

Part Number: PTR15-53080

Kit Contents:

Item #	Quantity Req'd.	Description
1	1	Clutch Cover Assembly
2	1	Clutch Disc
3	1	Clutch Release Hub Bearing

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1		
2		
3		

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1	1	Toyota Genuine Release Hub Grease or equivalent
2	1	Toyota Genuine Clutch Spline Grease or equivalent
3	6	Clutch Cover Bolts 90119-08079
4	1	E-Ring (clip)for Shift Lever 96160-00800
5	2	Exhaust Pipe Gaskets, Front 90917-06078
6	1	Exhaust Pipe Gasket, Rear 17451-31010
7	1	Exhaust Manifold Gasket, LH 17173-31020
8	6	Exhaust Manifold Nuts 94151-80841

Conflicts

--

Recommended Tools

Personal & Vehicle Protection	Notes
Special Tools	Notes
Snap Ring Pliers	Expanding
Installation Tools	Notes
Special Chemicals	Notes

General Applicability

IS 250






Recommended Sequence of Application

Item #	Accessory
1	
2	

Vehicle Service Parts (may be required for reassembly)

Item #	P/N	Description
1		
2		
3		

Legend

	STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.
	OPERATOR SAFETY: Use caution to avoid risk of injury.
	CAUTION: A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.
	TOOLS & EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.
	REVISION MARK: This mark highlights a change in installation with respect to previous issue.

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation

These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as:

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

See figures attached below.

1. Remove Manual Transmission Assembly

HINT: O₂ sensors can be unscrewed from underneath the vehicle with wire harness attached.

NOTE: You must remove the driver's side exhaust manifold.

2. Remove Clutch Release Fork Assembly

- (a) Wiggle fork free from release fork support.
(Fig 2-2)

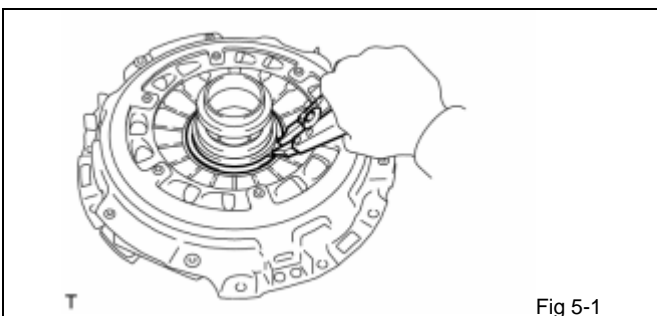
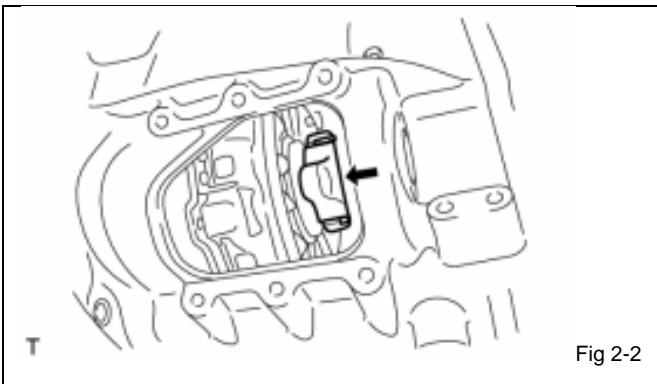
HINT: If you can not wiggle fork free from the support you can remove the e-ring clip and pin which will free the fork from the support assembly.

