

**SECTION** **AP**  
**ADJUSTABLE PEDAL**

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

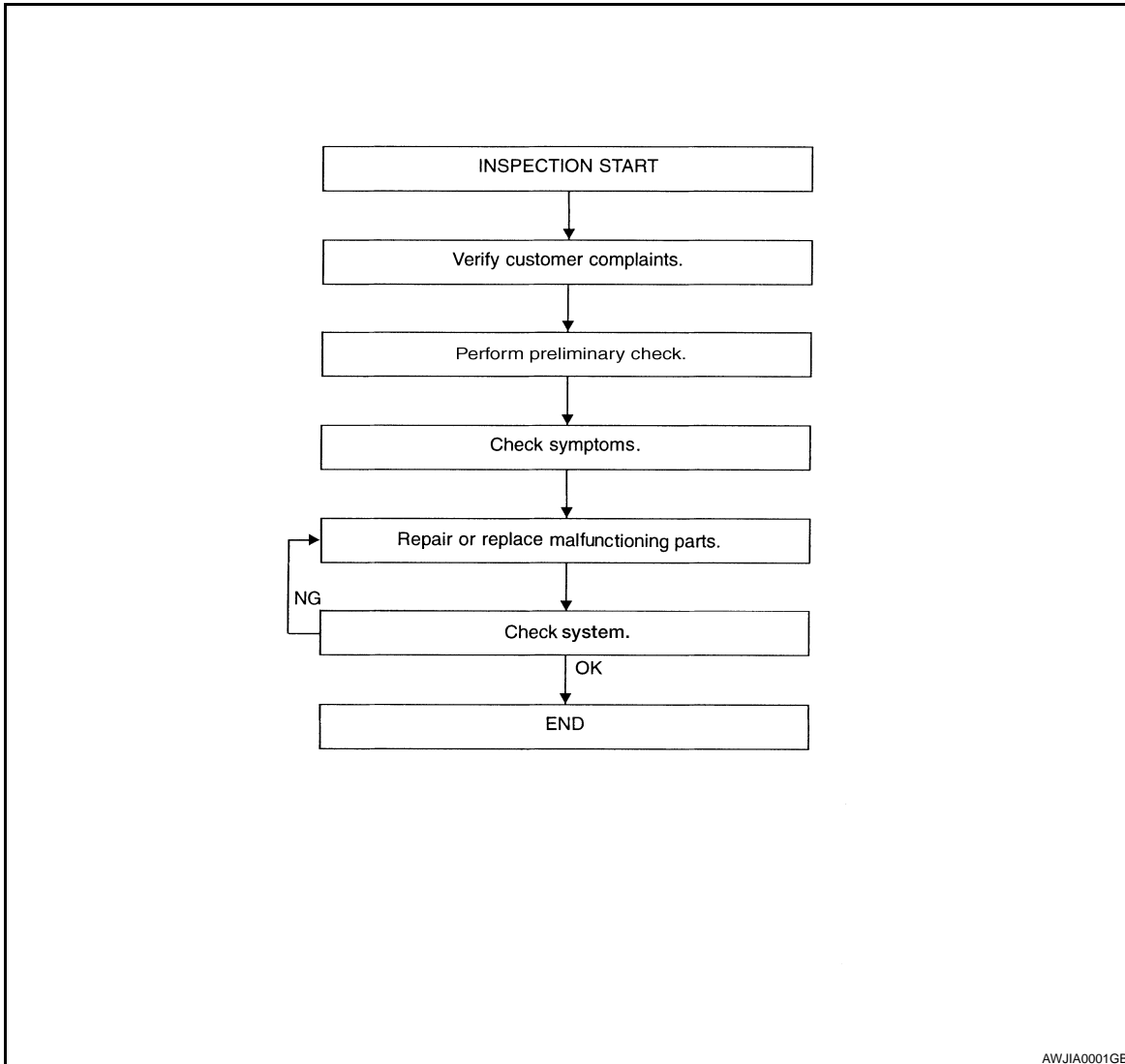
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Repair Work Flow

INFOID:000000001726708

WORK FLOW



DETAILED FLOW

### 1. CUSTOMER INFORMATION

Talk to the customer to obtain detailed information about the symptom.

>> GO TO 2

### 2. PRELIMINARY CHECK

Perform preliminary check. Refer to [AP-4. "Preliminary Check"](#).

>> GO TO 3

### 3. SYMPTOM

Check for symptoms. Refer to [AP-16. "Symptom Table"](#).

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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>> GO TO 4

## 4. MALFUNCTIONING PARTS

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Repair or replace the applicable parts.

