

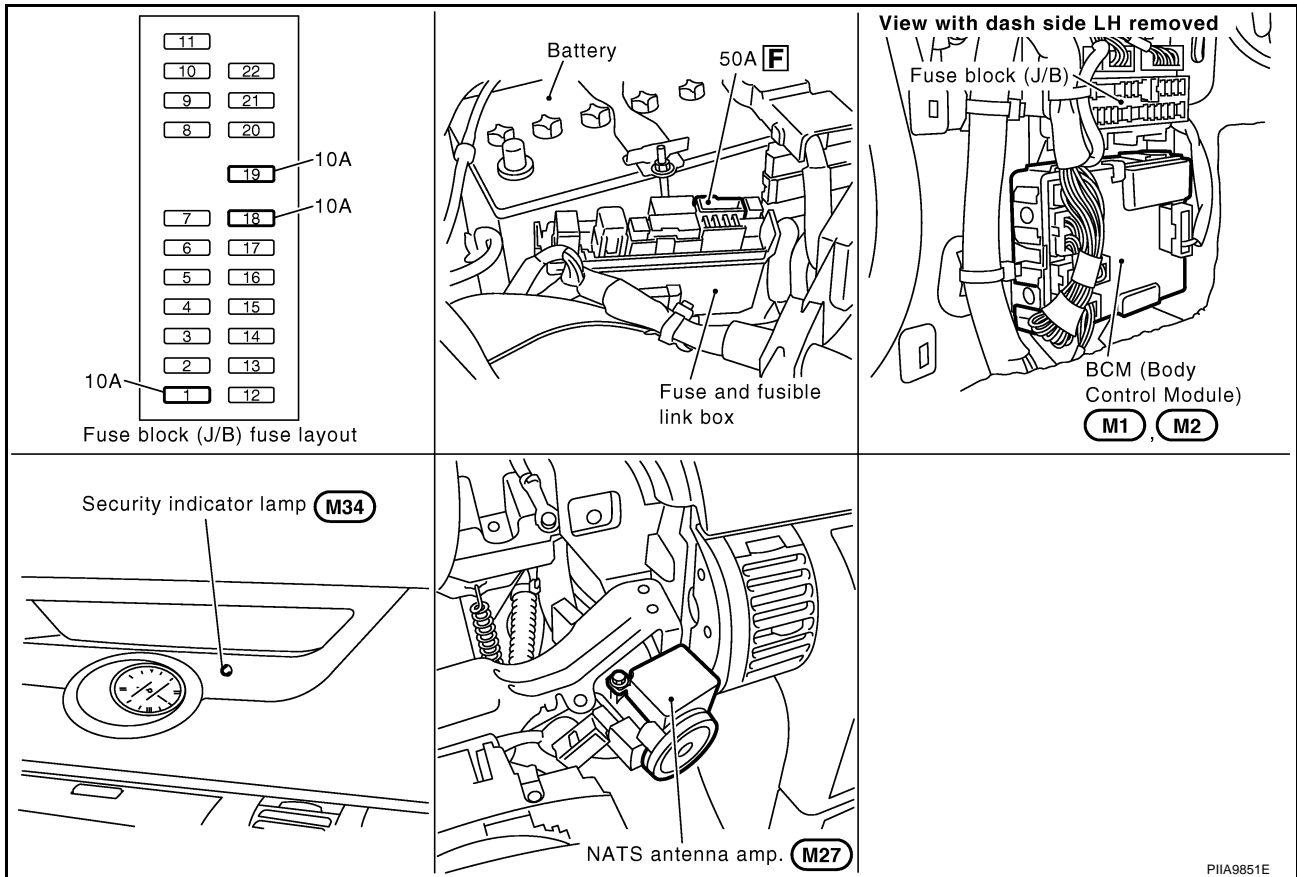
# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

### Component Parts and Harness Connector Location

AIS0027Z



**NOTE:**

If customer reports a "No start" condition, request ALL KEYS to be brought to an INFINITI dealer in case of a IVIS (NATS) malfunction.

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# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## System Description

AIS00280

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS) has the following immobilizer functions:

- Since only IVIS (NATS) ignition keys, whose ID No.s have been registered into the ECM and BCM (NATS control unit), allow the engine to run, a vehicle operation without a key registered in IVIS (NATS) is prevented by IVIS (NATS).  
That is to say, IVIS (NATS) will immobilize the engine if someone tries to start it without the registered key of IVIS (NATS).
- All of the originally supplied ignition key IDs (except for card plate key) have been registered in IVIS (NATS).  
If requested by the vehicle owner, a maximum of five key IDs can be registered into the IVIS (NATS) components.
- The security indicator blinks when the ignition switch is in “OFF” or “ACC” position. Therefore, IVIS (NATS) warns outsiders that the vehicle is equipped with the immobilizer system.
- When IVIS (NATS) detects trouble, the security indicator lamp lights up while ignition key is in the “ON” position.
- IVIS (NATS) trouble diagnoses, system initialization and additional registration of other IVIS (NATS) ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II IVIS (NATS) software.  
When IVIS (NATS) initialization has been completed, the ID of the inserted ignition key is automatically registered in IVIS (NATS). Then, if necessary, additional registration of other IVIS (NATS) ignition key IDs can be carried out.  
Regarding the procedures of IVIS (NATS) initialization and IVIS (NATS) ignition key ID registration, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.
- **When servicing a malfunction of the IVIS (NATS) (indicated by lighting up of Security Indicator Lamp) or registering another IVIS (NATS) ignition key ID No., it may be necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.**

