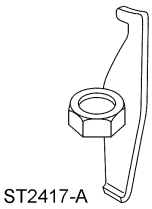
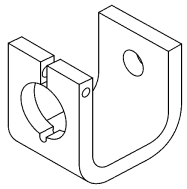
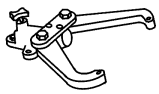
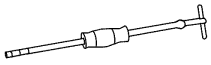
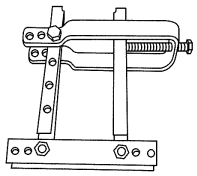
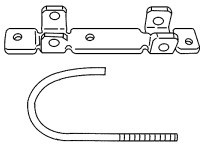
DISASSEMBLY

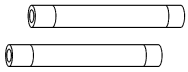
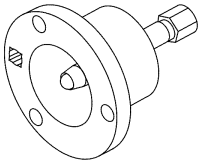
Transmission

Special Tool(s)

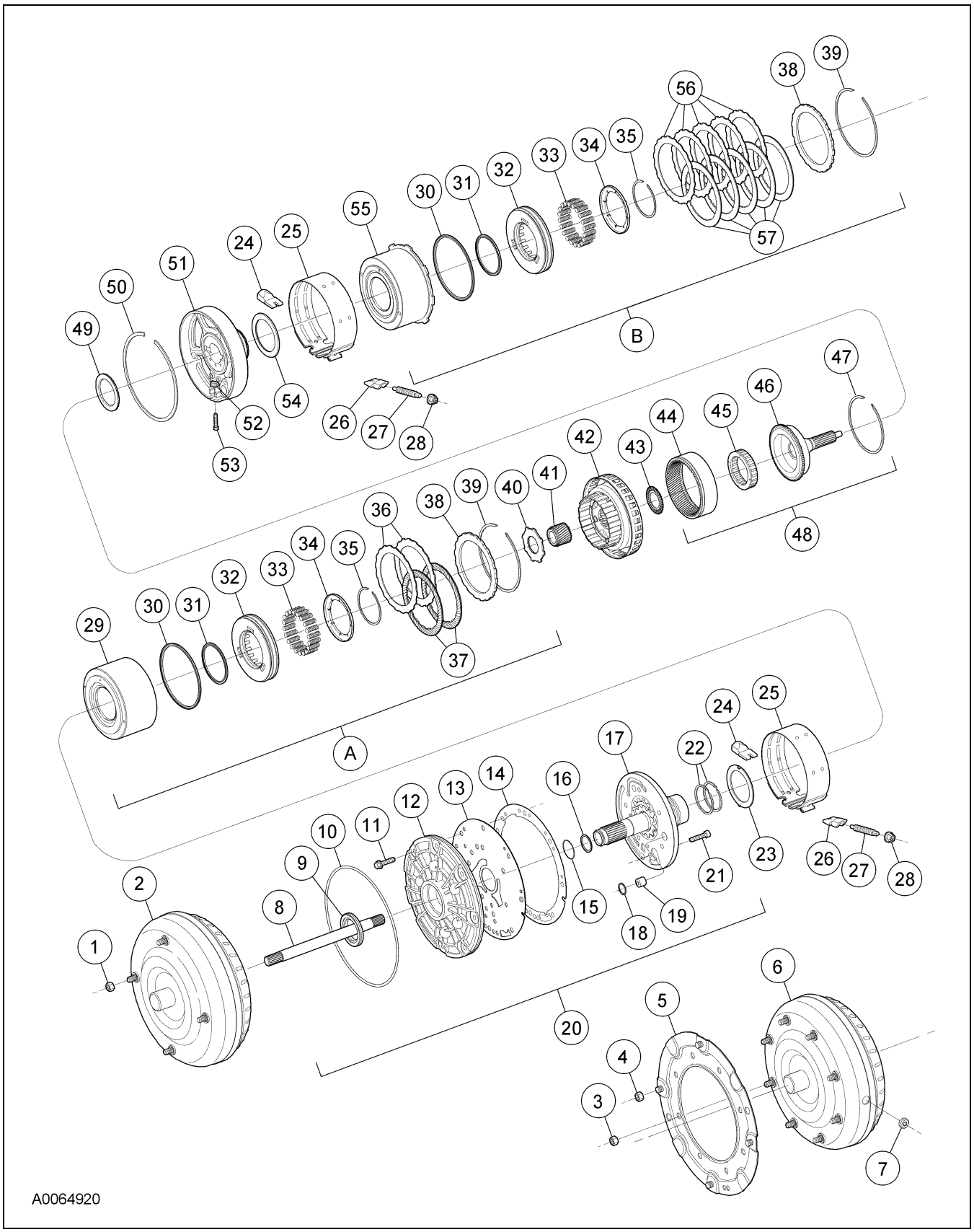
 ST2417-A	Remover, Input Shaft Oil Seal 308-375
 ST2418-A	Remover, Transmission Fluid Pump 307-397
 ST1186-A	Holding Fixture, Transmission 307-003 (T57L-500-B)
 ST1185-A	Slide Hammer 100-001 (T50T-100-A)
 ST1758-A	Remover, Torque Converter Fluid Seal 307-309 (T94P-77001-BH)
 ST2393-A	Compressor, Servo Cover 307-402

(Continued)

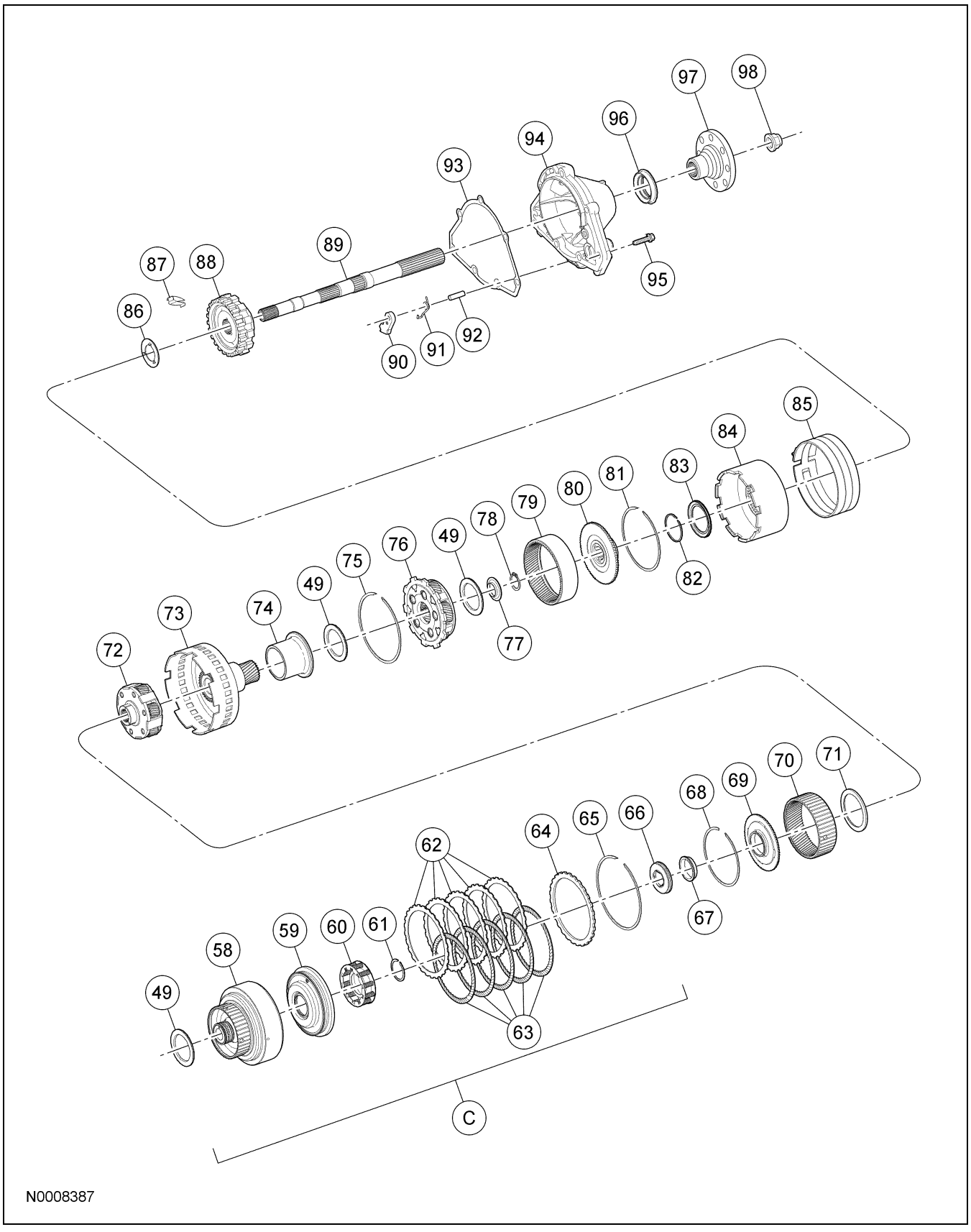
Special Tool(s)

 ST1631-A	Handle, Torque Converter 307-091 (T81P-7902-C)
 ST2415-A	Remover, Output Shaft Flange 307-523

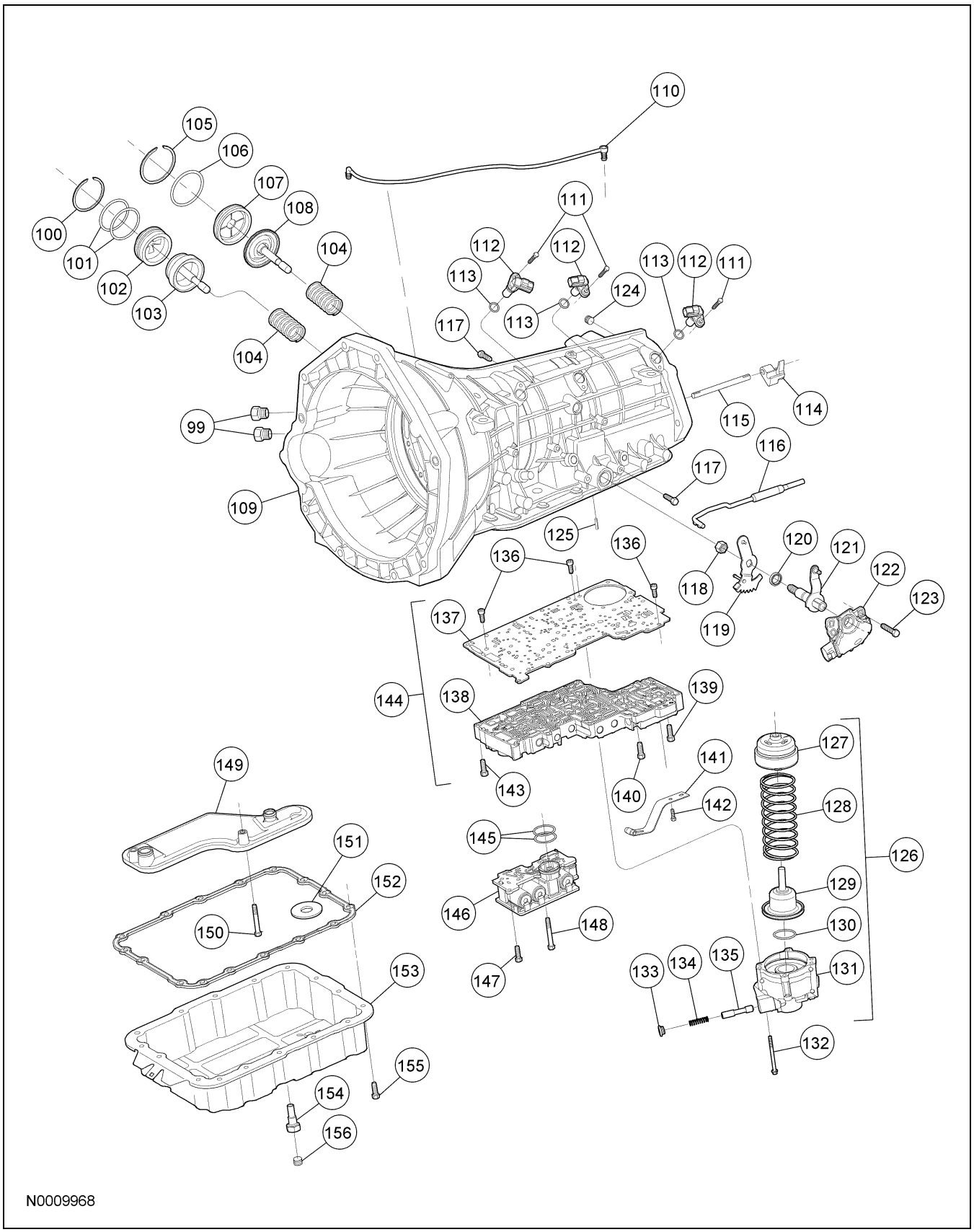
DISASSEMBLY (Continued)