>> GO TO 5

## 5. SYSTEM CHECK

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Operate the pedal adjusting switch to ensure that the pedals move completely forward and backward.

Does the system operate normally?

YES >> Inspection End.

NO >> Refer to [GI-51, "Intermittent Incident"](#).

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# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

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## INSPECTION AND ADJUSTMENT

### Preliminary Check

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### 1. FOREIGN OBJECTS

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Check the following:

- objects on or behind the pedals that could cause binding

Are there any foreign objects that could be causing interference with the pedals?

YES >> Remove objects.

NO >> GO TO 2

### 2. WIRING CONNECTIONS

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1. Disconnect pedal adjusting control unit and pedal adjusting motor.
2. Check terminals for damage or loose connections.
3. Reconnect harness connectors.

Are any connectors damaged or loose?

YES >> Repair or replace damaged parts.

NO >> GO TO 3

### 3. POWER AND GROUND

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Check power supply and ground circuits for pedal adjusting control unit. Refer to [AP-9. "Pedal Adjusting Switch Power Supply and Ground Circuit Inspection"](#).

Is the inspection result normal?

YES >> Refer to [AP-16. "Symptom Table"](#).

NO >> Repair or replace as necessary.

# ADJUSTABLE PEDAL SYSTEM

< FUNCTION DIAGNOSIS >

## FUNCTION DIAGNOSIS

### ADJUSTABLE PEDAL SYSTEM

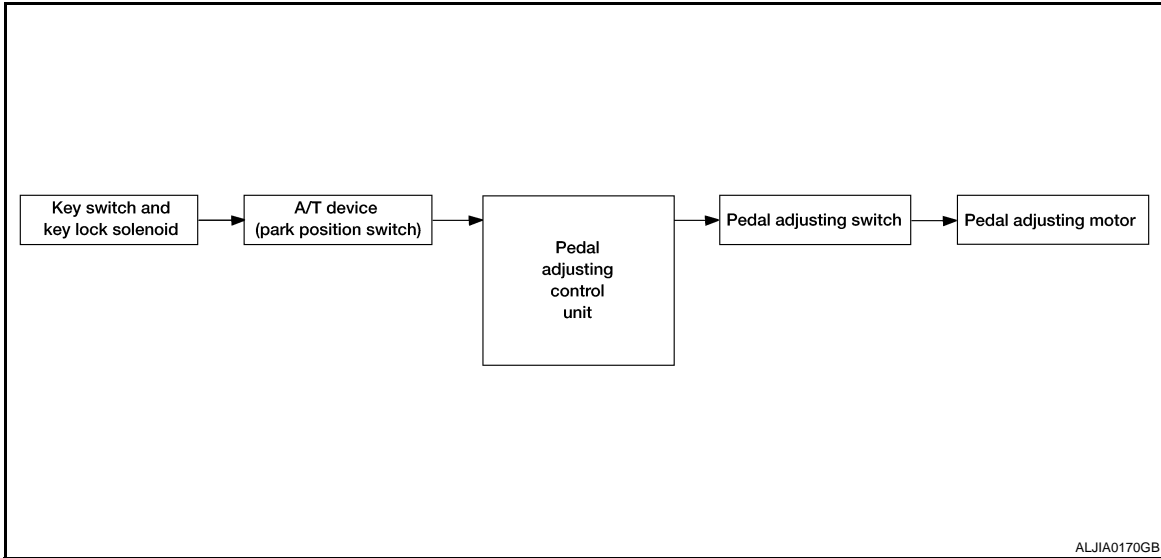
#### Automatic Drive Positioner Interlocking Adjustable Pedal

INFOID:000000001726710

Automatic drive positioner interlocking adjustable pedal. Refer to [ADP-9, "AUTOMATIC DRIVE POSITIONER SYSTEM : System Description"](#).

