FIAT CHRYSLER AUTOMOBILES

Revised January 2019

Dealer Service Instructions for:

Safety Recall U11
Brake Transmission Shift Interlock

NOTE: BTSI Inspection procedure requirements have changed.

NOTE: For all vehicles that were previously repaired under this safety recall (prior to February 18, 2018) drive the vehicle until at least 10 MPH is achieved for 5 seconds. For 2018 MY vehicles also perform the battery disconnect and BUS cycle included in steps 17 through 19 in Section C.

Remedy Available

2017 - 2018	**(DS)**	**RAM 1500 Pickup**
2017 - 2018	**(DJ)**	**RAM 2500 Pickup**
2017 - 2018	**(D2)**	**RAM 3500 Pickup**
2017 - 2018	**(DD)**	**RAM 3500 Chassis Cab**
2017 - 2018	**(DF)**	**RAM 3500 10K GVWR Chassis Cab**
2017 - 2018	**(DP)**	**RAM 4500/5500 Chassis Cab**

NOTE: This recall applies only to the above vehicles equipped with a column shift automatic transmission. This safety recall does not affect vehicles equipped with a rotary or floor shifter or manual transmission.

IMPORTANT: Some of the involved vehicles may be in Dealer new vehicle inventory. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this recall on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The Brake Transmission Shift Interlock (BTSI) locking pin on about 180,400 of the above vehicles may become stuck in the open position. A BTSI locking pin stuck in the open position may allow the transmission to be shifted out of PARK and to any gear position without depression of the brake pedal and/or without the key in the ignition, if a key is applicable, or while the ignition is in the "OFF" mode. The ability to shift the transmission out of the PARK position while the ignition is in the "OFF" mode or without a key in the ignition or a brake pedal application, increases the risk for an unintended vehicle rollaway that may result in a vehicle crash or injury without prior warning.

WARNING: Never use the PARK position as a substitute for the parking brake. Always apply the parking brake fully when parked to guard against vehicle movement and possible injury or damage. Refer to your owner's manual for additional information regarding proper parking brake usage.

Repair

Vehicle interior temperature must be at or below 90F/32C degrees and ignition must be in the "OFF" position for a minimum of 15 minutes prior to preforming the BTSI inspection. Test the BTSI operation and replace if necessary. Reprogram the Body Control Module (BCM) with new software and place an addendum card in the owner manual. Instruct the vehicle owner to read the addendum card in order to become familiar with the revised BTSI operation.

Parts Information

Perform the **Service Procedure Section A. BTSI Inspection** before ordering part.

Models	**Sales Codes**
DS - All	**DFP** - 6-SPD Automatic 66RFE Transmission
DX - All	**DG7** - 6-SPD Automatic 68RFE Transmission
DJ - All	**DG1** - 6-SPD Automatic 65RFE Transmission
DD - DFP	
D2 - DFP or DG7	
DF - DFP	

Part Number	**Description**
CSZHT791AA	**Bracket, Gearshift (Includes BTSI)**

Models	**Sales Codes**
DP - All	**DF2** - 6-SPD Automatic Aisin AS69RC
DD - DF2 or DF3	Transmission
D2 - DF2	**DF3** - 6-SPD Automatic Aisin AS66RC
DF - DF2 or DF3	Transmission

Part Number	**Description**
CSZHT792AA	**Bracket, Gearshift (Includes BTSI)**

Due to the small number of involved vehicles expected to require gearshift bracket / BTSI replacement, no parts will be distributed initially. **The gearshift bracket / BTSI should be ordered only after inspection determines that replacement is required.** ***Very few vehicles are expected to require gearshift bracket / BTSI replacement.***

Parts Return

No parts return required for this campaign.

Special Tools

The following special tools are required to perform this repair:

- NPN wiTECH micro pod II
- NPN Laptop Computer
- NPN wiTECH Software

Service Procedure

A. BTSI Inspection

NOTE: This process is to determine if the BTSI needs to be replaced. The BTSI inspection procedure may be performed in a parking lot prior to starting or moving the vehicle provided the two conditions below can be met.

- If the vehicle interior cabin ambient temperature is suspected to be above 90F/32C degrees, roll down all windows and open all doors to allow interior to cool. Place a thermometer in the vehicle near the base of the steering column and monitor the interior cabin ambient temperature. Temperature must be at or below 90F/32C degrees before proceeding with **Step 1** of this procedure.
- Vehicle **MUST** be parked with the ignition in the "**OFF**" position for a minimum of 15 minutes prior to proceeding with **Step 1** of this procedure.

NOTE: Do not proceed with Step 1 of BTSI inspection procedure unless the two conditions above have been met.

1. While sitting in the driver's seat, apply the parking brake.

2. With the ignition switch in the "**OFF**" position, attempt to shift the transmission into any gear. Only minimal force is required, do not force the shift lever.
   - If the shifter is blocked then continue with **Step 3**.
   - If the shifter moves freely, then follow the repair procedure to replace the BTSI. Proceed to **Section B. Gearshift Bracket / BTSI Assembly Replacement**.

