

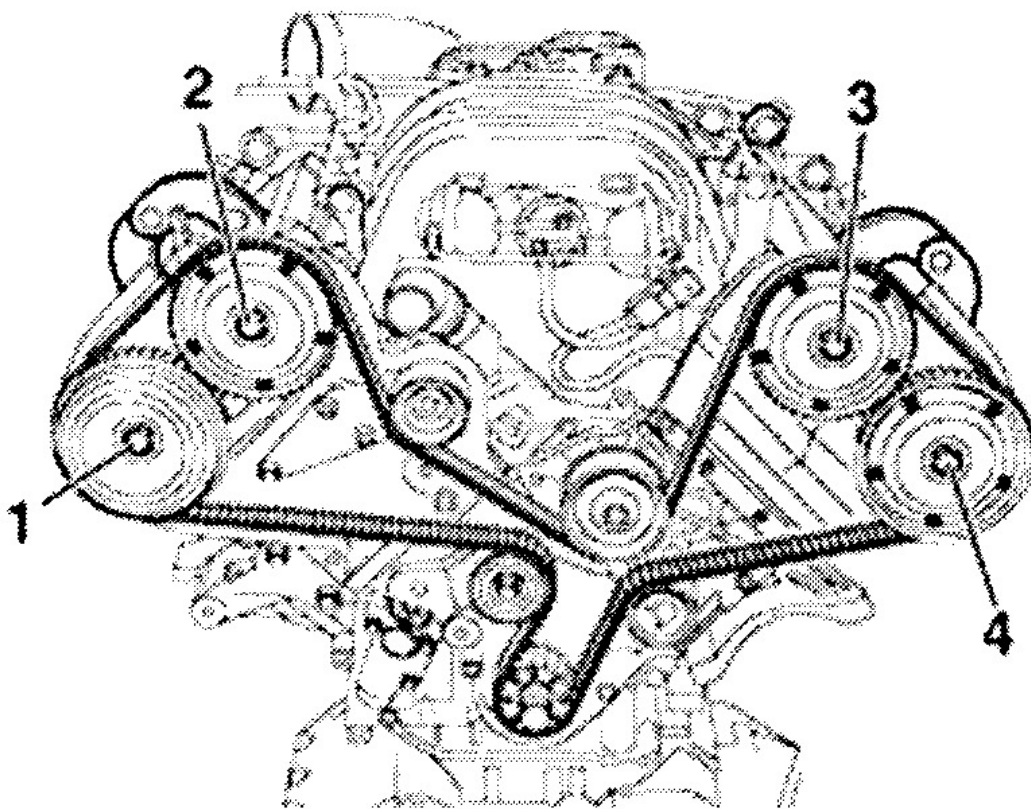
Installation (A4)

CAUTION: Before installation, ensure camshafts are aligned, crankshaft is locked in place and camshaft gear bolts are loose as described in removal procedures. When turning camshaft, crankshaft must not be at TDC for any cylinder. Valves and/or pistons may be damaged.

1. Ensure bolts (1-4) attaching camshaft gears are in far enough to allow camshaft gears to spin freely without wobbling. See [Fig. 36](#) . Install timing belt. For exact valve timing adjustment, the timing belt must make exact contact with front edge of all timing belt gears.
2. Using Pin Wrench (3387), turn eccentric pulley (1) in clockwise direction until the handle of the pin wrench is exactly above the center axle of coolant pump gear (2). See [Fig. 37](#) . Hold pin wrench in this position and tighten bolt (3) to 33 ft. lbs. (45 N.m). Place torque wrench horizontally on socket-head of tensioning lever. Turn with 33 ft. lbs. (45 N.m) in direction of arrow to pre-tension timing belt. See [Fig. 38](#) .
3. Using 8 mm socket head wrench, turn timing belt tensioning roller in opposite direction of arrow until pin (T40011) can pulled out. See [Fig. 25](#) . Place torque wrench horizontally on socket-head of tensioning lever. Turn with 18 ft. lbs. (25 N.m) in direction of arrow to tension timing belt. See [Fig. 38](#) .
4. Insert Socket (T40028) at camshaft adjuster of exhaust camshaft on left cylinder bank. Turn rotor of camshaft adjuster clockwise to 7.5 ft. lbs. (10 N.m) up to stop. See [Fig. 39](#) . Turn rotor of camshaft adjuster at right cylinder bank clockwise to 7.5 ft. lbs. (10 N.m) up to stop. Torque bolts for all four camshaft gears to 74 ft. lbs. (100 N.m).
5. Insert caps with new "O" rings at camshaft gears and secure with ring. Remove Camshaft Adjuster Gauge (T40030). See [Fig. 22](#) . Remove Alignment Bolt (T10026) and install sealing plug of TDC marking with new "O" ring into cylinder block. See [Fig. 23](#) . Install valve covers and tighten in sequence. See [Fig. 19](#) and [Fig. 20](#) . Install timing belt guards. See [Fig. 16](#) . Install harmonic balancer and ribbed belt. Torque all fasteners to specification. See [TORQUE SPECIFICATIONS](#) .
6. To install lock carrier, reverse removal procedures outlined in [REMOVAL \(A4\)](#) . Torque all fasteners to specification. See [TORQUE SPECIFICATIONS](#) . Let support stop rest on rubber buffer for torque support with its own weight and tighten bolts to 21 ft. lbs. (28 N.m). See [Fig. 40](#) .

