If necessary, remove piston-cooling spray nozzles.

CAUTION: When the pistons are removed and installed, there is the risk that the piston-cooling spray nozzles may be damaged.
Remove connecting-rod cover.

**Fig. 418: Identifying Piston-Cooling Spray Nozzle**
Courtesy of BMW OF NORTH AMERICA, INC.
Fig. 419: Removing Connecting-Rod Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Insert special tool 11 3 480 in conrod.

Remove connecting rod with piston from cylinder-head side.
Fig. 420: Removing Connecting Rod With Piston
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Piston and piston bolts are paired and must not be fitted individually.

Lift out retaining ring and press out piston pin.
Installation

Installation of pistons is described separately from removal. The assembly sequence for removal and installation is different.

If necessary, replace connecting rods.

NOTE: The conrods can also be replaced individually. The piston pin must be able to be pressed through the liner by hand with little force and must not display any significant play.
Prior to installation, measure piston installation clearance:

Measure piston diameter with micrometer at measuring point A from lower edge of piston and offset by 90° to piston pin axis.

Measuring point A. Refer to **11 25 PISTONS WITH RINGS AND PINS S62**.
Adjust micrometer to cylinder bore of engine block. Set internal caliper on micrometer to zero. Measure bottom, center and top of cylinder bore in direction of travel and direction of engine rotation.
Fig. 424: Measuring Cylinder Bore
Courtesy of BMW OF NORTH AMERICA, INC.

Diameter of cylinder bore. Refer to 11 11 ENGINE BLOCK, CYLINDER CRANKCASE S62.

Piston installation clearance. Refer to 11 25 PISTONS WITH RINGS AND PINS S62.

Total permissible wear tolerance. Refer to 11 25 PISTONS WITH RINGS AND PINS S62.

**CAUTION:** The pistons of cylinder banks 1 to 4 and 5 to 8 are different.

Fit conrod with piston pin to piston so that supplementary weight (1) on conrod points to inlet side.
Fig. 425: Installing Conrod  
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The direction in which the pairing numbers on the conrod point does not affect the function.

Install conrod bearing. Refer to **11 24 571 Replacing all conrod bearings (S62)**.

Install retaining ring.
Insert special tool 11 3 480 in conrod.
Fig. 427: Inserting Special Tool In Conrod  
Courtesy of BMW OF NORTH AMERICA, INC.

Lightly coat pistons and piston rings with oil.

Offset the contact points of the piston rings by approx. 120° to each other but do not position above the piston pin boss.

Press together piston rings using special tool 11 7 180.