3. Place the ignition switch in the "**RUN**" position and leave the shift lever in the "**PARK**" position.

4. Turn off the radio, Heating, Ventilating, and Air Conditioning (HVAC), and any other accessories that are making noise. Also have all vehicle windows in the up and closed position to reduce outside noises.

Service Procedure [Continued]

NOTE: Do not move the shift lever from the "PARK" position during Steps 5 through 9.

5. Place your hand on the shift lever knob and push lightly on the shift lever toward the instrument panel. This will allow you to feel a click sensation from BTSI solenoid pin movement when the brake pedal is applied and released (Figure 1).

6. Listen for a click sound from the BTSI solenoid pin movement while also feeling for the corresponding click sensation in the shift lever when the brake is applied and released.

Figure 1 – Push Lightly On Shift Lever Knob Toward Instrument Panel To Feel BTSI Solenoid Pin Movement

7. After you are familiar with both the sound and feel of the BTSI pin movement in **Steps 5 and 6**, continue with **Step 8**.

8. Place your hand on the shift lever knob as instructed in **Step 5** then apply and hold the brake pedal for a count of five seconds.

9. After five seconds of holding the brake pedal down, release the brake pedal while both listening and feeling for the click of the BTSI pin movement. The sound and feel of the BTSI pin movement should occur immediately within 0-2 seconds upon release of the brake pedal.

   - If the BTSI pin could be heard and felt moving within 0-2 seconds, then the BTSI inspection process is complete and the gearshift bracket / BTSI assembly does not need to be replaced. Place the ignition switch in the "**OFF**" position then proceed to **Section C. Reprogram Body Control Module (BCM)**.

   - If the BTSI pin could **not** be heard and felt moving within 0-2 seconds, then continue with **Step 10**.

Service Procedure [Continued]

NOTE: For the BTSI test in Steps 10 and 11, do not place your hand on the shift lever until instructed to do so.

10. Do **not** place your hand on the shift lever. With the ignition switch in the "**RUN**" position, apply and hold the brake pedal for a count of five seconds.

11. After five seconds of holding the brake pedal down, release the brake pedal. Wait exactly 2 seconds then attempt to move the shift lever out of the "**PARK**" position. Only minimal force is required, do not force the shift lever.

    - If the shift lever **cannot** be moved from the "**PARK**" position 2 seconds after the brake pedal is released, the BTSI inspection process is complete and the gearshift bracket / BTSI assembly does not need to be replaced. Proceed to **Section C. Reprogram Body Control Module (BCM)**.

    - If the shift lever can be moved out of the "**PARK**" position 2 seconds after the brake pedal is released, then the gearshift bracket / BTSI assembly must be replaced. Proceed to **Section B. Gearshift Bracket / BTSI Assembly Replacement**.

Service Procedure [Continued]

B. Gearshift Bracket / BTSI Assembly Replacement

1. Open the vehicle hood

2. Disconnect the negative battery cable terminal from the battery(s).

3. Using a trim stick C-4755 or equivalent, disengage the retainer clip that secures the hood release handle to the steering column opening cover, and remove the hood release handle from the cover (Figure 2).

Figure 2 – Hood Release Handle

4. Remove and save the two screws that secure the bottom of the steering column opening cover to the instrument panel (Figure 3).

5. Using a trim stick C-4775 or equivalent, release the eight spring clips that attach the steering column opening cover to the instrument panel (Figure 3)

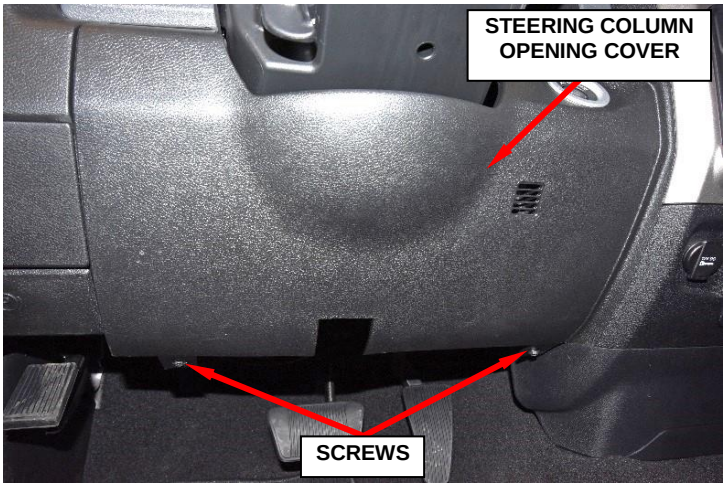

Figure 3 – Steering Column Opening Cover

Service Procedure [Continued]

6. Remove the data link connector from the steering column opening cover by pressing in the tabs and pushing the connector through the opening on the back side of the cover (Figure 4).