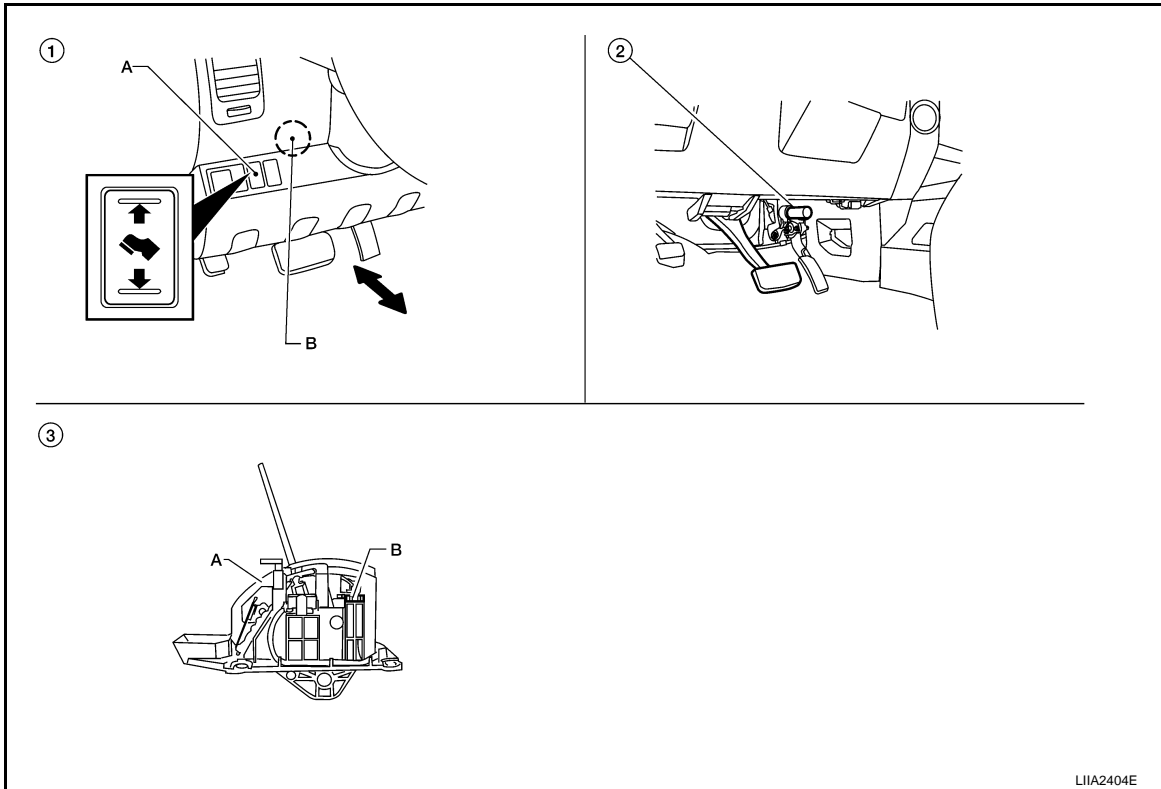
#### System Diagram

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#### Component Parts Location

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AP

- 1. A. Pedal adjusting switch M96  
B. Pedal adjusting control unit M14
- 2. Pedal adjusting motor E109
- 3. A. A/T device  
B. A/T device (park position switch) M156

# ADJUSTABLE PEDAL SYSTEM

< FUNCTION DIAGNOSIS >

## Component Description

INFOID:000000001726713

Component	Function
Pedal adjusting control unit	<ul style="list-style-type: none"><li>• Receive inputs from pedal adjusting switch and A/T device (park position switch)</li><li>• Drive pedal adjusting motor</li></ul>
A/T device (park position switch)	Provide park position switch signal to pedal adjusting control unit
Pedal adjusting switch	Provide move forward/backward signals to pedal adjusting control unit
Pedal adjusting motor	<ul style="list-style-type: none"><li>• Move pedal assembly forward and backward</li><li>• Provide feedback signals to pedal adjusting control unit</li></ul>

# ADJUSTABLE PEDAL SYSTEM

< COMPONENT DIAGNOSIS >

## COMPONENT DIAGNOSIS

### ADJUSTABLE PEDAL SYSTEM

#### Pedal Adjusting Control Unit Ignition Power Supply Circuit

INFOID:000000001726714

#### 1. CHECK FUSE

Check for blown fuse.

Unit	Power source	Fuse No.	Location
Pedal adjusting control unit	Ignition switch ON or START	12	Fuse block (J/B)

#### Is fuse blown?

- YES >> Replace fuse after repairing applicable circuit.  
 NO >> GO TO 2

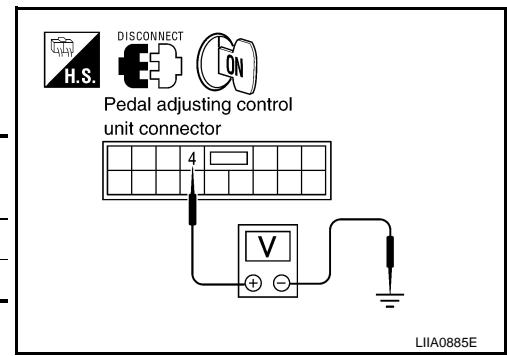
#### 2. CHECK PEDAL ADJUSTING CONTROL UNIT IGNITION POWER SUPPLY CIRCUIT

1. Disconnect pedal adjusting control unit.
2. Check voltage between pedal adjusting control unit connector and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M14	4	Ground	Ignition switch ON	Battery voltage
			Ignition switch OFF	0

#### Is inspection result normal?

- YES >> Pedal adjusting control unit ignition signal is OK.  
 NO >> Repair or replace harness.



