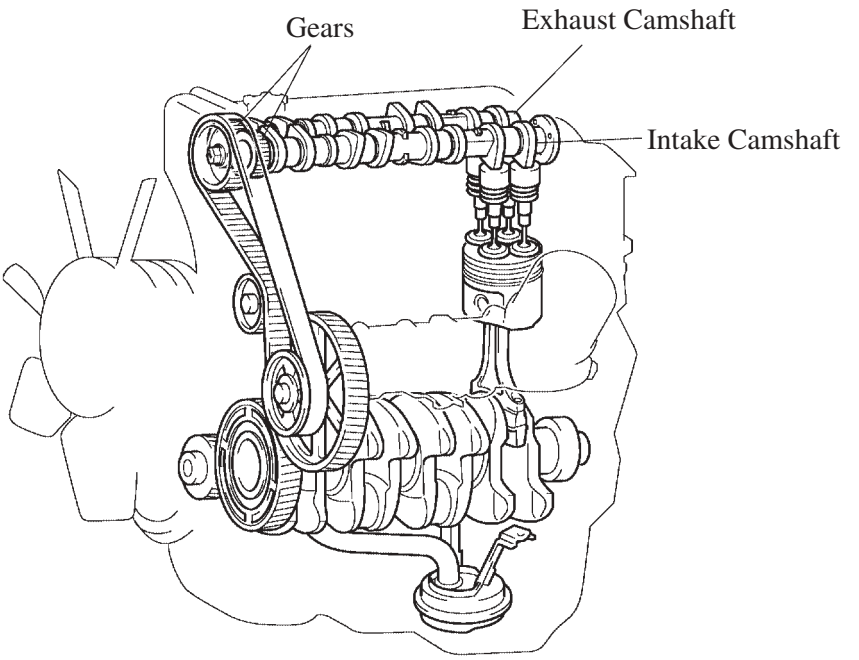
■ VALVE MECHANISM

1. General

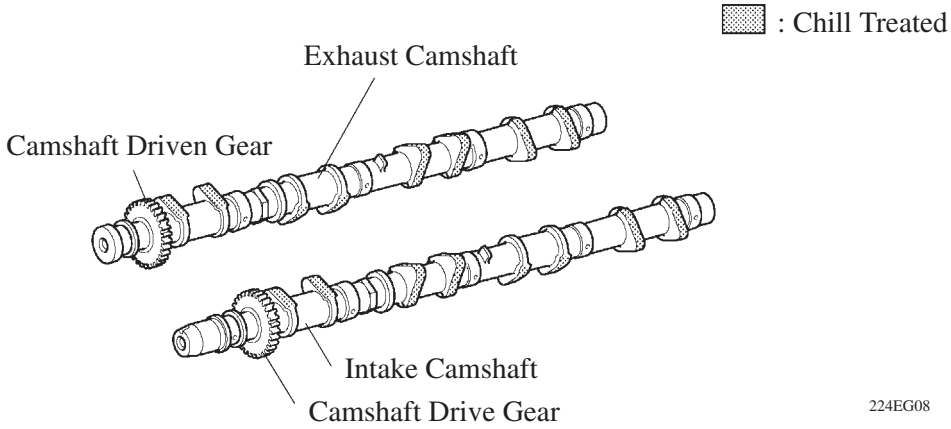
- The valves are directly opened and closed by 2 camshafts.
- The intake camshaft is driven by a timing belt, while the exhaust camshaft is driven through gear on the intake camshaft.
- Small-diameter, and flat-teeth gears are used for driving the exhaust camshaft in order to reduce gear noise.



210EG31

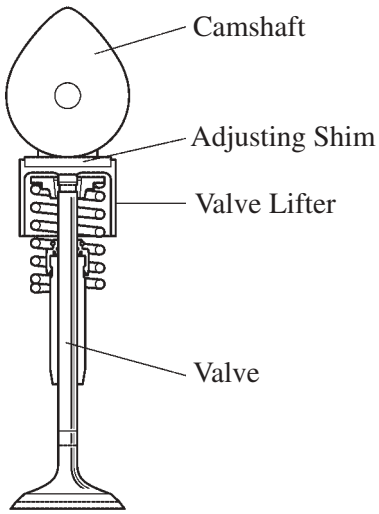
2. Camshaft

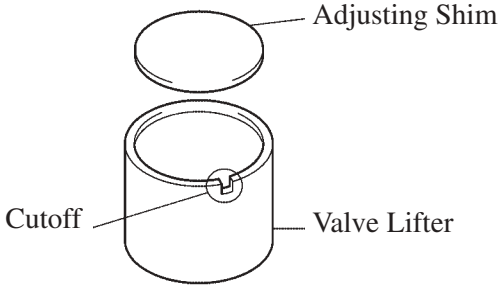
The cam nose has been chill treated to increase its abrasion resistance.



3. Intake and Exhaust Valves

- 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 cutoff is provided in the valve lifter to realize good serviceability of the replacing the adjusting shims.





Service Tip

Adjusting shims are available in 32 sizes in increments of 0.025 mm (0.0020 in.), from 2.525 mm (0.0994 in.) to 3.30 mm (0.1299 in.). For details, refer to see the 2KD-FTV Engine Repair Manual (Pub. No. RM907E).

4. Timing Train

- The supply pump, vacuum pump, and oil pump are driven by the camshaft timing gear.
- The idler gear is constructed with a scissors gear on its front and back to reduce noise.
- The automatic tensioner suppresses noise generated by the timing belt.
- The maintenance interval of the timing belt is every 150,000 km.