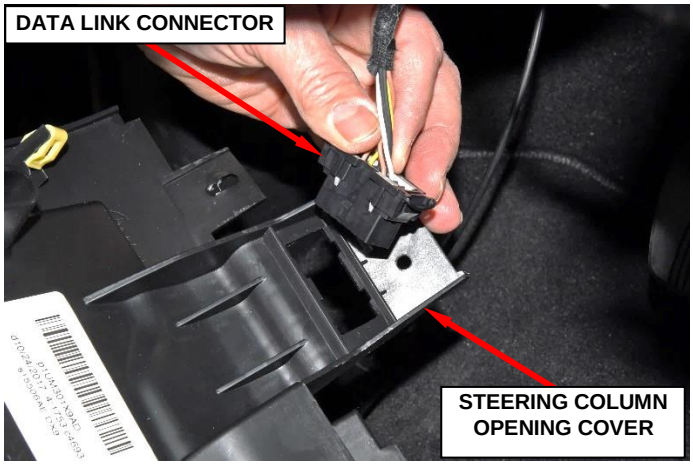

Figure 4 – Data Link Connector

7. **If equipped:** Disconnect the electrical connectors for any electrical devices from the steering column opening cover.

8. Remove and save the steering column opening cover.

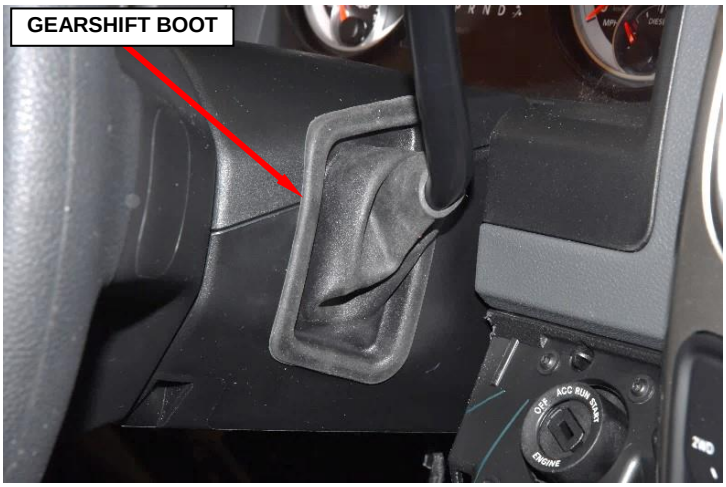

Figure 5 – Gearshift Boot

9. Using a trim stick, disengage the gearshift boot from the steering column shrouds (Figure 5).

Service Procedure [Continued]

10. Remove and save the two T20 star-head screws that attach the upper steering column shroud to the lower steering column shroud. The screws are located on the underside of the lower steering column shroud (Figure 6).

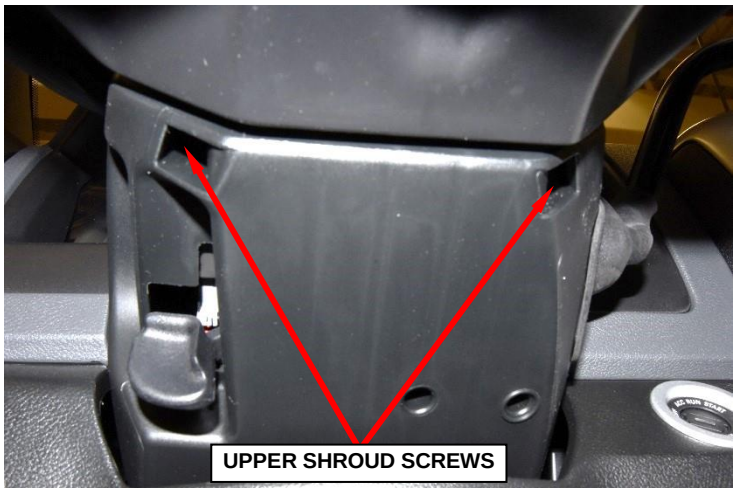

Figure 6 – Upper Shroud Screws

NOTE: There are snap connections near the instrument cluster and between the shroud and the steering wheel that secure the upper and lower shroud.

11. Remove and save the upper steering column shroud by pushing gently inward and upward on both sides of the upper shroud just above the joint line to the lower shroud to release the snap features that secure the shrouds together (Figure 7).

