

# **Component Procedures: Clockspring Assembly / Spiral Cable**

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# Component Procedures: Clockspring Assembly / Spiral Cable

## Parts and Labor (itype\_189)

### Parts

Qualifier	Part #	Name	Price	Note
Supplemental Restraint System	93490F2225	Clockspring	357.15	

### Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Supplemental Restraint System > Clockspring, ?	B	1.0	0.0

## Driver Airbag (DAB) Module and Clock Spring - Description and Operation (Article 44920)

- Description
  - Driver Air Bag ( DAB ) DAB is installed in the steering wheel, and electrically connected to the SRSCM via clock spring . It is deployed during frontal impact to protect the driver.
  - Clock Spring Clock spring delivers actuation signal, generated by the sensors installed in the front and right/left sides of a vehicle, to the inflator (gas generator) of the driver air bag module via internal cable. It also delivers actuation signal of the steering wheel remote control switch and horn to relevant systems via internal cable.
- Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.



- Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.

## Driver Airbag (DAB) Module and Clock Spring - Components and Components Location (Article 44918)

- Components



1. Driver Air Bag ( DAB ) 2. Steering Wheel 3. Clock Spring

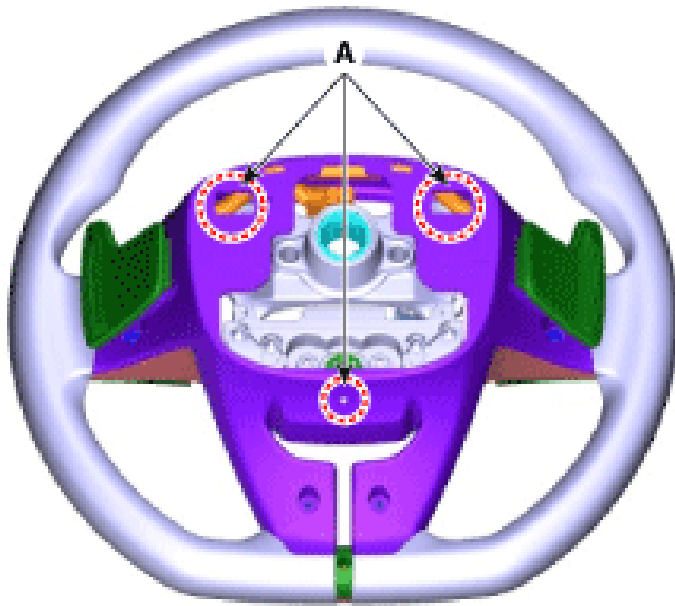
### **Driver Airbag (DAB) Module and Clock Spring - Repair Procedures (Article 44922)**

- Removal
  - Disconnect the battery negative cable and wait for at least three minutes before beginning work.
  - Remove the driver airbag module. [Without Paddle Shift] Putting in a flat tool (Ø5mm) into the guide hole and then press the spring. [With Paddle Shift] Putting in a flat tool (Ø5mm) into the guide hole(A) and then rotate it. After inserting the tool, press the DAB fixed pin in the direction of the arrow as illustration below.
- [Without Paddle Shift]
- Putting in a flat tool (Ø5mm) into the guide hole and then press the spring.

**Image not available at the time of publish.**

[With Paddle Shift]

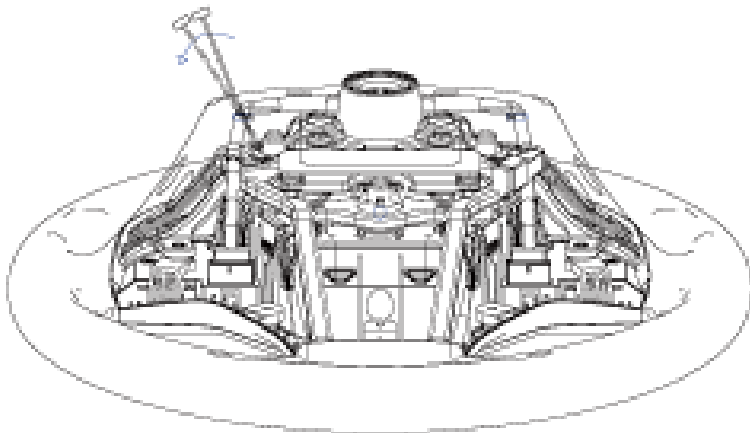
- Putting in a flat tool (Ø5mm) into the guide hole(A) and then rotate it.