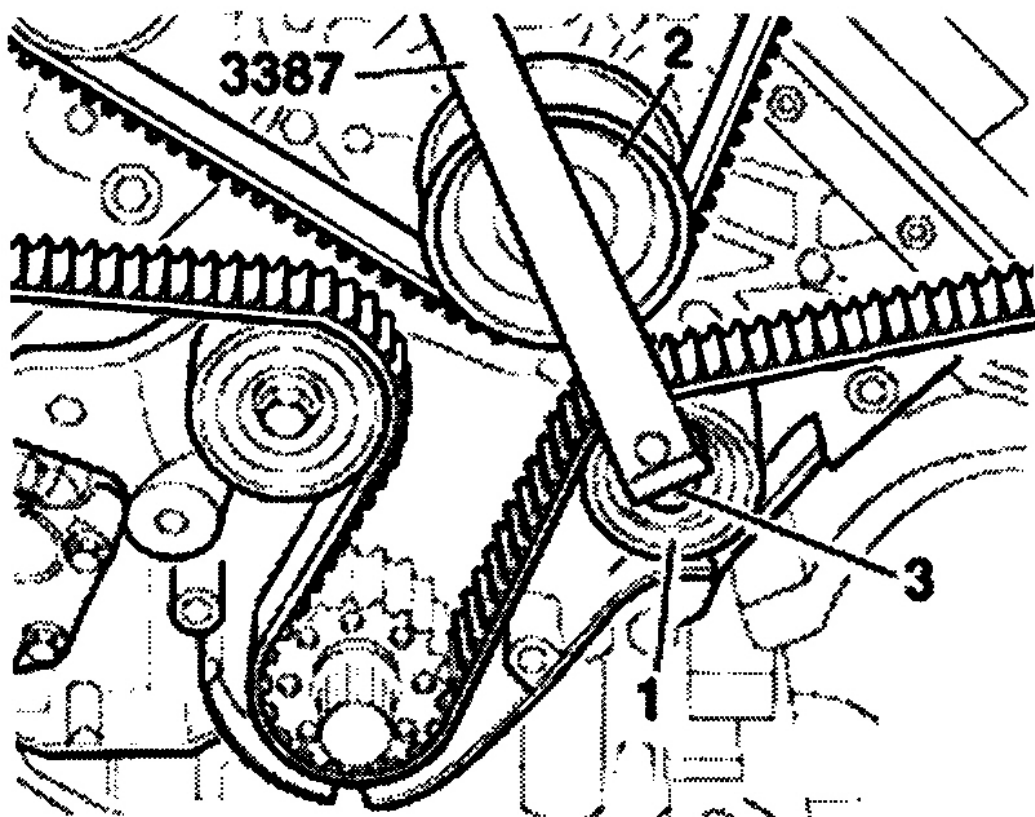
NOTE: Before installing bumper, check for the presence of threaded pins at bumper rear edge as well as expanding clips and sleeves in the fenders. Always replace bumper retaining bolts.

7. Slide bumper onto impact absorber and re-connect hose (1) of headlight cleaning system and electrical harness connectors (2). See [Fig. 7](#) . Move bumper into installation position. Make sure threaded pins in bumper side edges engage into holes at the fenders. Install bumper retaining bolts until bumper can stay in place without any assistance.
8. Do not tighten completely allowing for any necessary adjustments. Pull back wheelhousing liner (arrow A). See [Fig. 3](#) . Engage bumper rear edge into catch (arrow B). Torque nuts. Repeat procedure on opposite side of the vehicle. Torque left and right retaining bolts to specification. See [TORQUE SPECIFICATIONS](#) . Install left and right air inlet grille on bumper. Remainder of installation is the reverse of removal.



