

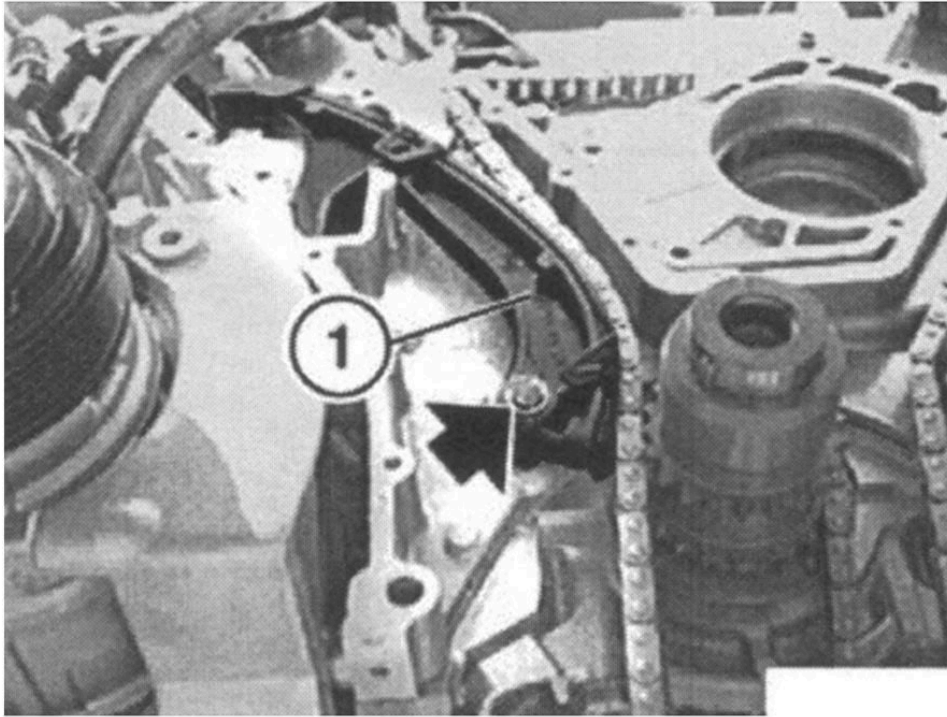
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Fig. 110: Replacing Radial Seal

Courtesy of BMW OF NORTH AMERICA, INC.

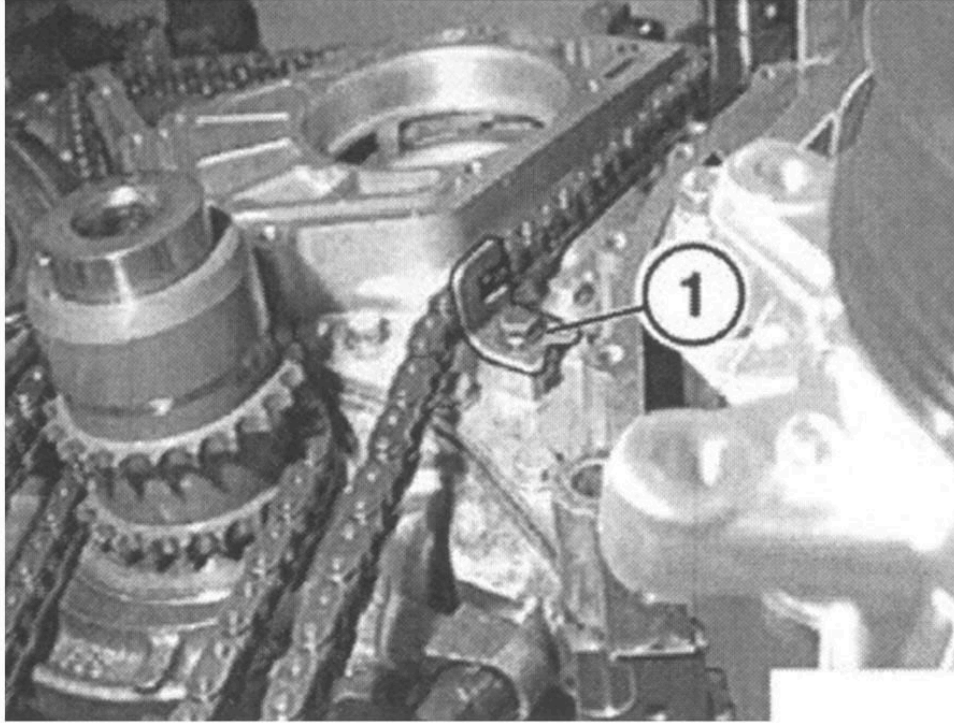
TIMING CASE LOWER SECTION**Removal & Installation**

1. Remove lower section of timing case cover. See **LOWER TIMING CASE COVER** under REMOVAL & INSTALLATION. Unfasten bolts and remove water pump. See **WATER PUMP** under REMOVAL & INSTALLATION. Clean sealing faces and fit new gaskets. Remove snap ring and remove tensioning rail. See **Fig. 111** . Remove timing chain.
2. To install, reverse removal procedure. Note installation location of chain on retaining bracket. See **Fig. 112** . Remove retaining pins from tensioning rail. See **Fig. 113** . If necessary, remove retaining bracket for guide rail. Remove bolts. Remove timing case. Replace gasket. Coat contact edges with liquid sealing compound Hylomar SQ 32 M.



