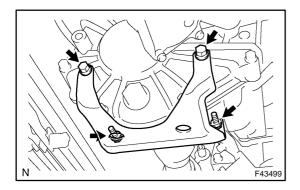
31033-01

OVERHAUL

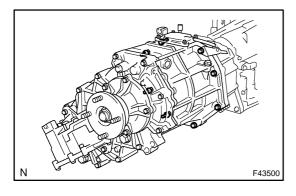
- 1. REMOVE ENGINE UNDER COVER SUB-ASSY NO.1 (See page 14-21)
- 2. REMOVE ENGINE UNDER COVER ASSY REAR (See page 14-21)
- 3. DISCONNECT OXYGEN SENSOR (See page 14-21)
- 4. REMOVE EXHAUST PIPE ASSY (See page 30-4)
- 5. REMOVE PROPELLER SHAFT ASSY FRONT (See page 30-4)
- 6. REMOVE PROPELLER SHAFT ASSY (See page 30-1 1)
- 7. DRAIN AUTOMATIC TRANSMISSION FLUID (See page 40-13)
- 8. DRAIN TRANSFER OIL
- 9. REMOVE FRONT SUSPENSION MEMBER BRACKET (See page 40-13)
- 10. REMOVE FRONT SUSPENSION MEMBER BRACKET LH (See page 40-13)
- 11. REMOVE TRANSMISSION OIL FILLER TUBE SUB-ASSY (See page 40-13)
- 12. DISCONNECT OIL COOLER OUTLET TUBE NO.1 (See page 40-13) SST 09023-12700
- 13. REMOVE OIL COOLER INLET TUBE NO.1 (See page 40-13) SST 09023-12700
- 14. DISCONNECT TRANSMISSION CONTROL CABLE ASSY (See page 40-13)
- 15. REMOVE TRANSMISSION CONTROL CABLE BRACKET NO.1 (See page 40-13)



16. REMOVE TRANSFER CASE LOWER PROTECTOR

(a) Remove the 4 bolts and transfer case lower protector.

- 17. SUPPORT AUTOMATIC TRANSMISSION W/TRANSFER (See page 40-13)
- 18. REMOVE FRAME CROSSMEMBER SUB-ASSY NO.3 (See page 40-13)
- 19. DISCONNECT CONNECTOR (See page 40-13)
- 20. DISCONNECT WIRE HARNESS (See page 40-13)
- 21. REMOVE FLYWHEEL HOUSING UNDER COVER (See page 40-13)
- 22. REMOVE AUTOMATIC TRANSMISSION W/TRANSFER (See page 40-13)

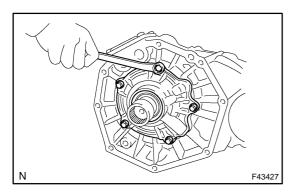


23. REMOVE TRANSFER ASSY

- (a) Remove the 8 bolts and 2 clamps.
- (b) Remove the transfer from the automatic transmission.

2003 4RUNNER REPAIR MANUAL (RM1001U)

24. REMOVE HOSE



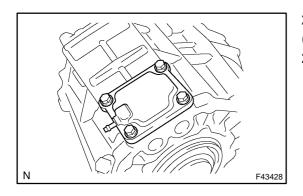
25. REMOVE TRANSFER FRONT BEARING RETAINER SUB-ASSY

(a) Remove the 5 bolts and front bearing retainer sub-assy. HINT:

If necessary, tap the front bearing retainer sub-assy with a plastic hammer to remove it.

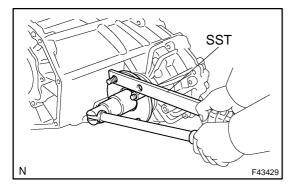
26. REMOVE TRANSFER COVER TYPE T OIL SEAL

(a) Using a screwdriver and hammer, remove the oil seal from the front bearing retainer sub-assy.



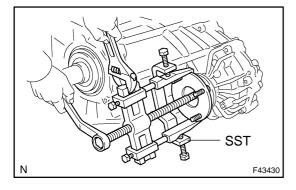
27. REMOVE TRANSFER CASE COVER SUB-ASSY

- (a) Remove the 4 bolts and case cover sub-assy.
- 28. REMOVE BREATHER OIL DEFLECTOR



29. REMOVE OUTPUT SHAFT COMPANION FLANGE SUB-ASSY

- (a) Using a chisel and hammer, loosen the staked part of the output shaft companion flange lock nut.
- (b) Using SST to hold the output shaft companion flange, remove the output shaft companion flange lock nut. SST 09330-00021



(c) Using SST, remove the output shaft companion flange sub-assy.

SST 09950-40011 (09951-04020, 09952-04010, 09953-04030, 09954-04010, 09955-04051, 09957-04010, 09958-04011)

2003 4RUNNER REPAIR MANUAL (RM1001U)

30. REMOVE TRANSFER OUTPUT SHAFT COMPANION FLANGE OIL SEAL

Using a screwdriver and hammer, remove the oil seal from the output shaft companion flange sub-(a)

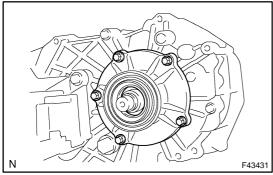
REMOVE OUTPUT SHAFT COMPANION FLANGE SUB-ASSY 31.

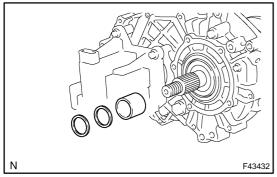
(a) Remove the rear output shaft companion flange sub-assy in the same way as the front output shaft companion flange sub-assy.

09330-00021, 09950-40011 (09951-04020, 09952-04010, 09953-04030, 09954-04010, SST 09955-04051, 09957-04010, 09958-04011)

REMOVE TRANSFER OUTPUT SHAFT COMPANION FLANGE OIL SEAL 32.

Using a screwdriver and hammer, remove the oil seal from the rear output shaft companion flange sub-(a) assy.





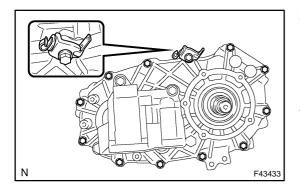
REMOVE TRANSFER EXTENSION HOUSING 33. SUB-ASSY REAR

Remove the 5 bolts and extension housing sub-assy rear.

HINT:

If necessary, tap the extension housing sub-assy rear with a plastic hammer to remove it.

