05A7A–01

PRE–CHECK

1. USER TROUBLES UNDER NORMAL CONDITION OF THE NAVIGATION SYSTEM

(a) Voice guidance is not performed even though the system is in normal condition when:
  (1) The destination is not set up.
  (2) The vehicle is not driving on the set route. (The remaining distance is not displayed at the lower left of the map screen that tells the current position of the vehicle.)
  (3) ”Guidance in Other Modes” is not set up. (In this case no voice guidance is given except on the map screen.)

(b) The vehicle icon turns around arbitrarily on the screen even when the system is in normal condition.

If the ignition switch is turned to ”ACC” or ”ON” while the vehicle is turning around such as being on the turntable, the Navigation System memorizes the angle speed of that moment as the standard figure. To solve this problem, at the vehicle speed of 0 MPH (0 km/h), turn off the ignition switch, and then turn it to ”ACC” or ”ON” again to see whether any trouble occurs again.

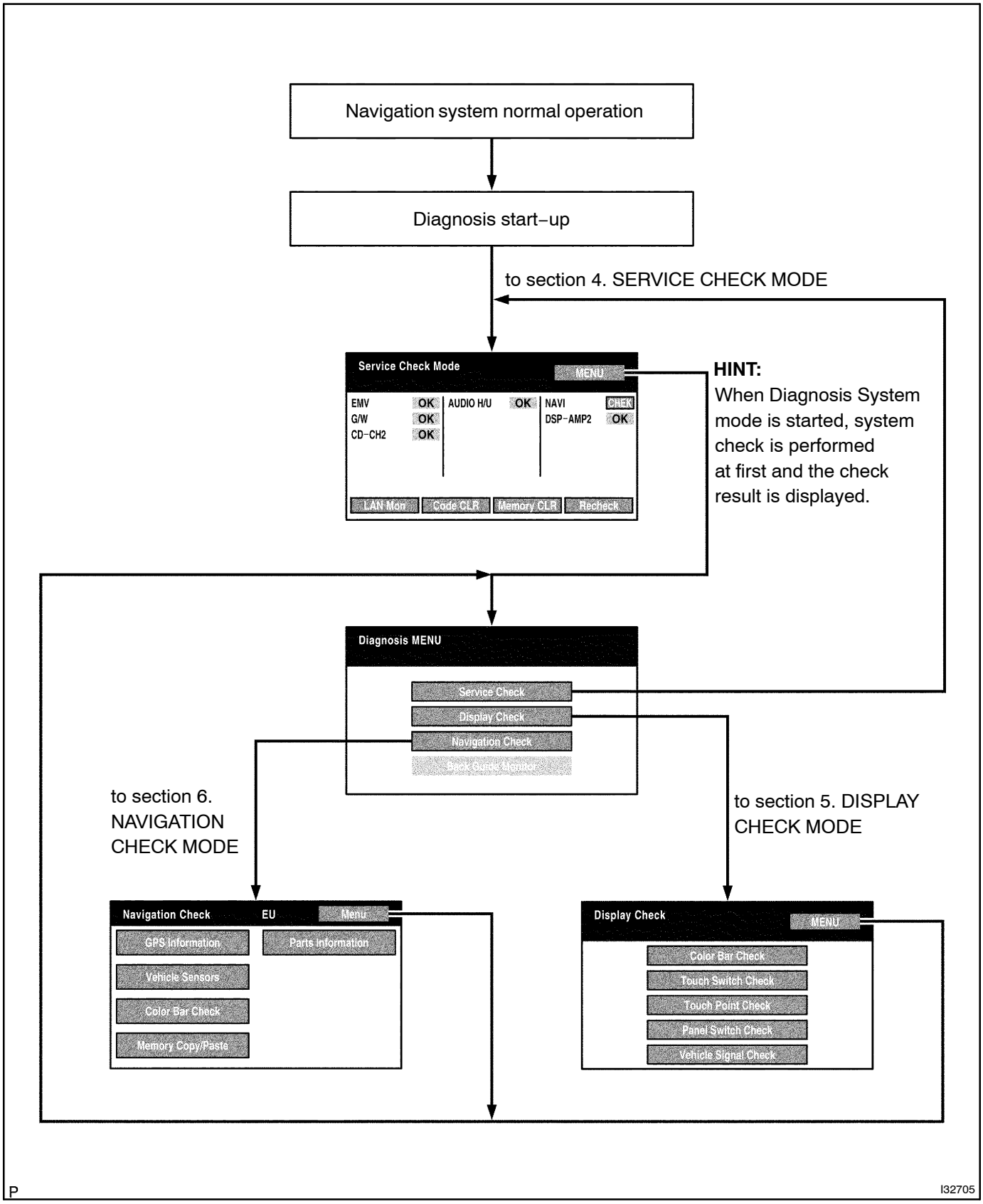
2. INSPECTION OF THE LOCATION WITH TROUBLE OCCURRENCE

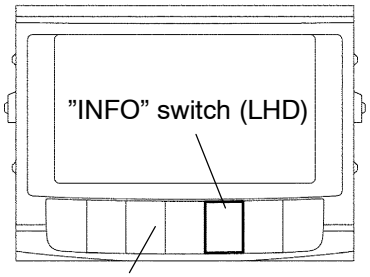
(a) Check whether the wrong display of the vehicle icon appears in a certain location or in several locations.

