Revised June 2017

Dealer Service Instructions for:

Safety Recall S34 / NHTSA 16V-302
Manual Transaxle Clutch Pedal

NOTE: Clutch assembly replacement parts and procedure steps added.

Models

2012 - 2016 (FF) FIAT 500 vehicles

NOTE: This recall applies only to the above vehicles equipped with a Manual Transaxle (sales code DDF) built from June 22, 2010 through January 29, 2016 ***(MDH 062200 through 012908)***.

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Federal law requires you to complete this recall service on these vehicles before retail delivery. 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 clutch cover diaphragm spring on about 39,000 of the above vehicles may fatigue and/or fracture. A failed clutch cover diaphragm spring may result in the inability to disengage the clutch, shift gears and the potential for a loss of motive power. The inability to disengage the clutch, shift gears and/or loss of motive power could cause a crash without warning.

Repair

All involved vehicles must be inspected for a clutch pedal travel limiter. Vehicles found without a clutch pedal travel limiter must have a new clutch pedal assembly and a new clutch pedal start switch installed.

Parts Information

Part Number	Description
CBJDS341AA	**Pedal Assembly and Clutch Switch**

Each package contains the following components:

Quantity	Description
1	Pedal Assembly, Clutch/Brake
1	Switch, Clutch Pedal Start

Part Number	Description
68073610AA	**Switch, Brake Lamp**
06106123AA	**Nut, Locking (MSQ 6) Pedal Assembly**
06509708AA	**Bolt, I-Shaft, Lower M10X1.25X35.00**
06504926AA	**Bolt, I-Shaft, Lower M10x1.50x40.00**

(Order only one of the below clamp part numbers, either is acceptable)

06106139AA or 06106346AA	**Clamp, Hose, Master Cylinder Fluid**

Each dealer to whom vehicles in the recall were assigned will receive enough parts to service about 20% of those vehicles.

NOTE: The following parts are ONLY required for clutch assembly replacement. Do not order these parts until after performing section B. Check Clutch Operation to determine if clutch assembly replacement is necessary. Very few vehicles are expected to require clutch assembly replacement parts.

Part Number	Qty.	Description
04892691AB	**1**	**Clutch Kit, Pressure Plate and Disc**
68136988AA	**1**	**Bearing, Clutch Release**
06509632AA	**6**	**Screw, M6X1.0X20.0 (Pressure Plate)**
06509729AA	**2**	**Nut, Hex Flange Lock (Hub Nut)**
06106061AA	**2**	**Nut, Hex Flange Lock (Tie Rod End)**
68092630AA	**2**	**Fluid, C Series Transmission, Quart**

Parts Return

No parts return required for this campaign.

Special Tools

The following special tools are required to perform this repair:

- 10288 Hose Clamp Pliers
- NPN wiTECH micro pod II
- NPN Laptop Computer
- NPN wiTECH Software

The following special tools are ONLY required to perform the Clutch Assembly Replacement repair.

- 9360 Ball Joint Remover
- 10287 Front Hub Nut Staking Tool

Service Procedure

A. Inspect For Clutch Pedal Travel Limiter

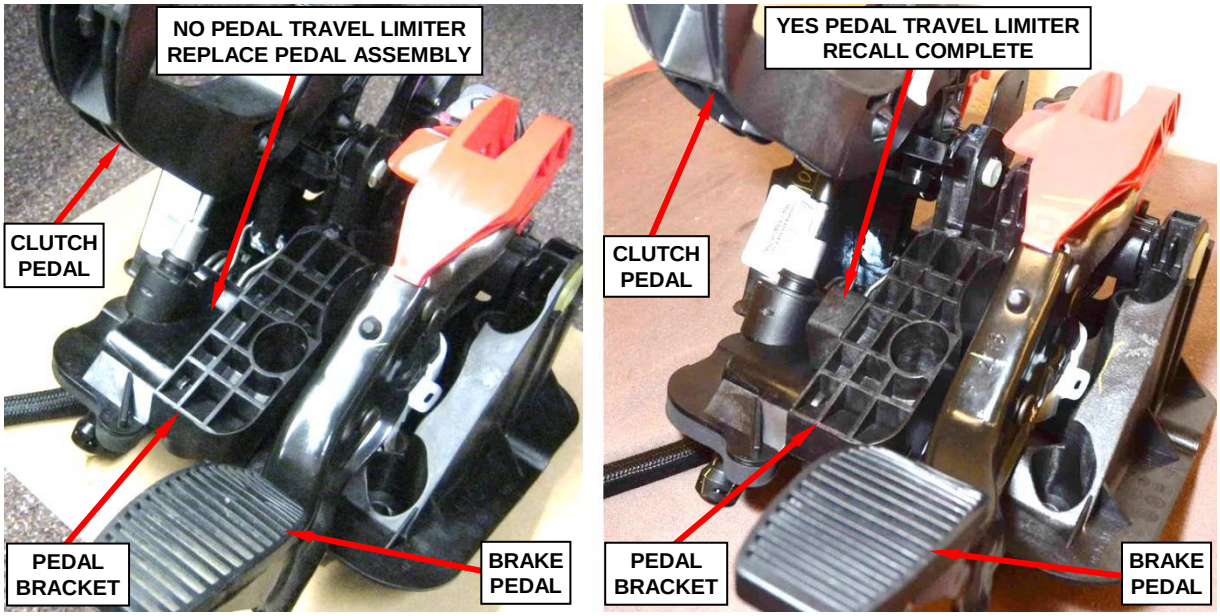

Figure 1 – Inspect For Clutch Pedal Travel Limiter

Inspect the clutch/brake pedal assembly bracket for a travel limiter (Figure 1).

- Yes, a clutch pedal travel limiter is visible on the pedal bracket. This recall is complete. Return the vehicle to the customer.
- No, the clutch pedal does NOT have a travel limiter on the pedal bracket. Continue with **Section B. Check Clutch Operation.**

B. Check Clutch Operation

Check the clutch for proper operation. Confirm that the clutch fully releases when the clutch pedal is depressed. Does the clutch operate properly?

- Yes, the clutch operates properly. **ONLY** replace the Clutch/Brake Pedal Assembly. Do **NOT** replace the clutch assembly. Continue with **Section C. Replace Clutch/Brake Pedal Assembly.**
- No, the clutch does **NOT** fully release as expected when the clutch pedal is depressed and a fractured clutch cover diaphragm spring is believed to be the cause. Replace both the Clutch/Brake Pedal Assembly and clutch assembly. Continue with **Section C. Replace Clutch/Brake Pedal Assembly** including **Section E. Replace Clutch Assembly**.

Service Procedure [Continued]

C. Replace Clutch/Brake Pedal Assembly

1. Open the vehicle hood.

Figure 2 – Battery Terminal Cover

2. Remove and save the cover from the battery positive terminal (Figure 2).

3. Disconnect and isolate the battery negative cable terminal from the battery negative post (Figure 3). If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the battery negative cable.

4. Remove the Powertrain Control Module (PCM) ground wire from the battery negative cable terminal (Figure 3).

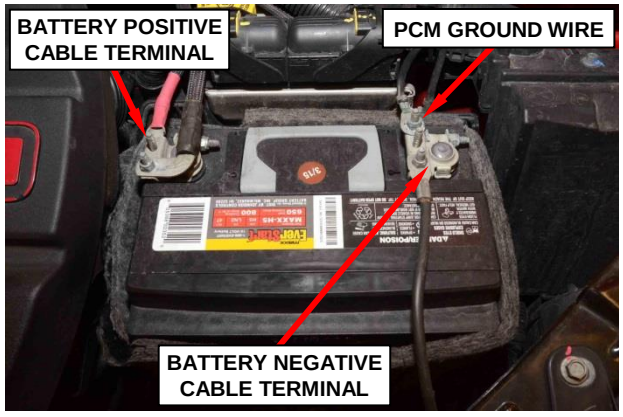

Figure 3 – Battery Terminals

5. Disconnect the battery positive cable terminal from the battery positive post (Figure 3).

Service Procedure [Continued]

6. Disconnect the PCM electrical connectors from the PCM (Figure 4).

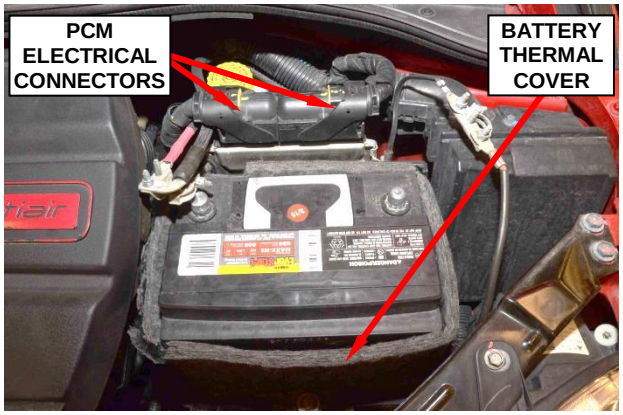

Figure 4 – PCM Connectors

7. Remove and save the battery thermal cover (Figure 4).

8. Remove and save the battery hold-down retainer (Figure 5).

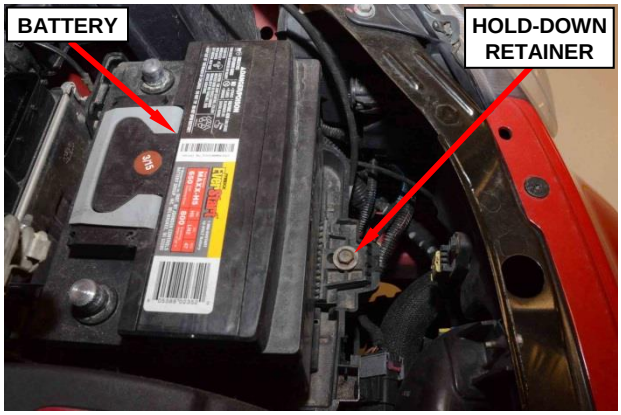

Figure 5 – Battery Hold-Down Retainer

9. Remove and save the vehicle battery (Figure 5).

Service Procedure [Continued]

10. Release the wire harness retainers from the battery tray (Figure 6).

11. Release the engine wire harness connector retainer from the battery tray and reposition the wire harness (Figure 6).

12. Remove and save the battery tray retaining nut and two bolts (Figure 6).

13. Remove and save the battery tray (Figure 6).

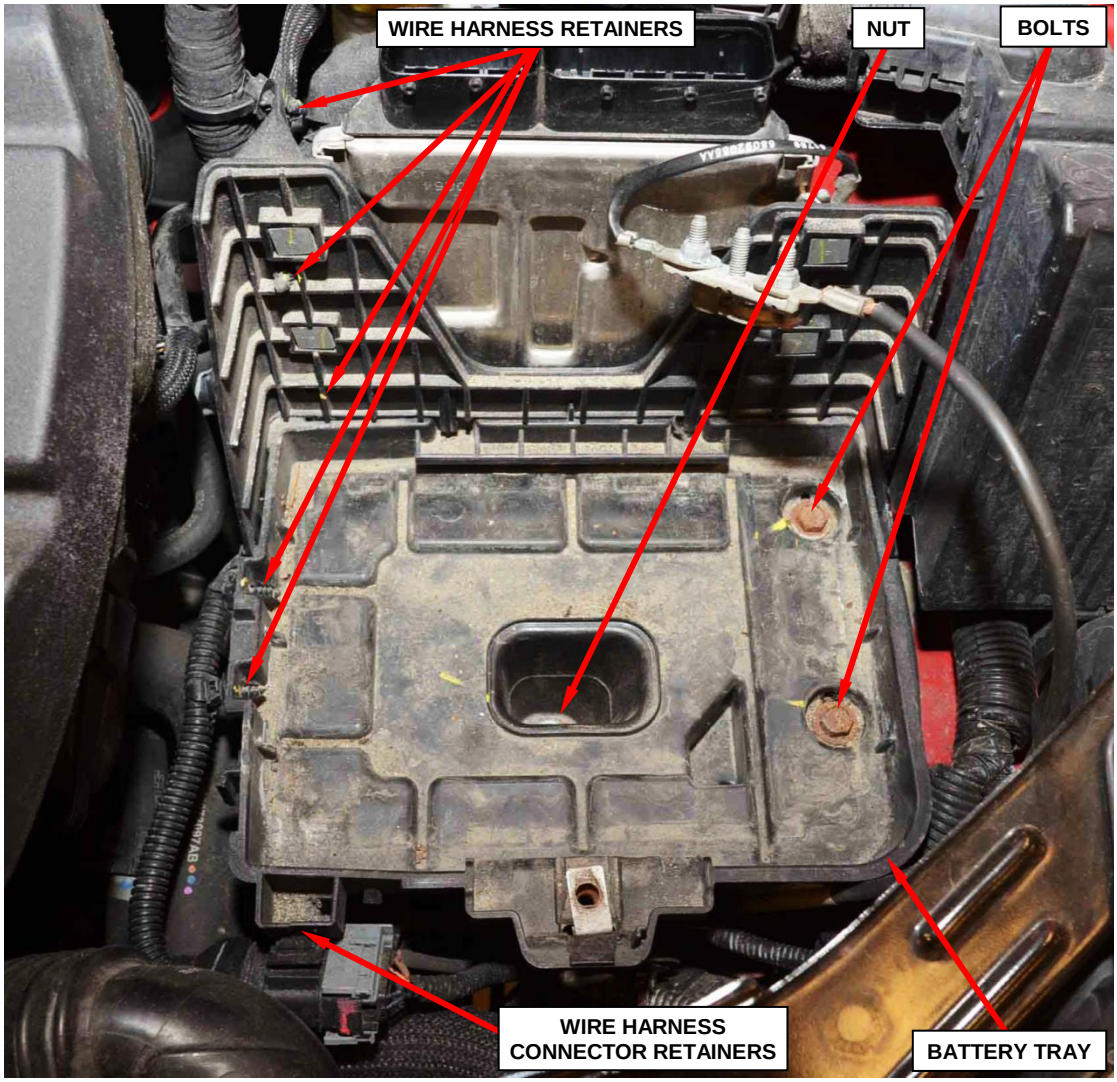

Figure 6 – Wire Harness Retainers and Battery Tray

NOTE: ONLY if the clutch cover diaphragm spring is believed to be fractured as determined in "Section B. Check Clutch Operation," then proceed now to Section E. Replace Clutch Assembly. Otherwise continue with Step 14 of Section C. Replace Clutch/Brake Pedal Assembly.

Service Procedure [Continued]

14. Raise and support the vehicle.

15. Place an oil drain pan under the clutch master cylinder.

16. Use a long pick tool to release the retaining clip then disconnect the clutch fluid tube from the clutch master cylinder outlet fitting and plug both openings (Figure 7).

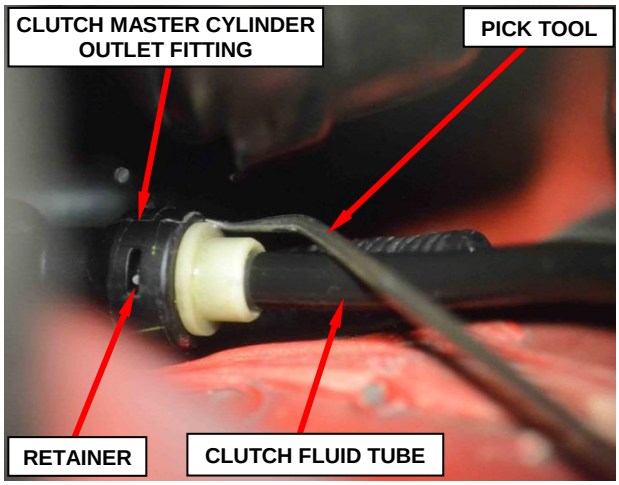

Figure 7 – Clutch Fluid Tube at Clutch Master Cylinder Outlet Fitting

17. Lower the vehicle.

18. Use special tool 10288 Hose Clamp Pliers to release the hose clamp then disconnect the clutch master cylinder fluid supply hose from the brake fluid reservoir and plug both openings (Figure 8).

    CAUTION: Discard the hose clamp; it is not to be reused.

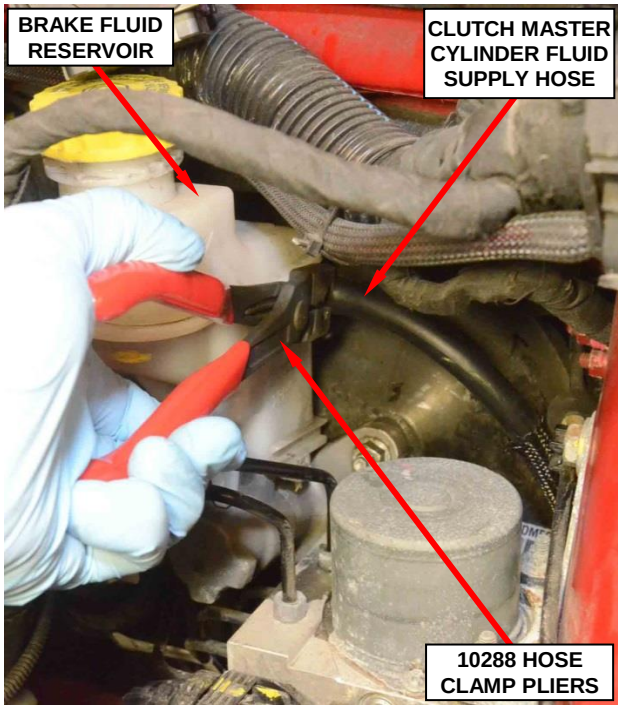

Figure 8 – Clutch Master Cylinder Fluid Supply Hose

Service Procedure [Continued]

19. Remove and save the steering column opening cover / Knee Air Bag (KAB) per the following steps:

    WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting KAB removal. Wait two minutes after disconnecting the vehicle battery for the system capacitor to discharge before performing further service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

    WARNING: To avoid serious or fatal injury, use extreme care to prevent any foreign material from entering the KAB, or becoming entrapped between the KAB cushion and the KAB trim cover. Failure to observe this warning could result in occupant injuries upon airbag deployment.

    a. From below the instrument panel, remove and save the two screws that secure the steering column opening cover/KAB unit to the instrument panel lower reinforcement (Figure 9).

    b. Pull the cover/KAB down and back from the instrument panel far enough to access the KAB electrical connection on the outboard end of the KAB housing (Figure 10).

    c. Depress the KAB inflator electrical connector integral latches on each side of the connector insulator and pull the connector insulator straight out from the KAB to disconnect it (Figure 10).

    d. Remove and save the steering column opening cover/KAB.