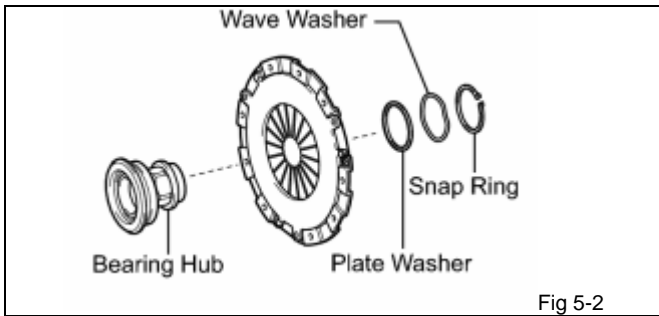
3. Remove Clutch Disc

4. Remove Clutch Cover Assembly

5. Remove Clutch Release Bearing Shaft Snap Ring.

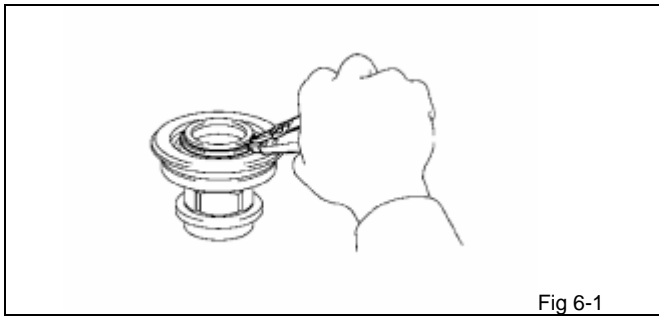
- (a) Using a snap ring pliers, remove the clutch release bearing shaft snap ring. (Fig 5-1)



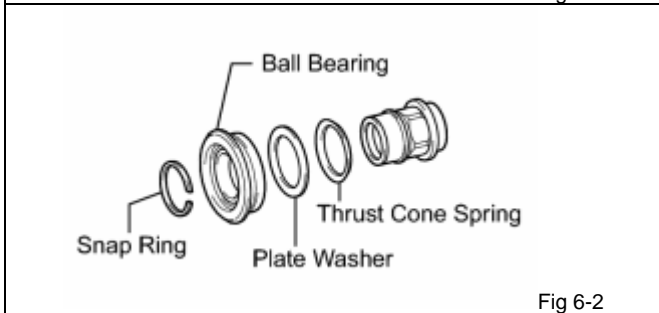


- (b) Remove the clutch release bearing hub, release bearing wave washer and release bearing plate washer. (Fig 5-2)

6. Disassemble Hub Bearing Assembly

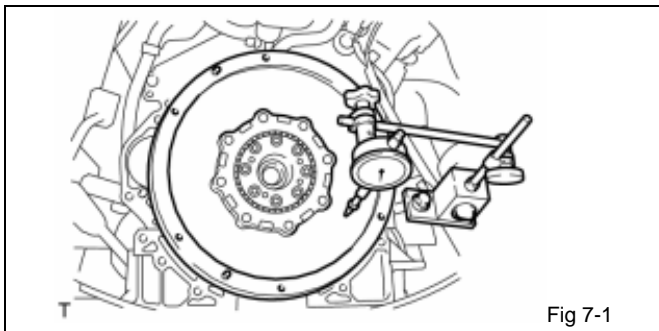


- (a) Using snap ring pliers, remove the clutch release hub snap ring. (Fig 6-1)



- (b) Remove the clutch release hub bearing, thrust cone spring plate washer and thrust cone spring. (Fig 6-2)

7. Inspect Flywheel



- (a) Using a dial indicator, inspect the flywheel sub-assembly runout. (Fig 7-1)

Maximum runout: 0.1 mm (0.004 in.)

If the runout exceeds the maximum or if the surface shows any excessive wear, replace the flywheel sub-assembly.

