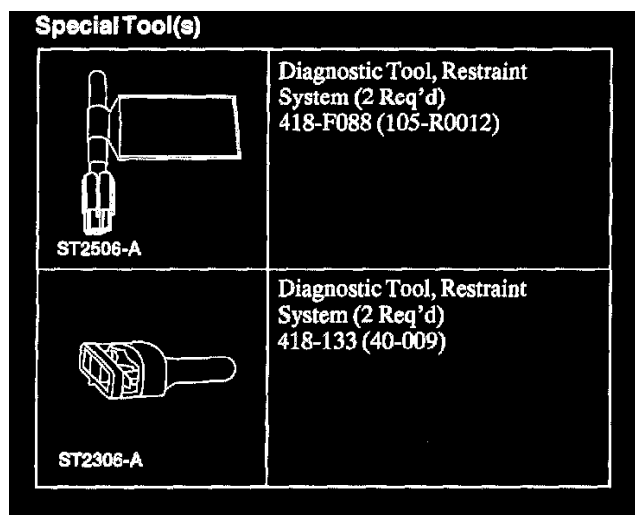


Air Bag Sliding Contact: Service and Repair



Special Tool(s)

SPECIAL TOOL(S)

REMOVAL

WARNING:

- ^ ALWAYS WEAR SAFETY GLASSES WHEN REPAIRING AN AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS) VEHICLE AND WHEN HANDLING AN AIR BAG MODULE.
- ^ CARRY A LIVE AIR BAG MODULE WITH THE AIR BAG AND TRIM COVER POINTED AWAY FROM YOUR BODY. THIS WILL REDUCE THE RISK OF INJURY IN THE EVENT OF AN ACCIDENTAL DEPLOYMENT.
- ^ DO NOT SET A LIVE AIR BAG MODULE DOWN WITH THE TRIM COVER FACE DOWN.
- ^ AFTER DEPLOYMENT, THE AIR BAG SURFACE CAN CONTAIN DEPOSITS OF SODIUM HYDROXIDE, A PRODUCT OF THE GAS GENERANT COMBUSTION THAT IS IRRITATING TO THE SKIN. WASH YOUR HANDS WITH SOAP AND WATER AFTERWARDS.
- ^ NEVER PROBE THE CONNECTORS ON THE AIR BAG MODULE. DOING SO CAN RESULT IN AIR BAG DEPLOYMENT, WHICH CAN RESULT IN PERSONAL INJURY.
- ^ AIR BAG MODULES WITH DISCOLORED OR DAMAGED TRIM COVERS MUST BE REPLACED, NOT REPAINTED.

NOTE:

- ^ Vehicles with speed control only shown, all others are similar.
- ^ A repair is made by replacement only. If a part is replaced and the new part does not correct the condition, install the original part and perform the diagnostic procedure again.

1. Prepare the vehicle for clockspring removal.
 - 1 Disconnect the battery ground cable and wait at least **one minute**.

WARNING: TO AVOID ACCIDENTAL DEPLOYMENT AND POSSIBLE PERSONAL INJURY, THE BACKUP POWER SUPPLY MUST BE DEPLETED BEFORE REPAIRING OR REPLACING ANY FRONT OR SIDE AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS) COMPONENTS AND BEFORE SERVICING, REPLACING, ADJUSTING OR STRIKING COMPONENTS NEAR THE FRONT OR SIDE AIR BAG SENSORS, SUCH AS DOORS, INSTRUMENT PANEL, CONSOLE, DOOR LATCHES, STRIKERS, SEATS AND HOOD LATCHES.

PLEASE REFER TO THE APPROPRIATE COMPONENT OR SYSTEM TO DETERMINE LOCATION OF THE FRONT AIR BAG SENSORS.