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## System Composition

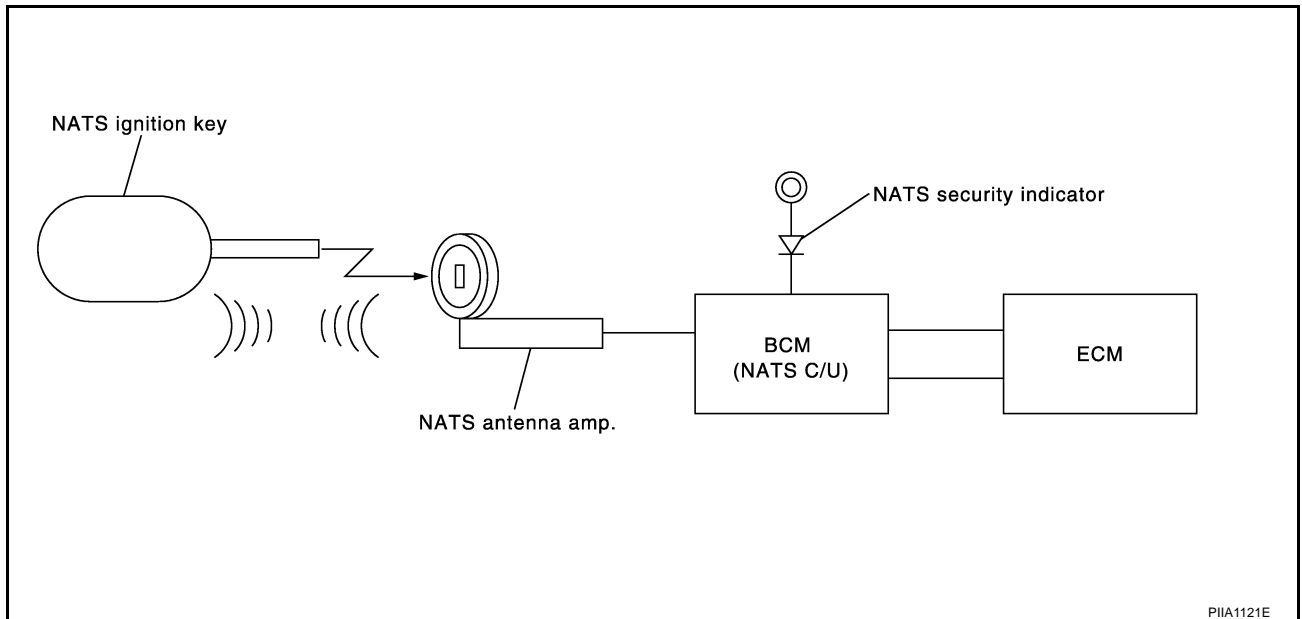
AIIS00281

The immobilizer function of the IVIS (NATS) consists of the following:

- NATS ignition key
- NATS antenna amp. located in the ignition key cylinder
- BCM (NATS control unit)
- Engine control module (ECM)
- Security indicator

### NOTE:

The communication between ECM and BCM uses the CAN communication system.



## ECM Re-Communicating Function

AIIS00282

Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (\*1).

\*1: New one means a virgin ECM which has never been energized on-board.

(In this step, initialization procedure by CONSULT-II is not necessary)

### NOTE:

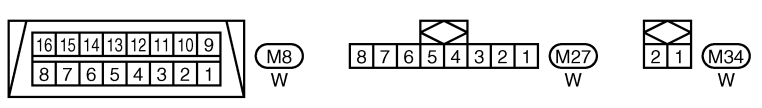
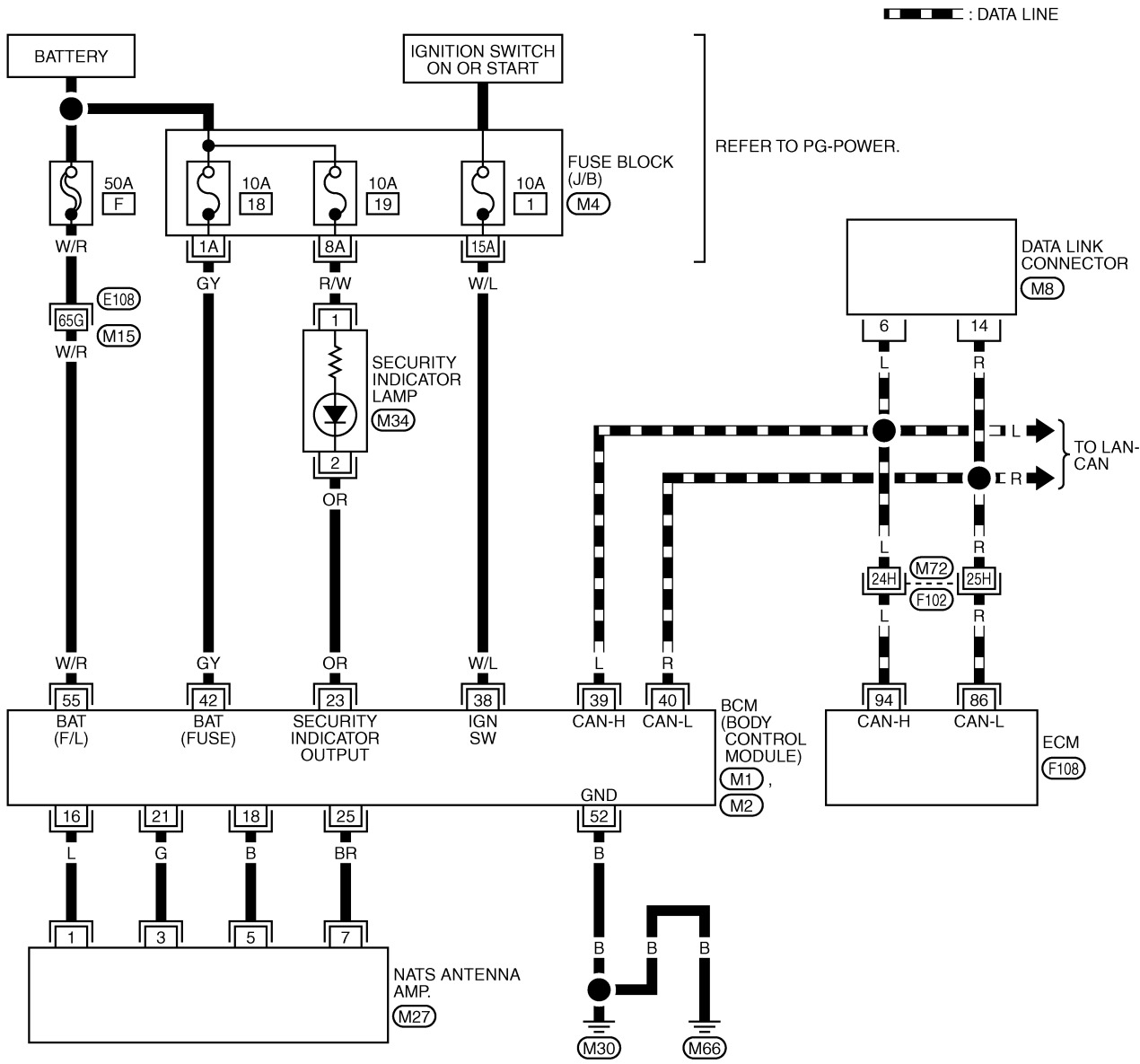
- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.**
  - **If multiple keys are attached to the key holder, separate them before work.**
  - **Distinguish keys with unregistered key ID from those with registered ID.**
1. Install ECM.
  2. Using a registered key (\*2), turn ignition switch to "ON".  
\*2: To perform this step, use the key (except for card plate key) that has been used before performing ECM replacement.
  3. Maintain ignition switch in "ON" position for at least 5 seconds.
  4. Turn ignition switch to "OFF".
  5. Start engine.  
If engine can be started, procedure is completed.  
If engine cannot be started, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS and initialize control unit.

