



Haynes
shows you how

BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual

7 Drivebelts - check and replacement

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Caution:

This video is for familiarization purposes only. Read below for specific information on your vehicle.

Check

- 1 Due to their function and construction, the belts are prone to failure after a period of time, and should be inspected periodically to prevent problems.
- 2 The number of belts used on a particular vehicle depends on the accessories installed. Drivebelts are used to drive the water pump, alternator, power steering pump and air conditioning compressor.
- 3 To improve access for belt inspection, if desired, remove the viscous cooling fan and cowl (see [Chapter 3](#)).
- 4 With the engine stopped, using your fingers (and a flashlight if necessary), move along the belts, checking for cracks and separation of the belt plies. Also check for fraying and glazing, which gives the belt a shiny

appearance. Both sides of the belts should be inspected, which means the belt will have to be twisted to check the underside. If necessary turn the engine using a wrench or socket on the crankshaft pulley bolt to that the whole of the belt can be inspected.

Replacement

Four-cylinder engines (1992 and 1993 models)

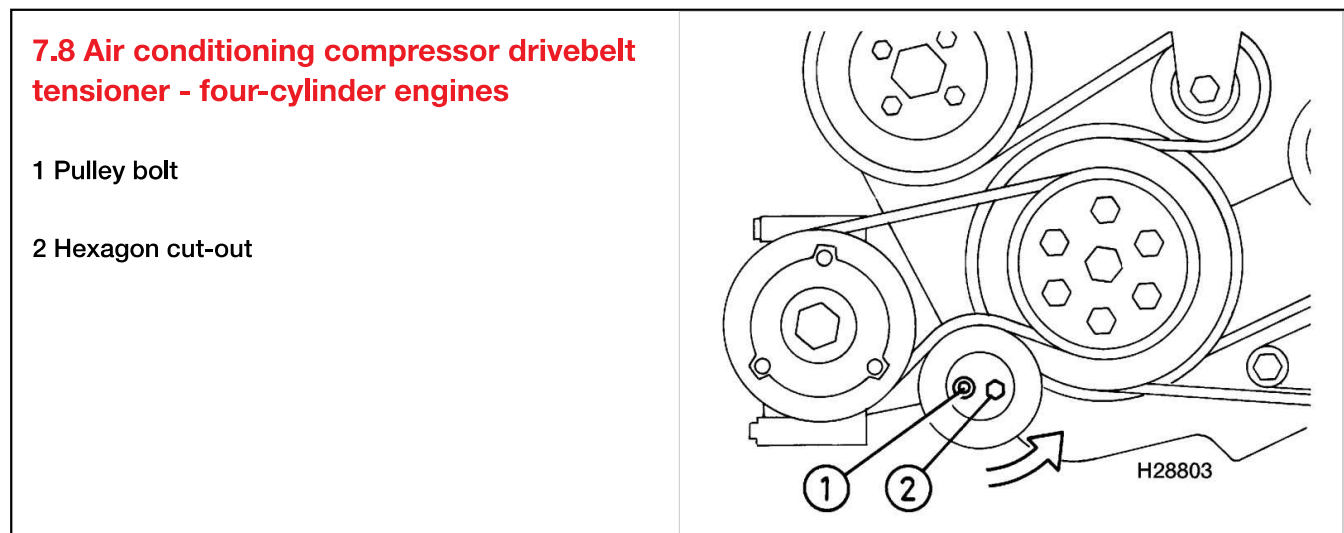
Air conditioning compressor drivebelt

5 Access is most easily obtained from under the vehicle. If desired, jack up the front of the vehicle and support securely on axle stands.

6 Loosen the tensioner pulley bolt, and slide the drivebelt from the pulleys.

7 Loosen the tensioner pulley bolt until the tensioner roller rotates smoothly with no friction.

8 Install the drivebelt around the pulleys, then engage a hexagon bit and torque wrench with the hexagon cut-out in the tensioner pulley and apply the specified torque (see Specifications) to the pulley. Tighten the tensioner pulley bolt (see illustration) .



9 Where applicable, lower the vehicle to the ground.

Power steering pump drivebelt

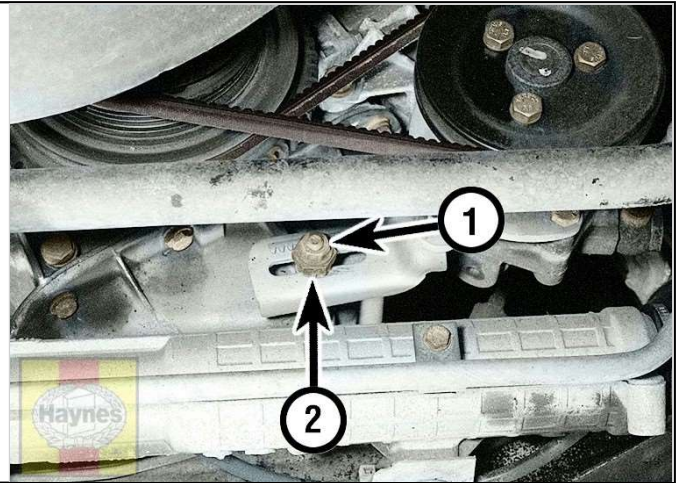
10 Access is most easily obtained from under the vehicle. If desired, jack up the front of the vehicle and support securely on axle stands.