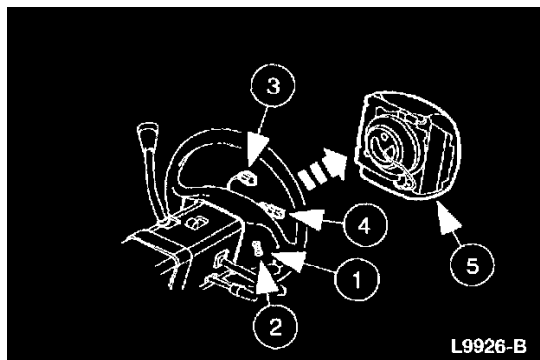
THE SIDE IMPACT SENSORS ARE LOCATED AT OR NEAR THE BASE OF THE B-PILLAR.

TO DEplete THE BACKUP POWER SUPPLY ENERGY, DISCONNECT THE BATTERY GROUND CABLE AND WAIT AT LEAST ONE MINUTE. BE SURE TO DISCONNECT AUXILIARY BATTERIES AND POWER SUPPLIES (IF EQUIPPED).

- 2 Deactivate the Supplemental Restraint System (SRS).

WARNING: TO REDUCE THE RISK OF SERIOUS PERSONAL INJURY, READ AND FOLLOW ALL WARNINGS, CAUTIONS, NOTES, AND INSTRUCTIONS IN THE SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

DEACTIVATION/REACTIVATION PROCEDURE. Refer to Air Bag(s) Arming and Disarming.

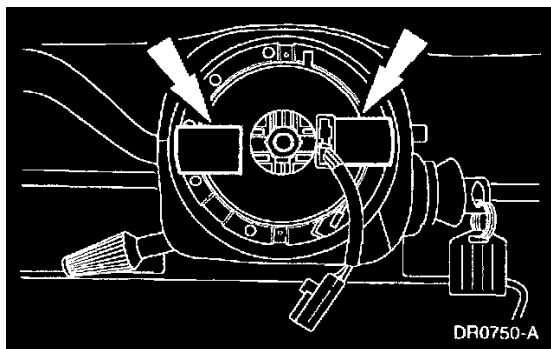


2. Remove the driver air bag module.
 - 1 Remove the two steering wheel back cover plugs.
 - 2 Remove the two driver air bag module bolts.
 - 3 Disconnect the horn electrical connector.
 - 4 Disconnect the clockspring electrical connector.
 - 5 Remove the driver air bag module.

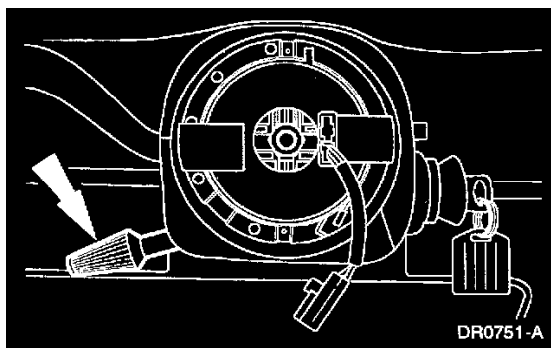
NOTE: Make sure the wheels are in the straight-ahead position.

3. Remove the steering wheel.

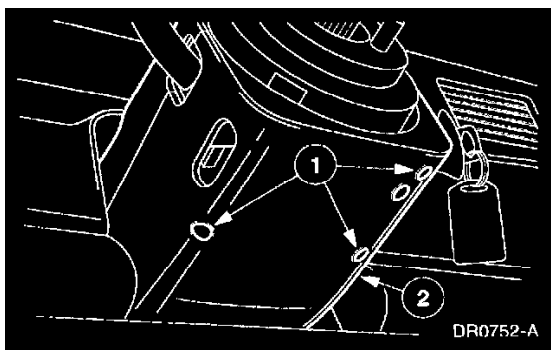
NOTE: Make sure the wheels are in the straight-ahead position.