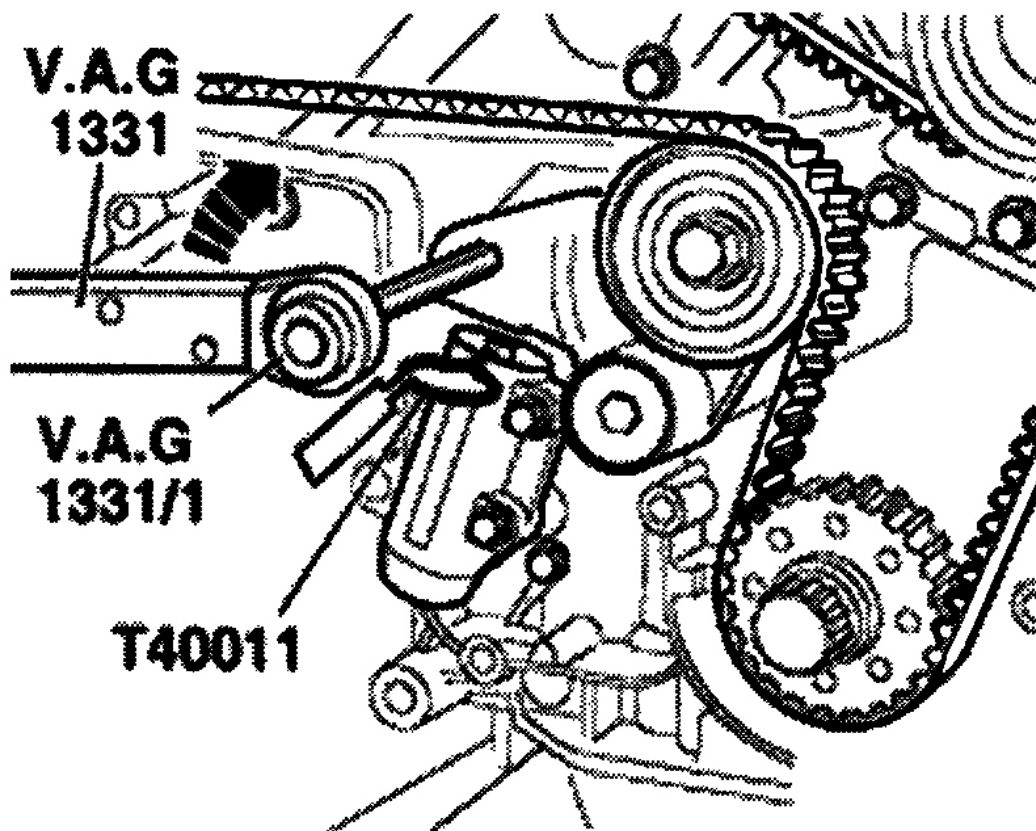
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Fig. 36: Timing Belt Routing (A4 & A6)
Courtesy of AUDI OF AMERICA, INC.



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Fig. 37: Adjusting Eccentric Pulley (A4 & A6)
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Fig. 38: Adjusting Timing Belt Tension (A4 & A6)
Courtesy of AUDI OF AMERICA, INC.

