



## Caution

The information available from this website, which is checked and updated annually, has been prepared from industry sources for use by the professional automotive technician engaged in daily vehicle service and repair operations. Detailed knowledge of a particular engine is not required to make full use of this information.

It has been written and presented in a way that enables any professional automotive technician with an appropriate level of skill and competence to carry out the work required. The information applies only to standard models and does not apply to vehicles fitted with equipment other than the standard production options.

The source material used for compilation has been obtained from the vehicle manufacturers and was believed to be the latest available at the time of compilation.

Manufacturers' information is liable to change at any time and there may have been updates or revisions which applied to this information but were not available at the time of compilation. Later material published by the manufacturers may also contain revisions which would be applicable retrospectively to this information and which, accordingly, will not be reflected in this compilation.

### Timing Belts

The procedures described are the recommended methods for the removal and installation of timing belts. Some procedures describe the use of specially designed tools as recommended by the original vehicle manufacturer. Anyone who intends to use a different procedure or substitute a different tool must be satisfied that neither personal safety nor safe operation of the vehicle will be compromised. Such variations from recommended procedures are outside the scope of this information.

Many problems associated with timing belt failure can be attributed to incorrect installation and tensioning or mishandling of the belt during replacement. It is important to follow the special precautions and specific instructions for each engine.

### Replacement Interval Guides

The information relating to timing belt replacement intervals is additional to the main purpose of this information but is included to provide guidance to repair shops for estimating and for customer advice.

The recommended replacement intervals have been compiled from vehicle manufacturers' information.

The previous use and service history of a vehicle should always be taken into account when making a decision to replace a timing belt and reference should always be made to the latest servicing recommendation from the appropriate manufacturer.

### Repair Times

The information relating to repair times is additional to the main purpose of this information but is included to provide guidance to repair shops for estimating and for customer advice.

The repair times have been compiled from vehicle manufacturers' warranty times. All times relate to replacement methods suggested by the vehicle manufacturers and may involve the use of specially designed tools. Due allowance must be made for any variations on vehicles fitted with non-standard equipment. Variations from recommended replacement procedures are outside the scope of this information and are not covered by the repair times shown.

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Model:

Year:

Engine Code:

### Replacement Interval Guide

recommend replacement as follows:

Pre 12/91 - replacement every 60,000 miles.

1/92 on - replacement every 54,000 miles or 60 months, whichever occurs first.

*The previous use and service history of the vehicle must always be taken into account.*

*Refer to Timing Belt Replacement Intervals at the front of this manual.*

### Check For Engine Damage

**CAUTION:** *This engine has been identified as an INTERFERENCE engine in which the possibility of valve-to-piston damage in the event of a timing belt failure is MOST LIKELY to occur.*

*A compression check of all cylinders should be performed before removing the cylinder head.*

### Repair Times – hrs

#### Remove & install:

	4,80
	1,30
PAS	+0,20
AC	+0,20

### Special Tools

- None required.

### Special Precautions

- Disconnect battery earth lead.
- DO NOT turn crankshaft or camshaft when timing belt removed.
- Remove glow plugs to ease turning engine.
- Turn engine in normal direction of rotation (unless otherwise stated).
- DO NOT turn engine via camshaft or other sprockets.
- Observe all tightening torques.
- Check diesel injection pump timing after belt replacement.