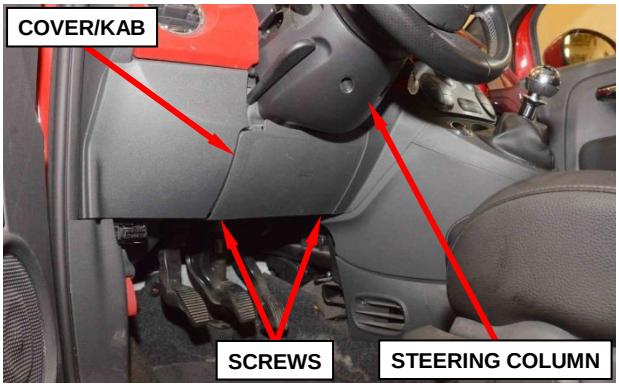

Figure 9 – Cover/KAB Fasteners

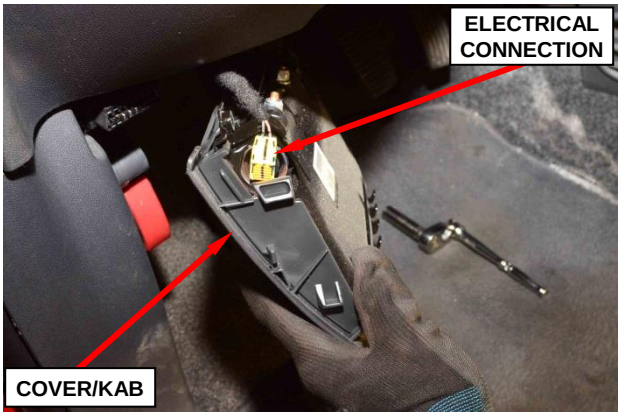

Figure 10 – KAB Electrical Connector

Service Procedure [Continued]

20. Position the steering wheel so that the steering column intermediate shaft lower pinch bolt is accessible then using a steering wheel holder, lock the steering wheel in place to keep it from rotating. This keeps the clockspring in the proper orientation (Figure 11).

21. Remove the steering column intermediate shaft pinch bolt. Discard the pinch bolt; it is not to be reused (Figure 11).

22. Separate the intermediate shaft at the base of the column from the steering gear pinion shaft (Figure 11).

23. Position the intermediate shaft so that the pedal assembly can be accessed (Figure 11).

24. Remove and save the two nuts from the fuse panel cover (Figure 12).

25. Remove and save the fuse panel cover (Figure 12).

26. Remove and save the two screws from the instrument panel support bracket (Figure 13).

27. Remove and save the instrument panel support bracket (Figure 13).

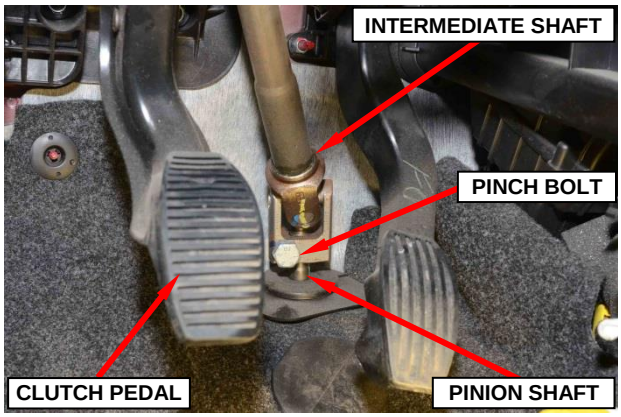

Figure 11 – Steering Column Intermediate Shaft

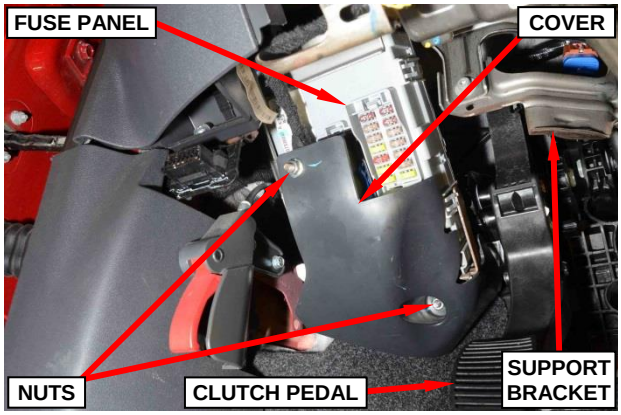

Figure 12 – Fuse Panel Cover

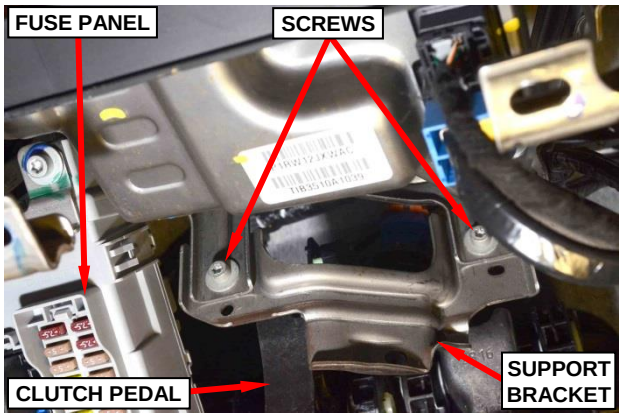

Figure 13 – Instrument Panel Support Bracket

Service Procedure [Continued]

28. Disconnect the electrical harness connectors from the clutch start and brake lamp switches (Figure 14).

29. Disengage the clips of the brake booster push rod retainer from the brake pedal. Position the retainer forward toward the brake booster, away from the brake pedal (Figure 14).

30. Remove and discard the six mounting nuts from the clutch/brake pedal assembly. The nuts are not to be reused (Figure 15).

    NOTE: Protect the vehicle floor mats/carpeting and interior trim from brake fluid while removing the clutch/brake pedal assembly.

31. Remove and discard the clutch/brake pedal assembly. The pedal assembly is not to be reused.

    NOTE: It may be necessary to pull the bottom right corner of the fuse panel/Body Control Module (BCM) slightly left and rearward toward you to provide additional clearance while removing the pedal assembly.

32. Remove and discard the used brake booster push rod retainer and brake booster push rod bearing cup. The retainer and cup are not to be reused.

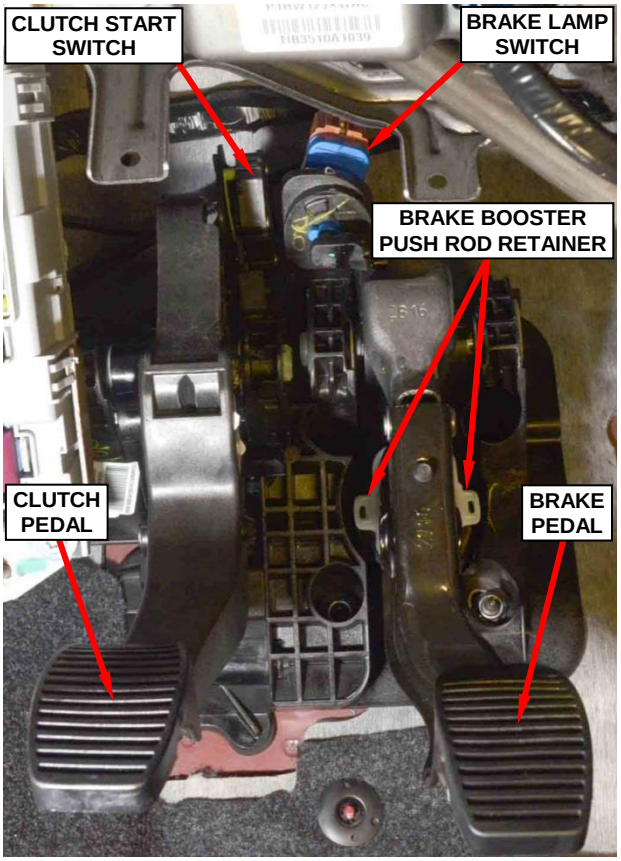

Figure 14 – Electrical Connectors and Brake Booster Push Rod

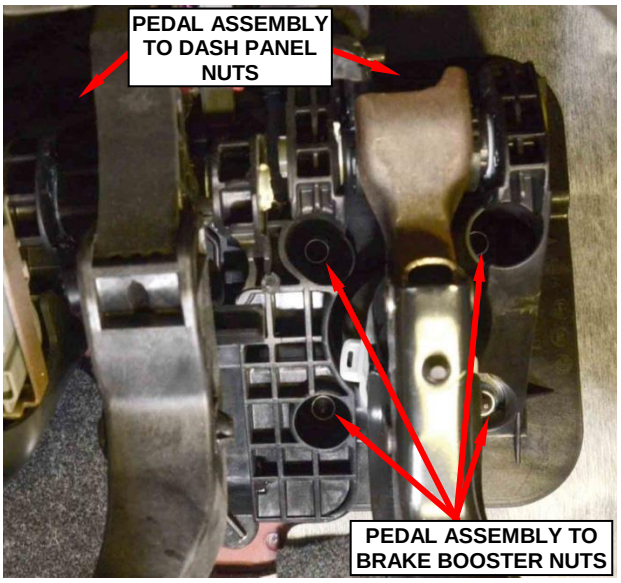

Figure 15 – Pedal Assembly Fasteners

Service Procedure [Continued]

33. Install the NEW clutch pedal start switch to the NEW clutch/brake pedal assembly per the following steps:

    a. Insert the switch locating tab into the clutch/brake pedal assembly (Figure 16).

    b. Insert the switch retaining rivet fully into the clutch/brake pedal assembly (Figure 16).

    c. Rotate the locking lever down to expand the retaining rivet securing the switch in place (Figure 16).

    d. Swing the switch activation arm into place making sure to capture the stud on the clutch pedal (Figure 16).

    e. Lock the switch activation arm in place by pushing the lock inward capturing the clutch pedal stud (Figure 16).

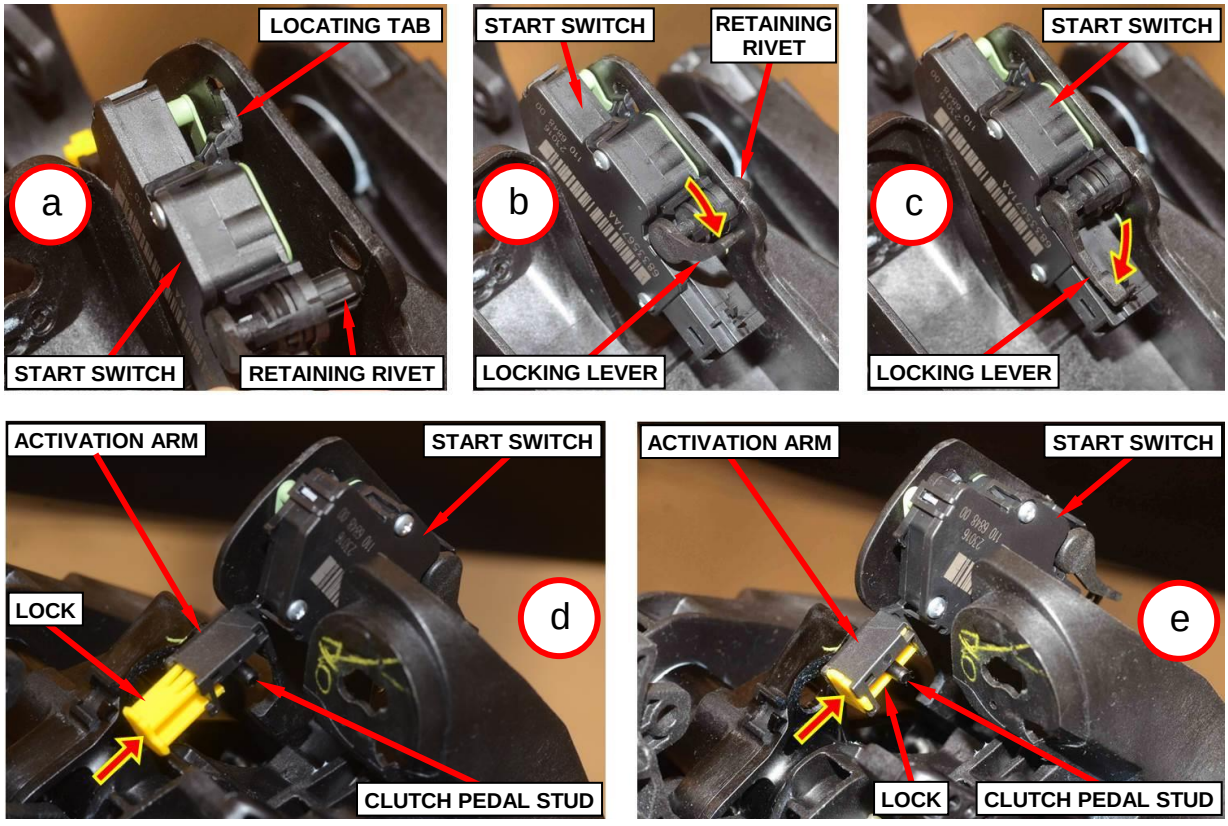

Figure 16 – Clutch Pedal Start Switch Installation

Service Procedure [Continued]

34. Carefully install the NEW clutch/brake pedal assembly per the following steps:

    CAUTION: Do NOT install the brake lamp switch to the clutch/brake pedal assembly prior to fully installing the clutch/brake pedal assembly in the vehicle. Possible damage may occur to the brake lamp switch if the switch is installed prior to pedal assembly installation.

    NOTE: Do NOT remove the brake booster push rod retainer from the brake pedal.

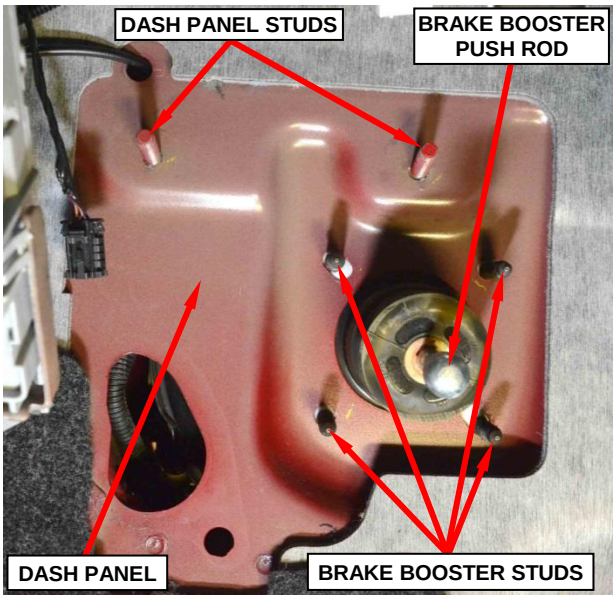

Figure 17 – Dash Panel Studs

NOTE: Do NOT attach the brake booster push rod to the brake pedal during pedal assembly installation. The brake booster push rod will be connected at a later time.

a. Align the NEW clutch/brake pedal assembly with the two mounting studs on the dash panel, then align the power brake booster mounting studs with the clutch/brake pedal assembly (Figure 17).

b. Install four NEW nuts attaching the pedal assembly to the power brake booster. Do not tighten these nuts at this time (Figure 18).

c. Install two NEW nuts attaching the pedal assembly to the dash panel. Tighten these two nuts to 12 ft. lbs. (16 N·m) (Figure 18).

d. Tighten the brake pedal assembly to power brake booster mounting nuts to 12 ft. lbs. (16 N·m).

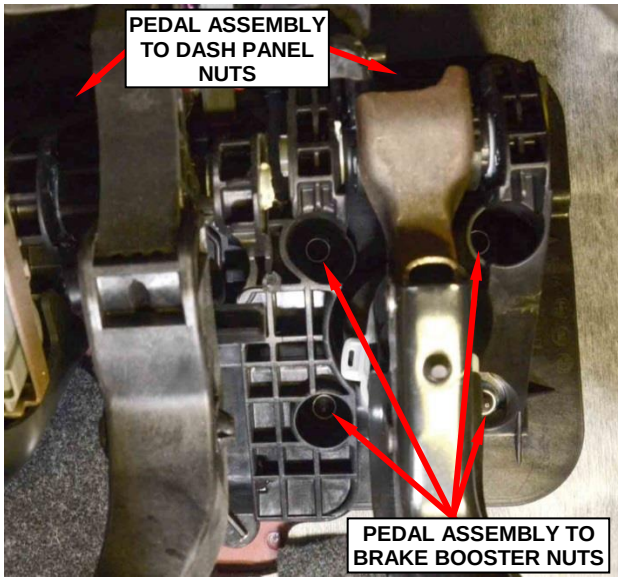

Figure 18 – Pedal Assembly Fasteners

Service Procedure [Continued]

35. Align the brake booster push rod to the brake pedal then push the brake pedal down to engage the booster push rod to the brake pedal.

36. Install the NEW brake lamp switch to the NEW clutch/brake pedal assembly per the following steps:

    CAUTION: Never remove or install the brake lamp switch while the brake pedal arm is disassembled from the brake booster push rod. Brake lamp switch damage may result.

    CAUTION: Do not depress, lift or move the brake pedal during brake lamp switch installation to avoid improper switch adjustment.

    a. Align the tabs on the brake lamp switch locking collar with the keyed hole in the clutch/brake pedal assembly (Figure 19).

    b. Holding the brake lamp switch perpendicular to the pedal assembly, insert the tabs on the brake lamp switch locking collar through the keyed hole in the pedal assembly until the switch housing is firmly seated against the pedal assembly (Figure 19).

    CAUTION: Do not depress, lift, touch or move the brake pedal during the next step. Switch damage or improper adjustment may result.

    c. Rotate the switch housing about 45 degrees to engage the tabs on the locking collar with the pedal assembly (Figure 19).

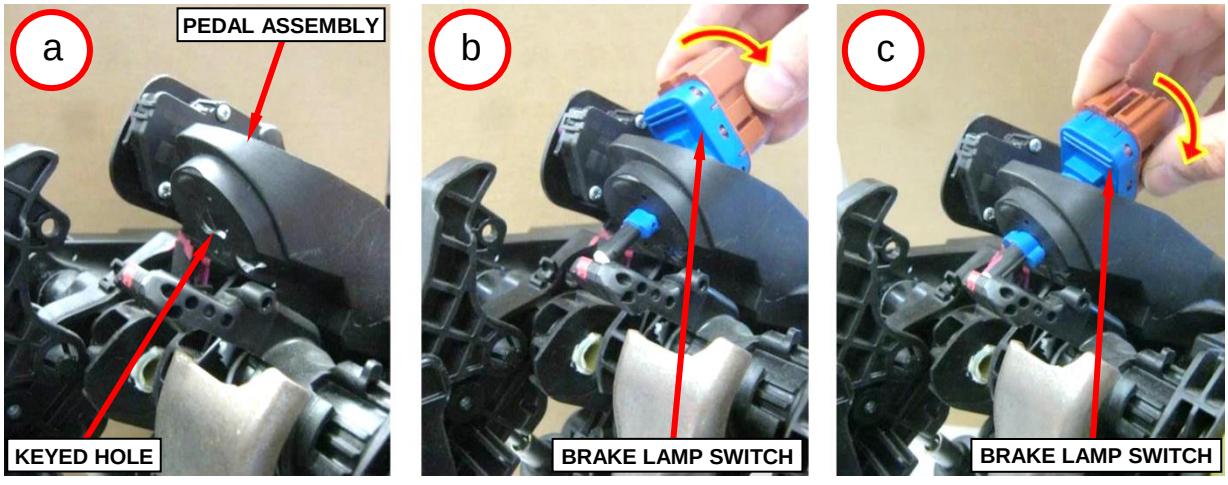

Figure 19 – Brake Lamp Switch Installation

Service Procedure [Continued]

37. Connect the body wire harness connectors to the clutch start switch and brake lamp switch (Figure 14).

38. Install the instrument panel support bracket, then install the two bolts. Tighten the bolts to 62 in. lbs. (7 N·m) (Figure 13).