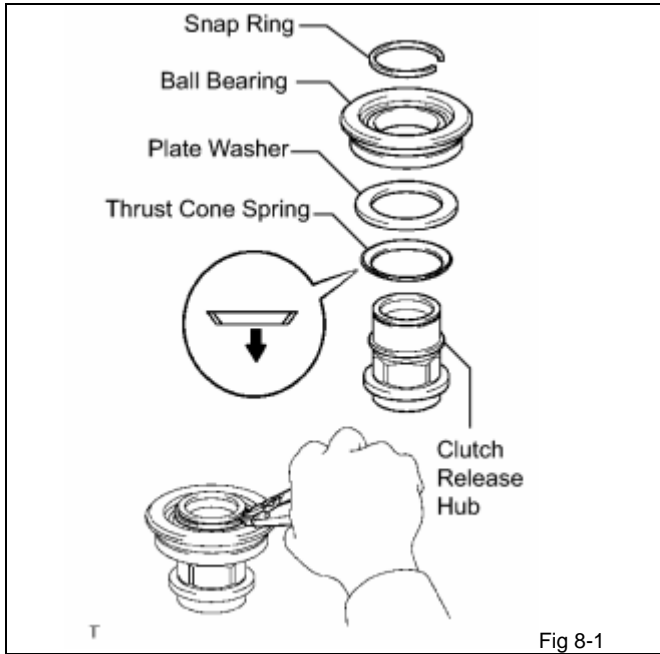


Fig 8-1

8. Assemble Hub with New Bearing

- (a) Install the thrust cone spring, thrust cone spring plate washer and supplied clutch release hub bearing to the clutch release hub as shown in the illustration. (Fig 8-1)
- (b) Using snap ring pliers, install the snap ring.

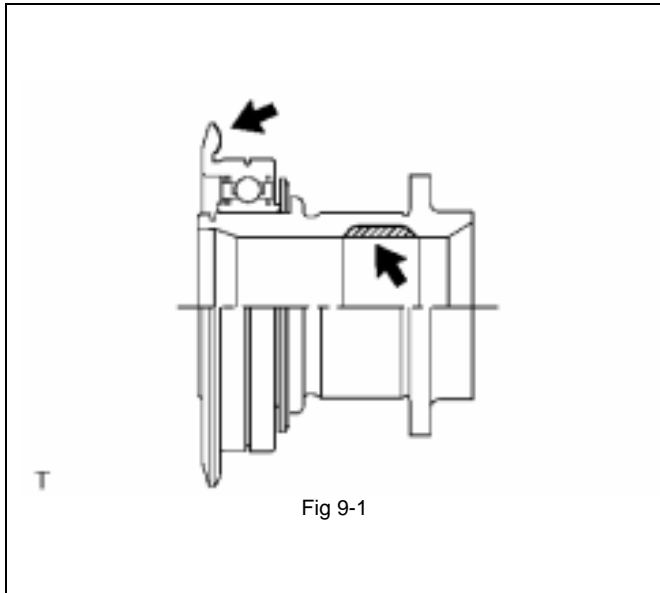


Fig 9-1

9. Install Clutch Release Bearing Hub

- (a) Fill the groove inside the release bearing hub with grease. (Fig 9-1)
- (b) Apply grease to the contact surface between the release hub bearing and the clutch cover.

NOTE:

- Be sure to apply an even and **thin** layer of grease.
- Excessive grease or a lump of grease on the contact surface between the release hub bearing and the clutch cover can splatter and result in contaminating the friction surface.

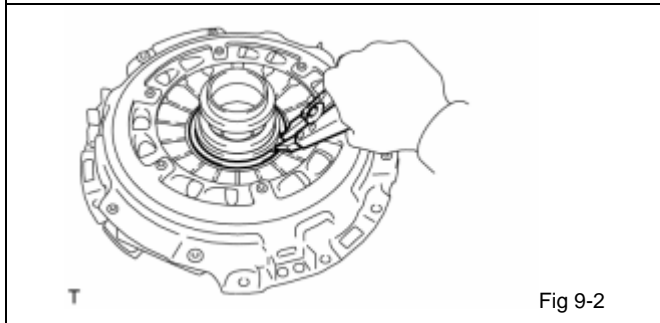


Fig 9-2

- (c) Install the hub assy onto the clutch cover assembly.
- (d) Install the release bearing plate washer and release bearing wave washer. (Fig 5-2)
- (e) Install the snap ring to fasten the assembly in place. (Fig 9-2)

