

Telephone:
Fax:
VAT Registration No.:

Name:		Manufacturer:	Hyundai
Address:		Model:	
		Year:	
		Registration:	
Tel - Private:		Mileage:	
Tel - Business:		Job number:	

Important note

Important note

The intervals and procedures given are subject to alteration by the manufacturer at any time. Check the regularly updated Timing Belts section on our website to ensure that you are kept informed of any changes that may occur between issues of the Autodata CD.

<http://www.autodata-cd.com>

Timing belt replacement intervals

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

Where possible the recommended intervals have been compiled from vehicle manufacturers' information. In a few instances no recommendation has been made by the manufacturer and the decision to replace the belt must be made from the evidence of a thorough examination of the condition of the existing belt.

Apart from the visible condition of the belt, which is explained fully later in this section, there are several other factors which must be considered when checking a timing belt:

1. Is the belt an original or a replacement.
2. When was the belt last replaced and was it at the correct mileage.
3. Is the service history of the vehicle known.
4. Has the vehicle been operated under arduous conditions which might warrant a shorter replacement interval.
5. Is the general condition of other components in the camshaft drive, such as the tensioner, pulleys, and other ancillary components driven by the timing belt, typically the water pump, sound enough to ensure that the life of the replacement belt will not be affected.
6. If the condition of the existing belt appears good, can you be satisfied that the belt will not fail before the next check or service is due.

Manufacturer: Hyundai
Engine code: D4BF
Tuned for: Doowon

Model: H100/Grace/Porter 2,5D Turbo
Output: 59 (80) 3800
Year: 1998-04

© Autodata Limited 2004
27-05-2007
V5.373- **/Autodata**

7. If the belt does fail, have you considered the consequences. If the engine is an INTERFERENCE type then considerable expensive damage may well be the result.
8. The cost of replacing a belt as part of a routine service could be as little as 5 to 10% of the repair cost following a belt failure. Make sure your customer is aware of the consequences.
9. If in doubt about the condition of the belt - RENEW it.

Replacement Interval Guide

Replacement Interval Guide

Hyundai recommend replacement every 54,000 miles or 6 years, whichever occurs first.

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

Check For Engine Damage

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

Repair Times - hrs

H100 Grace/Porter Minibus 2,5DT 1993-97	
Remove and install	1,60
Remove and install - AC	1,90
Remove and install - PAS	1,80
Remove and install - PAS+AC	2,10
H100 Grace/Porter Minibus 2,5DT 1998-03	
Remove and install	1,20
Remove and install - AC	1,50
Remove and install - PAS	1,40
Remove and install - PAS+AC	1,70

Special Tools

Special Tools

Manufacturer: Hyundai
Engine code: D4BF
Tuned for: Doowon

Model: H100/Grace/Porter 2,5D Turbo
Output: 59 (80) 3800
Year: 1998-04

© Autodata Limited 2004
 27-05-2007
 V5.373- ***/Autodata***

- Crankshaft pulley holding tool - Hyundai No.09231-43000.

Special Precautions

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.

Removal - Timing Belt

Removal

1. Remove:
 - Viscous fan casing.
 - Viscous fan.
 - Auxiliary drive belt(s).
 - Water pump pulley.
 - Timing belt upper cover [1].
2. Hold crankshaft pulley. Use tool No.09231-43000.
3. Remove:
 - Crankshaft pulley bolt [2].
 - Crankshaft pulley [3].
 - Timing belt lower cover [4].
4. Turn crankshaft clockwise to TDC on No.1 cylinder. Ensure timing marks aligned [5], [6], [7] & [8].
5. Slacken tensioner bolts [9]. Move tensioner away from belt. Lightly tighten bolts.
6. Remove timing belt.

Installation - Timing Belt

Installation

1. Ensure timing marks aligned [5], [6], [7] & [8].
 2. Fit timing belt. Ensure belt is taut on non-tensioned side.
 3. Slacken tensioner bolts [9]. Allow tensioner to operate.
 4. Turn crankshaft clockwise until camshaft sprocket timing mark [5] moves forward TWO teeth.
 5. Tighten tensioner upper bolt. Tightening torque: 22-30 Nm.
 6. Tighten tensioner lower bolt. Tightening torque: 22-30 Nm.
- NOTE: Observe correct tightening sequence, otherwise belt tension will not be correct.**
7. Turn crankshaft anti-clockwise until timing marks aligned [5], [6], [7] & [8].
 8. Apply thumb pressure to timing belt at ▼[10]. Belt should deflect 4-5 mm.
 9. Install components in reverse order of removal.
 10. Tighten crankshaft pulley bolt [2]. Tightening torque: 170-190 Nm.