11 Where applicable, remove the air conditioning compressor drivebelt as described previously in this Section.

12 Loosen the power steering pump tensioner locknut, then turn the tensioner nut to loosen the drivebelt until it can be slid from the pulleys (see illustration) . If necessary, loosen the power steering pump mounting bolts to

allow the pump to pivot.

7.12 Power steering pump drivebelt tensioner locknut (1) and tensioner nut (2) - four-cylinder engine



13 Engage the belt with the pulleys, then turn the tensioner nut to tension the drivebelt. As a guide, it should be possible to push the belt at the center of the belt run between the power steering pump and crankshaft pulleys to give a deflection of approximately 3/32-inch under moderate finger pressure.

14 When the drivebelt is correctly tensioned, tighten the tensioner locknut, and where applicable tighten the power steering pump mounting bolts.

15 Where applicable, lower the vehicle to the ground.

Alternator/water pump drivebelt

16 Where applicable, remove the air conditioning compressor and/or power steering pump drivebelt(s), as described previously in this Section.

17 If the drivebelt is to be re-used, mark the running direction of the belt before removal.

18 To improve access, remove the viscous cooling fan and shroud (see [Chapter 3](#)).

19 Make a careful note of the routing of the drivebelt before removal.

20 Loosen the nut at the rear of the alternator tensioner bolt, then turn the bolt as necessary to loosen the belt (see illustration) . If necessary loosen the lower alternator mounting bolt to allow the alternator to pivot.

7.20 Alternator/water pump drivebelt tensioner bolt (arrow) - four-cylinder engine



21 Slide the drivebelt from the pulleys.

22 If the original belt is being installed, observe the running direction mark made before removal.

23 Engage the belt with the pulleys, ensuring that it is routed as noted before removal.

24 Lever the tensioner bolt to tension the drivebelt. As a guide, it should be possible to push the belt at the center of the belt run between the alternator and water pump pulleys to give a deflection of approximately 13/64-inch under moderate finger pressure.

25 When the drivebelt is correctly tensioned, tighten the tensioner nut, and where applicable tighten the lower alternator mounting bolt.

26 Install the viscous cooling fan and shroud (see [Chapter 3](#)).

27 Where applicable, install the air conditioning compressor and/or power steering pump drivebelt(s), as described previously in this Section.

Four-cylinder engines (1994 and later models) and all six-cylinder engines

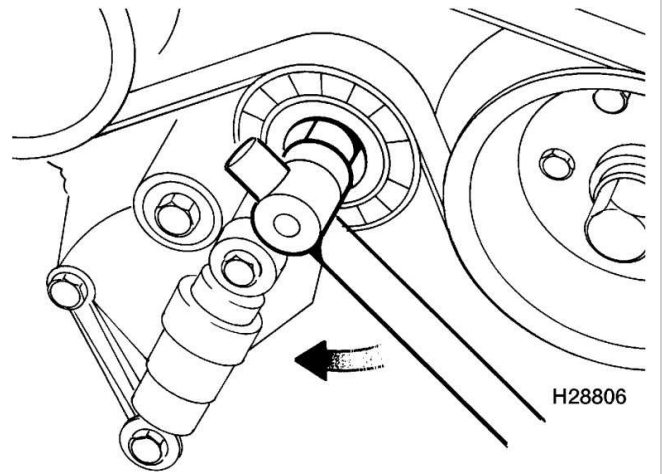
Air conditioning compressor drivebelt

28 Access is most easily obtained from under the vehicle. If desired, jack up the front of the vehicle and support it securely on jackstands.

29 Where applicable, pry the cover from the center of the tensioner pulley.

30 Engage a hexagon bit and extension bar with the tensioner bolt, and lever the tensioner clockwise (see [illustration](#)) . Slide the belt from the pulleys.

7.30 Lever the air conditioning drivebelt tensioner clockwise - six-cylinder engine



31 Lever the tensioner until the drivebelt can be routed around the pulleys, then release the tensioner. Ensure that the belt is engaged with the grooves in the pulleys.

32 Where applicable, install the pulley cover and lower the vehicle to the ground.

Water pump/alternator/power steering pump drivebelt

33 Where applicable, remove the air conditioning compressor drivebelt as described previously in this Section.

34 Proceed as described in Steps 17 to 19.

35 Pry the cover from the center of the tensioner pulley.

36 Engage a hexagon key and extension bar with the pulley bolt, then lever the pulley (counterclockwise) to compress the tensioner, and slide the drivebelt from the pulleys (see illustration) .

7.36 Removing the water pump/alternator/power steering pump drivebelt - six-cylinder engine



37 If the original belt is being installed, observe the running direction mark made before removal.

38 Compress the tensioner, and engage the belt with the pulleys, ensuring that it is routed as noted before removal. Make sure that the belt engages correctly with the grooves in the pulleys.

39 Install the viscous cooling fan and shroud with reference to [Chapter 3](#) .

40 Where applicable, install the air conditioning compressor drivebelt as described previously in this Section.

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