

VUE0037806

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

Symptom Chart

Symptom	Possible Sources	Action
Accessory drive belt noise	- Accessory drive system - Accessory drive belt incorrectly installed. - Pulley(s). - Lubricant or other contamination.	- Use a stethoscope or other listening device to determine the source of the noise. INSTALL new components as necessary. - CHECK the accessory drive belt is correctly installed in the pulley grooves. INSTALL a new accessory drive belt as necessary. REFER to: Accessory Drive Belt (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation). - CHECK the pulley(s) for damage, freedom of rotation, stone entrapment and alignment. INSTALL new components as necessary. - CHECK the accessory drive belt for contamination or damage. RECTIFY the source of the leak and INSTALL a new accessory drive belt. REFER to: Accessory Drive Belt (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation).
NOTE: Chirp is defined as a twittering noise, often intermittent - Accessory drive belt chirp	Pulley misalignment (usually evident at idle).	- CHECK that the accessory drive belt is running centrally on the flat pulleys. - CHECK the pulleys for excessive end float and bent flanges. - With the engine running at idle, use a stethoscope to identify the source of the noise. INSTALL new components as necessary.
NOTE: Rattle is defined as a metallic knocking noise - Accessory drive belt rattle	Loose components or hardware.	CHECK the components or hardware for correct installation and tighten as necessary.

Component Tests

Accessory Drive Belt Tensioner - Static Check

The accessory drive belt tensioner may be checked statically as follows:

- Inspect the area surrounding the accessory drive belt tensioner for lubricant or other contamination. Rectify any leaks before installing a new accessory drive belt tensioner. If the accessory drive belt tensioner is contaminated, do not attempt to clean it as the damping mechanism inside may be damaged. INSTALL a new accessory drive belt tensioner as necessary.
REFER to: Accessory Drive Belt Tensioner (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation).
- Detach the accessory drive belt in the area of the accessory drive belt tensioner.

3. **NOTE:** *The accessory drive belt tensioner has a damping feature, which is usually a friction device, therefore some friction within the system is normal.*

Using the correct tool, move the accessory drive belt tensioner from its relaxed position through its full stroke and back to the relaxed position to make sure there is no excessive stick, grab or bind, and to make sure there is tension on the accessory drive belt tensioner spring.

4. Rotate the accessory drive belt tensioner pulley and check for damage, freedom of rotation and alignment. **INSTALL** a new accessory drive belt tensioner as necessary.
REFER to: Accessory Drive Belt Tensioner (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation).
5. If the accessory drive belt tensioner meets the above criteria, proceed to test the accessory drive belt tensioner dynamically. If the accessory drive belt tensioner does not meet the above criteria, **INSTALL** a new accessory drive belt tensioner.
REFER to: Accessory Drive Belt Tensioner (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation).

Accessory Drive Belt Tensioner - Dynamic Check

The accessory drive belt tensioner may be checked dynamically as follows:

1. With the engine running, observe the accessory drive belt tensioner movement. The accessory drive belt tensioner should move (respond) when the engine is accelerated rapidly or when the A/C clutch cycles ON and OFF (the degree of movement can be up to 4 mm). If the accessory drive belt tensioner movement is not constant without engine acceleration or A/C clutch cycling, a pulley or shaft is possibly bent, out of round, or the damping mechanism inside the accessory drive belt tensioner may be damaged. **INSTALL** a new accessory drive belt tensioner as necessary.
REFER to: Accessory Drive Belt Tensioner (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation).
2. Excessive accessory drive belt rideout (uneven depth of grooves in the accessory drive belt) may cause excessive accessory drive belt tensioner movement. Check the condition by installing a new accessory drive belt.
REFER to: Accessory Drive Belt (303-05B Accessory Drive - 3.0L EcoBoost, Removal and Installation).
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Removal and Installation

Accessory Drive Belt

Removal

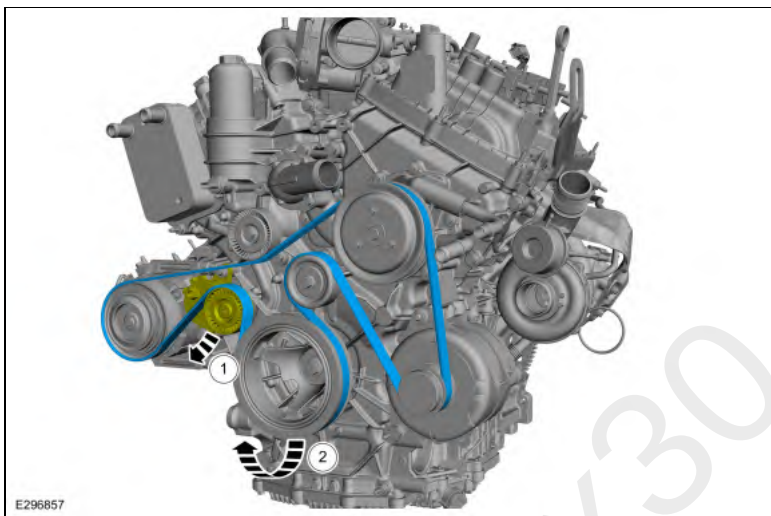
NOTICE: Under no circumstances should the accessory drive belt, tensioner or pulleys be lubricated as potential damage to the belt material and tensioner damping mechanism will occur. Do not apply any fluids or belt dressing to the accessory drive belt or pulleys.

NOTE: Removal steps in this procedure may contain installation details.

1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: Wheel and Tire Health and Safety Precautions (100-00 General Information, Description and Operation).
2. Remove the front undershield.
Refer to: Engine Front Undershield (501-02 Front End Body Panels, Removal and Installation).
3. **NOTE:** Use a 15mm socket located on the cast hex feature to rotate the drive belt tensioner counter-clockwise to release the belt.

Remove the following items:

1. Rotate the accessory drive belt tensioner clockwise.
2. Remove the accessory drive belt.



Installation

1. To install, reverse the removal procedure.
2. **NOTE:** All FEAD components and fasteners must be installed and torqued before belt installation.

NOTE: Check the A/C Compressor clutch assembly and crankshaft vibration damper assembly after installation. Lumps in the belt surface indicate ribs are out of pulley grooves and not fully seated in the A/C Compressor clutch assembly and/or crankshaft vibration damper assembly.

After installation, make sure the accessory drive belt is correctly seated on all pulleys.