DISASSEMBLY (Continued)



DISASSEMBLY (Continued)



DISASSEMBLY (Continued)

Item	Part Number	Description
1	379299-S2	Converter-to-flexplate nut (attaches the converter assembly to the flexplate)
2	7902	Converter assembly (3.0L)
3	6441	Converter-to-adapter plate nut (attaches the converter assembly to the adapter plate) (8 required)
4	6441	Adapter plate-to-flexplate nut (attaches adapter plate to the flexplate) (4 required)
5	6K374	Adapter plate assembly
6	7902	Converter assembly
7	6730	Torque converter drain plug
8	7017	Input shaft
9	7A248	Front fluid pump seal assembly
10	7A248	Front fluid pump seal
11	W704892-S300	Screw and washer assembly — M8 x 35 internal lobe (attaches pump to case) (8 required)
12	7G178	Fluid pump cover assembly
13	7B472	Fluid pump adapter plate
14	7A136	Front fluid pump gasket
15	W701431-S300	Fluid pump shaft-to-inner gear O-ring seal (also in pump assembly)
16	7L323	Stator support seal
17	7A108	Front pump support assembly
18	7H416	O-ring
19	7H411	Fluid pump control valve
20	7A103	Fluid pump assembly
21	W701429-S309M	M8 x 1 x 35 internal lobe screw (attaches pump support to pump assembly) (6 required)
22	7D025	Overdrive brake drum seal
23	7D014	Fluid pump input thrust washer No. 1
24	7D029	Intermediate and overdrive brake band anchor strut (2 required)
25	7D034	Intermediate and overdrive brake band (2 required)
26	7D029	Intermediate and overdrive brake band apply strut (2 required)

(Continued)

Item	Part Number	Description
27	7C492	Overdrive/intermediate band adjusting screw
28	71000-S100	Overdrive/intermediate locking nut
29	7L669	Overdrive brake band drum assembly
30	7A548	Direct and overdrive piston outer seal
31	7D404	Direct and overdrive piston inner seal
32	7A262	Direct and overdrive clutch piston
33	7A480	Direct and overdrive clutch piston spring
34	7A527	Clutch piston spring retainer (2 required)
35	E860125-S	Retaining ring (retains 7D041 to drum) (2 required)
36	7B442	Coast clutch external splined plate (steel) (2 required)
37	7B164	Coast clutch internal splined friction plate (2 required)
38	7B066	Coast and direct clutch pressure plate (2 required)
39	E860126-S	Coast and direct clutch plates retaining ring (select fit) (2 required)
40	7660	Coast clutch to overdrive carrier adapter
41	7D063	Overdrive sun gear
42	7B446	Overdrive planetary gear carrier (with trigger wheel)
43	7L495	Overdrive planet thrust bearing No. 2
44	7A153	Overdrive ring gear
45	7A089	Center shaft one-way clutch assembly
46	7A658	Overdrive center shaft
47	W702037-S300	Retaining ring (retains 7686 to 7653)
48	7L678	Hub and ring gear assembly (includes 7C109, 7A153, 7A658, W702037-S300)
49	7M153	Center shaft and forward clutch cylinder bearing assembly No. 3, No. 5, No. 8 and No. 9 (4 required)
50	W702465-S300	Retaining ring
51	7A130	Center support assembly

(Continued)

DISASSEMBLY (Continued)

Item	Part Number	Description
52	E826160-S76	Nut and cage assembly (attaches center support to case)
53	W705407-S300	Bolt
54	7D014	Intermediate clutch drum bearing No. 4
55	7D044	Intermediate brake drum assembly
56	7B442	Direct clutch external splined steel plates (5 required)
57	7B164	Direct clutch internal splined friction plates (5 required)
58	7A360	Forward clutch cylinder
59	7A262	Forward clutch piston assembly
60	7G299	Forward clutch support and spring assembly
61	E860109-S	Forward clutch piston and spring retaining ring in forward clutch cylinder
62	7B442	Forward clutch external spline steel plate (5 required)
63	7B164	Forward clutch internally spline friction plate (5 required)
64	7B066	Forward clutch pressure plate
65	7D483	Retaining ring 141.45 x 1.37 internal (select fit)
66	7D234	Forward ring gear hub thrust bearing No. 6A
67	7D090	Forward clutch thrust washer No. 6B
68	7G375	Forward clutch hub retainer ring
69	7B067	Forward ring gear hub
70	7D392	Forward ring gear
71	7F374	Forward planet thrust bearing No. 7
72	7A398	Forward planetary
73	7A019	Shell and sun gear assembly
74	7C176	Low and reverse spacer gear
75	W702775-S300	Reverse carrier drum snap ring
76	7D006	Reverse planet assembly
77	7B167	Output shaft sleeve
78	E860527-S	External retainer ring
79	7A153	Output shaft ring gear
80	7D164	Output shaft hub

(Continued)

Item	Part Number	Description
81	7C122	Output shaft ring gear retaining ring
82	7D019	Output shaft hub seal
83	7H027	Low/intermediate sun gear bearing assembly
84	7C498	Reverse brake drum and clutch assembly (includes OWC)
85	7D095	Low/reverse band assembly
86	7B368	Output shaft thrust washer No. 11
87	7C058	Deflector assembly
88	7A233	Transmission parking gear assembly
89	7060	Output shaft
90	7A441	Parking pawl
91	7D070	Parking pawl return spring
92	7D071	Parking pawl shaft
93	7086	Extension housing gasket
94	7A039	Extension housing
95	W500311-S309	M8 x 1.25 extension housing to case screw (5 required)
96	7052	Extension housing seal
97	7089	Output shaft flange
98	W701357-S309	Output shaft flange nut
99	7D273	Fluid tube connector assembly (2 required)
100	7H074	Ring overdrive servo retainer
101	W703119-S300	Overdrive servo cover seal (2 required)
102	7D027	Overdrive servo cover
103	7D021	Overdrive servo piston and rod
104	7D028	Intermediate/overdrive servo piston spring (2 required)
105	W702777-S300	Ring intermediate servo retainer
106	W702969-S300	Intermediate servo cover seal
107	7D027	Intermediate servo cover
108	7D021	Intermediate servo piston and rod
109	7005	Case assembly
110	7034	Case vent assembly
111	W708389-S426	Speed sensor-to-case screw (M6 x 19)
112	7H103	Output shaft speed, turbine shaft speed and intermediate shaft speed sensors

(Continued)

DISASSEMBLY (Continued)

Item	Part Number	Description
113	W702981-S300	Speed sensor-to-case O-ring seal
114	7A179	Reverse brake drum lever
115	7D433	Reverse band actuating lever shaft
116	7A232	Parking pawl actuating rod
117	390318-S2	Pipe plug
118	W703001-S309	Manual lever shaft outer and inner nut
119	7A115	Manual valve inner lever
120	7B498	Manual control lever seal
121	7A256	Manual control lever
122	7F293	Digital transmission range (TR) sensor
123	W500015-S309	Digital transmission range (TR) sensor screw and washer (2 required)
124	6026	Fluid fill plug
125	7B210	Manual lever shaft pin retainer
126	7B193	Reverse servo assembly
127	7D372	Reverse servo plate
128	7D466	Reverse servo accumulator spring
129	7D189	Reverse servo piston and seal
130	7423	Reverse servo piston O-ring seal
131	7D036	Reverse servo cover
132	W702359-S309	Reverse servo piston-to-case screw (4 required)
133	7D321	Control valve spring retainer
134	7A270	Main fluid pressure spring regulator valve
135	7D488	Reverse servo check valve
136	W701099-S1430	Main control valve body separating plate screw
137	7Z490	Main control valve body separating plate (bonded)
138	7A101	Lower main control valve body
139	W500102-S1300	Main control valve body screws (18 required)
140	W702791-S300	Main control valve body screws (1 required)
141	7E332	Manual valve detent spring
142	W500100-S300	Screw detent spring
143	W706672-S300	Main control valve body screws (1 required)
144	7A100	Main control valve body
145	W705928-S300	Solenoid body connector O-ring seal
146	7G391	Transmission control solenoid body
147	W702921-S300	Transmission control solenoid body screw
148	W703189-S430	Transmission control solenoid body screws (7 required)
149	7A098	Transmission fluid pan filter
150	W705559-S300	Transmission fluid pan filter screws
151	7L027	Transmission fluid pan magnet
152	7A191	Transmission fluid pan gasket
153	7A194	Transmission fluid pan
154	7A010	Transmission fluid pan drain tube
155	W500213-S1309	Transmission fluid pan screw
156	W704999-S309	Transmission fluid pan drain tube plug (short hex)
A	—	Overdrive/coast clutch assembly
B	—	Direct clutch assembly
C	—	Forward clutch assembly

(Continued)

⚠ CAUTION: The screws are not reusable for assembly. Discard the screws. If the screws are reused, the housing may become separated from the transmission.

NOTE: The transmission fluid pan gasket is reusable. Clean and inspect the gasket for damage. If not damaged, the gasket should be reused.

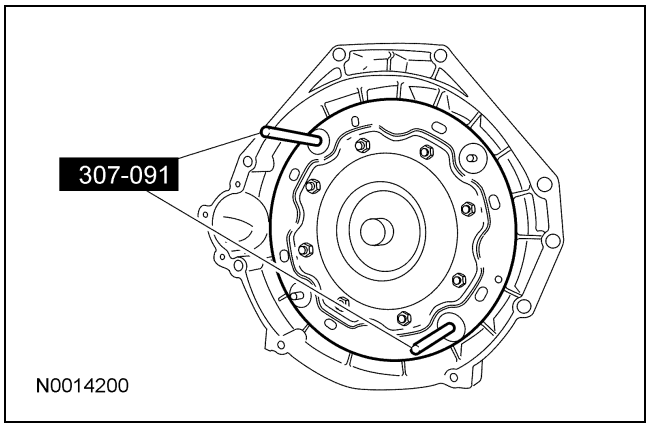
NOTE: Tag and identify all parts for reassembly.

