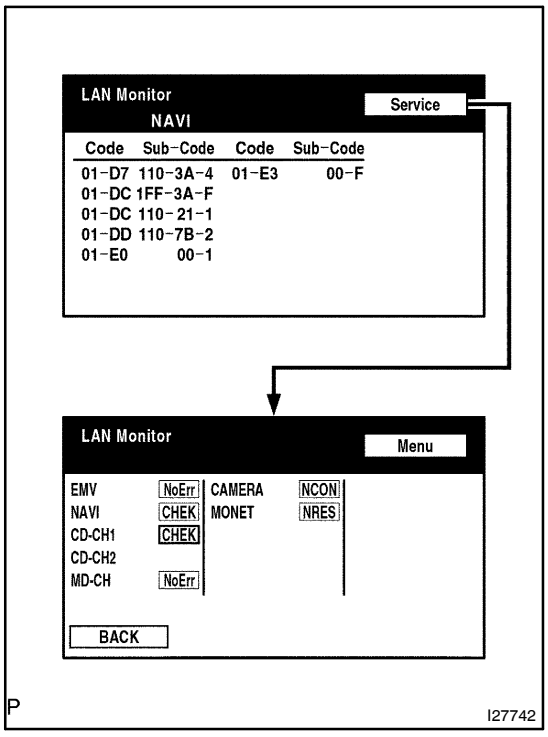
(c) Read the communication diagnostic check result.
(1) Return to the ”System Check Mode”, and press ”LAN Mon” switch to enter the LAN monitor window.



(2) If the result is "CHEK" or "Old" touch this display to check the contents on the "Unit Check Mode" screen and fill them in on the customer problem analysis check sheet.

HINT:

- If all check results are "No Err" the system judges that no DTC exists.
- The sub –code (relevant device) will be indicated by its physical address.



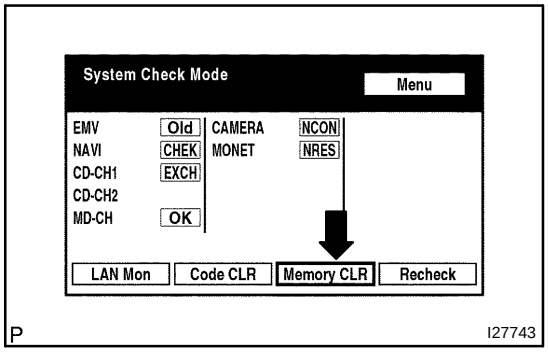
HINT:

If other devices return "CHEK" press the "Service" switch to return to the "LAN Monitor" screen. Then, check the individual communication diagnostic screen for the next device and fill out the result on the customer problem analysis check sheet.

3. SERVICE CHECK MODE (DTC CLEAR/RECHECK)

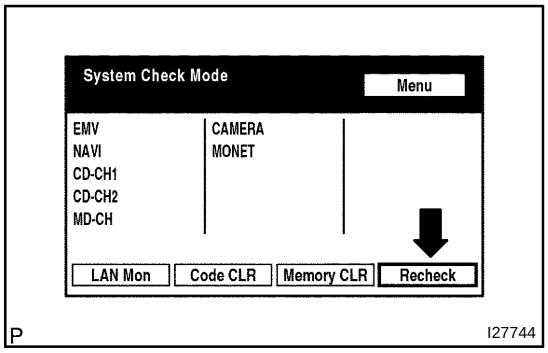
HINT:

The illustrations may differ from the actual vehicle depending on the device settings and options.



(a) Clear DTC

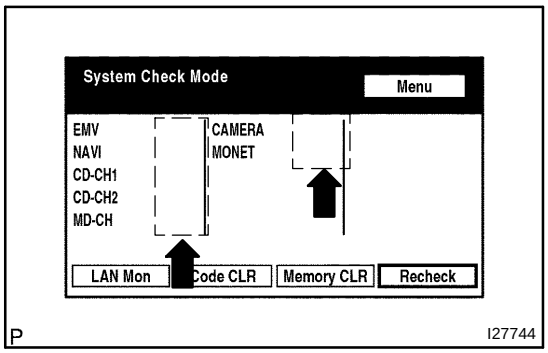
(1) Press ”Memory CLR” switch for 3 seconds.



(2) Check result is cleared.

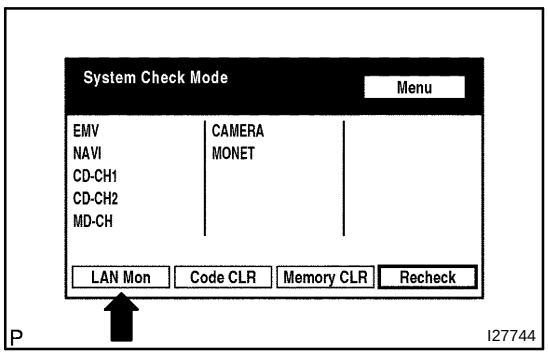
(b) Recheck

(1) Press the ”Recheck” switch.

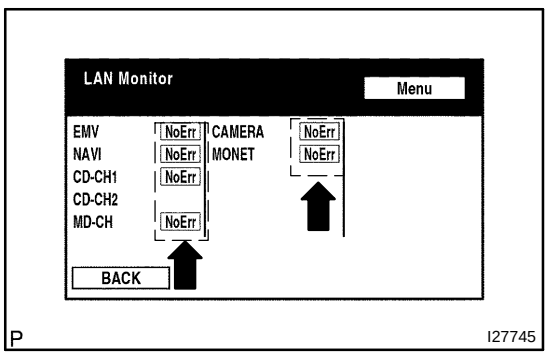


(2) Confirm that all diagnostic codes are ”OK” when the check results are displayed.

If a code other than ”OK” is displayed, troubleshoot again.



(3) Press ”LAN Mon” to switch to ”LAN Monitor” mode.



