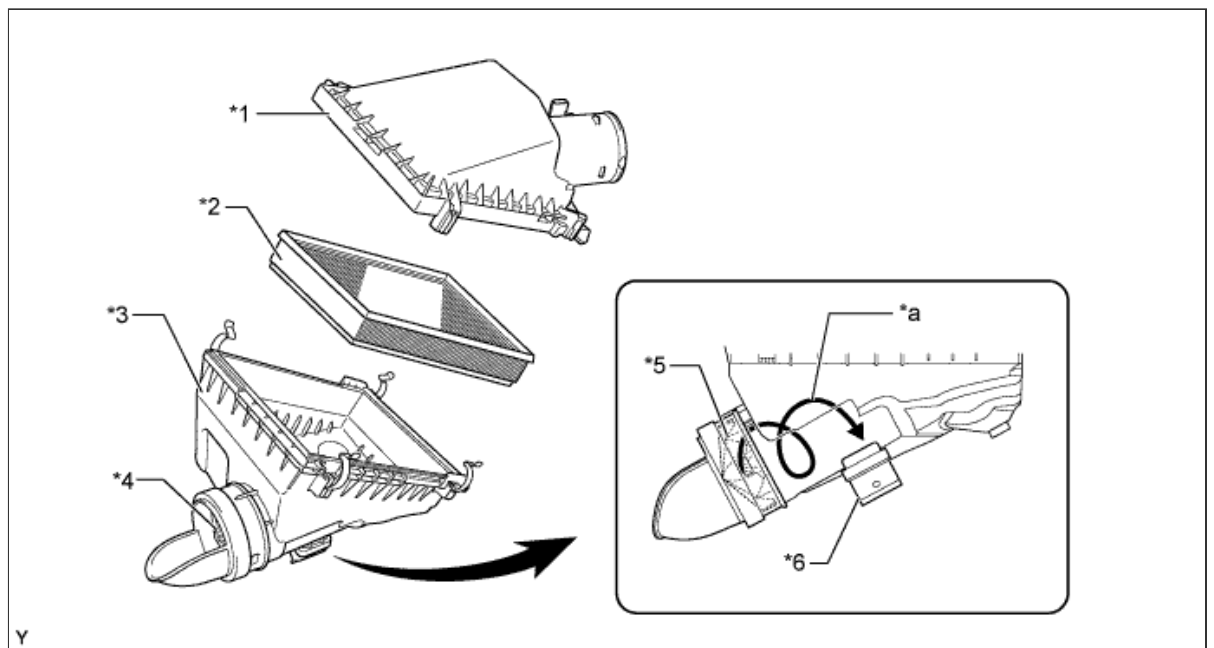


## INTAKE SYSTEM > DETAILS

### CONSTRUCTION

#### a. Air Cleaner

- i. The air cleaner filter element uses a filter paper that ensures a high level of filtering performance while reducing pressure loss.
- ii. Cyclone pre-cleaner has been provided in the air cleaner inlet. This cyclone pre-cleaner has a screw shape and gathers large-sized dusts particles in a dust cup by swirling the inlet air.

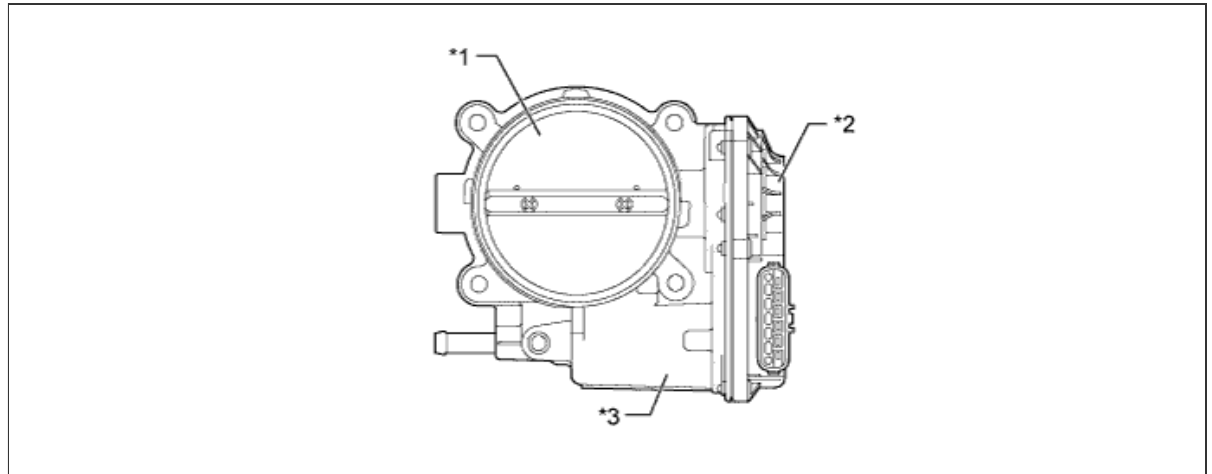


#### Text in Illustration

*1	Air Cleaner Cap	*2	Air Cleaner Element
*3	Air Cleaner Case	*4	Cyclone Pre-cleaner
*5	Turbinated Blade	*6	Dust Cup
*a	Swirl Air Flow	-	-

