

- ❑ Clean air conditioner compressor flange before fitting pulley

### 5.2.3 Assembly overview - “Denso” air conditioner compressor pulley (with air conditioning system magnetic clutch - N25-)

- Perform preparations ➔ [f5.6 or renewing pulley](#)”, [page 355](#) .



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#### 1 - Cap

- ☐ Not always fitted

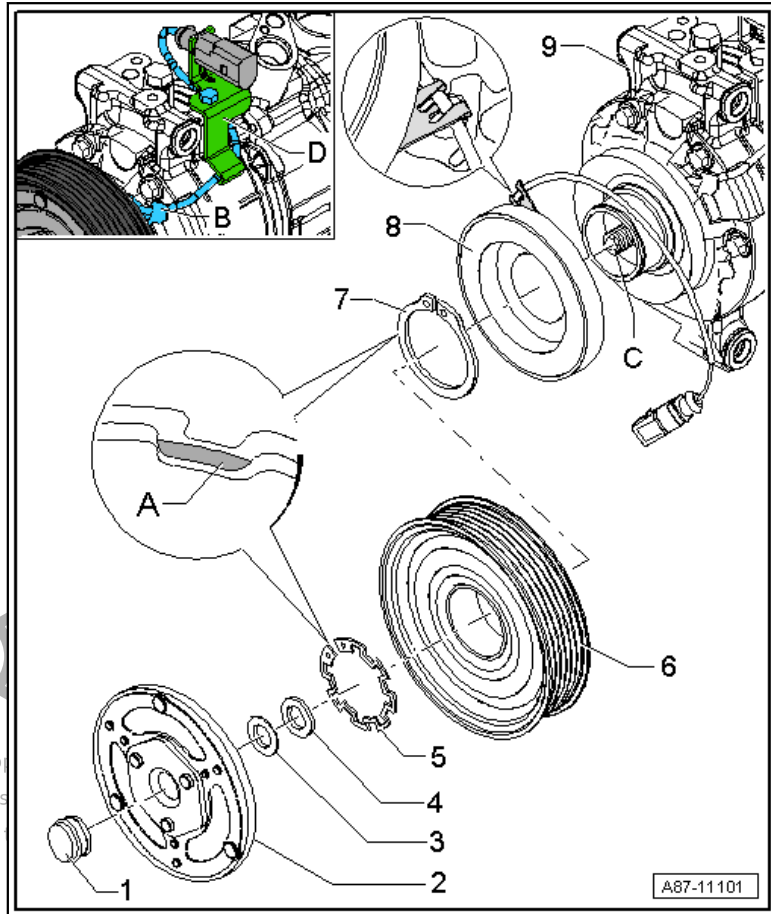
#### 2 - Clutch plate

- ☐ Renew after removing
- ☐ Detaching and attaching ⇒ [a5.8.2 nd attaching clutch plate - Denso air conditioner compressor](#), page 362
- ☐ Screwed onto compressor shaft
- ☐ Different versions available ⇒ Electronic parts catalogue
- ☐ With overload protection device; triggered if torque is too great (e.g. if air conditioner compressor cannot rotate freely) causing pulley to freewheel without driving air conditioner compressor when magnetic clutch -N25- is activated
- ☐ 30 Nm

#### 3 - Washer

#### 4 - Spacer

- ☐ For adjusting gap between clutch plate and pulley
- ☐ Checking gap ⇒ [g5.8.5 ap between pulley and clutch plate - Denso air conditioner compressor](#), page 364



#### 5 - Retaining ring

- ☐ Renew after removing
- ☐ Ensure correct installation position (flat side facing air conditioner compressor)
- ☐ When fitting retaining ring, take care not to bend it open more than necessary.
- ☐ Ensure that retaining ring is fitted correctly (bevelled side -A- faces away from air conditioner compressor; flat side faces compressor).

#### 6 - Pulley

- ☐ The pulley is sensitive to impact and should therefore be treated with care.
- ☐ Clean air conditioner compressor flange before fitting pulley
- ☐ Different versions (depending e.g. on type of engine) ⇒ Electronic parts catalogue
- ☐ If pulley cannot be detached from air conditioner compressor flange by hand, refer to [p5.8.4 ulley](#), page 364.