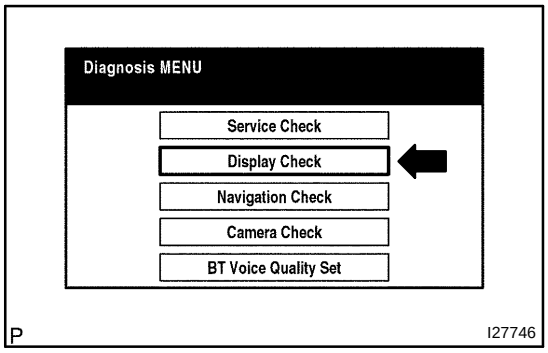
(4) Confirm that all diagnostic codes are ”No Err”.

If a code other than ”No Err” is displayed, troubleshoot again.

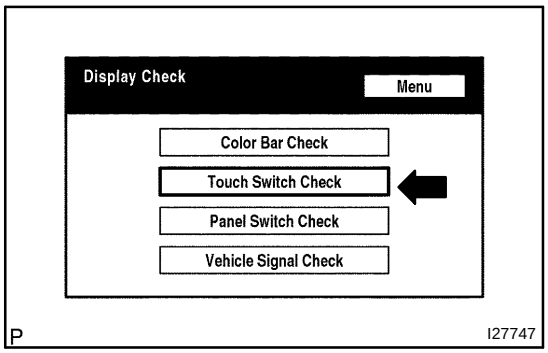
4. DISPLAY CHECK MODE (TOUCH SWITCH CHECK)

HINT:

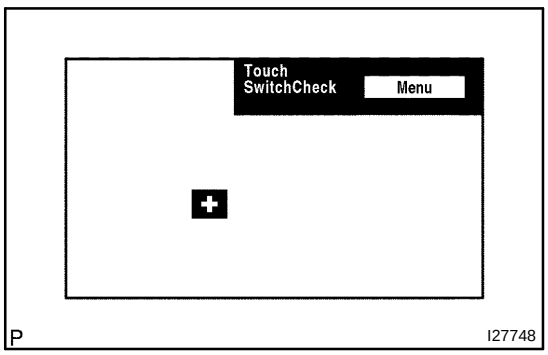
- This mode checks the touch switch operation condition on the multi−display.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.



(a) Select ”Display Check” from the ”Diagnosis MENU” screen.



(b) Select ”Touch Switch Check” from the ”Display Check” screen.



(c) Touch the display anywhere in the open area to perform the check when the ”Touch Switch Check” screen is displayed.

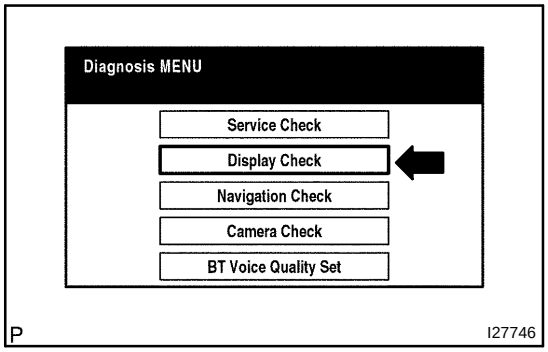
HINT:

- A ”+” mark is displayed where the display is touched.
- The ”+” mark remains on the display even after the finger is removed.

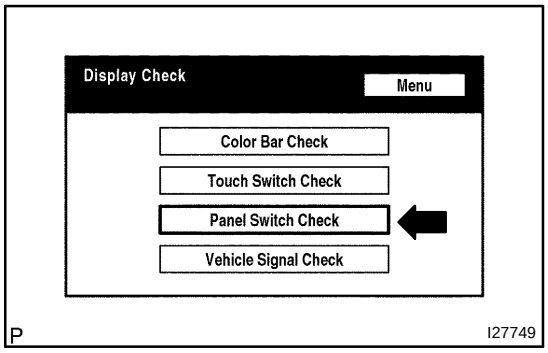
5. DISPLAY CHECK MODE (PANEL SWITCH CHECI)

HINT:

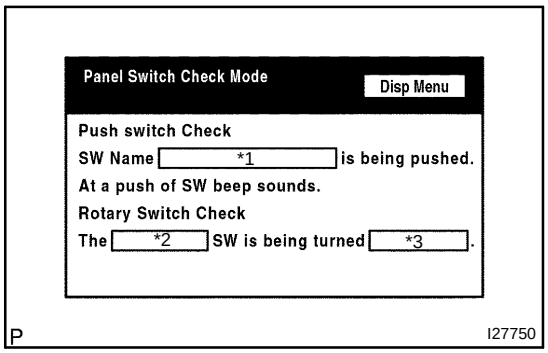
- This mode checks the panel switch operation response on the multi−display.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.



(a) Select ”Display Check” from the ”Diagnosis MENU” screen.



(b) Select ”Panel Switch Check” from the ”Display Check” screen.



(c) Operate each switch and check that the switch name and condition are correctly displayed.

HINT:

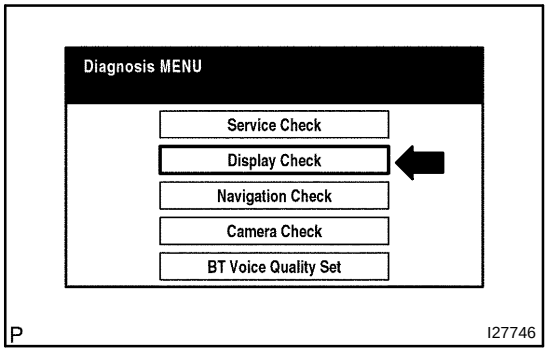
Pressing the ”DISPLAY” switch for 3 seconds will exit the diagnostic mode.

Display	Contents
Push switch name/*1	S Name of the pressed switch is displayed. S If more than one switch is pressed, ”MULTIPLE” is displayed.
Rotary switch name/*2	Name of the rotary switch is displayed.
Rotary switch direction/*3	Direction of the rotary switch is rotated.