HINT:

It is difficult to determine the accurate vehicle position when driving on a freeway, a looped road or a road which runs in parallel with another, and immediately after going a out of the parking area. In such cases the vehicle icon can be displayed off the real position of the vehicle.

3. DIAGNOSIS SYSTEM MODE





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(a) Start–up And Finishing Of The Diagnosis

HINT:

Before starting the Diagnosis System, make sure that the map appears on the screen after turning on the IG switch.

If not, some items cannot be checked.

(b) Diagnosis Start–up by light control switch.

(1) Vehicle speed should be 0 km/h (0 mph).

(2) Apply the parking brake.

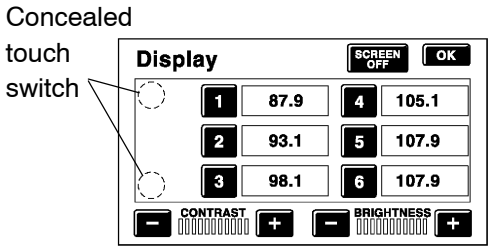
(3) Turn the ignition switch to ACC or ON.

(4) While pressing the ”INFO” switches on the Multi Display, turn the Light Control switch from OFF → TAIL → OFF → TAIL → OFF → TAIL → OFF.

Display	Description
Service Check	By performing system check and collecting data of diagnosis memory, this mode checks the current and past condition of each connection device.
Display Check	It displays the Display Check on the screen.
Navigation Check	It displays the Navigation ECU Check on the screen.

HINT:

- When Diagnosis System starts, Service Check screen is displayed and the service check begins.
- Select MENU to display Diagnosis Check Menu.



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(c) Diagnosis Start–Up by touch switch.

(1) Vehicle speed should be 0 km/h (0 mph).

(2) Apply the parking brake.

(3) Turn the ignition switch to ACC or ON.

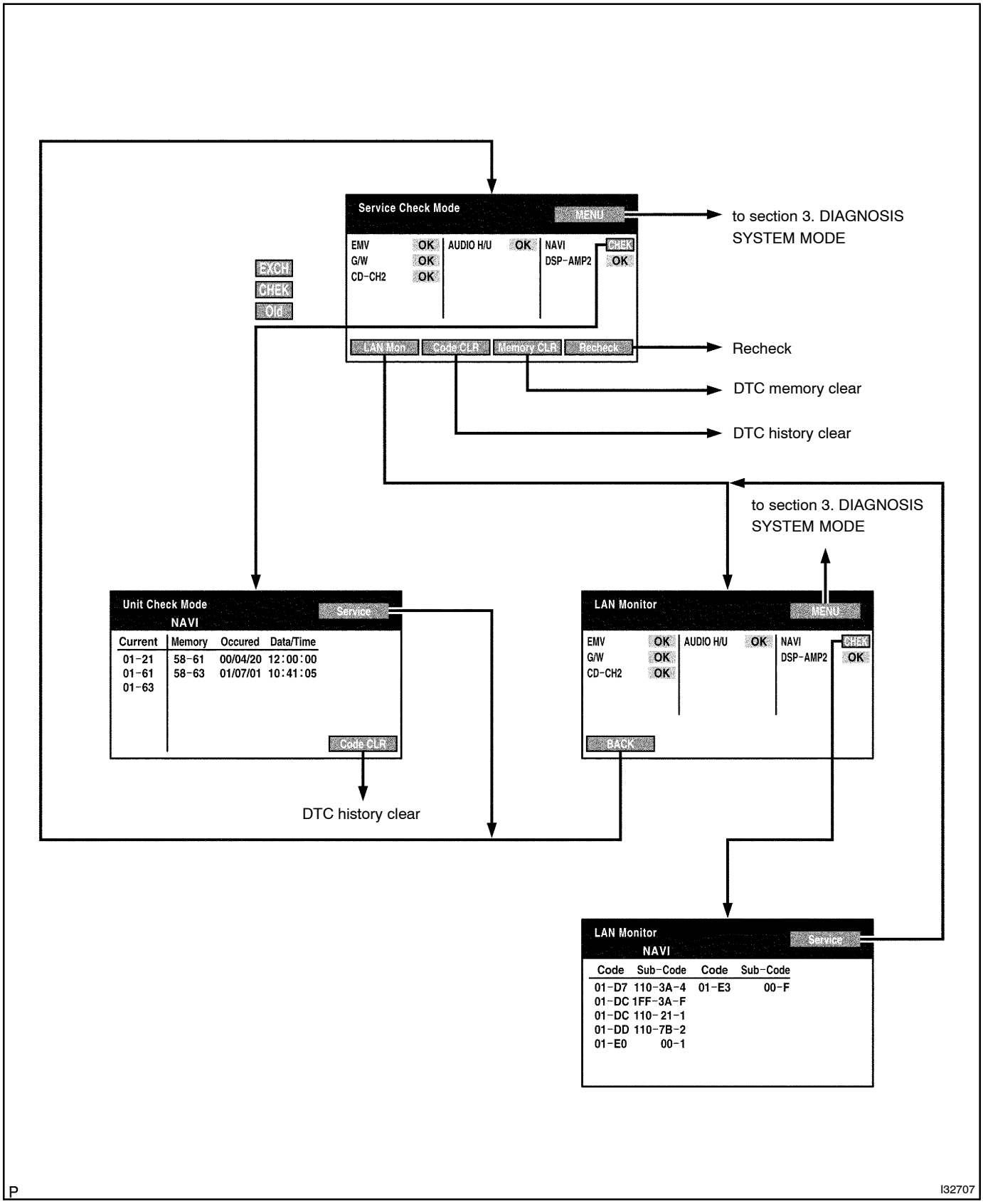
(4) Activate the screen adjustment screen.