- REMOVE OIL (TRANSFER EXTENSION REAR **HOUSING SUB-ASSY) SEAL**
- Using a screwdriver and hammer, remove the oil seal. (a)
- **REMOVE TRANSFER OUTPUT WASHER** 35.
- **REMOVE COLLAR** 36.

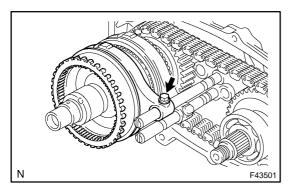


37. REMOVE TRANSFER CASE REAR

- (a) Remove the 12 bolts and clamp.
- (b) Remove the transfer case rear.

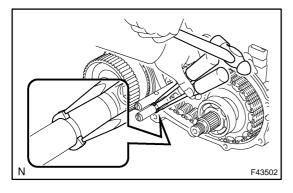
If necessary, tap the transfer case rear with a plastic hammer to remove it.

2003 4RUNNER REPAIR MANUAL (RM1001U)



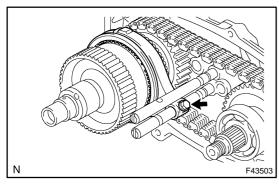
38. REMOVE TRANSFER GEAR SHIFT FORK NO.2 W/TRANSFER HIGH AND LOW CLUTCH SLEEVE

(a) Remove the bolt, gear shift fork No.2 and high and low clutch sleeve.

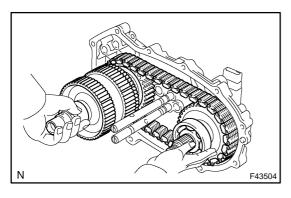


39. REMOVE CTR DIFFERENTIAL LOCK FORK SUB-ASSY W/FRONT DRIVE CLUTCH SLEEVE

(a) Using 2 screwdrivers and a hammer, tap out the snap ring.

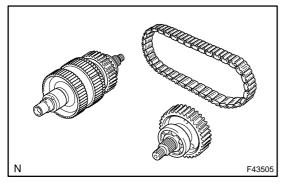


(b) Remove the bolt, CTR differential lock fork sub-assy and front drive clutch sleeve.



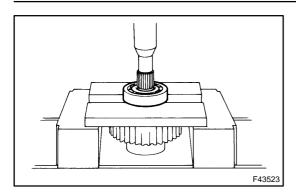
40. REMOVE REAR OUTPUT SHAFT SUB-ASSY, FRONT DRIVE CHAIN AND DRIVEN SPROCKET SUB-ASSY

- (a) Mount the transfer case rear in a vise.
- (b) Using a plastic hammer, carefully tap the transfer case rear, and remove the rear output shaft sub-assy together with front drive chain and driven sprocket sub-assy.



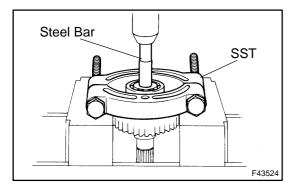
(c) Remove the rear output shaft sub-assy, front drive chain and driven sprocket sub-assy.

2003 4RUNNER REPAIR MANUAL (RM1001U)



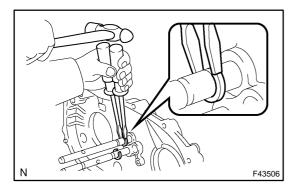
41. REMOVE TRANSFER DRIVEN SPROCKET BEARING

(a) Using a press, remove the driven sprocket bearing.



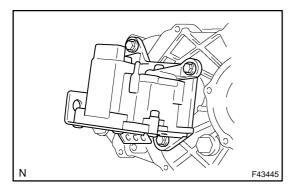
42. REMOVE TRANSFER INPUT GEAR RADIAL BALL BEARING

(a) Using SST, a press and steel bar, remove the transfer input gear radial ball bearing.SST 09555-55010



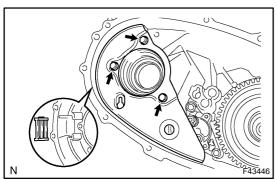
43. REMOVE TRANSFER SHIFT ACTUATOR ASSY

(a) Using 2 screwdrivers and a hammer, tap out the 2 snap rings.



- (b) Remove the 3 bolts and transfer shift actuator assy.
- 44. REMOVE TRANSFER CASE NO.1 PLUG
- (a) Remove the transfer case No.1 plug (filler plug) and gas-
- 45. REMOVE TRANSFER CASE NO.1 PLUG

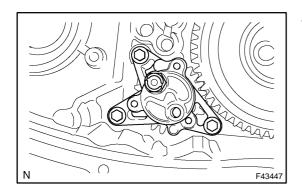
(a) Remove the transfer case No.1 plug (drain plug) and gas-



46. REMOVE TRANSFER OIL SEPARATOR SUB-ASSY

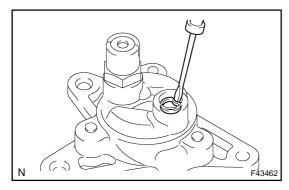
- (a) Remove the 3 bolts and oil separator sub-assy.
- 47. REMOVE TRANSFER CASE MAGNET

2003 4RUNNER REPAIR MANUAL (RM1001U)



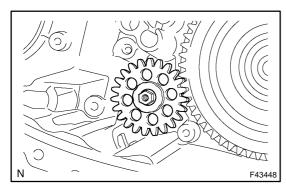
48. REMOVE TRANSFER OIL PUMP BODY SUB-ASSY

(a) Remove the 3 bolts and oil pump body sub-assy.

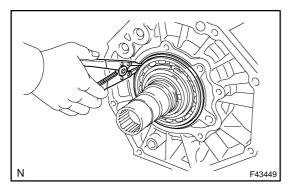


49. REMOVE TRANSFER OIL PUMP BODY O-RING

(a) Using a screwdriver, remove the oil pump body O-ring.

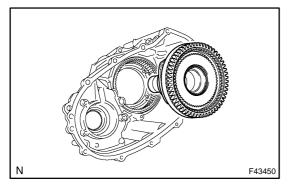


50. REMOVE TRANSFER OIL PUMP GEAR



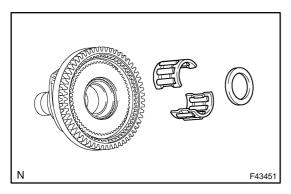
51. REMOVE LOW PLANETARY GEAR ASSY W/INPUT SHAFT SUB-ASSY

(a) Using a snap ring expander, remove the snap ring.