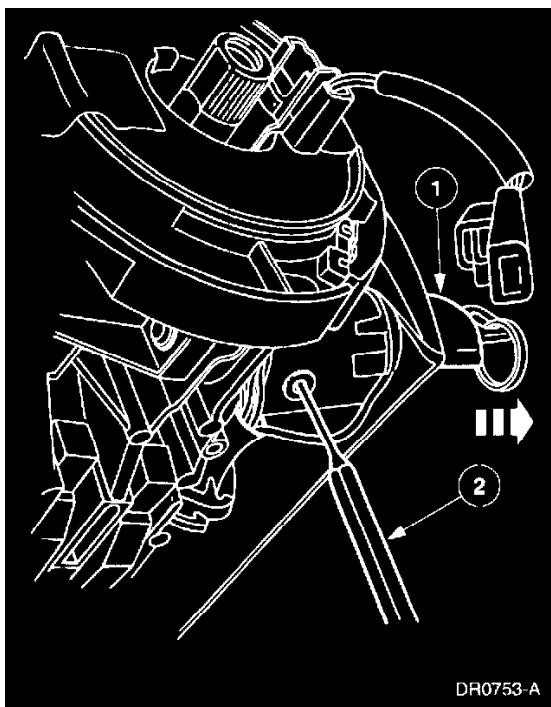
4. Apply two strips of masking tape across the clockspring to prevent accidental rotation.



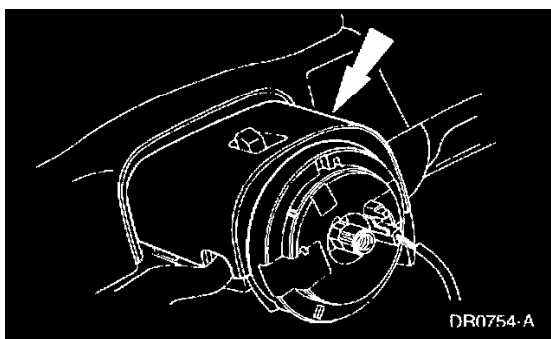
5. Twist the tilt wheel handle and shank and remove.



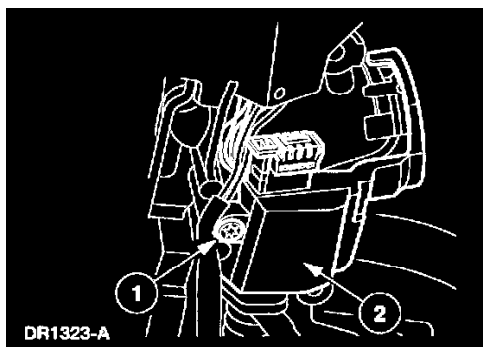
6. Remove the lower steering column shroud.
 - 1 Remove the three screws.
 - 2 Remove the steering column shroud.



7. Remove the ignition switch lock cylinder.
 - 1 Position the lock cylinder to RUN.
 - 2 Using a suitable tool, push upward on the cylinder release tab while pulling the cylinder outward.

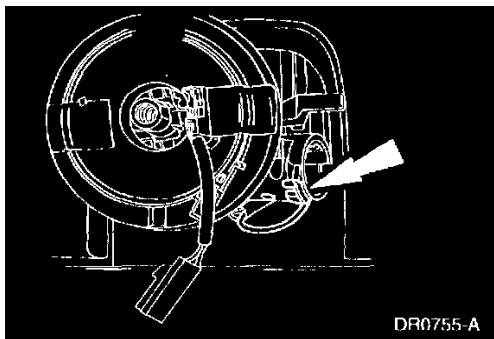


8. Remove the upper steering column shroud.

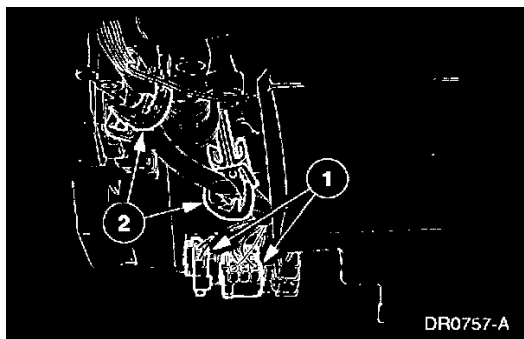


9. Remove the Passive Anti-theft System (PATS) transmitter.

- 1 Remove the PATS transmitter retaining screw.
- 2 Remove the PATS transmitter.