DISASSEMBLY (Continued)

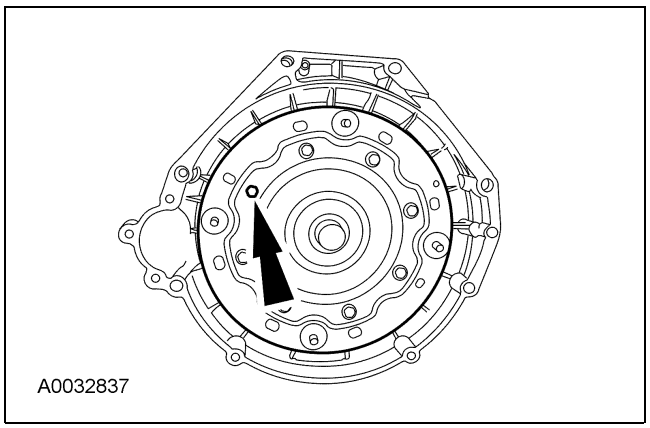
1. **⚠ WARNING: The torque converter is heavy, especially when full of fluid.**

   NOTE: If not installing a new torque converter, leave the adapter plate screwed to the torque converter.

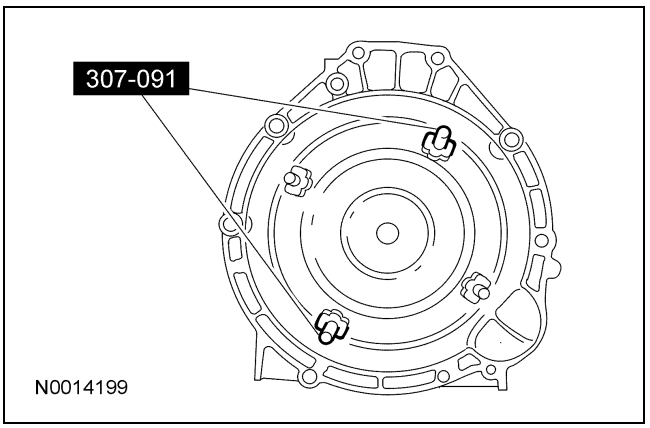
   Using the special tools, remove the torque converter and adapter plate as an assembly.



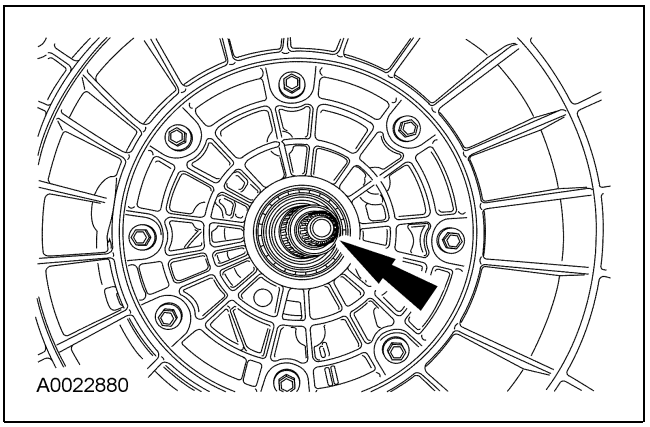
2. If the vehicle is equipped, and installation of a new or remanufactured torque converter is necessary, remove the torque converter adapter plate.



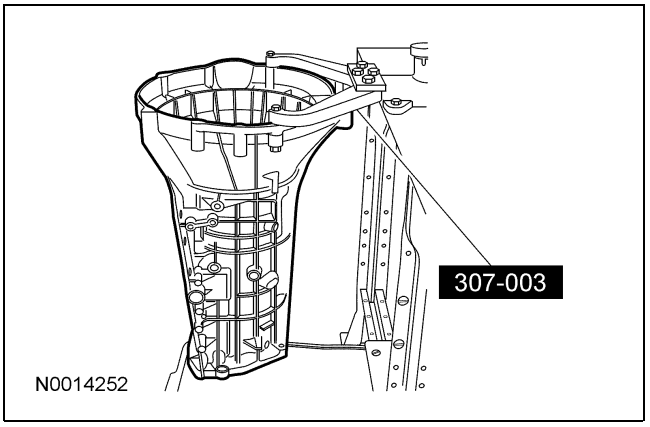
3. If the adapter plate has been removed, use the special tools to remove the torque converter.



4. Remove the input shaft.

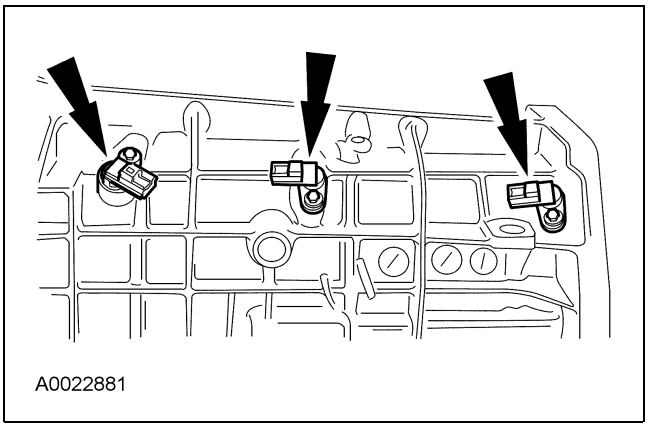


5. Using the special tool, install the transmission into the bench with the torque converter housing facing up.

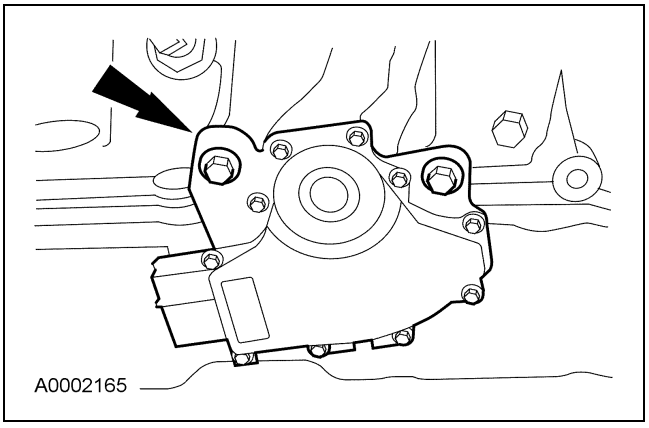


DISASSEMBLY (Continued)

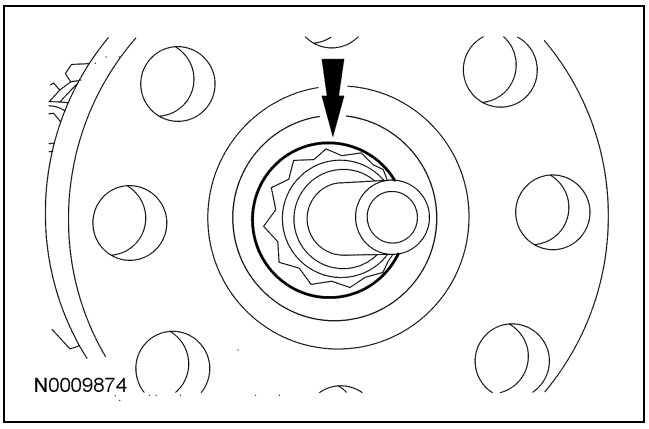
6. Remove the transmission sensors.



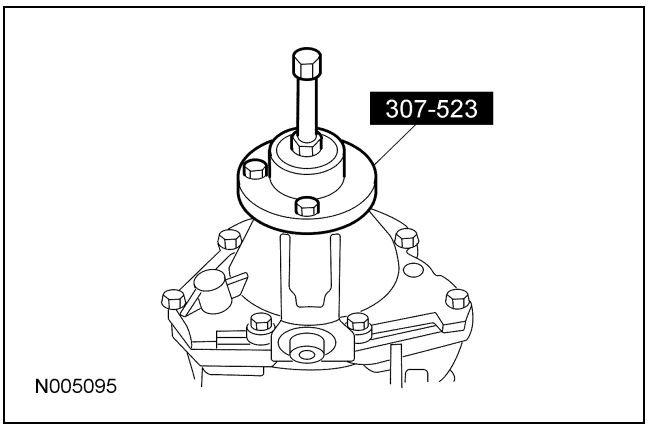
7. Remove the transmission range senor.



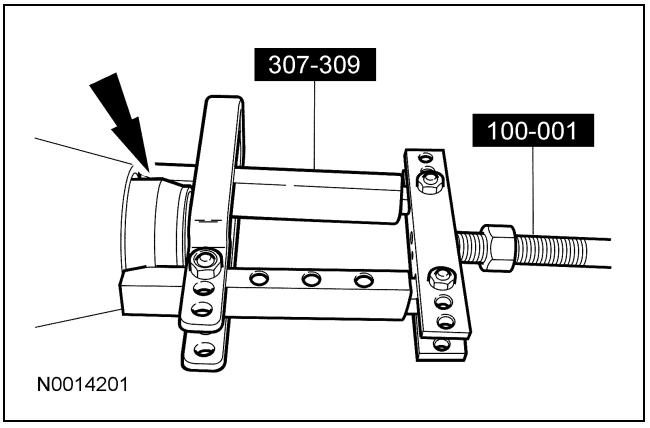
8. Remove and discard the nut.



9. Using the special tool, remove the output shaft flange.

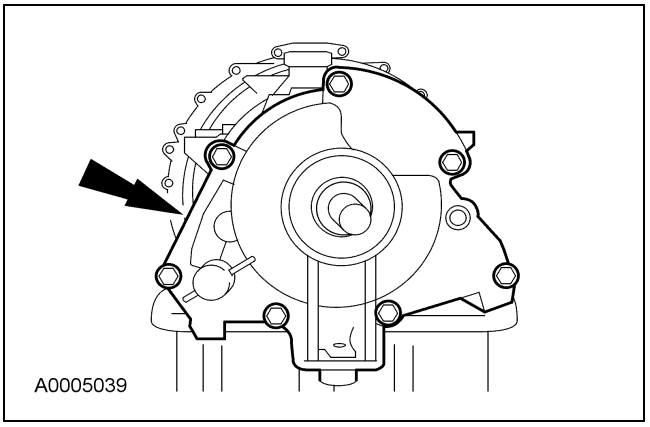


10. Using the special tools, remove the extension housing seal.



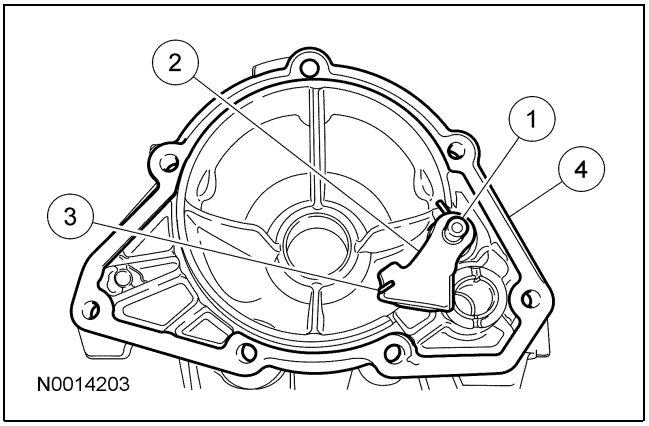
11. **⚠ CAUTION: The parking pawl, parking pawl return spring and parking pawl shaft could fall out during removal of the extension housing.**

    Remove the extension housing.



