

# Piston Rings

## Ring-to-Groove Clearance

After installing a new set of rings, measure ring-to-groove clearance:

### Top Ring Clearance

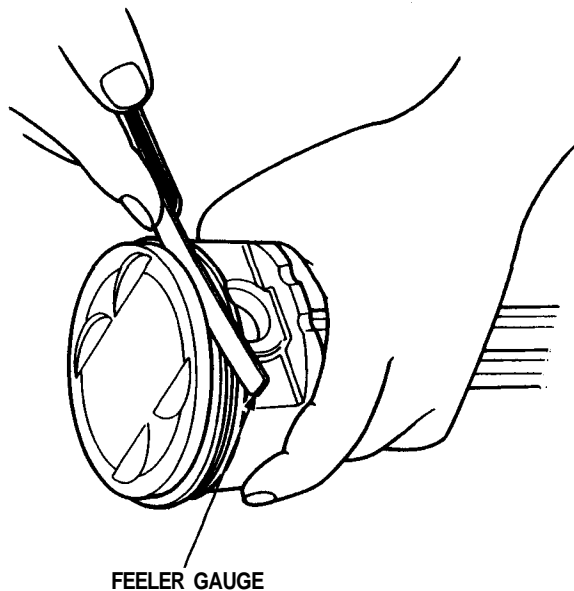
Standard (New): 0.035 — 0.060 mm  
(0.0014 — 0.0024 in)

Service Limit: 0.13 mm (0.005 in)

### Second Ring Clearance

Standard (New): 0.030 — 0.055 mm  
(0.0012 — 0.0022 in)

Service Limit: 0.13 mm (0.005 in)

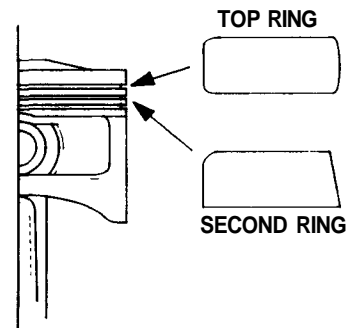


## Alignment

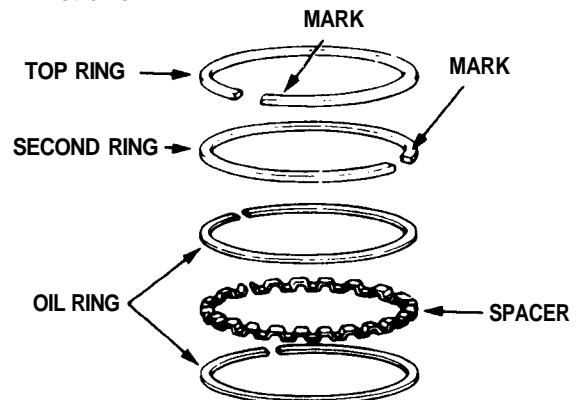
1. Install the rings as shown on page 7-17.

Identify top and second rings by the chamfer on the edge, and make sure they are in proper grooves on piston.

NOTE: The manufacturing marks must be facing upward.



2. Rotate the rings in grooves to make sure they do not bind.



3. Position the ring end gaps as shown:

