

2008 Scion xD

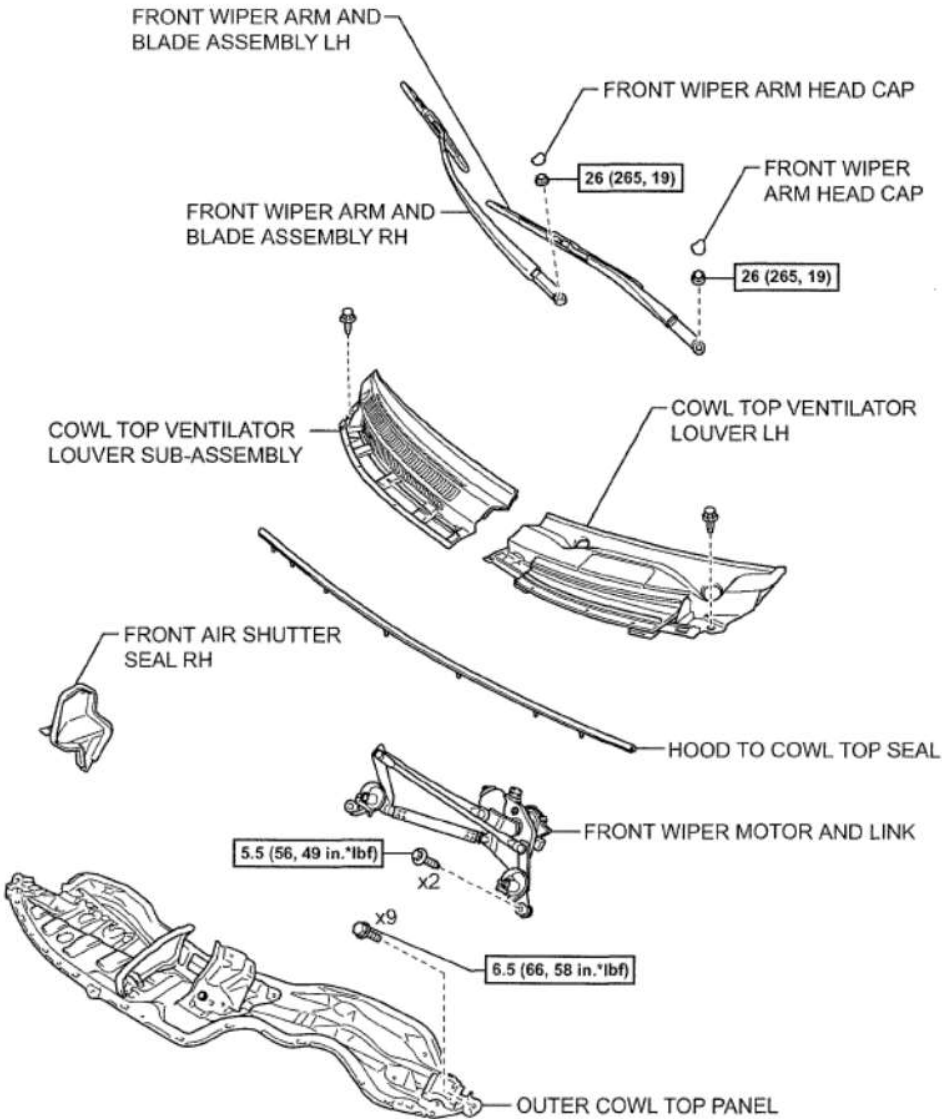
2008 ENGINE 2ZR-FE Exhaust - xD

2008 ENGINE

2ZR-FE Exhaust - xD

EXHAUST MANIFOLD

COMPONENTS



N*m (kgf*cm, ft*lbf) : Specified torque

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Fig. 1: Identifying Exhaust Manifold Replacement Components With Torque Specifications (1 Of 4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

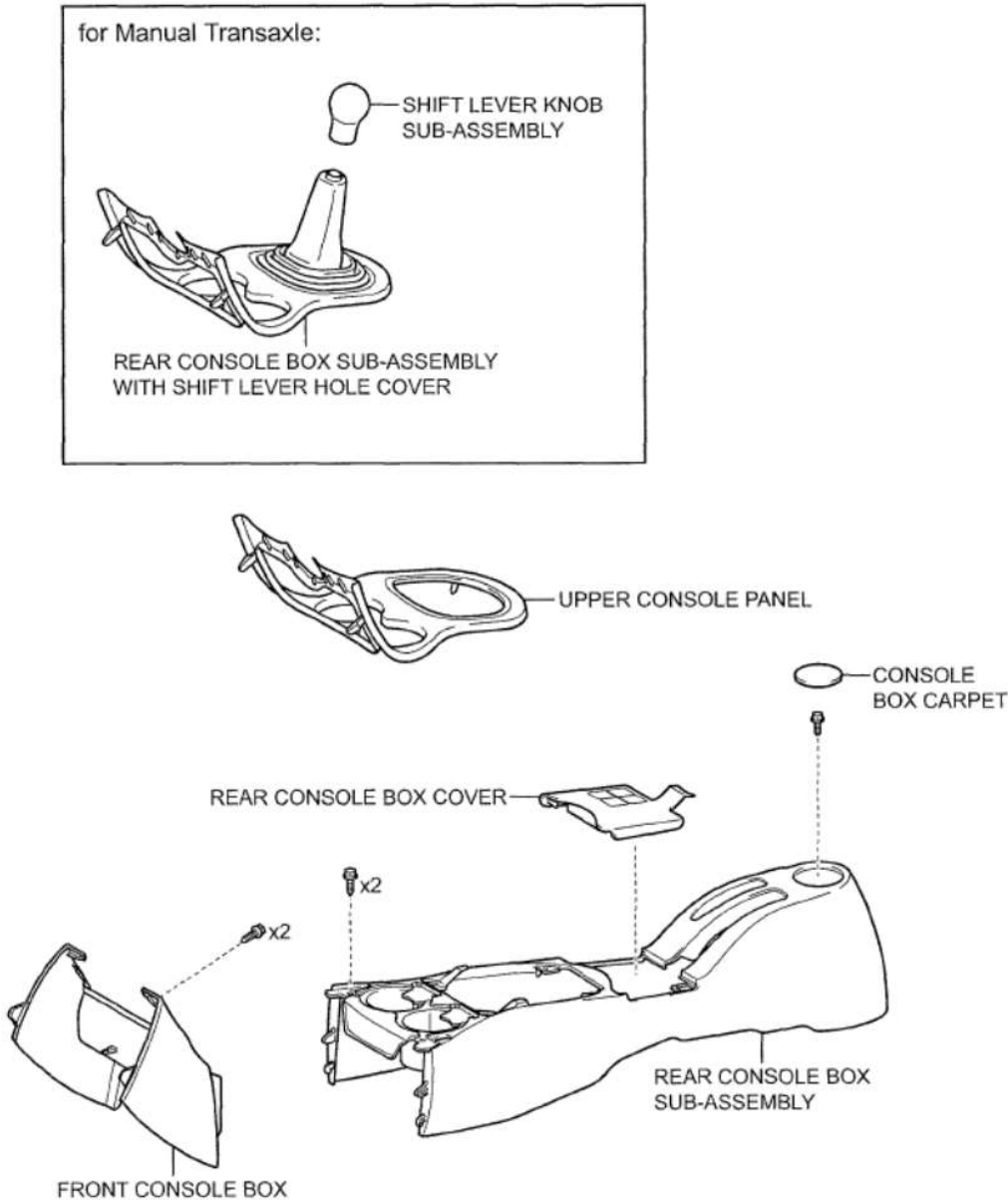


Fig. 2: Identifying Exhaust Manifold Replacement Components (2 Of 4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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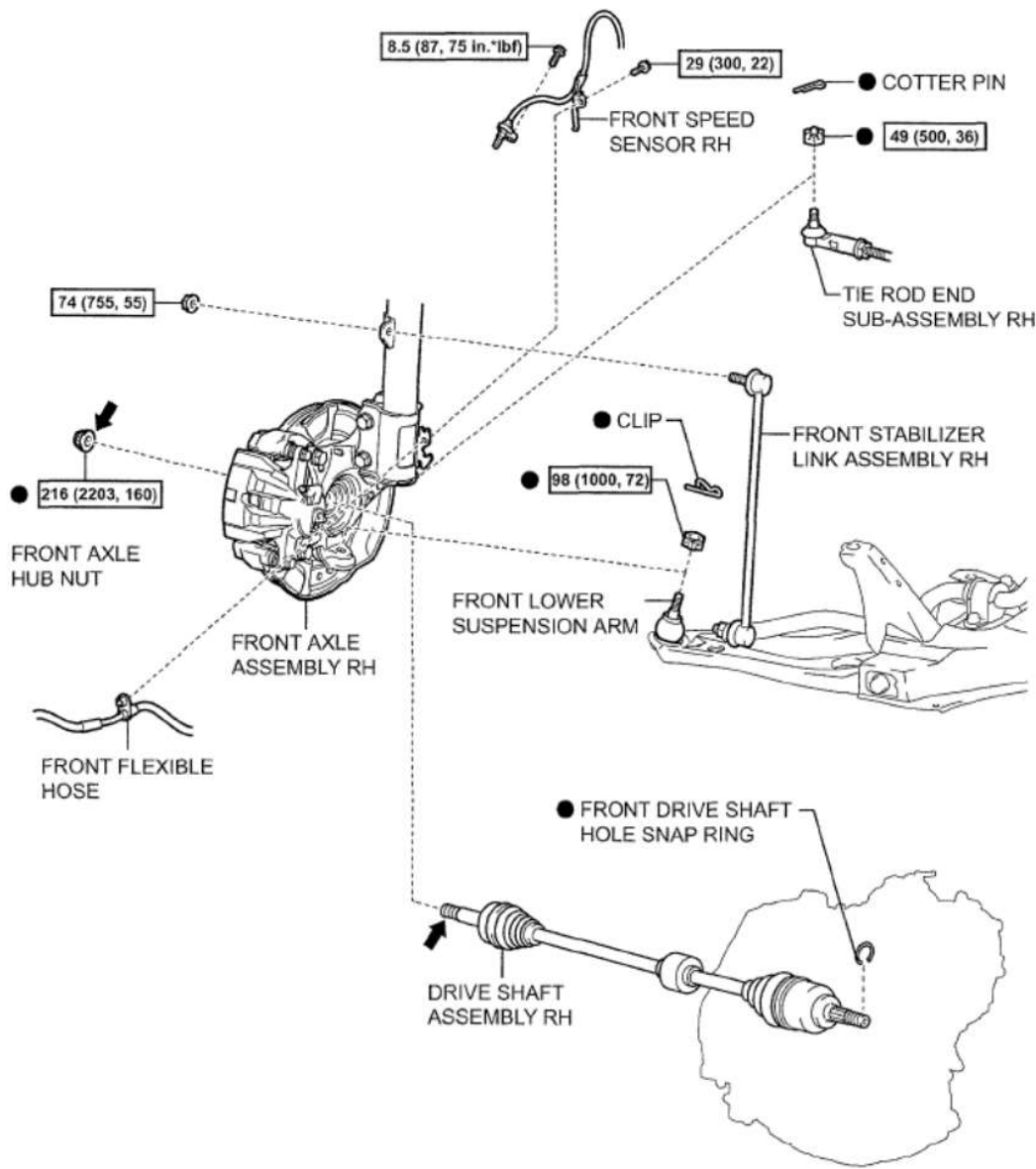
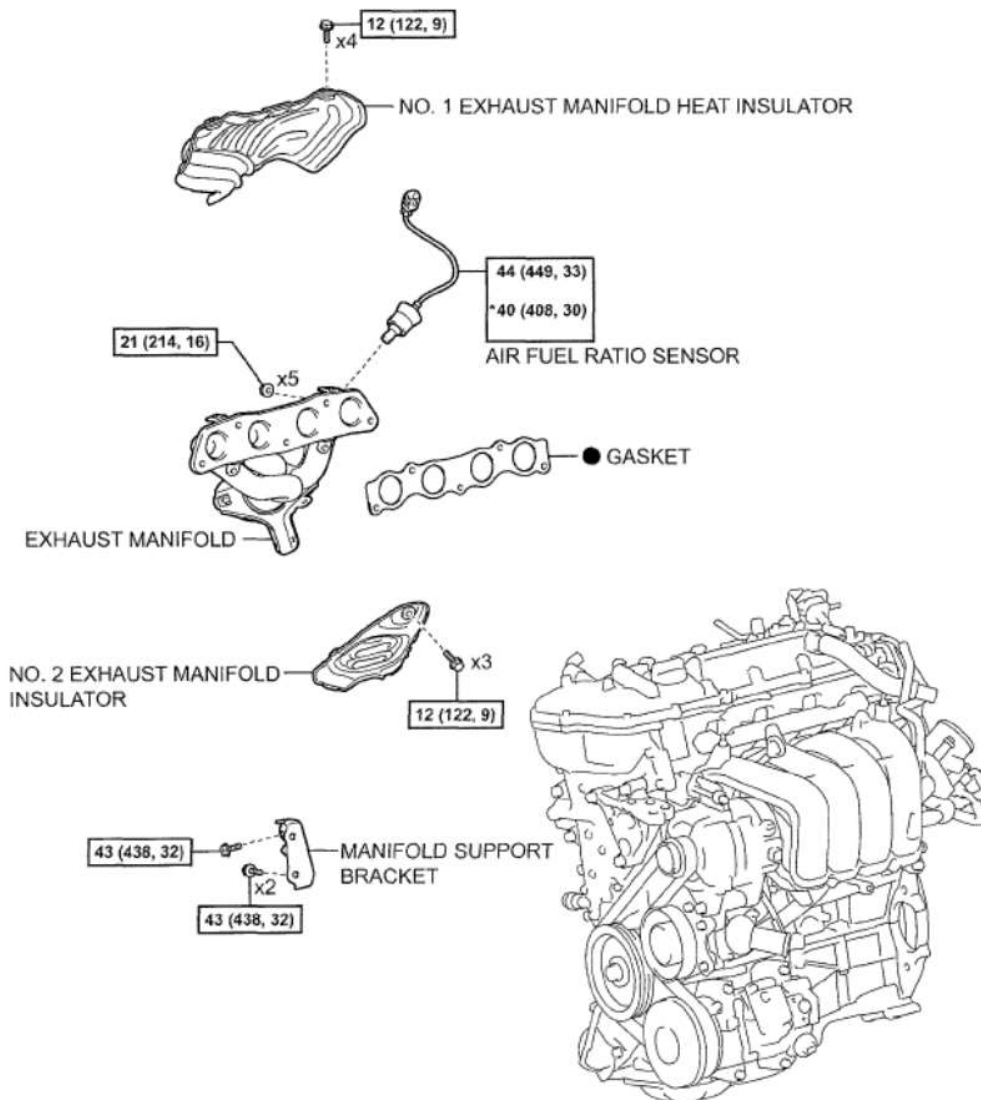