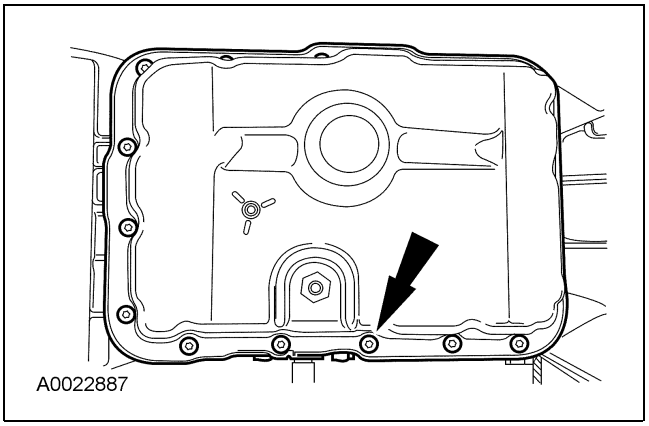
DISASSEMBLY (Continued)

12. Remove the parking pawl assembly and discard the gasket.
    1 Remove the parking pawl shaft.
    2 Remove the parking pawl.
    3 Remove the parking pawl return spring.
    4 Remove and discard the gasket.

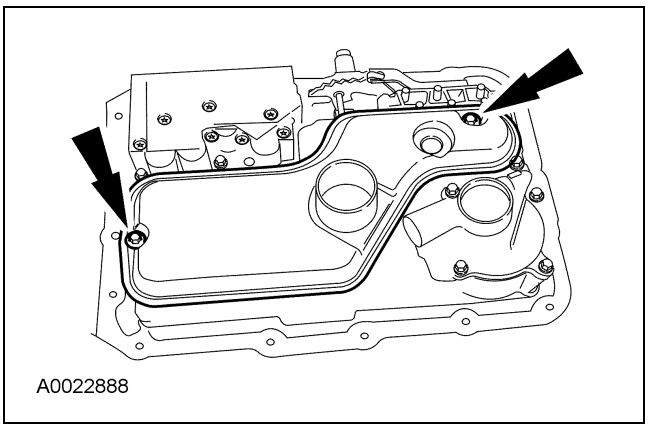


13. **NOTE:** The transmission fluid pan gasket is reusable. Clean and inspect the gasket for damage. If the gasket is not damaged, the gasket should be reused.

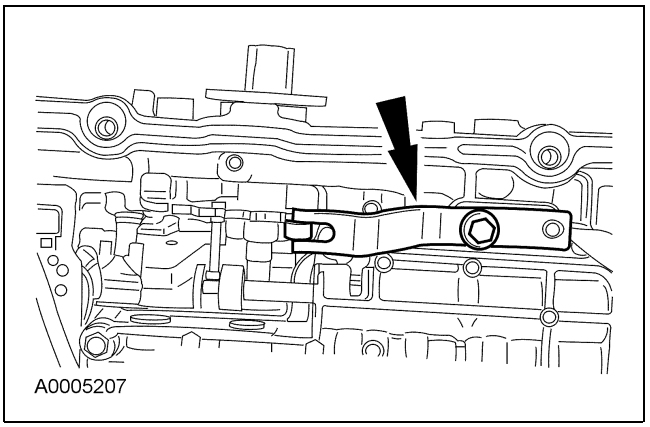
    Remove the transmission fluid pan and gasket.



14. Remove the transmission fluid filter and discard.

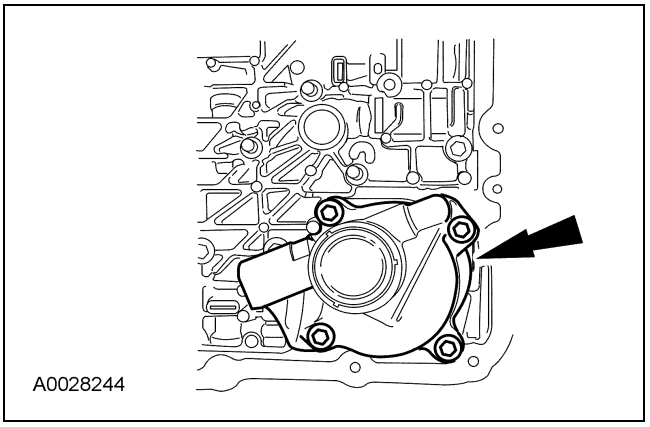


15. Remove the manual control valve detent spring.



16. ⚠ **WARNING: The upper and lower servo covers are under spring tension. Use care when removing the piston and cover assembly. Failure to follow these instructions may result in personal injury.**

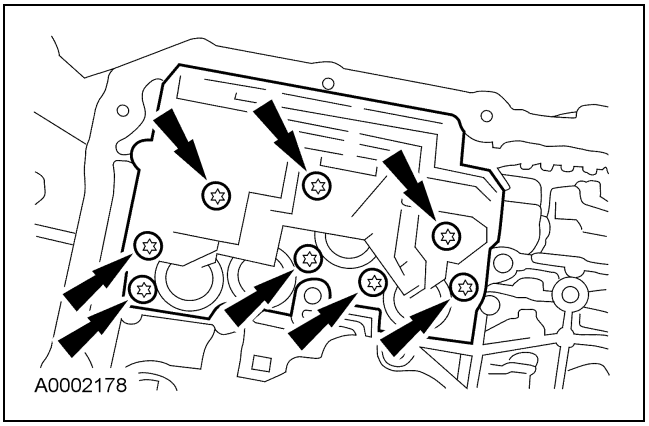
    Remove the reverse servo assembly.



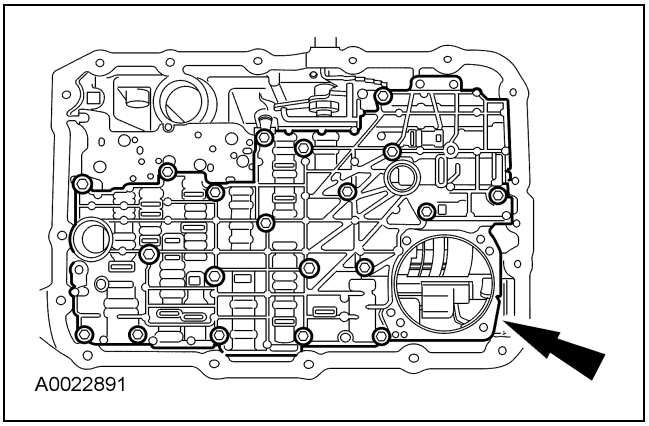
DISASSEMBLY (Continued)

17. **⚠ CAUTION: Do not damage solenoid body connector pins.**

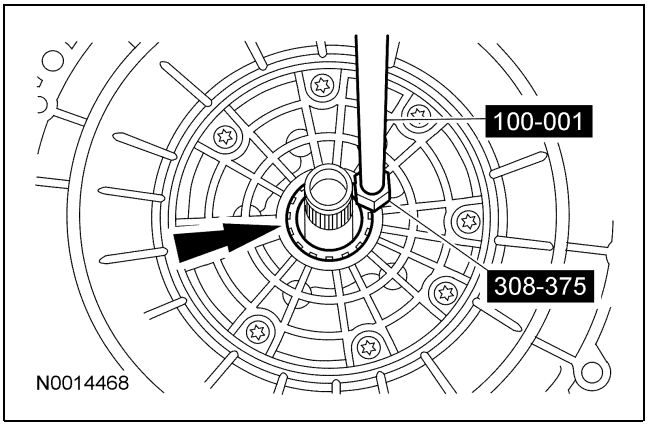
    Remove the solenoid body assembly by lifting on the body and pushing the connector from the other side of the case.



18. Remove the main control valve body, separator plate and gasket.



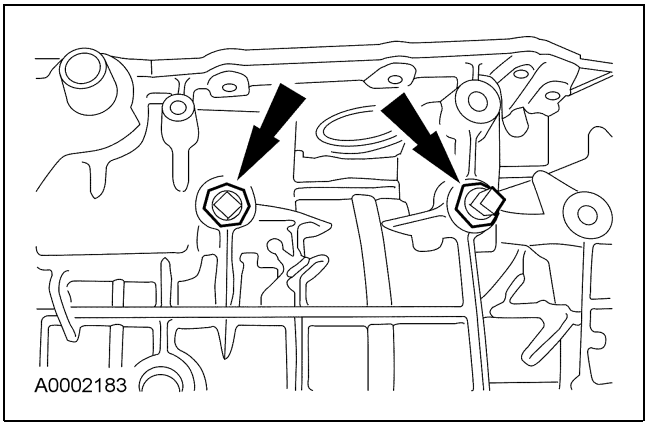
19. Using the special tools, remove the converter hub seal.



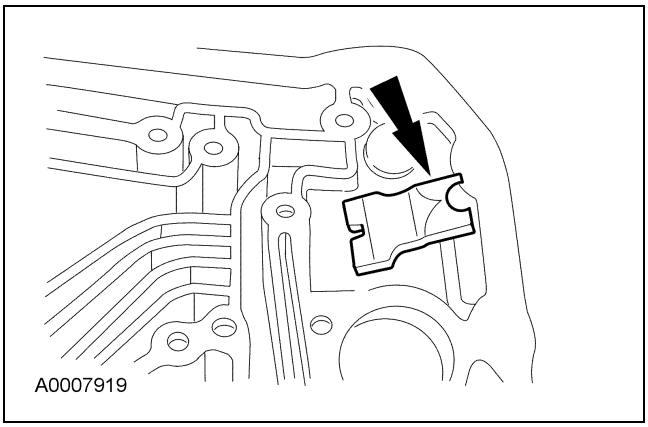
20. **⚠ CAUTION: Failure to loosen the OD band adjusting screw prior to pump removal may cause damage to the pump and OD band.**

    ⚠ CAUTION: Throw the locknuts away. The locknuts are not reusable for assembly.

    Remove the locknuts, and loosen the OD band adjusting screw.



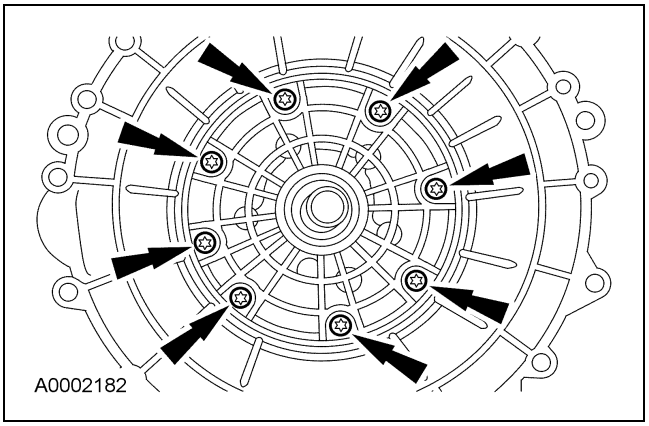
21. Remove and tag part for assembly.



