PRE–CHECK

DI9MX–01

1. DIAGNOSIS SYSTEM MODE

HINT:

Diagnosis System Mode is operated as follows.

```
┌──────────────────────────────────────┐
│  Navigation system normal operation   │
└──────────────────────────────────────┘
                    │
                    ▼
┌──────────────────────────────────────┐
│  Diagnosis start–up. (refer to next page) │
└──────────────────────────────────────┘
```

to 2. SYSTEM CHECK MODE SCREEN

Service Check Mode		MENU
Fr-DISPLAY : OK	AUDIO M/U : OK	NAVI-ECU : CHEK
DSP AMP : EXCH	TEL-ECU :	G/W-ECU : NCON
CDCH :	CAMERA :	
MDCH : Old		

Code CLR   Memory CLR   Recheck

MENU

HINT:
When Diagnosis System mode is started, system check is performed at first and the check result is displayed.

Diagnosis MENU
Service Check Mode
Display Check
Navigation Check

MENU

to 3. NAVIGATION
CHECK MODE SCREEN

Navigation Check	EU	Menu
GPS Information		Parts Information
Vehicle Sensors		
Color Bar Check		
Memory Copy/Paste		

MENU

to 4. DISPLAY
CHECK MODE SCREEN

Display Check	MENU
Color Bar Check	
Touch Switch Check	
Panel Switch Check	
Vehicle Signal Check	

MENU

I23525

(a) DIAGNOSIS START−UP
To start the diagnosis menu, there are 3 ways: using a diagnosis check wire and using a switch.
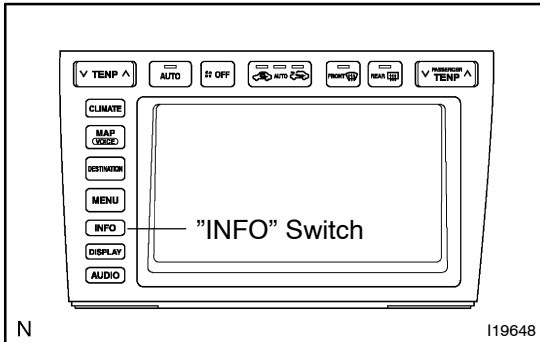
(b) START−UP BY SWITCH OPERATION
(light control switch)
(1) Vehicle speed is 0 km/h (0 mph).
(2) Parking brake switch is pressed.
(3) While pressing "INFO" switch, by turning the light control switch to OFF, TAIL, OFF, TAIL, and OFF the system is started up.