39. Install the fuse box cover, then install the two nuts and tighten the nuts securely (Figure 12).

40. Connect the steering column intermediate shaft to the steering gear pinion shaft. Do NOT reuse the intermediate shaft pinch bolt (Figure 11).

    NOTE: Two different intermediate shaft pinch bolts are listed in the parts section of this recall, M10X1.25X35.00 and M10x1.50x40.00. Use the NEW bolt which looks like the bolt previously removed from the intermediate shaft and discard the non-matching bolt (Figure 20).

41. Install the NEW intermediate shaft pinch bolt. Tighten the bolt to 40 ft. lbs. (55 N·m) (Figure 11).

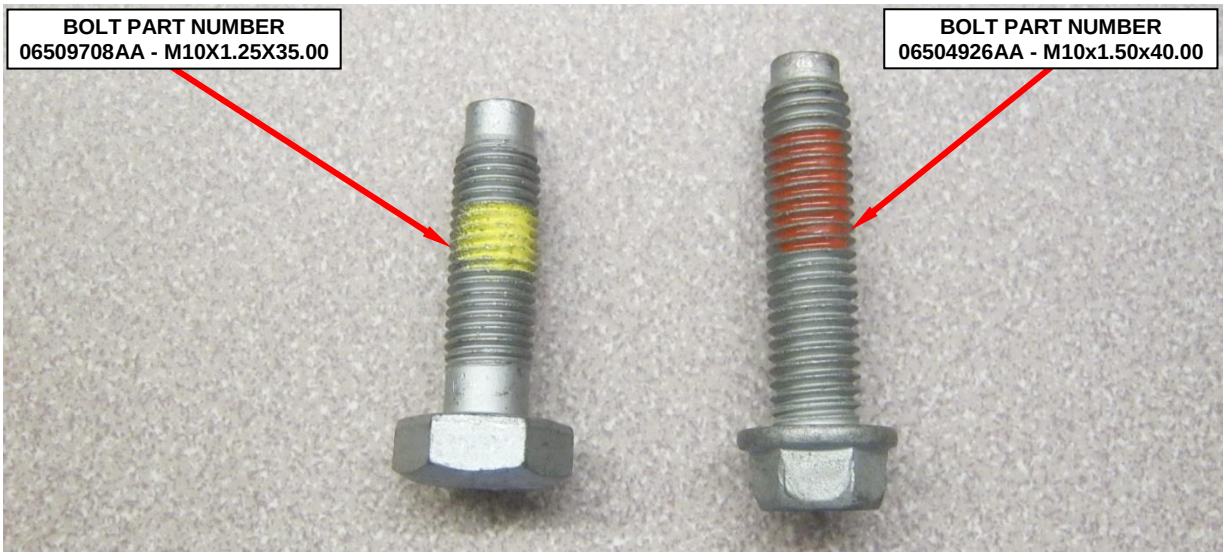

Figure 20 – Intermediate Shaft Pinch Bolts

Service Procedure [Continued]

42. Install the steering column opening cover / Knee Air Bag (KAB) per the following steps.

    WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting knee blocker installation. Wait two minutes after disconnecting the vehicle battery for the system capacitor to discharge before performing further service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.

    WARNING: To avoid serious or fatal injury, use extreme care to prevent any foreign material from entering the KAB, or becoming entrapped between the KAB cushion and the KAB trim cover. Failure to observe this warning could result in occupant injuries upon airbag deployment.

    a. Position the cover/KAB below the instrument panel in a vertical orientation with the KAB inflator electrical connector receptacle facing upward (Figure 10).

    b. Connect the instrument panel wire harness connector to the KAB inflator electrical connector receptacle by pressing straight in on the connector. The connection will make an audible click noise as the connector insulator integral latches snap into place, indicating the electrical connector is fully engaged in its receptacle (Figure 10).

    c. Carefully position the steering column opening cover/KAB unit into the instrument panel opening (Figure 9).

    d. Install the two screws that secure the column opening cover/KAB unit to the instrument panel lower reinforcement. Tighten the screws to 53 in. lbs. (6 N·m) (Figure 9).

    e. Do not connect the negative battery cable at this time. The Supplemental Restraint System (SRS) Verification Test detailed later in this procedure should be performed following installation of the KAB.

Service Procedure [Continued]

43. Raise and support the vehicle.

44. Connect the clutch fluid tube to the clutch master cylinder (Figure 7).

45. Lower the vehicle.

46. Install the clutch master cylinder fluid supply hose with NEW clamp to the brake fluid reservoir (Figure 8).

47. Use special tool 10288 Hose Clamp Pliers to engage the NEW clamp securing the clutch master cylinder fluid supply hose to the brake fluid reservoir (Figure 8).

48. Bleed the clutch hydraulic system.

    NOTE: Use Mopar brake fluid, or an equivalent quality fluid meeting DOT 3 standards only. Use fresh, clean fluid from a sealed container at all times.

49. Install the battery tray with one nut and two bolts. Tighten all three fasteners to 18 ft. lbs. (25 N·m) (Figure 6).

50. Engage the engine wire harness connector retainer to the battery tray (Figure 6).

51. Engage the engine wire harness retainers to the battery tray (Figure 6).

52. Install the vehicle battery into the battery tray (Figure 5).

53. Install the battery hold down retainer and tighten securely (Figure 5).

54. Install the battery thermal cover (Figure 4).

55. Connect the powertrain control module (PCM) electrical connectors (Figure 4).

56. Connect the battery positive cable terminal to the battery positive post and tighten the terminal securely (Figure 3).

    NOTE: Do NOT connect the battery negative cable at this time.

Service Procedure [Continued]

57. **Knee Air Bag (KAB) equipped vehicles only:** Proceed to **Section D. Supplemental Restraint System (SRS) Verification Test**. For vehicles without a KAB, continue with **Step 58**.

58. Install the PCM ground wire to the battery negative cable terminal then connect the negative cable terminal to the battery negative post and tighten the terminal securely (Figure 3). If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector after connecting the battery negative cable terminal to the battery.

59. Install the battery positive terminal cover (Figure 2).

60. Close the vehicle hood.

61. Check for proper operation of the hydraulic clutch system.

62. Check that the clutch switch will not allow the starter to crank without the clutch pedal depressed.

63. Check the brake lamps for proper operation.

64. Return the vehicle to the customer.

D. Supplemental Restraint System (SRS) Verification Test

NOTE: During the following test, the battery negative cable must remain disconnected and isolated during steps 1 and 2 of the Supplemental Restraint System (SRS) Verification Test.

NOTE: The wiTECH scan tool must be used to perform the SRS Verification Test. The wiTECH software is required to be at the latest release before performing the SRS Verification Test.

1. Connect the micro pod II to the vehicle data link connector located under the instrument panel to the left of the steering column.

Service Procedure [Continued]

2. Turn the ignition switch to the "ON" position then exit the vehicle and close the doors.

3. Check to be certain that nobody is in the vehicle. Install the PCM ground wire to the battery negative cable terminal then connect the negative cable terminal to the vehicle battery negative post and tighten the terminal securely (Figure 3). If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector after connecting the battery negative cable terminal to the battery.

4. Open the wiTECH Diagnostic application.

5. Starting at the "Select Tool" screen, select the row/tool for the micro pod II device you are using, then select "Next".

6. Enter your "**User id**" and "**Password**", then select **"Finish"**.

7. Using wiTECH, clear all DTCs in all modules.

   NOTE: Any active Diagnostic Trouble Codes (DTCs) may require an additional key cycle from "ON" to "OFF" to change DTC status from "active" to "stored".

8. Turn the ignition switch to the "OFF" position for about 15 seconds, and then back to the "ON" position. Observe the airbag indicator in the instrument cluster.

   - The airbag indicator in the instrument cluster should illuminate for six to eight seconds, and then turn off. This indicates that the SRS is functioning normally and that the repairs are complete. Turn the ignition to the "OFF" position then remove the micro pod II.
   - If the airbag indicator fails to illuminate or the indicator lamp stays ON, there is still an active SRS fault or malfunction. Refer to the appropriate diagnostic information to diagnose the problem.

9. Return to **Step 58** of **Section C. Replace Clutch/Brake Pedal Assembly**.

Service Procedure [Continued]

E. Replace Clutch Assembly

NOTE: Do NOT replace the clutch assembly unless it is suspected that the clutch cover diaphragm spring is fractured as determined in "Section B. Check Clutch Operation". If the clutch cover diaphragm spring is found to not be fractured and the clutch assembly exhibits any signs of improper use or abuse, clutch replacement will not be covered by Recall S34. Replacement of the clutch assembly on vehicles without a fractured clutch cover diaphragm spring will be entirely at the vehicle owner's expense.

NOTE: The vehicle battery and battery tray removal steps were covered previously in Steps 1 through 13 of "Section C. Replace Clutch/Brake Pedal Assembly" so those steps will not be covered here. It is to be assumed that the vehicle battery and battery tray are already removed from the vehicle before beginning with Step 1 of Section E. Replace Clutch Assembly.

1. Remove and save the engine cover (Figure 21).

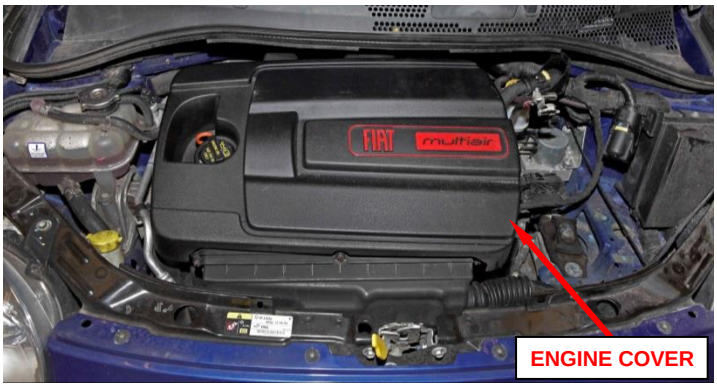

Figure 21 – Engine Cover

2. Remove and save the four screws securing the air cleaner housing cover and air cleaner duct (Figure 22).

3. Remove and save the air cleaner duct and air cleaner housing cover with air filter (Figure 22).

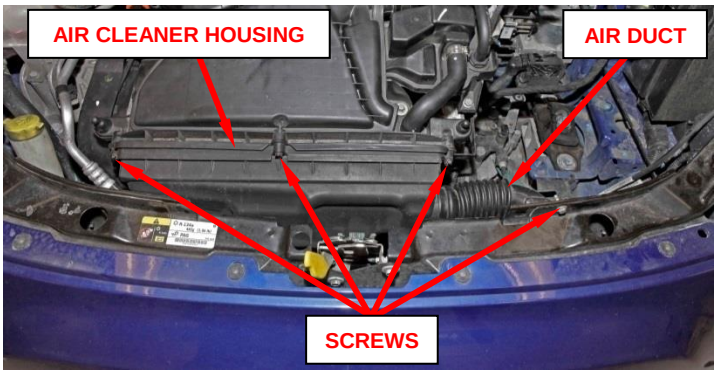

Figure 22 – Air Induction Components

Service Procedure [Continued]

4. Disconnect the backup lamp switch electrical connector (Figure 23).

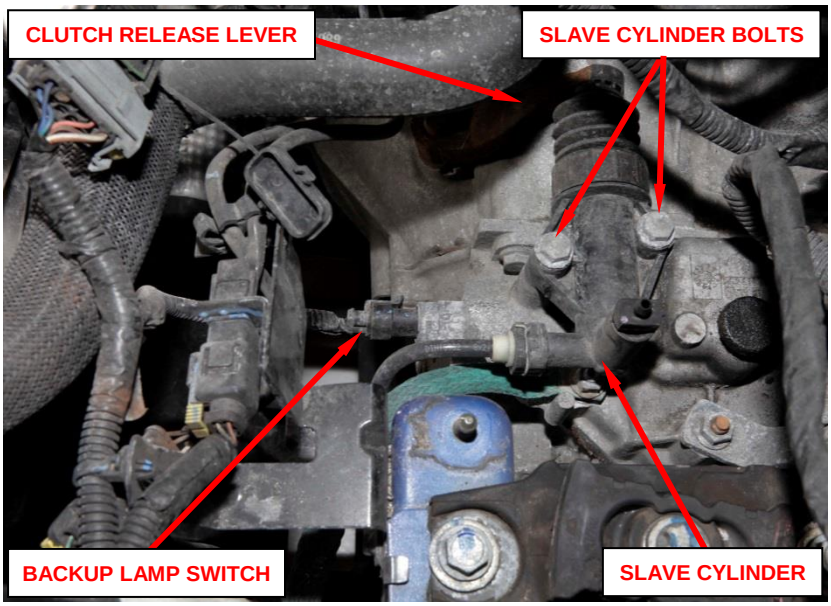

Figure 23 – Backup Lamp Switch and Slave Cylinder

5. Remove and save the slave cylinder bolts then secure the slave cylinder out of the way (Figure 23).

6. Remove and save the ground stud nut then remove and reposition the ground strap from the transmission ground stud (Figure 24).

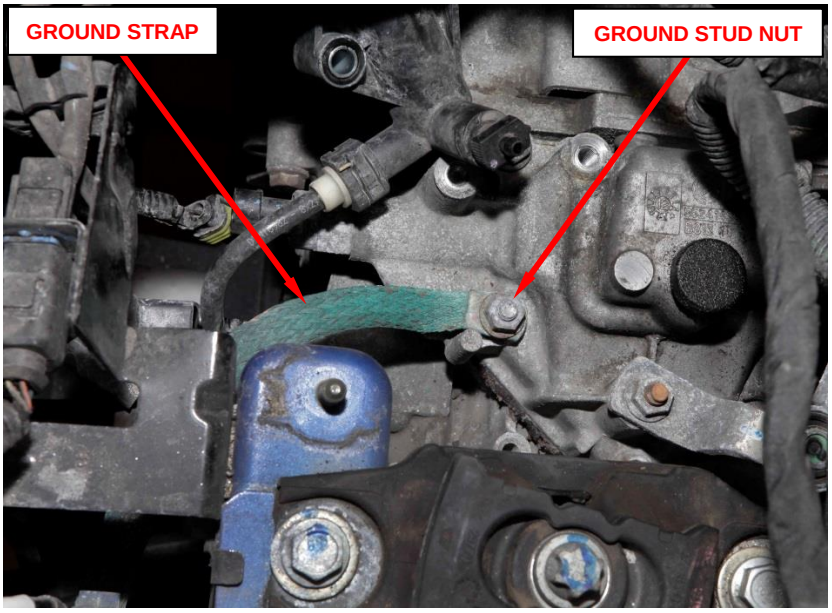

Figure 24 – Ground Strap

Service Procedure [Continued]

7. Disconnect the selector cable from the selector lever (Figure 25).

8. Remove and save the selector cable retainer (Figure 25).

9. Reposition the selector cable away from the mounting bracket (Figure 25).

10. Disconnect the shift cable from the shift lever (Figure 25).

11. Remove and save the shift cable retainer (Figure 25).

12. Reposition the shift cable away from the mounting bracket (Figure 25).

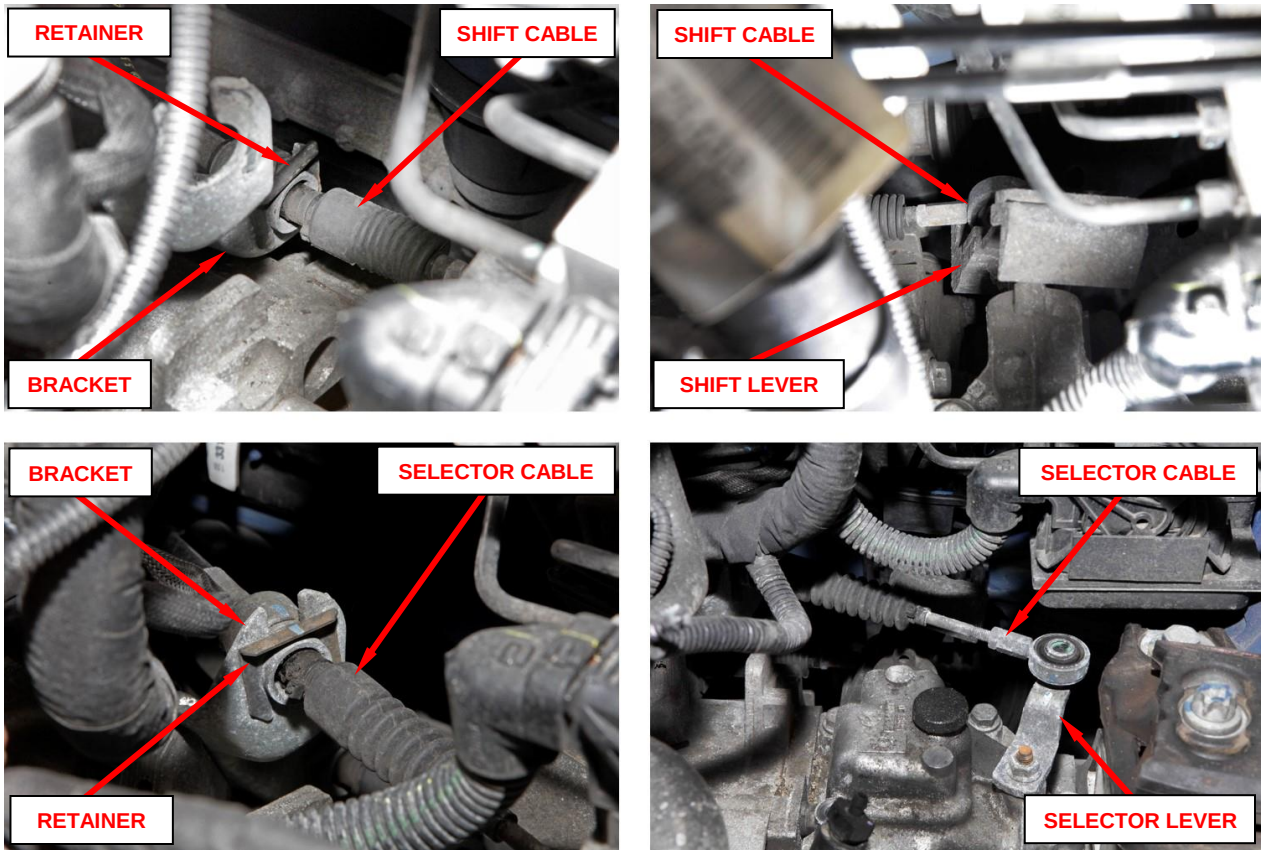

Figure 25 – Selector Cable and Shift Cable

Service Procedure [Continued]