#### 7 - Retaining ring

- ☐ Renew after removing
- ☐ Ensure correct installation position (flat side facing air conditioner compressor)
- ☐ When fitting retaining ring, take care not to bend it open more than necessary.
- Ensure that retaining ring is fitted correctly (bevelled side -A- faces away from air conditioner compressor; flat side faces compressor).

#### 8 - Solenoid

- ☐ When installing, make sure retainer for cable -B- is positioned correctly.
- ☐ Depending on version, connector -D- may be attached to air conditioner compressor with a bracket.
- ☐ On air conditioner compressors on which wiring for activating -N25- and -N280- is combined in a 3-pin connector, eject wire leading to -N25- from connector using a suitable release tool from wiring harness repair set -VAS 1978 B- ➔ Electrical system; Rep. gr. 97; Releasing and dismantling connector housings

#### 9 - Air conditioner compressor

- ☐ Different versions may be fitted, depending on engine type and country-specific version of vehicle  
➔ Electronic parts catalogue.
- ☐ Clean air conditioner compressor flange before fitting pulley
- ☐ Clean thread of compressor shaft and apply a small quantity of grease to thread

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#### 5.2.4 Assembly overview - "Sanden" air conditioner compressor pulley

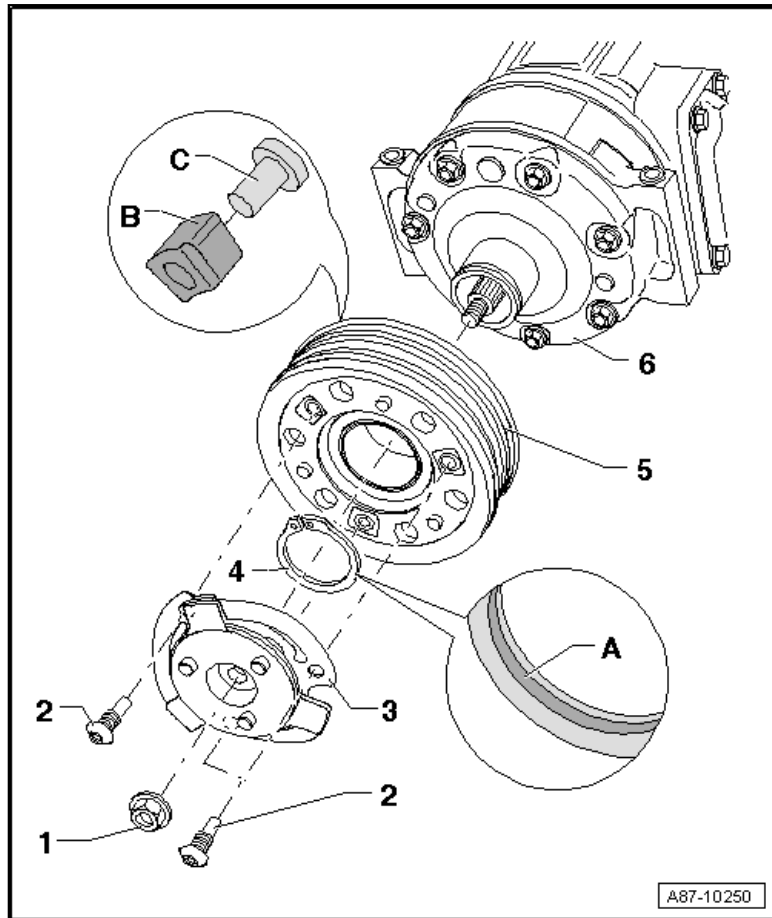
- Perform preparations ➔ [f5.6 or renewing pulley](#)", [page 355](#) .

### 1 - Nut

- ☐ 25 Nm
- ☐ A plastic cap may be fitted additionally to protect thread of air conditioner compressor drive shaft (cap is not shown in illustration).
- Hold pulley in position using a commercially available oil filter strap wrench when loosening or tightening hexagon nut.
- Using e.g. a thread cutter, clean thread of nut (screwed in with locking fluid). Otherwise there is a danger of the drive shaft shearing off when it is removed again.
- Using wire brush, clean thread of air conditioner compressor drive shaft.
- Apply locking fluid and insert nut. For locking fluid, refer to ⇒ Electronic parts catalogue.

### 2 - Bolt

- ☐ 12 Nm
- Hold pulley in position using a commercially available oil filter strap wrench when loosening or tightening bolts.