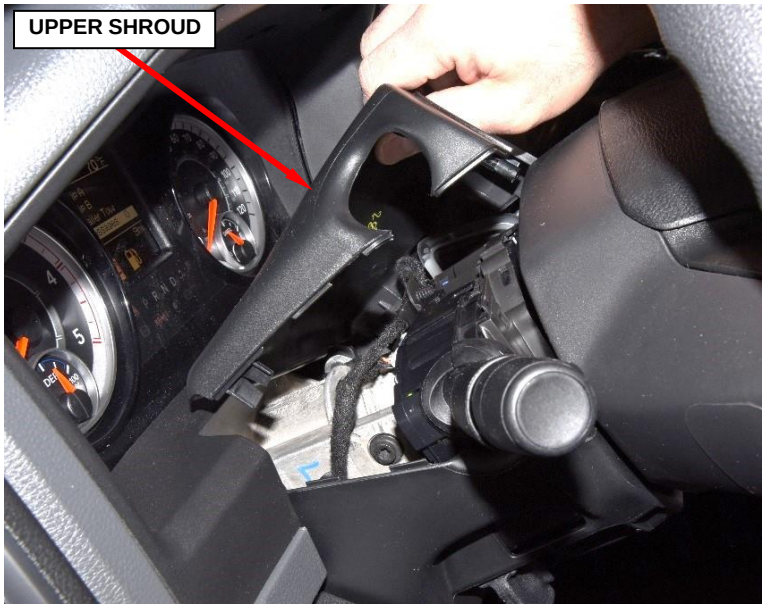

Figure 7 – Steering Column Upper Shroud

Service Procedure [Continued]

12. Remove and save the T20 star-head screw that retains the lower shroud to the steering column (Figure 8).

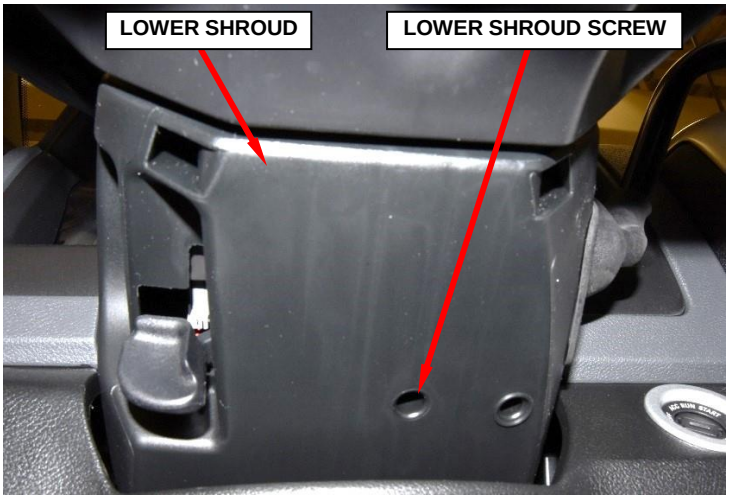

Figure 8 – Steering Column Lower Shroud

13. Carefully move the lower shroud to clear the steering column tilt lever then remove and save the lower shroud. (Figure 8).

14. Disconnect the shift cable from the gearshift bracket (Figure 9).

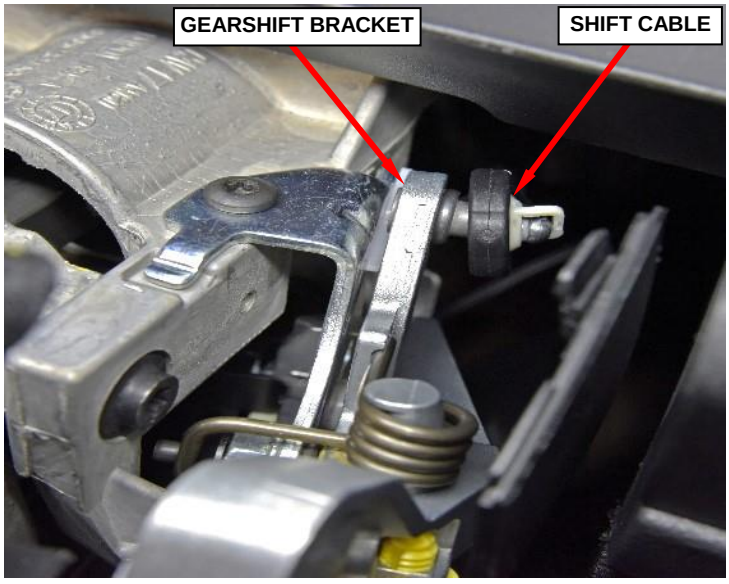

Figure 9 – Shift Cable

Service Procedure [Continued]