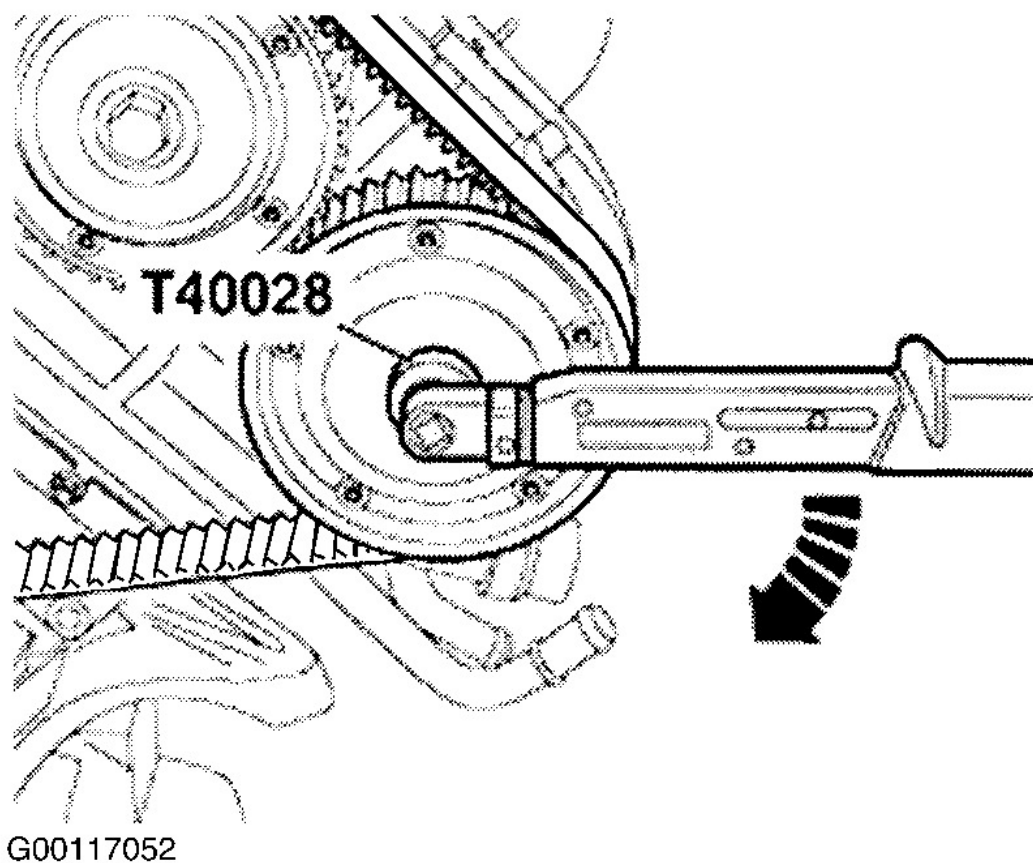
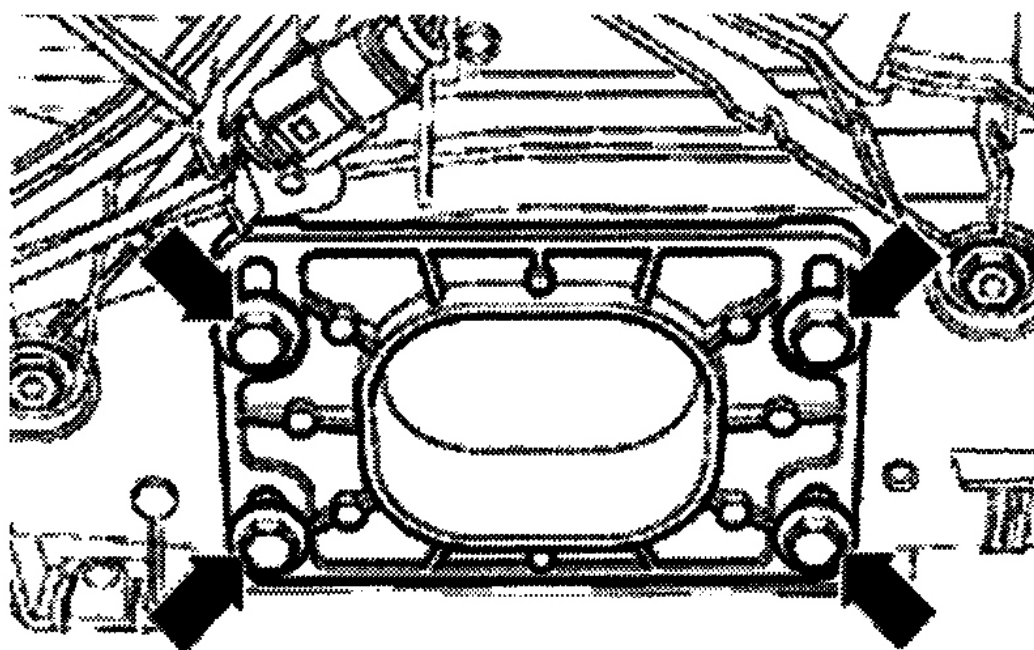


Fig. 39: Preloading Camshaft Adjuster (Left Shown; Right Is Similar - A4 & A6)
Courtesy of AUDI OF AMERICA, INC.



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Fig. 40: Identifying Torque Support Bolts (A4 & A6)
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