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Accessory Drive - TD4 2.2L Diesel -

Torque Specifications

Description	Nm	lb-ft
Accessory drive belt tensioner retaining bolt	45	33
Accessory drive belt idler retaining bolt	45	33

Accessory Drive - TD4 2.2L Diesel - Accessory Drive

Diagnosis and Testing

Principles of Operation

For a detailed description of the Front End Accessory Drive (FEAD), refer to the relevant Description and Operation section of the workshop manual.

REFER to: [Accessory Drive](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Description and Operation).

Inspection and Verification

1. Verify the customer concern.
2. Visually inspect for system integrity and obvious signs of damage.

Visual Inspection

Mechanical
<ul style="list-style-type: none"> ● FEAD belt ● FEAD belt tension ● FEAD belt tensioner ● FEAD belt pulleys ● FEAD belt pulley seals

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step
4. If the cause is not visually evident, verify the symptom and refer to the Symptom Chart.

Symptom Chart

Symptom	Possible Cause	Action
FEAD belt noise or squeal	<ul style="list-style-type: none"> ● FEAD belt pulley(s) ● Lubricant or other contamination ● FEAD belt 	<p>Check for pulley alignment, freedom of rotation and damage. Repair or install new parts as required.</p> <p>REFER to: Accessory Drive Belt (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation) / Accessory Drive Belt Tensioner (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation) / Accessory Drive Belt Idler Pulley (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).</p> <p>Check FEAD belt for contamination. If contaminated, install a new belt.</p> <p>REFER to: Accessory Drive Belt (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).</p> <p>Check FEAD belt for correct application</p>
FEAD belt does not hold tension	<ul style="list-style-type: none"> ● FEAD belt cracking or damaged ● Tensioner worn or damaged 	<p>Inspect FEAD belt for cracking or damage. Install a new belt as required.</p> <p>REFER to: Accessory Drive Belt (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).</p> <p>Check FEAD belt tensioner for damage and correct operation. Install a new FEAD belt tensioner as required.</p> <p>REFER to: Accessory Drive Belt Tensioner (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).</p>

Component Tests

FEAD belt tensioner

Static

The only checks required for the FEAD belt tensioner are for stick, grab or bind.

1. Remove the drive belt in the area of the tensioner.
2. Using the correct tool, 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 that there is tension on the tensioner spring.
3. If the tensioner meets the above criteria, proceed to the dynamic test. If the tensioner does not meet the above criteria install a new tensioner.
REFER to: [Accessory Drive Belt Tensioner](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).

Dynamic

The FEAD belt tensioner can be checked dynamically as follows:

With the engine running, observe drive belt tensioner movement, the FEAD belt tensioner should move (respond) when the air conditioning clutch cycles (if equipped), the FEAD belt tensioner should move (respond) when the engine speed is increased rapidly. If the drive belt tensioner movement is erratic without air conditioning clutch cycling or engine acceleration, a pulley or shaft may be bent, or distorted. Excessive drive belt rideout (uneven depth of grooves in the drive belt) can also cause excessive drive belt tensioner movement. Check condition by installing a known good belt.

REFER to: [Accessory Drive Belt](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).

FEAD belt

1. With the engine off, check routing of the drive belt.

REFER to: [Accessory Drive](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Description and Operation).

2. Inspect the drive belt tensioner wear indicator to confirm the drive belt is within operating range. Install a new drive belt as necessary .

REFER to: [Accessory Drive Belt](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).

Accessory Drive - TD4 2.2L Diesel - Accessory Drive Belt

Removal and Installation

Removal

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

1.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

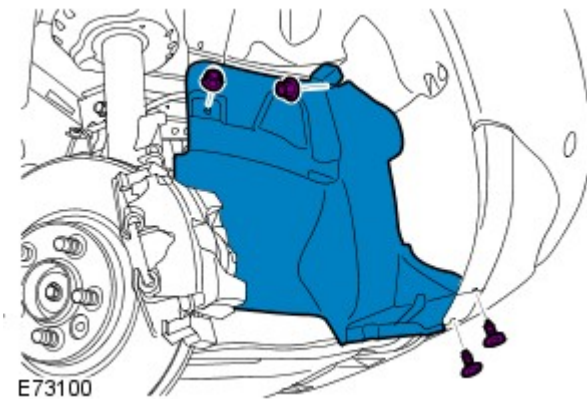
2. Remove the cover and disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