15. Disconnect the upshift/downshift electrical harness connector (Figure 10).

16. Release the upshift/downshift electrical harness connector retainer (Figure 10).

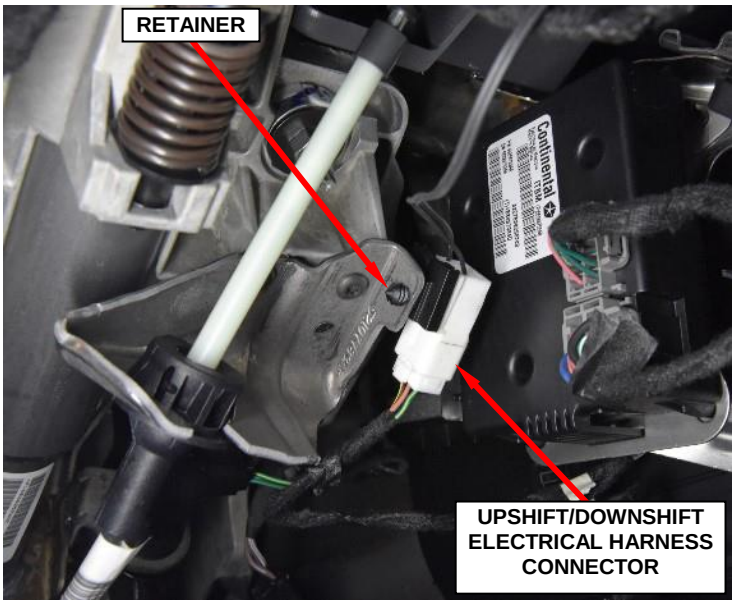

Figure 10 – Upshift/Downshift Electrical Harness

17. Disconnect the BTSI electrical harness connector (Figure 11).

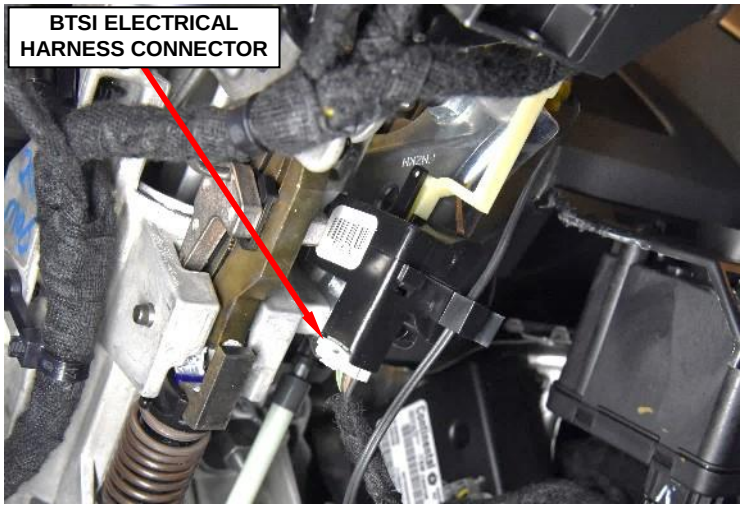

Figure 11 – BTSI Electrical Harness

Service Procedure [Continued]

18. Remove and save the three T27 star-head screws securing the gearshift bracket / BTSI assembly to the steering column (Figure 12).

19. Remove the gearshift bracket / BTSI assembly with shift lever from the steering column then transfer to bench (Figure 13).

20. Remove the upshift/downshift electrical harness from the retaining clip (Figure 13).

21. Release the upshift/downshift electrical harness retainer from the gearshift bracket / BTSI assembly (Figure 13).

22. Remove and save the E10 star-head pinch bolt securing the shift lever to the gearshift bracket / BTSI assembly (Figure 13).

23. Remove and save the gearshift lever from the gearshift bracket / BTSI assembly (Figure 13).

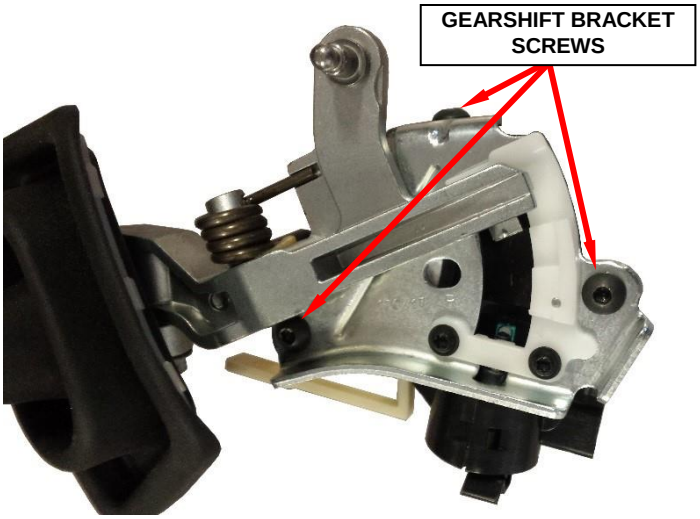

Figure 12 – Gearshift Bracket / BTSI Assembly Screws

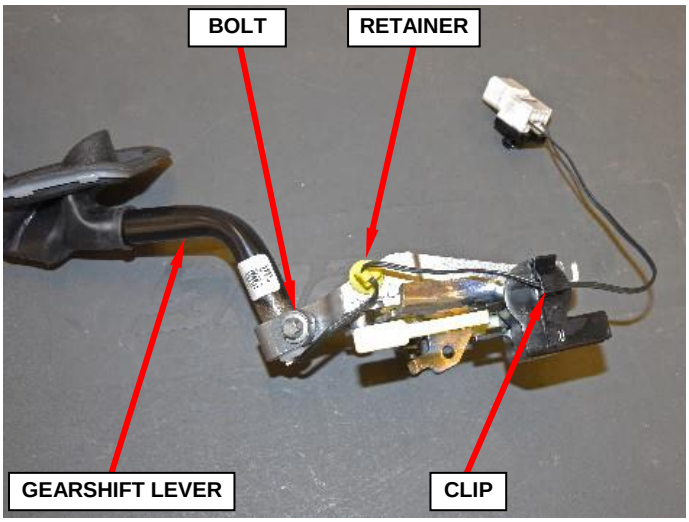

Figure 13 – Gearshift Lever

Service Procedure [Continued]