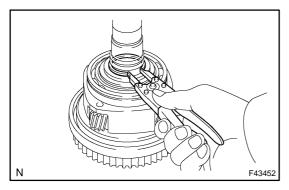


(b) Remove the low planetary gear assy and input shaft subassy.

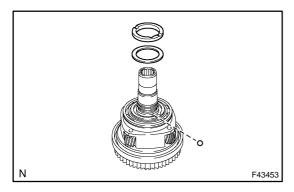
2003 4RUNNER REPAIR MANUAL (RM1001U)



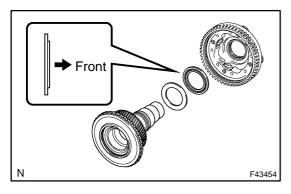
- 52. REMOVE TRANSFER OUTPUT SHAFT SPACER
- 53. REMOVE TRANSFER OUTPUT SHAFT FRONT NEEDLE ROLLER BEARING
- 54. REMOVE TRANSFER CASE OIL SEAL
- (a) Using a screwdriver and hammer, remove the transfer case oil seal.



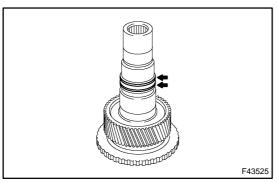
- 55. REMOVE TRANSFER INPUT GEAR STOPPER SHAFT SNAP RING
- (a) Using a snap ring expander, remove the input gear stopper shaft snap ring.



- 56. REMOVE TRANSFER INPUT GEAR STOPPER
- 57. REMOVE TRANSFER INPUT GEAR STOPPER BALL
- 58. REMOVE MANUAL TRANSFER PLANETARY CARR WASHER

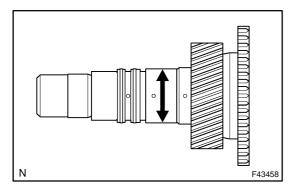


- 59. REMOVE SHAFT, TRANSFER INPUT
- 60. REMOVE TRANSFER THRUST BEARING RACE NO.1
- 61. REMOVE TRANSFER LOW PLANETARY GEAR BEARING



62. REMOVE TRANSFER INPUT SHAFT SEAL RING NO.1

2003 4RUNNER REPAIR MANUAL (RM1001U)

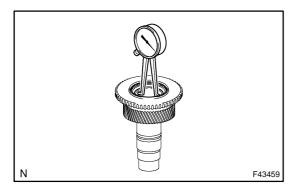


63. INSPECT SHAFT, TRANSFER INPUT

(a) Using a micrometer, measure the outer diameter of the input shaft journal surface.

Minimum diameter: 47.59 mm (1.8736 in.)

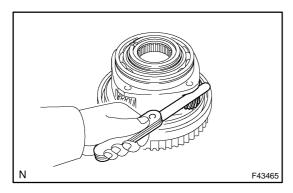
If the outer diameter is less than the minimum, replace the input shaft.



(b) Using a dial indicator, measure the inside diameter of the input shaft bushing.

Maximum diameter: 48.14 mm (1.8953 in.)

If the inside diameter exceeds the maximum, replace the input shaft.



64. INSPECT PLANETARY PINION GEAR THRUST CLEARANCE

(a) Using a feeler gauge, measure the thrust clearance of the planetary pinion gear.

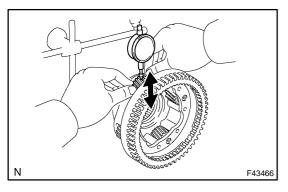
Standard clearance:

0.11 - 0.84 mm (0.0043 - 0.0331 in.)

Maximum clearance:

0.84 mm (0.0331 in.)

If the clearance exceeds the maximum, replace the planetary gear assy.



65. INSPECT PLANETARY PINION GEAR RADIAL CLEARANCE

(a) Using a dial indicator, measure the radial clearance of the planetary pinion gear.

Standard clearance:

0.009 - 0.038 mm (0.0004 - 0.0015 in.)

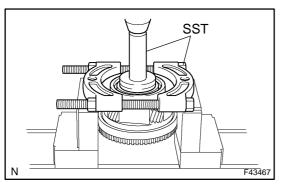
Maximum clearance:

0.038 mm (0.0015 in.)

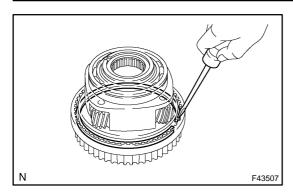
If the clearance exceeds the maximum, replace the planetary gear assy.



- (a) Using a snap ring expander, remove the snap ring.
- (b) Using SST and a press, remove the input shaft bearing. SST 09554-3001 1, 09555-55010

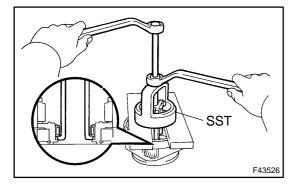


2003 4RUNNER REPAIR MANUAL (RM1001U)



67. REMOVE TRANSFER LOW PLANETARY GEAR SPLINE PIECE

- (a) Using a screwdriver, remove the snap ring.
- (b) Remove the low planetary gear spline piece.



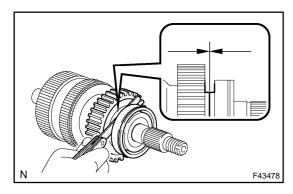
68. REMOVE TRANSFER LOW PLANETARY GEAR BEARING

(a) Using SST, remove the low planetary gear bearing.

NOTICE:

Hang SST securely to the clearance between the bearing and low planetary gear.

SST 09612-65014 (09612-01030, 09612-01050)



69. INSPECT DRIVE SPROCKET THRUST CLEARANCE

(a) Using a feeler gauge, measure the thrust clearance of the drive sprocket.

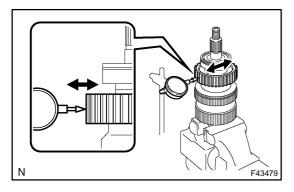
Standard clearance:

0.15 - 0.24 mm (0.0059 - 0.0094 in.)

Maximum clearance:

0.24 mm (0.0094 in.)

If the clearance exceeds the maximum, replace the drive sprocket.



70. INSPECT DRIVE SPROCKET RADIAL CLEARANCE

(a) Using a dial indicator, measure the radial clearance of the drive sprocket.