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS00283

## Wiring Diagram — NATS —

BL-NATS-01



REFER TO THE FOLLOWING.

- (E108), (F102) -SUPER MULTIPLE JUNCTION (SMJ)
- (M4) -FUSE BLOCK-JUNCTION BOX (J/B)
- (M1), (M2), (F108) -ELECTRICAL UNITS

TIWM0465E

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## Terminals and Reference Value for BCM

AIS00284

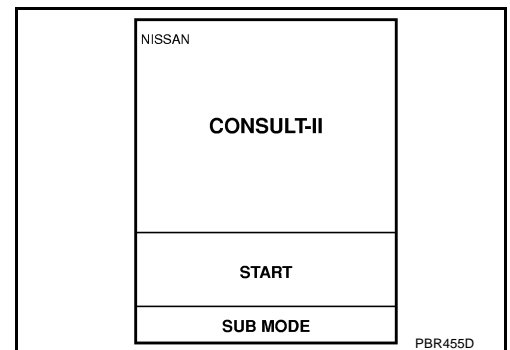
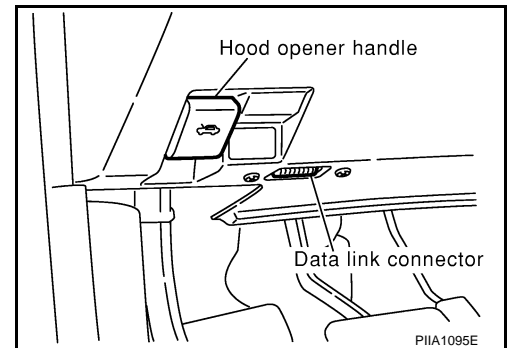
TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
16	L	NATS antenna amp.	Ignition switch: OFF → ON	0V → 5V (for 3 seconds)
18	B	NATS antenna amp.	—	0V
21	G	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch "ON": Pointer of tester should move.
23	OR	Security indicator lamp	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch "ON": Pointer of tester should move.
38	W/L	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
39	L	CAN-H	—	—
40	R	CAN-L	—	—
42	GY	Power source (fuse)	—	Battery voltage
52	B	Ground	—	0V
55	W/R	Power source (Fusible link)	—	Battery voltage

## CONSULT-II

### CONSULT-II INSPECTION PROCEDURE

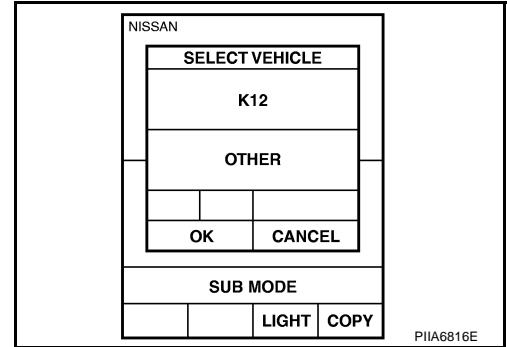
AIS00285

1. Turn ignition switch OFF.
2. Insert IVIS (NATS) program card into CONSULT-II.  
**Program card : NATS (AEN02C)**
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.
4. Turn ignition switch ON.
5. Touch "START".

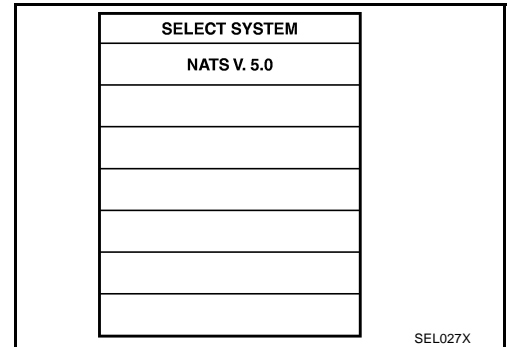


# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

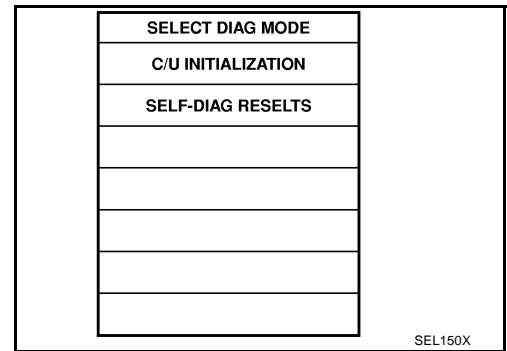
6. Touch "OTHER".



