

**ENGINE 1 SECTION**

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.

This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.

Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

**FUEL INJECTION (FUEL SYSTEMS) FU(SOHC)**

**EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES) EC(SOHC)**

**INTAKE (INDUCTION) IN(SOHC)**

**MECHANICAL ME(SOHC)**

**EXHAUST EX(SOHC)**

**COOLING CO**

**LUBRICATION LU**

**SPEED CONTROL SYSTEMS SP**

**IGNITION IG(SOHC)**

**STARTING/CHARGING SYSTEMS SC**

**ENGINE (DIAGNOSTICS) EN(SOHC)**

# SPEED CONTROL SYSTEMS

**SP**

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	<b>Page</b>
1. General Description .....	2
2. Accelerator Pedal.....	4
3. Accelerator Control Cable .....	9

# GENERAL DESCRIPTION

## SPEED CONTROL SYSTEMS

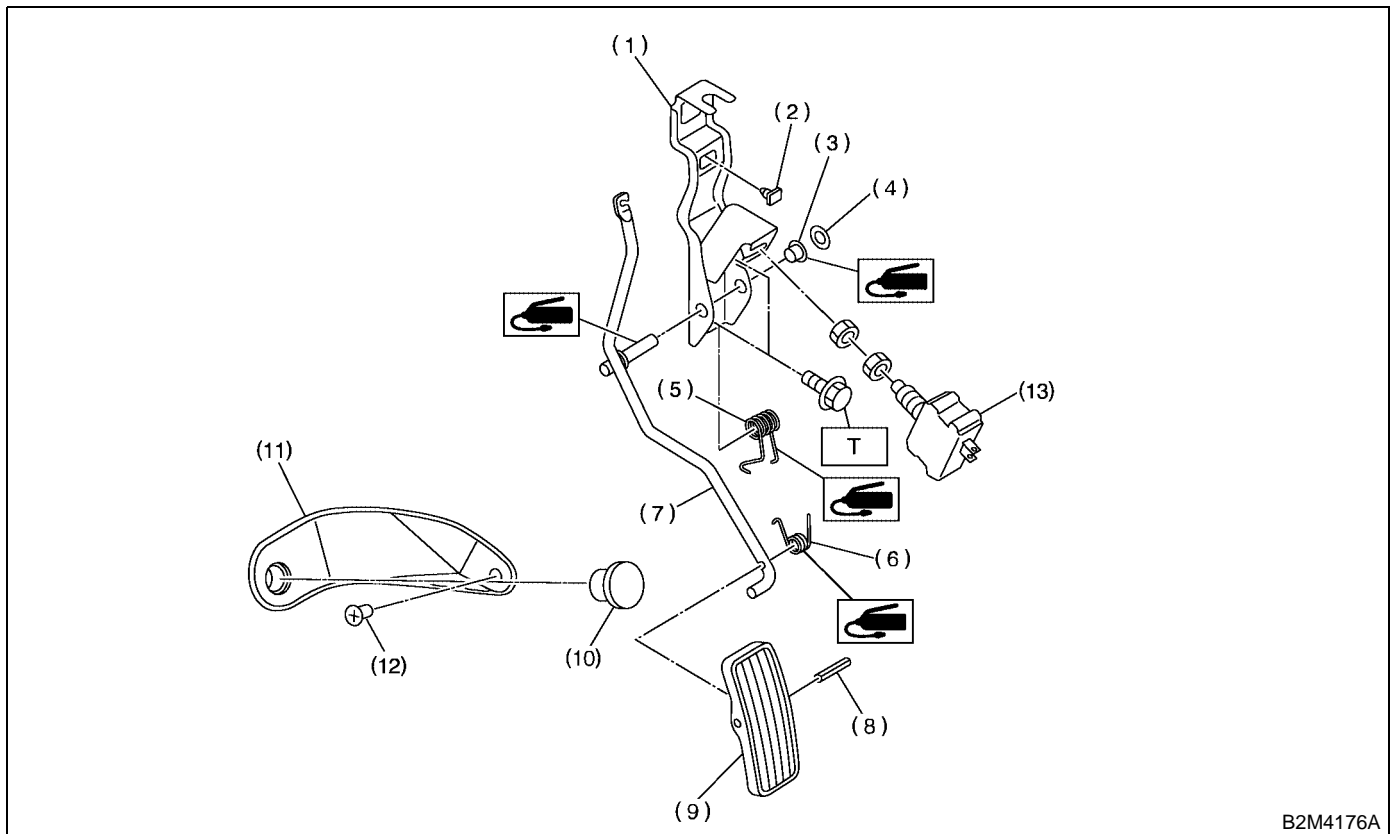
### 1. General Description

#### A: SPECIFICATION

Accelerator pedal	Free play	At pedal pad	1 — 4 mm (0.04 — 0.16 in)
	Stroke	At pedal pad	52 — 57 mm (2.05 — 2.24 in)