- Threaded holes which take self-locking bolts or bolts coated with locking fluid must be cleaned using a thread tap or similar. Otherwise there is a danger of the bolts shearing off the next time they are removed.
- Using wire brush, clean threads of bolts screwed in with locking fluid. Then apply locking fluid and insert bolts. Locking fluid ⇒ Electronic parts catalogue

### 3 - Drive plate

- ☐ With overload protection device (attachment of spring elements); triggered if torque is too great (e.g. if air conditioner compressor cannot rotate freely) causing pulley to freewheel without driving air conditioner compressor
- ☐ Spring elements of drive plate dampen vibrations and reduce noise

### 4 - Retaining ring

- ☐ Renew after removing
- ☐ Install in correct position; insertion bevel -A- facing away from air conditioner compressor (flat side towards compressor)

### 5 - Pulley

- ☐ With rubber elements -B- and threaded plates -C- for decoupling pulley from drive shaft of air conditioner compressor (rubber elements dampen vibrations and reduce noise)
- ☐ Depending on version, threaded plates may also be linked via a ring.
- ☐ "Cold country" vehicles (e.g. for Central and Northern Europe) may be fitted with air conditioner compressors with a smaller capacity. On these air conditioner compressors, the pulley is slightly different to the version shown here (e.g. no rubber elements -B-) ⇒ Electronic parts catalogue.

## 6 - Air conditioner compressor

- ☐ Clean air conditioner compressor drive shaft before fitting pulley

### 5.2.5 Assembly overview - "Sanden" air conditioner compressor pulley (with air conditioning system magnetic clutch - N25-)

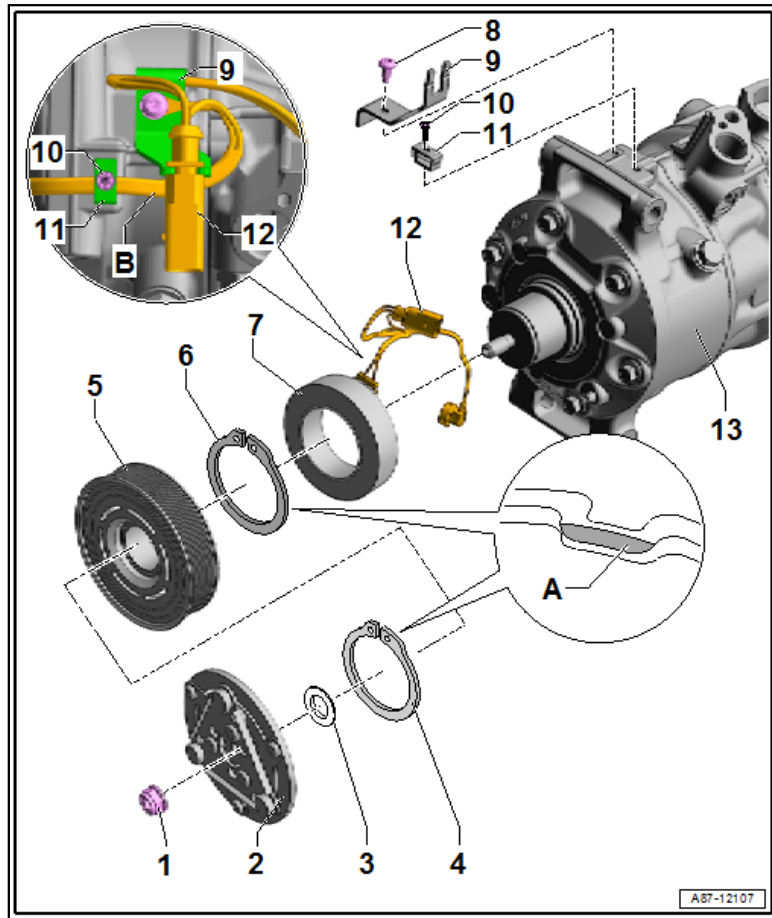
- Perform preparations → [f5.6 or renewing pulley", page 355](#) .
  - Remove pulley with air conditioning system magnetic clutch  
- N25- → [a5.8 nd installing pulley with air conditioning system magnetic clutchN25", page 361](#) .
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#### 1 - Nut

- ❑ 25 Nm
- ❑ Insert nut with locking fluid; locking fluid  
 ⇒ Electronic parts catalogue
- ❑ Clean thread of nut (screwed in with locking fluid). Otherwise there is a danger of the drive shaft shearing off when it is removed again.