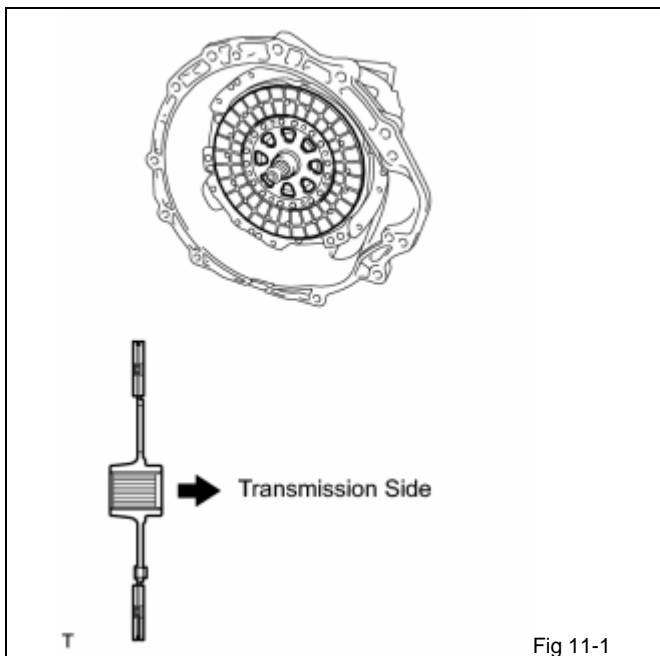
10. Install Clutch Cover Assembly

- (a) Apply a small amount of clutch spline grease to the input shaft spline. Just enough to coat the metal, there shouldn't be any excess grease.

Grease:

Toyota Genuine Clutch Spline Grease or equivalent (high Moly content grease).

- (b) Install the clutch cover assembly to the input shaft.



11. Install Clutch Disc

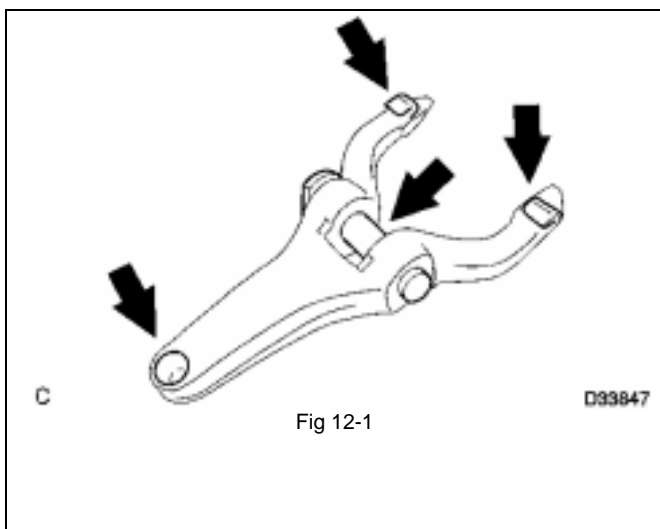
- (a) Install the clutch disc assembly to the transmission unit. (Fig 11-1)

NOTE:

Take care not to insert the clutch disc assembly in the wrong direction.

NOTE:

Remove any excess spline grease.



12. Install Clutch Release Fork



- (a) Apply release hub grease to the contact surface between, the release fork and release bearing hub, the contact surface between the release fork and push rod, and release fork pivot points as shown in the illustration. (Fig 12-1)

Grease:

Toyota Genuine Release Hub Grease or equivalent (Molybdenum Disulphide Lithium Base Grease (NLGI NO.2))

NOTE:

- Do not use excess force to install the clutch

release fork sub-assembly.

- After installation, move the fork back and forth to check that the clutch release bearing hub slides smoothly.

- (b) Install the clutch release fork sub-assembly to the release fork support.

13. Install Manual Transmission Assembly

- (a) First clean flywheel of any debris or grease.