7. Select "NATS V.5.0".  
If "NATS V5.0" is not indicated, go to [GI-38, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#) .



8. Perform each diagnostic test mode according to each service procedure.  
**For further information, see the CONSULT-II Operation Manual NATS-IVIS/NVIS.**



## CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [(NATS ignition key/ BCM (NATS control unit)/ ECM*)]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. Refer to <a href="#">BL-125, "IVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART"</a> .

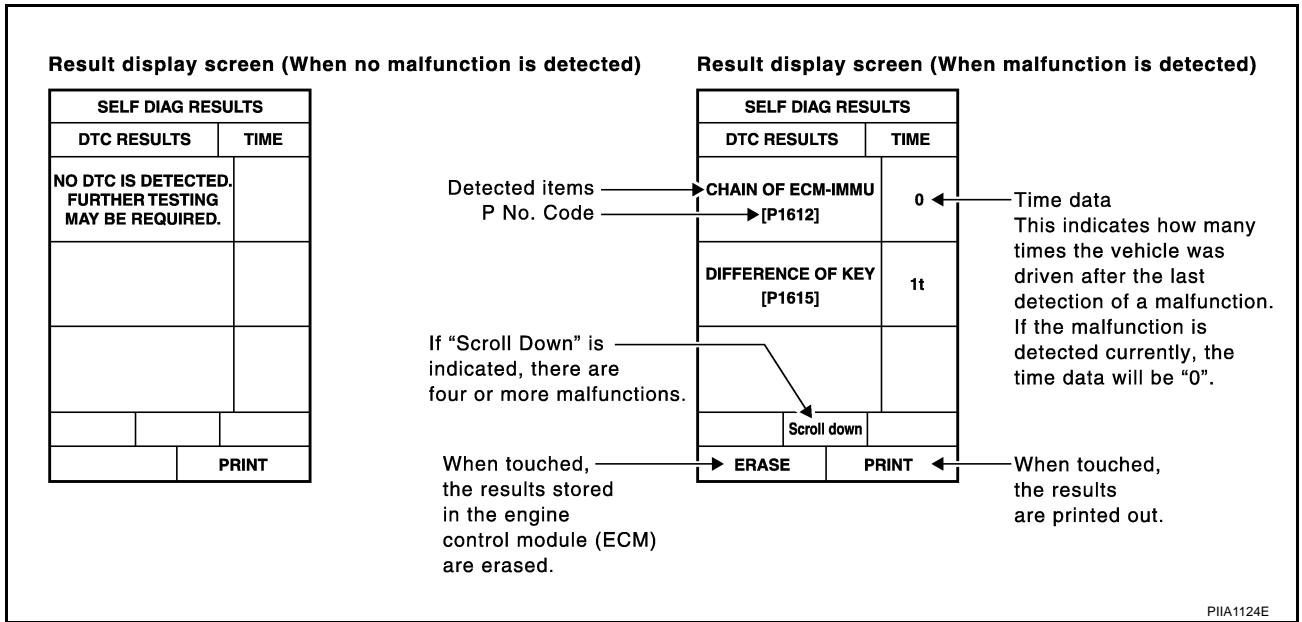
\*: When replace ECM, refer to [BL-121, "ECM Re-Communicating Function"](#) .

### NOTE:

- When any initialization is performed, all ID previously registered will be erased and all NATS ignition keys must be registered again.
- The engine cannot be started with an unregistered key. In this case, the system will show "DIFFERENCE OF KEY" or "LOCK MODE" as a self-diagnostic result on the CONSULT-II screen.
- In rare case, "CHAIN OF ECM-IMMU" might be stored as a self-diagnostic result during key registration procedure, even if the system is not malfunctioning.

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## HOW TO READ SELF-DIAGNOSTIC RESULTS



