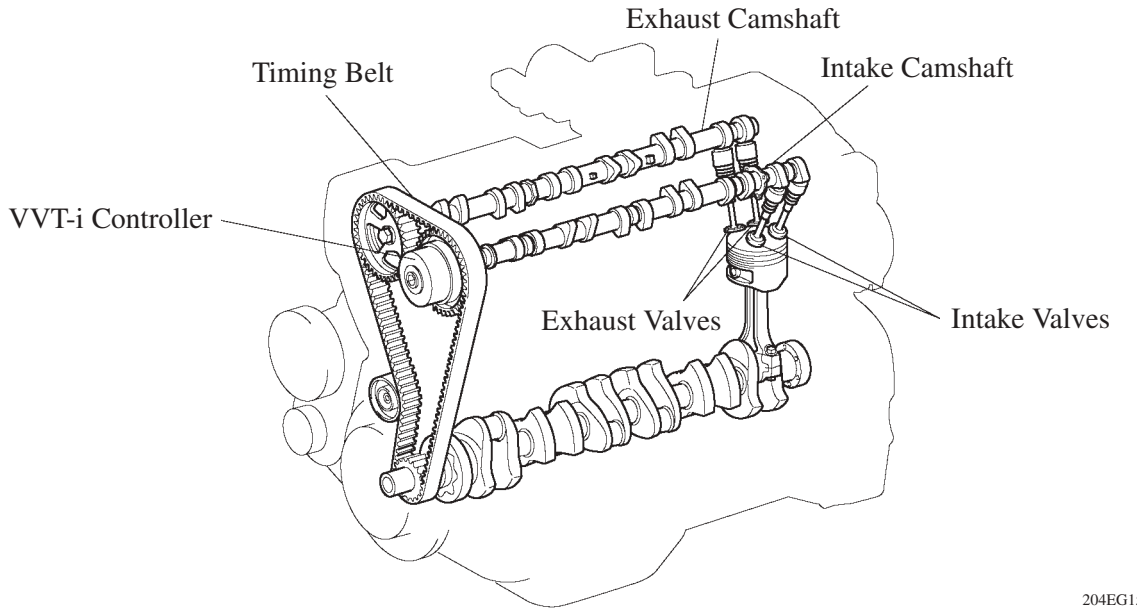
■ VALVE MECHANISM

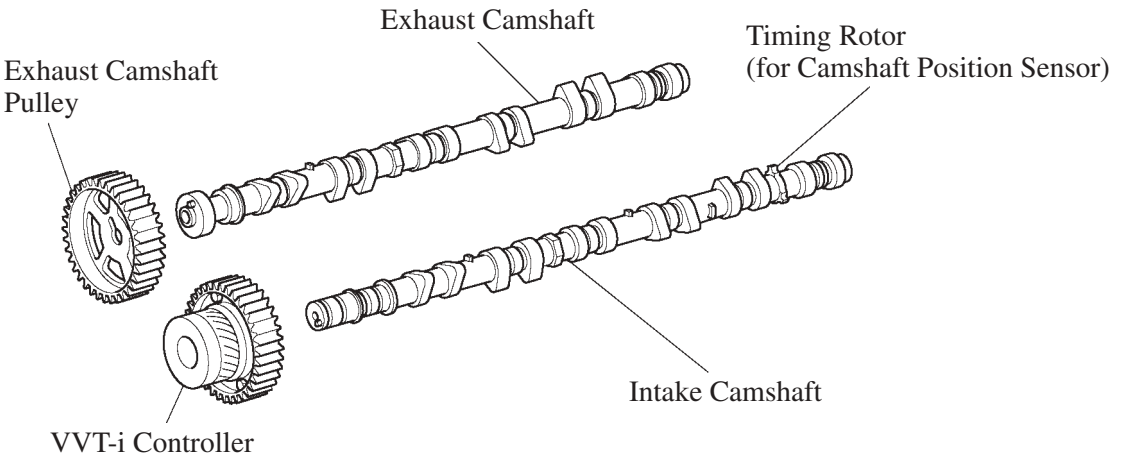
1. General

- Outer type valve adjusting shims, which are located on top of the valve lifter.
- The VVT-i system used for the intake camshaft is adopted.
- The automatic belt tensioner has been adopted to suppresses noise.