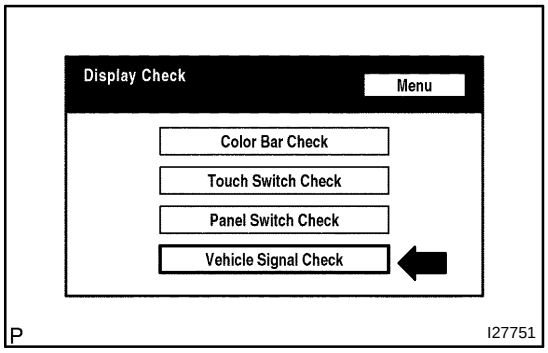
6. DISPLAY CHECK MODE (VEHICLE SINGNAL CHECK)

HINT:

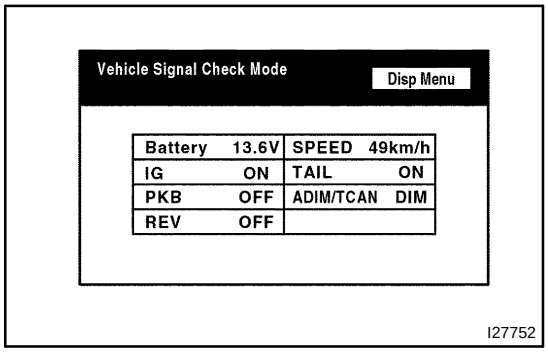
- S This mode checks the vehicle signal status input to the multi−display.
- S Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.



(a) Select ”Display Check” from the ”Diagnosis MENU” screen.



(b) Select ”Vehicle Signal Check” from the ”Display Check” screen.

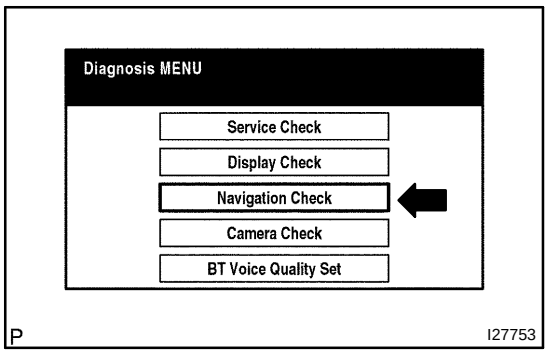


(c) When the ”Vehicle Signal Check Mode” screen is displayed, check all the vehicle signal conditions.

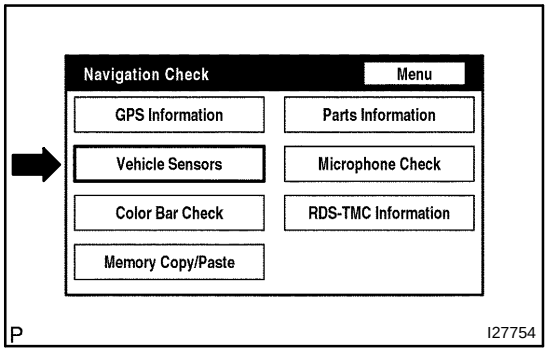
7. NAVIGATION CHECK MODE (VEHILCE SENSORS)

HINT:

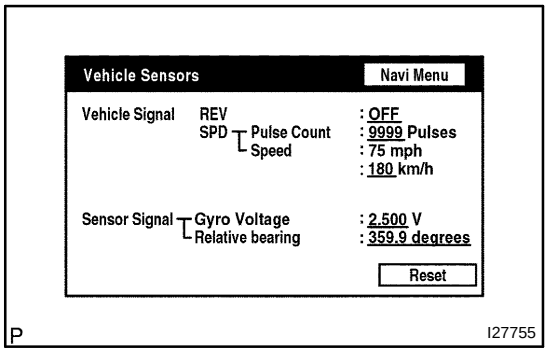
- This mode checks the vehicle signal status to the navigation ECU.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.



(a) Select ”Navigation Check” from the ”Diagnosis MENU” screen.



(b) Select ”Vehicle Sensork” from the ”Navigation Check” screen.



(c) Check all the signals and sensors when vehicle signal information is displayed.

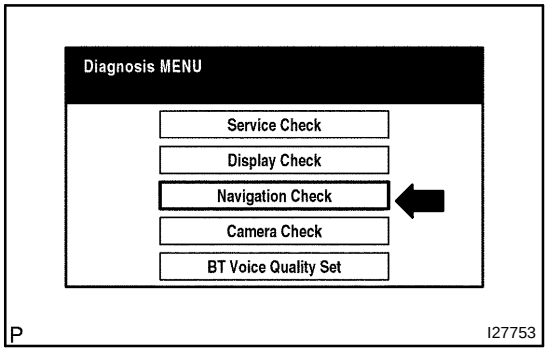
HINT:

This screen is updated once per second when input signals to the vehicle are changed.

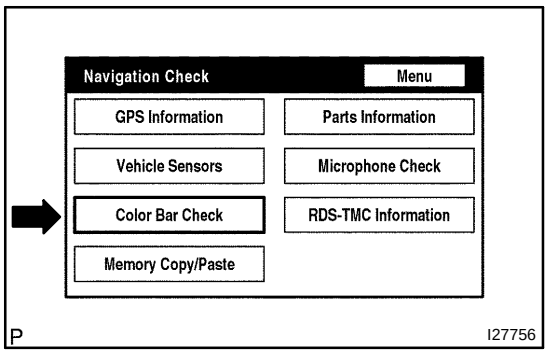
8. NAVIGATION CHECK MODE (NAVI COLOR VAR CHECK)

HINT:

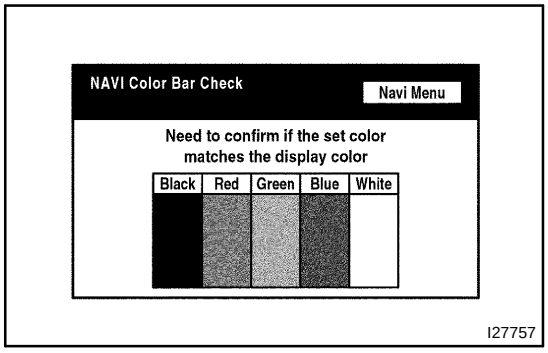
- This mode checks the color display on the navigation ECU.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.



(a) Select ”Navigation Check” from the ”Diagnosis MENU” screen.



(b) Select ”Color Bar Check” from the ”Navigation Check” screen.



(c) Check each color of the color bar when the ”NAVI Color Bar Check” screen is displayed.