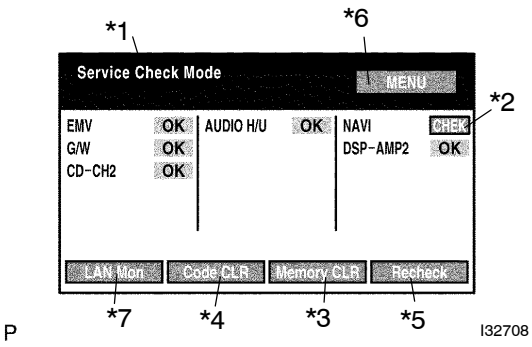
(5) Alternately touch the upper and lower bottom parts of the left end of the screen 3 times.

(d) Finishing the Diagnosis System

Turn the ignition switch off to finish the mode.

4. SYSTEM CHECK MODE





(a) SERVICE CHECK MODE

(b) System Check

(1) Start the Diagnosis System.

Display Item	Function
Components Name/*1	List of component names including optional components (15 components max.) are displayed. When the names are not identified, their physical addresses are displayed.
Check/*2	Check results are displayed.
Memory CLR/*3	Pressing this switch for 3 sec. deletes all the information about master component registration.
Code CLR/*4	Pressing this switch for 3 sec. deletes diagnosis memory of all the components. It deletes Service Check results and the screen displaying the check results.
Recheck/*5	Pressing this switch performs Service Check again.
MENU/*6	Pressing this switch activates the Diagnosis Menu screen.
LAN Mon/*7	Pressing this switch activates the LAN monitor screen.

HINT:

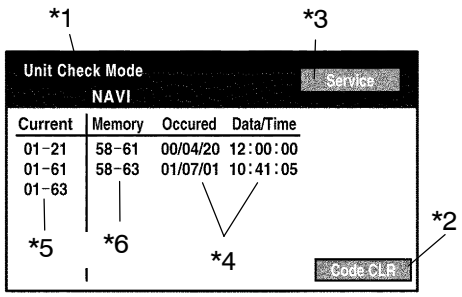
System Check displays the check results based on the information obtained from each component's response to "System Check Execution" and "Diagnosis Memory Request", and the information of "Current DTC Notification" (the Unit Check and the LAN Check information that will be displayed on the next screens.).

(2) Read Check Result

Check Result	Meaning
OK	No DTC is identified.
EXCH	One or more DTC requesting for exchange are detected.
CHEK	One or more DTC requesting for check are detected.
NCON	No connection response to Diagnosis System start–up, whereas it has the connection response to the AVC LAN system when the power switch is turned on (when IG is turned to ACC).
Old	One or more DTC are detected because of old version.
NRES	No response to the information about the Diagnosis System, whereas it responds to the Diagnosis System start–up.
No Err	No DTC is identified.

HINT:

- After repair and check, press "Code CLR" for more than 3 sec. to delete diagnosis memory.
- After deleting diagnosis memory, press "Recheck" and make sure "OK" is displayed on the screen.



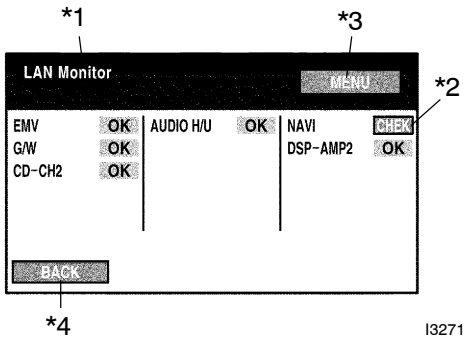
P I32709

(3) ”EXCH”, ”CHEK” and ”Old” can be used as switches to activate ”Unit Check Mode” for detail information. Check troubled parts of the components in these modes by referring to the DTC code list.