13. Remove the two upper bell housing bolts (Figure 26).

14. Remove the upper starter motor bolt (Figure 26).

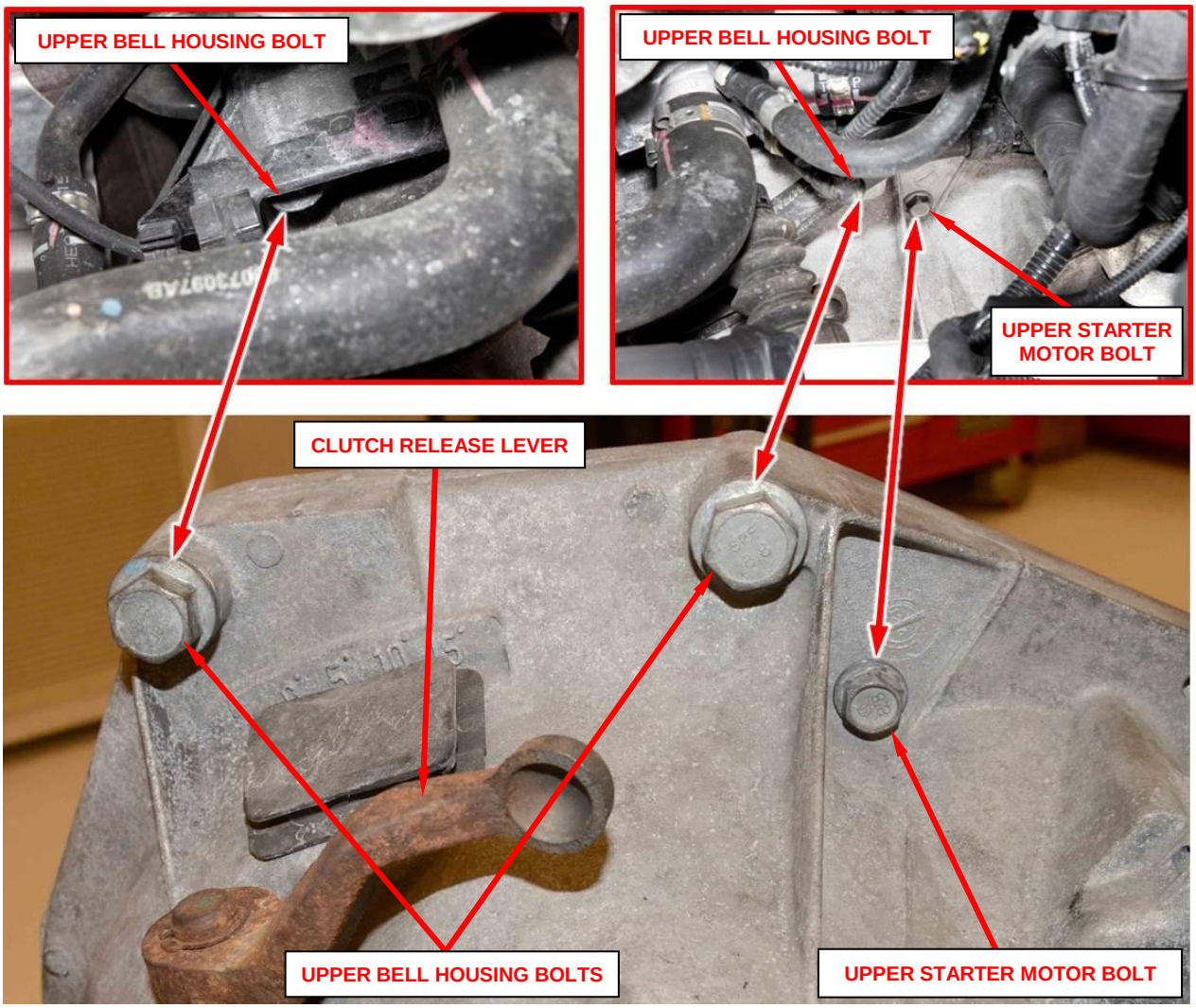

Figure 26 – Upper Bell Housing Bolts And Upper Starter Bolt

Service Procedure [Continued]

15. Raise and support the vehicle.

16. Remove and save the six screws securing the belly pan, also remove and save the belly pan (Figure 27).

17. Remove and save the three lower screws from the front fascia (Figure 27).

18. Remove and save the two lower screws from the left and right side wheel house splash shields (Figure 27).

19. Remove and save both of the front wheel and tire assemblies (Figure 27).

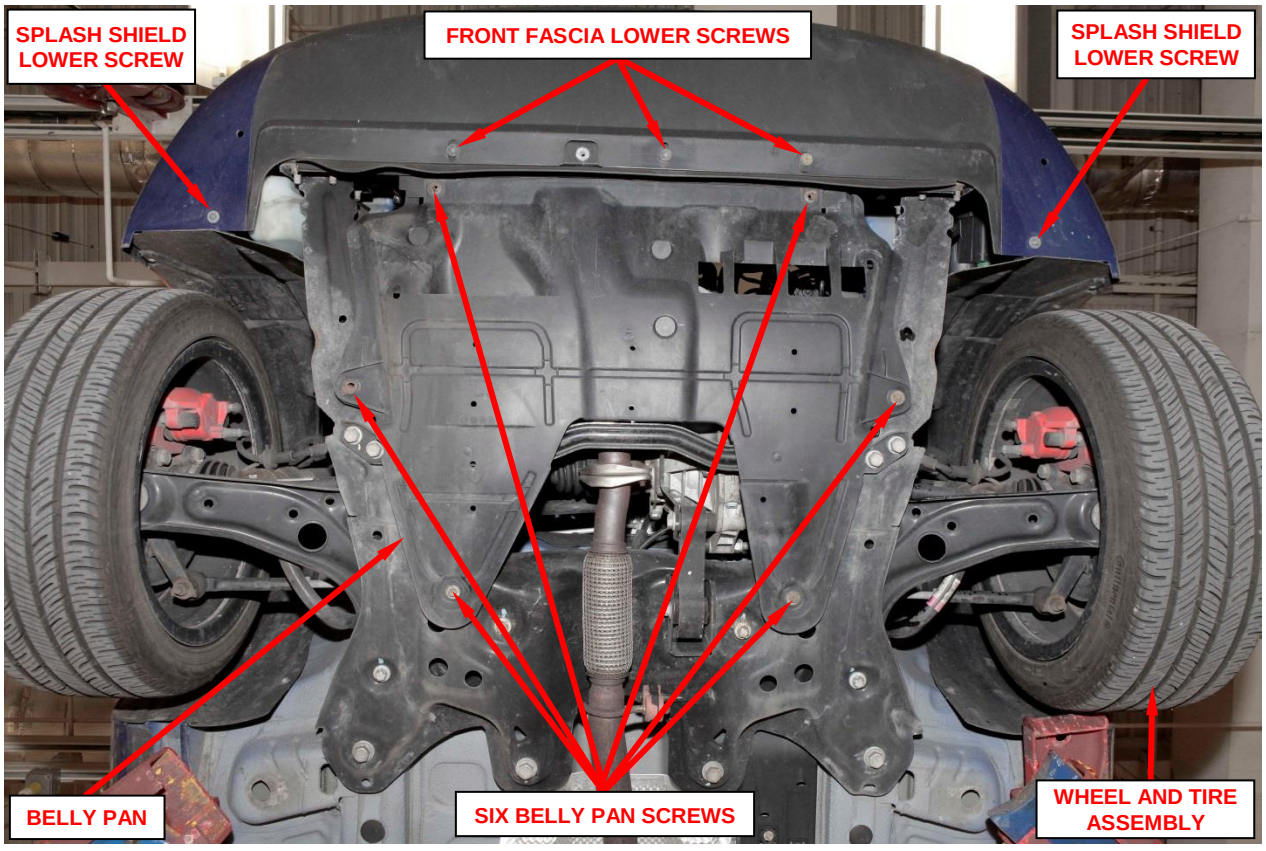

Figure 27 – Belly Pan and Front Fascia Screws

Service Procedure [Continued]

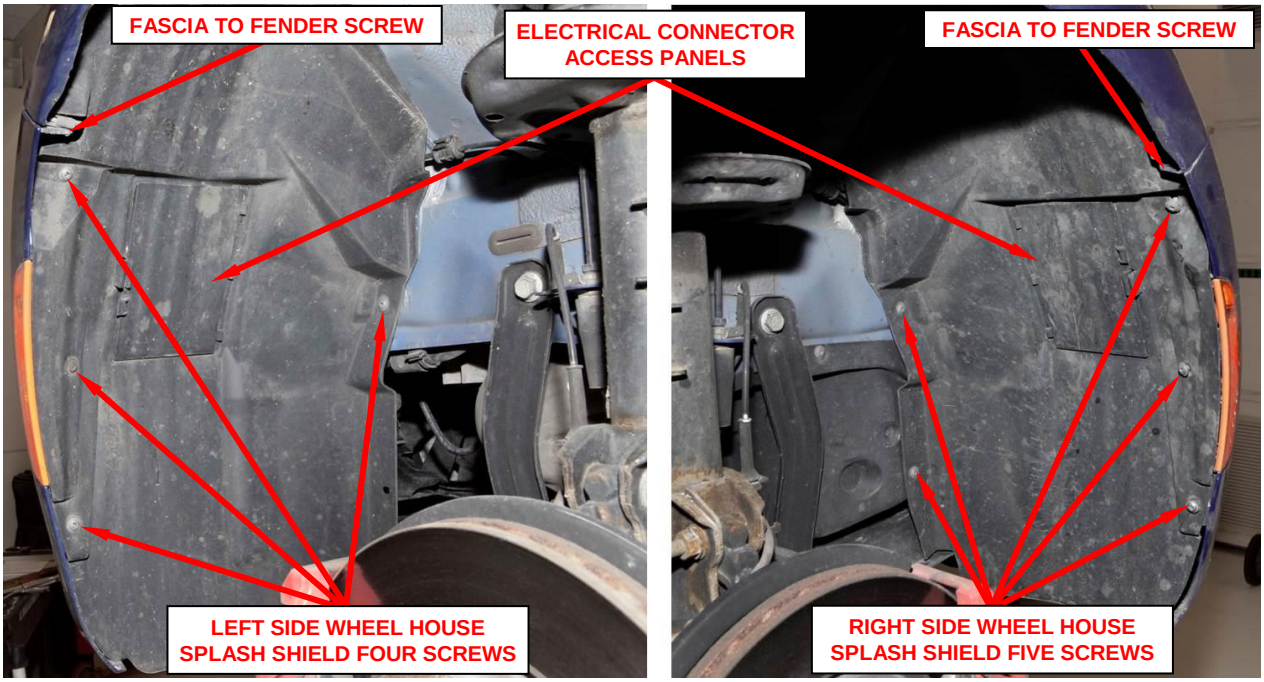

Figure 28 – Front Left and Right Side Wheel House Splash Shields

20. Remove and save the electrical access panels then disconnect the electrical connectors from the left and right side turn signals (Figures 28 and 29).

21. Remove and save the four screws securing the left front wheel house splash shield (Figure 28).

22. Remove and save the five screws securing the right front wheel house splash shield (Figure 28).

23. Remove and save the single screw per side that secures the front fascia to the fender on the left and right side of the vehicle (Figure 28).

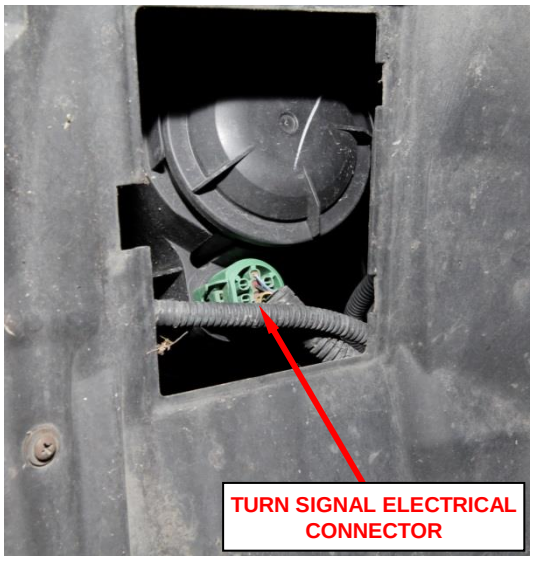

Figure 29 – Electrical Connectors

Service Procedure [Continued]

24. Remove and save the four fasteners securing the front fascia to the upper radiator support (Figure 30).

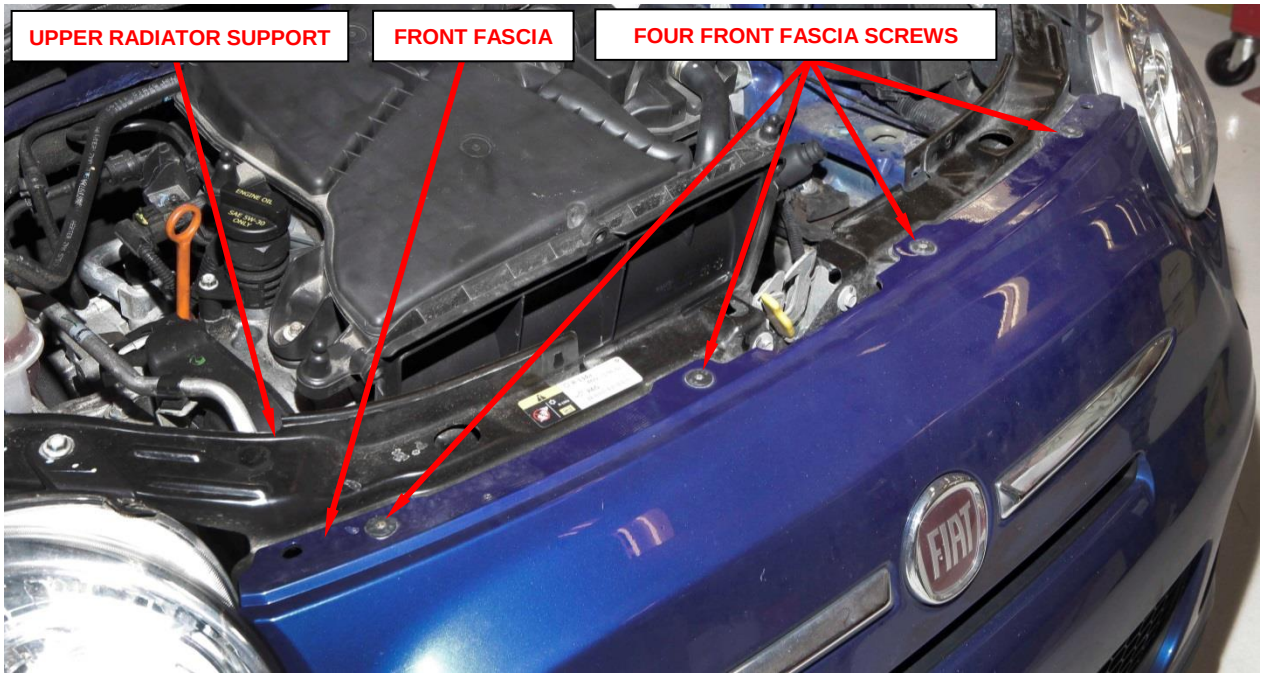

Figure 30 – Front Fascia Screws to Upper Radiator Support

25. Release the front fascia retainer clips along the left and right side fender edges (Figure 31).

26. Disconnect the fog lamp electrical connector from the front fascia (Figure 31).

27. Remove the front fascia and save in a safe area to prevent paint damage (Figure 31).

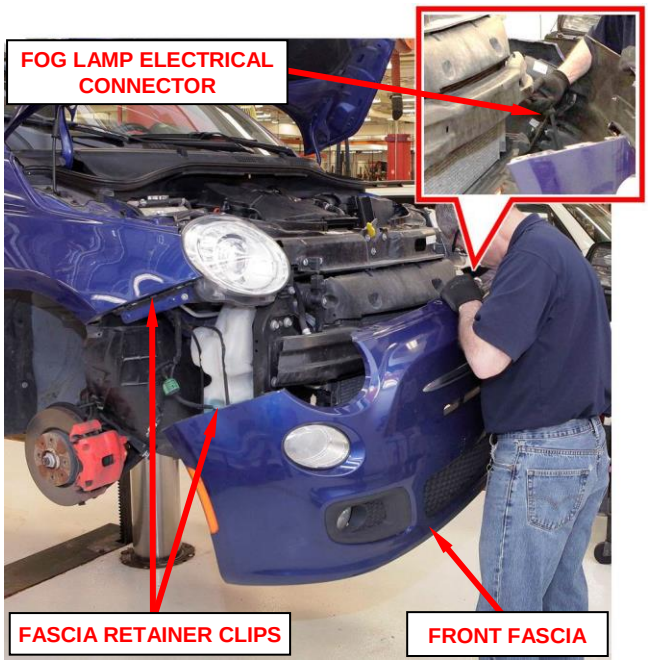

Figure 31 – Electrical Connector

Service Procedure [Continued]

28. Remove the transmission drain plug and allow the transmission fluid to drain (Figure 32).

    NOTE: The drain plug is located on the lower right side of the transmission differential housing (Figure 32).