#### Pedal Adjusting Control Unit Output Power Supply

INFOID:000000001726715

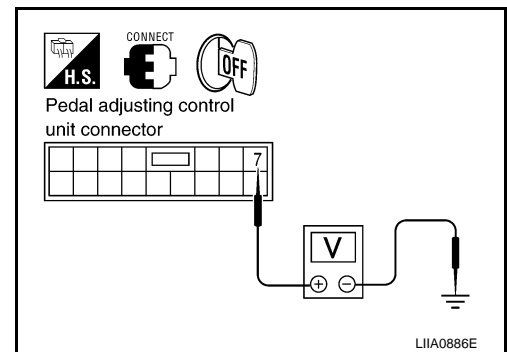
#### 1. CHECK PEDAL ADJUSTING CONTROL UNIT OUTPUT POWER SUPPLY

1. Turn ignition switch OFF.
2. With key inserted and A/T selector lever in P position, check voltage between pedal adjusting control unit connector M14 terminal 7 and ground.

**7 - Ground : Battery voltage**

#### Is inspection result normal?

- YES >> Pedal adjusting control unit power supply and ground is OK.  
 NO >> GO TO 2



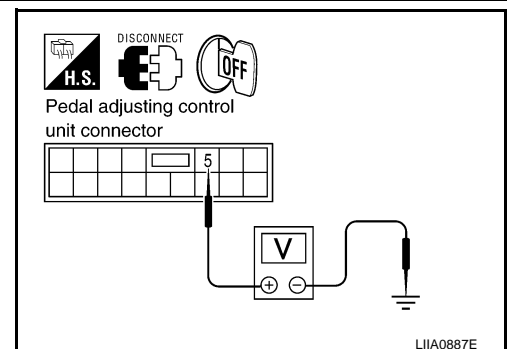
#### 2. CHECK PEDAL ADJUSTING CONTROL UNIT POWER SUPPLY CIRCUIT

1. Disconnect pedal adjusting control unit.
2. Check voltage between pedal adjusting control unit connector M14 terminal 5 and ground.

**5 - Ground : Battery voltage**

#### Is inspection result normal?

- YES >> GO TO 3  
 NO >> Repair or replace harness.



# ADJUSTABLE PEDAL SYSTEM

## < COMPONENT DIAGNOSIS >

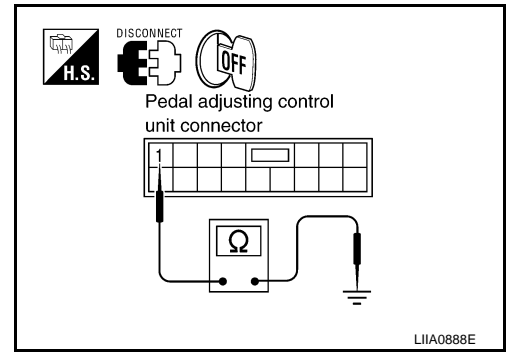
### 3. CHECK PEDAL ADJUSTING CONTROL UNIT GROUND CIRCUIT

Check continuity between pedal adjusting control unit connector M14 terminal 1 and ground.

**1 - Ground : Continuity should exist.**

Is inspection result normal?

- YES >> Replace pedal adjusting control unit.
- NO >> Repair or replace harness.



### A/T Device (Park Position Switch) Circuit Inspection

INFOID:000000001726716

#### 1. CHECK PEDAL ADJUSTING CONTROL UNIT INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect pedal adjusting control unit.
3. With key inserted in ignition cylinder, check voltage between pedal adjusting control unit connector and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M14	3	Ground	P position	Battery voltage
			Other than P position	0

Is inspection result normal?

