

## Clockspring - Vehicles With: Adaptive Steering

### Removal

**WARNING:** The following procedure prescribes critical repair steps required for correct restraint system operation during a crash. Follow all notes and steps carefully. Failure to follow step instructions may result in incorrect operation of the restraint system and increases the risk of serious personal injury or death in a crash.

**NOTICE:** Never provide power to the SASM/clockspring without first installing the SASM/clockspring onto the steering wheel/ SECM, making the integral electrical connection between the two of them. Failure to do so sets a DTC that cannot be cleared and a new SASM/clockspring needs to be installed.

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

1. **WARNING:** Before beginning any service procedure in this manual, refer to health and safety warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

Refer to: Pyrotechnic Device Health and Safety Precautions (100-00 General Information, Description and Operation).

2. **NOTE:** This step is only necessary when installing a new component.

**NOTE:** The PMI process must begin with the current clockspring installed. If the current clockspring does not respond to the diagnostic scan tool, the tool may prompt for As-Built Data as part of the repair.

Using a diagnostic scan tool, begin the PMI process for the SASM following the on-screen instructions.

3. **NOTE:** Follow the unique instructions or graphic for this step in installation.

Remove the steering wheel with adaptive steering.

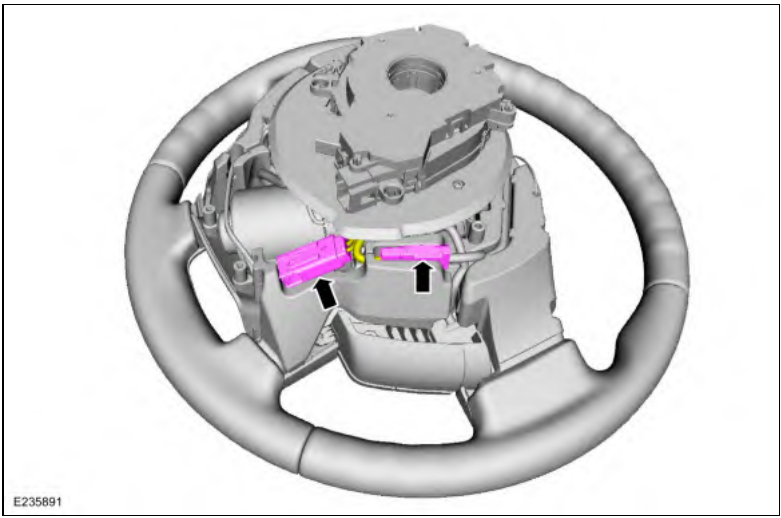
Refer to: Steering Wheel - Vehicles With: Adaptive Steering (211-04 Steering Column, Removal and Installation).

4. Remove the screws and the steering wheel back cover.



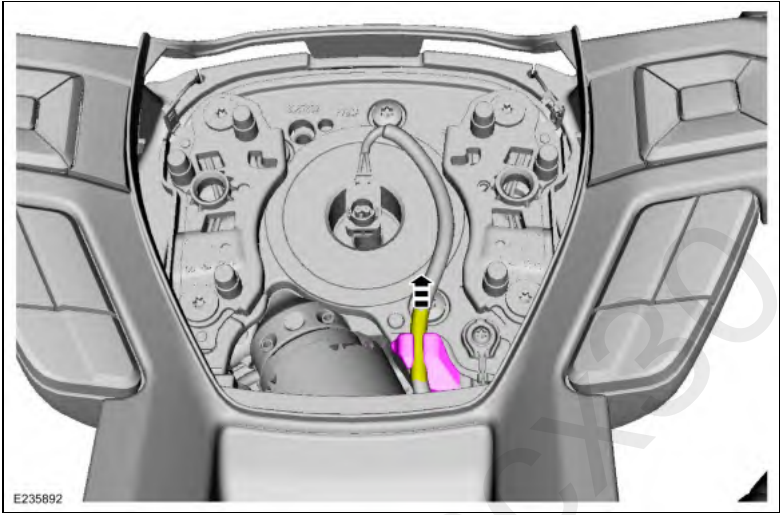
5. **NOTE:** Follow the unique instructions or graphic for this step in installation.

Disconnect the clockspring electrical connectors from the steering wheel and position aside.



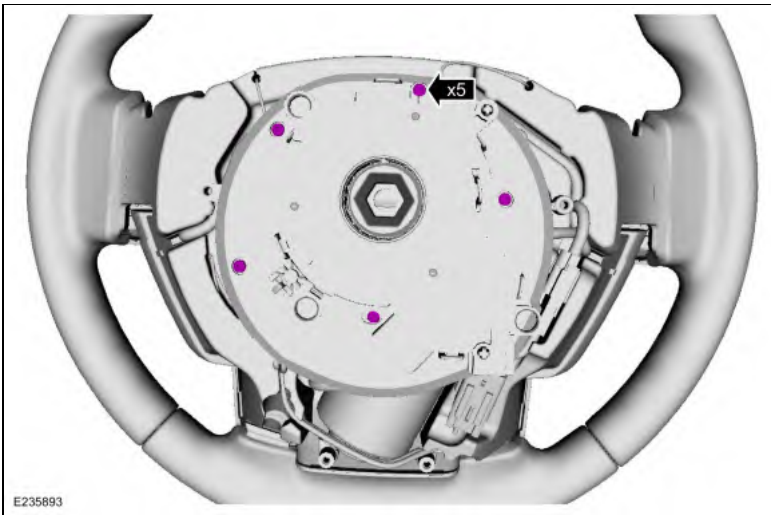
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6. Detach the driver airbag wire harness from the steering wheel.