Fig. 3: Identifying Exhaust Manifold Replacement Components With Torque Specifications (3 Of 4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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$\boxed{N \cdot m \text{ (kgf} \cdot \text{cm, ft} \cdot \text{lb)}} : \text{Specified torque}$

● Non-reusable part

* For use with SST

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Fig. 4: Identifying Exhaust Manifold Replacement Components With Torque Specifications (4 Of 4)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

REMOVAL

1. REMOVE AIR FUEL RATIO SENSOR

Refer to the procedures under "REMOVE AIR FUEL RATIO SENSOR" (See **REMOVAL**).

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2. **REMOVE ENGINE UNDER COVER RH**
3. **REMOVE FRONT EXHAUST PIPE ASSEMBLY**

Refer to the procedures under "REMOVE FRONT EXHAUST PIPE ASSEMBLY" (See **REMOVAL**).

4. **DRAIN AUTOMATIC TRANSAXLE FLUID** (for Automatic Transaxle)
5. **DRAIN MANUAL TRANSAXLE OIL** (for Manual Transaxle)
6. **REMOVE FRONT WHEEL**
7. **REMOVE FRONT AXLE SHAFT RH NUT** (See **REMOVAL**)
8. **REMOVE FRONT SPEED SENSOR RH** (See **REMOVAL**)
9. **REMOVE TIE ROD END SUB-ASSEMBLY RH** (See **REMOVAL**)
10. **REMOVE FRONT STABILIZER LINK ASSEMBLY RH** (See **REMOVAL**)
11. **REMOVE NO. 1 FRONT LOWER SUSPENSION ARM SUB-ASSEMBLY RH** (See **REMOVAL**)
12. **SEPARATE FRONT AXLE ASSEMBLY RH** (See **REMOVAL**)
13. **REMOVE DRIVE SHAFT ASSEMBLY RH** (See **DISASSEMBLY**)
14. **REMOVE NO. 1 EXHAUST MANIFOLD HEAT INSULATOR**
 - a. Remove the 4 bolts and remove the No. 1 exhaust manifold heat insulator.

