

TOOLS

Compression gauge attachment	07RMJ-MY50100	Equivalent commercially available
Valve spring compressor	07757-0010000	
Valve spring compressor attachment	07959-KM30101	
Tappet hole protector	07HMG-MR70002	
Valve guide driver, 5 mm	07942-MA60000	
Valve guide reamer	07984-MA60001	
Valve seat cutters		– these are commercially available
Seat cutter, 33 mm (45° IN)	07780-0010800	
Seat cutter, 29 mm (45° EX)	07780-0010300	
Flat cutter, 33 mm (32° IN)	07780-0012900	
Flat cutter, 30 mm (32° EX)	07780-0012200	
Interior cutter, 34 mm (60° IN)	07780-0014700	
Interior cutter, 30 mm (60° EX)	07780-0014000	
Cutter holder, 5 mm	07781-0010400	

TROUBLESHOOTING

- Engine top-end problems usually affect engine performance. These problem can be diagnosed by a compression test or by tracing engine noises to the top-end with a sounding rod stethoscope.
- If the performance is poor at low speeds, check for white smoke in the crankcase breather tube. If the tube is smoky, check for a seized piston ring (Section 11).

Compression too low, hard starting or poor performance at low speed

- Valves:
 - Incorrect valve adjustment
 - Burned or bent valve
 - Incorrect valve timing
 - Broken valve spring
 - Uneven valve seating
- Cylinder head:
 - Leaking or damaged head gasket
 - Warped or cracked cylinder head
- Worn cylinder, piston or piston rings (Section 11)

Compression too high, overheating or knocking

- Excessive carbon build-up on piston crown or on combustion chamber

Excessive smoke

- Cylinder head:
 - Worn valve stem or valve guide
 - Damaged stem seal
- Worn cylinder, piston or piston rings (Section 11)

Excessive noise

- Cylinder head:
 - Incorrect valve adjustment
 - Sticking valve or broken valve spring
 - Damaged or worn camshaft
 - Loose or worn cam chain
 - Worn or damaged cam chain
 - Worn or damaged cam chain tensioner
 - Worn cam sprocket teeth
- Worn cylinder, piston or piston rings (Section 11)

Rough idle

- Low cylinder compression