29. Install the transmission drain plug and tighten the plug to 18 N·m (13 lb ft.) (Figure 32).

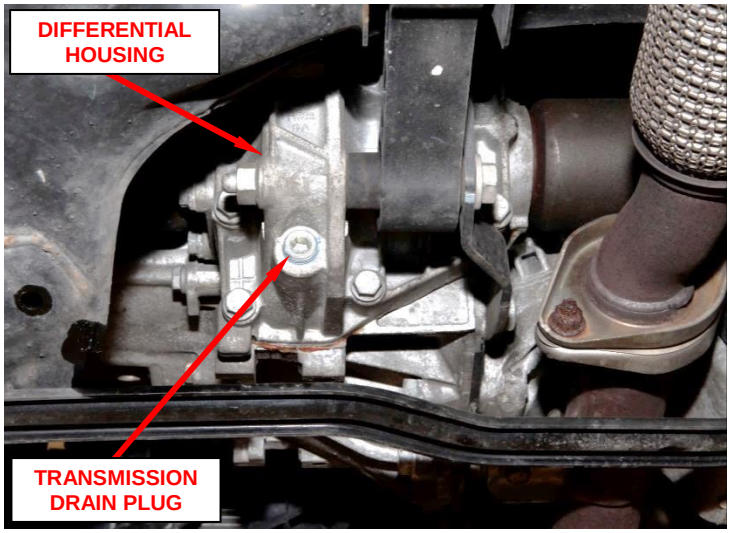

Figure 32 – Transmission Drain Plug

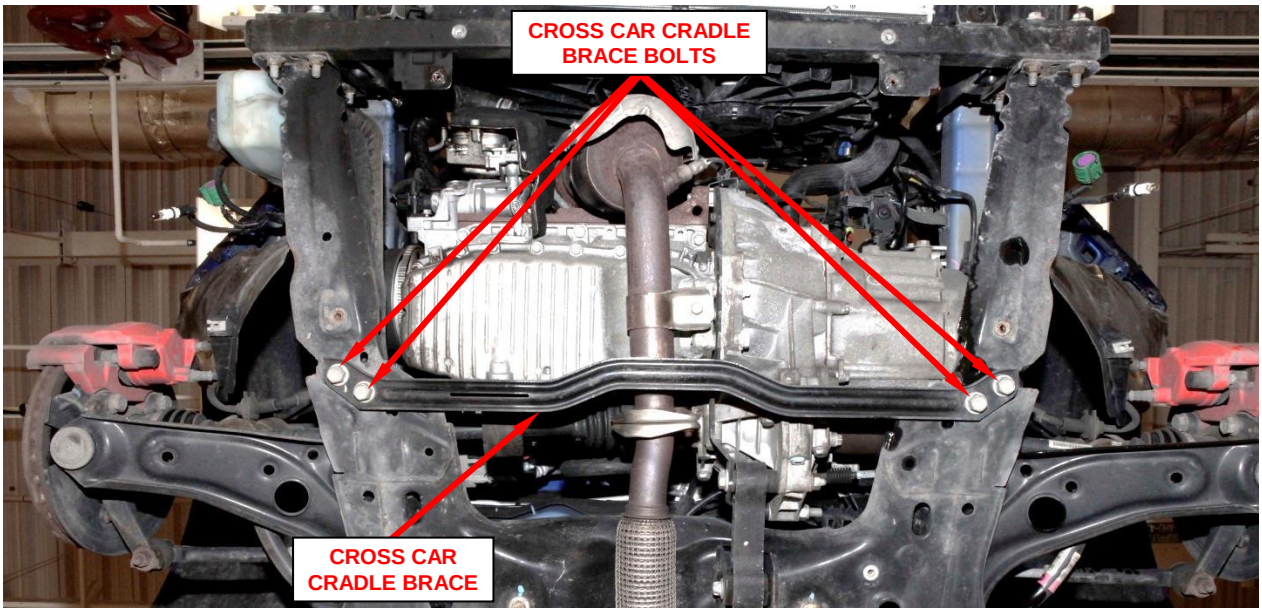

Figure 33 – Cross Car Cradle Brace

30. Remove and save the cross car cradle brace bolts then remove and save the cross car cradle brace (Figure 33).

    NOTE: The following Steps 31 through 40 must be performed to both the left and right sides of the vehicle.

Service Procedure [Continued]

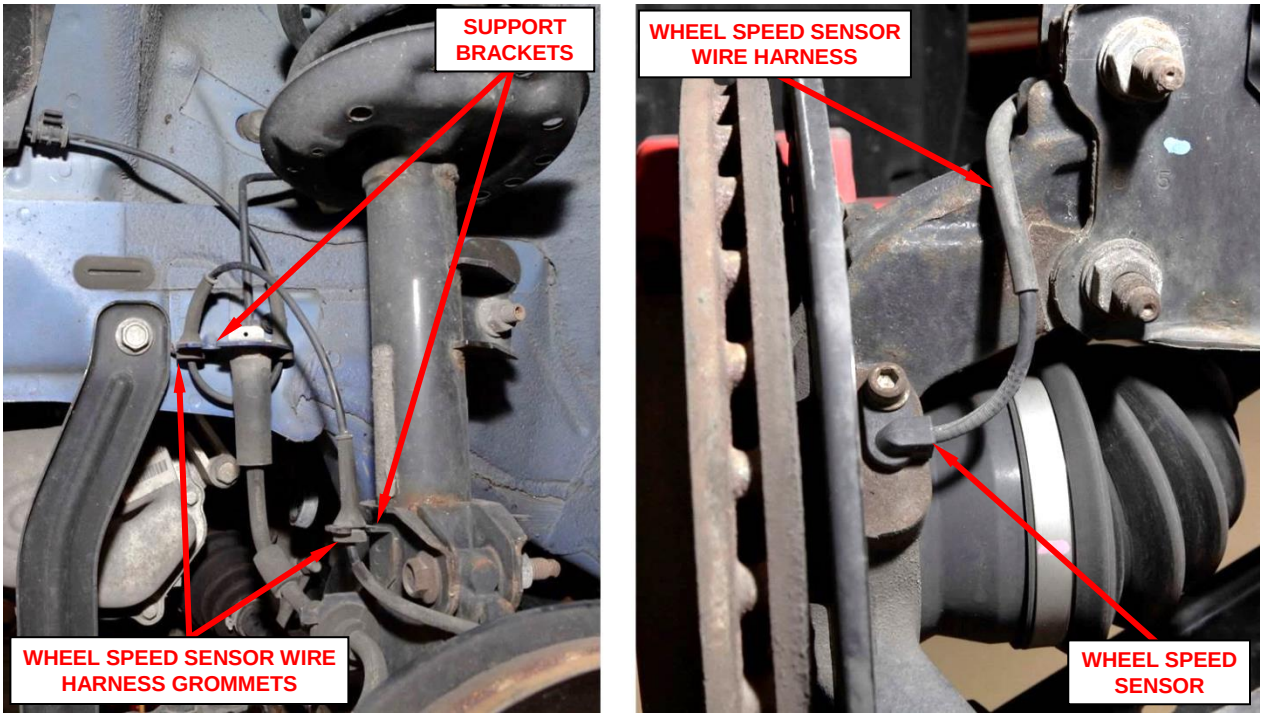

Figure 34 – Wheel Speed Sensor Wire Harness

31. Remove the wheel speed sensor wire harness grommets from the support brackets to provide enough wire length for axle shaft removal (Figure 34).

32. Using a suitable punch, lift the two staked areas in the hub nut to avoid damaging the half shaft (Figure 35).

33. While a helper applies the brakes to keep the hub from rotating, remove the hub nut from the half shaft and **DISCARD**. **The used hub nut is not reusable** (Figure 35).

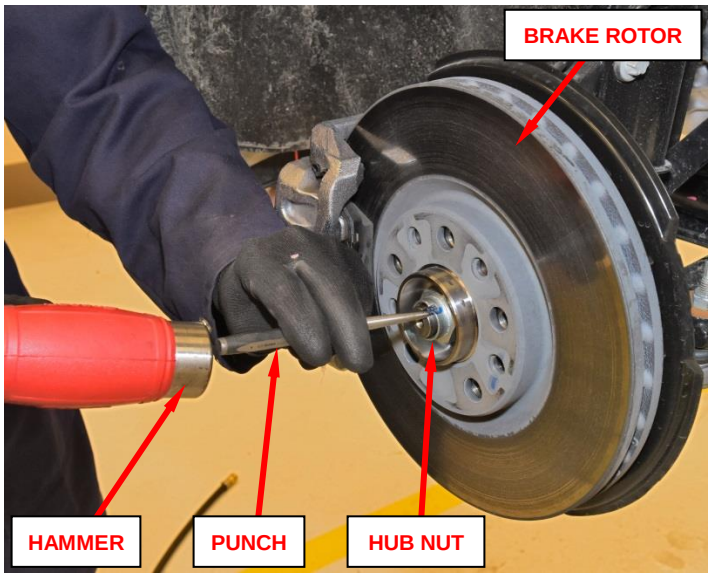

Figure 35 – Unstake Hub Nut

Service Procedure [Continued]

34. Remove the nut securing the outer tie rod end to the steering knuckle and **DISCARD**. **The used tie rod end nut is not reusable** (Figure 36).

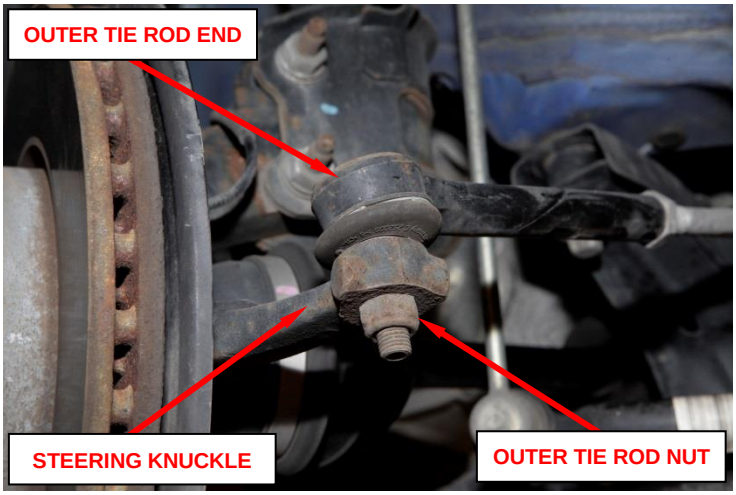

Figure 36 – Outer Tie Rod End

35. Using Ball Joint Remover 9360, separate the outer tie rod end from the steering knuckle (Figure 37).

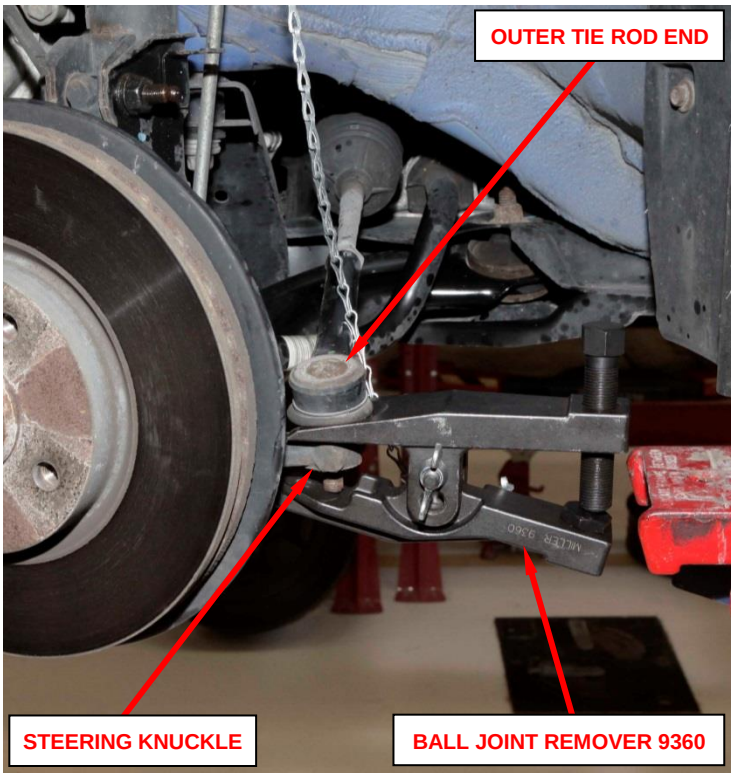

Figure 37 – Disconnect Tie Rod From Knuckle

Service Procedure [Continued]

36. While holding the bolt heads stationary, remove the two nuts from the bolts attaching the strut to the knuckle (Figure 38).

37. Remove the two bolts attaching the strut to the knuckle (Figure 38).

38. Separate the half shaft Constant Velocity (CV) joint from the wheel hub (Figure 39).

    NOTE: The half shaft CV joint may stick in the hub bearing during removal. A dead-blow or plastic hammer may be used to tap the half shaft CV joint inward and out of the hub bearing.

39. Use a pry bar to separate the half shaft tripod joint from the transmission differential side gear (Figure 40).

    NOTE: Never pull on the half shaft, joint boot, or the outboard CV joint housing. Pull from the inner tripod joint housing.

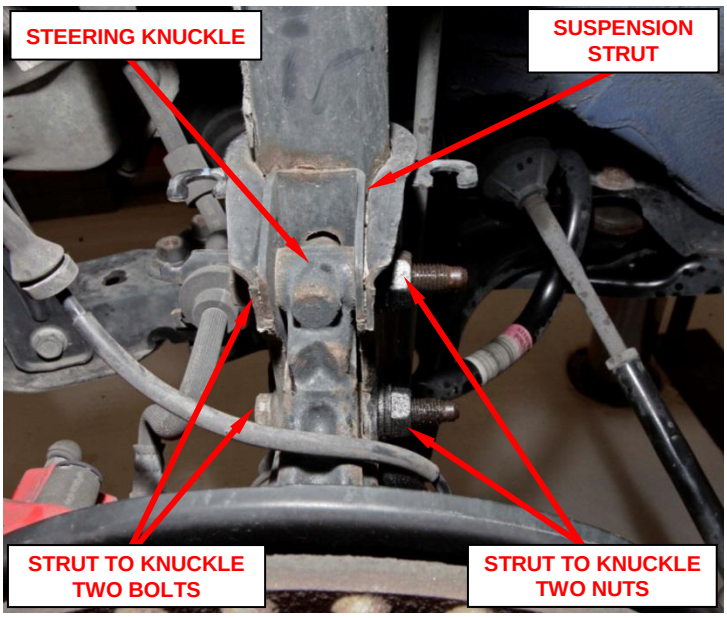

Figure 38 – Lower Ball Joint Pinch Bolt

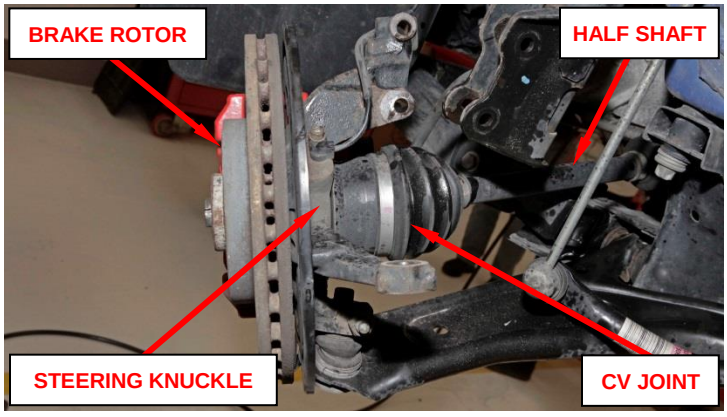

Figure 39 – Half Shaft CV Joint

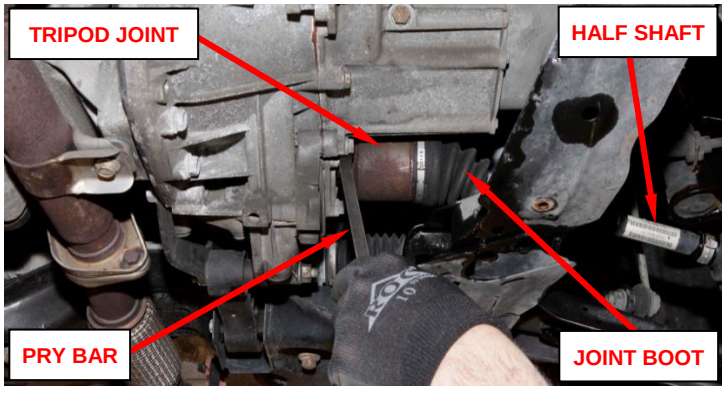

Figure 40 – Half Shaft Tripod Joint

Service Procedure [Continued]

40. Support the steering knuckle to prevent any damage to the brake hose or wheel speed sensor wire during transmission removal (Figure 41).

NOTE: Steps 31 through 40 must have been performed to both the left and right sides of the vehicle before continuing with Step 41.

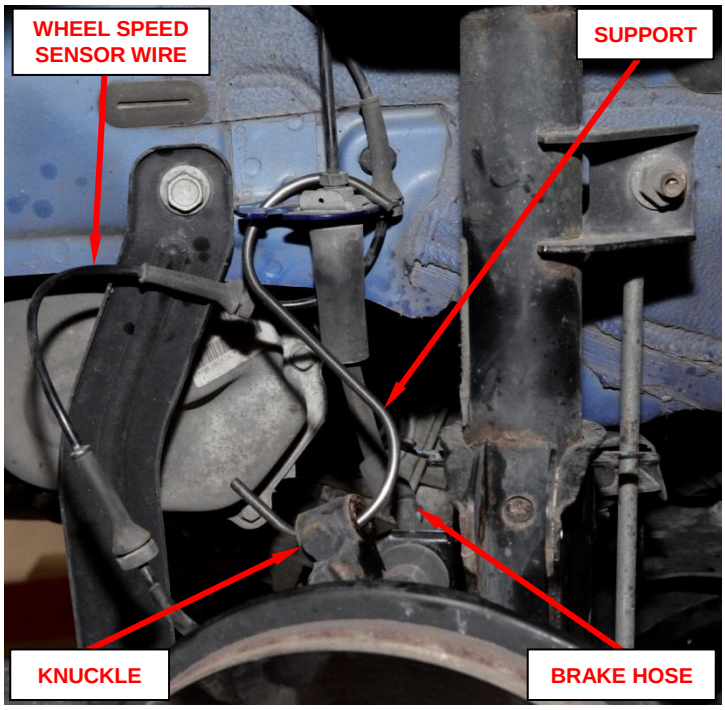

Figure 41 – Support Steering Knuckle

41. Remove and save the two bolts attaching the vertical brace to the left side of the vehicle, then remove and save the vertical brace (Figure 42).

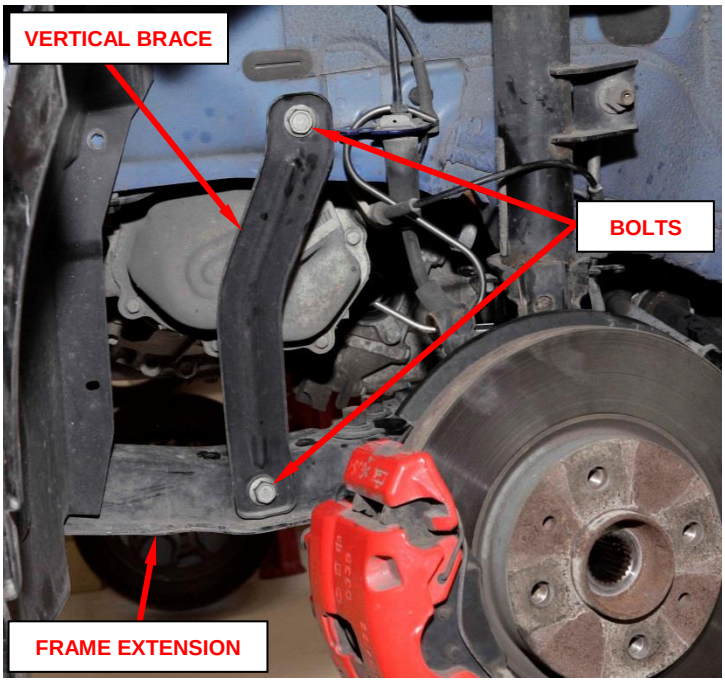

Figure 42 – Vertical Brace Left Side

Service Procedure [Continued]

42. Support the transmission with wood block(s) placed between the transmission and frame extension to prepare for left transmission mount bolt removal (Figure 43).