#### b. Throttle Body Assembly

- i. A linkless-type throttle body, in which the throttle position sensor and the throttle control motor are integrated, is used. It achieves excellent throttle valve control.
- ii. For the throttle control motor, a DC motor with excellent response and minimal power consumption is used. The ECM performs duty cycle control of the direction and the amperage of the current supplied to the throttle control motor in order to regulate the throttle valve angle.

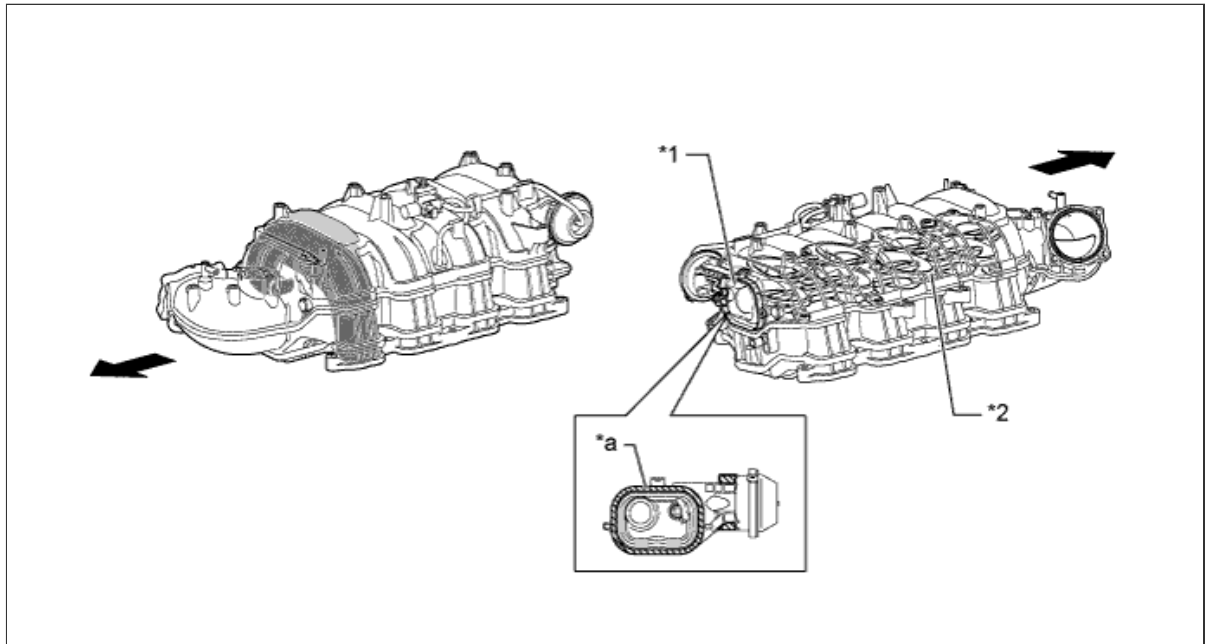


**Text in Illustration**

*1	Throttle Valve	*2	Throttle Position Sensor
*3	Throttle Control Motor	-	-

**c. Intake Manifold**

- i. An intake manifold with a built-in plastic intake air chamber is used for weight reduction.
- ii. The diameter and length of the port have been optimized to achieve high torque in all driving ranges.
- iii. The intake manifold contains valves for the Acoustic Control Induction System (ACIS), and the actuator is laser-welded to the intake manifold.
- iv. The intake air control valve and ACIS actuator are integrated with the intake manifold. This valve opens and closes to change the effective length of the intake manifold in 2 stages.



**Text in Illustration**

*1	ACIS Actuator	*2	Intake Air Control Valve
*a	Laser-welding	-	-
➔	Front	-	-
■	Left Bank Passage	■	Right Bank Passage

**HINT:**

Laser-welding: In laser-welding, a laser-absorbing material (for the intake manifold) is joined to a laser-transmitting material (for the ACIS actuator). Laser beams are then irradiated from the laser-transmitting side. The beams penetrate the laser-transmitting material to heat and melt the surface of the laser-absorbing material. Then, the heat of the laser-absorbing material melts the laser-transmitting material and causes both materials to become welded.