Display Item	Description
Components name/*1	Names of components to be checked are displayed.
Code CLR/*2	Pressing this switch for 3 sec. deletes DTC memory of the selected diagnosis component.
Service/*3	Pressing this returns to the System Check Mode screen.
Date/Time/*4	The date and time stamped at the time of DTC occurrence are displayed in the order of year–month–day–hour–minute–second. (If the date and time data is invalid, it is displayed as a blank.)
Current/ *5	Up to 6 DTC codes detected during the System Check are displayed.
Memory/ *6	DTC memories stored and current DTC Notification are displayed.

HINT:

- Detecting Unit DTC activates the Unit Check Mode on the screen.
- In the Unit Check Mode, DTC identified as ”EXCH” in the Service Check is displayed as classified into Current DTC and Past DTC.



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(c) LAN Monitor

(1) Start the Diagnosis System.

Display Item	Function
Components Name/*1	List of component names including optional components (15 components max.) are displayed. When the names are not identified, their physical addresses are displayed.
CHEK/*2	Check results are displayed.
MENU/*3	Pressing this switch activates the Diagnosis Menu screen.
BACK/*4	Pressing this switch activates the System Check Mode screen.

HINT:

System Check displays the check results based on the information obtained from each component’s response to ”System Check Execution” and ”Diagnosis Memory Request”, and the information of ”Current DTC Notification” (the LAN Monitor that will be displayed on the next screens).

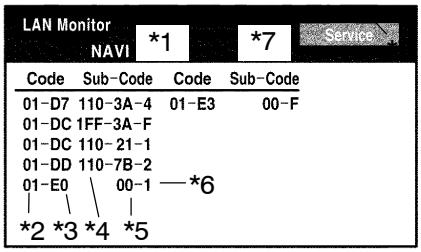
(2) Read Check Result

Check Result	Meaning
OK	No DTC is identified.
EXCH	One or more DTC requesting for exchange are detected.
CHEK	One or more DTC requesting for check are detected.
NCON	No connection response to Diagnosis System start–up, whereas it has the connection response to the AVC LAN system when the power switch is turned on (when IG is turned to ACC).
Old	One or more DTC are detected because of old version.
NRES	No response to the information about the Diagnosis System, whereas it responds to the Diagnosis System start–up.
No Err	No DTC is identified.

HINT:

- After repair and check, press ”Code CLR” for more than 3 sec. to delete diagnosis memory.
- After deleting diagnosis memory, press ”Recheck” and make sure ”OK” is displayed on the screen.

(3) ”CHEK” can be used as switches to activate ”LAN Monitor” for detail information. Check troubled parts of the components in these modes by referring to the DTC code list.