(c) START−UP BY SWITCH OPERATION (touch panel)
(1) Vehicle speed is 0 km/h (0 mph).
(2) Parking brake switch is pressed.
(3) Press the "INFO" switch to display the Screen Adjustment screen.
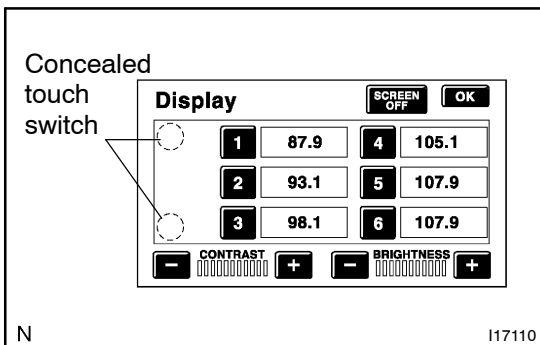
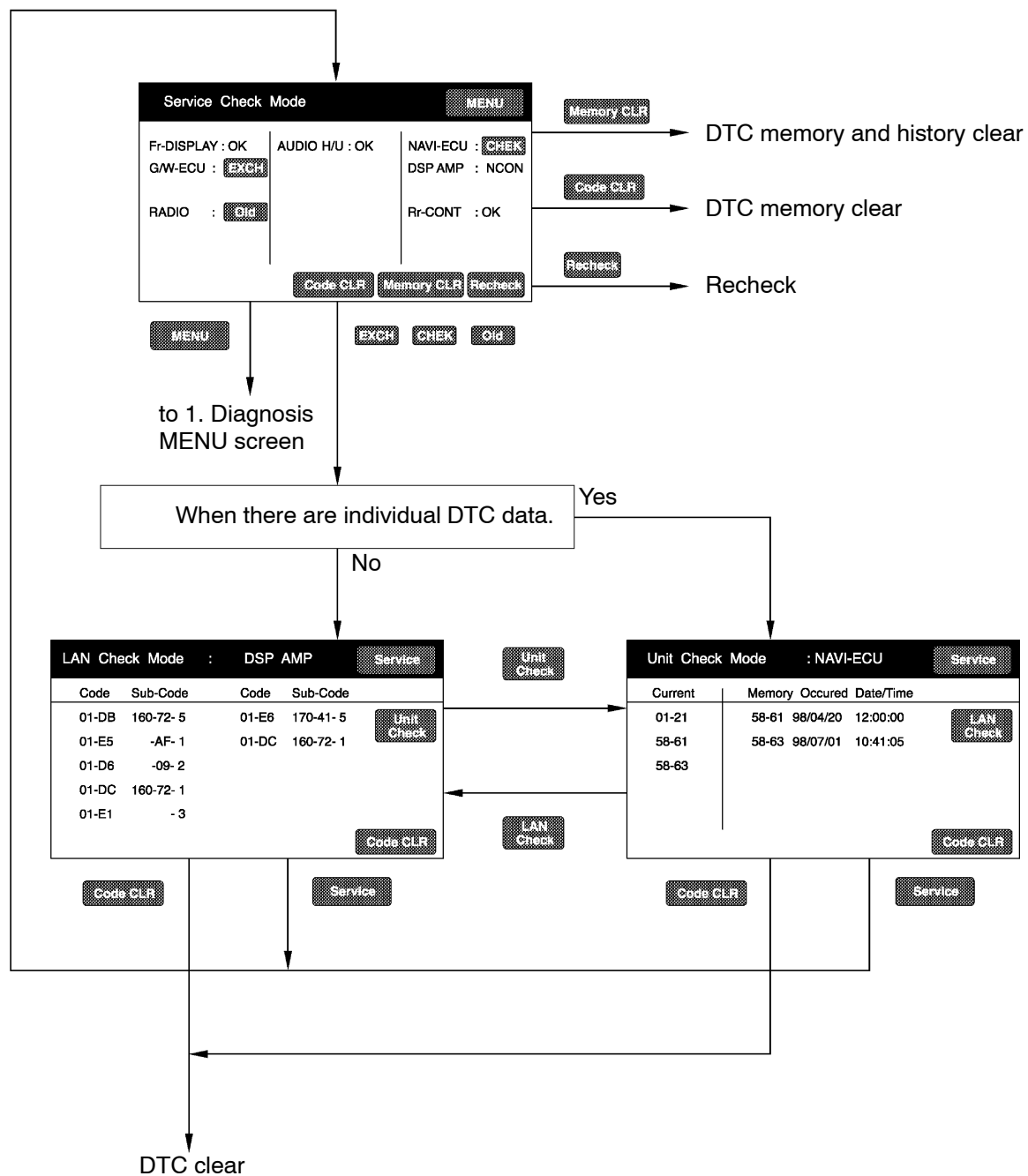(4) Repeatedly touch the upper and lower bottom parts of the left end of the screen 3 times.
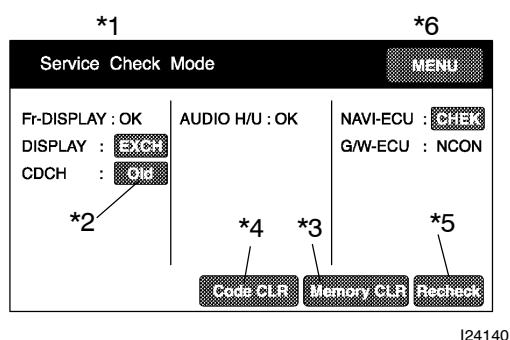
(d) FINISHING DIAGNOSIS SYSTEM MODE
Turn the ignition switch from ACC to OFF to finish the mode. If it is started by switch operation.