24. Discard the old gearshift bracket / BTSI assembly.

25. Verify the **new** gearshift bracket / BTSI assembly to be used has a paint mark on the BTSI solenoid (Figure 14).

26. Install the gearshift lever to the **new** gearshift bracket / BTSI assembly and ensure the gearshift lever is fully inserted into the gearshift bracket (Figure 15).

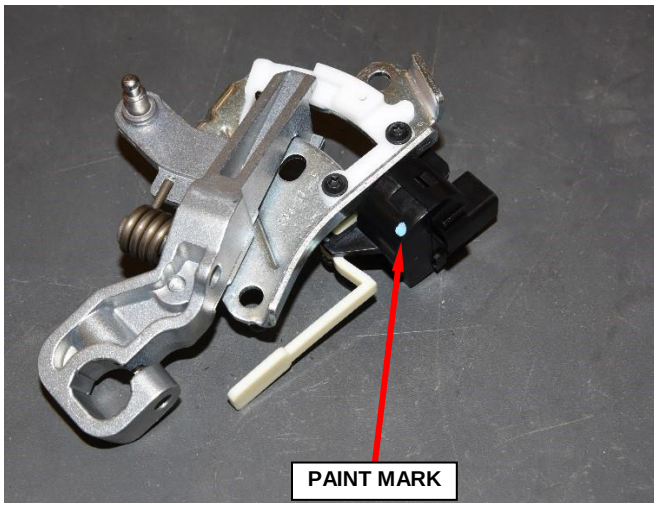

Figure 14 – Gearshift Bracket / BTSI Assembly Paint Mark Verification

27. Install the E10 star-head pinch bolt securing the shift lever to the gearshift bracket / BTSI assembly. Tighten the pinch bolt to 11 N·m (97 in. lbs.) (Figure 13). Ensure shift lever is properly seated and not loose after tightening.

28. Attach the upshift/downshift electrical harness retainer to the gearshift bracket / BTSI assembly (Figure 13).

29. Install the upshift/downshift electrical harness to the retaining clip (Figure 13).

30. Install the gearshift bracket / BTSI assembly with shift lever to the steering column.

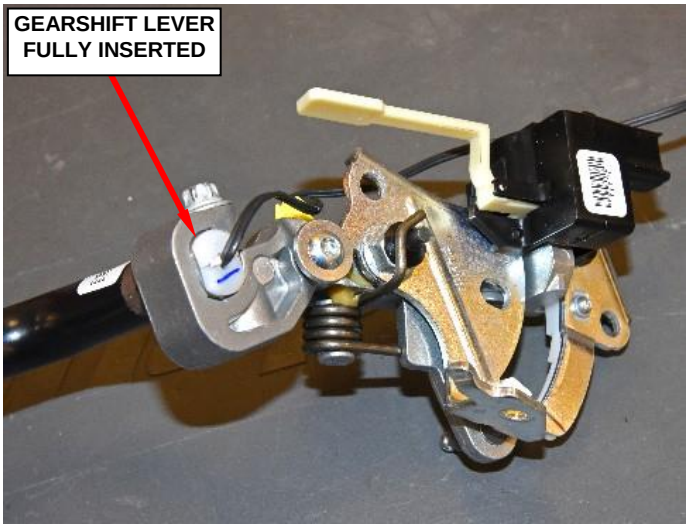

Figure 15 – Gearshift Lever Insertion

Service Procedure [Continued]

31. Install the three T27 star-head screws securing the gearshift bracket / BTSI assembly to the steering column. Tighten the screws to 10 N·m (89 in. lbs.) (Figure 12).

32. Connect the BTSI electrical harness connector (Figure 11).

33. Install the upshift/downshift electrical harness connector retainer (Figure 10).

34. Connect the upshift/downshift electrical harness connector (Figure 10).

35. Connect the shift cable to the gearshift bracket (Figure 9).

36. Carefully position the lower shroud over the steering column tilt lever and onto the steering column (Figure 8).

37. Install the T20 star-head screw that retains the lower shroud to the steering column. Tighten the screw to 2.3 N·m (20 in. lbs.) (Figure 8).

38. Attach the upper steering column shroud by pushing gently inward on both sides of the upper shroud just above the joint line to the lower shroud and attach to the lower shroud using the snap features (Figure 7).