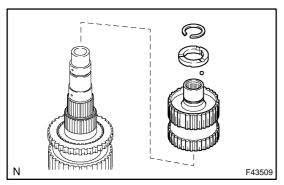
Standard clearance:

0.01 - 0.06 mm (0.0004 - 0.0024 in.)

Maximum clearance:

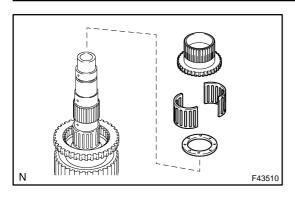
0.06 mm (0.0024 in.)

If the clearance exceeds the maximum, replace the drive sprocket, output shaft rear or needle roller bearing.

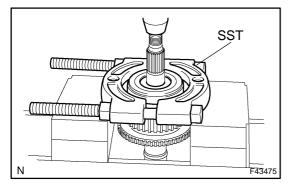


- 71. REMOVE TRANSFER LOW PLANETARY RING GEAR HOLE SNAP RING
- (a) Using a snap ring expander, remove the snap ring.
- 72. REMOVE TRANSFER OUTPUT SHAFT SPACER NO.2
- 73. REMOVE TRANSFER OUTPUT SHAFT SPACER BALL
- 74. REMOVE CENTER DIFFERENTIAL CASE

2003 4RUNNER REPAIR MANUAL (RM1001U)



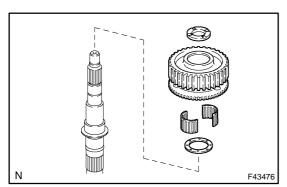
- 75. REMOVE TRANSFER CLUTCH HUB
- 76. REMOVE TRANSFER OUTPUT SHAFT FRONT NEEDLE ROLLER BEARING
- 77. REMOVE TRANSFER OUTPUT SHAFT PLATE WASHER



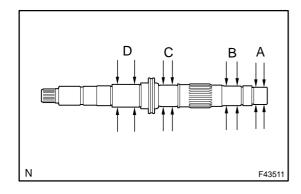
78. REMOVE TRANSFER OUTPUT SHAFT REAR RADIAL BALL BEARING

(a) Using SST and a press, remove the output shaft rear radial ball bearing.

SST 09555-55010



- 79. REMOVE TRANSFER OUTPUT SHAFT SPACER NO.1
- 80. REMOVE TRANSFER DRIVE SPROCKET SUB-ASSY
- 81. REMOVE TRANSFER DRIVE SPROCKET BEARING
- 82. REMOVE TRANSFER OUTPUT SHAFT PLATE WASHER



83. INSPECT TRANSFER OUTPUT SHAFT REAR

(a) Using a micrometer, measure the outer diameter of the output shaft rear journal surface.

Standard diameter:

Part A: 27.98 - 27.99 mm (1.1016 - 1.1020 in.)

Part B: 31.98 - 32.00 mm (1.2591 - 1.2598 in.)

Part C: 34.98 - 35.00 mm (1.3772 - 1.3780 in.)

Part D: 36.98 - 37.00 mm (1.4559 - 1.4567 in.)

Minimum Diameter:

Part A: 27.98 mm (1.1016 in.)

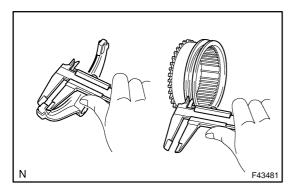
Part B: 31.98 mm (1.2591 in.)

Part C: 34.98 mm (1.3772 in.)

Part D: 36.98 mm (1.4559 in.)

If the outer diameter is less than the minimum, replace the output shaft rear.

2003 4RUNNER REPAIR MANUAL (RM1001U)



84. INSPECT HIGH AND LOW CLUTCH SLEEVE AND GEAR SHIFT FORK NO.2 CLEARANCE

(a) Using vernier calipers, measure the thickness of the gear shift fork No.2 claw.

Thickness: 10 mm (0.3937 in.)

(b) Using vernier calipers, measure the groove of the high and low clutch sleeve.

Distance: 10.5 mm (0.4134 in.)

(c) Calculate a clearance between the high and low clutch sleeve and gear shift fork No.2 clearance.

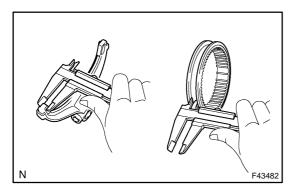
Standard clearance:

0.26 - 0.84 mm (0.0102 - 0.0331 in)

Maximum clearance:

0.84 mm (0.0331 in.)

If the clearance exceeds the maximum, replace the high and low clutch sleeve or gear shift fork No.2.



85. INSPECT FRONT DRIVE CLUTCH SLEEVE AND CTR DIFFERENTIAL LOCK FORK SUB-ASSY CLEARANCE

(a) Using vernier calipers, measure the thickness of the CTR differential lock fork claw.

Thickness: 10 mm (0.3937 in.)

(b) Using vernier calipers, measure the groove of the front drive clutch sleeve.

Distance: 10.5 mm (0.4134 in.)

(c) Calculate a clearance between the front drive clutch sleeve and CTR differential lock fork.

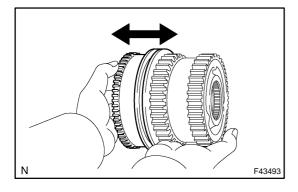
Standard clearance:

0.26 - 0.84 mm (0.0102 - 0.0331 in)

Maximum clearance:

0.84 mm (0.0331 in.)

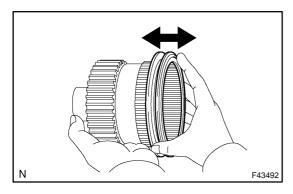
If the clearance exceeds the maximum, replace the front drive clutch sleeve or CTR differential lock fork.



2003 4RUNNER REPAIR MANUAL (RM1001U)

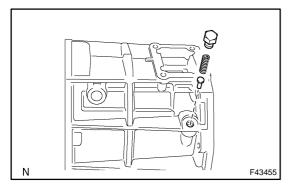
86. INSPECT CENTER DIFFERENTIAL CASE AND HIGH AND LOW CLUTCH SLEEVE

- (a) Check that the tip of the spline gear of the front drive clutch sleeve is not worn.
- (b) Install the front drive clutch sleeve to the center differential case and check that the front drive clutch sleeve moves smoothly.