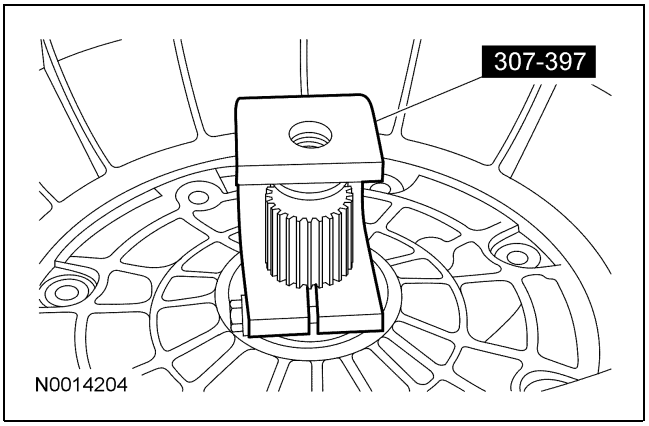
DISASSEMBLY (Continued)

22. **⚠ CAUTION: The screws are not reusable for assembly. Discard the screws. If the screws are reused, the housing may become separated from the transmission.**

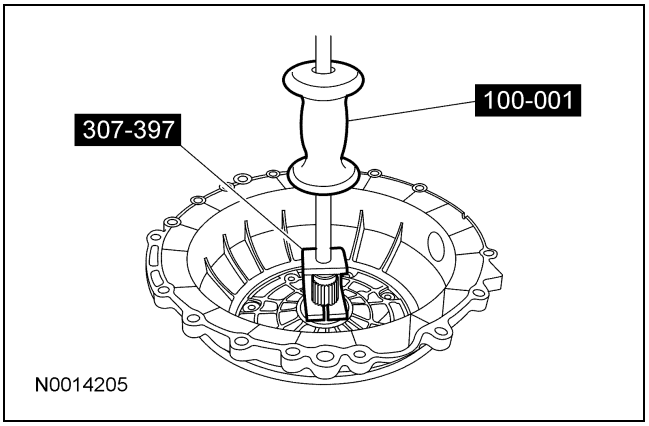
    Remove and discard the screws.



23. Install the special tool.

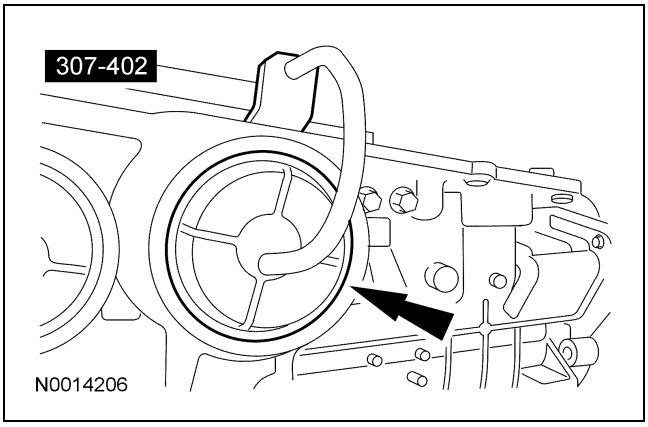


24. Using the special tools, remove the pump.

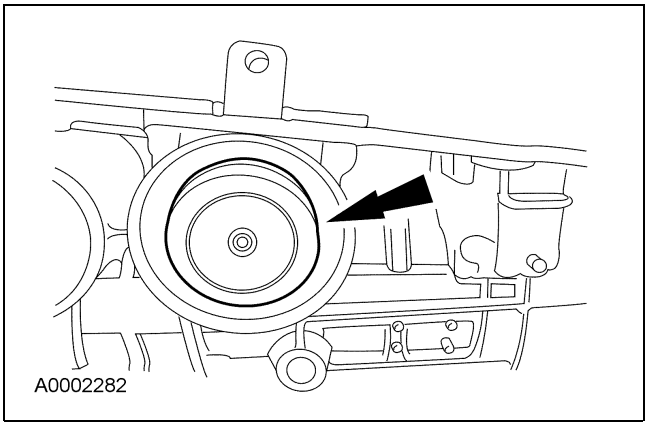


25. **⚠ CAUTION: Servo cover is under spring tension.**

    Using the special tool, remove the intermediate servo cover retaining ring.

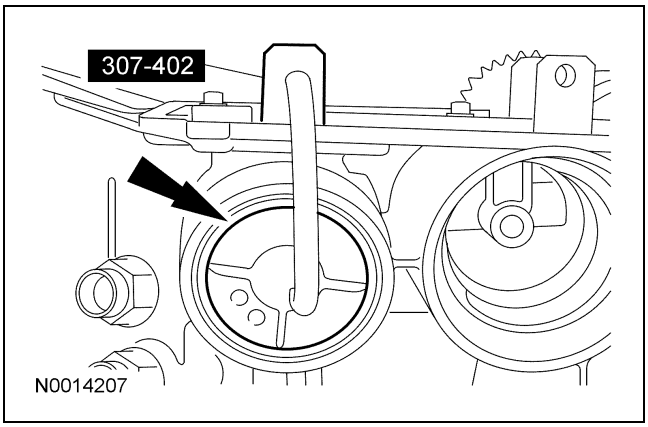


26. Remove the intermediate band servo piston and spring.



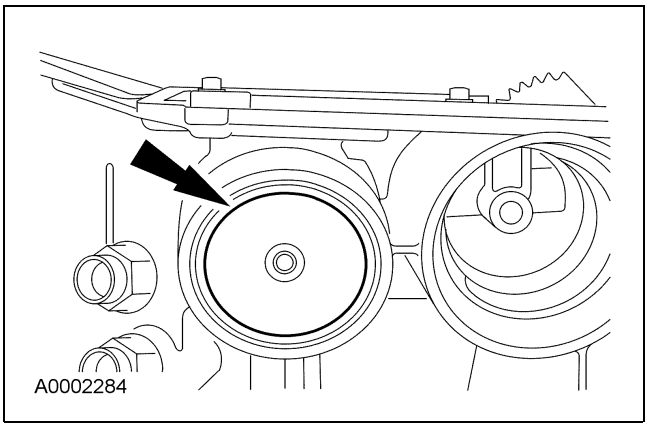
27. **⚠ CAUTION: Servo cover is under spring tension.**

    Using the special tool, remove the overdrive servo cover retaining ring and cover.

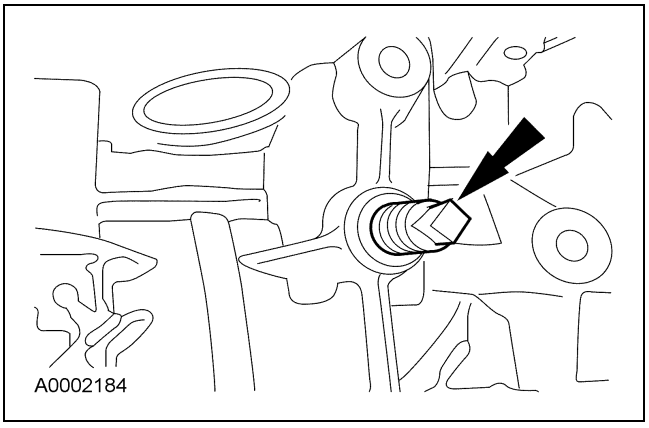


DISASSEMBLY (Continued)

28. Remove the front band servo piston and spring.

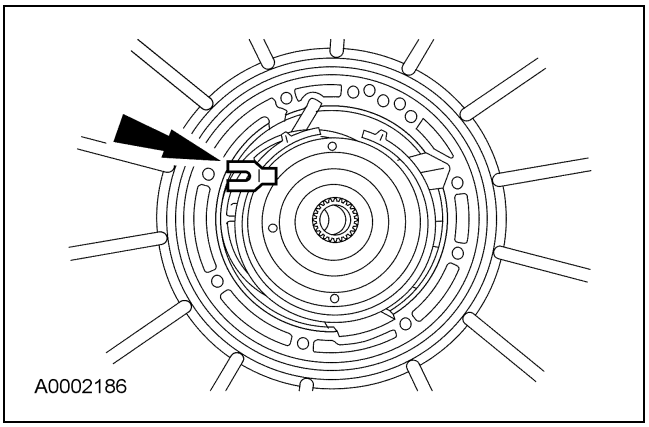


29. Remove the screw.



30. **NOTE:** Tag and identify parts for reassembly.

    Compress the overdrive band and remove the apply strut.

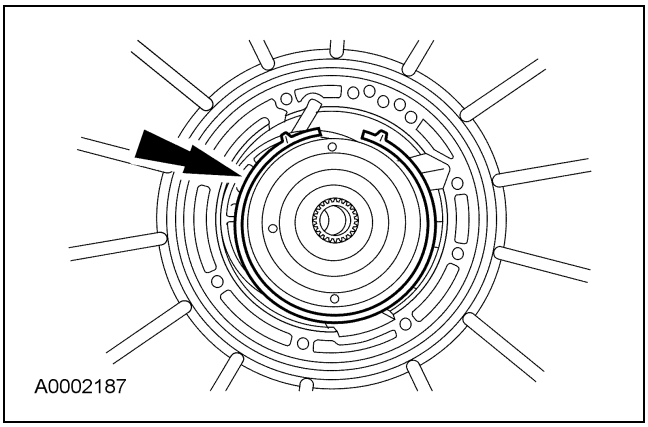


31. ⚠ **CAUTION: Identify the anchor and apply ends of the overdrive band.**

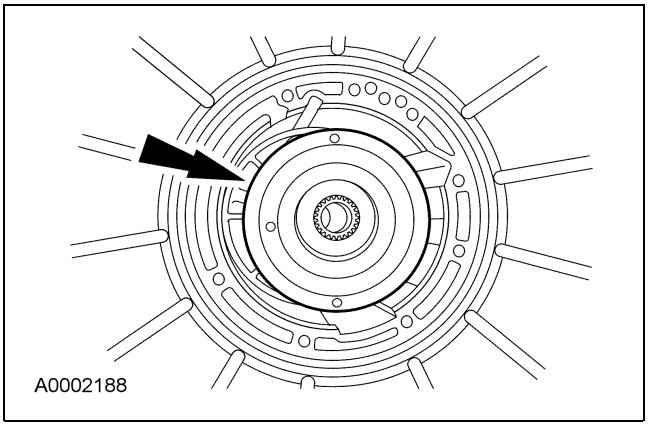
    NOTE: The new overdrive band is dark in color. This is a normal condition of the band. Hairline cracks in the band are also considered normal. Do not install a new band based solely on the color.

    Remove and inspect the overdrive band. Check the following conditions for installing a new band:

    - Inspect for glazing.
    - Inspect for missing friction material.
    - Inspect for material flaking.
    - Inspect for damage to the anchor pins.



32. Remove the overdrive brake and coast clutch drum.

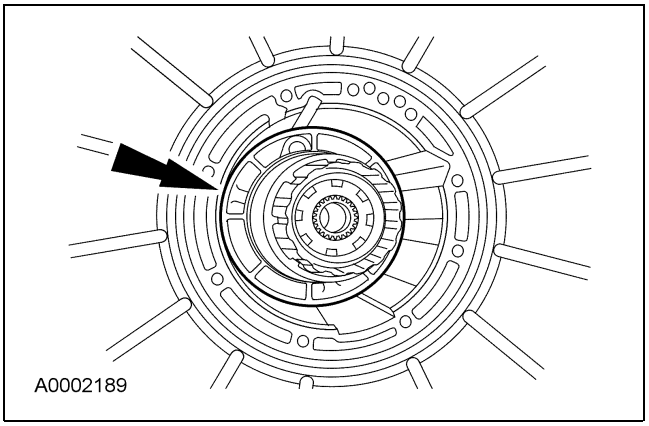


DISASSEMBLY (Continued)

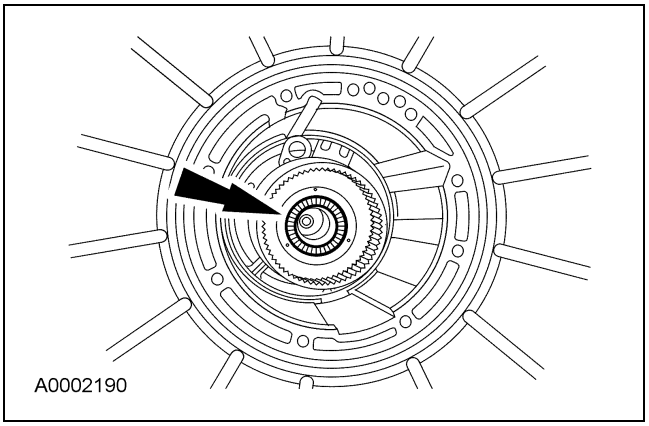
33. **CAUTION: Do not bend the trigger wheel.**

    NOTE: The No. 12 thrust bearing is in this assembly.