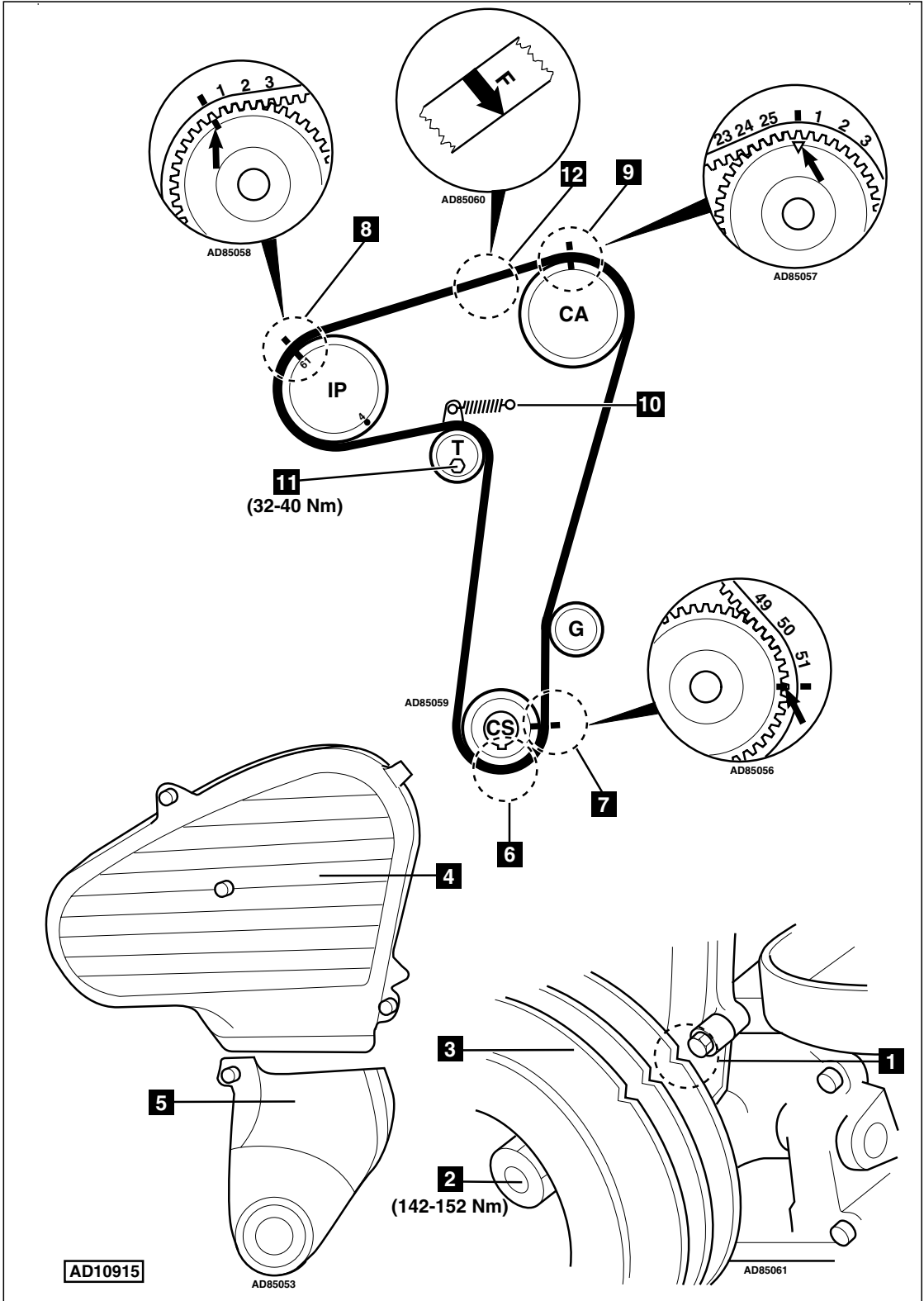
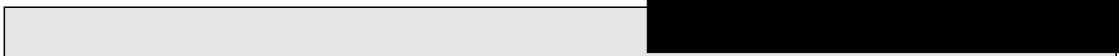
### Removal

1. Drain coolant.
2. Remove:
  - Top radiator hose.
  - Air hose to air filter.
  - Radiator shroud.
  - Cooling fan.
  - Viscous coupling.
  - Auxiliary drive belt(s).
  - Water pump pulley.

3. Turn crankshaft clockwise to BDC on No.1 cylinder (power stroke). Ensure timing mark aligned with bolt of timing belt lower cover **1**.
4. Remove:
  - Crankshaft pulley bolt **2**.
  - Crankshaft pulley **3**.
  - Timing belt upper cover **4**.
  - Timing belt lower cover **5**.
5. Check crankshaft keyway is at 6 o'clock position **6**.
6. Mark belt with chalk or paint against timing marks on sprockets **7**, **8** & **9**.
7. Remove tensioner spring **10**.
8. Slacken tensioner nut **11**. Move tensioner away from belt and lightly tighten nut.
9. Remove timing belt.

### Installation

1. Ensure crankshaft at BDC on No.1 cylinder. Check crankshaft keyway is at 6 o'clock position **6**.
2. Fit timing belt in anti-clockwise direction, starting at crankshaft sprocket. Ensure marks on belt aligned with timing marks on sprockets **7**, **8** & **9**.  
**NOTE:** *New belts are marked with white lines to ensure correct alignment with timing marks on sprockets. Ensure belt teeth between marks on sprockets correspond with those shown in illustration. Arrow on belt must point away from engine **12**.*
3. Fit tensioner spring **10**.
4. Slacken tensioner nut **11**. Allow tensioner to operate.
5. Turn crankshaft two turns clockwise to BDC on No.1 cylinder. Check crankshaft keyway is at 6 o'clock position **6**.
6. Tighten tensioner nut **11**. Tightening torque: 32-40 Nm.
7. Install components in reverse order of removal.
8. Tighten crankshaft pulley bolt **2**. Tightening torque: 142-152 Nm.



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