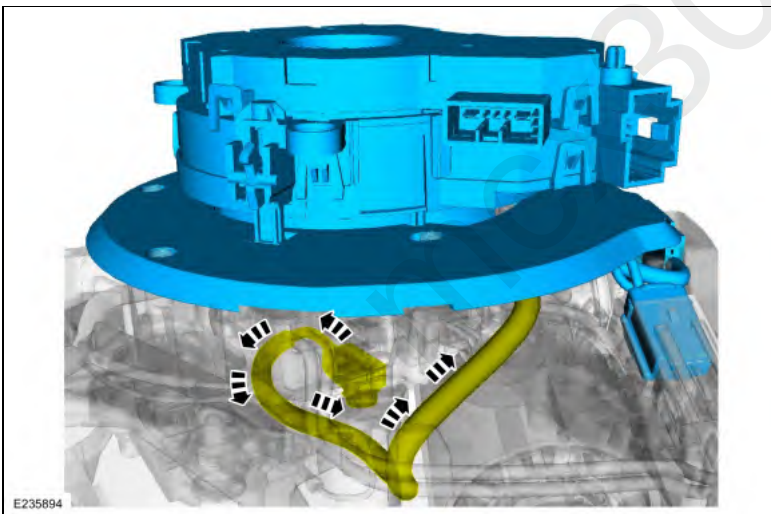
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7. Remove the screws.  
*Torque: 4 lb.in (0.4 Nm)*



8. **NOTICE:** During removal, note the clockspring orientation to the steering wheel or the electrical connector pins between the clockspring and steering wheel can be bent during installation.

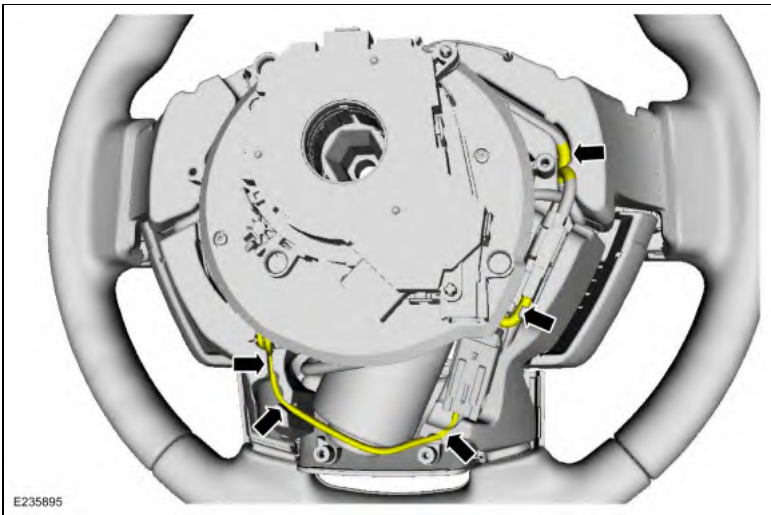
Route out the driver airbag wire harness and remove the clockspring.



## Installation

**NOTICE:** If installing a new clockspring, do not remove the clockspring anti-rotation key until the steering wheel is installed. If the anti-rotation key has been removed before installing the steering wheel, the clockspring must be centered. Failure to follow this instruction may result in component damage and/or system failure.

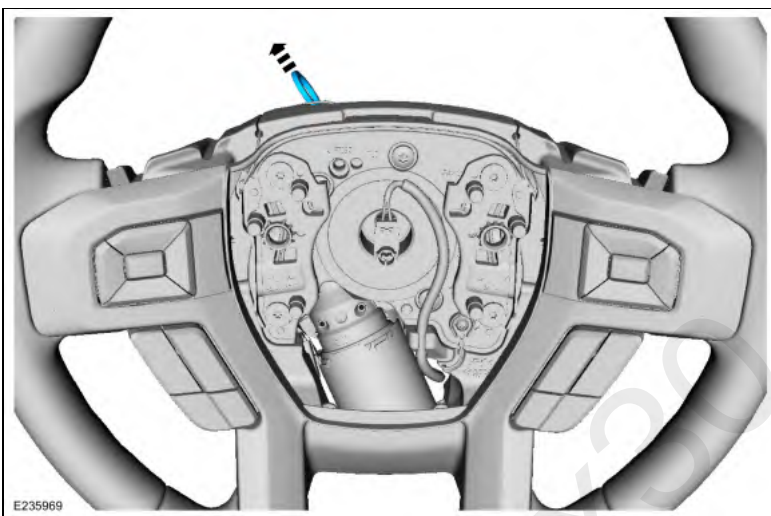
1. To install, reverse the removal procedure.
2. Route the wiring in the steering wheel slots.



3. **NOTE:** To install, remove the anti-rotation key from a new clockspring after installing the steering wheel.

Install the steering wheel with adaptive steering.

Refer to: Steering Wheel - Vehicles With: Adaptive Steering (211-04 Steering Column, Removal and Installation).



4. **NOTE:** This step is only necessary when installing a new component.

Using a diagnostic scan tool, complete the PMI process for the SASM following the on-screen instructions.

5. Using a diagnostic scan tool, complete the following service routines in the order shown, following the on-screen instructions.

1. Steering Wheel Angle Trim
2. Steering Motor Angle Trim

6. Check and if necessary, adjust the front toe.

Refer to: Front Toe Adjustment - F-250/F-350, Vehicles With: Adaptive Steering (204-00 Suspension System - General Information, General Procedures).