- YES >> A/T device circuit is OK.
- NO >> GO TO 2

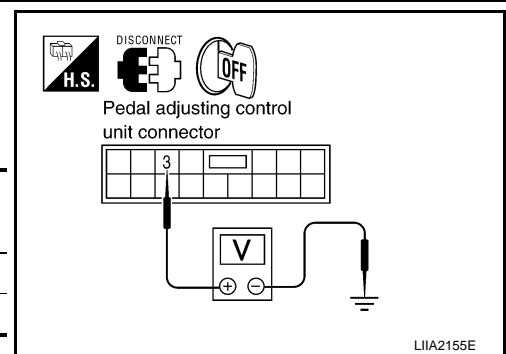
#### 2. CHECK A/T DEVICE POWER SUPPLY CIRCUIT

1. Disconnect A/T device.
2. Check voltage between A/T device connector M156 terminal 5 and ground.

**5 - Ground : Battery voltage**

Is inspection result normal?

- YES >> GO TO 3
- NO >> Repair or replace harness.



#### 3. CHECK A/T DEVICE HARNESS

1. Disconnect pedal adjusting control unit.
2. Check continuity between pedal adjusting control unit connector M14 terminal 3 and A/T device connector M156 terminal 4.

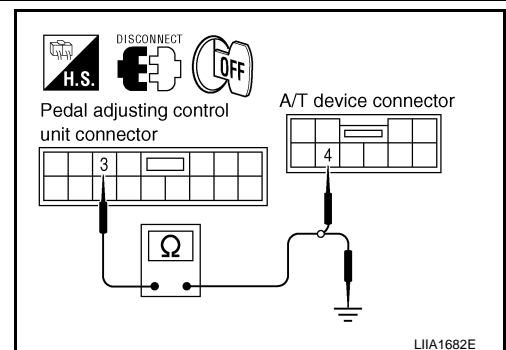
**3 - 4 : Continuity should exist.**

3. Check continuity between pedal adjusting control unit connector M14 terminal 3 and ground.

**3 - Ground : Continuity should not exist.**

Is inspection result normal?

- YES >> GO TO 4
- NO >> Repair or replace harness.





# ADJUSTABLE PEDAL SYSTEM

## < COMPONENT DIAGNOSIS >

### 4. CHECK A/T DEVICE

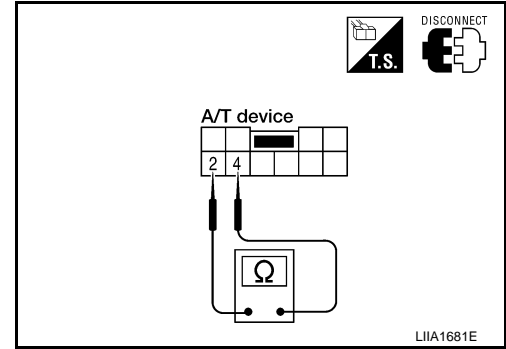
Check continuity between A/T device terminals as follows.

Terminals		Condition	Continuity
2	4	P position	Yes
		Other than P position	No

Is inspection result normal?

YES >> Inspect shift lock system. Refer to [TM-196, "Inspection and Adjustment"](#).

NO >> Replace A/T device. Refer to [TM-195, "Removal and Installation"](#).



### Pedal Adjusting Switch Power Supply and Ground Circuit Inspection

INFOID:000000001726717

#### 1. CHECK PEDAL ADJUSTING SWITCH POWER SUPPLY

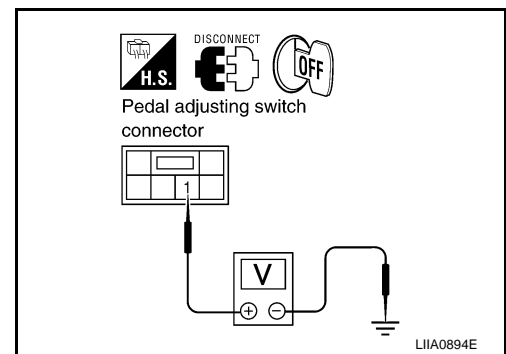
- Turn ignition switch OFF.
- Disconnect pedal adjusting switch.
- With key inserted and A/T selector lever in P position, check voltage between pedal adjusting switch connector M96 terminal 1 and ground.

**1 - Ground : Battery voltage**

Is inspection result normal?

YES >> GO TO 3

NO >> GO TO 2



#### 2. CHECK PEDAL ADJUSTING SWITCH HARNESS

- Disconnect pedal adjusting control unit.
- Check continuity between pedal adjusting control unit connector M14 terminal 7 and pedal adjusting switch connector M96 terminal 1.

**7 - 1 : Continuity should exist.**

- Check continuity between pedal adjusting control unit connector M14 terminal 7 and ground.

**7 - Ground : Continuity should not exist.**

Is inspection result normal?

YES >> Check the condition of the harness and connector.