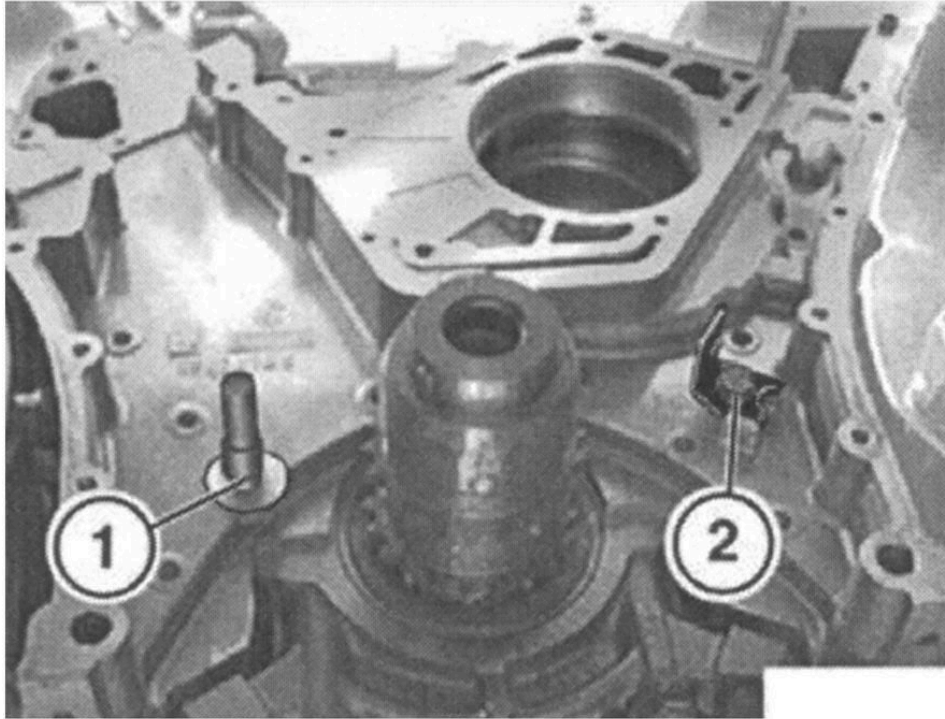
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Fig. 111: Removing Tensioning Rail
Courtesy of BMW OF NORTH AMERICA, INC.



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Fig. 112: Installation Location Of Chain
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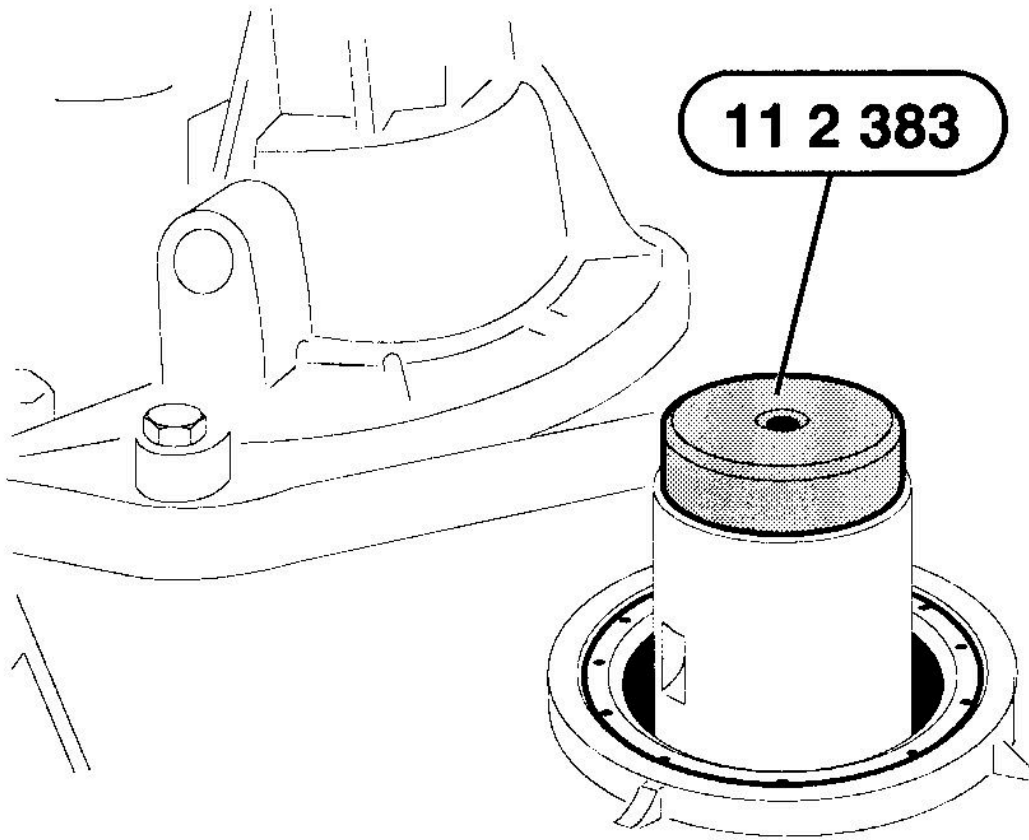
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Fig. 113: Removing Retaining Bracket From Guide Rail