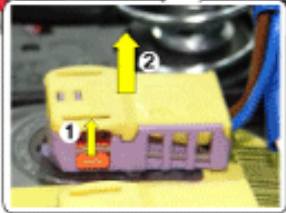
After inserting the tool, press the DAB fixed pin in the direction of the arrow as illustration below.



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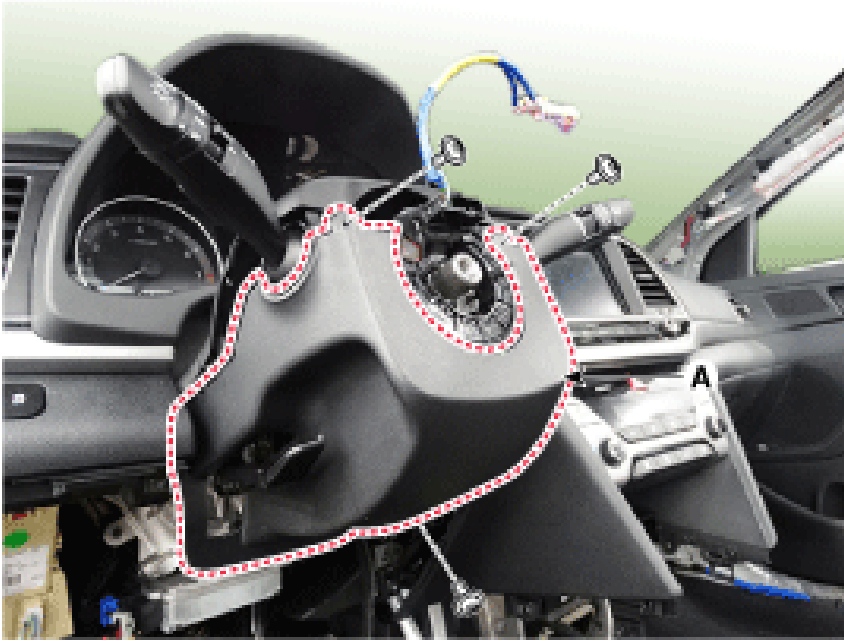
- Release the connector locking pin, then disconnect the driver airbag module connector (A) and horn connector (B). The removed airbag module should be stored in a clean, dry place with the pad cover facing up.



- The removed airbag module should be stored in a clean, dry place with the pad cover facing up.
- The removed airbag module should be stored in a clean, dry place with the pad cover facing up.
  - Remove the steering wheel. (Refer to Steering System - "Steering Wheel")
  - Using a screwdriver or remover, separate the steering column shroud upper panel (A) from the steering column shroud lower panel.



- Remove the steering column shroud lower panel (A) after loosening the screws.



- Remove the clock spring (A) after disconnecting the clock spring connectors (B).



- Inspection

Driver Airbag (DAB)

Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.

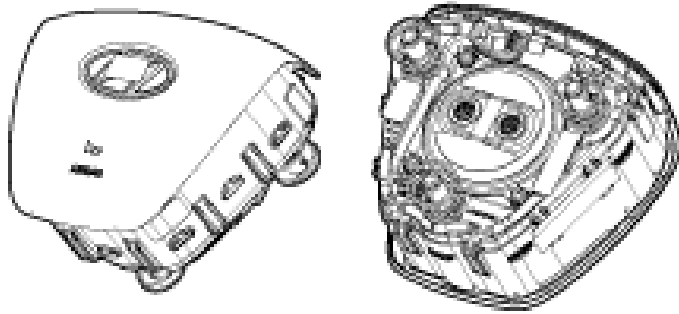
- Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.

- Check pad cover for dents, cracks or deformities.

- Check the airbag module for denting, cracking or deformation.

- Check hooks and connectors for damage, terminals for deformities, and harness for binds.

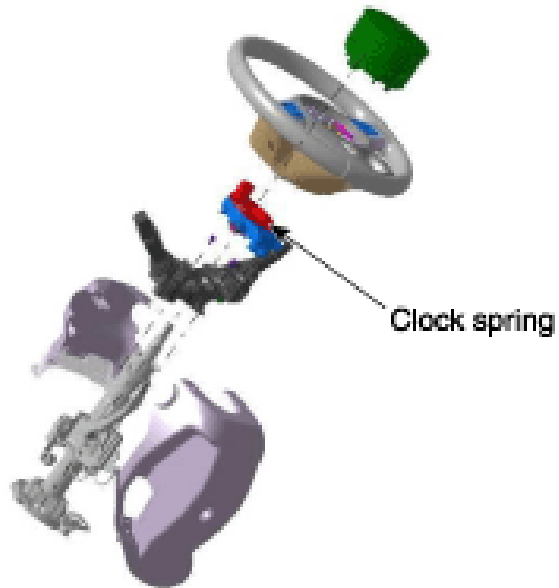
- Check airbag inflator case for dents, cracks or deformities.