NO >> Repair or replace harness.

#### 3. CHECK PEDAL ADJUSTING SWITCH GROUND CIRCUIT

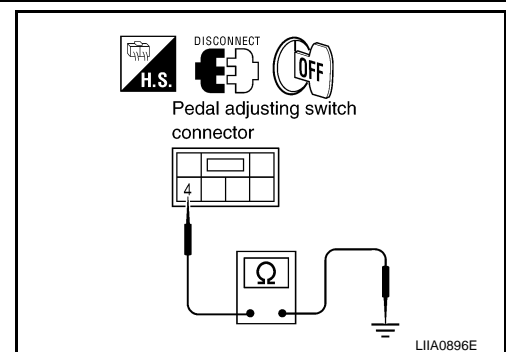
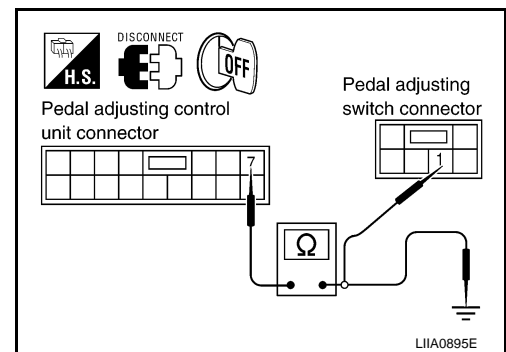
Check continuity between pedal adjusting switch connector M96 terminal 4 and ground.

**4 - Ground : Continuity should exist.**

Is inspection result normal?

YES >> Pedal adjusting switch power supply and ground circuit is OK.

NO >> Repair or replace harness.



# ADJUSTABLE PEDAL SYSTEM

## < COMPONENT DIAGNOSIS >

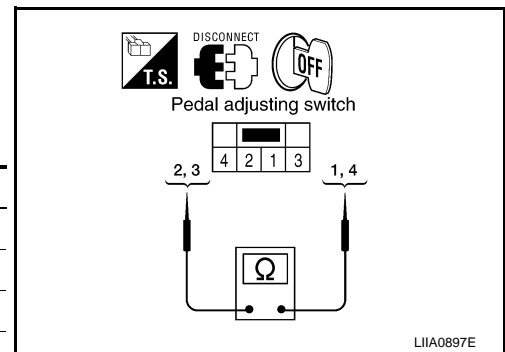
### Pedal Adjusting Motor Circuit Inspection

INFOID:000000001726718

#### 1. CHECK PEDAL ADJUSTING SWITCH

1. Turn ignition switch OFF.
2. Disconnect pedal adjusting switch.
3. Check continuity between pedal adjusting switch terminals as follows.

Terminals	Condition	Continuity	
3	1	Pedal adjusting switch forward.	Continuity should exist.
		Pedal adjusting switch neutral.	Continuity should not exist.
	4	Pedal adjusting switch backward.	Continuity should exist.
		Pedal adjusting switch neutral.	Continuity should not exist.
2	1	Pedal adjusting switch backward.	Continuity should exist.
		Pedal adjusting switch neutral.	Continuity should not exist.
	4	Pedal adjusting switch forward.	Continuity should exist.
		Pedal adjusting switch neutral.	Continuity should not exist.



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Is inspection result normal?

YES >> GO TO 2

NO >> Replace pedal adjusting switch.

#### 2. CHECK PEDAL ADJUSTING MOTOR HARNESS

1. Disconnect pedal adjusting motor.
2. Check continuity between pedal adjusting switch connector M96 (A) terminals 2, 3 and pedal adjusting motor connector E109 (B) terminals 1, 2.

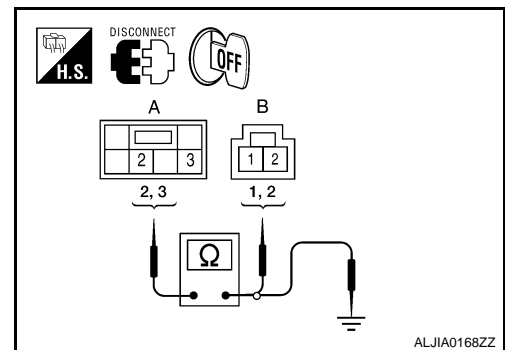
**2 - 2 : Continuity should exist.**

**3 - 1 : Continuity should exist.**

3. Check continuity between pedal adjusting switch connector M96 (A) terminals 2, 3 and ground.

**2 - Ground : Continuity should not exist.**

**3 - Ground : Continuity should not exist.**



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Is inspection result normal?