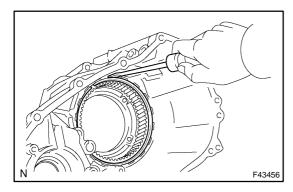


87. INSPECT CENTER DIFFERENTIAL CASE AND FRONT DRIVE CLUTCH SLEEVE

- (a) Check that the tip of the spline gear of the front drive clutch sleeve is not worn.
- (b) Install the front drive clutch sleeve to the center differential case and check that the front drive clutch sleeve moves smoothly.

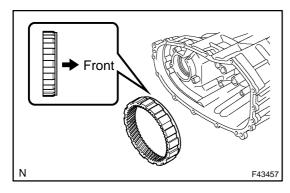


- 88. REMOVE TRANSFER CASE PLUG
- 89. REMOVE SPRING, COMPRESSION
- 90. REMOVE PIN, W/HEAD

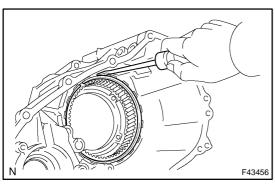


91. REMOVE TRANSFER LOW PLANETARY RING GEAR

(a) Using a screwdriver, remove the snap ring.

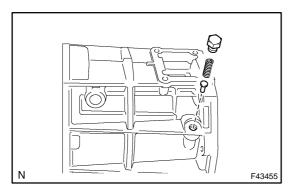


- (b) Remove the low planetary ring gear from the front case.
- 92. INSTALL TRANSFER LOW PLANETARY RING GEAR
- (a) Install the low planetary ring gear to the front case.



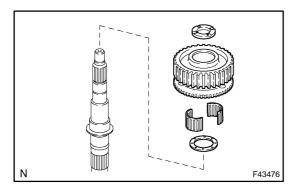
(b) Using a screwdriver, install the snap ring.

2003 4RUNNER REPAIR MANUAL (RM1001U)

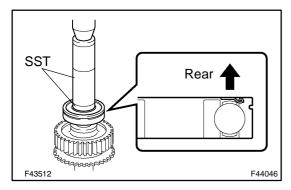


- 93. INSTALL PIN, W/HEAD
- 94. INSTALL SPRING, COMPRESSION
- 95. INSTALL TRANSFER CASE PLUG

Torque: 18.6 N m (190 kgf cm, 14 ft lbf)



- 96. INSTALL TRANSFER OUTPUT SHAFT PLATE WASHER
- 97. INSTALL TRANSFER DRIVE SPROCKET BEARING
- 98. INSTALL TRANSFER DRIVE SPROCKET SUB-ASSY
- 99. INSTALL TRANSFER OUTPUT SHAFT SPACER NO.1



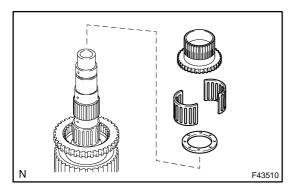
100. INSTALL TRANSFER OUTPUT SHAFT REAR RADIAL BALL BEARING

(a) Using SST and a press, install a new output shaft rear radial ball bearing.

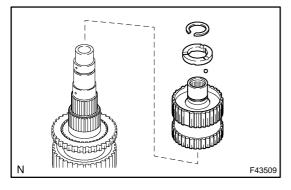
SST 09316-6001 1 (09316-00011, 09316-00071)

NOTICE:

Install the output shaft rear radial ball bearing so that the bearing snap ring groove faces to the rear.

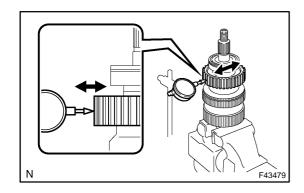


- 101. INSTALL TRANSFER OUTPUT SHAFT PLATE WASHER
- 102. INSTALL TRANSFER OUTPUT SHAFT FRONT NEEDLE ROLLER BEARING
- 103. INSTALL TRANSFER CLUTCH HUB

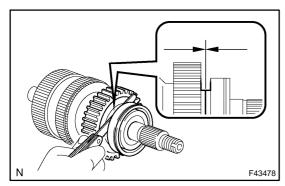


- 104. INSTALL CENTER DIFFERENTIAL CASE
- 105. INSTALL TRANSFER OUTPUT SHAFT SPACER BALL
- 106. INSTALL TRANSFER OUTPUT SHAFT SPACER NO.2
- 107. INSTALL TRANSFER LOW PLANETARY RING GEAR HOLE SNAP RING
- (a) Using a snap ring expander, install the snap ring.

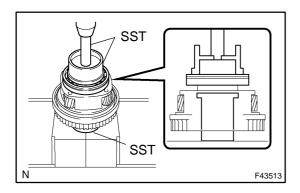
2003 4RUNNER REPAIR MANUAL (RM1001U)



108. INSPECT DRIVE SPROCKET RADIAL CLEARANCE (See step 70)



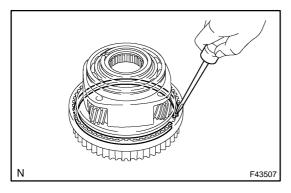
109. INSPECT DRIVE SPROCKET THRUST CLEARANCE (See step 69)



110. INSTALL TRANSFER INPUT SHAFT BEARING

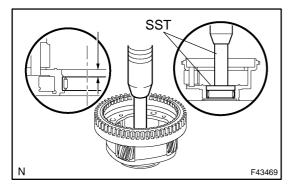
(a) Using SST and a press, install a new bearing with the groove facing forward.

SST 09223-15020, 09515-30010, 09950-70010 (09951-07100)



111. INSTALL TRANSFER LOW PLANETARY GEAR SPLINE PIECE

(a) Using a screwdriver, install the spline piece and low planetary gear with the snap ring.

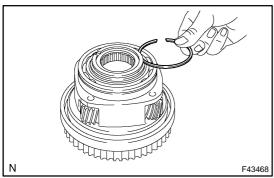


112. INSTALL TRANSFER LOW PLANETARY GEAR BEARING

(a) Using SST and a press, drive in a new bearing. SST 09950-60010 (09951-00570), 09950-70010 (09951-07100)

Bearing press in depth: 7.7 - 8.3 mm (0.303 - 0.327 in.)