2. SERVICE CHECK MODE

HINT:

Service Check Mode is operated as follows.

to 1. Diagnosis MENU screen

DTC clear

Service Check Mode

Fr-DISPLAY : OK   AUDIO H/U : OK   NAVI-ECU : CHEK
DISPLAY : EXCH   G/W-ECU : NCON
CDCH : Old

Code CLR   Memory CLR   Recheck

I24140

(a) System Check Mode

(1) Start the Diagnosis System.

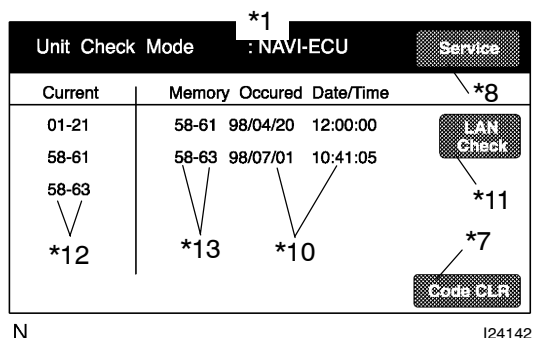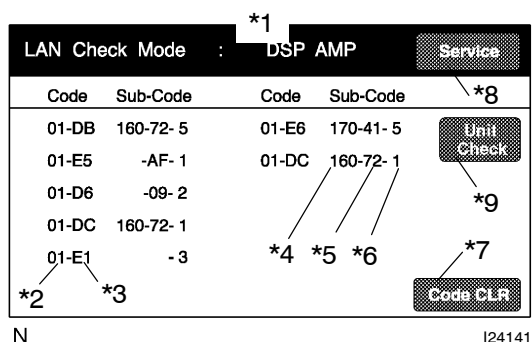| Display Item	Function
Components Name/*1	List of component names including optional components (15 components max.) are displayed. When the names are not identified, their physical addresses are displayed.
Check Result/*2	Check results are displayed.
Memory Clear switch/*3	Pressing this switch for 3 sec. deletes all the information about master component registration.
DTC Clear switch/*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.

HINT:

Service 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.

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.

```
                    *1
LAN Check Mode    :    DSP AMP         Service
                                              \*8
  Code   Sub-Code    Code   Sub-Code
 01-DB  160-72- 5   01-E6  170-41- 5          Unit
                                              Check
 01-E5    -AF- 1    01-DC  160-72- 1
 01-D6    -09- 2                               *9
 01-DC  160-72- 1
 01-E1      - 3     *4   *5   *6               *7
 *2      *3                             Code CLR

N                                      I24141
```

```
                    *1
Unit Check Mode    : NAVI-ECU         Service
                                              \*8
  Current    Memory Occured  Date/Time
 01-21      58-61  98/04/20  12:00:00         LAN
                                              Check
 58-61      58-63  98/07/01  10:41:05
 58-63                                        *11
    \/         \/       \/
   *12        *13      *10                    *7
                                       Code CLR

N                                      I24142
```