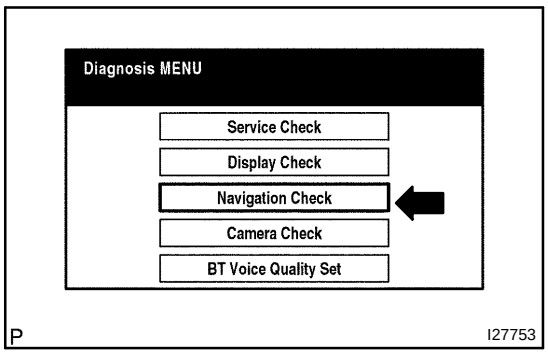
HINT:

Colors will not be displayed full−screen as in ”Display Check Mode”.

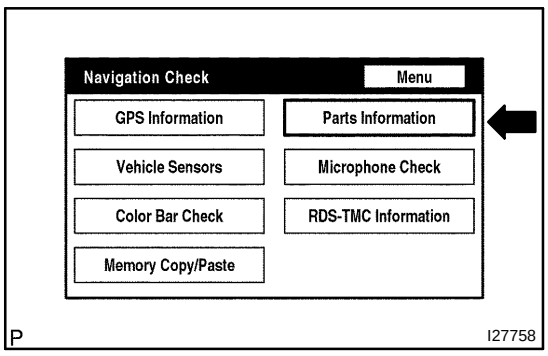
9. NAVIGATION CHECK MODE (PARTS INFORMATION)

HINT:

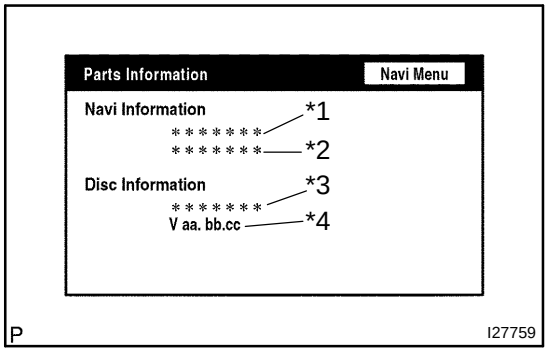
- This mode displays product information on the navigation systems and discs.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.



(a) Select ”Navigation Check” from the ”Diagnosis MENU” screen.



(b) Select ”Parts Information” from the ”Navigation Check” screen.



(c) Check the navigation and disc information when the ”Parts Information” screen is displayed.

Display	Contents
Navigation Manufacturer/*1	Navigation ECU manufacturer name is displayed.
Navigation Version/*2	Navigation ECU version is displayed.
Disc Manufacturer/*3	Map disc manufacturer is displayed.
Disc Version/*4	Map disc version is displayed.

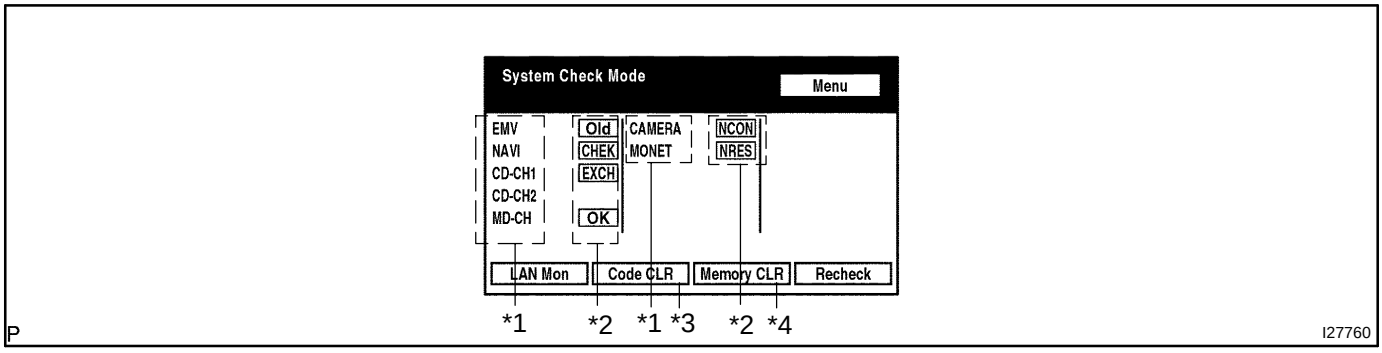
10. DIAGNOSIS DISPLAY DETAILED DESCRIPTION

HINT:

- This section contains a detailed description of displays within diagnostic mode.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.

(a) System check

(1) System check mode display



Device Names and hardware Address/*1

HINT:

- Registered device names are displayed below.
- If a device name is unknown to the system, its physical address is shown instead.

Address No.	Name	Address No.	Name
110	EMV	120	AVX
128	1DIN TV	140	AVN
144	G−BOOK	178	NAVI
17C	MONET	190	AUDIO H/U
1AC	CAMERA−C	1B0	Rr−TV
1C0	Rr−CONT	1C2	TV−TUNER2
1C4	PANEL	1C6	G/W
1C8	FM−M−LCD	1D8	CONT−SW
1EC	Body	1F0	RADIO TUNER
1F1	XM	1F2	SIRIUS
230	TV−TUNER	240	CD−CH2
250	DVD−CH	280	CAMERA
360	CD−CH1	3A0	MD−CH

Address No.	Name	Address No.	Name
17D	TEL	440	DSP−AMP
530	ETC	5C8	MAYDAY
1A0	DVD−P	1D6	CLOCK
1F4	RSA	1F6	RSE
480	AMP		

Check Result/*2

HINT:

Result codes for all devices are shown below.

Result	Meaning	Action
OK	The device did not respond with a DTC (excluding communication DTCs from the AVC−LAN).	−
EXCH	The device responds with a ”replace”−type DTC.	Look up the DTC in ”Unit Check Mode” and replace the device.
CHEK	The device responds with a ”check”−type DTC.	Look up the DTC in ”Unit Check Mode”.
NCON	The device was previously present, but does not respond in diagnostic mode.	1. Check power supply wire harness of the device. 2. Check the AVC−LAN of the device.
Old	The device responds with an ”old”−type DTC.	Look up the DTC in ”Unit Check Mode”.
NRES	The device responds in diagnostic mode, but gives no DTC information.	1. Check power supply wire harness of the device. 2. Check the AVC−LAN of the device.

