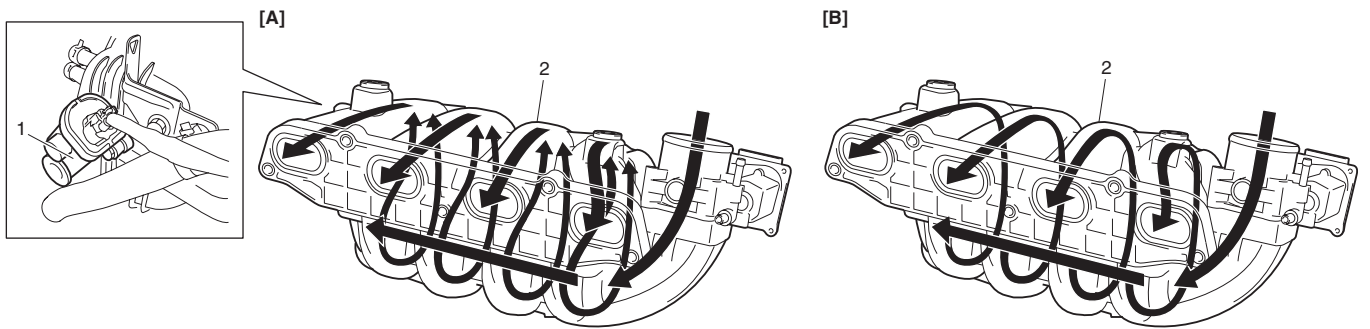
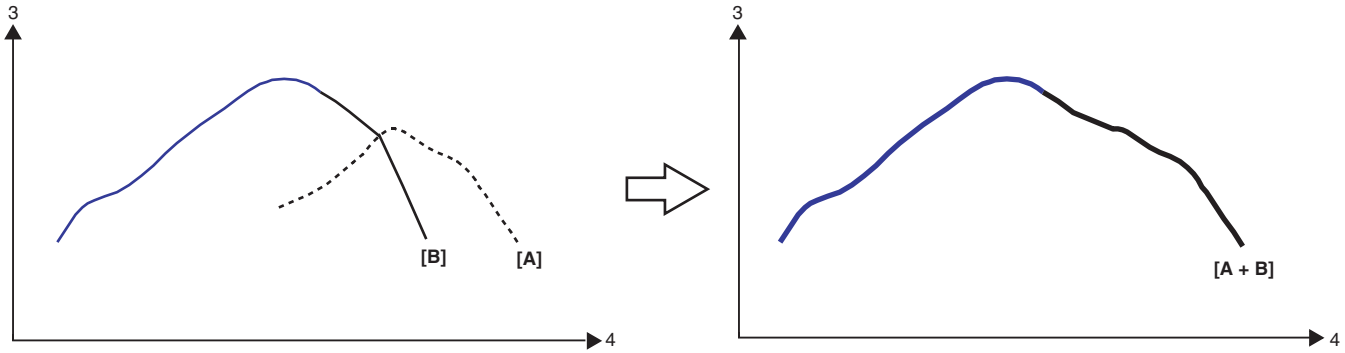


IMT (Intake Manifold Tuning) System



I7RW01140002-04

[A]: IMT valve open	1. IMT valve actuator	3. Engine torque
[B]: IMT valve closed	2. Intake manifold	4. Engine speed

IMT (Intake manifold tuning) system varies effective length of intake pipe by opening and closing IMT valve in order to improve air volumetric efficiency.

As intake valve in cylinder head is opened and closed repeatedly, intake air pulsation always exists. If intake valve is opened when air pressure is momentarily maximum, intake air volumetric efficiency is increased. This momentary maximum air pressure depends on effective intake pipe length.

When IMT valve is fully open [A]:

The effective intake pipe length is shorter. Engine torque between middle and high engine speed ranges is improved, whilst it drops between low and middle engine speed ranges.

When IMT valve is totally closed [B]:

The effective intake pipe length is longer. Engine torque between middle and high engine speed ranges drops, while it is improved between low and middle ranges.

IMT system utilizes this characteristic of engine. IMT valve is closed between low and middle engine speed ranges, and opened between middle and high engine speed ranges.

In this way, engine torque is improved in whole engine speed ranges.