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

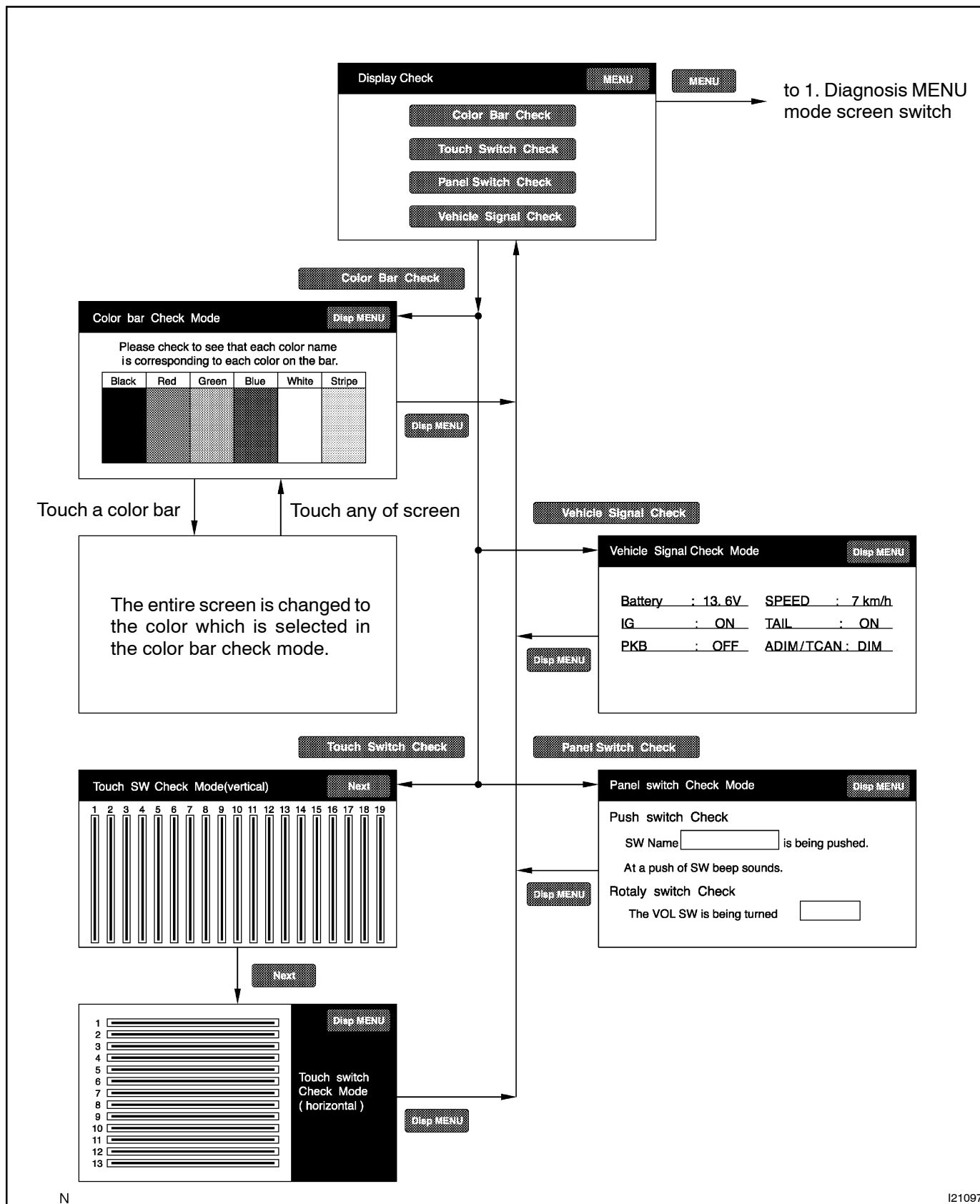| Display Item	Description
Components name/*1	Names of components to be checked are displayed.
Segment/*2	Logical address codes corresponding to DTC are displayed.
DTC/*3	DTC is displayed.
Sub–Code (address numbers of related components)/*4	Physical address codes memorized together with DTC are displayed.
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.
DTC clear switch/*7	Pressing this switch for 3 sec. deletes DTC memory of the selected diagnosis component.
Service check mode screen switch/*8	Pressing this returns to the Service Check Mode screen.
Unit check mode screen switch/*9	Pressing this switch activates the Unit Check Mode screen, which displays the logical address 01 with DTC 00–CF and the logical address 10 and up with DTC 00–FE.
Date/Time/*10	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.)
Unit check mode screen switch/*11	Pressing this switch activates the LAN Check Mode screen, which displays the logical address 01 with DTC 00–D0 –FE.
Current/ *12	Up to 6 DTC codes detected during the System Check are displayed.
Memory/ *13	DTC memories stored and current DTC Notification are displayed.

HINT:
• Detecting Unit DTC activates the Unit Check Mode on the screen.
• Detecting no LAN DTC activates the LAN Check Mode on the screen.
• Use the displayed switch to change to the Unit Check Mode and the LAN Check Mode.
• The LAN Check Mode chooses and displays the LAN DTC out of DTC of components identified as "CHEK" in the Service Check.
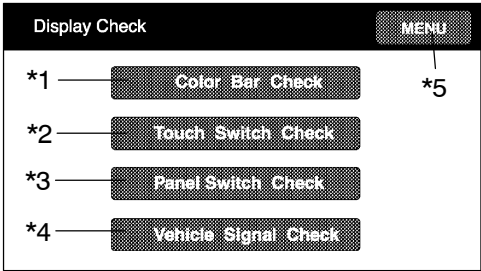
- In the Unit Check Mode, DTC which is identified as
  ”EHCK” in the Service Check, is displayed as classified
  into Current DTC and Past DTC.