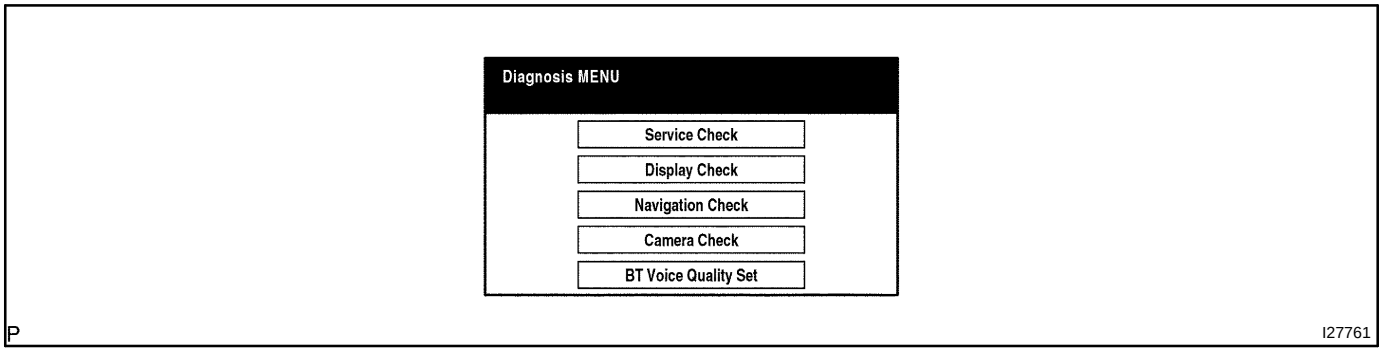
Code Clear/*3

Present DTCs are cleared.

Memory Clear/*4

Present and past DTCs and registered connected device names are cleared.

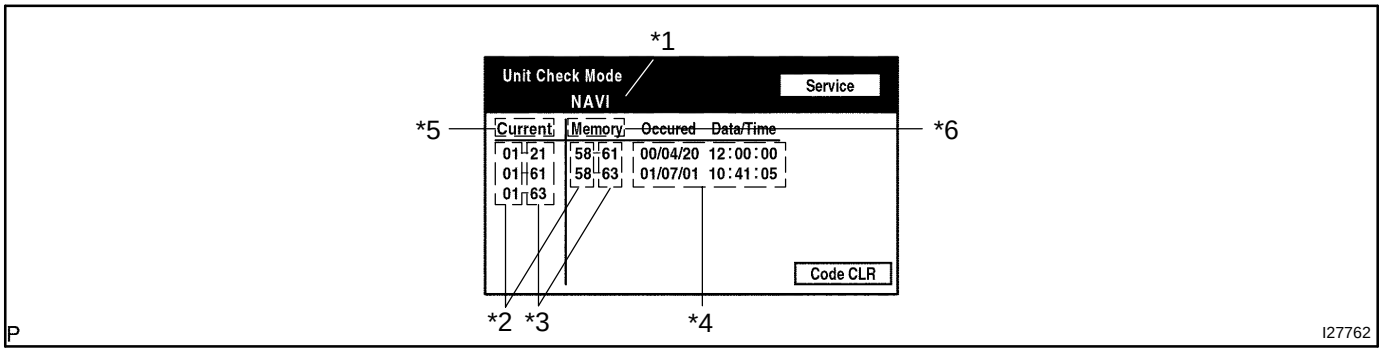
(2) Diagnosis MENU Display



HINT:

Each item is grayed out or not displayed based on the device settings.

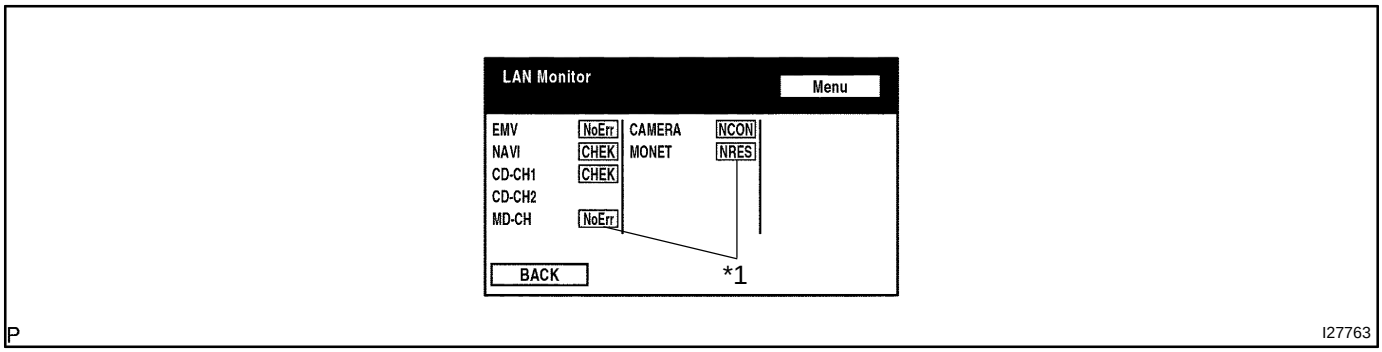
(3) Unit check mode screen



Screen Description

Display	Contents
Device name/*1	Target Device
Segment/*2	Target Device Logical address
DTC/*3	DTC (Diagnostic Trouble Code)
Timestamp/*4	The time and date of past DTCs are displayed. (The year is displayed in 2 digit format.)
Present Code/*5	The DTC output at the service check is displayed.
Past Code/*6	Diagnostic memory results and recorded DTCs are displayed.