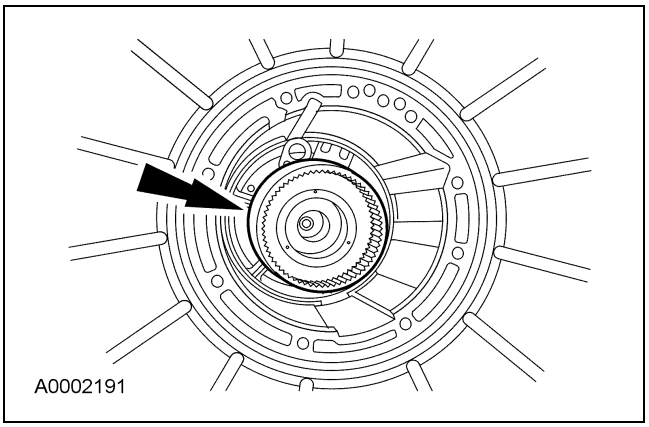
    Remove the planetary gear overdrive carrier.



34. Remove the No. 2 overdrive planet thrust bearing.

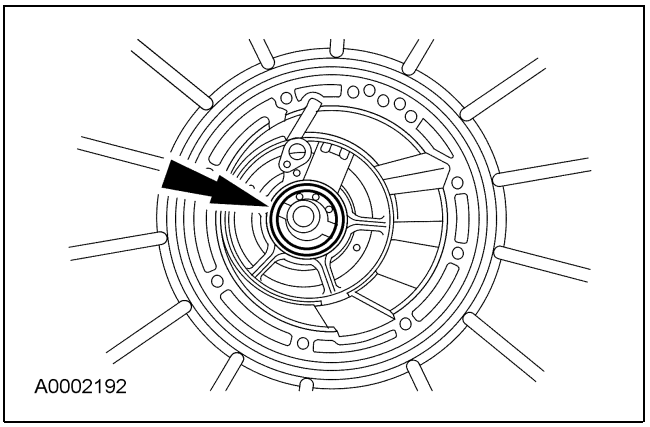


35. Remove the overdrive ring gear, overdrive one-way clutch assembly and center shaft as an assembly.



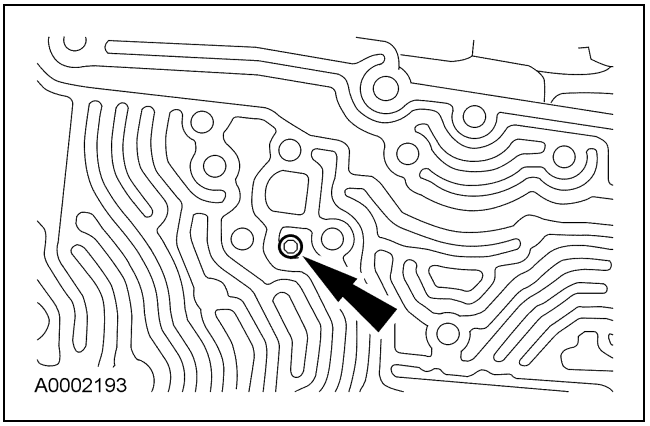
36. **NOTE:** Tag and identify the center shaft thrust bearing No. 3 for reassembly.

    Remove the No. 3 center shaft thrust bearing.

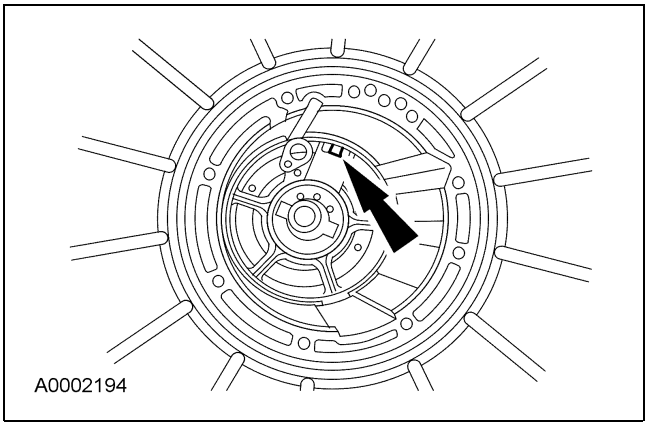


37. **CAUTION: The center support locknut could fall into the remaining assembly if not removed.**

    Remove the bolt.

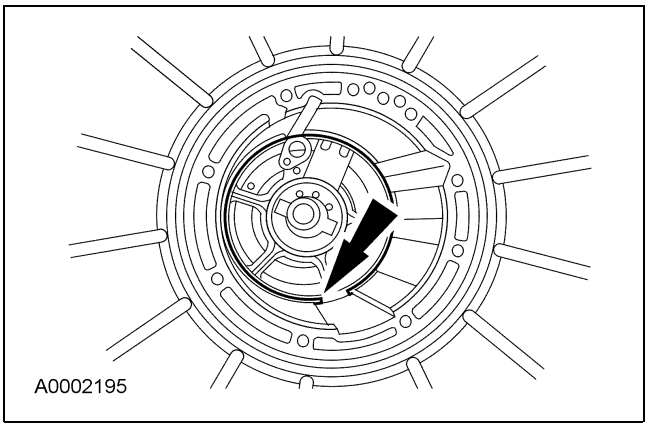


38. Remove the locknut and cage.



DISASSEMBLY (Continued)

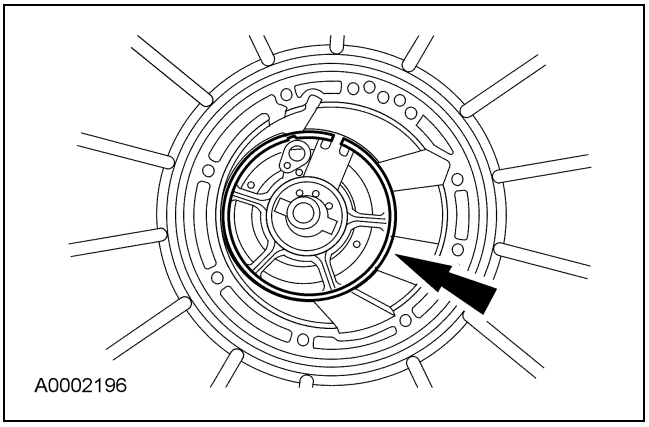
39. Remove the center support retaining ring.



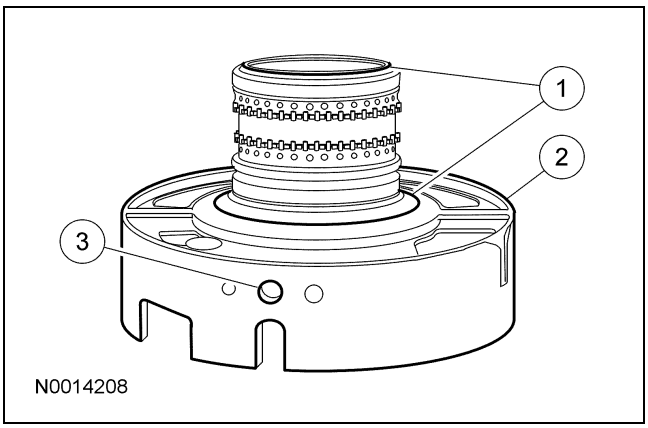
40. **NOTE:** The center support is repaired as an assembly. Any damage requires installing a new component.

    NOTE: When removing the center support, pull evenly around the center support web.

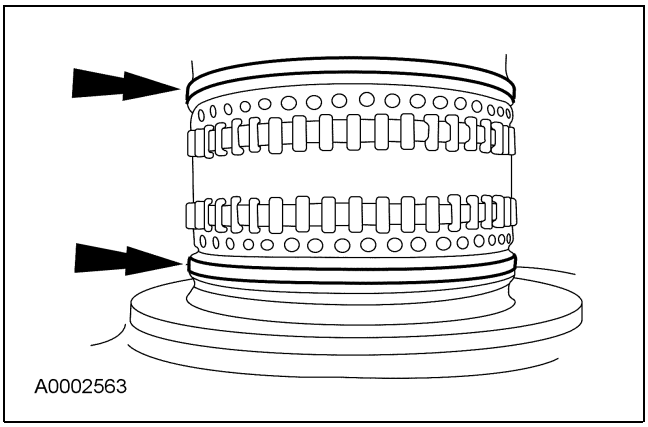
    Remove the center support.



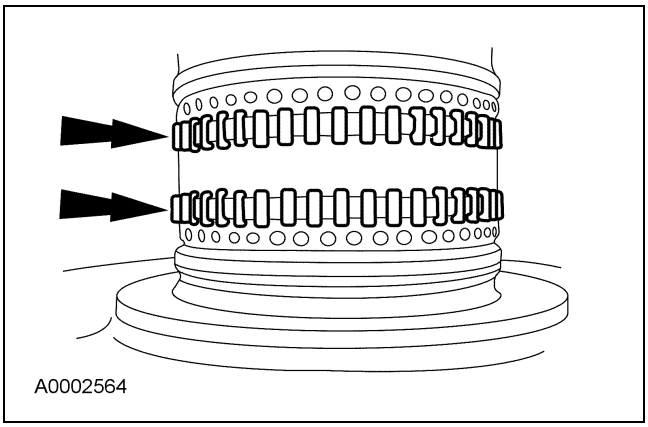
41. Inspect the center support assembly for wear or damage.
    1 Inspect the thrust surfaces for wear or damage.
    2 Inspect the center support sealing surface.
    3 Inspect the fluid passage for blockage or damage.



42. Inspect the seal rings for damage.

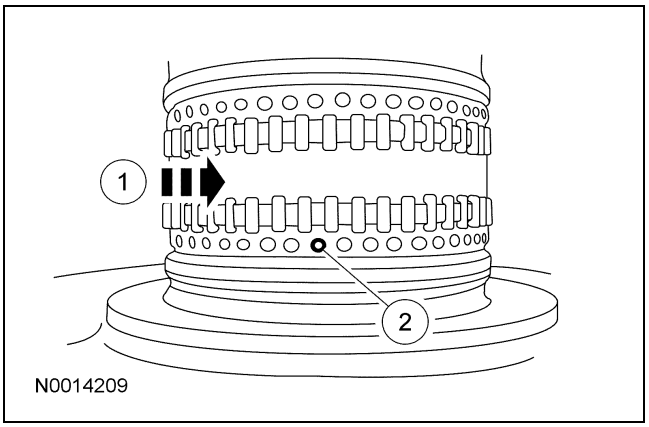


43. Inspect the bearing for missing rollers or damage.



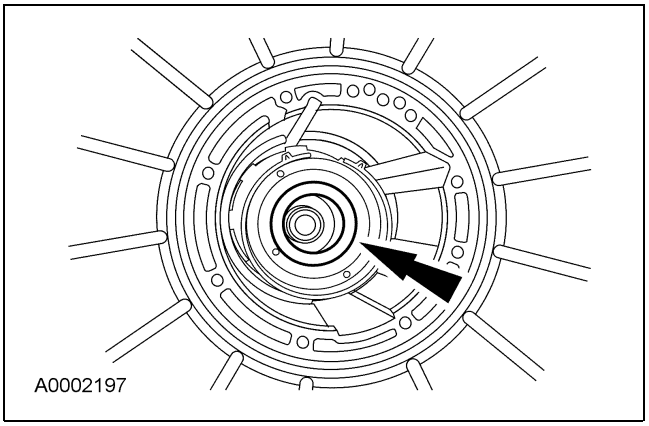
DISASSEMBLY (Continued)

44. Inspect the direct clutch feed hole for blockage or damage.
    1 Rotate the center support bearing to locate the direct clutch feed hole.
    2 Inspect the direct clutch feed hole for blockage or damage.