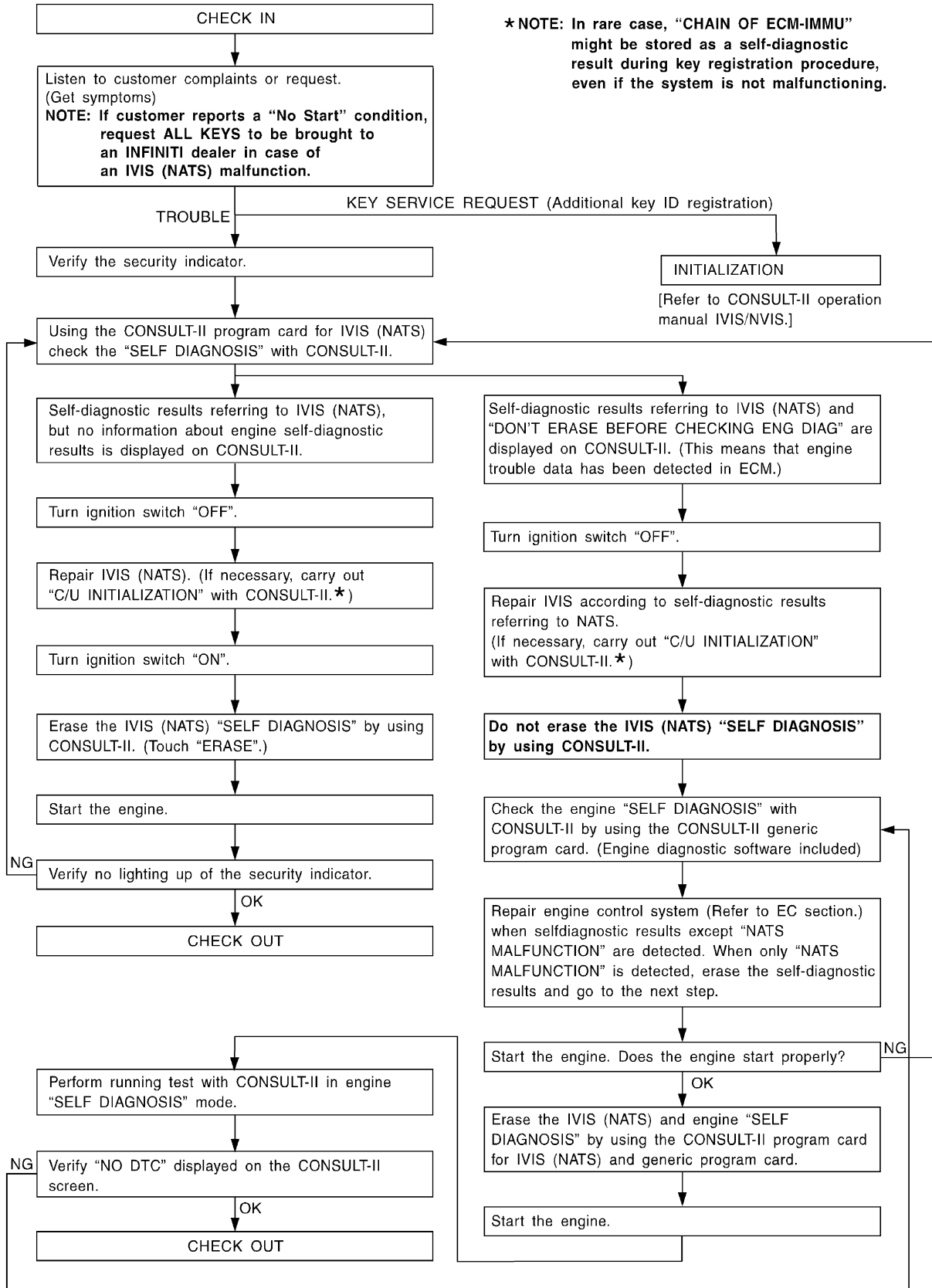
## IVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items [IVIS (NATS) program card screen terms]	P No. Code (Self-diagnostic result of "ENGINE")	Malfunction is detected when....	Reference page
CHAIN OF ECM-IMMU [P1612]	NATS MAL-FUNCTION P1612	Communication impossible between ECM and BCM (NATS control unit) In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.	Refer to <a href="#">BL-129.</a> " <a href="#">Diagnostic Procedure 1</a> ".
DIFFERENCE OF KEY [P1615]	NATS MAL-FUNCTION P1615	BCM (NATS control unit) can receive the key ID signal but the result of ID verification between key ID and BCM (NATS control unit) is NG.	Refer to <a href="#">BL-130.</a> " <a href="#">Diagnostic Procedure 2</a> ".
CHAIN OF IMM-KEY [P1614]	NATS MAL-FUNCTION P1614	BCM (NATS control unit) cannot receive the key ID signal.	Refer to <a href="#">BL-130.</a> " <a href="#">Diagnostic Procedure 3</a> ".
ID DISCORD, IMM-ECM [P1611]	NATS MAL-FUNCTION P1611	The result of ID verification between BCM (NATS control unit) and ECM is NG. System initialization is required.	Refer to <a href="#">BL-132.</a> " <a href="#">Diagnostic Procedure 4</a> ".
LOCK MODE [P1610]	NATS MAL-FUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, IVIS (NATS) will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none"> <li>● Unregistered ignition key is used.</li> <li>● BCM (NATS control unit) or ECM's malfunctioning.</li> </ul>	Refer to <a href="#">BL-135.</a> " <a href="#">Diagnostic Procedure 6</a> ".
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except IVIS (NATS) trouble code has been detected in ECM.	Refer to <a href="#">BL-126.</a> " <a href="#">Work Flow</a> ".

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## Work Flow

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# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS00287

## Trouble Diagnoses SYMPTOM MATRIX CHART 1

### Self-diagnosis related item

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
<ul style="list-style-type: none"> <li>● Security indicator lighting up*</li> <li>● Engine cannot be started</li> </ul>	CHAIN OF ECM-IMMU [P1612]	PROCEDURE 1 <a href="#">(BL-129)</a>	In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of BCM (NATS control unit) circuit	C1
			Open circuit in ignition line of BCM (NATS control unit) circuit	C2
			Open circuit in ground line of BCM (NATS control unit) circuit	C3
			Open or short circuit between BCM (NATS control unit) and ECM communication line	C4
			ECM	B
			BCM (NATS control unit)	A
			DIFFERENCE OF KEY [P1615]	PROCEDURE 2 <a href="#">(BL-130)</a>
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 3 <a href="#">(BL-130)</a>	BCM (NATS control unit)	A
			Malfunction of key ID chip	E5
			Communication line between ANT/ AMP and BCM (NATS control unit):	E1
			Open circuit or short circuit of battery voltage line or ground line	E2
			Open circuit in power source line of ANT/ AMP circuit	E3
			Open circuit in ground line of ANT/ AMP circuit	E4
			NATS antenna amp.	E6
			BCM (NATS control unit)	A
	ID DISCORD, IMM-ECM [P1611]	PROCEDURE 4 <a href="#">(BL-132)</a>	System initialization has not yet been completed.	F
	ECM	B		

A  
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BL

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
<ul style="list-style-type: none"> <li>Security indicator lighting up*</li> <li>Engine cannot be started</li> </ul>	LOCK MODE [P1610]	PROCEDURE 6 (BL-135)	LOCK MODE	When the starting operation is carried out five or more times consecutively under the following conditions, IVIS (NATS) will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none"> <li>Unregistered ignition key is used.</li> <li>BCM (NATS control unit) or ECM's malfunctioning.</li> </ul>
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-126)	Engine trouble data and IVIS (NATS) trouble data have been detected in ECM	—

\*: When IVIS (NATS) detects trouble, the security indicator lights up while ignition key is in the "ON" position.