#### B: COMPONENT

##### 1. LHD MODEL



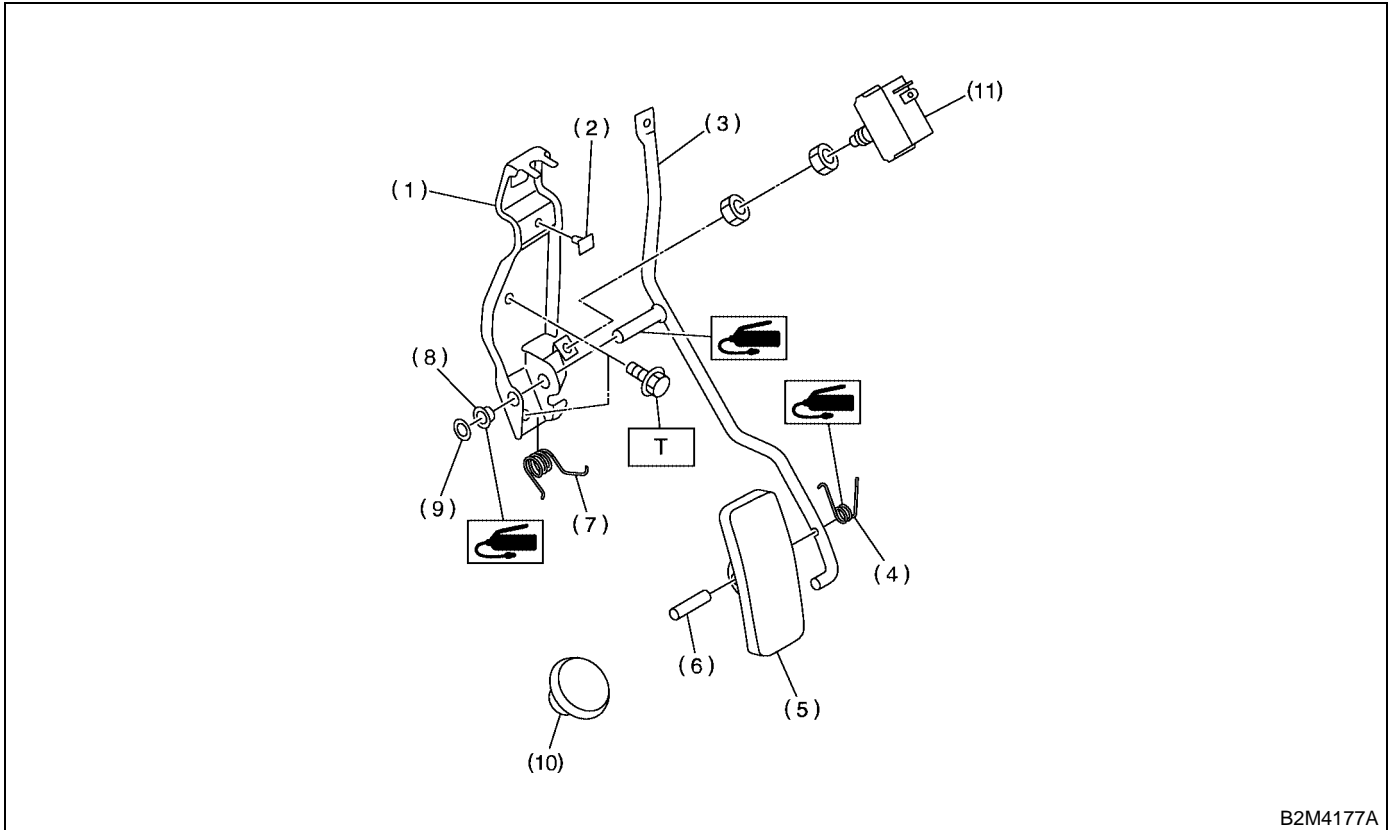
B2M4176A

- |                              |                             |                                  |
|------------------------------|-----------------------------|----------------------------------|
| (1) Accelerator bracket      | (7) Accelerator pedal lever | (13) Kick-down switch (AT model) |
| (2) Stopper                  | (8) Spring pin              |                                  |
| (3) Bushing                  | (9) Accelerator pedal       |                                  |
| (4) Clip                     | (10) Accelerator stopper    |                                  |
| (5) Accelerator spring       | (11) Accelerator plate      |                                  |
| (6) Accelerator pedal spring | (12) Clip                   |                                  |

**Tightening torque: N·m (kgf·m, ft·lb)**

**T: 18 (1.8, 13.0)**

## 2. RHD MODEL



B2M4177A

- |                              |                          |
|------------------------------|--------------------------|
| (1) Accelerator bracket      | (6) Spring pin           |
| (2) Stopper                  | (7) Accelerator spring   |
| (3) Accelerator pedal lever  | (8) Bushing              |