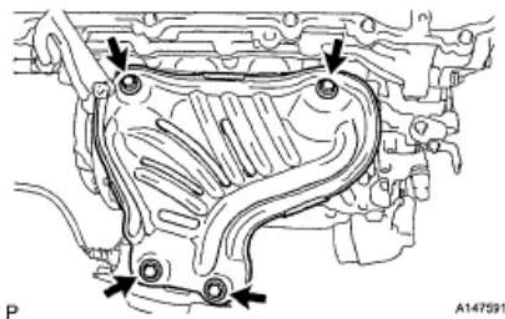
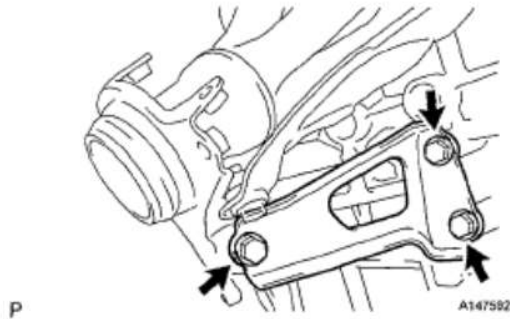


Fig. 5: Locating No. 1 Exhaust Manifold Heat Insulator Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

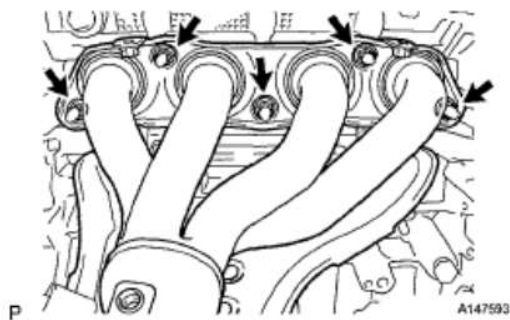
15. **REMOVE MANIFOLD STAY**
 - a. Remove the 3 bolts and remove the manifold stay.

2008 Scion xD**2008 ENGINE 2ZR-FE Exhaust - xD****Fig. 6: Locating Manifold Stay Bolts**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

16. REMOVE EXHAUST MANIFOLD

- a. Remove the 5 nuts and remove the exhaust manifold.

**Fig. 7: Locating Exhaust Manifold Nuts**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

17. REMOVE NO. 2 EXHAUST MANIFOLD HEAT INSULATOR

- a. Remove the 3 bolts and remove the No. 2 exhaust manifold heat insulator.

**Fig. 8: Locating No. 2 Exhaust Manifold Heat Insulator Bolts**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

2008 Scion xD**2008 ENGINE 2ZR-FE Exhaust - xD****1. INSTALL NO. 2 EXHAUST MANIFOLD INSULATOR**

- a. Install the No. 2 exhaust manifold heat insulator with the 3 bolts.

Torque: 12 N*m (122 kgf*cm, 9 ft.*lbf)



Fig. 9: Locating No. 2 Exhaust Manifold Heat Insulator Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. INSTALL EXHAUST MANIFOLD

- a. Install a new exhaust manifold gasket and exhaust manifold with the 5 nuts.

Torque: 21 N*m (214 kgf*cm, 16 ft.*lbf)

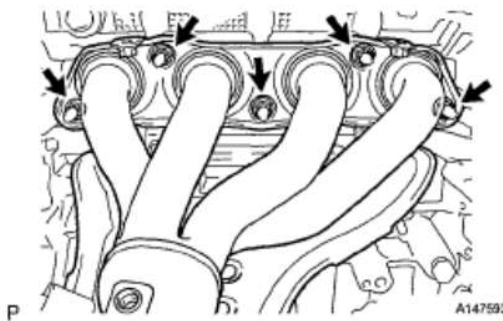


Fig. 10: Locating Exhaust Manifold Nuts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. INSTALL MANIFOLD SUPPORT BRACKET

- a. Install the manifold support bracket with the 3 bolts in the sequence shown in the illustration.

Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

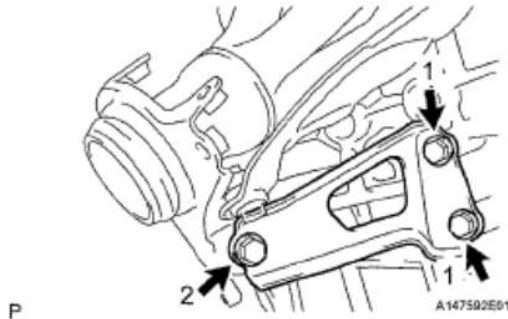
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Fig. 11: Locating Manifold Support Bracket With Bolts
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. INSTALL NO. 1 EXHAUST MANIFOLD HEAT INSULATOR

- a. Install the No. 1 exhaust manifold heat insulator with the 4 bolts.

Torque: 12 N*m (122 kgf*cm, 9 ft.*lbf)

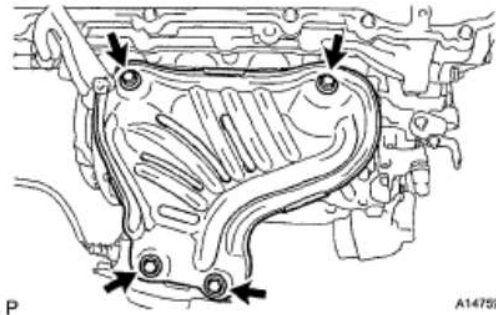


Fig. 12: Locating No. 1 Exhaust Manifold Heat Insulator Bolts
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. **INSTALL DRIVE SHAFT ASSEMBLY RH** (See INSTALLATION)
6. **INSTALL FRONT AXLE ASSEMBLY RH** (See INSTALLATION)
7. **INSTALL NO. 1 FRONT SUSPENSION ARM SUB-ASSEMBLY RH** (See INSTALLATION)
8. **INSTALL FRONT STABILIZER LINK ASSEMBLY RH** (See INSTALLATION)
9. **INSTALL TIE ROD END SUB-ASSEMBLY RH** (See INSTALLATION)
10. **INSTALL FRONT SPEED SENSOR RH** (See INSTALLATION)
11. **INSTALL FRONT AXLE SHAFT RH NUT** (See INSTALLATION)
12. **INSTALL FRONT WHEEL** (See INSTALLATION)
13. **INSTALL FRONT EXHAUST PIPE ASSEMBLY**

Refer to the procedures under "INSTALL FRONT EXHAUST PIPE ASSEMBLY" (See INSTALLATION).