39. Install the two T20 star-head screws that attach the lower steering column shroud to the upper shroud. Tighten the screws to 1.3 N·m (12 in. lbs.) (Figure 6).

40. Attach the shift boot to the upper and lower steering column shrouds (Figure 5).

Service Procedure [Continued]

41. **If equipped:** Connect the electrical connectors for any electrical devices to the steering column opening cover.

42. Install the data link connector to the steering column opening cover by pushing the connector through the opening on the back side of the cover and fully engaging the lock tabs of the connector (Figure 4).

43. Attach the steering column opening cover to the instrument panel with the eight spring clips (Figure 3).

44. Install the two screws that secure the steering column opening cover to the instrument panel. Tighten the screws to 3.6 N·m (32 in. lbs.) (Figure 3).

45. Position the hood release handle onto the steering column opening cover and fully engage the retainer clip that secures the hood release handle to the steering column opening cover (Figure 2).

46. Connect the negative battery cable terminal to the battery(s).

47. Proceed to **Section C. Reprogram Body Control Module (BCM).**

Service Procedure [Continued]

C. Reprogram Body Control Module (BCM)

NOTE: The wiTECH scan tool must be used to perform this recall. The wiTECH software is required to be at the latest release level before performing this procedure. If the reprogramming flash for the BCM is aborted or interrupted, repeat the procedure. The BCM must be at the latest calibration level after completing this recall.

1. Open the hood. Install a battery charger and verify that the charging rate provides 13.0 to 13.5 volts. Do not allow the charger to time out during the flash process. Set the battery charger timer (if so equipped) to continuous charge.

   NOTE: Use an accurate stand-alone voltmeter. The battery charger volt meter may not be sufficiently accurate. Voltages outside of the specified range will cause an unsuccessful flash. If voltage reading is too high, apply an electrical load by activating the park or headlamps and/or HVAC blower motor to lower the voltage.

2. Connect the wiTECH micro pod II to the vehicle data link connector.

3. Place the ignition in the "**RUN**" position.

4. Open the wiTECH 2.0 website.

5. Enter your "**User id**" and "**Password**" and your "**Dealer Code**", then select "**Finish**" at the bottom of the screen.

6. From the "**Vehicle Selection**" screen, select the vehicle to be updated.

7. From the "**Action Items**" screen, select the "**Topology**" tab.

8. From the "**Topology**" tab, select the "**BCM**" icon for the module requiring updating.

Service Procedure [Continued]

9. From the "**Flash**" tab, compare the "**Current Electronic Control Unit (ECU) Part Number**" with the "**New ECU Part Number**" listed.
   - If the "**Current ECU part Number**" is the same as the "**New Part Number**", proceed to **Step 14**.
   - If the "**Current ECU part Number**" is NOT the same as the "**New Part Number**", continue with **Step 10**.

10. Read the flash special instructions page. Select "**OK**" to continue.

11. From the flash ECU agreement page, agree to terms by checking the box.

12. Select "**Flash ECU**" and then follow the wiTECH screen instructions to complete the flash.

13. Select "**Guided Diagnosis**" under the "**Activities**" column.

14. Select "**Restore Vehicle Configuration**" and click "**Continue**", then follow the wiTECH screen instructions to complete the vehicle configuration.

15. From the "**Topology**" screen, select the "**All DTCs**" tab to view the DTCs.

16. Select **"Clear All DTCs**" and then select "**Close**".

17. For 2018 MY only, Disconnect the negative battery cable for 60 seconds then reconnect the negative battery cable.

18. For 2018 MY only, turn the ignition to the ON position then turn the ignition to the OFF position and allow the BUS to go to sleep and wait one additional minute.

19. For 2018 MY only, turn the ignition to the ON position and verify the HVAC temperature control functionality.

Service Procedure [Continued]

20. Place the ignition in the "**OFF**" position and then remove the wiTECH micro pod II device from the vehicle.

21. Remove the battery charger from the vehicle.

22. Close the vehicle hood.

23. Drive the vehicle until at least 10 MPH is achieved for 5 seconds.

    NOTE: Step 23 must be performed prior to returning the vehicle to the customer.

24. Before returning the vehicle to the customer, confirm that the vehicle is in Customer Mode.

    NOTE: All vehicles that have software update performed will require an addendum card be provided to the vehicle owner.

25. Process Steps to obtain the BTSI Addendum Card:

    a. Access the "**DealerCONNECT**" website.

    b. Select the "**Recall Central**" link.

    c. Locate the "**Repair Information**" section.

    d. Select the "**BTSI Addendum Card**" link in the Repair Information section.

    e. Print a copy of the BTSI addendum card.

    f. Give the addendum card to the vehicle owner and advise the vehicle owner to read the addendum card for information regarding how the new software changes the gear shift lever interlock operation for enhanced vehicle safety.