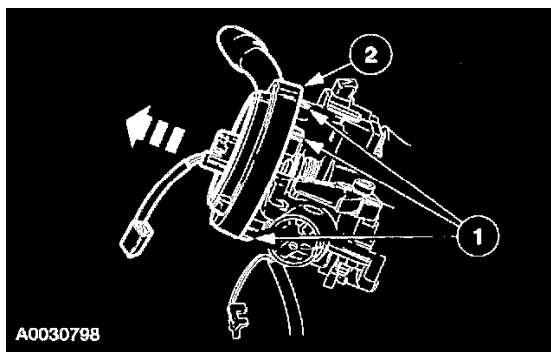


10. Remove the key-in-ignition warning indicator switch.



11. Remove the clockspring electrical connectors and wire harness from the side of the steering column.

- 1 Remove the clockspring electrical connectors from the bracket.
^ Disconnect the remaining electrical connector.
- 2 Remove the wire harness from the retainers.



12. Remove the clockspring.

- 1 Release the retaining clips.
- 2 Remove the clockspring.

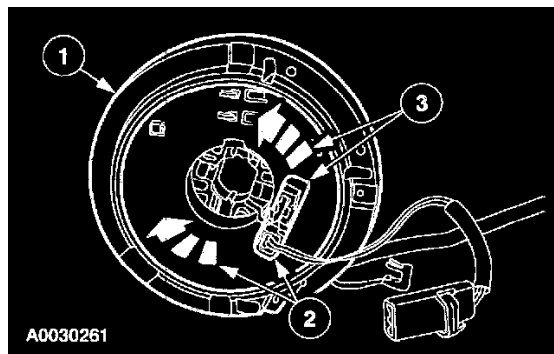
WARNING: TO REDUCE THE RISK OF SERIOUS PERSONAL INJURY, READ AND FOLLOW ALL WARNINGS, CAUTIONS AND NOTES AT THE BEGINNING OF THE REMOVAL PROCEDURE.

Vehicles receiving a new clockspring

1. Remove the key from the clockspring, holding the rotor in its centralized position.
 - ^ Do not allow the clockspring rotor to turn.

NOTE: A new clockspring is supplied in a centralized position and held there with a key.

Vehicles needing clockspring recentering



2. Centralize the clockspring.
 - 1 Hold the clockspring outer housing stationary.
 - 2 While turning the rotor clockwise, carefully feel for the ribbon wire to run out of length and a slight resistance is felt. Stop turning at this point.

CAUTION: Overturning will destroy the clockspring. The internal ribbon wire acts as the stop and can be broken from its internal connection.

- 3 Turn the clockspring counterclockwise approximately 2.25 turns. This is the center point of the clockspring.
 - ^ Do not allow the rotor to turn from this position.

WARNING: INCORRECT CENTRALIZATION MAY RESULT IN PREMATURE COMPONENT FAILURE. IF IN DOUBT WHEN CENTRALIZING THE CLOCKSPRING, REPEAT THE CENTRALIZING PROCEDURE. FAILURE TO FOLLOW THIS INSTRUCTION MAY RESULT IN PERSONAL INJURY.

CAUTION: Make sure the road wheels are in the straight ahead position.