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14. INSTALL AIR FUEL RATIO SENSOR

Refer to the procedures under "INSTALL AIR FUEL RATIO SENSOR" (See **INSTALLATION**).

- 15. ADD AUTOMATIC TRANSAXLE FLUID (for Automatic Transaxle)**
- 16. INSPECT AUTOMATIC TRANSAXLE FLUID (for Automatic Transaxle) (See **ON-VEHICLE INSPECTION**)**
- 17. ADD MANUAL TRANSAXLE OIL (for Manual Transaxle)**
- 18. INSPECT MANUAL TRANSAXLE OIL (for Manual Transaxle) (See **ON-VEHICLE INSPECTION**)**
- 19. INSPECT FOR AUTOMATIC TRANSAXLE FLUID LEAK (for Automatic Transaxle)**
- 20. INSPECT FOR MANUAL TRANSAXLE OIL LEAK**
- 21. INSPECT FOR EXHAUST GAS LEAK**
- 22. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT**

(See **ADJUSTMENT**)

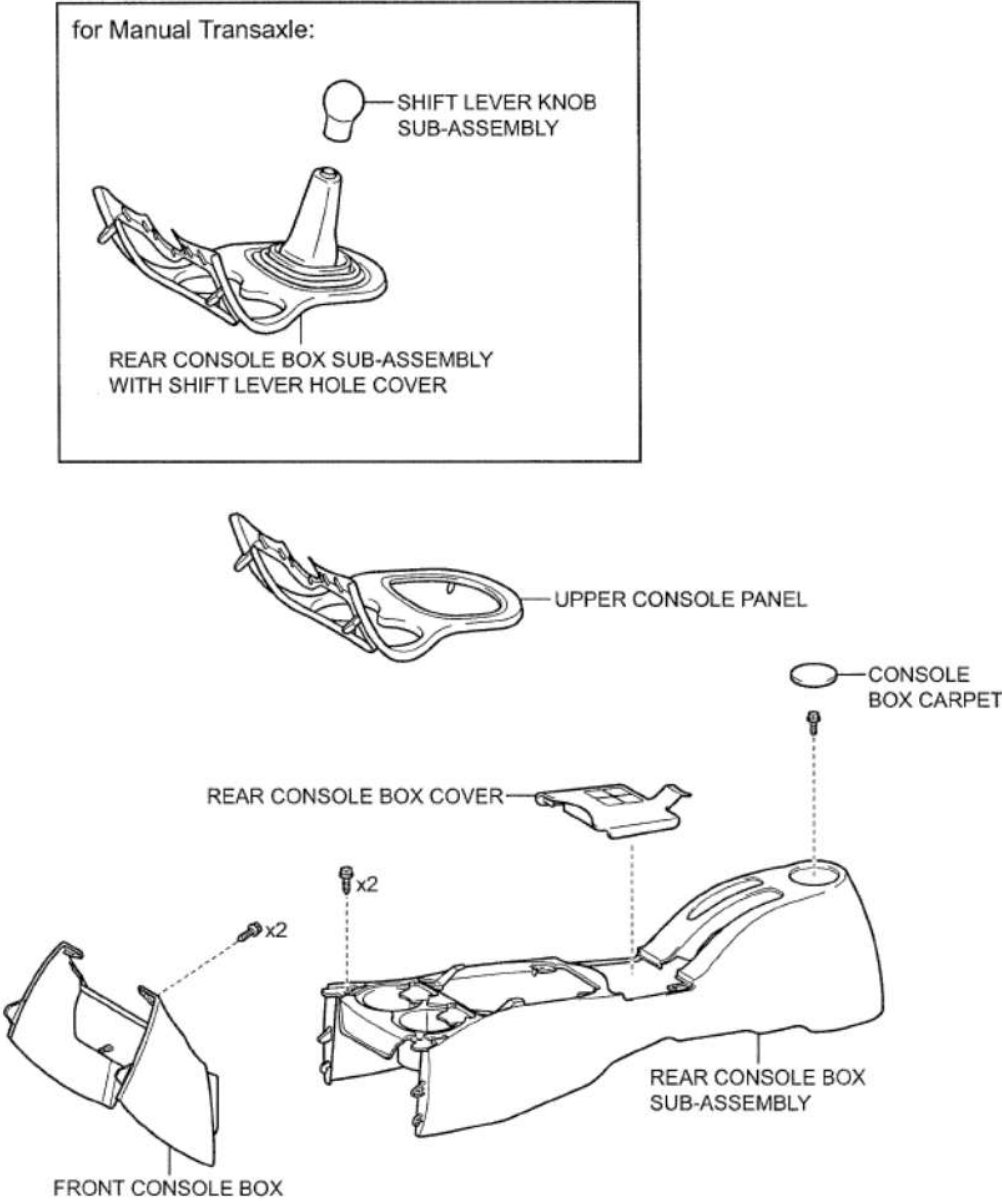
23. INSTALL ENGINE UNDER COVER RH

Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)