| (4) Accelerator pedal spring | (9) Clip                 |
| (5) Accelerator pedal        | (10) Accelerator stopper |

- (11) Kick-down switch (AT model).

**Tightening torque: N·m (kgf-m, ft-lb)**

**T: 18 (1.8, 13.0)**

### C: CAUTION

- Wear work clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination, including dirt and corrosion, before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust and dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Be careful not to burn your hands, because each part in the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect negative terminal from battery.

# ACCELERATOR PEDAL

## SPEED CONTROL SYSTEMS

### 2. Accelerator Pedal

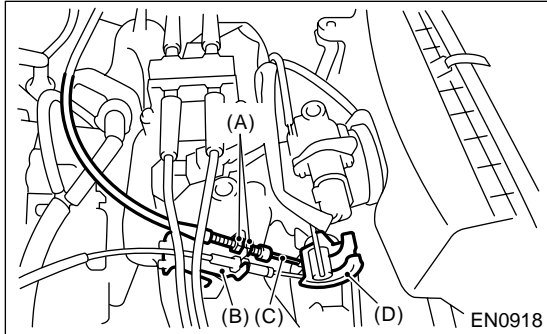
#### A: REMOVAL

- 1) Disconnect ground cable from battery.
- 2) Remove lock nut from accelerator cable bracket.
- 3) Separate accelerator cable from bracket.
- 4) Remove accelerator cable end from throttle cam.
- 5) Disconnect accelerator cable from throttle body.

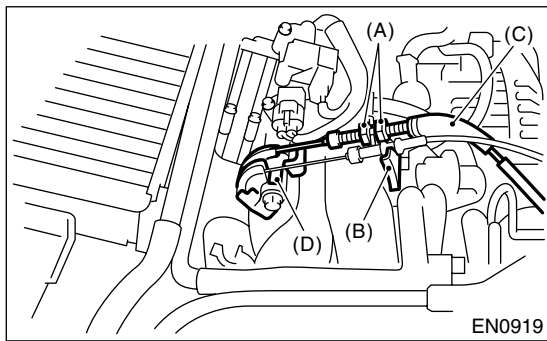
#### CAUTION:

Be careful not to kink accelerator cable.

- SOHC model



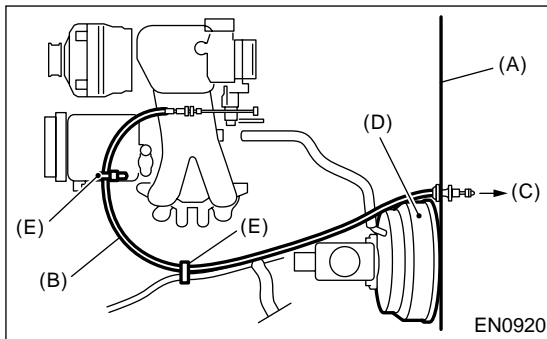
- DOHC TURBO model



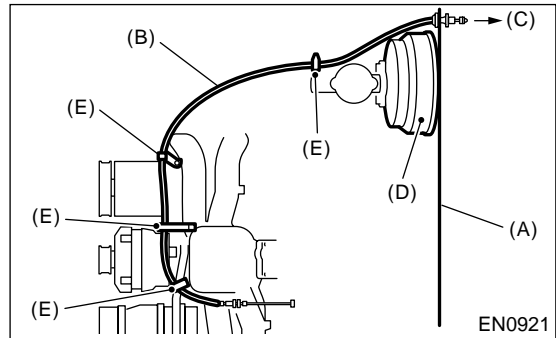
- (A) Lock nut
- (B) Accelerator cable bracket
- (C) Accelerator cable
- (D) Throttle cam

