

SECTION: 303-05 Accessory Drive

VEHICLE APPLICATION: 2008.0 Falcon

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SPECIFICATIONS

General specifications

| Description | Specification |
|-------------|---------------|
| Sealer | ESZ-M4G281-A |

Torque specifications

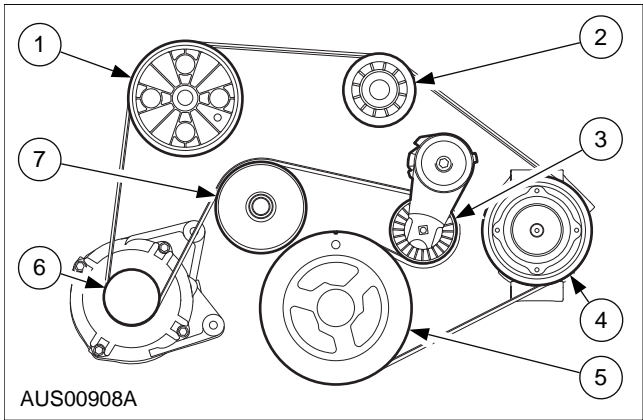
| Description | Nm |
|---|----|
| Accessory drive belt tensioner securing bolt to front cover - I6 and V8 | 25 |
| Accessory drive belt tensioner pulley securing bolt to tensioner arm - I6 | 35 |
| Accessory drive belt idler pulley bolt to front cover - I6 | 25 |
| Water pump bolts - I6 | 20 |



DESCRIPTION AND OPERATION

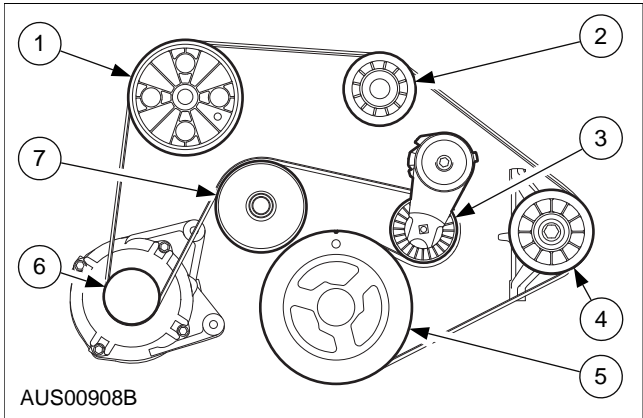
Accessory Drive

I6 engine with air conditioning



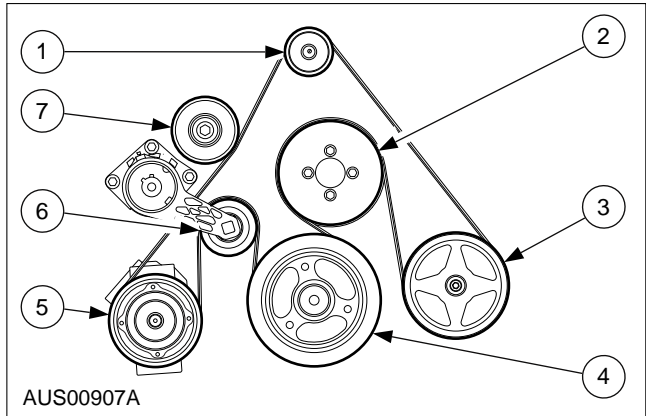
| Item | Description |
|------|----------------------------|
| 1 | Power steering pump pulley |
| 2 | Belt idler pulley |
| 3 | Belt tensioner |
| 4 | A/C compressor pulley |
| 5 | Crankshaft damper |
| 6 | Alternator pulley |
| 7 | Water pump pulley |

I6 engine without air conditioning



| Item | Description |
|------|----------------------------|
| 1 | Power steering pump pulley |
| 2 | Belt idler pulley |
| 3 | Belt tensioner |
| 4 | A/C idler pulley |
| 5 | Crankshaft damper |
| 6 | Alternator pulley |
| 7 | Water pump pulley |