EXHAUST PIPE**COMPONENTS**

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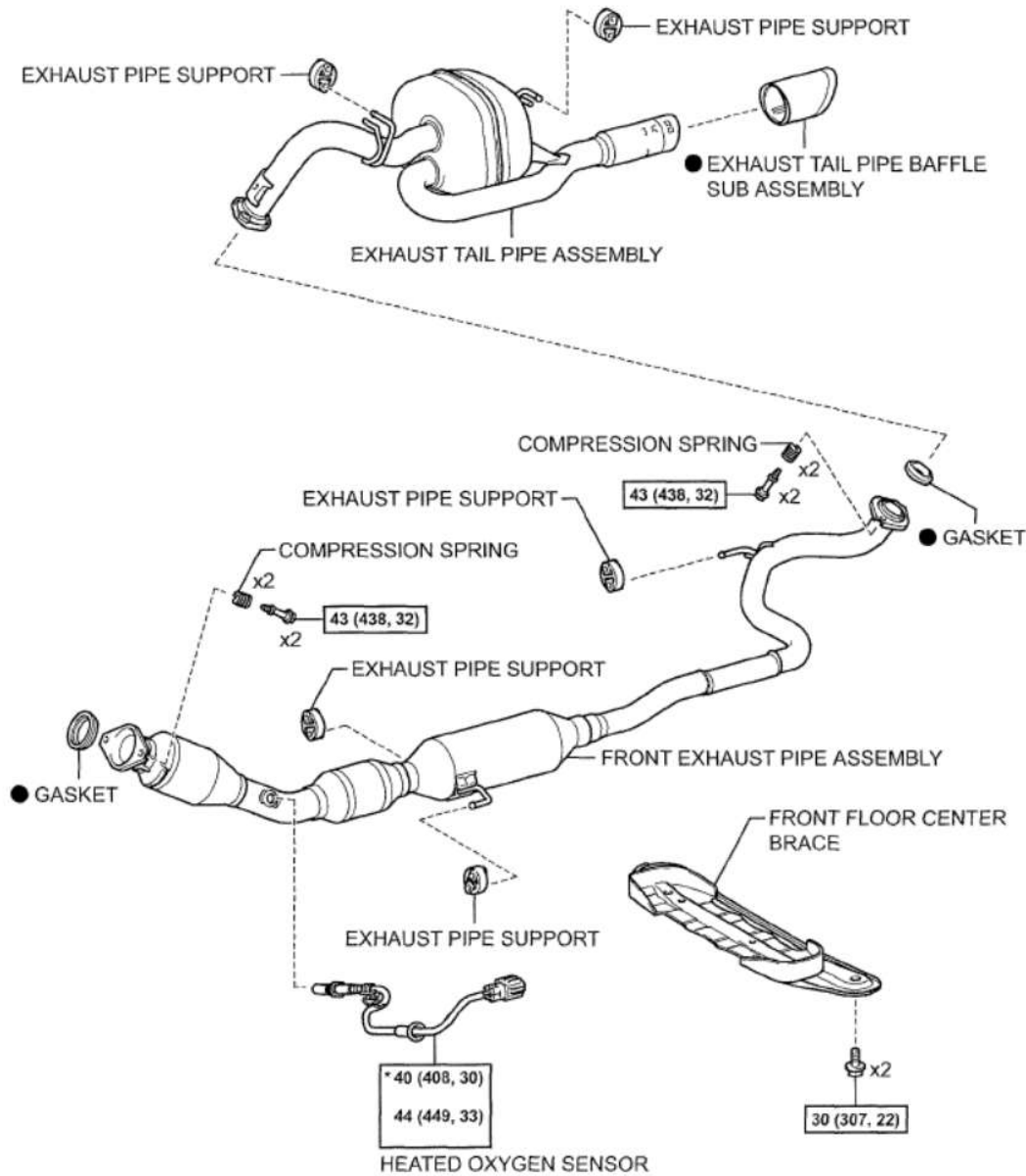
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Fig. 13: Identifying Exhaust Pipe Components (1 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

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N*m (kgf*cm, ft*lb) : Specified torque ● Non-reusable part * For use with SST

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Fig. 14: Identifying Exhaust Pipe Components With Torque Specifications (2 Of 2)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

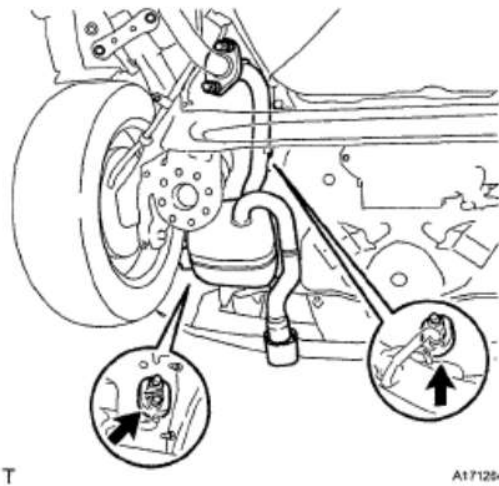
REMOVAL

1. REMOVE SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle) (See [REMOVAL](#))
2. REMOVE UPPER CONSOLE PANEL (See [REMOVAL](#))
3. REMOVE REAR CONSOLE BOX COVER (See [REMOVAL](#))

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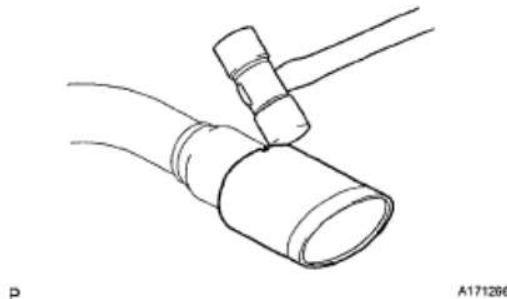
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4. **REMOVE CONSOLE BOX CARPET** (See REMOVAL)
5. **REMOVE REAR CONSOLE BOX SUB-ASSEMBLY** (See REMOVAL)
6. **REMOVE FRONT CONSOLE BOX** (See REMOVAL)
7. **REMOVE HEATED OXYGEN SENSOR** (See REMOVAL)
8. **REMOVE EXHAUST TAIL PIPE ASSEMBLY**
 - a. Remove the 2 bolts and 2 compression springs.
 - b. Remove the 2 exhaust pipe supports and the exhaust tail pipe assembly.