2003 4RUNNER REPAIR MANUAL (RM1001U)



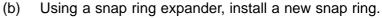


F43460

113. INSTALL TRANSFER INPUT BEARING SHAFT SNAP RING

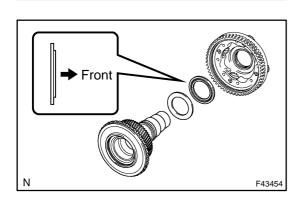
(a) Select a snap ring that allows the minimum axial play.

Mark	Thickness mm (in.)
1	1.45 - 1.50 (0.0571 - 0.0591)
2	1.50 - 1.55 (0.0591 - 0.0610)
3	1.55 - 1.60 (0.0610 - 0.0630)
4	1.60 - 1.65 (0.0630 - 0.0650)
5	1.65 - 1.70 (0.0650 - 0.0669)

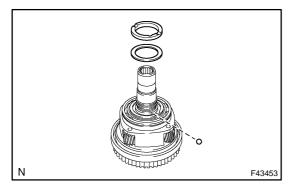


114. INSTALL TRANSFER INPUT SHAFT SEAL RING NO.1 HINT:

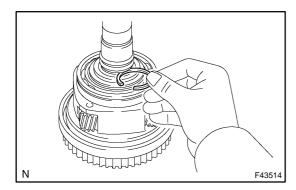
- Apply gear oil to the oil seal ring.
- Engage securely to eliminate clearance as shown in the illustration.



- 115. INSTALL TRANSFER LOW PLANETARY GEAR BEARING
- 116. INSTALL TRANSFER THRUST BEARING RACE NO.1
- 117. INSTALL SHAFT, TRANSFER INPUT



- 118. INSTALL MANUAL TRANSFER PLANETARY CARR WASHER
- 119. INSTALL TRANSFER INPUT GEAR STOPPER BALL
- 120. INSTALL TRANSFER INPUT GEAR STOPPER

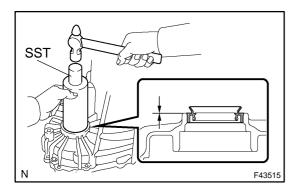


121. INSTALL TRANSFER INPUT GEAR STOPPER SHAFT SNAP RING

(a) Select a input gear stopper snap ring that allows 0.05 - 0.15 mm (0.0020 - 0.0059 in.) axial play.

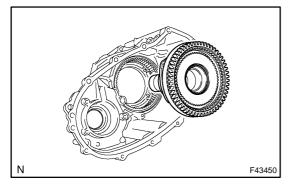
Mark	Thickness mm (in.)
А	2.10 - 2.15 (0.0827 - 0.0846)
В	2.15 - 2.20 (0.0846 - 0.0866)
С	2.20 - 2.25 (0.0866 - 0.0886)
D	2.25 - 2.30 (0.0886 - 0.0906)
E	2.30 - 2.35 (0.0906 - 0.0925)
F	2.35 - 2.40 (0.0925 - 0.0945)
G	2.40 - 2.45 (0.0945 - 0.0965)
Н	2.45 - 2.50 (0.0965 - 0.0984)
J	2.50 - 2.55 (0.0984 - 0.1004)
К	2.55 - 2.60 (0.1004 - 0.1024)
L	2.60 - 2.65 (0.1024 - 0.1043)
М	2.65 - 2.70 (0.1043 - 0.1063)
N	2.70 - 2.75 (0.1063 - 0.1083)
Р	2.75 - 2.80 (0.1083 - 0.1102)
Q	2.80 - 2.85 (0.1102 - 0.1122)
R	2.85 - 2.90 (0.1122 - 0.1142)
S	2.90 - 2.95 (0.1142 - 0.1161)
Т	2.95 - 3.00 (0.1161 - 0.1181)
U	3.00 - 3.05 (0.1181 - 0.1201)

(b) Using a snap ring expander, install a new input gear stopper snap ring.



122. INSTALL TRANSFER CASE OIL SEAL

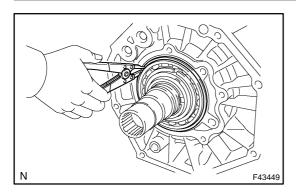
- (a) Using SST and a hammer, drive in a new oil seal until its surface is flush with the case upper surface. SST 09316-6001 1 (09316-00011)
- (b) Coat the lip of the oil seal with MP grease.



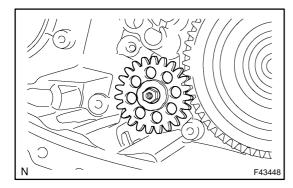
123. INSTALL LOW PLANETARY GEAR ASSY W/INPUT SHAFT SUB-ASSY

(a) Install the low planetary gear assy and input shaft sub-assy.

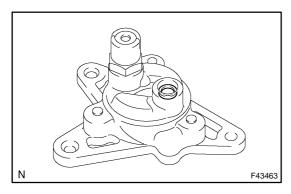
2003 4RUNNER REPAIR MANUAL (RM1001U)



(b) Using a snap ring expander, install the snap ring.

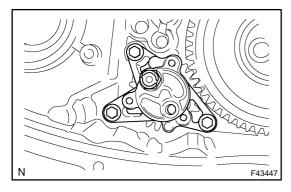


124. INSTALL TRANSFER OIL PUMP GEAR



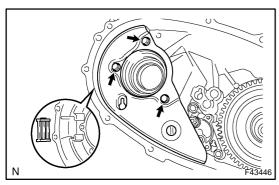
125. INSTALL TRANSFER OIL PUMP BODY O-RING

(a) Coat a new O-ring with gear oil and install it to the oil pump body.



126. INSTALL TRANSFER OIL PUMP BODY SUB-ASSY

(a) Install the oil pump body sub-assy with the 3 bolts. Torque: 7.5 N·m (80 kgf·cm, 69 in.·lbf)



127. INSTALL TRANSFER CASE MAGNET

128. INSTALL TRANSFER OIL SEPARATOR SUB-ASSY

(a) Install the oil separator sub-assy with the 3 bolts.

Torque: 7.5 N·m (80 kgf·cm, 69 in.·lbf)

2003 4RUNNER REPAIR MANUAL (RM1001U)

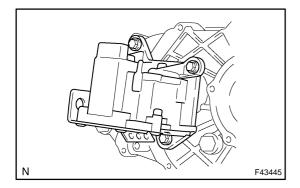
129. INSTALL TRANSFER CASE NO.1 PLUG

(a) Install the case No.1 plug (filler plug) and a new gasket.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)
130. INSTALL TRANSFER CASE NO.1 PLUG

(a) Install the case No.1 plug (drain plug) and a new gasket.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

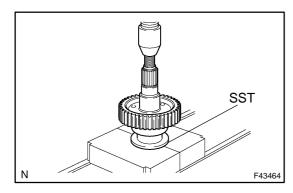


131. INSTALL TRANSFER SHIFT ACTUATOR ASSY

(a) Install the actuator assy with the 3 bolts.