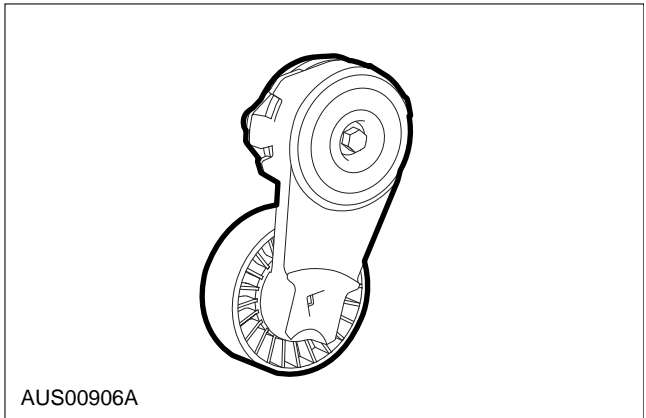
V8 engine



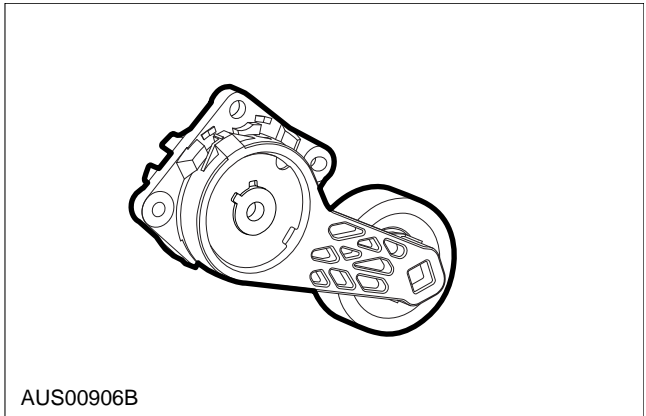
| Item | Description |
|------|----------------------------|
| 1 | Alternator pulley |
| 2 | Water pump pulley |
| 3 | Power steering pump pulley |
| 4 | Crankshaft damper |
| 5 | A/C compressor pulley |
| 6 | Belt tensioner |
| 7 | Belt idler pulley |

Belt Tensioner

I6 engine



V8 engine



DESCRIPTION AND OPERATION (Continued)

Automatic belt tensioners are spring loaded devices which set and maintain the drive belt tension. The drive belt does not require tension adjustment for the life of the belt. Automatic tensioners have belt wear indication marks.

If the indicator mark is not between the indicator lines, the belt is worn or an incorrect belt has been installed.

To replace the belt, refer to **Accessory Drive Belt - 303-05-5**.

Water Pump

A centrifugal-type water pump is mounted on the front of the cylinder block.

A vane-type impeller supplies coolant through centrifugal action to the water pump outlet port.

If the pump is found to be fault, remove and discard as it is of a sealed type which cannot be repaired.

Refer to **Engine Cooling** in Section 303-03.



DIAGNOSIS AND TESTING

Accessory Drive

Inspection and verification

1. Verify the customer's concern by operating the engine to duplicate the condition.
2. Inspect to determine if any of the following mechanical concerns apply:

| Mechanical |
|---|
| <ul style="list-style-type: none"> • Drive belt cracking/chunking • Drive belt contamination • Drive belt length incorrect • Drive belt noise or squeal • Pulley misalignment or excessive pulley run-out. |

3. Install a new drive belt if any of the following conditions exist: rib chunk-out, severe glazing, frayed cords, belt back delamination or other concerns.

Note: Minor cracks in the V-grooved portion of the drive belt are considered normal and acceptable. If the drive belt has chunks missing from the ribs, a new drive belt should be installed.

4. If the concern is not visually evident, verify the symptom and refer to the Symptom Chart.

Symptom chart

| Condition | Source | Action |
|------------------------------------|--------------------------------------|--|
| • Drive belt cracking | • Drive belt | • System OK |
| • Drive belt chunking | • Drive belt | • INSTALL a new drive belt. REFER to 'Accessory Drive Belt' in this section |
| • Drive belt noise or squeal | • Pulleys | • DETERMINE where the noise is coming from. CHECK pulley alignment, freedom of rotation or damage. REPAIR or INSTALL as necessary. |
| | • Lubrication or other contamination | • CHECK belt for contamination. If belt is damaged, INSTALL a new belt. |
| | • Drive belt | • CHECK correct belt is fitted |
| • Drive belt does not hold tension | • Drive belt cracked or damaged | • INSPECT belt for parallel cracking through to backing. INSTALL new drive belt as necessary. |
| | • Tensioner worn or damaged | • CHECK belt tensioner for damage and correct operation. INSTALL a new belt tensioner if required. |

Belt Tensioner

Note: The only mechanical check that needs to be made is a check for tensioner stick, grab or bind.