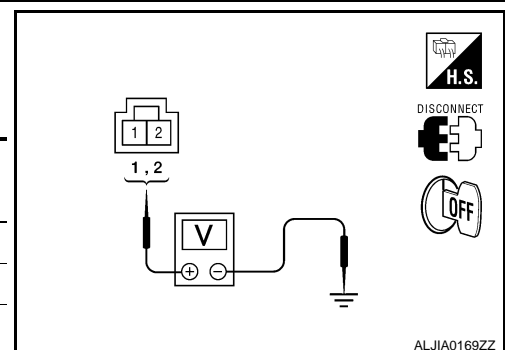
YES >> GO TO 3

NO >> Repair or replace harness.

#### 3. CHECK PEDAL ADJUSTING MOTOR POWER SUPPLY

1. Connect pedal adjusting switch.
2. Check voltage between pedal adjusting motor connector E109 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
E109	1	Ground	Pedal adjusting switch forward	Battery voltage
			Other than above	0
	2		Pedal adjusting switch backward	Battery voltage
			Other than above	0



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Is inspection result normal?

# ADJUSTABLE PEDAL SYSTEM

## < COMPONENT DIAGNOSIS >

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YES >> Replace pedal adjusting motor.  
NO >> Repair or replace harness.

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# ADJUSTABLE PEDAL SYSTEM

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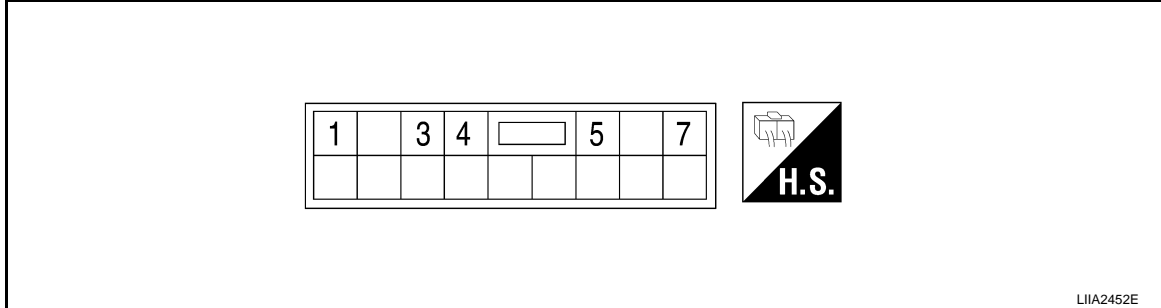
## ECU DIAGNOSIS

### ADJUSTABLE PEDAL SYSTEM

Reference Value

INFOID:000000001726719

#### TERMINAL LAYOUT



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#### PHYSICAL VALUES

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	B	Ground	—	0
3	SB	A/T device (park position switch) signal	A/T selector lever in other than P position	0
			A/T selector lever in P position	Battery voltage
4	W/G	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
5	W	Battery power supply	—	Battery voltage
7	GR	Pedal adjusting switch power supply output	Ignition switch ON A/T selector lever in other than P position	0
			Ignition switch ON A/T selector lever in P position	Battery voltage

# ADJUSTABLE PEDAL SYSTEM

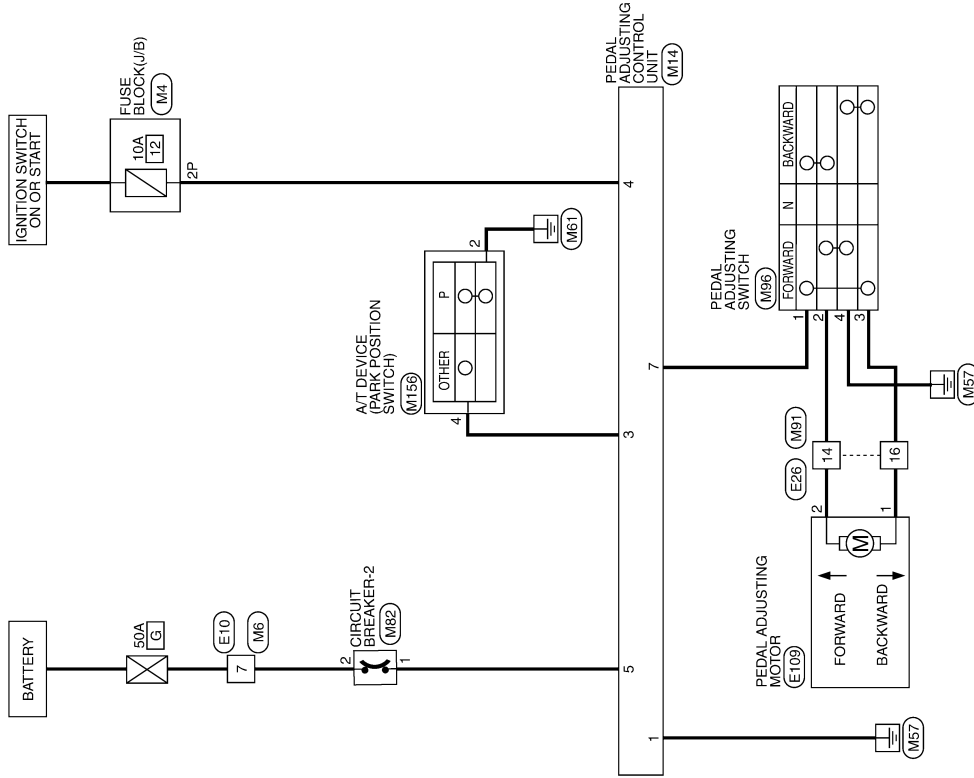
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## Wiring Diagram