(4) LAN monitor (Original) screen



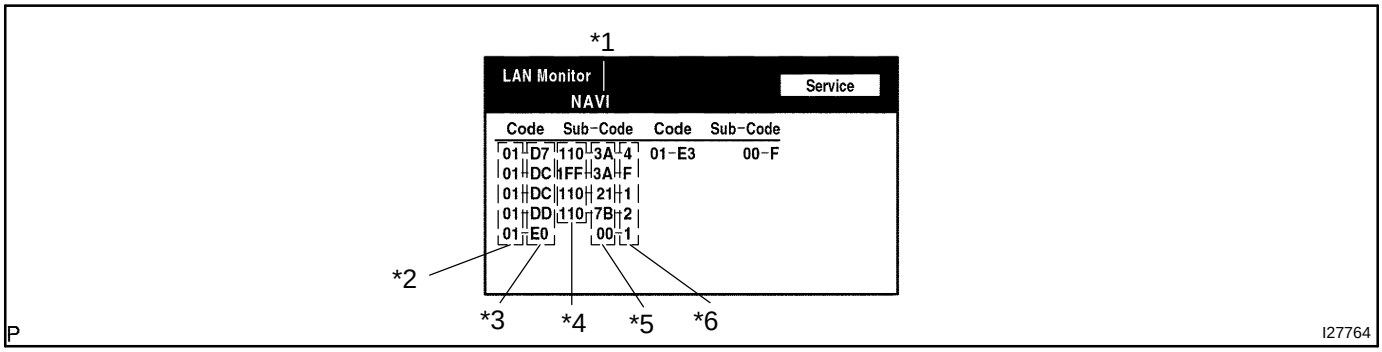
Check result

HINT:

Check results of all the devices are displayed.

Result	Meaning	Action
No Err (OK)	There are no communication DTCs.	−
CHEK	The device responds with a ”check”−type DTC.	Look up the DTC in ”Unit Check Mode”.
NCON	The device was previously present, but does not respond in diagnostic mode.	1. Check power supply wire harness of the device. 2. Check the AVC−LAN of the device.
Old	The device responded with an old−type DTC.	Look up the DTC in ”Unit Check Mode”.
NRES	Device responds in diagnostic mode, but gives no DTC information.	1. Check power supply wire harness of the device. 2. Check the AVC−LAN of the device.

(5) LAN monitor (Individual) screen

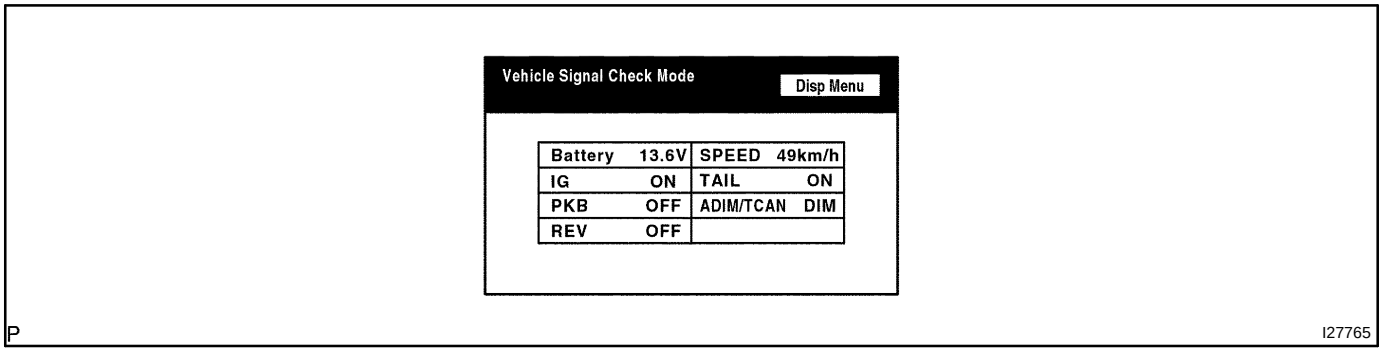


Screen Description

Display	Contents
Device name/*1	Target device
Segment/*2	Target logical address
DTC/*3	DTC (Diagnostic Trouble Code)
Sub−Code (device address)/*4	Physical address stored with DTC. (If there is no address, nothing is displayed.)
Connection check No./*5	Connection check number stored with DTC.
DTC occurrence/*6	Number of times the same DTC has been recorded.

(b) Display check

Vehicle signal check mode screen



Screen Description

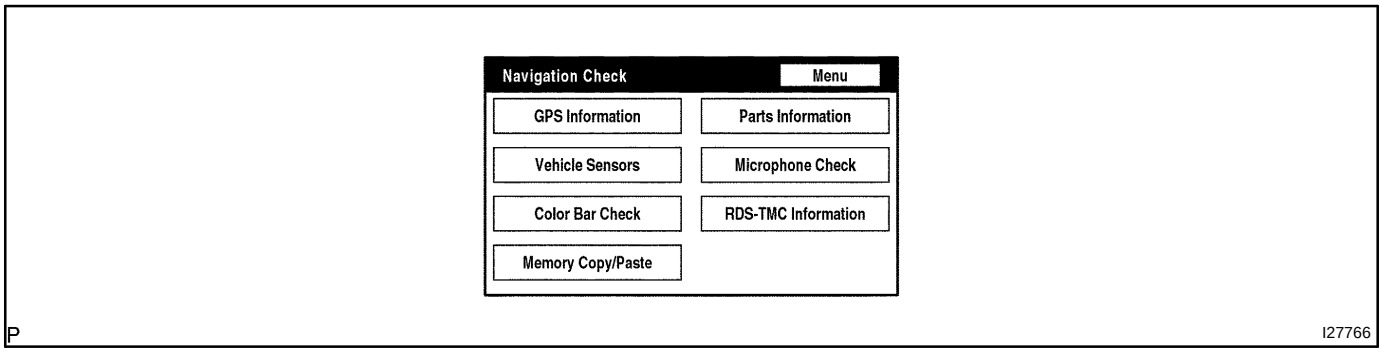
Name	Contents
Battery	Battery voltage is displayed.
PKB	Parking brake ON/OFF state is displayed.
REV	Reverse signal ON/OFF state is displayed.
IG	IG switch ON/OFF state is displayed.
ADIM/TCAN	Brightness state DIM (with)/ BRIGHT (without) is displayed.
SPEED	The vehicle speed is displayed in km/h.
TAIL	TAIL signal (Head lamp dimmer switch) ON/OFF state is displayed.

HINT:

- Only items sending a vehicle signal will be displayed.
- This screen is updated once per second when input signals to the vehicle are changed.