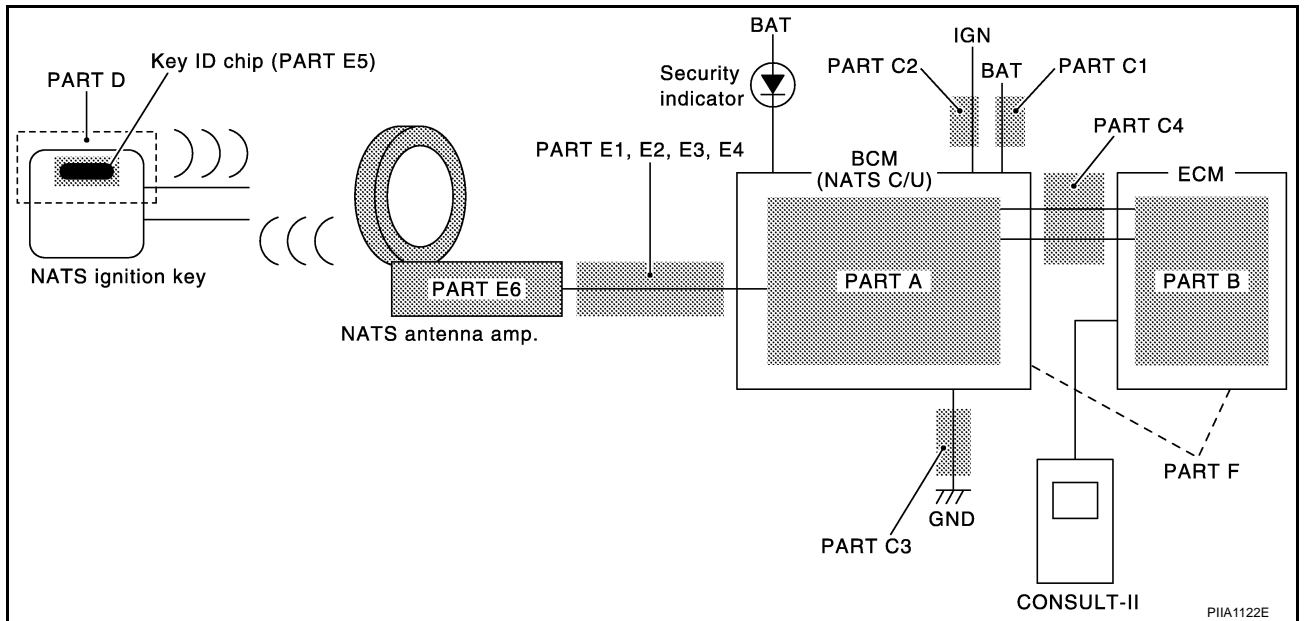
## SYMPTOM MATRIX CHART 2

### Non self-diagnosis related item

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security indicator does not light up*.	PROCEDURE 5 (BL-133)	Security indicator.	—
		Open circuit between Fuse and BCM (NATS control unit)	—
		BCM (NATS control unit)	A

\*: CONSULT-II self-diagnostic results display screen "no malfunction is detected".

## DIAGNOSTIC SYSTEM DIAGRAM



# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AI500288

## Diagnostic Procedure 1

### Self-diagnostic results:

“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen

First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated “SELF-DIAG RESULTS” of “BCM”. Refer to [BCS-13, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#) .

### 1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF ECM-IMMU” displayed on CONSULT-II screen.

#### NOTE:

In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.

Is CONSULT-II screen displayed as above?

YES >> GO TO 2.

NO >> GO TO [BL-127, "SYMPTOM MATRIX CHART 1"](#) .

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU [P1612]	0

### 2. CHECK IGN SW. ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between BCM (NATS control unit) connector M1 terminal 38 (W/L) and ground with CONSULT-II or tester.

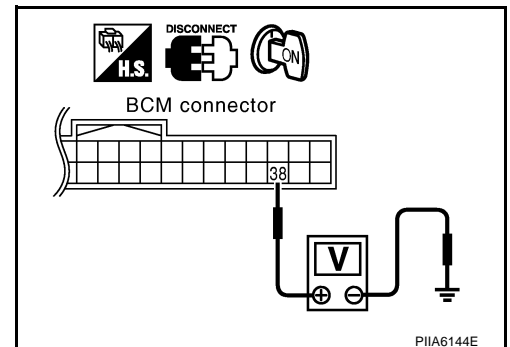
**38 (W/L) – Ground : Battery voltage**

OK or NG

OK >> GO TO 3.

NG >> Check the following.

- 10A fuse [No. 1, located in the fuse block (J/B)]
- Harness for open or short between fuse and BCM (NATS control unit) connector  
**Ref. part No. C2**



### 3. REPLACE BCM (NATS CONTROL UNIT)

1. Replace BCM (NATS control unit) **Ref. part No. A**
2. Perform initialization with CONSULT-II.  
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

Yes >> ● BCM (NATS control unit) is malfunctioning.

- Replace BCM (NATS control unit). **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

No >> ● ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization or re-communicating function.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.
- For re-communicating function, refer to [BL-121, "ECM Re-Communicating Function"](#) .

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS00289

## Diagnostic Procedure 2

### Self-diagnostic results:

“DIFFERENCE OF KEY” displayed on CONSULT-II screen

### 1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.

No >> GO TO [BL-127, "SYMPTOM MATRIX CHART 1"](#).