- 6) Remove clip inside engine compartment.

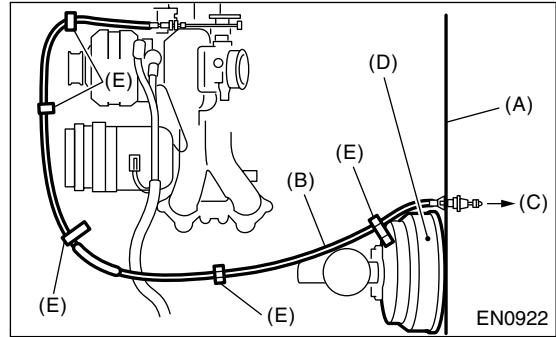
- LHD SOHC model



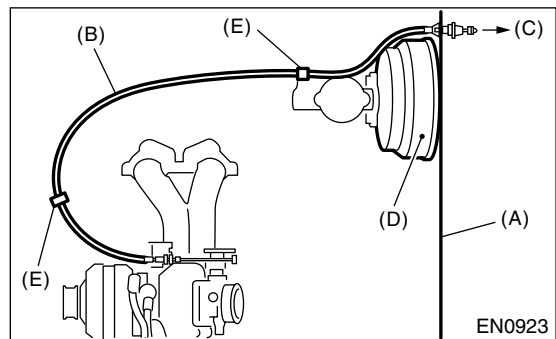
- RHD SOHC model



- LHD DOHC TURBO model



- RHD DOHC TURBO model



- (A) Toe board
- (B) Accelerator cable
- (C) To accelerator pedal
- (D) Brake booster
- (E) Clip

- 7) Remove instrument panel lower cover from instrument panel, and connector.

- 8) Disconnect connector from kick-down switch. (AT model)

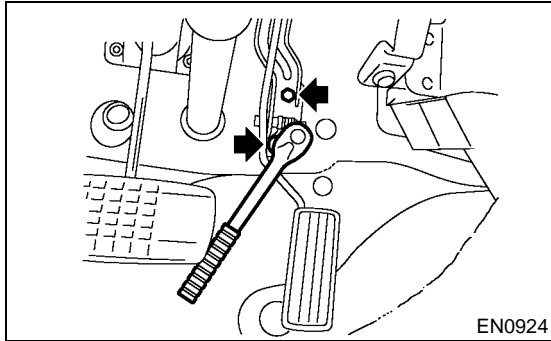
- 9) Remove brake and clutch pedal bracket. (LHD MT model) <Ref. to BR-73, REMOVAL, Brake Pedal.>

- 10) Remove accelerator pedal connecting bolt from accelerator pedal bracket.

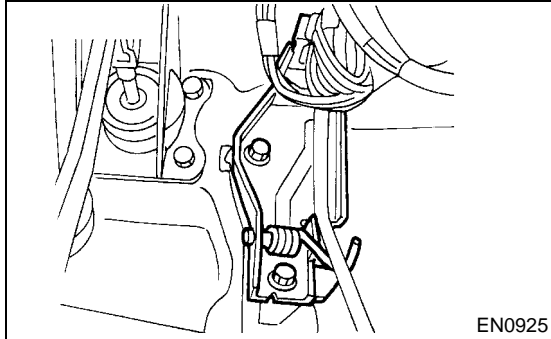
# ACCELERATOR PEDAL

## SPEED CONTROL SYSTEMS

- LHD model



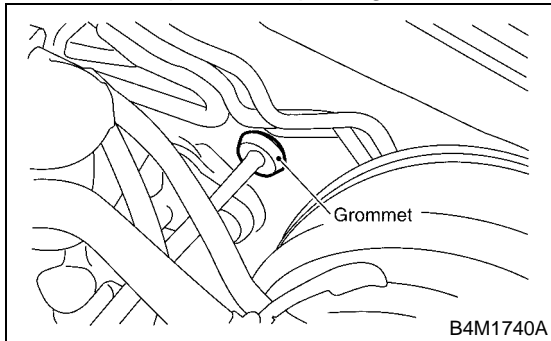
- RHD model



- 11) Disconnect grommet from toe board.