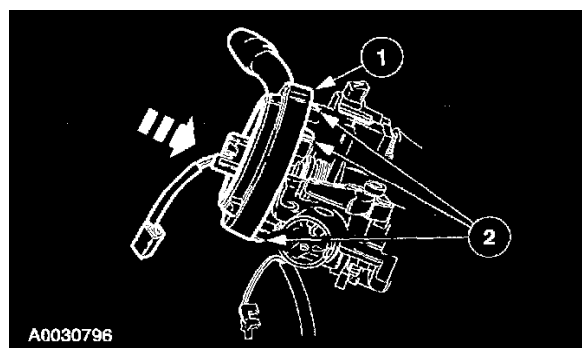
NOTE: If a clockspring has rotated out of center, follow through with this step.

Vehicle repairs reusing the same clockspring

3. Remove the tape applied during clockspring removal.

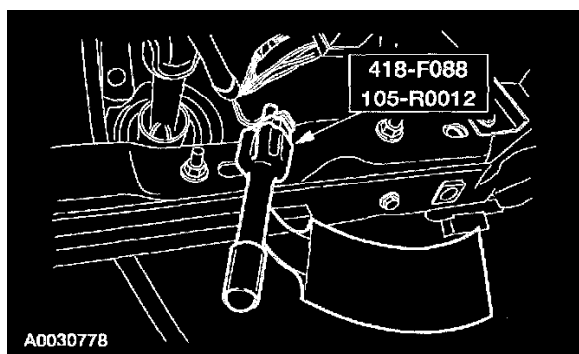
NOTE: When the tape is removed, do not allow the clockspring to turn.

All vehicles

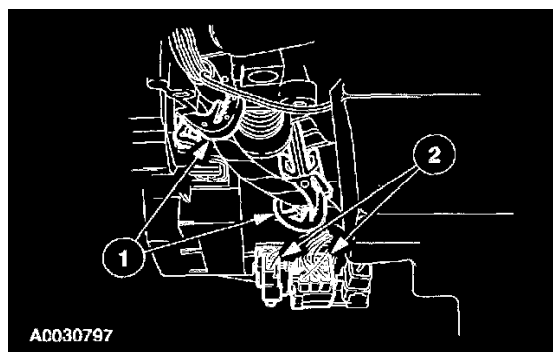


4. With the flats of the clockspring aligned to the flats of the steering column, slide the clockspring onto the steering column engaging the retaining tabs.

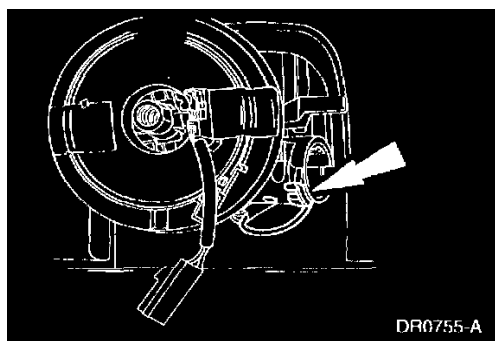
NOTE: Slight turning of the clockspring rotor is allowable for alignment purposes to the steering column.



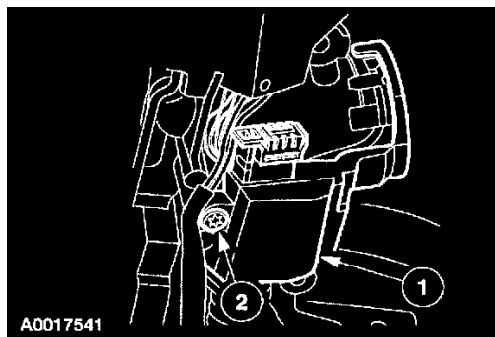
5. Remove the restraint system diagnostic tool from the vehicle harness side of the clockspring electrical connector.