1. Remove the belt in the area of the tensioner.
2. Rotate the tensioner from its relaxed position through its full stroke and back to the relaxed position to make sure there is no stick, grab or bind and to make sure there is tension on the belt tensioner spring.
3. If the tensioner does not meet the above criteria, install a new tensioner, see **Accessory Drive Belt Tensioner - 303-05-5**.



REMOVAL AND INSTALLATION

Accessory Drive Belt

Removal

1. Rotate the tensioner arm clockwise using a 3/8" square drive to remove tension from the accessory drive belt.
2. Remove the accessory drive belt from the vehicle.

Installation

1. Position the accessory drive belt to the vehicle in the correct orientation. For additional information, refer **Accessory Drive - 303-05-3**.

Note: On I6 engines, power steering pump pulley will be done last when tension from the belt tensioner is removed.

Note: On V8 engine, the water pump pulley will be done last when tension from the belt tensioner is removed.

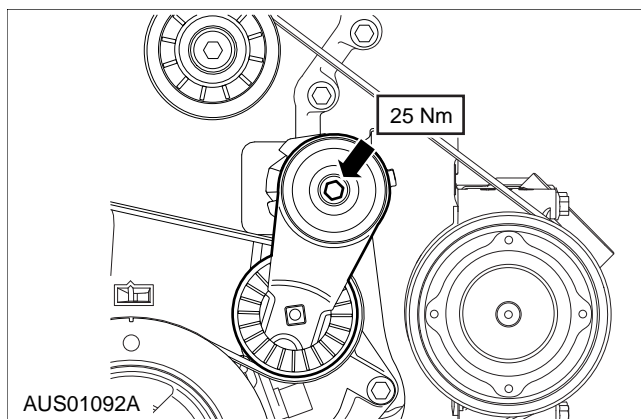
2. Rotate the tensioner arm clockwise using a 3/8" square drive to remove tension from the accessory drive belt.
3. Install the accessory drive belt over the power steering pump pulley (I6) or the water pump pulley (V8).
4. Check the accessory drive belt is correctly routed and located correctly on all pulleys.

Accessory Drive Belt Tensioner

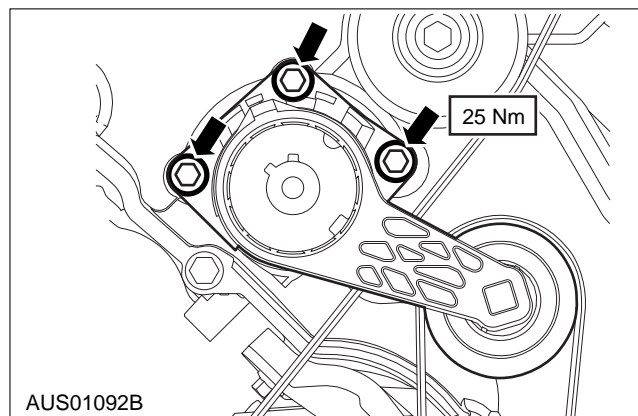
Removal

1. Remove the accessory drive belt. For additional information, refer to **Accessory Drive Belt - 303-05-5**.
2. Remove belt tensioner bolt(s) and remove the drive belt tensioner.

I6 engine



V8 engine



Installation

1. To install, reverse the removal procedure.

Note: Ensure that the alignment pin locates correctly in the front cover (I6 engine only).

Accessory Drive Belt Idler Pulley

Removal

1. Remove the accessory drive belt. For additional information, refer to **Accessory Drive Belt - 303-05-5**.
2. Remove the idler bolt and the idler pulley assembly.

Installation

1. To install, reverse the removal procedure.