HINT: Wind up O₂ sensor with wire harness counterclockwise four turns before installing O₂ sensors.

14. Install Shift Lever Cap

- (a) Move the shift lever to the 2nd gear position. Adjust the guide plate so that dimension A is as shown in the illustration with the shift lever cap pushed toward neutral (select direction). (Fig 14-1)

Torque: 10 N·m (102 kgf·cm, 7 ft·lbf)

15. Inspect and Adjust Clutch Pedal Height

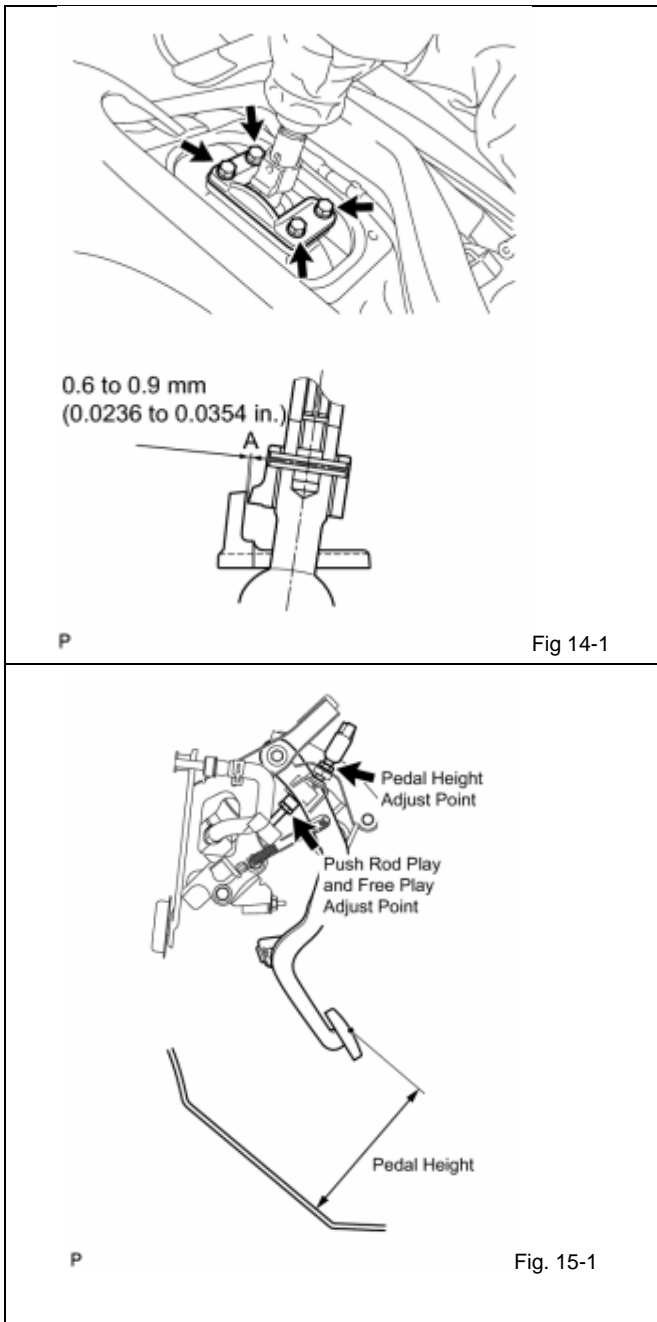
- (a) Pull back the floor carpeting underneath the clutch pedal.
- (b) Check that the pedal height is correct. (Fig 15-1)