Service Procedure [Continued]

Sample: BTSI Addendum Card

FCA
FIAT CHRYSLER AUTOMOBILES

2013MY-2018MY Owner Addendum Card

The purpose of this addendum card is to explain the change in the vehicle functionality after receiving the software flash.

Vehicle Remedy

This vehicle received updated software that releases the Brake Transmission Interlock (BTSI) locking pin after 3 minutes of applying the brake while the vehicle is in Park.

Impact to Owner

When applying the brake for more than 3 minutes while the vehicle is on and in park, the vehicle will require the user to release the brake and then reapply the brake in order to shift the vehicle out of Park.

Note: Please place this document in the Glove Box of the vehicle.

Completion Reporting and Reimbursement

Claims paid will be used by FCA to record recall service completions and provide dealer payments.

Use one of the following labor operation numbers and time allowances:

	Labor Operation Number	Time Allowance
Inspect BTSI Functionality and Verify BCM Software Level (2017-2018 Model Year)	19-U1-11-81	0.2 hours
Inspect BTSI Functionality and Perform BCM Software Update (2017 Model Year Only)	19-U1-11-82	0.4 hours
Inspect BTSI Functionality, Replace Gearshift Bracket and Verify BCM Software Level (2017-2018 Model Year)	19-U1-11-83	0.7 hours
Inspect BTSI Functionality, Replace Gearshift Bracket and Perform BCM Software Update (2017 Model Year Only)	19-U1-11-84	0.9 hours
Inspect BTSI Functionality and Perform BCM Software Update (2018 Model Year Only)	19-U1-11-85	0.5 hours
Inspect BTSI Functionality, Replace Gearshift Bracket and Perform BCM Software Update (2018 Model Year Only)	19-U1-11-86	1.0 hours

NOTE: See the FCA International Warranty Policy and Procedure Manual, Claim Entry Section – Recall Claims for claim processing instructions.

Owner Notification and Service Scheduling

All involved vehicle owners should be notified of the service requirement by their Dealer. Owners are requested to schedule appointments for this service. A sample copy of the owner notification letter is attached.

Vehicle Lists, Global Recall System, VIP and Distributor/Dealer Follow Up

All involved vehicles have been entered into the Global Recall System (GRS) and Vehicle Information Plus (VIP) for Dealer inquiry as needed.

GRS provides involved Dealers with an updated VIN list of their incomplete vehicles. Completed vehicles are removed from GRS within several days of repair claim submission.

Dealers must perform this repair on all unsold vehicles *before* retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

IMPORTANT SAFETY RECALL

U11

This notice applies to your vehicle (VIN: xxxxxxxxxxxxxxxxx).

Dear RAM Owner:

FCA US LLC has decided that a defect, which relates to motor vehicle safety, exists in certain **2017-2018 Model Year RAM 1500 Pickup, 2017-2018 Model Year RAM 2500 Pickup, 2017-2018 Model Year RAM 3500 Pickup, 2017-2018 Model Year RAM 3500 Chassis Cab, 2017-2018 Model Year RAM 3500 10K GVWR Chassis Cab, 2017-2018 Model Year RAM 4500/5500 Chassis Cab vehicles equipped with a column shift automatic transmission. This safety recall does not affect vehicles equipped with a rotary or floor shifter or manual transmission.**

The problem is...

The Brake Transmission Shift Interlock (BTSI) locking pin on your vehicle may become stuck in the open position. A BTSI locking pin stuck in the open position may allow the transmission to be shifted out of PARK and to any gear position without depression of the brake pedal and/or without the key in the ignition, if a key is applicable, or while the ignition is in the "OFF" mode. The ability to shift the transmission out of the PARK position while the ignition is in the "OFF" mode or without a key in the ignition or a brake pedal application, increases the risk for an unintended vehicle rollaway that may result in a vehicle crash or injury without prior warning.

WARNING: Never use the PARK position as a substitute for the parking brake. Always apply the parking brake fully when parked to guard against vehicle movement and possible injury or damage. Refer to your owner's manual for additional information regarding proper parking brake usage.

What your dealer will do...

FCA will repair your vehicle free of charge (parts and labor). To do this, your dealer will inspect the BTSI operation and replace if necessary. The Body Control Module (BCM) software will also be updated. The work will take about two hours to complete. However, additional time may be necessary depending on service schedules.

What you must do to ensure your safety...

Simply **contact your Chrysler, Jeep, or Dodge dealer** right away to schedule a service appointment. Ask the dealer to hold the part for your vehicle or to order it before your appointment. **Please bring this letter with you to your dealer.**

If you need help...

If you have trouble getting your vehicle serviced, please contact the dealer nearest your location. A representative will assist you in getting your vehicle serviced. This information can be found in the Customer Assistance section of your Owner's Manual.

We're sorry for any inconvenience, but we are sincerely concerned about your safety. Thank you for your attention to this important matter.

Global Service & Parts - International
FCA LLC
Notification Code U11