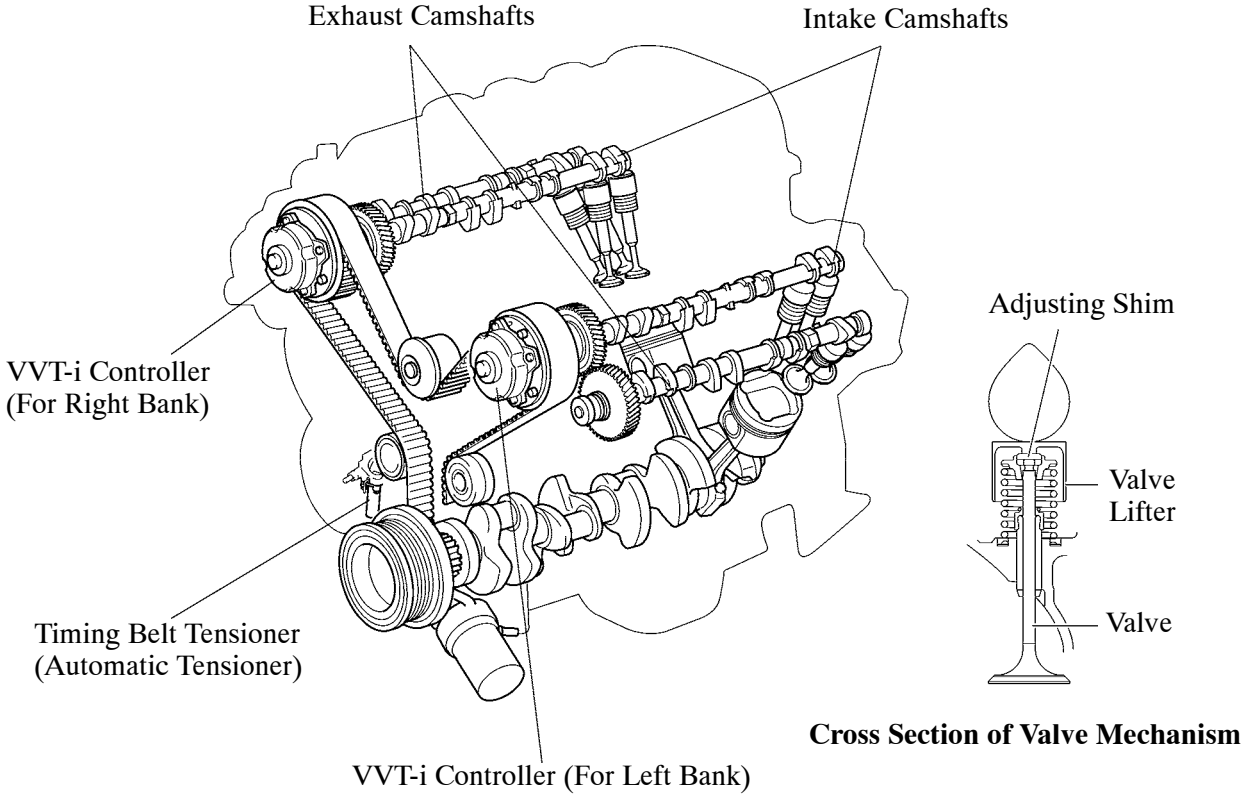
■VALVE MECHANISM

1. General

- Each cylinder has 2 intake valves and 2 exhaust valves. Intake and exhaust efficiency is increased by means of the larger total port areas.
- The valves are directly opened and closed by 4 camshafts.
- The intake camshafts are driven by a timing belt, while the exhaust camshafts are driven by gears on the intake camshafts.
- A VVT-i controller is installed on the front of each intake camshaft to vary the timing of the intake valves.
- Inner shim type adjusting shims, which allow a greater amount of valve lift, are used.

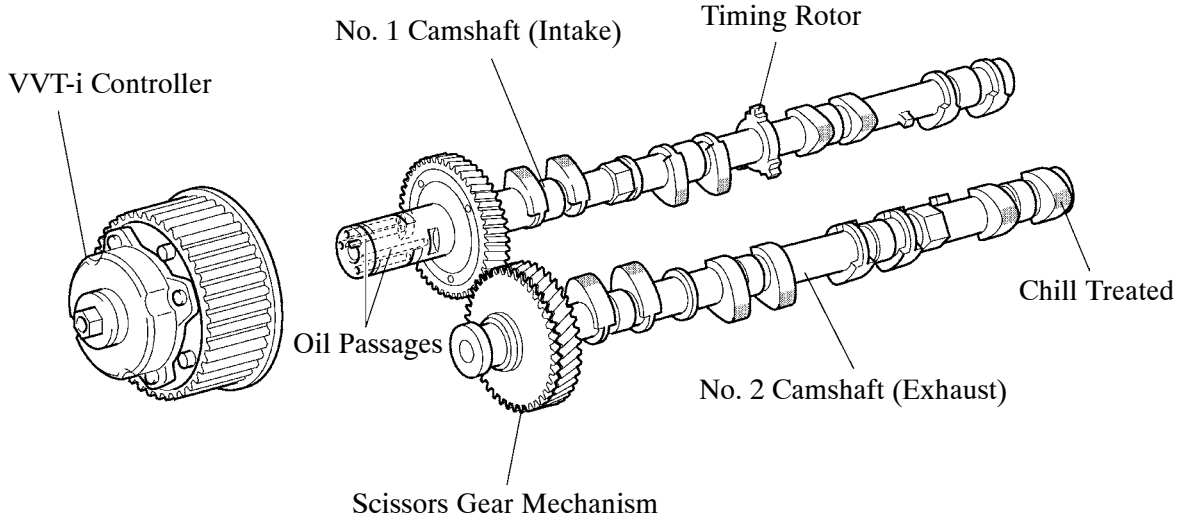


Cross Section of Valve Mechanism

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2. Camshaft

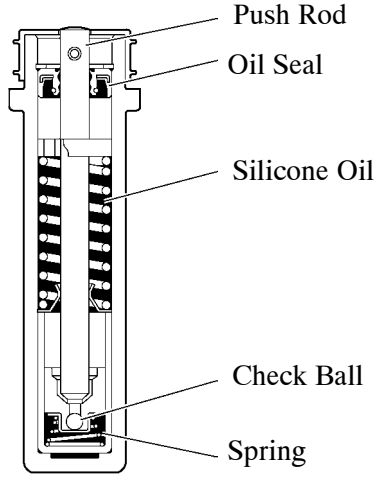
- The camshafts are made of cast iron alloy. The cam lobes have been chill-treated to increase abrasion resistance.
- An oil passage is provided in the intake camshaft in order to supply engine oil to the VVT- i controller.
- A timing rotor for the VVT-i sensor is provided on the intake camshaft to detect the actual position of the intake camshaft.
- The exhaust camshafts are driven by gears on the intake camshafts. The scissors gear mechanism is used on the exhaust camshaft to control backlash and suppress gear noise.



Right Bank

3. Automatic Tensioner

The automatic tensioner consists of a spring and oil damper, and maintains proper timing belt tension at all time. The automatic tensioner suppresses noise generated by the timing belt.



Timing Belt Tensioner (Automatic Tensioner)