SELF DIAG RESULTS	
DTC RESULTS	TIME
DIFFERENCE OF KEY [P1615]	0

PIIA1261E

### 2. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.

For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

#### NOTE:

If the initialization is not completed or malfunctions, CONSULT-II shows message on the screen.

Can the system be initialized and can the engine be started with re-registered NATS ignition key?

Yes >> Ignition key ID was unregistered. **Ref. part No. D**

No >> ● BCM (NATS control unit) is malfunctioning.

● Replace BCM (NATS control unit). **Ref. part No. A**

● Perform initialization with CONSULT-II.

● For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

IMMU INITIALIZATION
INITIALIZATION FAIL
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.

SEL297W

## Diagnostic Procedure 3

AIS0028A

### Self-diagnostic results:

“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

### 1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.

No >> GO TO [BL-127, "SYMPTOM MATRIX CHART 1"](#).

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF IMMU-KEY [P1614]	0

PIIA1263E

### 2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to [BL-136, "How to Replace NATS Antenna Amp."](#).

OK or NG

OK >> GO TO 3.

NG >> Reinstall NATS antenna amp. correctly.

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## 3. CHECK IVIS (NATS) IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

Yes >> Ignition key ID chip is malfunctioning.

- Replace the ignition key.  
**Ref. part No, E5**
- Perform initialization with CONSULT-II.  
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

No >> GO TO 4.

## 4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

1. Turn ignition switch "ON".
2. Check voltage between NATS antenna amp. connector M27 terminal 1 (L) and ground with CONSULT-II or tester.

**Just after turning ignition switch "ON"**

**Voltage: Approx. 5V (For 3 seconds)**

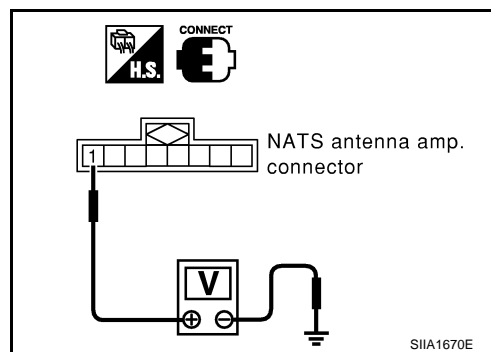
OK or NG

OK >> GO TO 5.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

**NOTE:**

If harness is OK, replace BCM (NATS control unit), perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



## 5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

Check voltage between NATS antenna amp. connector M27 terminal 3 (G) and ground with analogue tester.

**Before turning ignition switch "ON"**

**Voltage: 0V**

**Just after turning ignition switch "ON"**

**: Pointer of tester should move.**

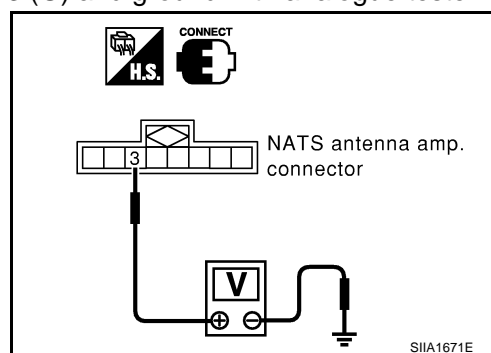
OK or NG

OK >> GO TO 6.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

**NOTE:**

If harness is OK, replace BCM (NATS control unit), perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## 6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

Check voltage between NATS antenna amp. connector M27 terminal 7 (BR) and ground with analogue tester.

**Before turning ignition switch "ON"**

**Voltage: 0V**

**Just after turning ignition switch "ON"**

**: Pointer of tester should move.**

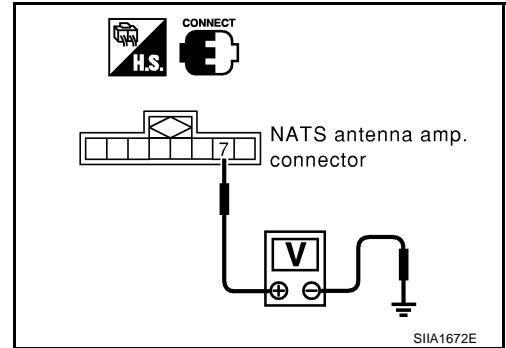
OK or NG

OK >> GO TO 7.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

**NOTE:**

If harness is OK, replace BCM (NATS control unit), perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



## 7. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch "OFF".

2. Check continuity between NATS antenna amp. connector M27 terminal 5 (B) and ground.

**5 (B) – Ground : Continuity should exist.**

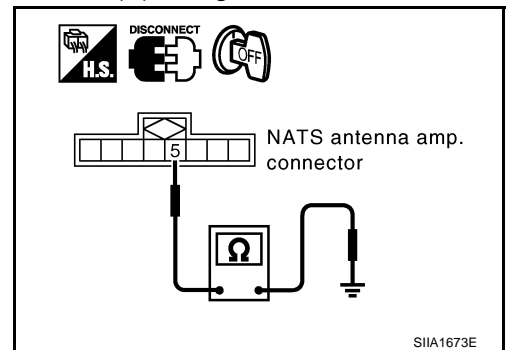
OK or NG

OK >> NATS antenna amp. is malfunctioning. **Ref. part No. E6**

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

**NOTE:**

If harness is OK, replace BCM (NATS control unit), perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



## Diagnostic Procedure 4

AIS0026B

**Self-diagnostic results:**

**"ID DISCORD, IMM-ECM" displayed on CONSULT-II screen**

### 1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS "ID DISCORD, IMM-ECM" displayed on CONSULT-II screen.

**NOTE:**

"ID DISCORD IMM-ECM":

Registered ID of BCM (NATS control unit) is in discord with that of ECM.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.

No >> GO TO [BL-129, "Diagnostic Procedure 1"](#) .

SELF DIAG RESULTS	
DTC RESULTS	TIME
ID DISCORD, IMM-ECM [P1611]	0

PIIA1262E

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## 2. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.  
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

### NOTE:

If the initialization is not completed or malfunctions, CONSULT-II shows message on the screen.