Courtesy of BMW OF NORTH AMERICA, INC.

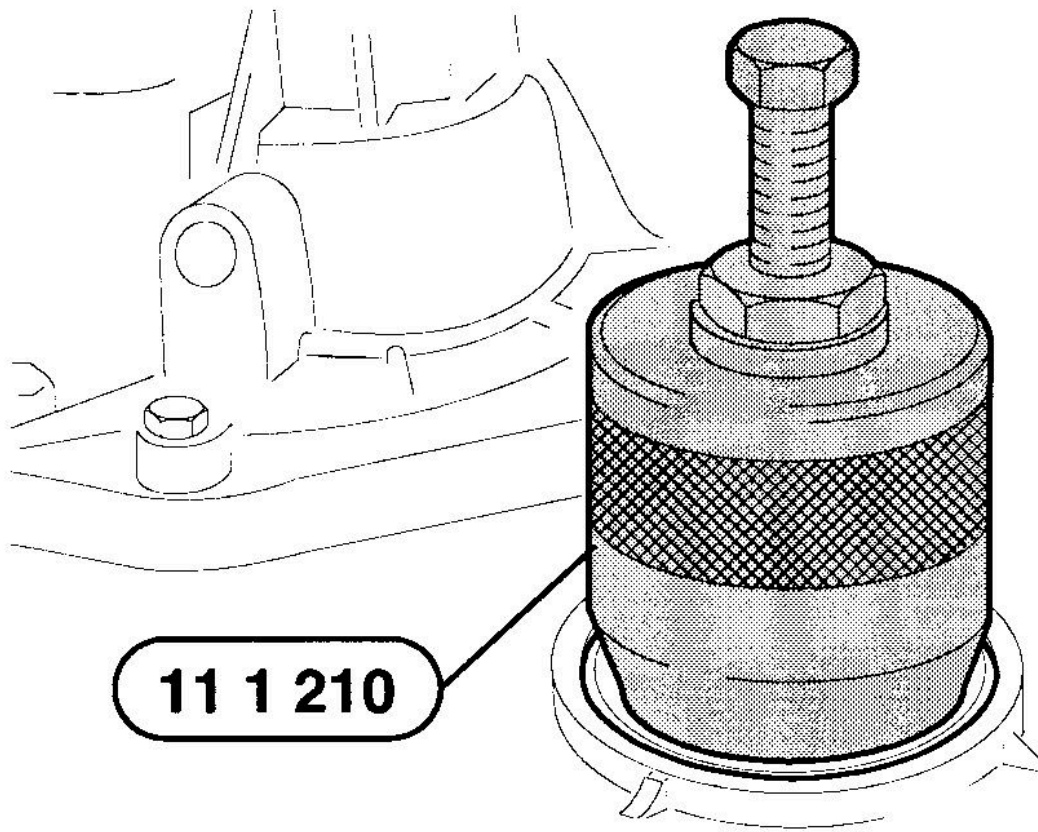
CRANKSHAFT FRONT SEAL**Removal & Installation**

1. Remove vibration damper. See **VIBRATION DAMPER** . Install Pressure Piece (11 2 383) to crankshaft. Screw in Extractor (11 1 210) until it is rigidly connected with radial sealing ring. Remove radial sealing ring by tightening in bolt. See **Fig. 114** and **Fig. 115** .
2. To install, reverse removal procedure. Coat sealing lips of new radial sealing ring with oil. Using Bushing (11 5 110) and central bolt, install radial seal until flush with timing case cover. See **Fig. 116** .



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Fig. 114: Identifying Pressure Piece (11 2 383)
Courtesy of BMW OF NORTH AMERICA, INC.



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Fig. 115: Identifying Removing Radial Sealing Ring
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