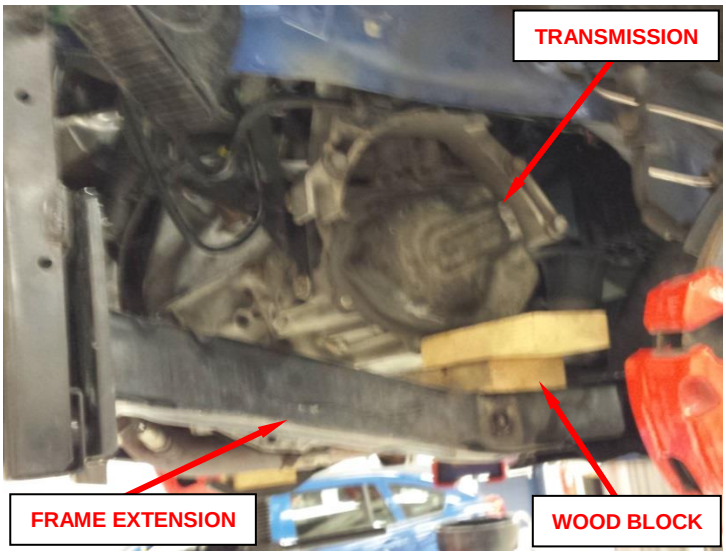

Figure 43 – Support Transmission

43. Lower the vehicle.

44. Remove and save the center bolt from the left transmission mount isolator (Figure 44).

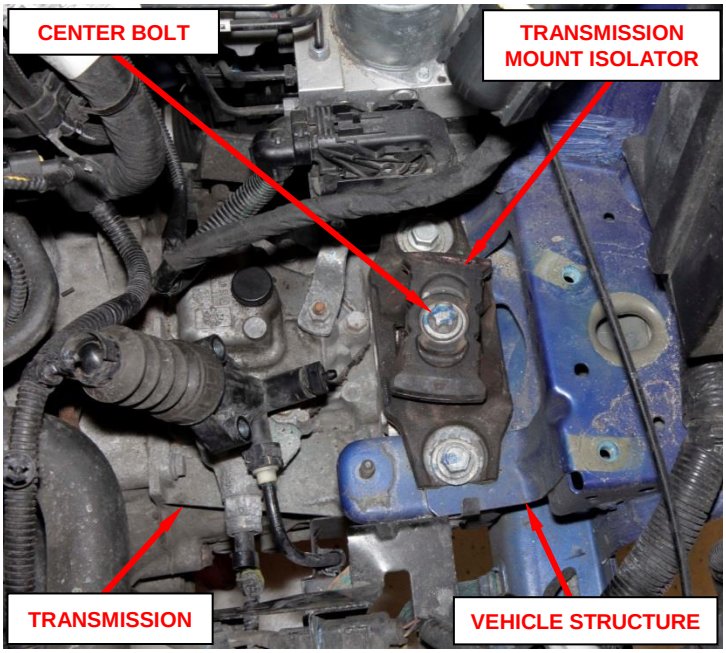

Figure 44 – Left Transmission Mount

45. Raise and support the vehicle.

Service Procedure [Continued]

46. Support the engine with an appropriate support stand (Figure 45).

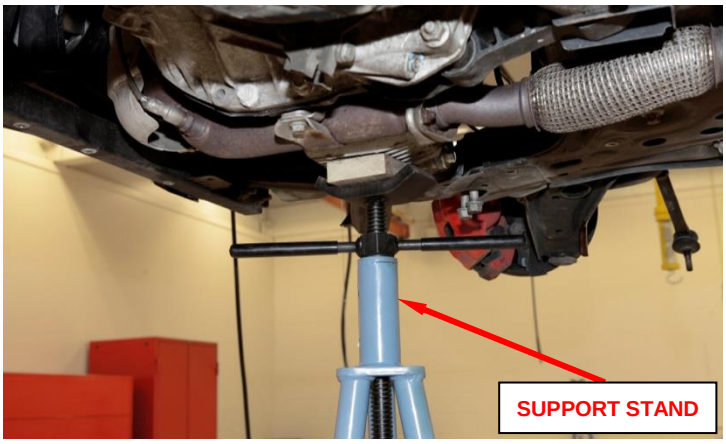

Figure 45 – Support Engine

47. Remove the wood blocks previously installed in **Step 42**.

48. Remove and save the four bolts with washers attaching the left frame extension to the radiator core support (Figure 46).

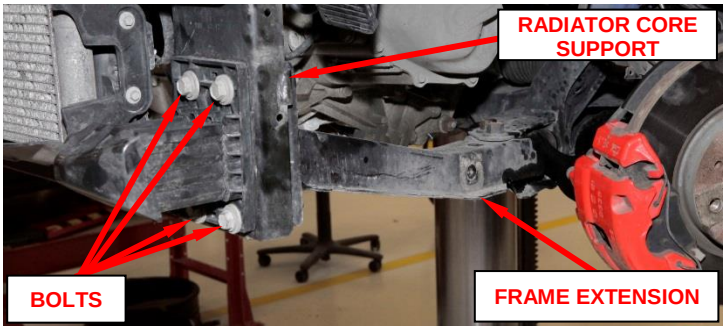

Figure 46 – Frame Extension

49. Remove and save the left frame extension (Figure 46).

50. Remove and save the three bolts attaching the left transmission mount bracket to the transmission (Figure 47).

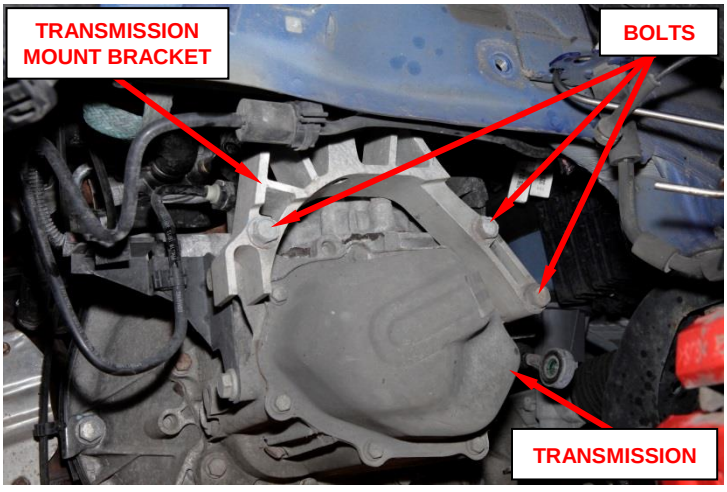

Figure 47 – Left Transmission Mount Bracket

51. Remove and save the left transmission mount bracket (Figure 47).

Service Procedure [Continued]

52. Loosen the bolt attaching the rear transmission mount to the vehicle body (Figure 48). Bolt does not need to be fully removed.

53. Remove the nut from the bolt attaching the rear transmission mount to the transmission (Figure 48). Bolt does not need to be fully removed.

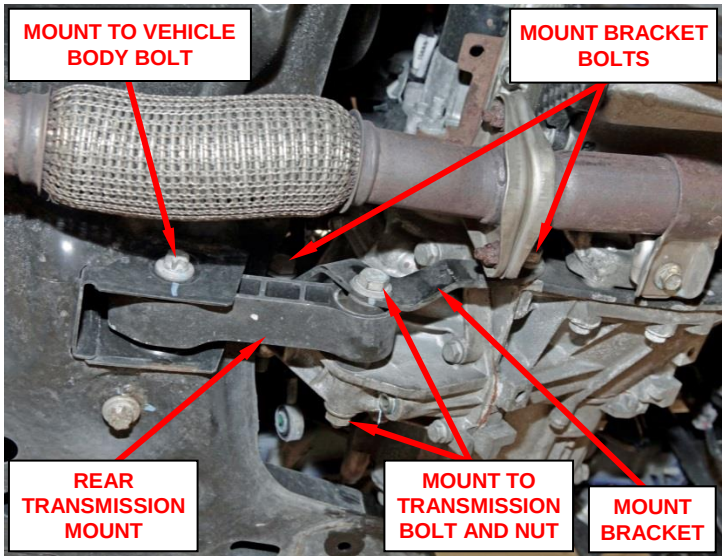

Figure 48 – Rear Transmission Mount

54. Remove and save the two bolts attaching the rear transmission mount bracket to the transmission (Figure 48).

55. Rotate rear transmission mount and bracket assembly down away from the transmission. Mount and bracket will hang from the vehicle body bolt.

56. Remove and save the bolt from the transmission dust shield. Bolt is located near the post catalyst oxygen sensor (Figure 49).

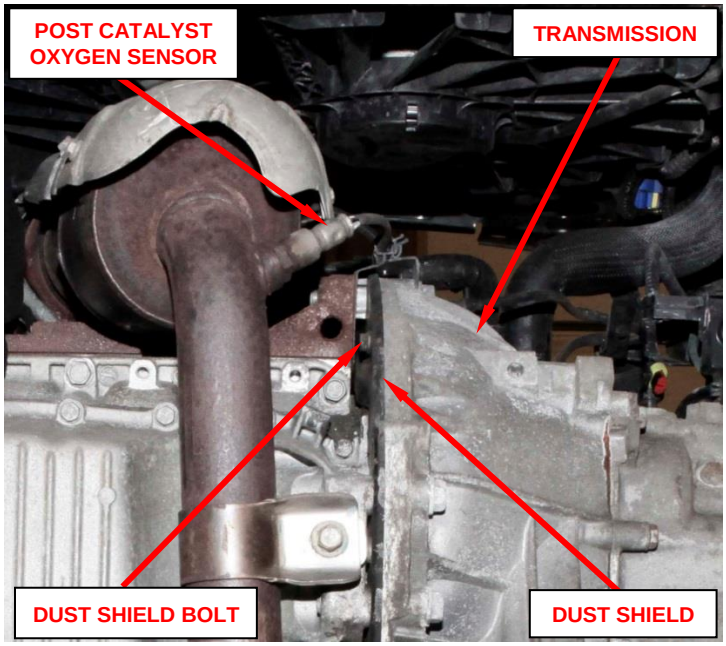

Figure 49 – Transmission Dust Shield Bolt

Service Procedure [Continued]

57. Remove and save the two bolts attaching the clutch hydraulic tube support bracket (Figure 50).

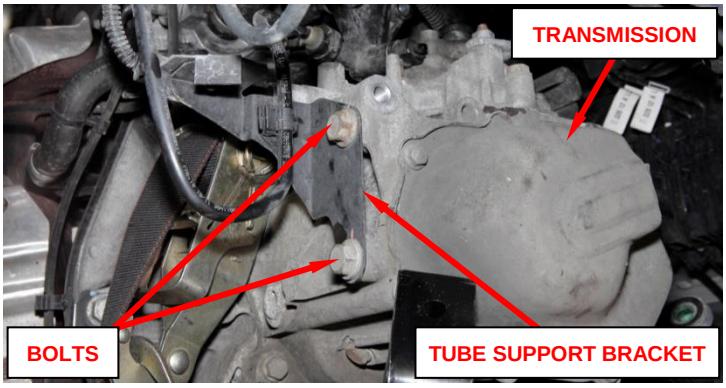

Figure 50 – Hydraulic Tube Support Bracket

58. Remove and save the shift lever counter weight to provide some additional clearance while removing and installing the transmission (Figure 51).

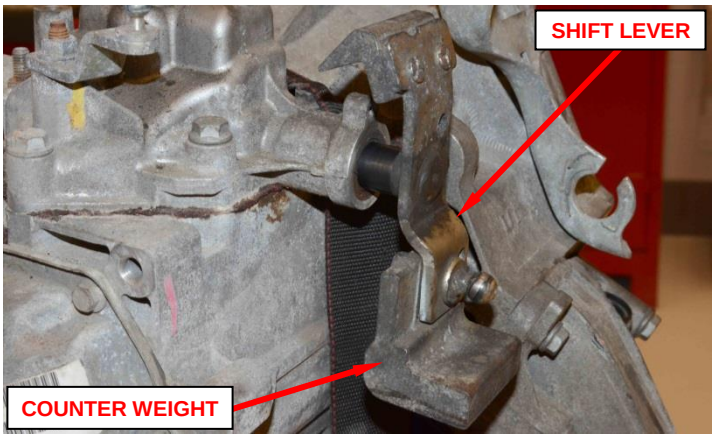

Figure 51 – Shift Lever Counter Weight

59. Remove and save the two lower bolts from the transmission bell housing (Figure 52).

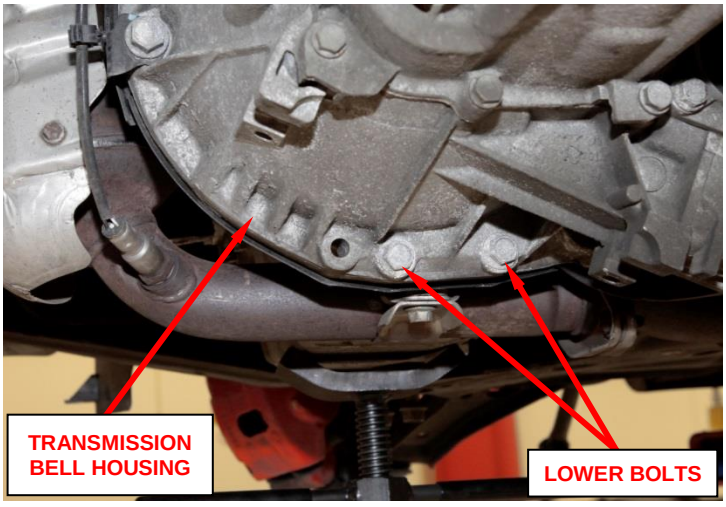

Figure 52 – Lower Bell Housing Bolts

Service Procedure [Continued]

60. Support the transmission with an appropriate adjustable transmission jack stand. Secure the transmission to the jack stand (Figure 53).

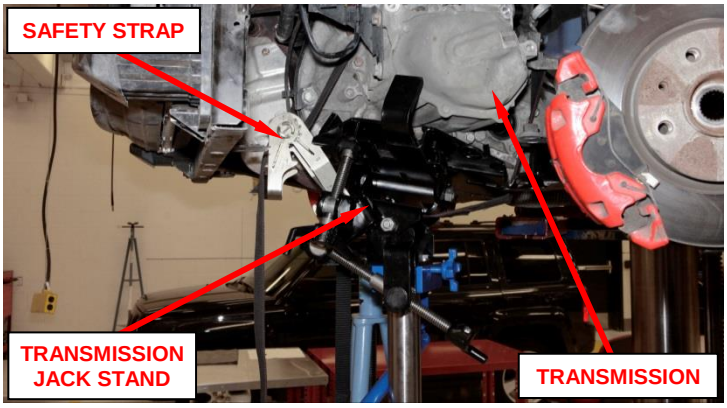

Figure 53 – Support Transmission

61. Remove and save the lower starter motor bolt (Figure 54).

62. Remove and save the nut from the right side transmission bell housing mounting stud (Figure 54).

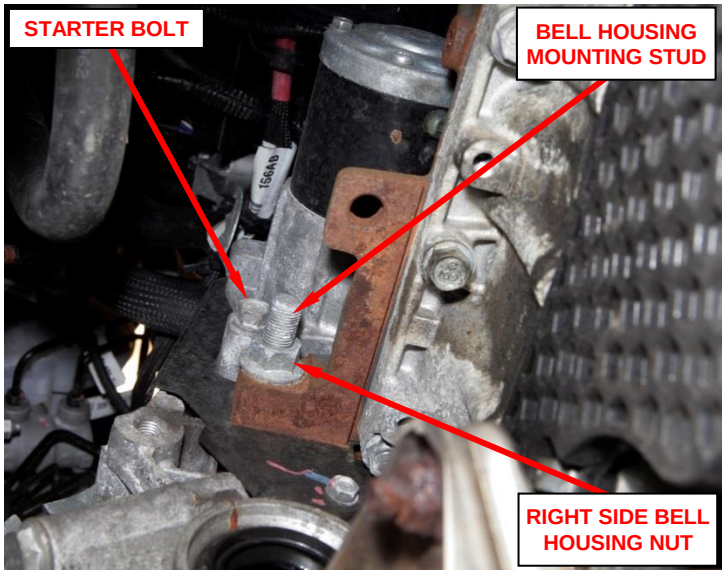

Figure 54 – Right Side Bell Housing Fasteners

63. Remove and save the bolt from the left side of the transmission bell housing (Figure 55).

64. Reposition the post oxygen sensor wire harness retainer bracket (Figure 55).

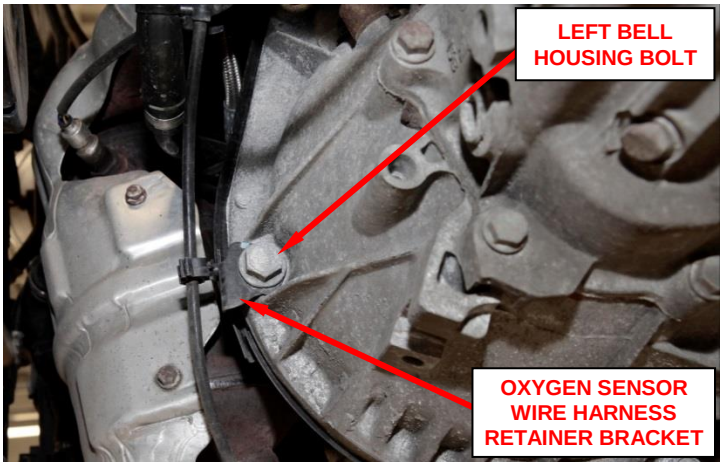

Figure 55 – Left Side Bell Housing Bolt

65. Remove the transmission from the vehicle.

Service Procedure [Continued]

66. Remove and **DISCARD** the six clutch cover bolts (Figure 56).

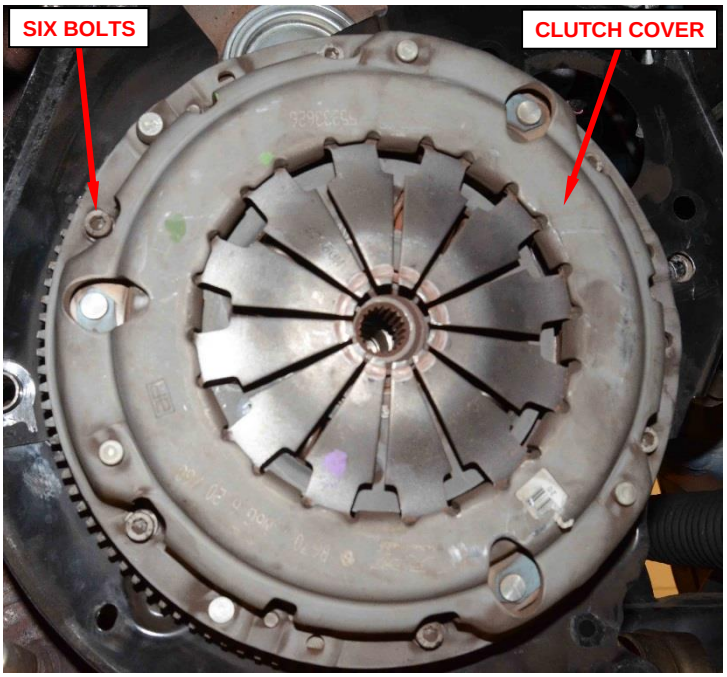

Figure 56 – Clutch Cover Bolts

67. Remove the clutch cover and the clutch disc (Figure 57).

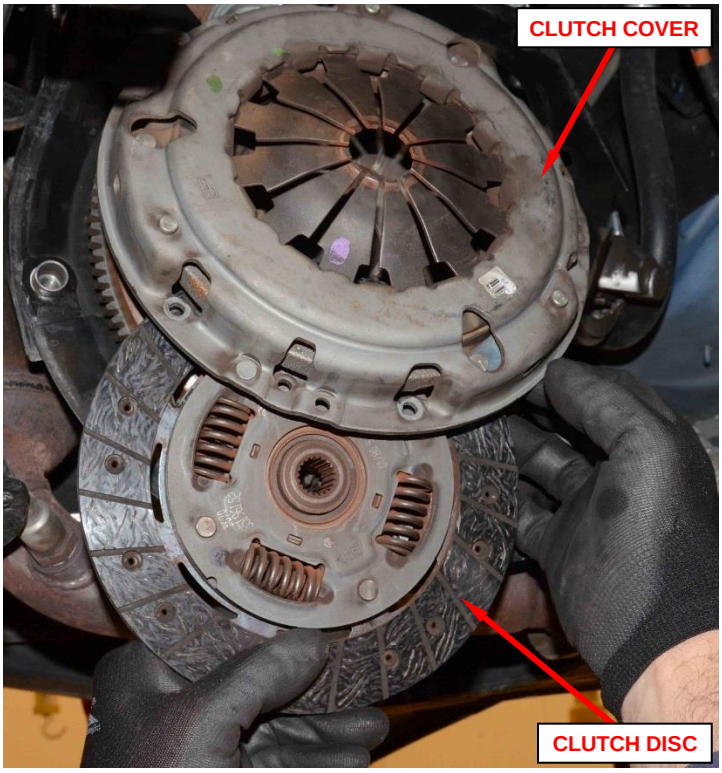

Figure 57 – Clutch Cover and Clutch Disc

Service Procedure [Continued]