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### ADJUSTABLE PEDAL SYSTEM

— : DATA LINE



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# ADJUSTABLE PEDAL SYSTEM

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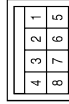
## ADJUSTABLE PEDAL SYSTEM CONNECTORS

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



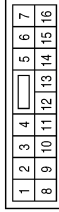
Terminal No.	Color of Wire	Signal Name
2P	W/G	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	W	-

Connector No.	M14
Connector Name	PEDAL ADJUSTING CONTROL UNIT
Connector Color	WHITE



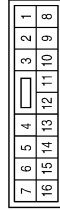
Terminal No.	Color of Wire	Signal Name
1	B	GND
3	SB	DETENT (KEY) SW
4	W/G	IGN SW
5	W	BAT (PTC)
7	GR	PEDAL MOTOR OUTPUT

Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	P	-

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	BR	-
16	G	-

Connector No.	M96
Connector Name	PEDAL ADJUSTING SWITCH
Connector Color	BROWN

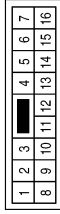


Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR	-
3	G	-
4	B	-

# ADJUSTABLE PEDAL SYSTEM

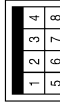
## < ECU DIAGNOSIS >

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE



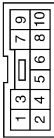
Terminal No.	Color of Wire	Signal Name
14	BR	-
16	G	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	W	-

Connector No.	M156
Connector Name	A/T DEVICE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	B	-
4	SB	-

Connector No.	E109
Connector Name	PEDAL ADJUSTING MOTOR
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	G	-
2	BR	-

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# ADJUSTABLE PEDAL SYSTEM

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### ADJUSTABLE PEDAL SYSTEM

#### Symptom Table

INFOID:000000001726721

**NOTE:**

Always check the WORK FLOW before troubleshooting. Refer to "WORK FLOW".

Symptom	Diagnosis/Service procedure	Reference page
Adjustable pedal system does not operate.	1. Pedal adjusting control unit power supply and ground circuit inspection.	<a href="#">AP-7</a>
	2. Pedal adjusting switch power supply and ground circuit inspection.	<a href="#">AP-9</a>
	3. Pedal adjusting motor circuit inspection.	<a href="#">AP-10</a>
Adjustable pedal system does operate when ignition switch is turned ON and A/T selector lever is in other than P position.	1. A/T device (park position switch) circuit inspection.	<a href="#">AP-8</a>
	2. Pedal adjusting control unit ignition signal inspection.	<a href="#">AP-7</a>
	3. Replace pedal adjusting control unit.	—
Adjustable pedal system does not operate when ignition switch is turned ON and A/T selector lever is in P position.	1. A/T device (park position switch) circuit inspection.	<a href="#">AP-8</a>



# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000001726722

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### Precaution for Work

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- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and keep them.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After re-installation is completed, be sure to check that each part works normally.
- Follow the steps below to clean components.
  - Water soluble foul: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the fouled area.  
Then rub with a soft and dry cloth.
  - Oily foul: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the fouled area.  
Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

## ADJUSTABLE PEDAL SYSTEM

< ON-VEHICLE REPAIR >

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### ON-VEHICLE REPAIR

#### ADJUSTABLE PEDAL SYSTEM

##### Removal and Installation

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Refer to [ACC-4, "Removal and Installation"](#) and [BR-15, "Removal and Installation"](#) .