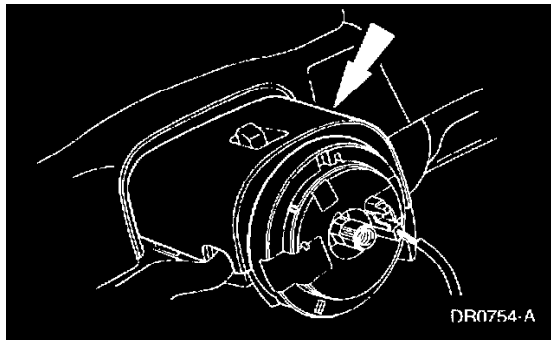
6. Install the clockspring wire harness and electrical connectors.
 - 1 Route the clockspring wire harness down the side of the steering column and into the holders.
 - 2 Connect the clockspring electrical connectors.
 - ^ Install the electrical connectors into the bracket.



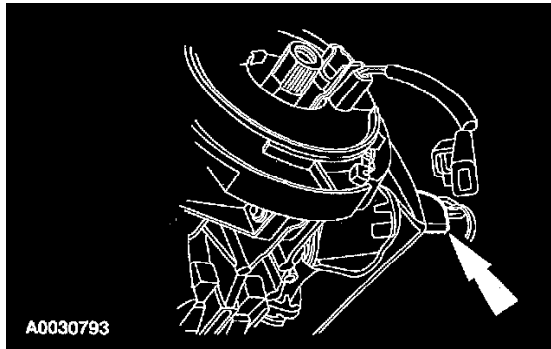
7. Install the key-in-ignition warning indicator switch.



8. Install the Passive Anti-theft System (PATS) transmitter.
 - 1 Position the PATS transmitter.
 - 2 Install the PATS transmitter retaining screw.

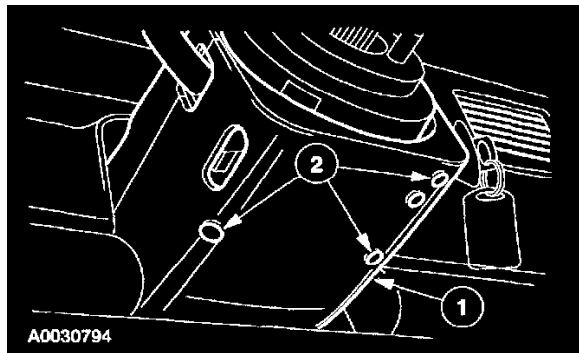


9. Install the upper steering column shroud.



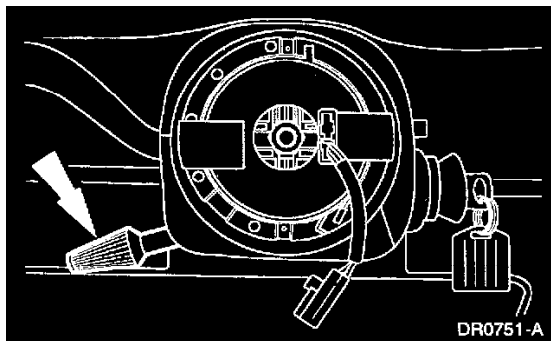
10. Install the ignition switch lock cylinder.

- ^ Position the ignition switch lock cylinder to the RUN position.
- ^ Insert the ignition switch lock cylinder into the steering column.
- ^ Make sure the ignition switch lock cylinder is fully seated and aligned in the interlocking washer before turning the key to the OFF position.
- ^ Make sure the ignition switch lock cylinder retaining pin is seated in the hole in the steering column.
- ^ Rotate the ignition switch lock cylinder through all positions to verify operation.



11. Install the lower steering column shroud.

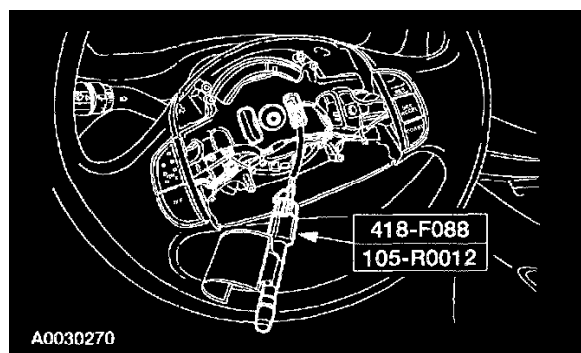
- 1 Position the lower steering column shroud.
- 2 Install the screws.