#### 2 - Clutch plate

- ❑ Renew after removing
- ❑ Detaching and attaching ⇒ [a5.8.3 nd attaching clutch plate - Sanden air conditioner compressor \(with N25\)”, page 363](#)
- ❑ Attached to air conditioner compressor drive shaft
- ❑ Different versions available ⇒ Electronic parts catalogue
- ❑ With overload protection device; triggered if torque is too great (e.g. if air conditioner compressor cannot rotate freely) causing pulley to freewheel without driving air conditioner compressor when magnetic clutch -N25- is activated



#### 3 - Spacer

- ❑ For adjusting gap between clutch plate and pulley
- ❑ Checking gap ⇒ [q5.8.6 ap between pulley and clutch plate - Sanden air conditioner compressor \(with N25\)”, page 365](#)

#### 4 - Retaining ring

- ❑ Renew after removing
- ❑ Ensure correct installation position (flat side facing air conditioner compressor)
- ❑ When fitting retaining ring, take care not to bend it open more than necessary.
- Ensure that retaining ring is fitted correctly (bevelled side -A- faces away from air conditioner compressor; flat side faces compressor).

#### 5 - Pulley

- ❑ Pulley is sensitive to impact; handle with care
- ❑ Clean air conditioner compressor flange before fitting pulley
- ❑ Different versions (depending e.g. on type of engine) ⇒ Electronic parts catalogue
- ❑ If pulley cannot be detached from air conditioner compressor flange by hand, refer to ⇒ [p5.8.4 ulley”, page 364](#).

#### 6 - Retaining ring

- ❑ Renew after removing
- ❑ When fitting retaining ring, take care not to bend it open more than necessary.

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- Ensure that retaining ring is fitted correctly (bevelled side -A- faces away from air conditioner compressor; flat side faces compressor).

#### 7 - Solenoid

- ☐ When installing, make sure retainer for cable -B- is positioned correctly.
- ☐ Depending on version, connector may be attached to air conditioner compressor with a bracket.
- ☐ On air conditioner compressors on which wiring for activating -N25- and -N280- is combined in a 3-pin connector: Unplug connector from -N280- or disconnect wire to -N25- from connector ➔ [Item 12 \(page 318\)](#) using a suitable release tool from wiring harness repair set -VAS 1978 B- ➔ Electrical system; Rep. gr. 97; Releasing and dismantling connector housings

#### 8 - Bolt

- ☐ 3 Nm
- ☐ For securing bracket ➔ [Item 9 \(page 318\)](#) , for connector ➔ [Item 12 \(page 318\)](#) and earth connection of -N25-
- ☐ Before installing, check and if necessary clean contact surfaces on air conditioner compressor and bracket

#### 9 - Bracket

#### 10 - Bolt

- ☐ 3 Nm

#### 11 - Bracket

#### 12 - Connector

- ☐ Different versions, depending on air conditioner compressor and -N280- (1, 2 or 3 pins)

#### 13 - Air conditioner compressor

- ☐ Different versions may be fitted, depending on engine type and country-specific version of vehicle ➔ Electronic parts catalogue.
- ☐ Clean air conditioner compressor flange before fitting pulley
- ☐ Clean thread of compressor shaft and apply a small quantity of grease to thread

### 5.3 Detaching and attaching air conditioner compressor at bracket

➔ [a5.3.1 nd attaching mechanically driven air conditioner compressor at bracket - vehicles with 4-cyl. TFSI engine", page 318](#)

➔ [a5.3.2 nd attaching mechanically driven air conditioner compressor at bracket - vehicles with 6-cyl. engine", page 320](#)

➔ [a5.3.3 nd attaching mechanically driven air conditioner compressor at bracket - vehicles with 8-cyl. TDI engine", page 322](#)

➔ [a5.3.4 nd attaching mechanically driven air conditioner compressor at bracket - vehicles with V8 TFSI engine", page 323](#)

➔ [a5.3.5 nd attaching electrically driven air conditioner compressor at bracket", page 326](#)

#### 5.3.1 Detaching and attaching mechanically driven air conditioner compressor at bracket - vehicles with 4-cyl. TFSI engine

##### Detaching

- Switch off ignition.
- Remove noise insulation (front) ➔ General body repairs, exterior; Rep. gr. 66; Noise insulation; Removing and installing noise insulation.