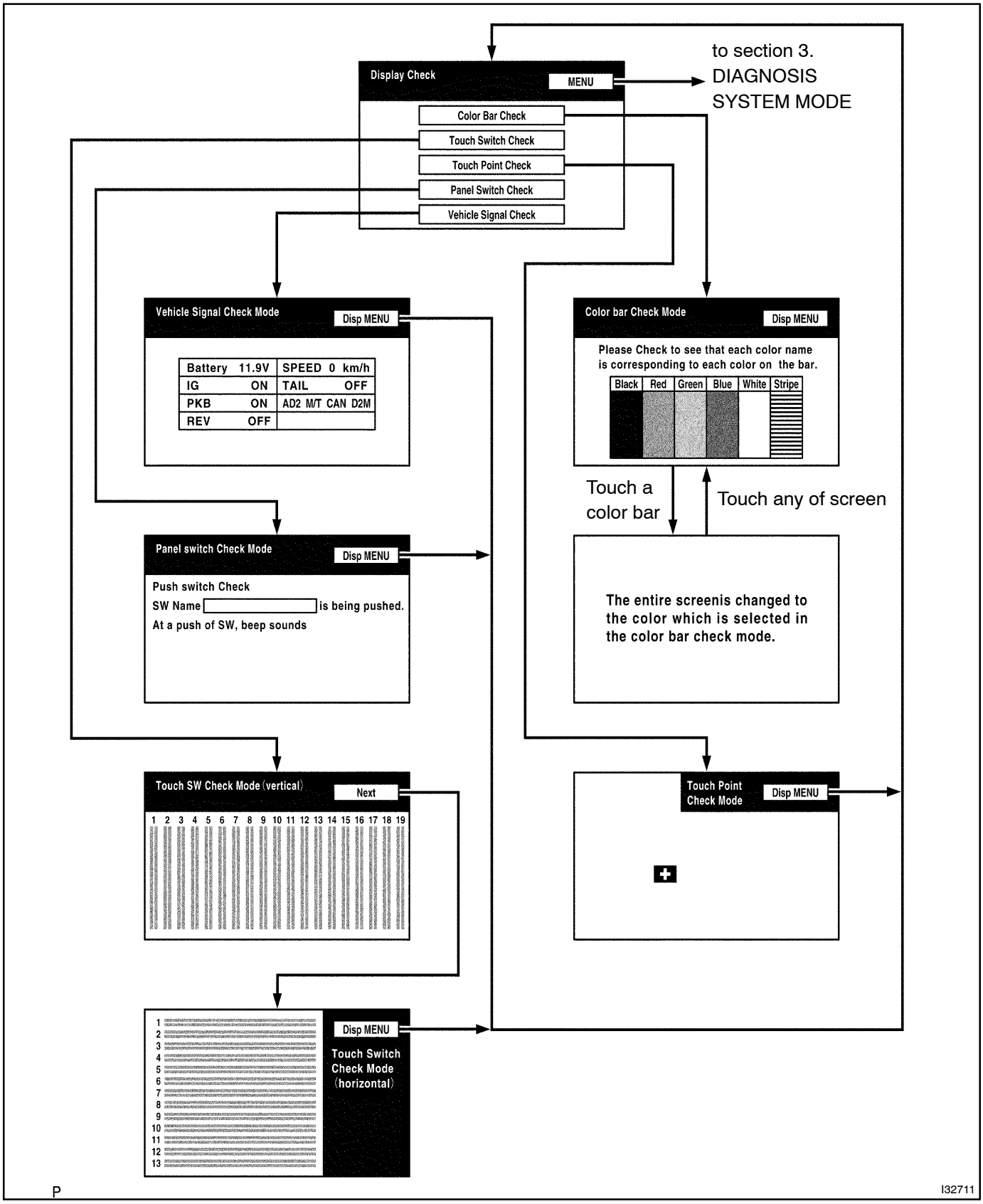
P I33648

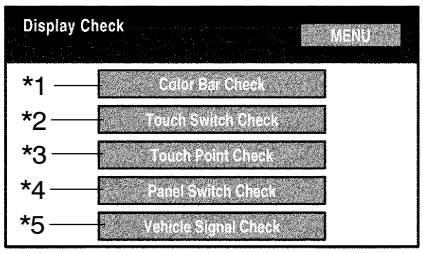
Display Item	Description
Components name/*1	Names of components to be checked are displayed.
Segment/*2	Logical address codes corresponding to DTC are displayed.
DTC/*3	DTC is displayed.
Sub–Code (address numbers of related components)/*4	Physical address codes memorized together with DTC are displayed.
Sub–code (Connection confirmation number) /*5	Connection confirmation numbers memorized together with DTC are displayed.
Sub–code (Number of occurrence) /*6	The number of occurrence of the same DTC is displayed.
Service/*7	Pressing this returns to the System Check Mode screen.

HINT:

Detecting no LAN DTC activates the LAN Check Mode on the screen.

5. DISPLAY CHECK MODE





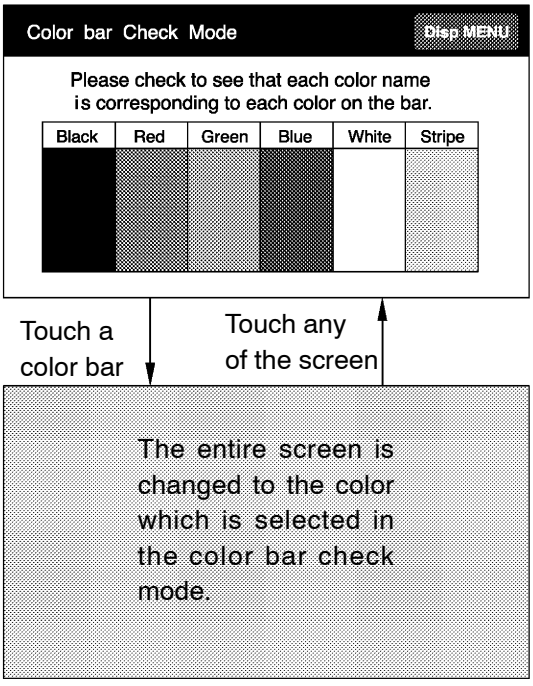
P I32712

(a) Display Check Mode

Display	Contents
Color Bar Check/*1	Color display is checked.
Touch Switch Check/*2	Operating condition of touch switch display is checked.
Touch Point Check/*3	Operating condition of touch point display is checked.
Panel Switch Check/*4	Operating condition of switches on both sides of the display is checked.
Vehicle Signal Check/*5	Status of the vehicle signal which has been loaded into the display is checked.

HINT:
In Display Check Mode, above checks can be performed.

Display Item	Meaning
MENU	Pressing this switch activates the "Diagnosis MENU".