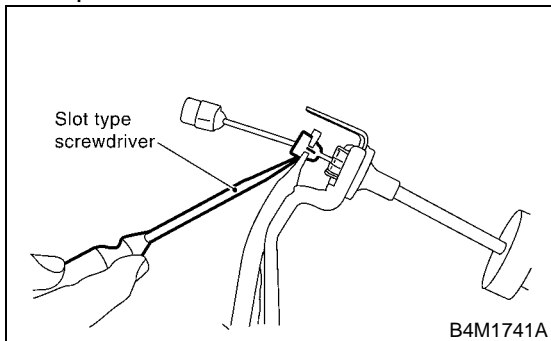
### NOTE:

From inside compartment, push grommet into hole.

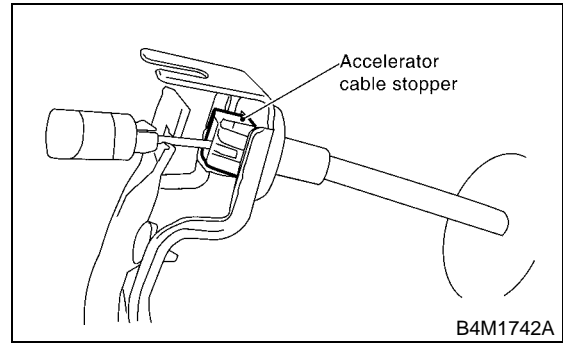


- 12) Pull out the cable from the toe board hole.

- 13) Disconnect accelerator cable bushing from accelerator pedal lever.



- 14) Disconnect accelerator cable stopper from bracket.



- 15) Separate accelerator cable and bracket.

## B: INSTALLATION

- 1) Install in the reverse order of removal.

### CAUTION:

- If cable clamp is damaged, replace it with a new one.
- Never fail to cover outer cable end with boot.
- Be careful not to kink accelerator cable.
- Always use new clevis pins.

# ACCELERATOR PEDAL

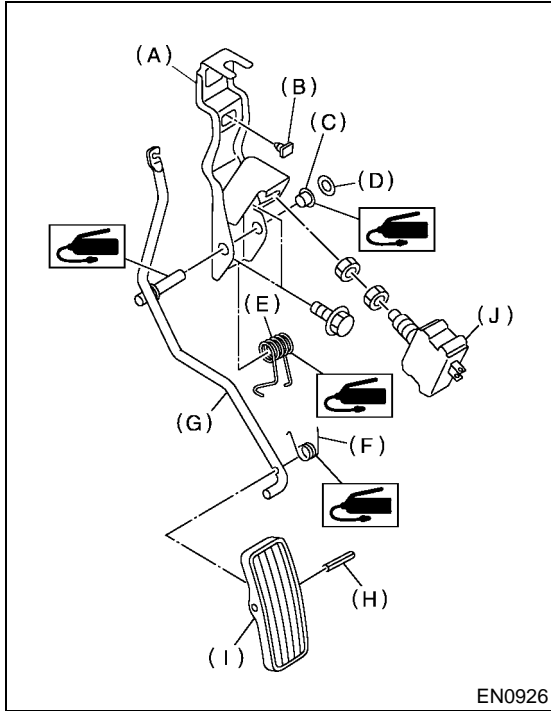
## SPEED CONTROL SYSTEMS

### C: DISASSEMBLY

1) Remove the clip, and then remove the accelerator pedal from the bracket.