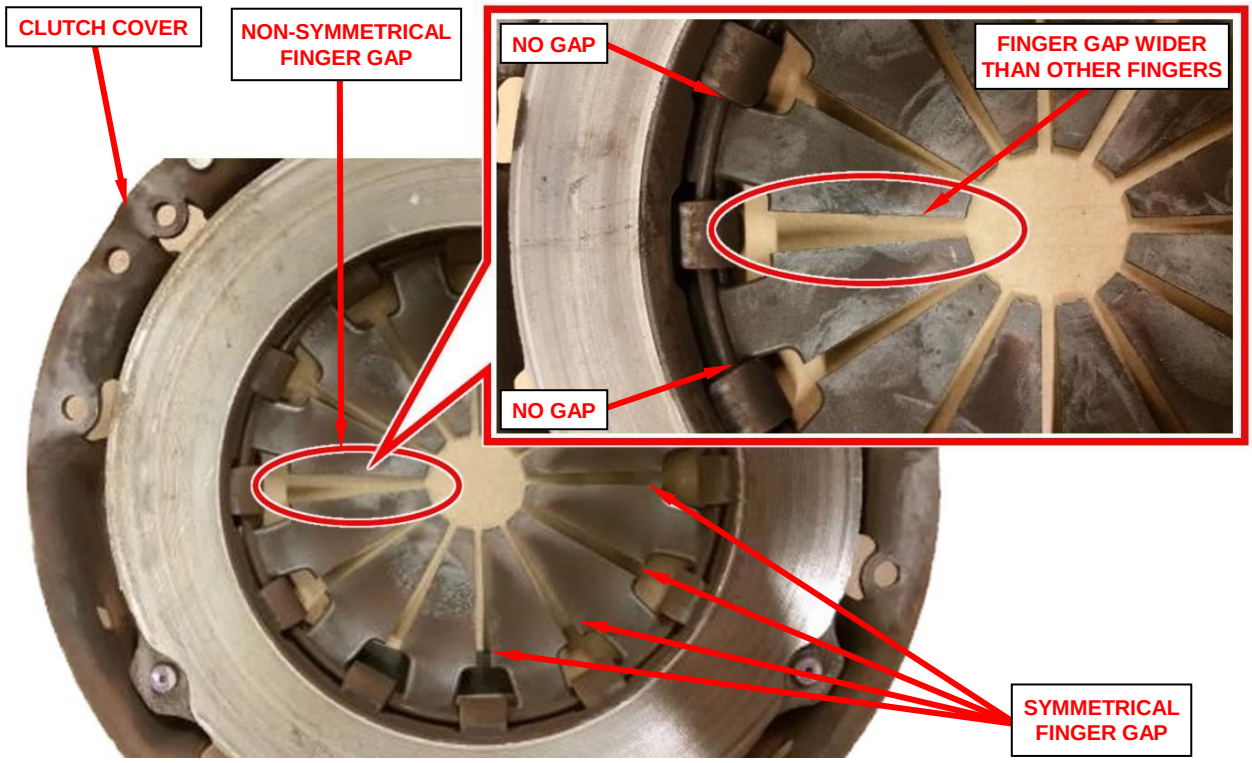

Figure 58 – Non-Symmetrical Finger Gap Indicating Fractured Diaphragm Spring

68. Inspect the clutch cover diaphragm spring for a non-symmetrical gap between the fingers. The fingers will also not appear symmetrically centered within the clutch cover housing (Figure 58).

    These conditions are an indication of a fracture along the collar of the diaphragm spring (Figure 59).

    Follow the gap between the fingers towards the collar to verify that the clutch cover diaphragm spring is fractured.

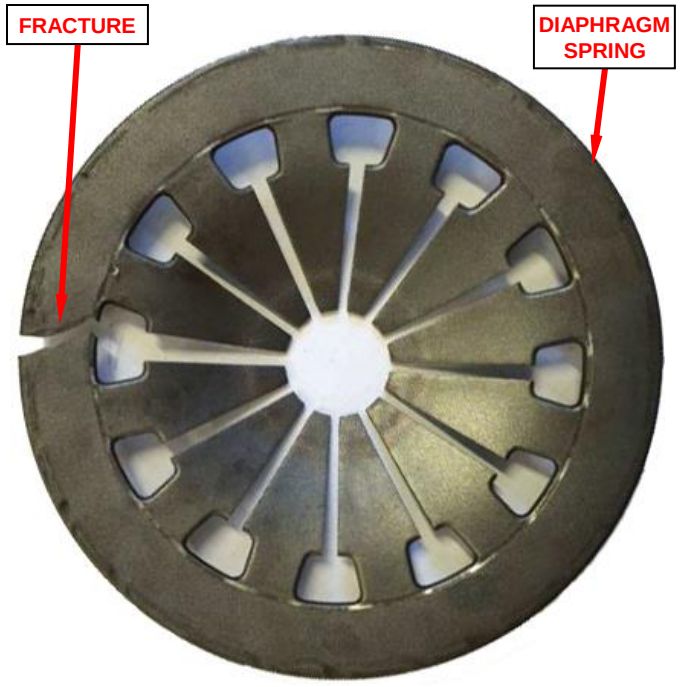

Figure 59 – Diaphragm Spring Fractured

Service Procedure [Continued]

NOTE: If the clutch cover diaphragm spring is NOT fractured, the clutch replacement labor, parts and materials will NOT be covered by Safety Recall S34.

69. Inspect the clutch disc friction material to determine that it is still in good condition with no evidence of customer abuse or excessive wear (Figure 60).

    NOTE: If the clutch disc friction material shows signs of customer abuse or excessive wear, the clutch replacement labor, parts and materials will NOT be covered by Safety Recall S34.

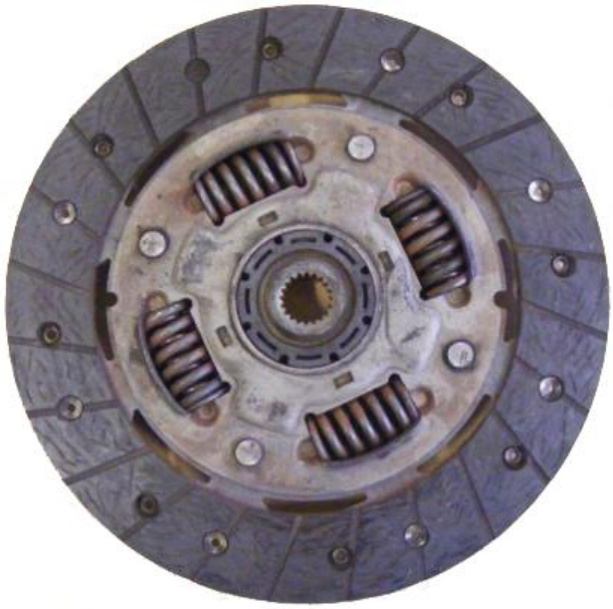

Figure 60 – Clutch Disc Friction Material

NOTE: If the clutch diaphragm spring is NOT fractured and/or the clutch disc friction material shows signs abuse or excessive wear, any reimbursement claim for clutch assembly replacement parts and/or labor as part of Safety Recall S34 will be rejected.

70. Determine which of the following criteria the clutch assembly meets before proceeding:

    - If clutch disc friction material is in good condition with no evidence of customer abuse or excessive wear and clutch cover diaphragm spring is fractured. Clutch assembly replacement parts and labor will be covered by Safety Recall S34.
    - If clutch disc friction material shows evidence of customer abuse or excessive wear. Clutch assembly replacement parts and labor will **NOT** be covered by Safety Recall S34 even if the clutch cover diaphragm spring is fractured.

Service Procedure [Continued]

71. Clean the surface of the flywheel with Mopar® brake parts cleaner or equivalent non-residue cleaner to make certain that all oil, grease and rust has been removed (Figure 61).

Figure 61 – Clean Flywheel Surface

72. Clean the **NEW** clutch cover pressure plate surface with Mopar® brake parts cleaner or equivalent non-residue cleaner to make certain that all oil, grease and rust has been removed (Figure 62).

Figure 62 – Clean Clutch Cover

Service Procedure [Continued]

73. Position the clutch disc and clutch cover to the flywheel (Figure 63).

    NOTE: Clutch disc springs must face toward the clutch cover and away from the flywheel (Figure 63).

74. Install by hand **NEW** clutch cover-to-flywheel bolts, do not tighten the bolts.

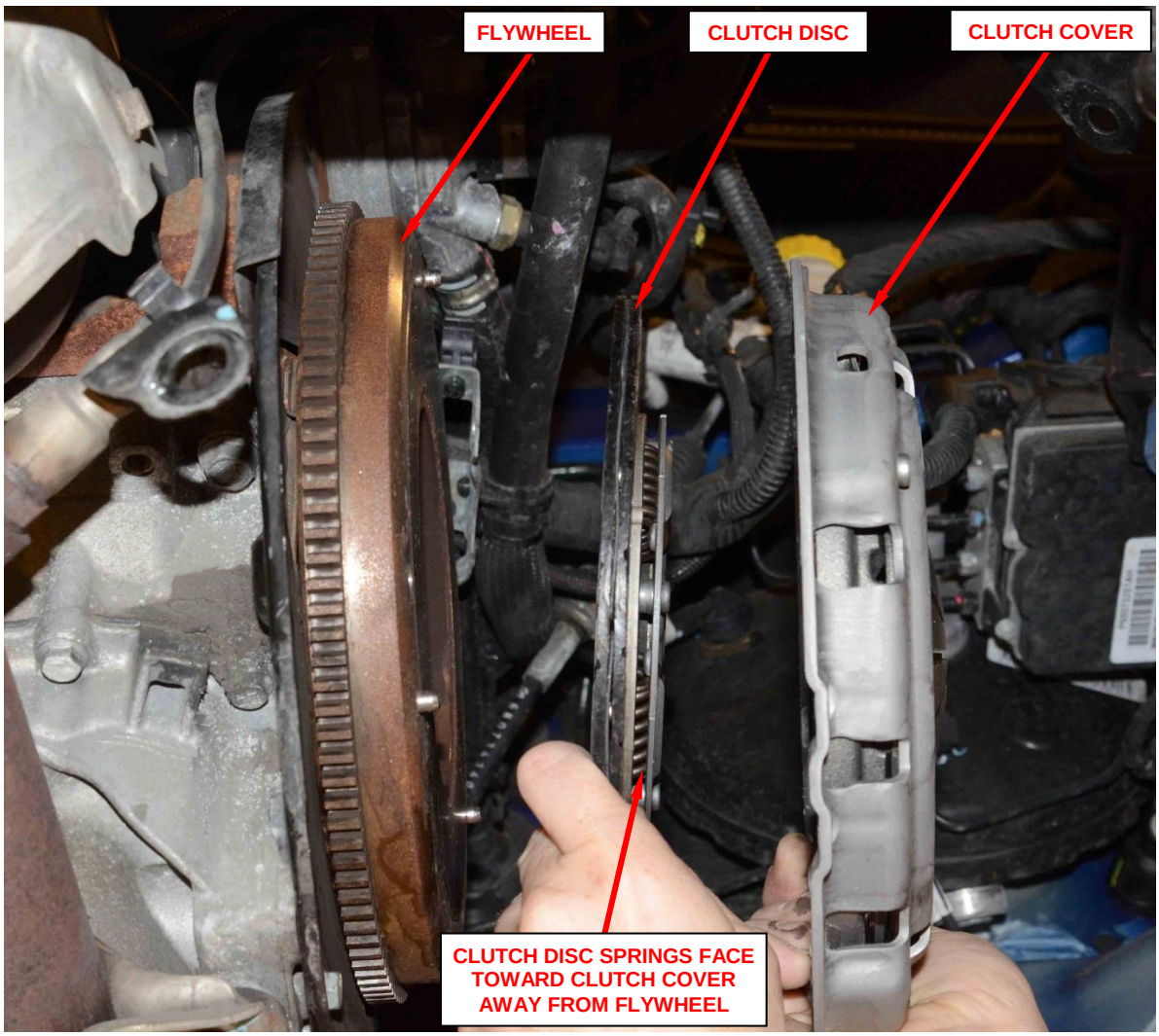

Figure 63 – Assemble Clutch Disc and Clutch Cover to Flywheel

Service Procedure [Continued]

75. Use a suitable 15mm diameter clutch disc alignment tool to center the clutch disc. Inspect around the parameter of the clutch cover to ensure that the clutch disc is perfectly centered (Figure 64).

    NOTE: Ensure that the clutch disc is perfectly centered; otherwise transmission installation could be difficult.

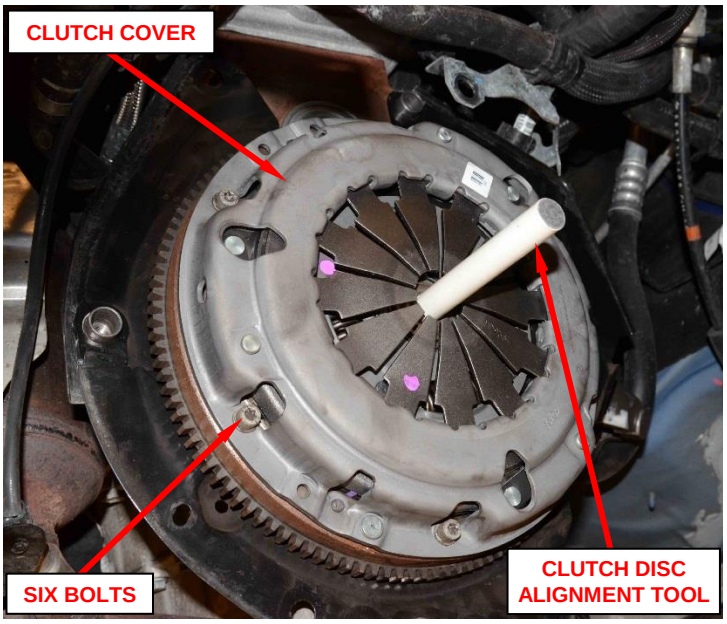

Figure 64 – Clutch Cover Alignment and Bolts

76. Using a "star" pattern, tighten the six clutch cover bolts to 16 N·m (12 ft. lbs.) (Figure 64).

77. Remove the clutch disc alignment tool from the clutch disc (Figure 64).

78. Remove and **DISCARD** the clutch release bearing from the clutch release fork (Figure 65).

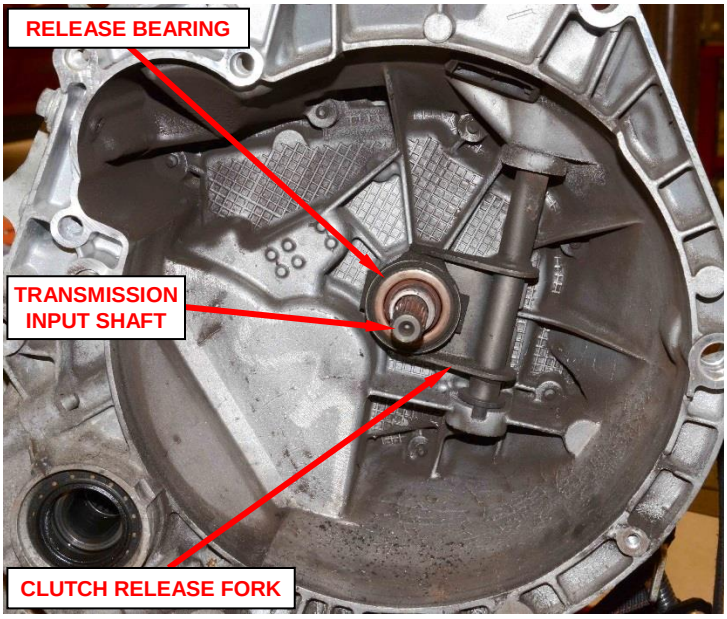

Figure 65 – Clutch Release Bearing

Service Procedure [Continued]

79. Clean the surface of the clutch release fork fingers, input shaft pilot bearing and the input shaft splines to make certain that all oil, grease, and rust has been removed (Figure 66).

    NOTE: Do not over lubricate shaft splines. This will result in grease contamination of the clutch disc.

80. Lubricate the surface of the clutch release fork fingers, input shaft pilot bearing and the input shaft splines with Mopar® high temperature bearing grease or equivalent (Figure 66).

81. Lubricate the surface of the clutch disc splines with Mopar® high temperature bearing grease or equivalent (Figure 67).