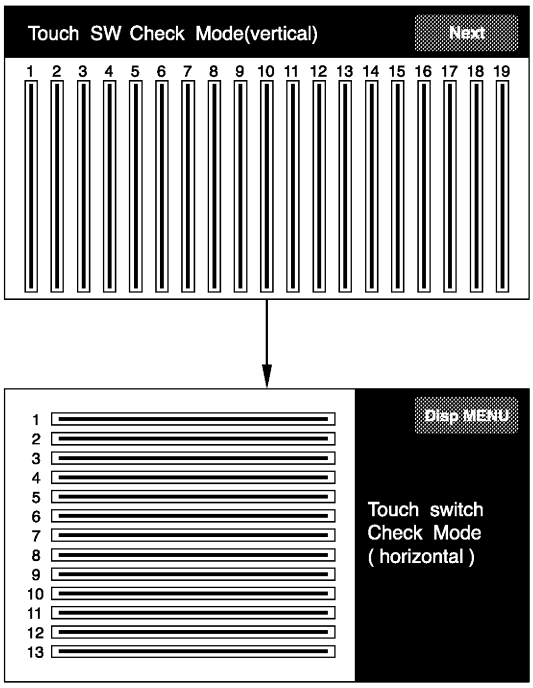
N I31935

(b) Display Color Bar Check
(1) Start the Diagnosis System.
(2) Select "MENU".
(3) Select "Display Check".
(4) Select "Color Bar Check".
(5) Make sure that each color name is corresponding to each color on the bar.

HINT:
Select Black, Red, Green, Blue, White and Stripe to display selected colors and stripe on the entire screen.

(6) Compare with the Color Bar Check in the Navigation Check and make sure that no difference is found.

Display Item	Meaning
Disp MENU	Pressing this switch activates the "Display Check".

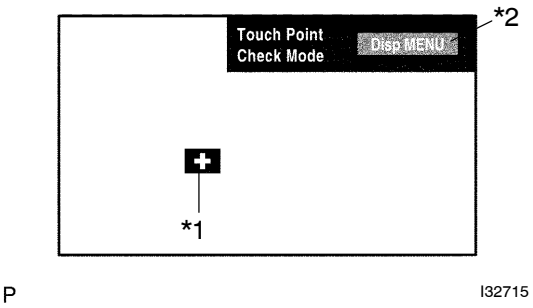


N I31943

(c) Display Touch Switch Check
(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Display Check”.
(4) Select ”Touch Switch Check”.
(5) Touch the screen and make sure that every line reacts to the touch.

HINT:
After the Touch Switch Check for vertical lines, press ”Next” to check horizontal lines.

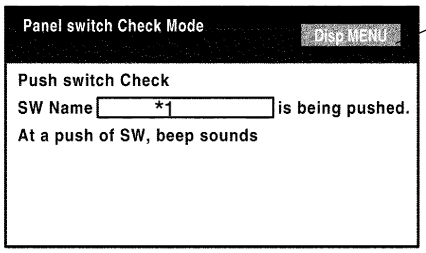
Display Item	Meaning
Disp MENU	Pressing this switch activates the ”Display Check”.



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(d) Display Touch Point Check
(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Display Check”.
(4) Select ”Touch Point Check”.
(5) The position detected by the pressure sensing touch switch is checked.

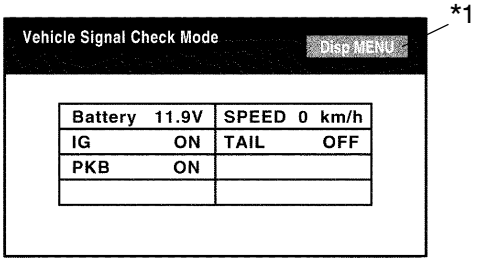
Display Item	Meaning
Press point/*1	The detected point is indicated by a cross–hair cursor.
Disp MENU/*2	Pressing this switch activates Display Check Menu.



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(e) Display Panel Switch Check
(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Display Check”.
(4) Select ”Panel Switch Check”.
(5) Press each switch and make sure that it corresponds to the display on the screen.

Display Data	Description
Names of push–button switches/*1	Names of push–button switches pressed are displayed. Pressing 2 or more push–button switches is displayed as ”MULTIPLE”. After that if the number of push–button switches being pressed becomes 1, the name of the push–button switch being pressed is displayed.
Disp MENU*2	Pressing this switch activates Display Check Menu.