3. DISPLAY CHECK MODE
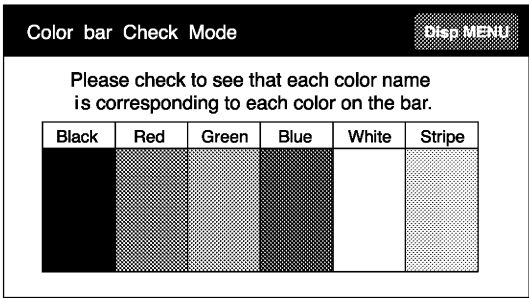
HINT:

Display Check Mode is operated as follows.

Display Check

Color Bar Check
Touch Switch Check
Panel Switch Check
Vehicle Signal Check

MENU → to 1. Diagnosis MENU mode screen switch

Color Bar Check

Color bar Check Mode — Disp MENU

Please check to see that each color name is corresponding to each color on the bar.

| Black | Red | Green | Blue | White | Stripe |

Disp MENU

Touch a color bar | Touch any of screen

The entire screen is changed to the color which is selected in the color bar check mode.

Vehicle Signal Check

Vehicle Signal Check Mode — Disp MENU

Battery	: 13. 6V	SPEED	: 7 km/h
IG	: ON	TAIL	: ON
PKB	: OFF	ADIM/TCAN	: DIM

Disp MENU

Touch Switch Check

Touch SW Check Mode(vertical) — Next

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Next

1
2
3
4
5
6
7
8
9
10
11
12
13

Disp MENU

Touch switch Check Mode (horizontal)

Disp MENU

Panel Switch Check

Panel switch Check Mode — Disp MENU

Push switch Check

SW Name [ ] is being pushed.

At a push of SW beep sounds.

Rotaly switch Check

The VOL SW is being turned [ ]

Disp MENU

N

I21097

```
Display Check                    MENU
*1 ──────  Color Bar Check       *5
*2 ──────  Touch Switch Check
*3 ──────  Panel Switch Check
*4 ──────  Vehicle Signal Check

C                                I23524
```

(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.
Panel Switch Check/*3	Operating condition of switches on both sides of the display is checked.
Vehicle Signal Check/*4	Status of the vehicle signal which has been loaded into the display is checked.
MENU/*5	Pressing this switch activates the Diagnosis Menu screen.

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


```
Color bar Check Mode            Disp MENU

Please check to see that each color name
is corresponding to each color on the bar.

Black | Red | Green | Blue | White | Stripe



Touch a                    Touch any of
color bar                  the screen


The entire screen is
changed to the color
which is selected in
the color bar check
mode.


N                                I23620
```
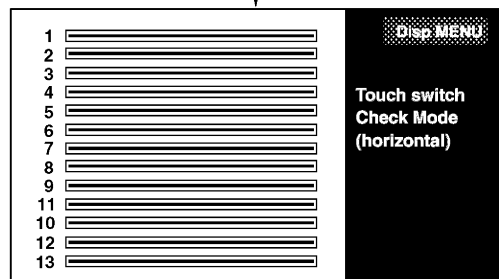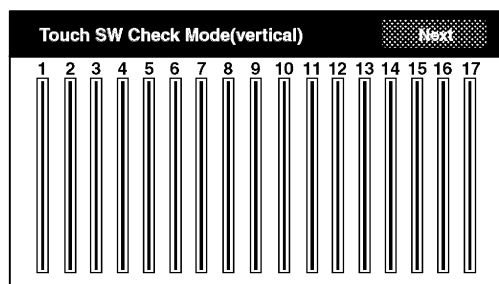
(b)   Display Color Bar Check
(1)   Start the Diagnosis System.
(2)   Select "MENU".
(3)   Select "Display Check".
(4)   Select "Color Bar Check".
(5)   Make sure that each color name is corresponding to each color on the bar.