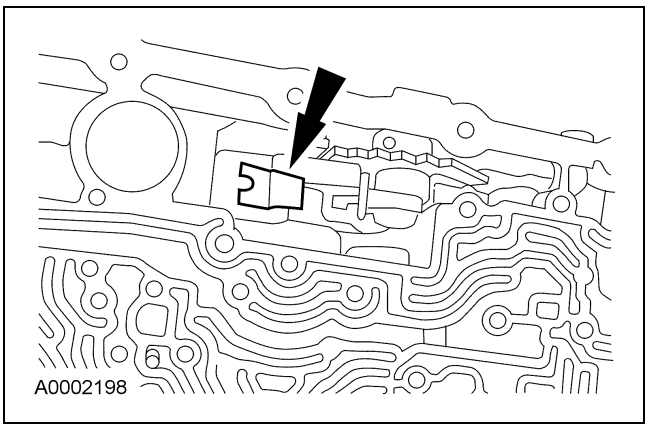


45. **NOTE:** Tag and identify the No. 4 intermediate clutch drum thrust bearing.

    Remove the intermediate brake drum thrust bearing (No. 4).



46. Remove, tag and identify the band anchor strut for assembly.

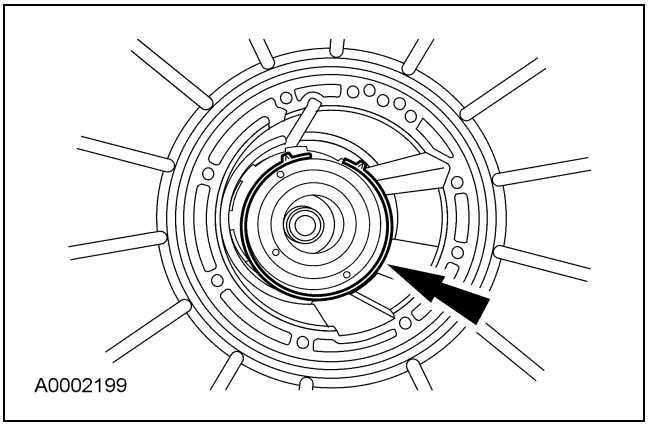


47. ⚠ **CAUTION: Identify the anchor and apply ends of the intermediate band.**

    NOTE: The new intermediate band is dark in color. This is a normal condition of the band. Hairline cracks in the band are also considered normal. Do not install a new band based solely on the color.

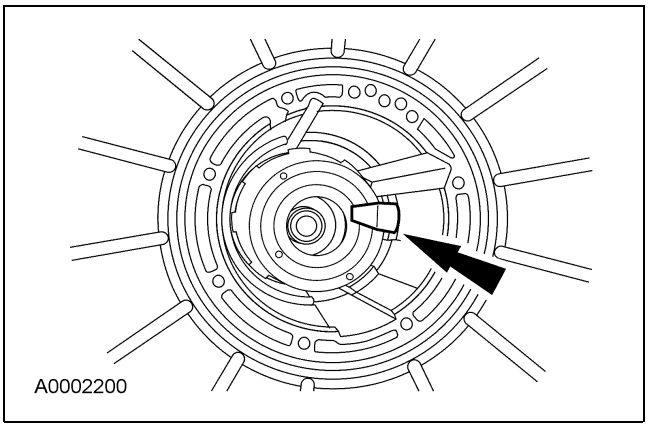
    Remove and inspect the intermediate band. Check the following conditions when installing a new band:

    - Inspect for glazing.
    - Inspect for missing friction material.
    - Inspect for material flaking.
    - Inspect for damage to the anchor pins.

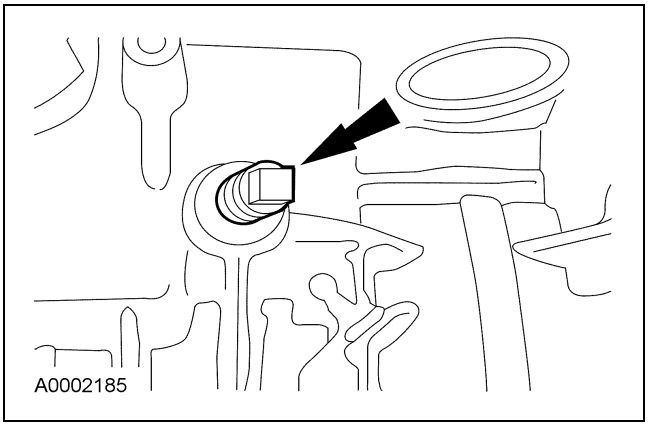


DISASSEMBLY (Continued)

48. Remove, tag and identify the band apply strut.

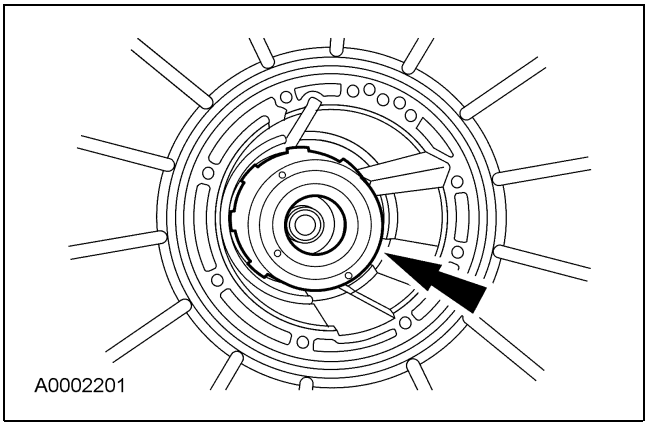


49. Remove the screw.

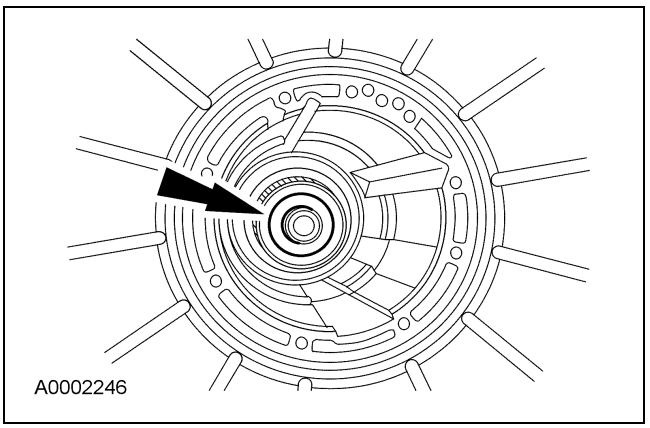


50. **NOTE:** The No. 5 forward clutch cylinder thrust bearing may come out with the intermediate brake and direct clutch drum.

    Remove the direct clutch drum.

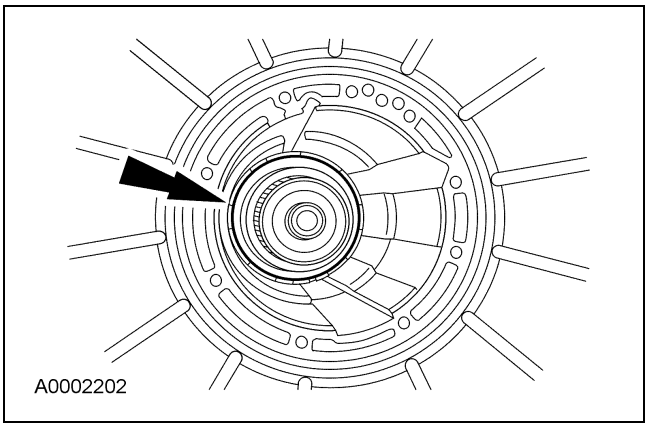


51. Remove the No. 5 forward clutch cylinder thrust bearing, tag and identify.



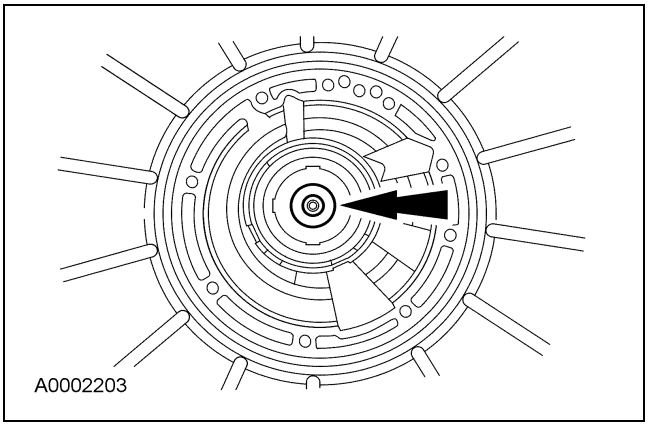
52. **NOTE:** The No. 6A thrust bearing may come out with the cylinder. Tag and identify for reassembly.

    Remove the forward clutch cylinder.



53. **NOTE:** The No. 6A forward ring gear hub thrust bearing may have come out with the forward clutch cylinder.

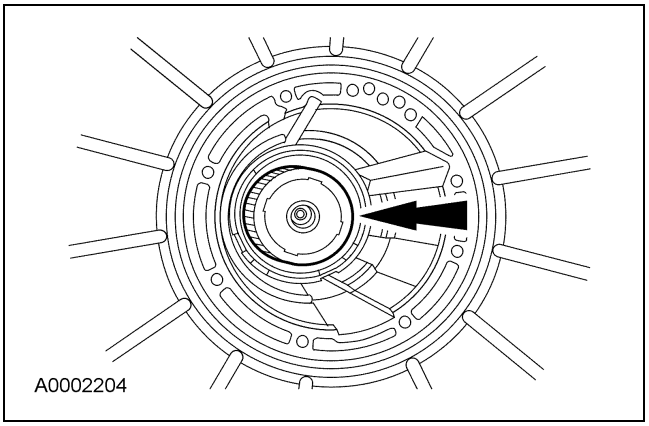
    Remove the No. 6A forward ring gear hub thrust bearing.



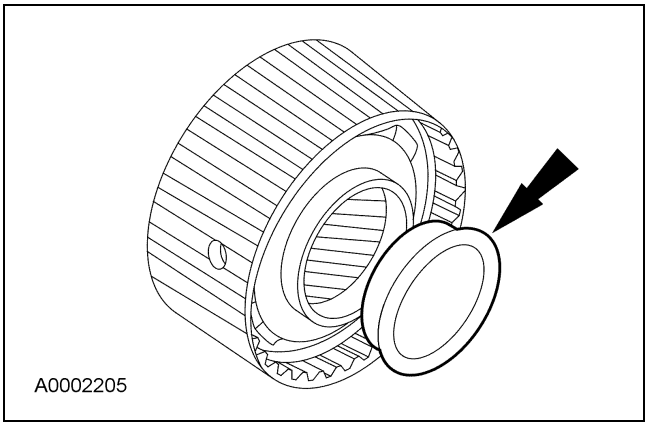
DISASSEMBLY (Continued)

54. **NOTE:** The No. 7 forward planet thrust bearing may come out with the forward ring gear and hub assembly.

    Remove the forward ring gear and hub as an assembly.