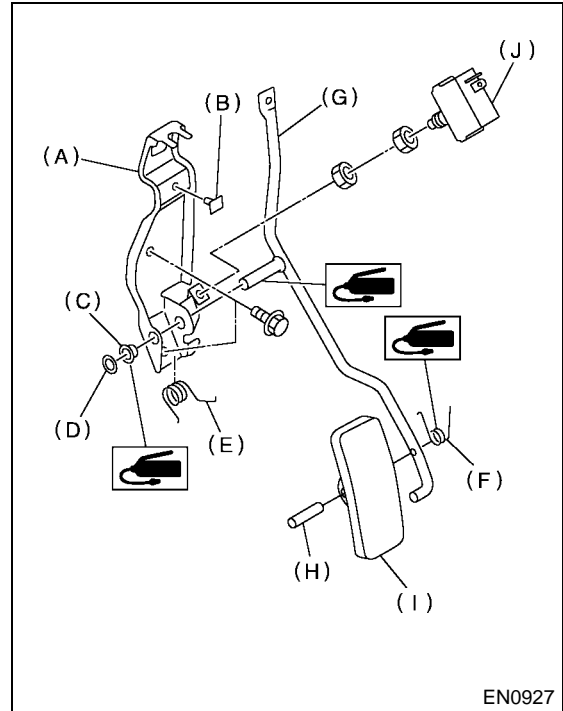
2) Pull out the spring pin, and then remove the accelerator pedal from the accelerator pedal lever.

- LHD model



- (A) Accelerator bracket
- (B) Stopper
- (C) Bushing
- (D) Clip
- (E) Accelerator spring
- (F) Accelerator pedal spring
- (G) Accelerator pedal lever
- (H) Spring pin
- (I) Accelerator pedal
- (J) Kick-down switch (AT model)

- RHD model



- (A) Accelerator bracket
- (B) Stopper
- (C) Bushing
- (D) Clip
- (E) Accelerator spring
- (F) Accelerator pedal spring
- (G) Accelerator pedal lever
- (H) Spring pin
- (I) Accelerator pedal
- (J) Kick-down switch (AT model)

### D: ASSEMBLY

Assemble in the reverse order of disassembly.

#### CAUTION:

**Clean and apply grease to spacer and inside bore of a accelerator pedal.**

### E: INSPECTION

#### 1. ACCELERATOR PEDAL

Lightly move pedal pad in lateral the direction to ensure pedal deflection is in specified range.

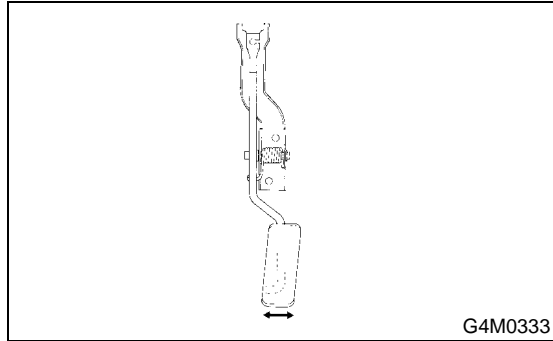
#### CAUTION:

**If excessive deflection is noted, replace bushing and clip with new ones.**

**Deflection of accelerator pedal:**

**Service limit**

**5.0 mm (0.197 in) or less**

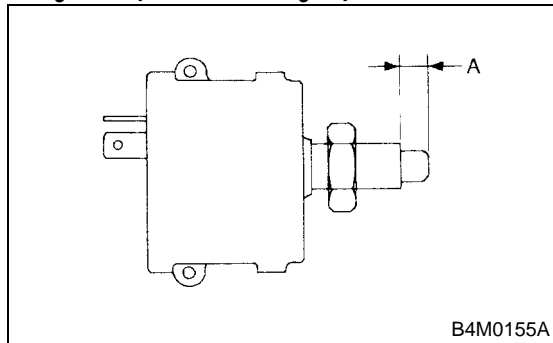


**2. KICK-DOWN SWITCH**

If kick-down switch does not operate properly (or if it does not stop at the specified position), replace with a new one.

**Specified position: A**

**$2^{+1.5}/_0$  mm ( $0.079^{+0.059}/_0$  in)**



**F: ADJUSTMENT**

1) Check pedal stroke and free play by operating accelerator pedal by hand.

