

Telephone:
Fax:
VAT Registration No.:

Special tools

Special tools

- None required.

General precautions

General precautions

- Disconnect battery earth lead.
- Remove spark plugs to ease turning engine.
- Turn engine in normal direction of rotation (unless otherwise stated).
- Observe tightening torques.
- If fitted: Mark position of crankshaft position (CKP) sensor before removal.
- Do NOT turn crankshaft via camshaft or other sprockets.
- Do NOT turn crankshaft or camshaft with timing chain removed.

Valve timing procedures

Valve timing procedures

Removal

- Removal/refitting requires:
- Sump removal.

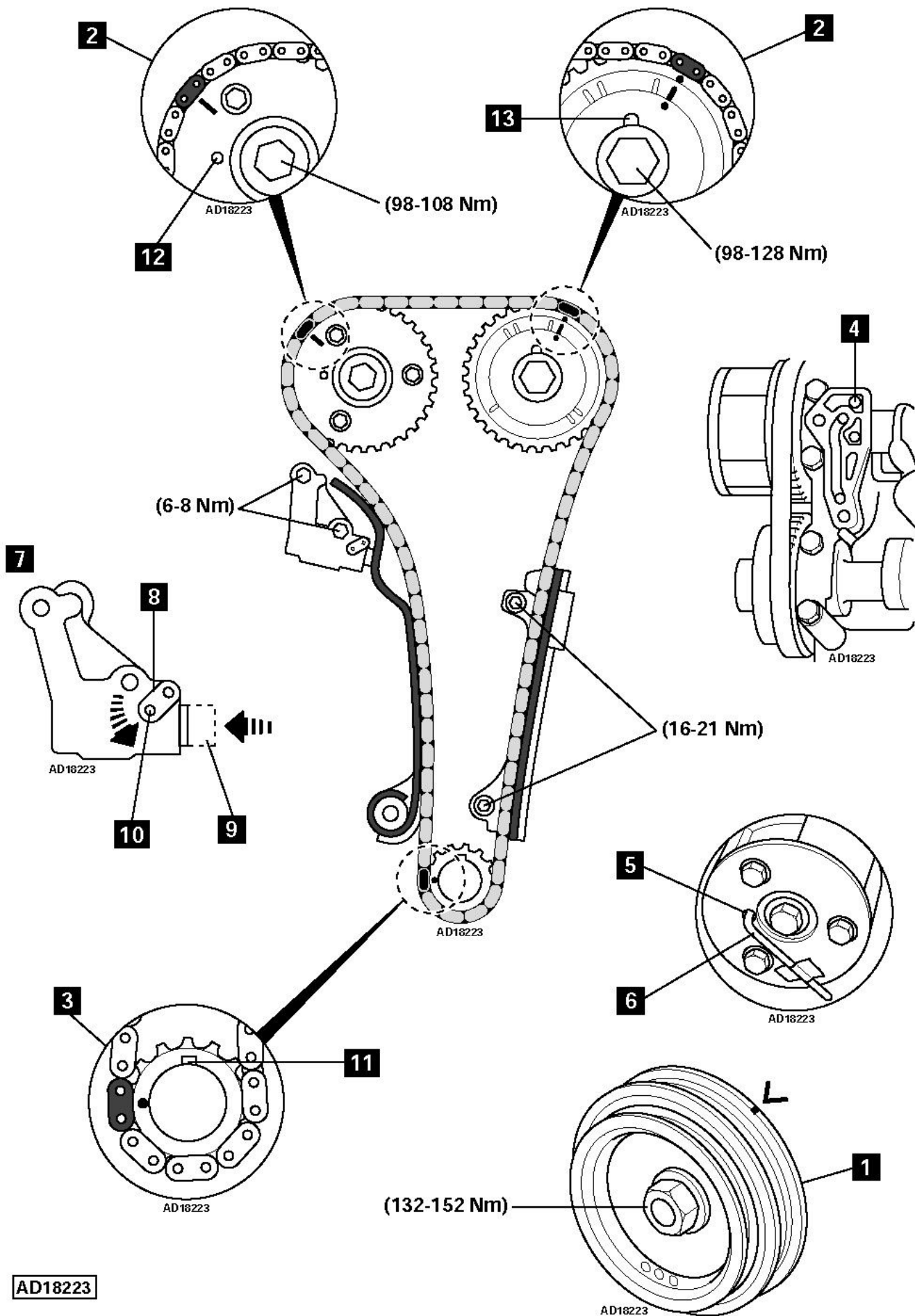
NOTE: Refer to Technical Data module for tightening torques.

- Engine at TDC on No.1 cylinder [1] .
- Align blue coloured chain links with timing mark on each camshaft sprocket [2] .
- Align crankshaft sprocket timing mark with yellow link [3] .
- Lock inlet camshaft sprocket:
- Hold inlet camshaft with spanner.
- Apply air pressure, using air gun, to inlet camshaft oil way [4] .
- Turn inlet camshaft slowly anti-clockwise until click can be heard.
- Turn inlet camshaft slowly clockwise until holes aligned [5] .
- Insert 3 mm locking pin into inlet camshaft sprocket [6] .
- Remove tensioner [7] :
- Push plate downwards [8] .
- Push plunger [9] through tensioner body in direction of arrow.
- Retain in position with wire clip [10] .
- Remove camshaft sprockets and chain.

NOTE: Only remove inlet camshaft sprocket centre bolt.

Installation

- Ensure crankshaft sprocket keyway at 12 o'clock position [11] .
- Ensure inlet camshaft dowel pin aligned [12] .
- Ensure exhaust camshaft dowel pin aligned [13] .
- Ensure crankshaft sprocket timing mark aligned with yellow link [3] .
- Install camshaft sprockets complete with chain.
- Ensure timing mark on each camshaft sprocket aligned with blue links [2] .
- Install tensioner [7] :
- Remove 3 mm locking pin [6] .
- Remove wire clip [10] .



AD18223