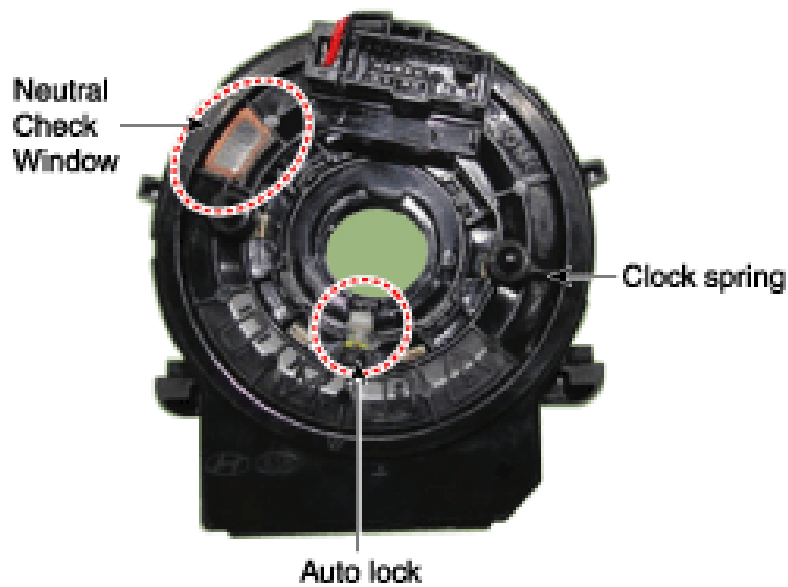


- Install the airbag module to the steering wheel to check for fit or alignment with the wheel.

#### Clock Spring

- If, as a result of the following checks, even one abnormal point is discovered, replace the clock spring with a new one.
- Check connectors and protective tube for damage, and terminals for deformities.





- Installation
  - Set the front tires straight-ahead.
  - Turn the ignition switch OFF.
  - Disconnect the battery negative cable from the battery and wait for at least three minutes before beginning the work.
  - Connect the clock spring harness connector and horn harness connector to the clock spring.
  - Factory setting for the clock spring is neutral. If white cable is visible through the product's 10 O' Clock Neutral Check Window, then the spring is at neutral. If white cable is not visible through the product's 10 O' Clock Neutral Check Window, then manually adjust the setting to neutral. Neutral Check Window : Normal Neutral Check Window : Fault White cable is visible through 10 O' Clock Neutral Check Window White cable is not visible through 10 O' Clock Neutral Check Window
  - If white cable is visible through the product's 10 O' Clock Neutral Check Window, then the spring is at neutral.
  - If white cable is not visible through the product's 10 O' Clock Neutral Check Window, then manually adjust the setting to neutral.
- Neutral Check Window : Normal Neutral Check Window : Fault





White cable is visible through 10 O' Clock Neutral Check Window White cable is not visible through 10 O' Clock Neutral Check Window

- Clock spring manual neutral setting procedure. Press the Auto Lock at 6 O' Clock and turn clockwise 3 rotations. Press the Auto Lock at 6 O' Clock and turn counter-clockwise 3 rotations. If white cable is visible through the 10 O' Clock Neutral Check Window, then the spring is set to neutral.
- Press the Auto Lock at 6 O' Clock and turn clockwise 3 rotations.



- Press the Auto Lock at 6 O' Clock and turn counter-clockwise 3 rotations.
- If white cable is visible through the 10 O' Clock Neutral Check Window, then the spring is set to neutral.



- Install the steering wheel column shroud and the steering wheel. (Refer to Steering System - "Steering Column and Shaft")
  - Connect the Driver Airbag (DAB) module connector and horn connector, and then install the Driver Airbag (DAB) module on the steering wheel. When install the Driver Airbag (DAB) module, Fix the horn wire and DAB inflator wire tightly with wire clip (A).
- When install the Driver Airbag (DAB) module, Fix the horn wire and DAB inflator wire tightly with wire clip (A).

# NOTICE

- When install the Driver Airbag (DAB) module, Fix the horn wire and DAB inflator wire tightly with wire clip (A).



- Connect the battery negative cable.
- After installing the airbag, confirm proper system operation : Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off. Make sure horn button works.
- Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.
- Make sure horn button works.