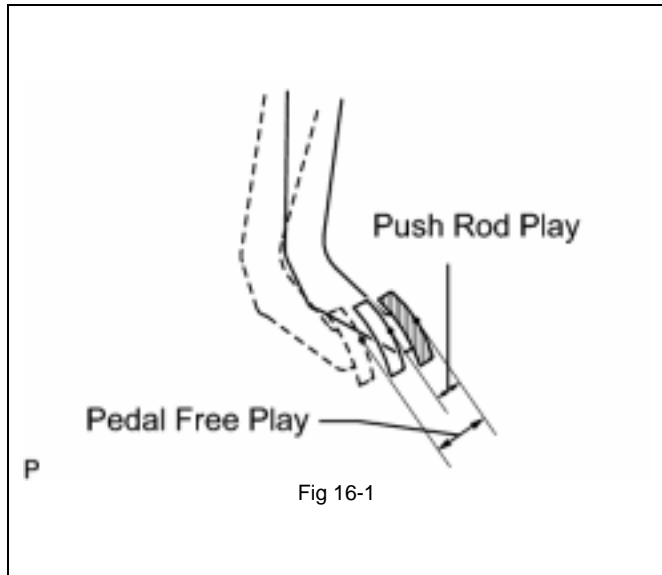
Pedal height from asphalt sheeting:

173.1 to 183.1 mm (6.8149 to 7.2086 in.)

- (c) Adjust pedal height if necessary.
- (1) Loosen the lock nut and turn the stopper bolt until the stopper bolt height is correct. Tighten the lock nut.

Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)





16. Inspect Clutch Pedal Free Play and Push Rod Play

- (a) Check that the pedal free play and push rod play are correct. (Fig 16-1)
 - (1) Depress the pedal until clutch resistance is felt.
Pedal free play:
5.0 to 15.0 mm (0.197 to 0.591 in.)
 - (2) Gently depress the pedal until the resistance begins to increase a little.
Push rod play at pedal top:
1.0 to 5.0 mm (0.039 to 0.197 in.)
- (b) Adjust the pedal free play and push rod play.
 - (1) Loosen the lock nut and turn the push rod until the free play and push rod play are correct. (Fig 15-1)
 - (2) Tighten the lock nut.
 - (3) After adjusting the pedal free play, check the pedal height.

17. Inspect Clutch Release Point

- (a) Check the clutch release point. (Fig 17-1)
 - (1) Pull the parking brake lever and chock the rear wheels.
 - (2) Start and idle the engine.
 - (3) Without depressing the clutch pedal, slowly move the shift lever to the reverse position until the gears are engaged.

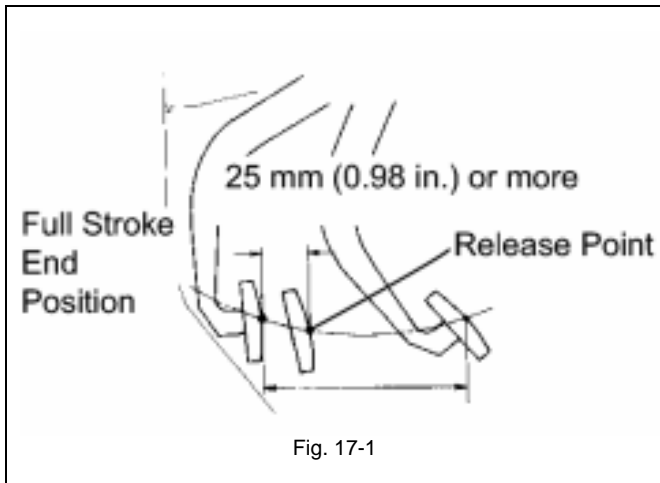


Fig. 17-1

- (4) Gradually depress the clutch pedal and measure the stroke distance from the point that the gear noise stops (release point) to the full stroke end position.

