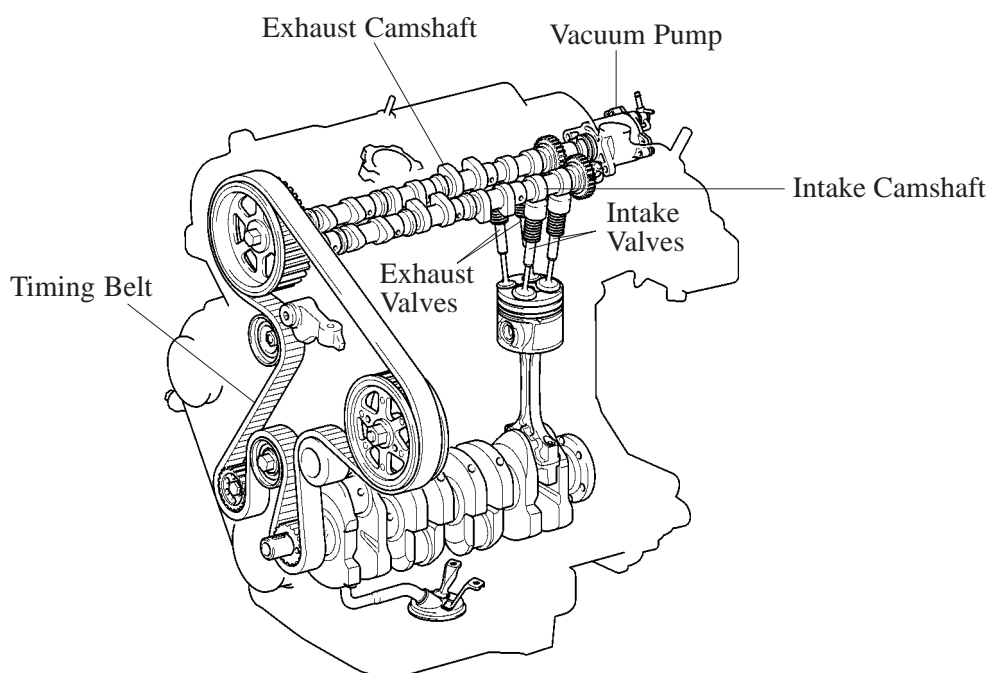


■ VALVE MECHANISM

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.
- Outer type valve adjusting shims, which are located on top of the valve lifter.
- A vacuum pump is driven by exhaust camshaft.
- The exhaust camshaft is driven by a timing belt, while the intake camshaft is driven through gear on the exhaust camshaft.
- Small-diameter, and flat-teeth gear are used for driving the intake camshaft in order to reduce gear noise.

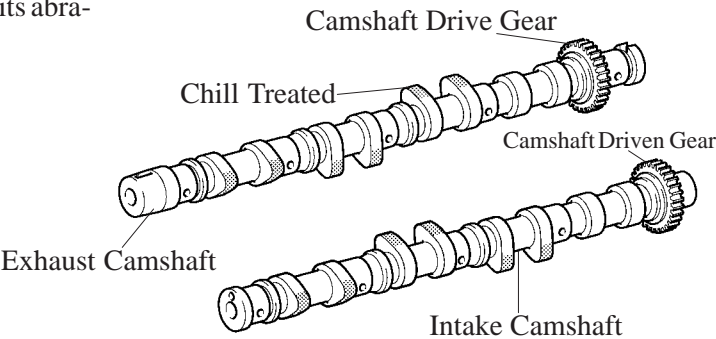
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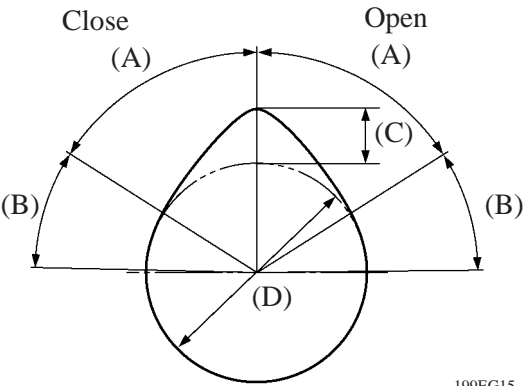
2. Camshaft

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



206EG28

► Cam Profile ◀

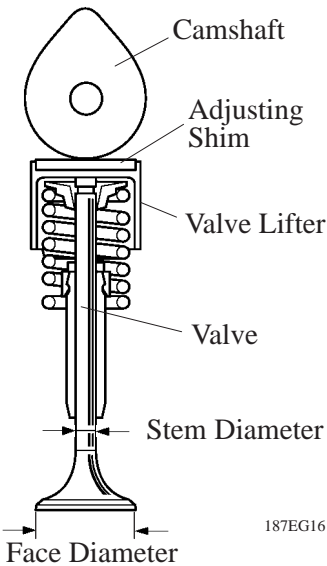


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Cam		Intake		Exhaust	
Side		Open	Close	Open	Close
(A)	Lifter Operation Portion	53.25°	←	57.75°	←
(B)	Lifter Buffering Portion	23.87°	29.43°	36.09°	32.2°
(C)	Cam Height	7.220 mm (0.284 in.)		8.170 mm (0.321 in.)	
(D)	Diameter	39.4 mm (1.551 in.)		←	
Material		Cast-iron		←	