82. Install the **NEW** release bearing and secure to the release fork (Figure 68).

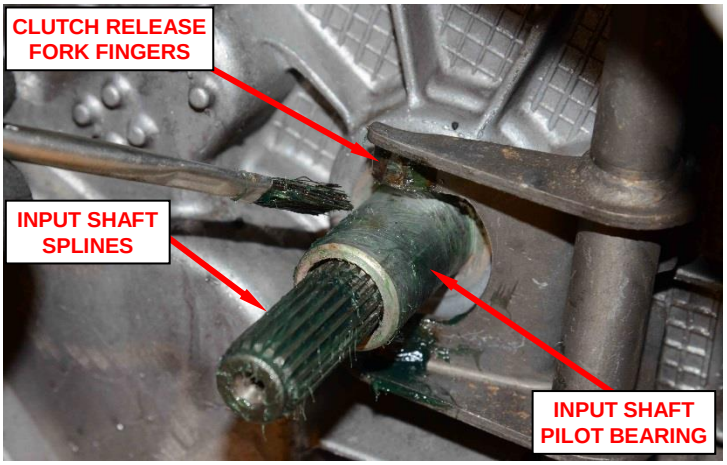

Figure 66 – Lubricate Clutch Release

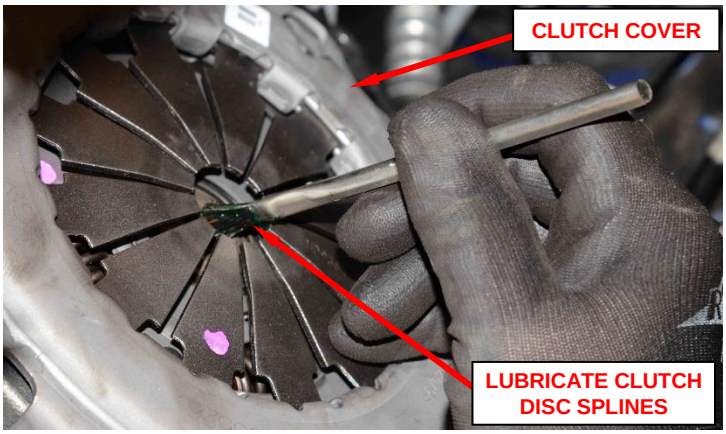

Figure 67 – Lubricate Clutch Disc Splines

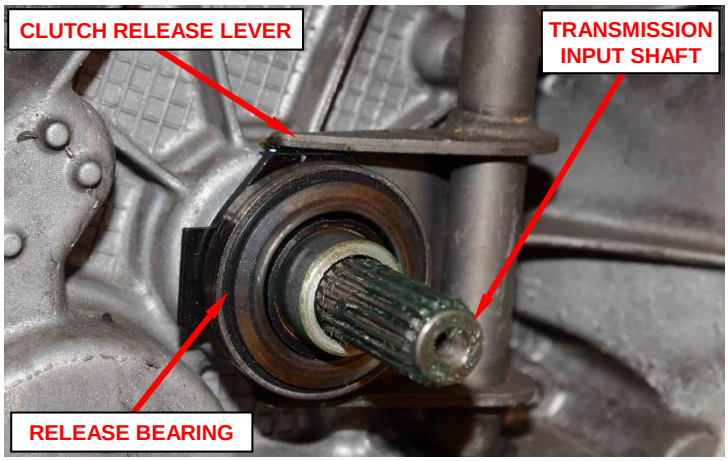

Figure 68 – New Clutch Release Bearing

Service Procedure [Continued]

83. Using an appropriate adjustable transmission jack stand, install the transmission to the vehicle.

84. Position the post oxygen sensor wire harness retainer bracket to the bell housing then install the left side transmission bell housing bolt. Tighten the bolt to 60 N·m (44ft. lbs.) (Figure 55).

85. Install the nut to the right side transmission bell housing mounting stud. Tighten the nut to 60 N·m (44ft. lbs.) (Figure 54).

86. Install the lower starter motor bolt. Tighten the bolt to 26 N·m (19 ft. lbs.) (Figure 54).

87. Remove the transmission jack stand from the transmission (Figure 53).

88. The two lower bolts from the transmission bell housing (Figure 52).

89. Install the counter weight to the transmission shift lever (Figure 51).

90. Install the two bolts attaching the clutch hydraulic tube support bracket to the transmission. Tighten the bolts to 45 N·m (33 ft. lbs.) (Figure 50).

91. Install the bolt to the transmission dust shield and tighten the bolt securely. Bolt is located near the post catalyst oxygen sensor (Figure 49).

92. Rotate rear transmission mount and bracket assembly into position then install the two bolts attaching the rear transmission mount bracket to the transmission. Tighten the bolts to 80 N·m (59 ft. lbs.) (Figure 48).

93. Install the bolt and nut attaching the rear transmission mount to the transmission. Tighten the bolt to 80 N·m (59 ft. lbs.) (Figure 48).

94. Install the bolt attaching the rear transmission mount to the vehicle body. Tighten the bolt to 130 N·m (96 ft. lbs.) (Figure 48).

Service Procedure [Continued]

95. Install the left transmission mount bracket to the transmission and install the three bolts attaching the left transmission mount bracket to the transmission. Tighten the bolts to 50 N·m (37 ft. lbs.) (Figure 47).

96. Install the left frame extension and install the four bolts attaching the frame extension to the radiator core support. Tightened the bolts to 45 N·m (33 ft. lbs.) (Figure 46).

97. Support the transmission at the proper height with wood block(s) placed between the transmission and frame extension to prepare for left transmission mount bolt installation (Figure 43).

98. Remove the engine support stand (Figure 45).

99. Lower the vehicle.

100. Install the center bolt to the left transmission mount isolator. Tighten the bolt to 110 N·m (81 ft. lbs.) (Figure 44).

101. Raise and support the vehicle.

102. Remove the wood blocks previously installed in **Step 97**.

103. Install the vertical brace with two bolts to the left side of the vehicle. Tighten the bolts to 45 N·m (33 ft. lbs.) (Figure 42).

Service Procedure [Continued]

NOTE: The following Steps 104 through 116 must be performed to both the left and right sides of the vehicle.

104. Clean the splines and oil seal sealing surface of the half shaft tripod joint.

105. Lightly lubricate oil seal sealing surface on the tripod joint with fresh clean transaxle fluid.

106. While holding the half shaft assembly by the tripod joint and interconnecting shaft, insert tripod spline shaft through the axle seal and into the differential side gear. Engage the splines before applying inward force. Push the tripod inward until the lock ring is fully seated in the differential side gear. If lock ring is fully seated, the tripod joint will not be removable from the transmission by hand.

107. Clean all debris from the bearing hub where the outer Constant Velocity (CV) joint will be installed into steering knuckle assembly.

108. Insert the outer CV joint spline shaft into the bearing hub (Figure 39).

109. Insert the top of the steering knuckle into the bottom of the suspension strut (Figure 38).

110. Insert the two bolts through the suspension strut and steering knuckle then install the nuts (Figure 38).

111. Align the washers on the bolts and nuts with the witness marks on the sides of the suspension strut then tighten the nuts to 75 N·m (55 ft. lbs.) (Figure 38).

112. Install the outer tie rod ball stud into the steering knuckle arm. Start a NEW tie rod mounting nut on the stud. While holding the tie rod end stud with a wrench, tighten the nut to 40 N·m (30 ft. lbs.) (Figure 36).

Service Procedure [Continued]

NOTE: Always install a NEW hub nut. The original hub nut is one time use only and must be discarded when removed.

113. Clean all foreign matter from the threads of the half shaft stub shaft.

114. Install a **NEW** hub nut on the end of the half shaft stub shaft then using a 12-point thin-walled 36 mm Craftsman® socket (or equivalent), tighten the hub nut to 310 N·m (229 ft. lbs.). It may be necessary to have a helper apply the brakes to keep the hub from rotating.

NOTE: Do not use air tools on the staking tool while staking the hub nut.

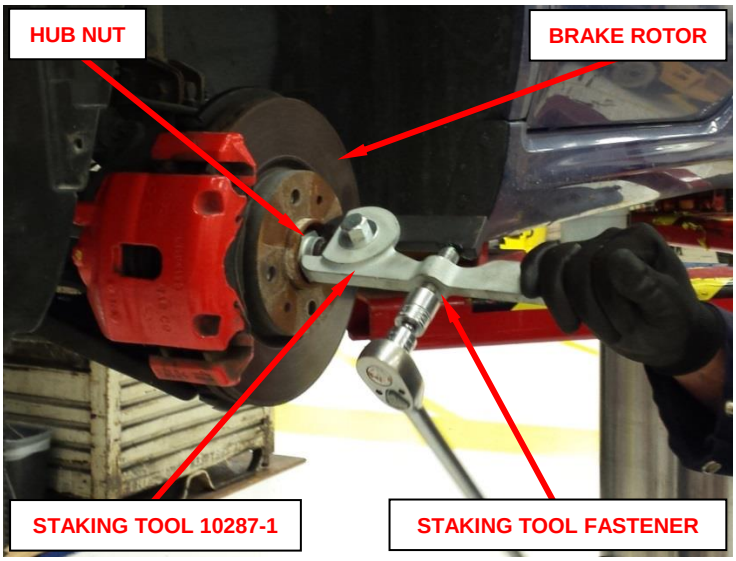

Figure 69 – Staking Tool

NOTE: The hub nut must be staked so that it looks similar to (Figure 70). Both edges must be split and bent into the shape shown. The staking must be opposite of the direction to tighten the nut (Figure 70).

115. Using Staking Tool 10287-1, align the leading cutting edge of the tool with the top left side channel on the axle. Tighten the fastener on the staking tool with hand tools until the threads bottom out completely (Figure 69).

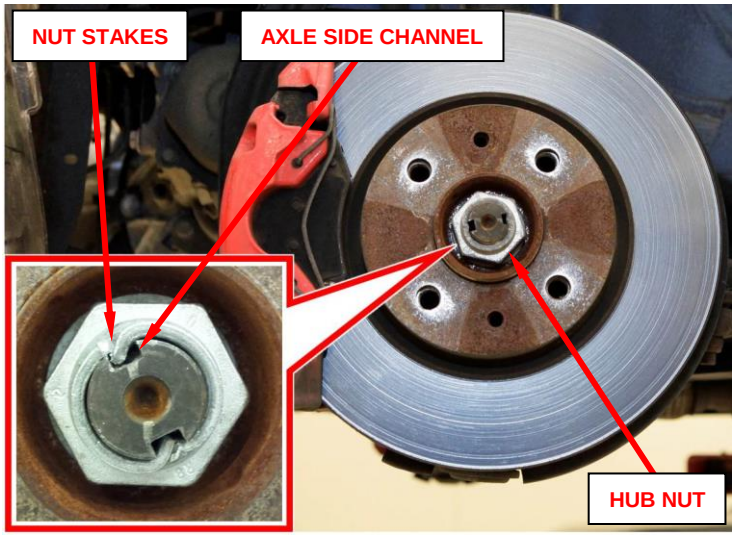

Figure 70 – Hub Nut Properly Staked

Service Procedure [Continued]

116. Install the wheel speed sensor wire harness grommets to the support brackets (Figure 34).

NOTE: The Steps 104 through 116 must have been performed to both the left and right sides of the vehicle before continuing with Step 117.

NOTE: The vehicle must be level when checking the fluid level.

117. Remove the transmission fill plug. The fill plug is located on the left side of the transmission housing (Figure 71).

NOTE: All C514 Transmissions require the use of C-Series Transmission Fluid.

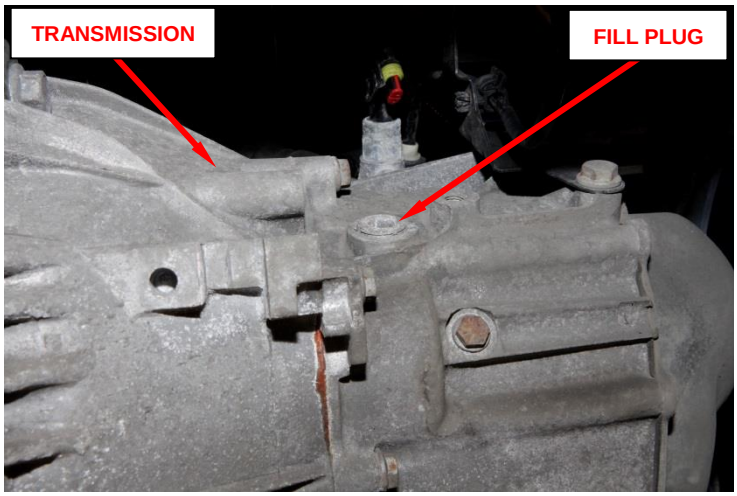

Figure 71 – Transmission Fluid Fill Plug

118. Fill the transmission with fluid until the fluid level is even with the bottom of the transmission fill hole. Tighten the fill plug to 25 N·m (18 lb ft.) (Figure 71).

119. Install the cross car cradle brace and bolts. Tighten the bolts to 90 N·m (66 ft. lbs.) (Figure 33).

120. Connect the fog lamp electrical connector to the front fascia (Figure 31).

121. Align and position the front fascia to the vehicle then engage the fascia to fender retaining clips along the left and right side fender edges (Figure 31).

122. Install the four screws securing the front fascia to the upper radiator support. Tighten the screws securely (Figure 30).

123. Install the single screw per side that secures the front fascia to the fender on the left and right side of the vehicle. Tighten the screw securely (Figure 28).

Service Procedure [Continued]

124. Install the five screws securing the right front wheel house splash shield. Tighten the screws securely (Figure 28).

125. Install the four screws securing the left front wheel house splash shield. Tighten the screws securely (Figure 28).

126. Connect the electrical connectors to the left and right side turn signals (Figure 29).

127. Install the electrical access panels on the left and right side (Figure 28).

128. Install both of the front wheel and tire assemblies (Figure 27).

NOTE: Never use oil or grease on the wheel mounting (lug) bolts.

a. Clean the wheel mounting surfaces, removing any build-up of corrosion. It is important to have good metal-to-metal contact between the wheel, hub, and brake rotor.

b. Position the tire and wheel assembly and install the four wheel mounting (lug) bolts. Progressively tighten all wheel mounting (lug) bolts in a "star" pattern.

- For steel wheels, tighten the bolts to 85 N·m (63 ft. lbs.).
- For aluminum wheels, tighten the bolts to 100 N·m (75 ft. lbs.).

129. Install the two lower screws to the left and right side wheel house splash shields. Tighten the screws securely (Figure 27).

130. Install the three lower screws from the front fascia. Tighten the screws securely (Figure 27).

131. Install the belly pan and install the six screws securing the belly pan. Tighten the screws securely (Figure 27).

132. Lower the vehicle.

Service Procedure [Continued]

133. Install the two upper bell housing bolts and tighten the bolts to 60 N·m (44 ft. lbs.) (Figure 26).

134. Install the upper starter motor bolt and tighten the bolt to 26 N·m (19 ft. lbs.) (Figure 26).

135. Position and install the shift cable to the mounting bracket (Figure 25).

136. Install the shift cable retainer (Figure 25).

137. Connect the shift cable to the shift lever (Figure 25).

138. Position and install the selector cable to the mounting bracket (Figure 25).

139. Install the selector cable retainer (Figure 25).

140. Connect the selector cable to the selector lever (Figure 25).

141. Install the ground strap to the transmission ground stud then install the ground stud nut. Tighten the nut to 20 N·m (15 ft. lbs.) (Figure 24).

142. Position the clutch slave cylinder to the clutch release lever and transmission then install the bolts. Tighten the bolts to 20 N·m (15 ft. lbs.) (Figure 23).

143. Connect the electrical connector to the backup lamp switch (Figure 23).

144. Install the air cleaner housing cover with air filter and the air cleaner duct to the air cleaner housing (Figure 22).

145. Install the four screws that secure the air cleaner housing cover and air duct. Tighten the screws to 4 N·m (35 in. lbs.) (Figure 22).

146. Install the engine cover (Figure 21).

NOTE: Return now to Step 14 of Section C. Replace Clutch/Brake Pedal Assembly to complete the pedal assembly replacement steps.

Completion Reporting and Reimbursement

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims paid will be used by FCA to record recall service completions and provide dealer payments.

Use the following labor operation numbers and time allowances:

	Labor Operation Number	Time Allowance
Inspect for Clutch Pedal Travel Limiter	05-S3-41-81	0.2 hours
Inspect/Replace Clutch/Brake Pedal Assembly	05-S3-41-82	1.4 hours

Related Operation

Replace Clutch Disc and Pressure Plate	05-S3-41-50	4.4 hours

Add the cost of the recall parts package plus applicable dealer allowance to your claim.

NOTE: See the Warranty Administration Manual, Recall Claim Processing Section, for complete recall claim processing instructions.

Dealer Notification

To view this notification on DealerCONNECT, select "Global Recall System" on the Service tab, then click on the description of this notification.

Owner Notification and Service Scheduling

All involved vehicle owners known to FCA are being notified of the service requirement by first class mail. They are requested to schedule appointments for this service with their FIAT studios. A generic copy of the owner letter is attached.

Enclosed with each owner letter is an Owner Notification postcard to allow owners to update our records if applicable.

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

All involved vehicles have been entered into the DealerCONNECT 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. The owner's name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the **"Service"** tab and then click on **"Global Recall System."** Your dealer's VIN list for each recall displayed can be sorted by: those vehicles that were unsold at recall launch, those with a phone number, city, zip code, or VIN sequence.

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.

Recall VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this recall only and is strictly prohibited from all other use.

Additional Information

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

Customer Services / Field Operations
FCA US LLC

FIAT CHRYSLER AUTOMOBILES

MANUAL TRANSAXLE CLUTCH PEDAL

IMPORTANT SAFETY RECALL

S34 / NHTSA 16V-302

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

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Dear: (Name)

FCA has decided that a defect, which relates to motor vehicle safety, exists in certain **2012 through 2016 model year FIAT 500 vehicles equipped with a manual transaxle.**

The problem is...	**The clutch cover diaphragm spring on your vehicle may fatigue and/or fracture. A failed clutch cover diaphragm spring may result in the inability to disengage the clutch, shift gears and the potential for a loss of motive power. The inability to disengage the clutch, shift gears and/or loss of motive power could cause a crash without warning.**
What your studio will do...	**FCA will repair your vehicle free of charge.** To do this, your FIAT studio will install a clutch pedal assembly with pedal travel limiter and a clutch pedal switch. The work will take about 2 hours to complete. However, additional time may be necessary depending on service schedules.
What you must do to ensure your safety...	Simply **contact your FIAT studio,** at your convenience, to schedule a service appointment. Your FIAT studio will collect the necessary information to ensure that the appropriate parts are available so your service can be completed in a timely manner. Although not required, we recommend bringing this letter with you to your FIAT studio, when you bring your vehicle in for this service.
If you need help...	Please contact the FCA US Recall Information Center at either **recalls.mopar.com** or phone 1-800-853-1403.

Please help us update our records by filling out the attached prepaid postcard if any of the conditions listed on the card apply to you or your vehicle. If you have further questions go to **recalls.mopar.com**.

If you have already experienced this specific condition and have paid to have it repaired, you may visit **www.fcarecallreimbursement.com** to submit your reimbursement request online or you can mail your original receipts and proof of payment to the following address for reimbursement consideration: **FCA Customer Assistance, P.O. Box 21-8004, Auburn Hills, MI 48321-8007, Attention: Recall Reimbursement**. Once we receive and verify the required documents, reimbursement will be sent to you within 60 days. If you've had previous repairs and/or reimbursement you may still need to have the recall repair performed on your vehicle.

If your studio fails or is unable to remedy this defect without charge and within a reasonable time, you may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Ave., S.E., Washington, DC 20590, or you can call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY 1-800-424-9153), or go to **safercar.gov**.

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

Customer Services / Field Operations
FCA US LLC

Note to lessors receiving this recall: Federal regulation requires that you forward this recall notice to the lessee within 10 days.