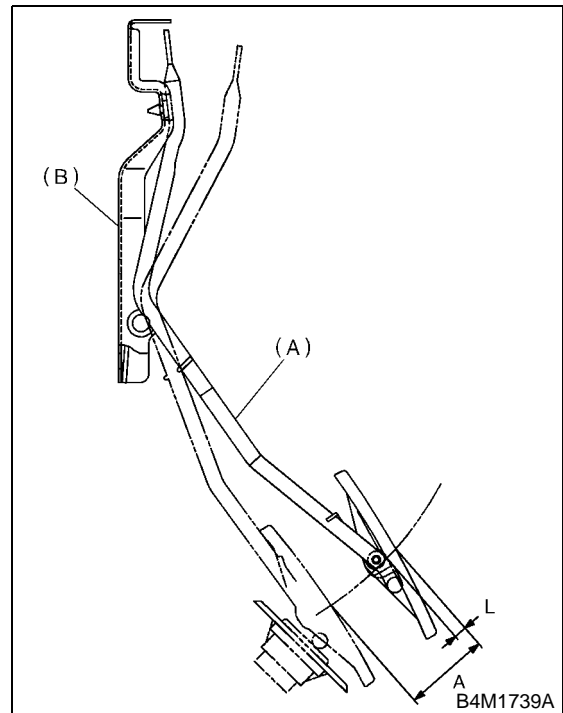
If it is not within specified value, adjust it by turning nut connecting accelerator cable to throttle body.

**Free play at pedal pad: L**

**1 — 4 mm (0.04 — 0.16 in)**

**Stroke at pedal pad: A**

**52 — 57 mm (2.05 — 2.24 in)**



(A) Accelerator pedal

(B) Accelerator pedal bracket

**Accelerator cable lock nut tightening torque:**

**12 N·m (1.2 kgf·m, 9 ft·lb)**



# ACCELERATOR PEDAL

## SPEED CONTROL SYSTEMS

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2) Check to ensure the kick-down switch operates at the specified value in relation to the stroke of the accelerator pedal.

If it is not in specified value, adjust it by adjusting position of kick-down switch.

### **CAUTION:**

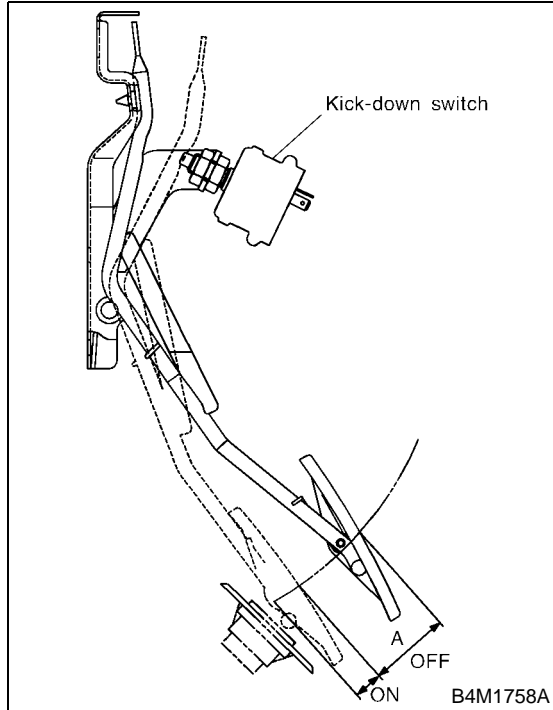
**Be careful not to rotate kick-down switch.**

***Kick-down switch stroke: A***

***48±1 mm (1.89±0.04 in)***

***Kick-down switch tightening torque:***

***12 N·m (1.2 kgf·m, 9 ft·lb)***



## 3. Accelerator Control Cable

### A: REMOVAL

- 1) Remove accelerator pedal. <Ref. to SP-4, REMOVAL, Accelerator Pedal.>
- 2) Separate accelerator cable and accelerator pedal.

### B: INSTALLATION

- 1) Install in the reverse order of removal.

#### CAUTION:

- If cable clamp is damaged, replace it with a new one.
- Never fail to cover outer cable end with boot.
- Be careful not to kink accelerator cable.
- Do not apply grease to the throttle cable on the engine side.

- 2) Adjustment after pedal installation <Ref. to SP-5, INSTALLATION, Accelerator Pedal.>

### C: INSPECTION

- 1) Make sure the inner cable is not twisted or frayed.
- 2) Make sure the outer cable is not cracked.

# ACCELERATOR CONTROL CABLE

SPEED CONTROL SYSTEMS

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