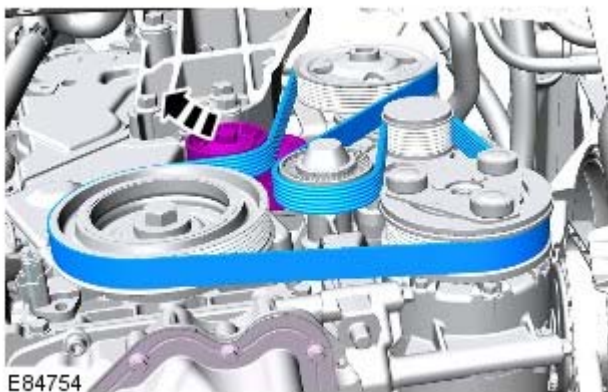
3. Remove the RH front wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

4.




5. Rotate the accessory drive belt tensioner clockwise.





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6.  **CAUTION:** Note the fitted position of the component prior to removal.

Installation

1. To install, reverse the removal procedure.

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Removal and Installation

Removal

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

1. Remove the cover and disconnect the battery ground cable.

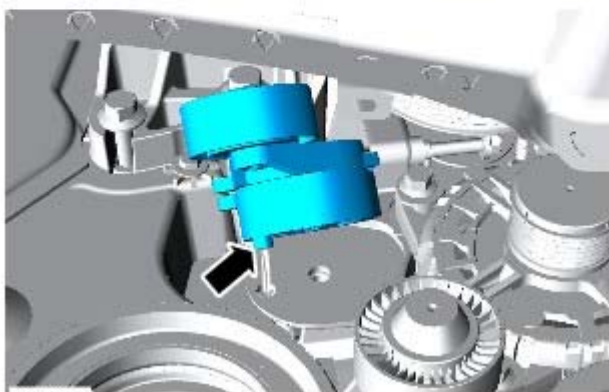
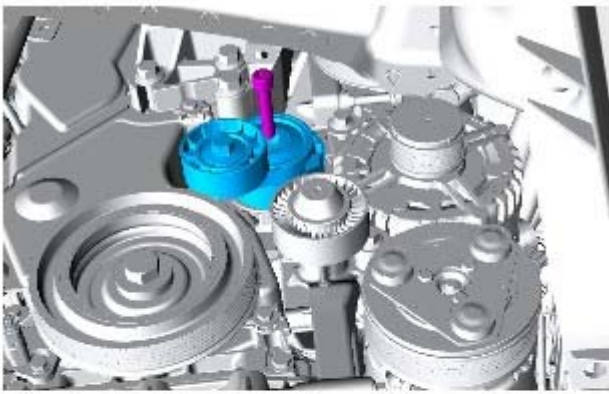
Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the auxiliary drive belt.

Refer to: [Accessory Drive Belt](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).

3. **NOTE:** Make sure that the component is installed to the position noted on removal.

- *Torque:* 45 Nm



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Installation

1. To install, reverse the removal procedure.

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Accessory Drive - TD4 2.2L Diesel - Accessory Drive Belt Idler Pulley

Removal and Installation

Removal

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

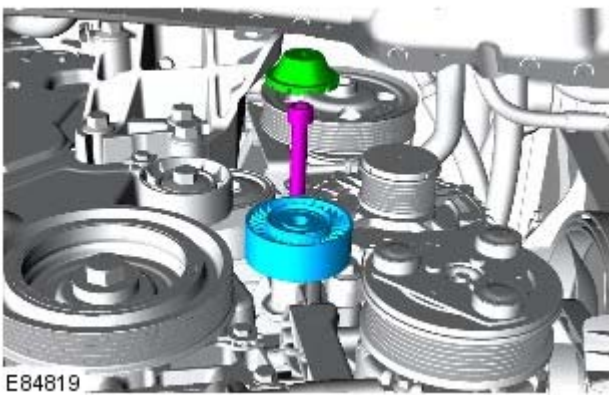
1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the accessory drive belt.

Refer to: [Accessory Drive Belt](#) (303-05B Accessory Drive - TD4 2.2L Diesel, Removal and Installation).

3. *Torque:* 45 Nm



Installation

1. To install, reverse the removal procedure.