3. Intake and Exhaust Valves

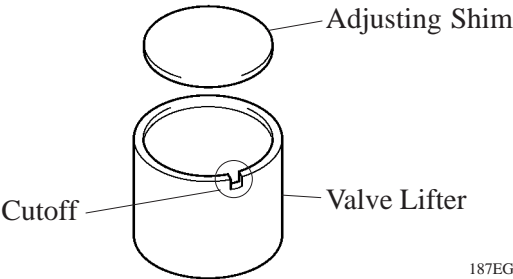
- The adjusting shim has been located directly above the valve lifter. This construction allows the adjusting shim to be replaced without removing the camshaft, which improves the serviceability during valve clearance adjustment.
- A cutoff is provided in the valve lifter to improve the serviceability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



187EG16

► Specifications ◀

Item	Intake Valve	Exhaust Valve
Face Diameter	28.0 mm (1.10 in.)	24.0 mm (0.94 in.)
Stem Diameter	6.0 mm (0.236 in.)	←



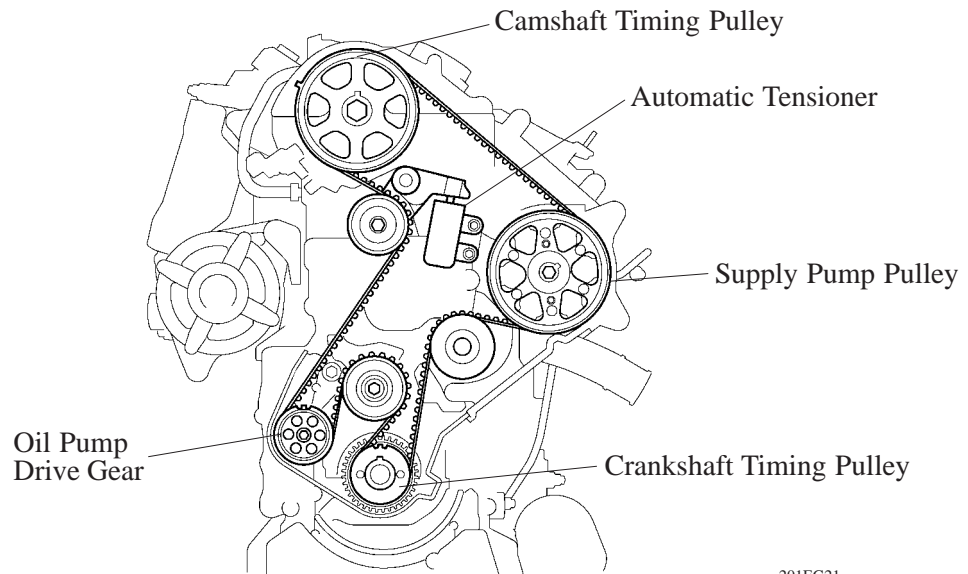
187EG17

Service Tip

Adjusting shims are available in 17 increments of 0.050 mm (0.0020 in.), from 2.50 mm (0.0984 in.) to 3.30 mm (0.1299 in.). For details, refer to see the 1CD-FTV Engine Repair Manual (Pub. No. RM866E).

4. Timing Belt Relation

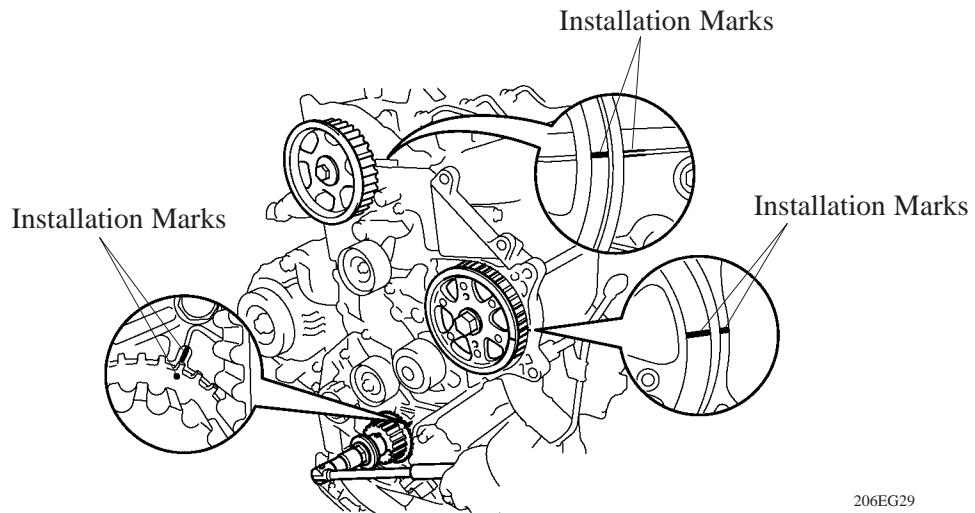
The automatic tensioner suppresses noise generated by the timing belt.



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Service Tip

- The maintenance interval of the timing belt is every 150,000 km.
- For the purpose of replacing the timing belt, installation marks are provided on the crankshaft timing pulley and the oil pump, the camshaft timing pulley and the mating surface of the cylinder head cover, and the supply pump pulley and the water pump.



206EG29