Torque: 20 N m (200 kgf cm, 14 ft. lbf)

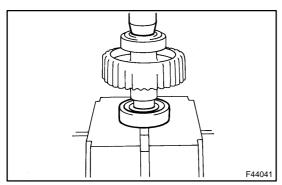
(b) Using a screwdriver and hammer, drive in the 2 snap rings.



132. INSTALL TRANSFER INPUT GEAR RADIAL BALL BEARING

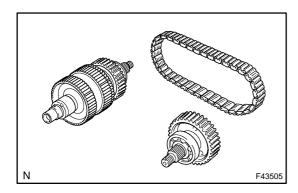
(a) Using SST and a press, install a new input gear radial ball bearing.

SST 09316-6001 1 (09316-00031)



133. INSTALL TRANSFER DRIVEN SPROCKET BEARING

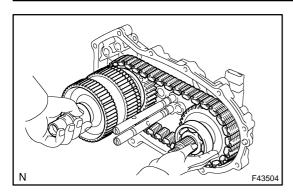
(a) Using a press, install a new driven sprocket bearing.



134. INSTALL REAR OUTPUT SHAFT SUB-ASSY, FRONT DRIVE CHAIN AND DRIVEN SPROCKET SUB-ASSY

(a) Install the rear output shaft sub-assy and drive sprocket to the front drive chain.

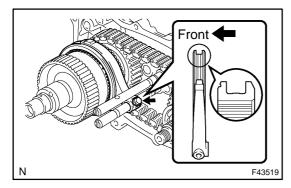
2003 4RUNNER REPAIR MANUAL (RM1001U)



(b) Install the rear output shaft sub-assy, front drive chain and driven sprocket sub-assy to the rear case.

HINT:

Check that the rear output shaft sub-assy and driven sprocket sub-assy turn lightly.

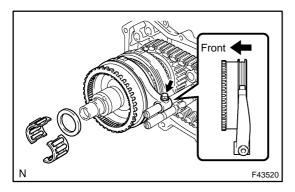


135. INSTALL CTR DIFFERENTIAL LOCK FORK SUB-ASSY W/FRONT DRIVE CLUTCH SLEEVE

- (a) Install the CTR differential lock fork sub-assy and front drive clutch sleeve.
- (b) Install the bolt.

Torque: 24 N·m (245 kgf·cm, 18 ft·lbf)

(c) Using a screwdriver and hammer, drive in the snap ring.

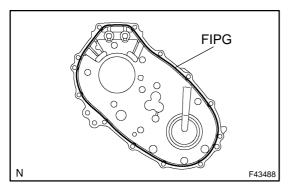


136. INSTALL TRANSFER GEAR SHIFT FORK NO.2 W/TRANSFER HIGH AND LOW CLUTCH SLEEVE

- (a) Install the gear shift fork No.2 and high and low clutch sleeve.
- (b) Install the bolt.

Torque: 24 N·m (245 kgf·cm, 18 ft·lbf)

- 137. INSTALL TRANSFER OUTPUT SHAFT SPACER
- 138. INSTALL TRANSFER OUTPUT SHAFT FRONT NEEDLE ROLLER BEARING

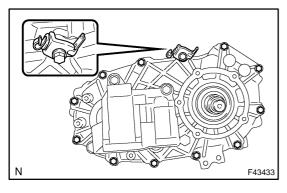


139. INSTALL TRANSFER CASE REAR

(a) Apply FIPG to the case rear, as shown.

FIPG:

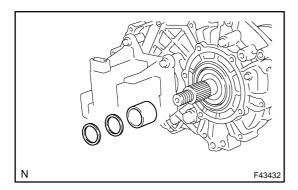
Part No. 08826-00090, THREE BOND 1281 or equivalent



(b) Install the clamp and case rear with the 12 bolts.

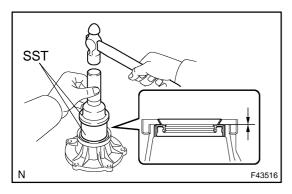
Torque: 28 N·m (285 kgf·cm, 21 ft·lbf)

2003 4RUNNER REPAIR MANUAL (RM1001U)



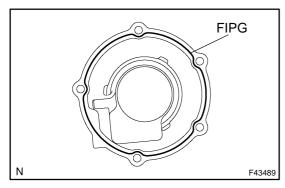
140. INSTALL COLLAR

141. INSTALL TRANSFER OUTPUT WASHER



142. INSTALL OIL (TRANSFER EXTENSION REAR HOUSING SUB-ASSY) SEAL

- (a) Using SST and a hammer, drive in a new oil seal until its surface is flush with the housing upper surface.SST 09223-4601 1, 09631-32020
- (b) Coat the lip of the oil seal with MP grease.



143. INSTALL TRANSFER EXTENSION HOUSING SUB-ASSY REAR

(a) Apply FIPG to the extension housing sub-assy rear, as shown.

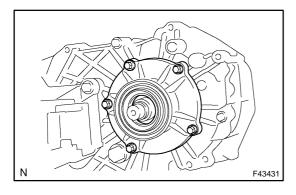
FIPG:

Part No. 08826-00090, THREE BOND 1281 or equivalent

(b) Apply sealant to the bolt threads.

Sealant:

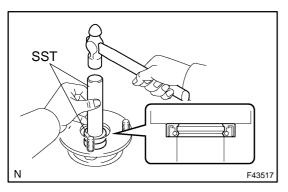
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent



(c) Install the extension housing sub-assy rear with the 5 bolts.

Torque: 12 N·m (120 kgf·cm, 9 ft·lbf)

2003 4RUNNER REPAIR MANUAL (RM1001U)



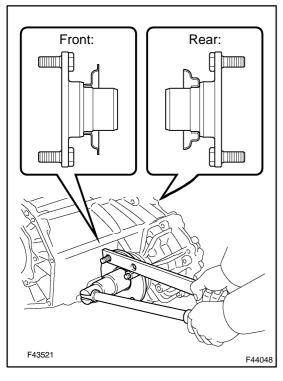
144. INSTALL TRANSFER OUTPUT SHAFT COMPANION FLANGE OIL SEAL

- (a) Using SST and a hammer, drive in a new oil seal (front). SST 09950-60010 (09951-00320), 09950-70010 (09951-07100)
- (b) Coat the lip of the oil seal with MP grease.