Standard distance:

25 mm (0.98 in.) or more (From pedal stroke end position to release point)

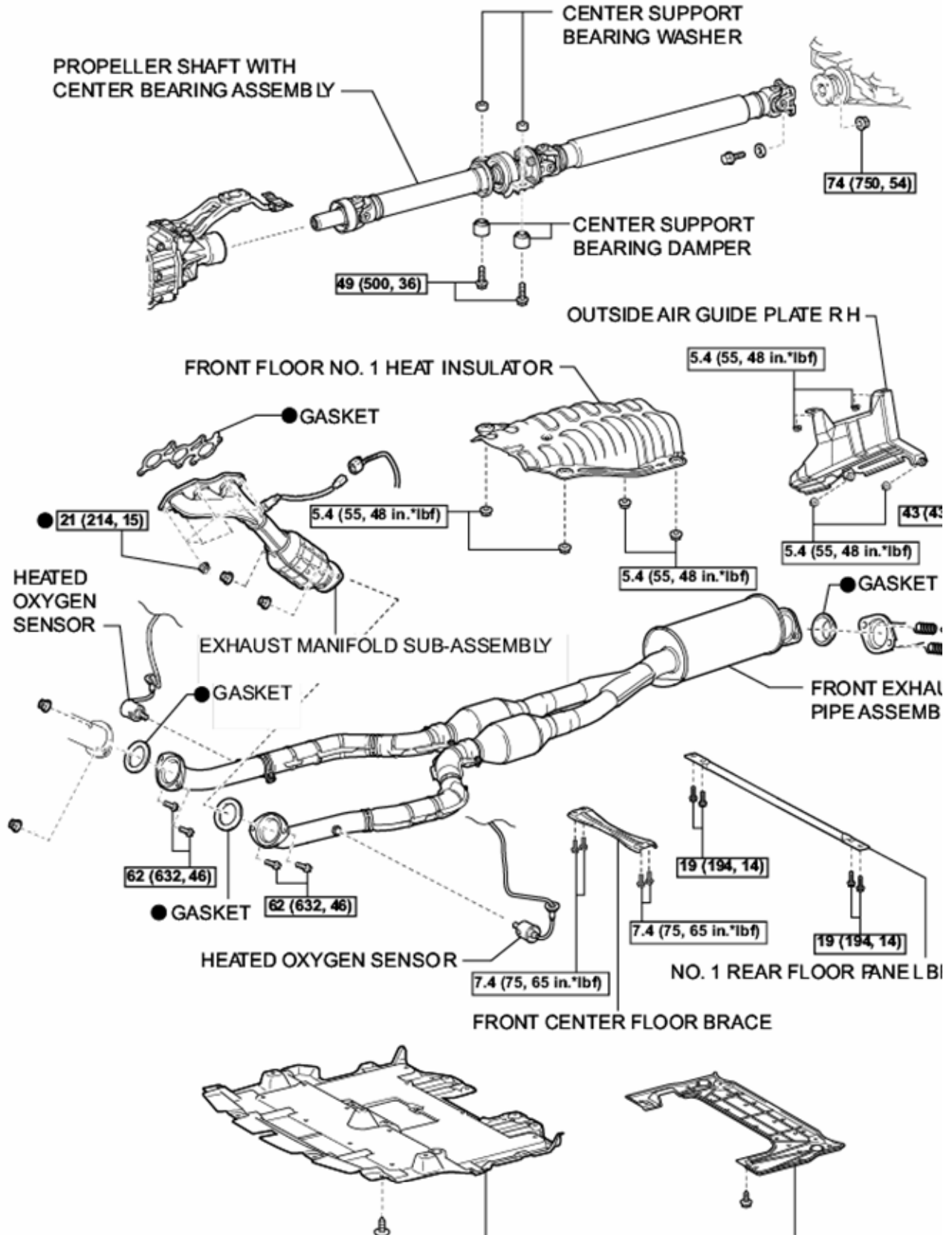
If the distance is not as specified, perform the following operations:

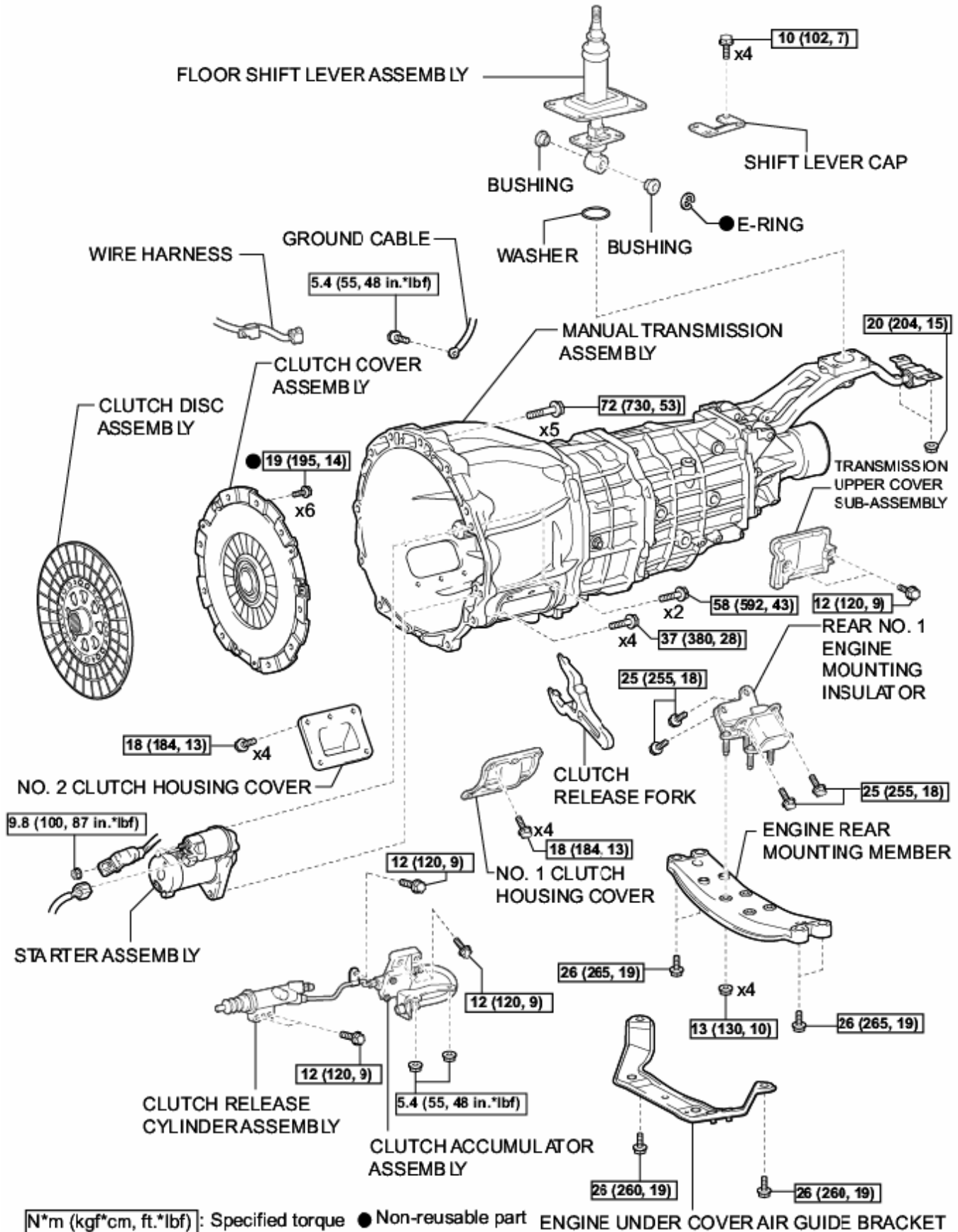
- Check pedal height.
- Check push rod play and pedal free play.
- Bleed the clutch line.

Check the clutch cover assembly and disc assembly.

18. Break In New Clutch

- (a) The vehicle will require 300-500 miles of city driving to properly break in the clutch.
- (b) No high load / high RPM launches during this time period.





N*m (kgf*cm, ft.*lbf): Specified torque ● Non-reusable part

Checklist. These points MUST be checked to ensure a quality installation.

CHECK FOR:

Accessory Function Checks

LOOK FOR:

Vehicle Function Checks