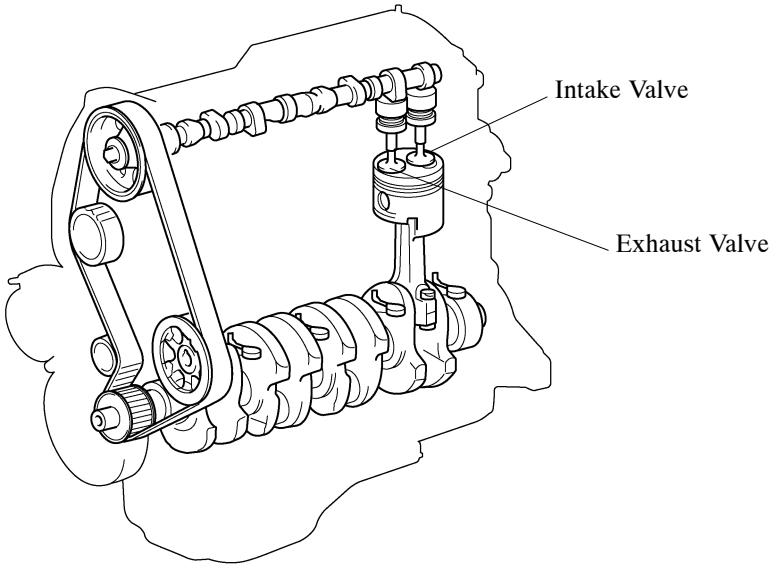
■VALVE MECHANISM

1. General

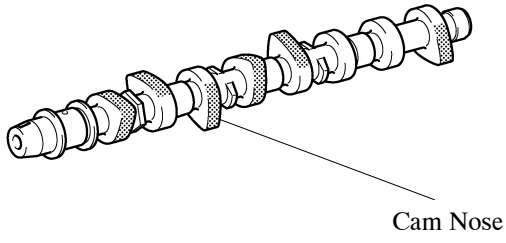
- A direct drive OHC is used for the valve drive mechanism.
- Each cylinder has 1 intake valve and 1 exhaust valve.



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2. Camshaft

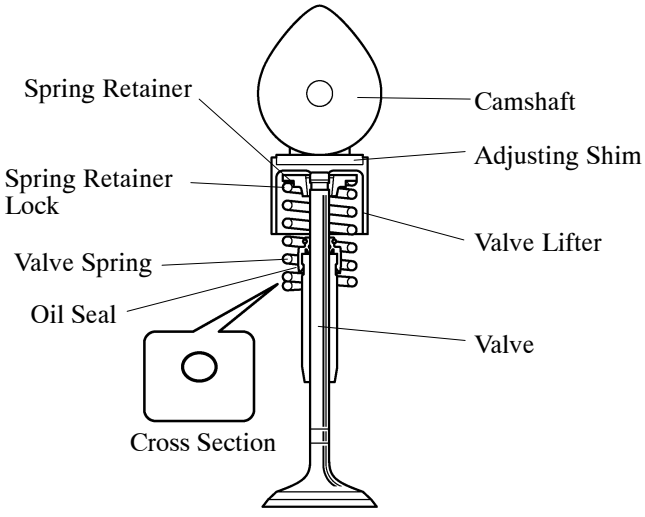
A cam nose has been chill-treated to increase its abrasion resistance.



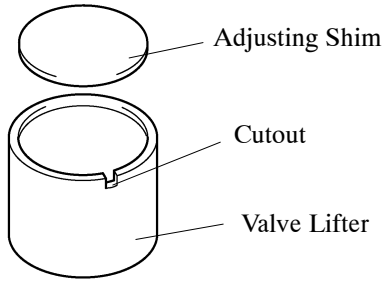
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3. Intake and Exhaust Valves and Valve Lifter

- Heat-resistant steel is used for the intake and exhaust valves.
- Unequal-pitch springs with anomalous cross sections are used to improve the surge resistance of the valve springs.
- 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 improves the serviceability during valve clearance adjustment.
- A cutout is provided in the valve lifter to improve the serviceability of the adjusting shims when replacement is required.



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Service Tip

The adjusting shims are available in 17 sizes in increments of 0.05 mm (0.002 in.), from 2.50 (0.098 in.) to 3.30 (0.130 in.). For details, refer to the Fortuner/Hilux SW4 Repair Manual.