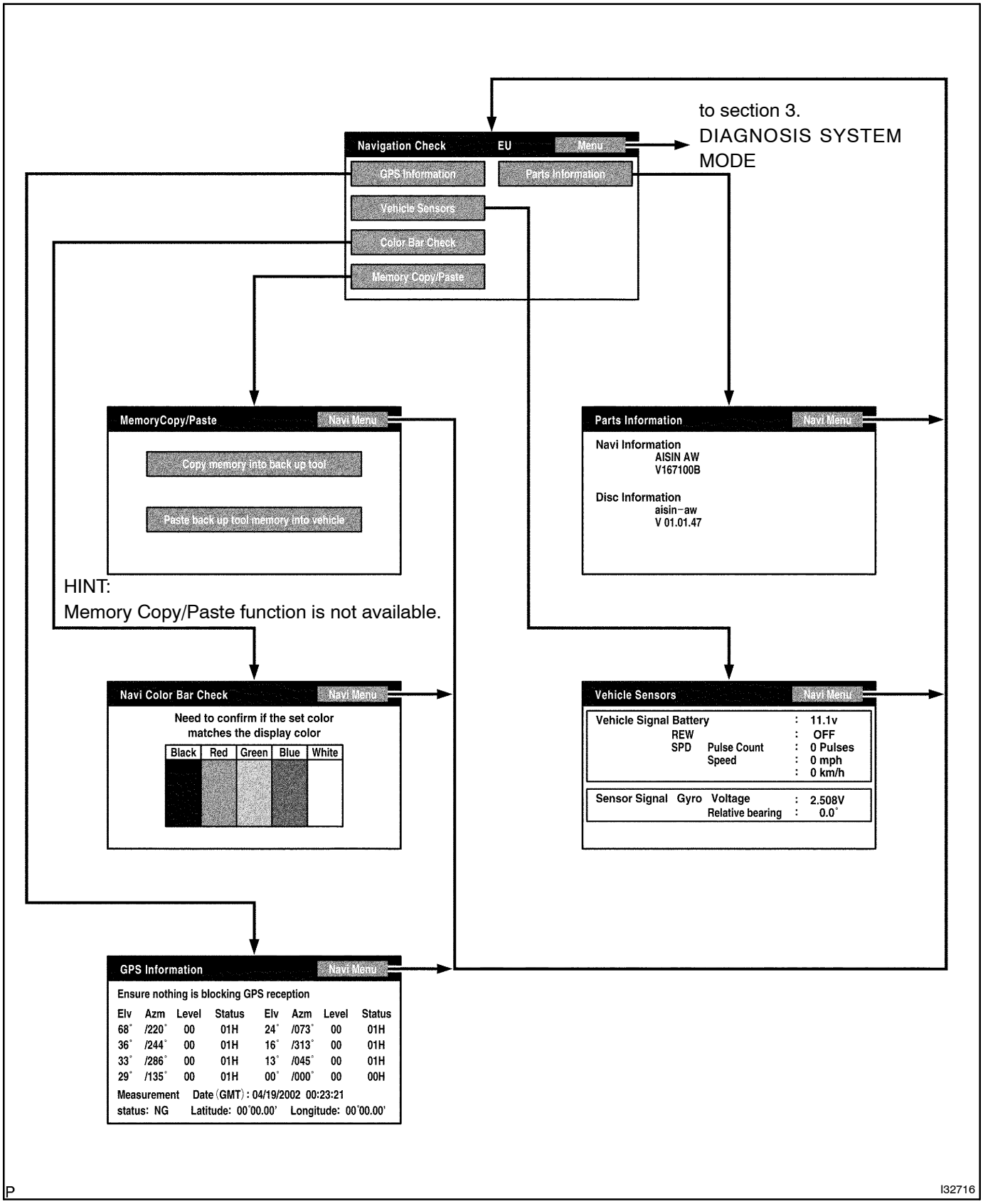
P I32714

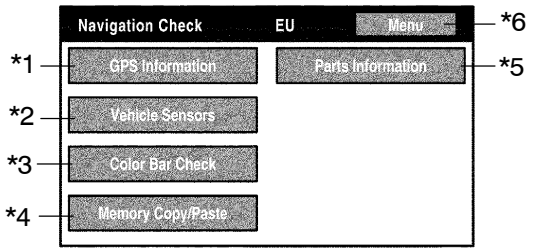
(f) Display Vehicle Signal Check
(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Display Check”.
(4) Select ”Vehicle Signal Check”.
(5) Check the status of the vehicle signal (PKB, SPEED, TAIL, REV) loaded into the display.

HINT:
Vehicle signal data is updated every 1 second.

Display Item	Meaning
Battery	Battery voltage is displayed by V.
IG	IG (Signal State) is displayed by ON/OFF.
PKB	IG (Signal State) is displayed by ON/OFF. (IG switch ON)
SPEED	SPD is displayed by calculating the vehicle speed from the pulse signal.
TAIL	TAIL (Signal State) is displayed by ON/OFF.
Disp MENU/*1	Pressing this switch activates Display Check Menu.

6. NAVIGATION CHECK MODE





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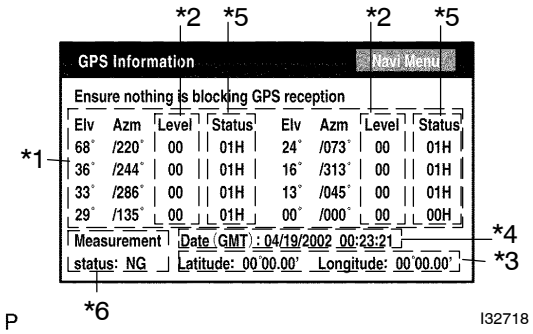
(a) Navigation Check Mode

Display	Description
GPS Information/*1	Information related to GPS is displayed (updated every 1 second.).
Vehicle Sensors/*2	Vehicle signal information to be loaded in the Navigation ECU is displayed (updated every 1 second.).
Color Bar Check/*3	Color display of the Navigation ECU is checked. (Compare with the Color Bar Check results in the Display Check.)
Memory Copy / Paste/*4	This function is not available.
Parts Information/*5	Navigation program version and disc version are displayed.