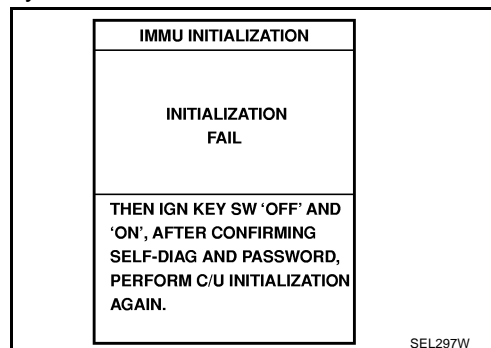
Can the system be initialized?

Yes >> ● Start engine. (END)

- (System initialization had not been completed. **Ref. part No. F**)

No >> ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.  
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



## Diagnostic Procedure 5

AIS0028C

"SECURITY INDICATOR LAMP DOES NOT LIGHT UP"

### 1. CHECK FUSE

Check 10A fuse [No.19, located in the fuse block (J/B)]

OK or NG

OK >> GO TO 2.

NG >> Replace fuse.

### 2. CHECK SECURITY INDICATOR LAMP

1. Start engine and turn ignition switch OFF.
2. Check the security indicator lamp lights up.

**Security indicator lamp should light up.**

OK or NG

OK >> Inspection END.

NG >> GO TO 3.

### 3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

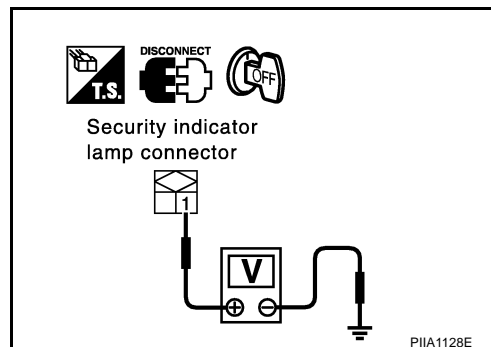
1. Disconnect security indicator lamp connector.
2. Check voltage between security indicator lamp connector M34 terminal 1 (R/W) and ground.

**1 (R/W) – Ground : Battery voltage**

OK or NG

OK >> GO TO 4.

NG >> Check harness for open or short between fuse and security indicator lamp.



# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## 4. CHECK BCM (NATS CONTROL UNIT) FUNCTION

1. Connect security indicator lamp connector.
2. Disconnect BCM (NATS control unit) connector M1.
3. Check voltage between BCM (NATS control unit) connector M1 terminal 23 (OR) and ground.

**23 (OR) – Ground : Battery voltage**

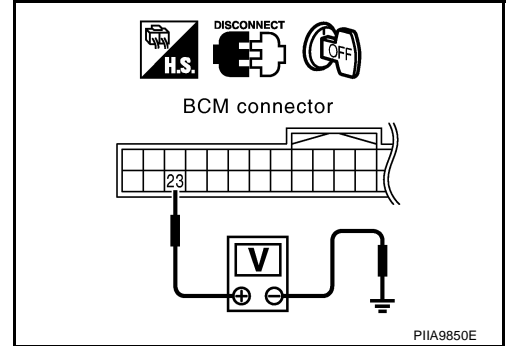
### OK or NG

OK >> BCM (NATS control unit) is malfunctioning.

- Replace BCM (NATS control unit).  
**Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NG >> Check the following.

- Harness for open or short between security indicator lamp and BCM (NATS control unit).
- Indicator lamp condition





# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AI50028D

## Diagnostic Procedure 6

### Self-diagnostic results:

“LOCK MODE” displayed on CONSULT-II screen

### 1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

- Yes >> GO TO 2.
- No >> GO TO [BL-129, "Diagnostic Procedure 1"](#) .

SELF DIAG RESULTS	
DTC RESULTS	TIME
LOCK MODE [P1610]	0

PIIA1264E

### 2. ESCAPE FROM LOCK MODE

1. Turn ignition switch OFF.
2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds.
3. Return the key to OFF position. Wait 5 seconds.
4. Repeat steps 2 and 3 twice (total of three cycles).
5. Start the engine.

Does engine start?

- Yes >> System is OK (Now system is escaped from “LOCK MODE”).
- No >> GO TO 3.

### 3. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II.

For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

#### NOTE:

If the initialization is not completed or malfunctions, CONSULT-II shows the message on the screen.

Can the system be initialized?

- Yes >> System is OK.
- No >> GO TO 4

IMMU INITIALIZATION
INITIALIZATION FAIL
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.

SEL297W

# IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

## 4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

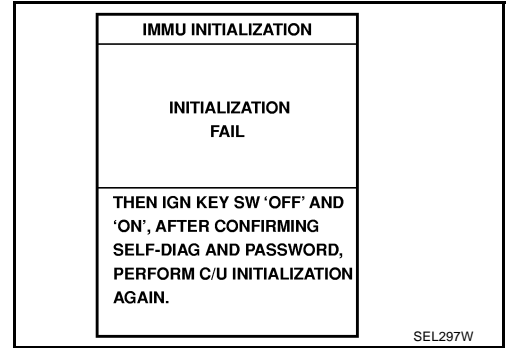
1. Replace BCM (NATS control unit).
2. Perform initialization with CONSULT-II.  
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

### NOTE:

If the initialization is not completed or malfunctions, CONSULT-II shows the message on the screen.

Can the system be initialized?

- Yes >> System is OK. (BCM (NATS control unit) is malfunctioning. **Ref. part No. A** )
- No >> ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
  - Perform initialization with CONSULT-II.
  - For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



## How to Replace NATS Antenna Amp.

AIS0028E

### NOTE:

- If NATS antenna amp. is not installed correctly, IVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".
- Initialization is not necessary only when NATS antenna amp. is replaced with a new one.