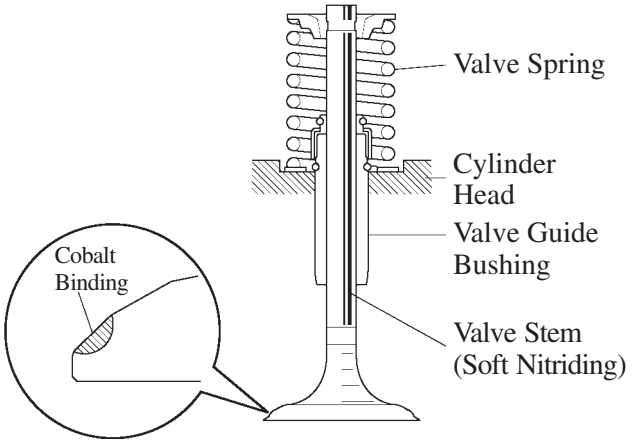
2. Camshaft

- The intake camshaft is provided with timing rotor to trigger the camshaft position sensor.
- In conjunction with the adoption of the VVT-i system, an oil passage is provided in the intake camshaft in order to supply engine oil pressure to the VVT-i system. For details of VVT-i control, refer to page 45.
- A VVT-i controller has been installed on the front of the intake camshaft to vary the timing of the intake valves.



3. Intake and Exhaust Valve, Valve Lifter and Valve Adjusting Shim

- The intake and exhaust valves are made of heat resistant steel. Also, through the application of the soft nitriding process to the valve stem, and cobalt alloy binding to the valve face, as shown, the valves have been made highly wear-resistant.
- The valve spring used is relatively short, and offers excellent valve-trailing capability during high engine speed operation.



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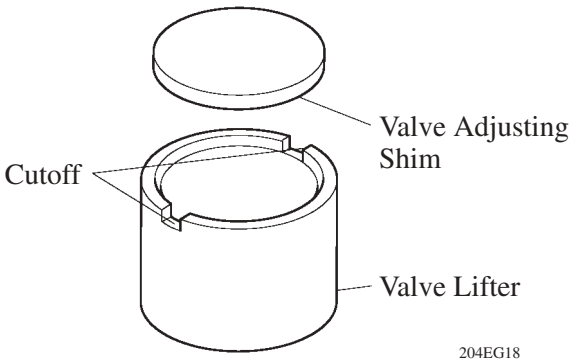
- The adjusting shim has been located directly above the valve lifter. This construction allows the adjusting shim to be replaced without removing the camshaft, which realizes the highly serviceability during valve clearance adjustment.
- A cutoff is provided in the valve lifter to realize the highly serviceability of the replacing the adjusting shims.



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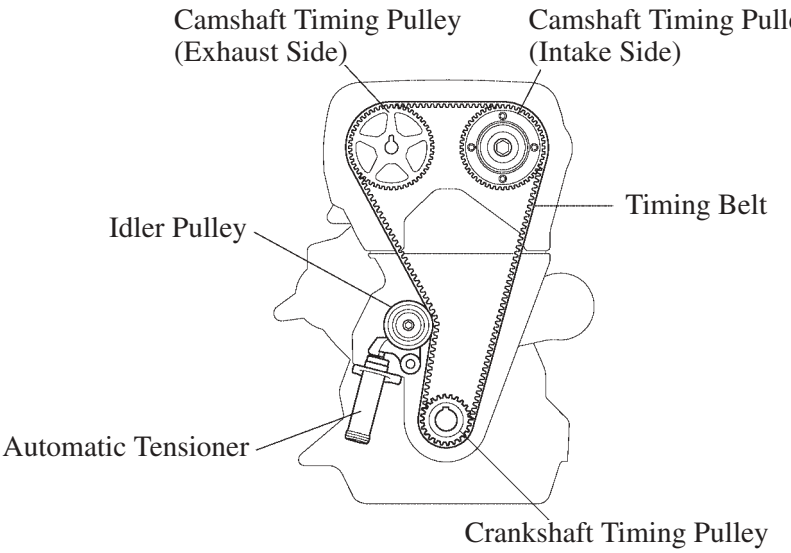
5. Timing Belt

- The timing belt has high heat resistance and durability. The tooth profile of the timing belt is shown in the illustration below. This design ensures quiet operation and high-load transmission.
- The automatic tensioner is made up of a spring and oil damper, and maintains proper timing belt tension at all times. The automatic tensioner suppresses noise generated by the timing belt.



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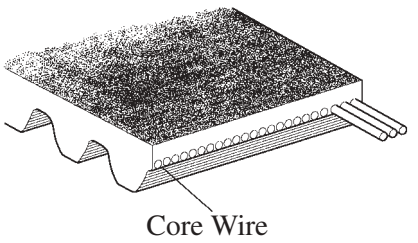

Timing Belt

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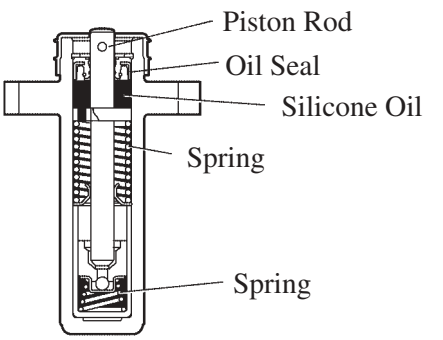

Automatic Tensioner

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