HINT:

- In the Navigation Check mode, the checks mentioned above can be conducted.
- The Navigation ECU operates each Navigation Check screen.

Display Item	Meaning
Menu/*6	Pressing this switch activates the "Diagnosis MENU".



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(b) GPS Information

(1) Start the Diagnosis system.
(2) Select "Menu".
(3) Select "Navigation Check".
(4) Select "GPS Information".
(5) Check the GPS–related information.

Display Data	Description
Satellite Information/*1	"Angle of elevation", "Azimuth", "Level of Signal" and "Status of Wave Reception" of the Satellite captured by the antenna are displayed (for 8 satellites max.)
Level of Signal/*2	As the level of signal is higher, the receiving sensitivity better.
Position Data/*3	The latitude and longitude of the current position are displayed in degree, minute and second.
Time Data/*4	Date and time data obtained from the GPS receiver is displayed.

Status of Wave Reception:/5*

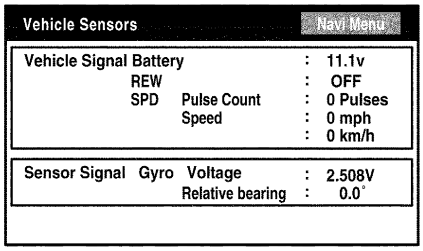
Display	Conditions
01H	Complement no GPS
02H	Chasing GPS satellites
04H	Complement GPS but no using
08H	Using GPS

Measurement Status: /*6

Display	Conditions
2D	Measurement on 2 dimensions
3D	Measurement on 3 dimensions
NG	GPS information cannot be used
Error	Reception error occurs.
–	Other than the above

(c) Vehicle Sensors

(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Navigation Check”.
(4) Select ”Vehicle sensors”.
(5) Check the vehicle signals (ACC, REV, SPD) and the output signal of the gyro sensor introduced into the navigation ECU.

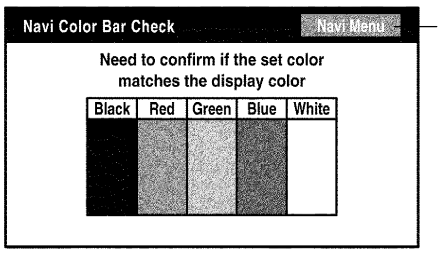


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Items	Display Method
ACC signal status	Displayed as ON/OFF.
REV signal status	Displayed as ON/OFF.
SPD signal status	The cumulative value of input pulse count and the vehicle speed [km/h] [mph] are displayed. [The cumulative value of input pulse count is set to be 0 when this screen is displayed. When the vehicle starts to drive, it is counted and displayed continually.]
Output signal of the gyro sensor	Voltage [V] and relative azimuthal angle [degree] are displayed. [The position of the vehicle when this screen is displayed is set to be 0 degree in azimuth. Based on this, relative azimuthal angle is measured and displayed continually.]
Navi Menu	Pressing this switch activates the ”Navigation Check”.

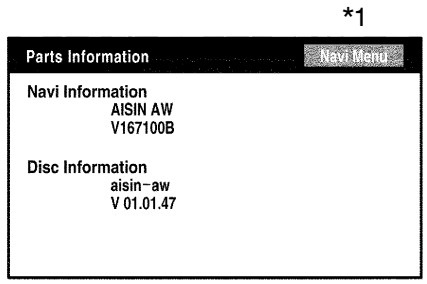
(d) Navigation Color Bar Check

(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Navigation Check”.
(4) Select ”Color Bar Check”.
(5) Make sure that the set color matches the display color.
(6) Compare with the Color Bar Check in the Display Check and make sure that no difference is found.



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Display Item	Meaning
Navi Menu/*1	Pressing this switch activates the ”Navigation Check”.

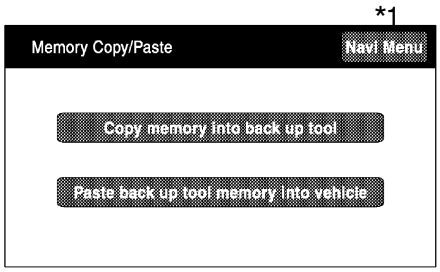


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(e) Parts Information

(1) Start the Diagnosis system.
(2) Select ”MENU”.
(3) Select ”Navigation Check”.
(4) Select ”Parts Information”.
(5) Check the program and disc version.

Display Item	Meaning
Navi Menu/*1	Pressing this switch activates the ”Navigation Check”.



N I34350

(f) Memory Copy/ Paste

HINT:

This function is not available.

Display Item	Meaning
Navi Menu/*1	Pressing this switch activates the ”Navigation Check”.