(c) Navigation check

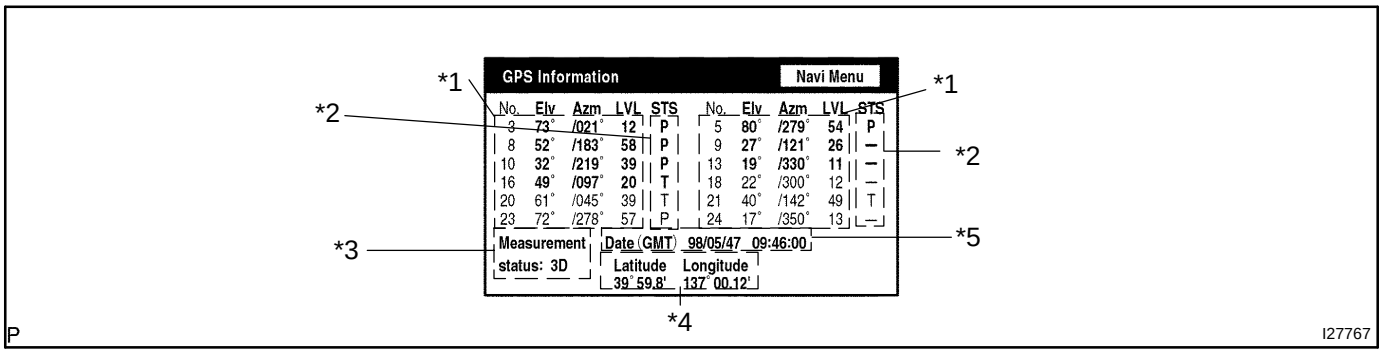
(1) Navigation check MENU screen



HINT:

Each item is grayed out or not displayed based on the device settings.

(2) GPS information screen



Satellite information/*1

Information from a maximum of 12 satellites is displayed on the screen. This information includes the target GPS satellite number, elevation angle, direction and signal level.

Receiving condition/*2

Display	Contents
01H	The system cannot receive a GPS signal.
02H	The system is tracing a satellite.
03H	The system is receiving a GPS signal, but is not using it for location.
04H	The system is using the GPS signal for location.

Measurement information/*3

Display	Contents
2D	2−dimensional location method is being used.
3D	3−dimensional location method is being used.
NG	Location data cannot be used.
Error	Reception error has occurred.
−	Any other state.

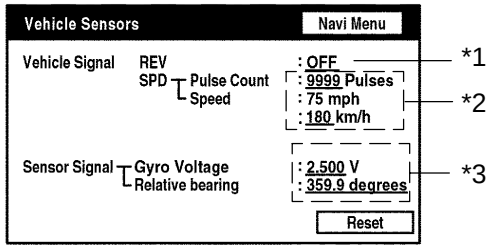
Position information/*4

Display	Contents
Position	Latitude and longitude information on the current position is displayed.

Date information/*5

Display	Contents
Date	The date/time information obtained from GPS signal is displayed in Greenwich mean time (GMT). The last 4 digits are displayed.

(3) Vehicle signal check screen



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Vehicle signal

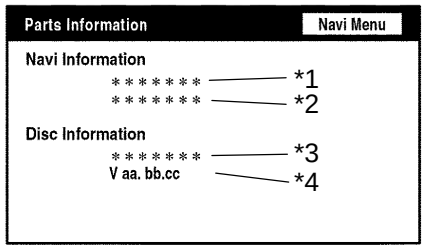
Display	Contents
REV/*1	REV signal ON/OFF state is displayed.
SPD/*2	SPD signal condition is displayed.

Sensor signal

Display	Contents
Gyro sensor/*3	Gyro sensor output condition is displayed (when the vehicle runs straight or is stationary, the voltage is approximately 2.5 V).

HINT:
Signals are updated once per second only when vehicle sensor signals are changed.

(4) Parts information screen



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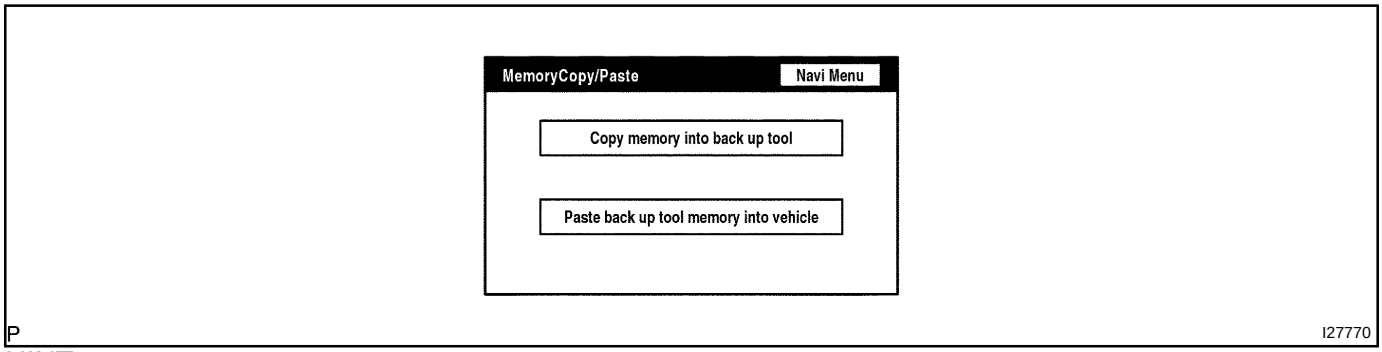
Screen description

Display	Contents
Navigation Manufacturer/*1	Navigation ECU manufacturer is displayed.
Navigation Version No./*2	Navigation ECU version is displayed.
Disc Manufacturer/*3	Map disc manufacturer is displayed.
Disc Version No./*4	Map disc version is displayed.

(5) Memory copy/paste screen



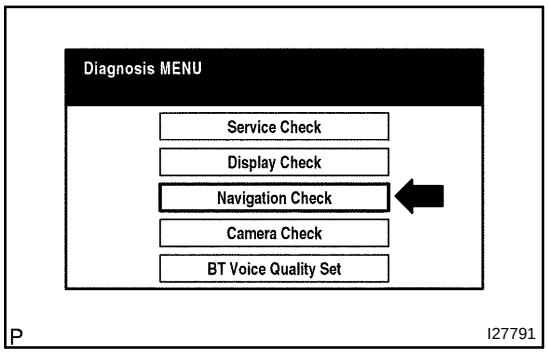
HINT:

This function cannot be used.