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.

Touch SW Check Mode(vertical)   Next

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1
2
3
4
5
6
7
8
9
11
10
12
13   Disp MENU

Touch switch
Check Mode
(horizontal)

C   I23521

Panel switch Check Mode   Disp MENU

Push switch Check   *2

SW Name   *1   is being pushed.

At a push of SW beep sounds.

Rotaly switch Check

The VOL SW is being turned

                                         I23523

Vehicle Signal Check Mode   Disp MENU

Battery   : 13. 6V   SPEED   : 7 km/h
IG   : ON   TAIL   : ON
PKB   : OFF   ADIM/TCAN : DIM

C   I23500

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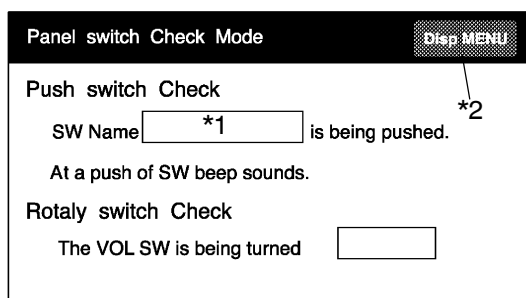
(d) Display Panel Switch Check
  (1) Start the Diagnosis system.
  (2) Select "MENU".
  (3) Select "Display Check".
  (4) Select "Panel Switch Check".
  (5) Press each switch and make sure that it corresponds to the display on the screen.