Manufacturer: Hyundai

Engine code: D4BF

Tuned for: Doowon

Model: H100/Grace/Porter 2,5D Turbo

Output: 59 (80) 3800

Year: 1998-04

© Autodata Limited 2004

27-05-2007

V5.373-

/Autodata



Removal - Balancer Shaft Belt

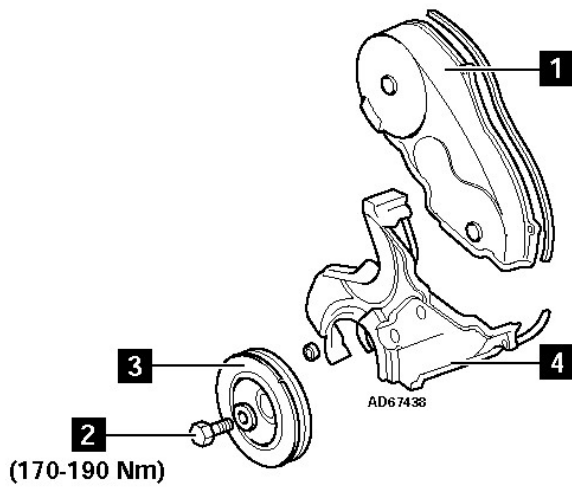
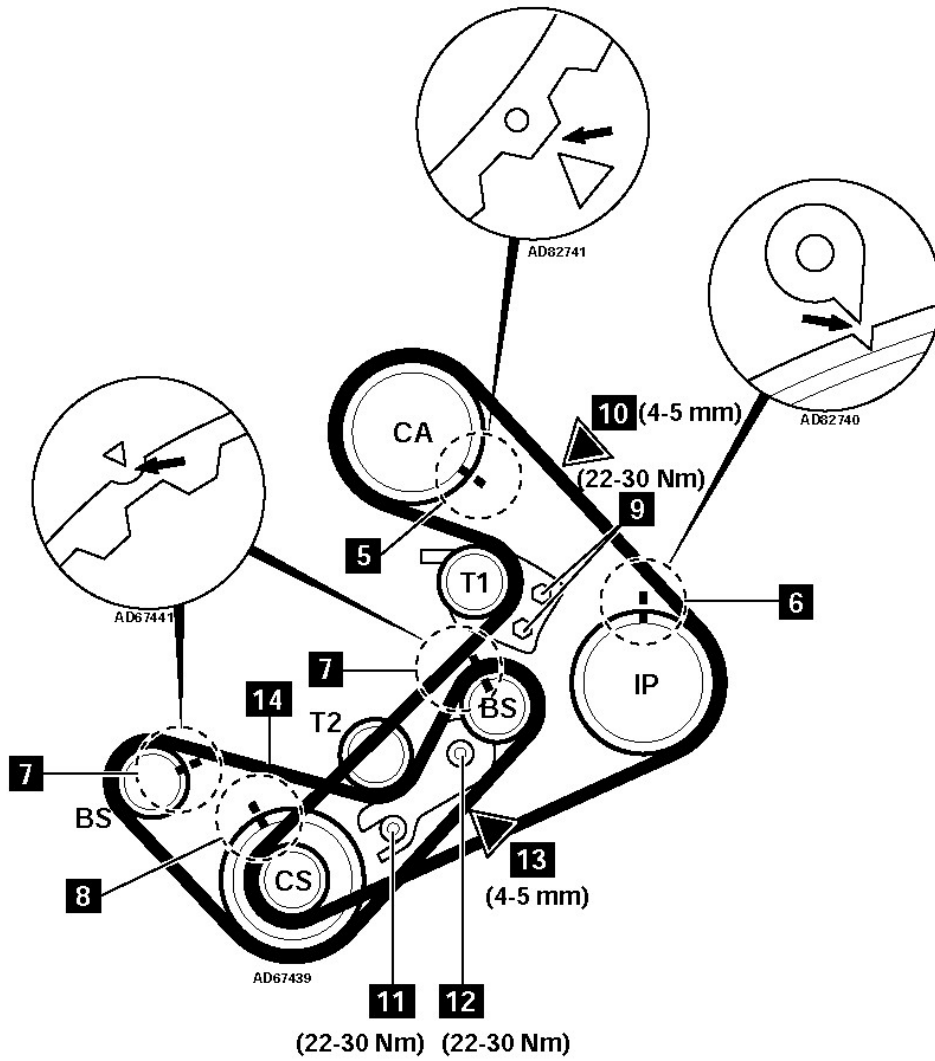
Removal

1. Remove timing belt as described previously.
2. Ensure timing marks aligned [7] & [8].
3. Slacken nut and bolt [11] & [12].
4. Move tensioner (T2) towards water pump and tighten nut [11].
5. Remove balancer shaft belt.

Installation - Balancer Shaft Belt

Installation

1. Ensure timing marks aligned [7] & [8].
2. Fit balancer shaft belt to sprockets with no slack at  [13].
3. Press down several times on belt at [14].
4. Slacken tensioner nut [11]. Allow tensioner to operate.
5. Tighten tensioner nut [11]. Tightening torque: 22-30 Nm.
6. Tighten tensioner bolt [12]. Tightening torque: 22-30 Nm.
NOTE: Observe correct tightening sequence, otherwise belt tension will not be correct.
7. Apply thumb pressure to balancer shaft belt at  [13]. Belt should deflect 4-5 mm.
8. Fit timing belt as described previously.



AD11577

Manufacturer: Hyundai
 Engine code: D4BF
 Tuned for: Doowon

Model: H100/Grace/Porter 2,5D Turbo
 Output: 59 (80) 3800
 Year: 1998-04

© Autodata Limited 2004
 27-05-2007
 V5.373- **/Autodata**