**Fig. 15: Locating Compression Springs Bolts**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

9. **REMOVE EXHAUST TAIL PIPE BAFFLE SUB ASSEMBLY**
 - a. Using a plastic hammer, uniformly tap out and remove the exhaust tail pipe baffle.

**Fig. 16: Removing Exhaust Tail Pipe Baffle Sub Assembly**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

10. **REMOVE FRONT FLOOR CENTER BRACE**
 - a. Remove the 2 bolts and remove the front floor center brace.

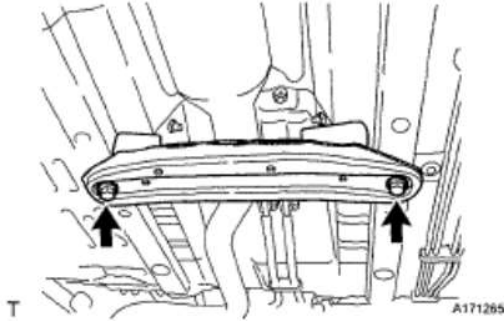
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Fig. 17: Locating Front Floor Center Brace Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

11. REMOVE FRONT EXHAUST PIPE ASSEMBLY

- a. Remove the 2 bolts and 2 compression springs.

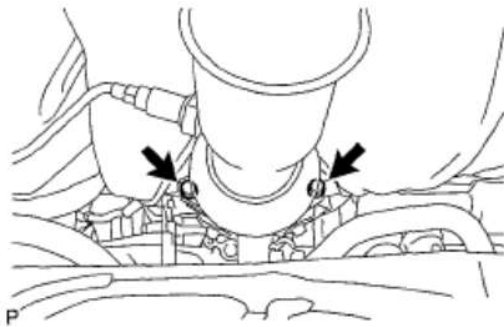
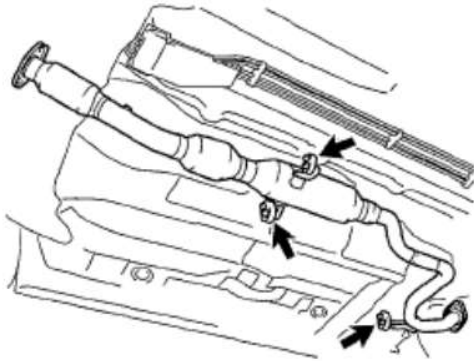


Fig. 18: Locating Compression Springs Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Remove the 3 exhaust pipe supports and the front exhaust pipe assembly.

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Fig. 19: Locating Exhaust Pipe Supports And Front Exhaust Pipe Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSTALLATION

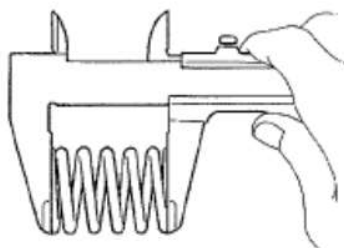
1. INSTALL FRONT EXHAUST PIPE ASSEMBLY

- a. Using vernier calipers, measure the free length of the compression spring.

Minimum length:

40.5 mm (1.594 in.)

If the length is not as specified, replace the compression spring.



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Fig. 20: Measuring Free Length Of Compression Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- b. Using a plastic hammer and a wooden block, tap in a new exhaust pipe gasket until its surface is flush with the front exhaust pipe assembly.

NOTE:

- Install the exhaust pipe gasket in the correct direction.
- Do not damage the outer surface of the exhaust pipe gasket.
- Do not reuse the exhaust pipe gasket.

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- Do not push in the gasket with the exhaust pipe when connecting it.

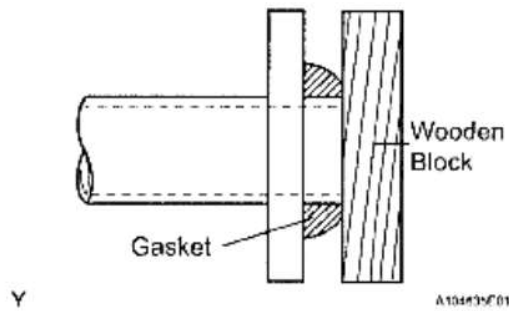


Fig. 21: Identifying Wooden Block And Gasket
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- c. Install the 3 exhaust pipe supports.

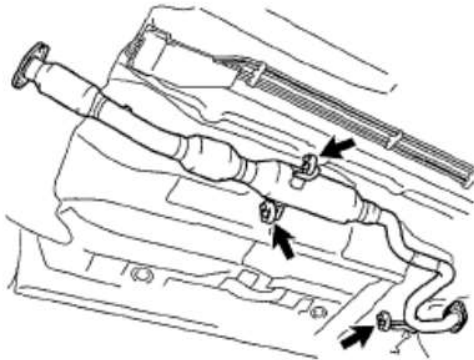
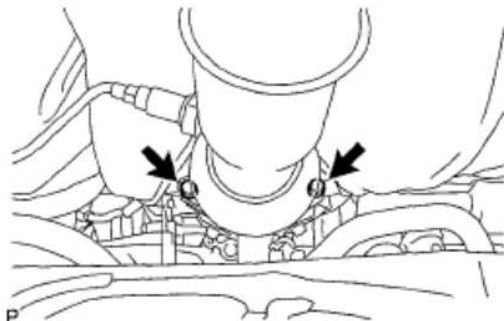


Fig. 22: Locating Exhaust Pipe Supports
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- d. Install the front exhaust pipe assembly with the 2 compression springs and 2 bolts.

Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

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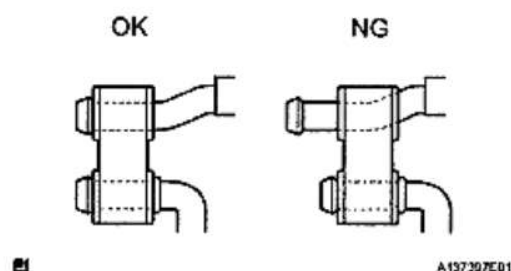
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Fig. 23: Locating Compression Springs Bolts

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- e. Check the exhaust pipe supports.

NOTE: Install the exhaust pipe support onto the pipe retaining support.



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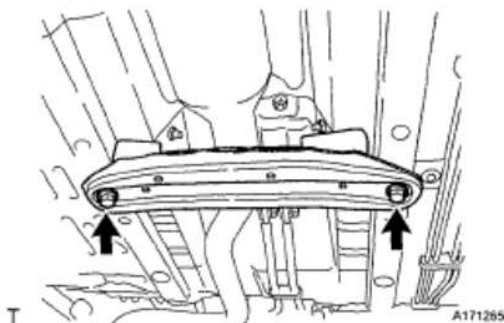
Fig. 24: Identifying Exhaust Pipe Supports

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. INSTALL FRONT FLOOR CENTER BRACE

- a. Install the front floor center brace with the 2 bolts.

Torque: 30 N*m (307 kgf*cm, 22 ft.*lbf)



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Fig. 25: Locating Front Floor Center Brace With Bolts
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

3. INSTALL EXHAUST TAIL PIPE Baffle SUB ASSEMBLY

- Align the keyway on a new exhaust tail pipe baffle sub assembly baffle with the protruding part of the exhaust tail pipe as shown in the illustration.
- Using a plastic hammer, uniformly tap in the tail pipe baffle.

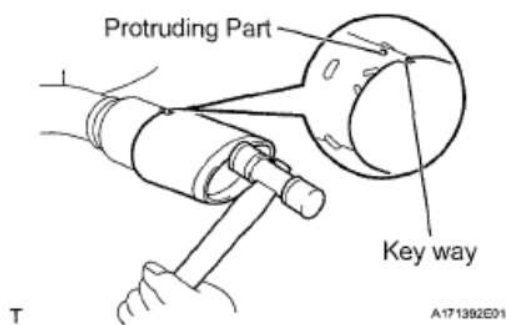


Fig. 26: Installing Exhaust Tail Pipe Baffle Sub Assembly
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

4. INSTALL EXHAUST TAIL PIPE ASSEMBLY

- Using vernier calipers, measure the free length of the compression spring.

Minimum length:

38.5 mm (1.516 in.)

If the length is not as specified, replace the compression spring.

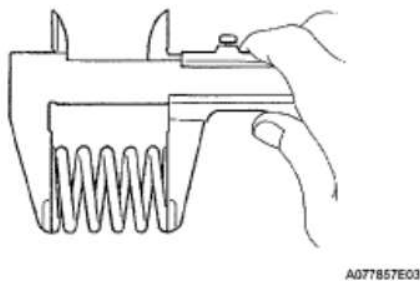
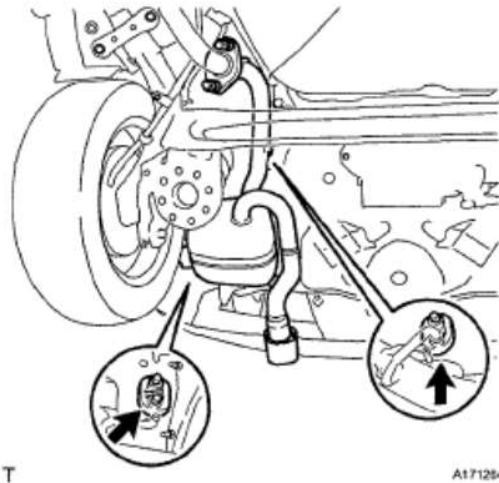


Fig. 27: Measuring Free Length Of Compression Spring
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Install the 2 exhaust pipe supports.
- Install the tail exhaust pipe assembly and a new exhaust pipe gasket with the 2 compression springs and 2 bolts.

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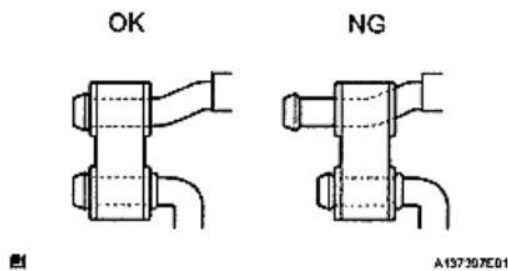
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Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)**Fig. 28: Locating Exhaust Pipe Supports**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- d. Check the exhaust pipe supports.

NOTE: Install the exhaust pipe support onto the pipe retaining support.

**Fig. 29: Identifying Exhaust Pipe Supports**

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

5. **INSTALL HEATED OXYGEN SENSOR** (See INSTALLATION)
6. **INSPECT FOR EXHAUST GAS LEAK**
7. **INSTALL CONSOLE BOX FRONT** (See INSTALLATION)
8. **INSTALL REAR CONSOLE BOX SUB-ASSEMBLY** (See INSTALLATION)
9. **INSTALL CONSOLE BOX CARPET** (See INSTALLATION)
10. **INSTALL REAR CONSOLE BOX COVER** (See INSTALLATION)
11. **INSTALL UPPER CONSOLE PANEL** (See INSTALLATION)
12. **INSTALL SHIFT LEVER KNOB SUB-ASSEMBLY (for Manual Transaxle)** (See INSTALLATION)