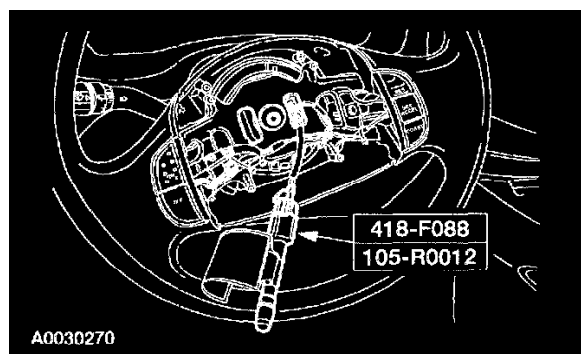
12. Install the tilt wheel handle and shank.

13. Install the steering wheel. Do not install the driver air bag module at this time.

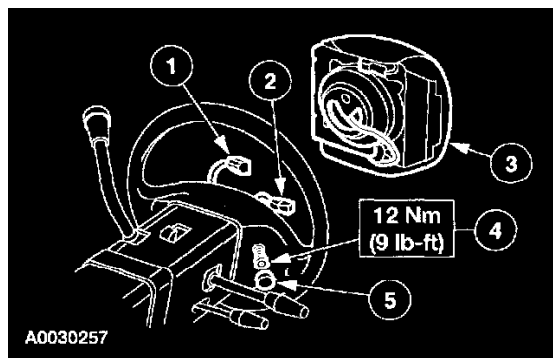
WARNING: TO REDUCE THE RISK OF SERIOUS PERSONAL INJURY, READ AND FOLLOW ALL WARNINGS, CAUTIONS, NOTES, AND INSTRUCTIONS IN THE STEERING WHEEL REMOVAL AND INSTALLATION PROCEDURE.



14. Attach the restraint system diagnostic tools to the clockspring electrical connectors at the top of the steering column.
15. Connect the battery ground cable.
16. With the restraint system diagnostic tools installed at all deployable devices, prove out the supplemental restraint system (SRS). See: Air Bag(s) Arming and Disarming/Service and Repair/Prove Out Procedure
17. Disconnect the battery ground cable and wait at least **one minute**.



18. Remove the restraint system diagnostic tools from the clockspring electrical connectors at the top of the steering column.



19. Install the driver air bag module.
 1. Connect the horn electrical connector.
 2. Connect the driver air bag module electrical connector.
 3. Position the driver air bag module into the steering wheel.
 4. Install the two bolts.
 5. Install the two steering wheel back cover plugs.
20. Restore the vehicle to operating condition.
 1. Reactivate the supplemental restraint system (SRS).

WARNING: TO REDUCE THE RISK OF SERIOUS PERSONAL INJURY, READ AND FOLLOW ALL WARNINGS, CAUTIONS, NOTES, AND INSTRUCTIONS IN THE SUPPLEMENTAL RESTRAINT SYSTEM (SRS) DEACTIVATION/REACTIVATION PROCEDURE.

2. With all the restraint system diagnostic tools removed, prove out the supplemental restraint system (SRS). See: Air Bag(s) Arming and Disarming/Service and Repair/Prove Out Procedure

WARNING: THE RESTRAINT SYSTEM DIAGNOSTIC TOOL IS FOR RESTRAINT SYSTEM SERVICE ONLY. REMOVE FROM THE VEHICLE PRIOR TO ROAD USE. FAILURE TO REMOVE COULD RESULT IN INJURY AND POSSIBLE VIOLATION OF VEHICLE SAFETY STANDARDS.