145. INSTALL TRANSFER OUTPUT SHAFT COMPANION FLANGE OIL SEAL

(a) Drive in a new oil seal (rear) in the same way as the oil seal (front).

SST 09950-60010 (09951-00320), 09950-70010 (09951-07100)



146. INSTALL OUTPUT SHAFT COMPANION FLANGE SUB-ASSY

- (a) Install the companion flange sub-assy (front) to the drive sprocket sub-assy.
- (b) Using SST to hold the companion flange, install a new companion flange lock nut.

Torque: 118 N·m (1,200 kgf·cm, 87 ft·lbf)

(c) Using a chisel and hammer, stake the companion flange lock nut.

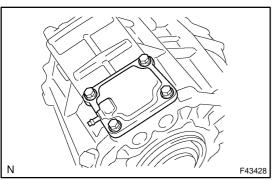
SST 09330-00021

147. INSTALL OUTPUT SHAFT COMPANION FLANGE SUB-ASSY

(a) Using SST, install the companion flange sub-assy (rear) in the same way as the companion flange sub-assy (front).

Torque: 118 N·m (1,200 kgf·cm, 87 ft·lbf)

SST 09330-00021

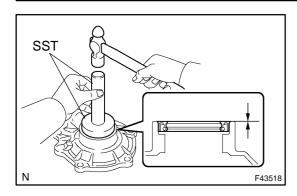


148. INSTALL BREATHER OIL DEFLECTOR

149. INSTALL TRANSFER CASE COVER SUB-ASSY

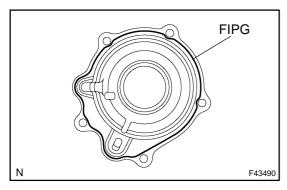
(a) Install the case cover sub-assy with the 4 bolts.

Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)



150. INSTALL TRANSFER COVER TYPE T OIL SEAL

- (a) Using SST and a hammer, drive in a new oil seal until its surface is flush with the retainer upper surface.
- (b) Coat the lip of the oil seal with MP grease. SST 09950-60010 (09951-00590), 09950-70010 (09951-07100)



151. INSTALL TRANSFER FRONT BEARING RETAINER SUB-ASSY

(a) Apply FIPG to the front bearing retainer sub-assy, as shown.

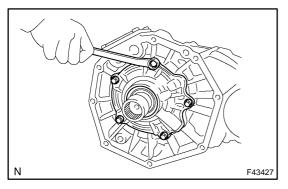
FIPG:

Part No. 08826-00090, THREE BOND 1281 or equivalent

(b) Apply sealant to the bolt thread.

Sealant:

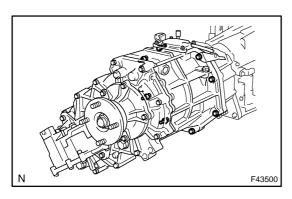
Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent



(c) Install the front bearing retainer sub-assy with the 5 bolts.

Torque: 11.5 N·m (117 kgf·cm, 8 ft·lbf)

152. INSTALL HOSE



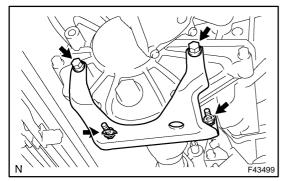
2003 4RUNNER REPAIR MANUAL (RM1001U)

153. INSTALL TRANSFER ASSY

- (a) Install the transfer to the automatic transmission.
- (b) Install the 2 clamps and 8 bolts.

Torque: 24 N m (240 kgf cm, 17 ft lbf)

- 154. INSTALL AUTOMATIC TRANSMISSION W/TRANSFER (See page 40-13)
- 155. INSTALL FLYWHEEL HOUSING UNDER COVER (See page 40-13)
- 156. CONNECT WIRE HARNESS (See page 40-13)
- 157. CONNECT CONNECTOR (See page 40-13)
- 158. INSTALL FRAME CROSSMEMBER SUB-ASSY NO.3 (See page 40-13)



- 159. INSTALL TRANSFER CASE LOWER PROTECTOR
- (a) Install the transfer case lower protector with the 4 bolts.

 Torque: 18 N·m (184 kgf·cm, 13 ft·lbf)

- 160. INSTALL TRANSMISSION CONTROL CABLE BRACKET NO.1 (See page 40-13)
- 161. CONNECT TRANSMISSION CONTROL CABLE ASSY (See page 40-13)
- 162. INSTALL OIL COOLER INLET TUBE NO.1 (See page 40-13)
 SST 09023-12700
- 163. CONNECT OIL COOLER OUTLET TUBE NO.1 (See page 40-13) SST 09023-12700
- 164. INSTALL TRANSMISSION OIL FILLER TUBE SUB-ASSY (See page 40-13)
- 165. INSTALL FRONT SUSPENSION MEMBER BRACKET LH (See page 40-13)
- 166. INSTALL FRONT SUSPENSION MEMBER BRACKET (See page 40-13)
- 167. ADD TRANSFER OIL (See page 31-3)
- 168. ADD AUTOMATIC TRANSMISSION FLUID (See page 40-13)
- 169. INSPECT AUTOMATIC TRANSMISSION FLUID (See page 40-13)
- 170. INSTALL PROPELLER SHAFT ASSY (See page 30-4)
- 171. INSTALL PROPELLER SHAFT ASSY FRONT (See page 30-4)
- 172. INSTALL EXHAUST PIPE ASSY (See page 30-4)
- 173. CONNECT OXYGEN SENSOR (See page 14-21)
- 174. INSTALL ENGINE UNDER COVER ASSY REAR (See page 14-21)
- 175. INSTALL ENGINE UNDER COVER SUB-ASSY NO.1 (See page 14-21)
- 176. INSPECT AUTOMATIC TRANSMISSION FLUID (See page 40-13)
- 177. INSPECT SHIFT LEVER POSITION (See page 40-13)
- 178. CHECK FOR EXHAUST GAS LEAK
- 179. WARM UP
- 180. DRIVING TEST