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.
Direction of the rotation/*2	Direction of a rotary switch (volume switch, etc.) is displayed as "right" or "left".
Disp MENU/*3	Pressing this switch activates Display Check Menu.
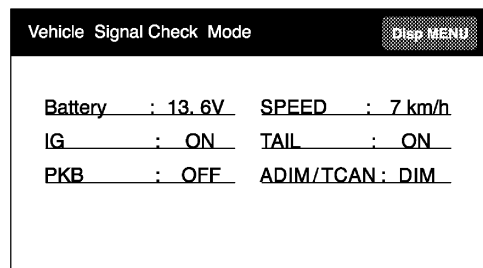
(e) Display Vehicle Signal Check
  (1) Start the Diagnosis system.
  (2) Select "MENU".
  (3) Select "Display Check".
  (4) Select "Vehicle Signal Check".
  (5) Check the status of the vehicle signal (Battery, IG, PKB, SPEED, TAIL, ADIM/TCAN) loaded into the display.
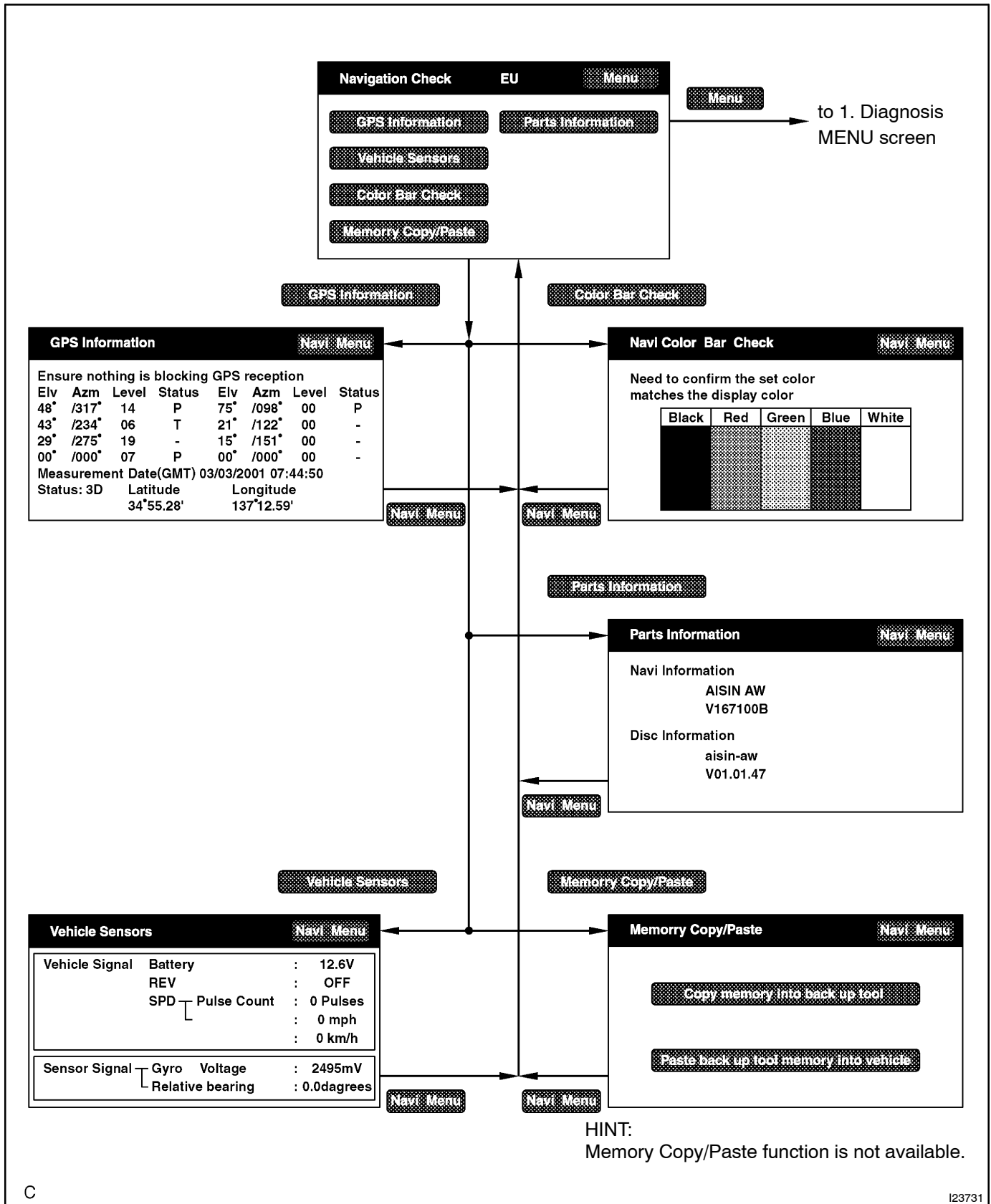HINT:
Vehicle signal data is updated every 1 second.
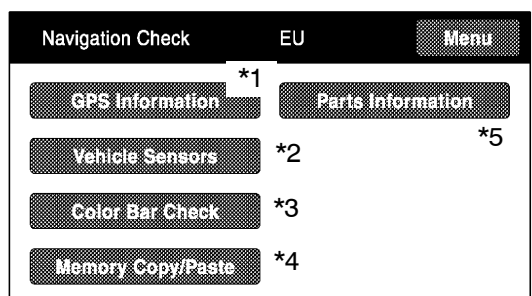
4. NAVIGATION CHECK MODE

HINT:

Navigation Check Mode is operated as follows.

Navigation Check   EU   Menu

- GPS Information
- Parts Information
- Vehicle Sensors
- Color Bar Check
- Memory Copy/Paste

Menu → to 1. Diagnosis MENU screen

GPS Information   Navi Menu

Ensure nothing is blocking GPS reception

Elv	Azm	Level	Status	Elv	Azm	Level	Status
48°	/317°	14	P	75°	/098°	00	P
43°	/234°	06	T	21°	/122°	00	-
29°	/275°	19	-	15°	/151°	00	-
00°	/000°	07	P	00°	/000°	00	-

Measurement Date(GMT) 03/03/2001 07:44:50

Status: 3D   Latitude   Longitude
              34°55.28'   137°12.59'

Navi Color Bar Check   Navi Menu

Need to confirm the set color
matches the display color

Black	Red	Green	Blue	White

Parts Information   Navi Menu

Navi Information
    AISIN AW
    V167100B

Disc Information
    aisin-aw
    V01.01.47

Vehicle Sensors   Navi Menu

Vehicle Signal	Battery	:	12.6V
	REV	:	OFF
	SPD ┬ Pulse Count	:	0 Pulses
		:	0 mph
	┴	:	0 km/h
Sensor Signal ┬ Gyro Voltage	:	2495mV
┴ Relative bearing	:	0.0dagrees

Memorry Copy/Paste   Navi Menu

- Copy memory into back up tool
- Paste back up tool memory into vehicle

HINT:

Memory Copy/Paste function is not available.