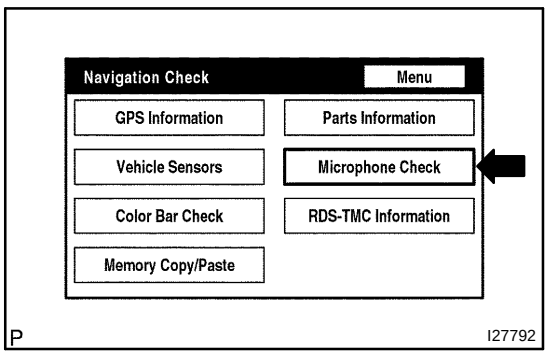
11. MICROPHONE CHECK

HINT:

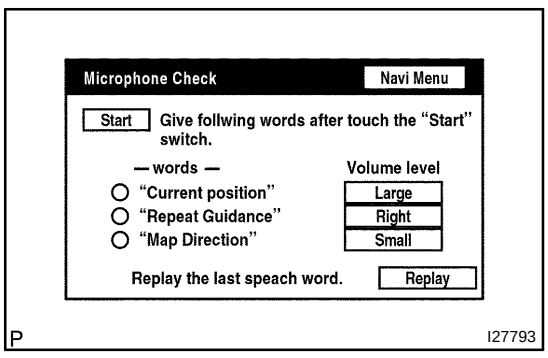
- The microphone is checked in the ”Navigation Check (Microphone Check)” mode.
- Illustrations may differ from the actual vehicle depending on vehicle specifications.



(a) Select ”Navigation check” from ”Diagnosis MENU”



(b) Select ”Micrphone Check” from ”Navigation Check”.

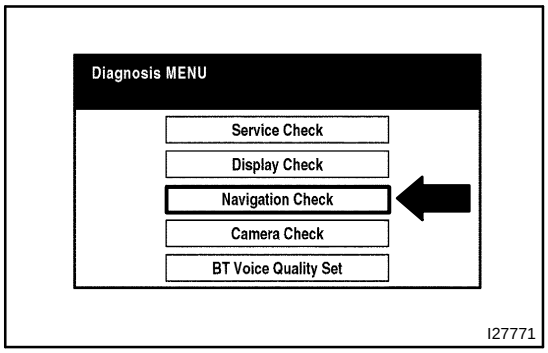


(c) Perform the microphone check by following the directions on the ”Microphone Check” screen.

12. SCREEN NOISE AUTOMATIC ADJUSTMENT

HINT:

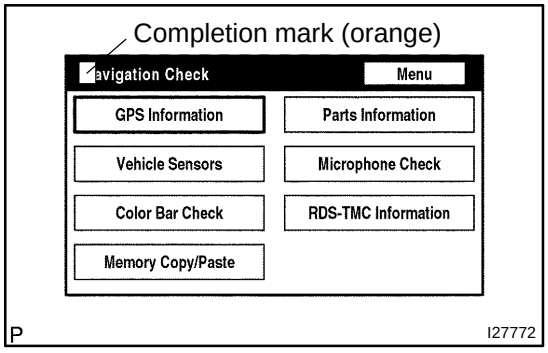
- This adjustment is performed to reduce noise when screen noise occurs upon replacing the multi−display, the navigation ECU or the television camera ECU.
- Illustrations may differ from the actual vehicle depending on the device settings and options. Therefore, some detailed areas may not be shown exactly the same as on the actual vehicle.
- Perform both procedures below when the multi−display is replaced.



(a) When either the multi−display or the navigation ECU is replaced:

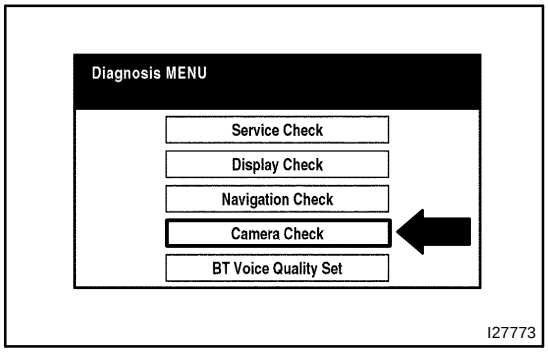
(1) Turn the ignition switch to the ACC position and wait for at least 6 seconds to activate the diagnostic mode.

(2) Select ”Navigation Check” from the ”Diagnosis MENU” screen.



(3) The screen enters ”Navigation Check” with a beeping sound. Adjustment is completed when the completion mark is displayed.

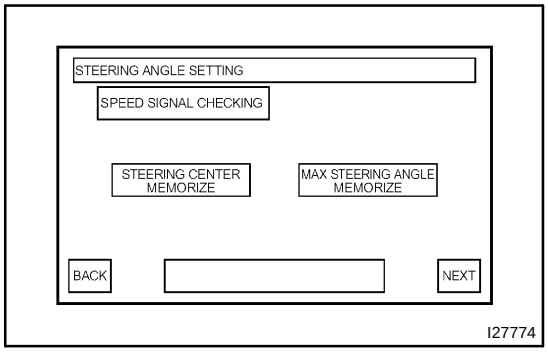
(4) Cancel the diagnostic mode.



(b) When either the multi−display or the television camera ECU is replaced:

(1) Turn the ignition switch to the ACC position and wait for at least 6 seconds to activate the diagnostic mode.

(2) Select ”Camera Check” from the ”Diagnosis MENU” screen.



(3) Adjustment is completed when the steering angle setting screen is displayed.

(4) Cancel the diagnostic mode.

HINT:

- If the automatic adjustment is not performed (only step 1) only upon replacing the multi−display, a beeping sound can be heard for 3 seconds (while the initial screen is displayed) after turning the ignition switch to the ACC position.
- Perform the automatic adjustment again if a beeping sound can be heard within 3 seconds.