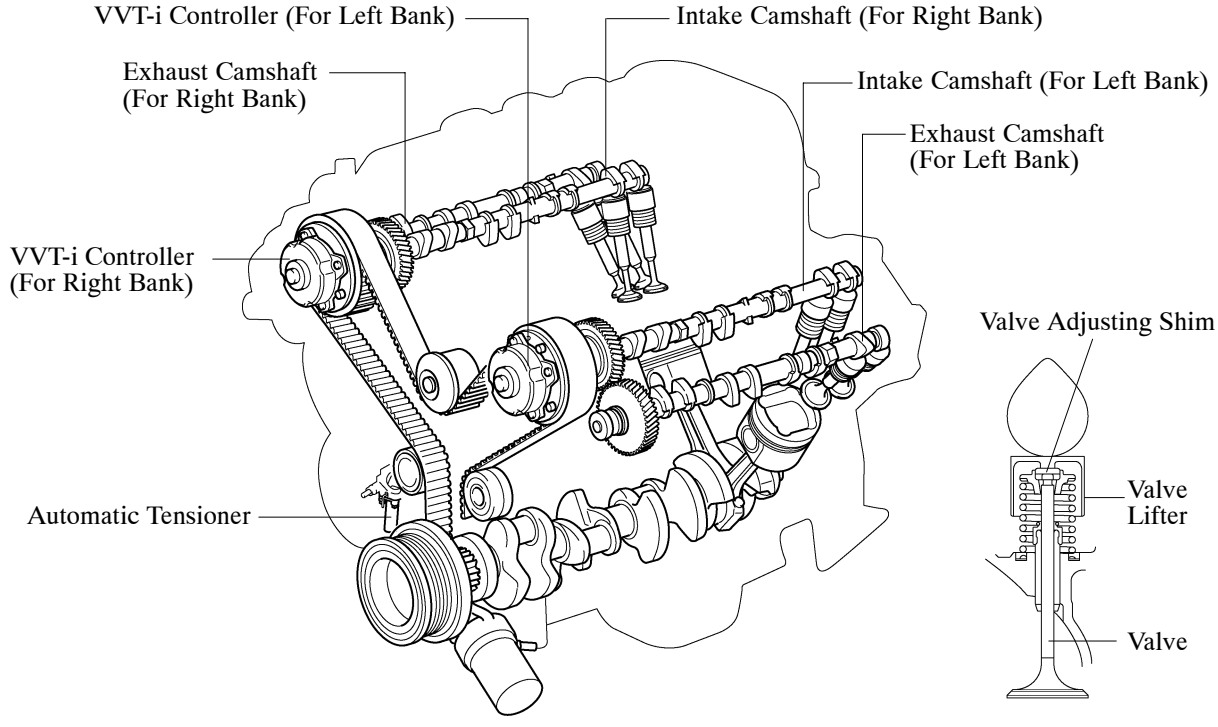
■VALVE MECHANISM

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 through 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 valve adjusting shims, which allow a greater amount of valve lift, are used.

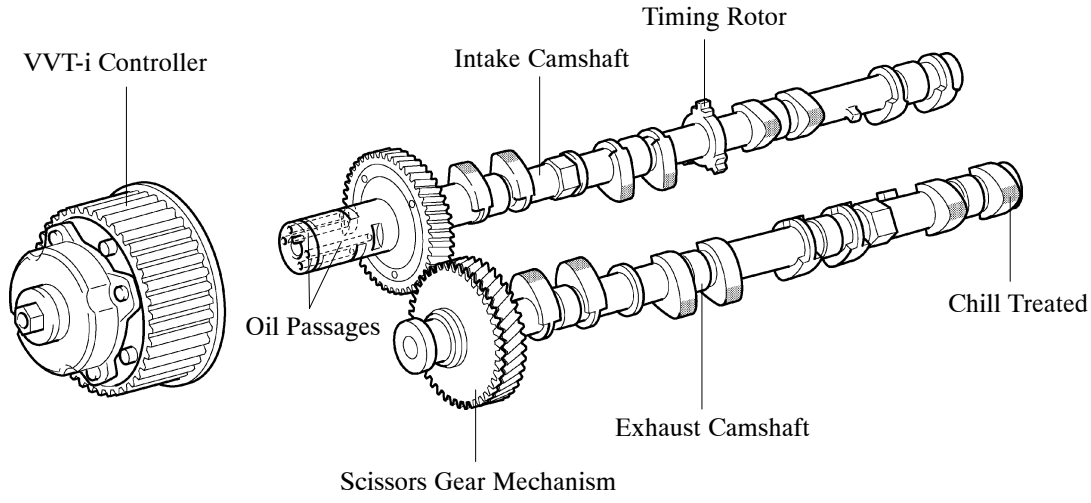


Cross Section of Valve Mechanism

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2. Camshaft

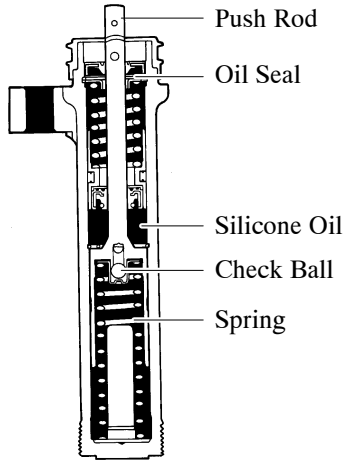
- The camshafts are made of a cast iron alloy. The cam lobes have been chill treated to increase abrasion resistance.
- An oil passage is provided in the intake camshaft in order to supply engine oil to the VVT- i controller.
- A timing rotor for the VVT-i sensor is provided on the intake camshaft to 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.



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3. Automatic Tensioner

The automatic tensioner is made up 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.



Automatic Tensioner

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