C

I23731

Navigation Check	EU	Menu
GPS Information *1		Parts Information
Vehicle Sensors *2		*5
Color Bar Check *3		
Memory Copy/Paste *4		

N   I23622

(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	Using hand−held tester, read and write user data such as a placement of shop, restaurant etc. stored in memory.
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.

GPS Information   *1   Navi Menu

Ensure nothing is blocking GPS reception

Elv	Azm	Level	Status	Elv	Azm	Level	Status
48°	/317°	14	P	75°	/098°	00	P
43°	/234°	06	T	21°	/122°	00	-
29°	/275°	19	-	15°	/151°	00	-
00°	/000°	07	P	00°	/000°	00	-

Measurement Date(GMT) 03/05/2001 07:44:50

Status: 3D   Latitude   Longitude   *3
      34°55.28'   137°12.59'

C   *4   *2   I23728

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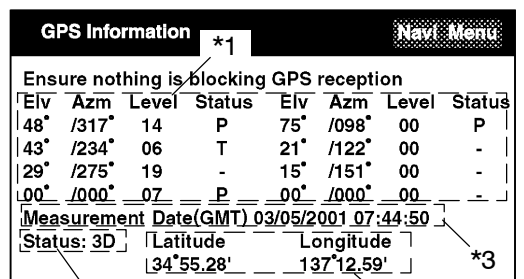
Display Data	Description
Satellite Information/*1	"Angle of elevation", "Azimuth", "Level of Signal" and "Status of Wave Reception" of the Satellite captured by the antenna are displayed (for 8 satellites max.)
Position Data/*2	The latitude and longitude of the current position are displayed in degree,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

Measurement Status: /*4

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

```
Vehicle Sensors                    Navi Menu

Vehicle Signal   Battery          :   12.6V
                 REV              :   OFF
                 SPD ┬ Pulse Count : 0 Pulses
                     │            :   0 mph
                     └            :   0 km/h

Sensor Signal ┬ Gyro   Voltage    : 2495mV
              └ Relative bearing   : 0.0dagrees
```
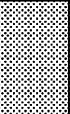
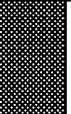C   I23729

(c) Vehicle Sensors
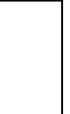
   (1) Start the Diagnosis system.

   (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.

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.]

(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.


```
Navigation Color Bar Check         Navi Menu

Need to confirm if the set color
matches the display color

 Black  Red  Green  Blue  White
```

C   I23730

(e) Parts Information

   (1) Start the Diagnosis system.

   (2) Select "MENU".

   (3) Select "Navigation Check".

   (4) Select "Parts Information".
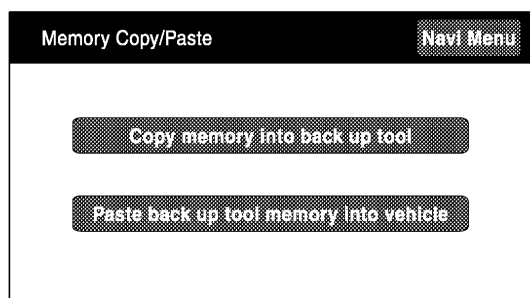
   (5) Check the program and disc version.

Europe:

```
Parts Information                  Navi Menu

Navi Information
        AISIN AW
        V167100B

Disc Information
        aisin-aw
        V01.01.47
```

Australia:

```
Parts Information                  Navi Menu

Navi Information
        DENSO
        OBD1

Disc Information
        DENSO
        AF AV:2.3D,   AGAV:2.3D
```

C   I23734

Memory Copy/Paste   Navi Menu

Copy memory into back up tool

Paste back up tool memory into vehicle

N   I23627

(f)   Memory/ Copy/ Paste
HINT:
This function is not available.