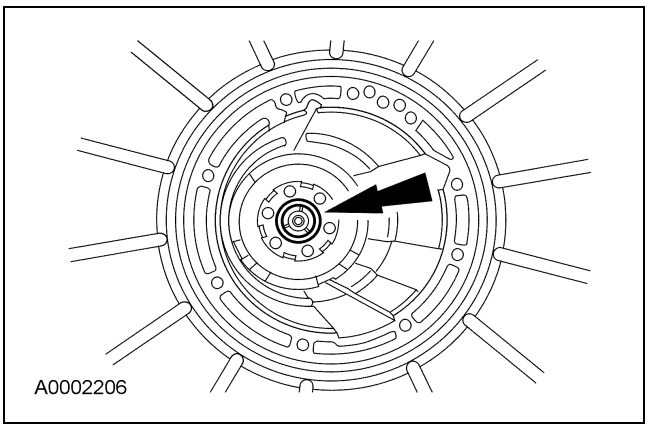


55. Remove the No. 6B forward clutch thrust washer from the forward ring gear hub.

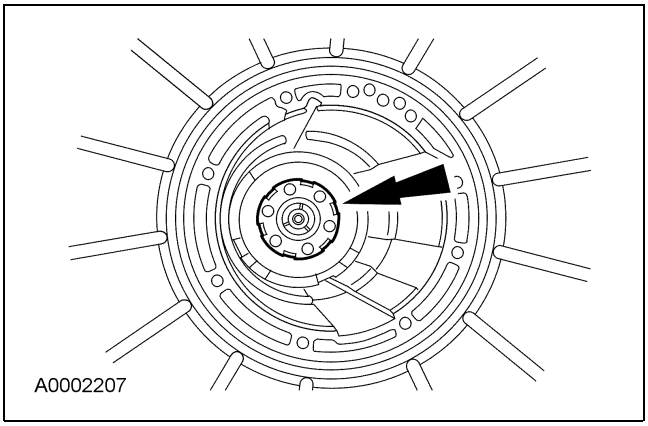


56. **NOTE:** The No. 7 forward planet thrust bearing may come out with the forward ring gear and hub assembly.

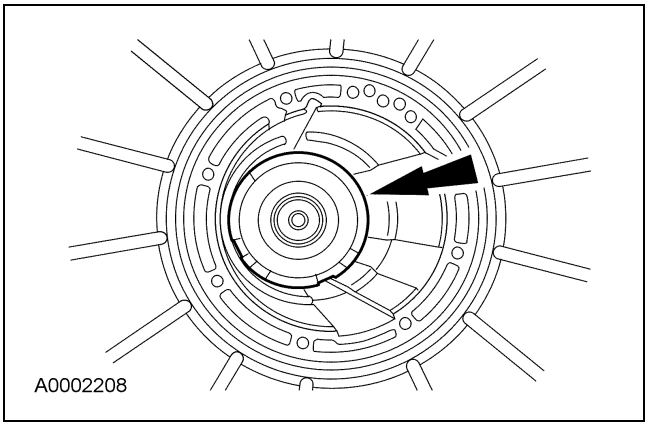
    Remove the No. 7 forward planet thrust bearing.



57. Remove the forward planetary assembly.

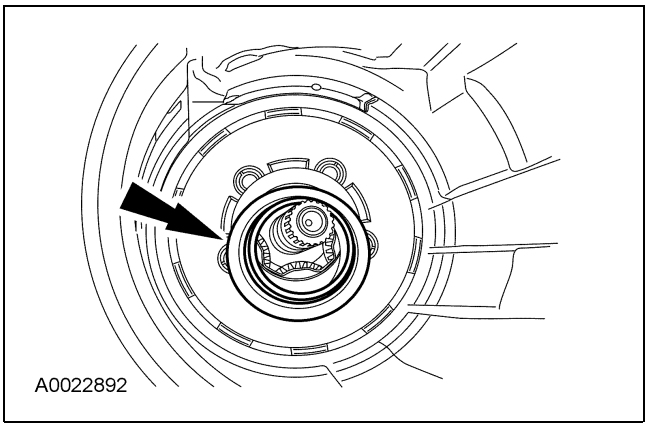


58. Remove the input shell and sun gear assembly.



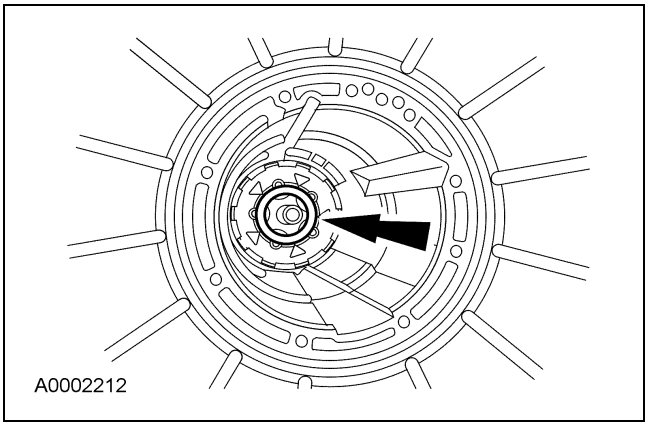
DISASSEMBLY (Continued)

59. Remove the spacer.

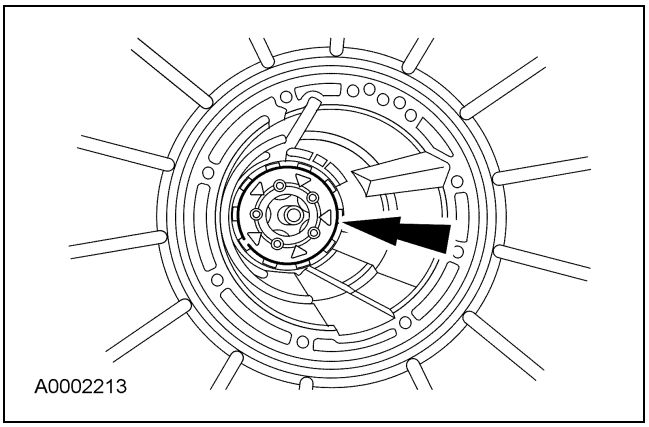


60. **NOTE:** Tag and identify the No. 8 low/reverse planetary carrier thrust bearing.

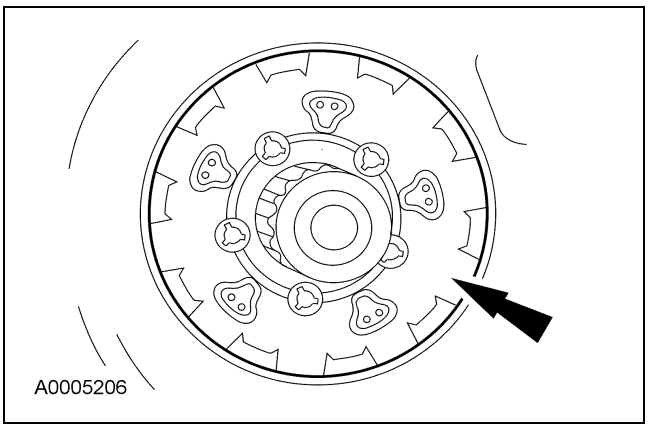
    Remove the thrust bearing.



61. Remove the retaining ring.

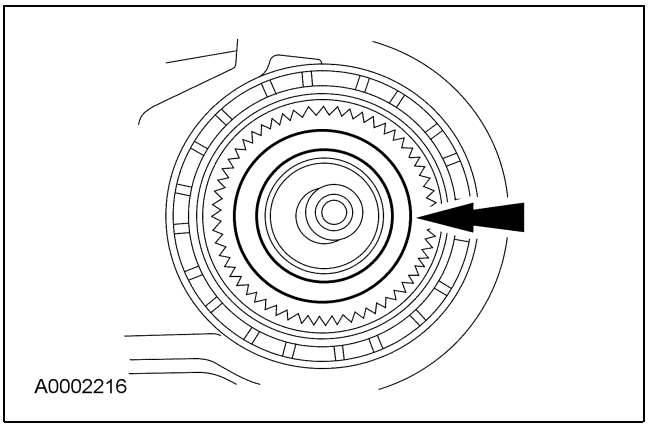


62. Remove the low/reverse planetary assembly.



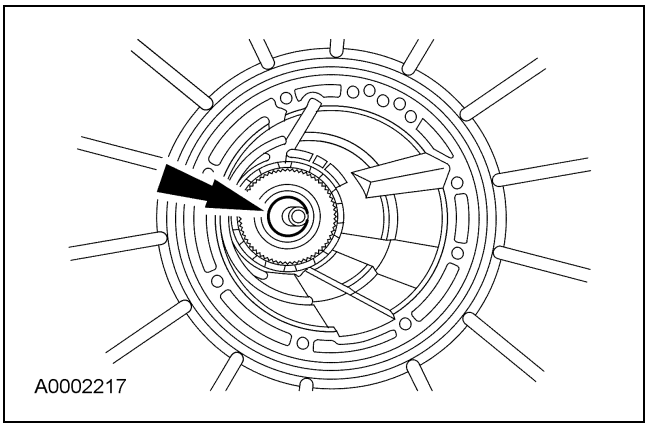
63. **NOTE:** Tag and identify the No. 9 low/reverse planetary carrier thrust bearing.

    Remove the thrust bearing.



64. **NOTE:** Use slots located around the outside of the sleeve.

    Using a small pick, remove the output shaft sleeve.

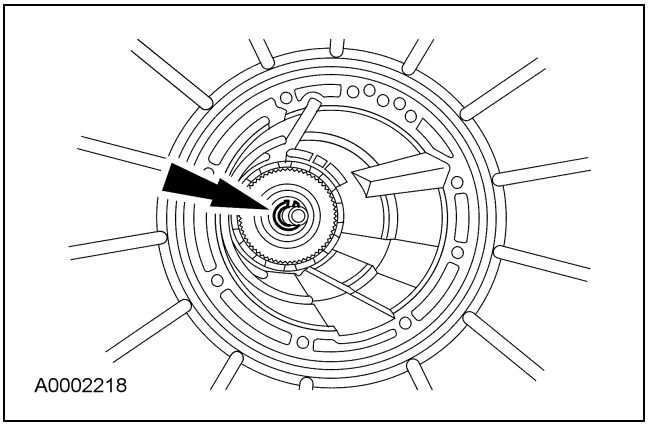


DISASSEMBLY (Continued)

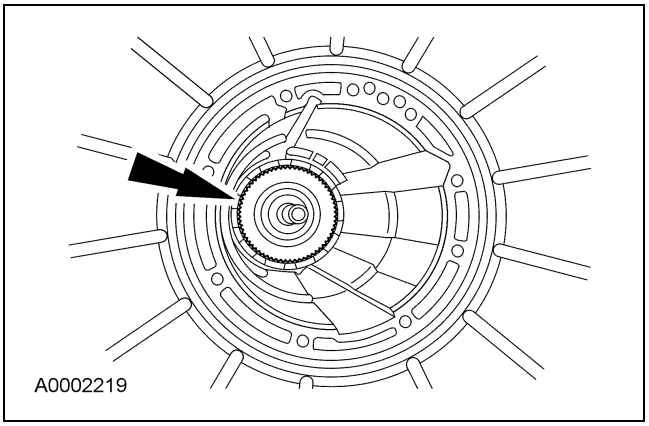
65. **⚠ WARNING: The output shaft may fall out after removing the snap ring. Failure to follow these instructions may result in personal injury.**

    ⚠ CAUTION: Discard the output shaft retaining ring. A new retaining ring must be used for assembly.

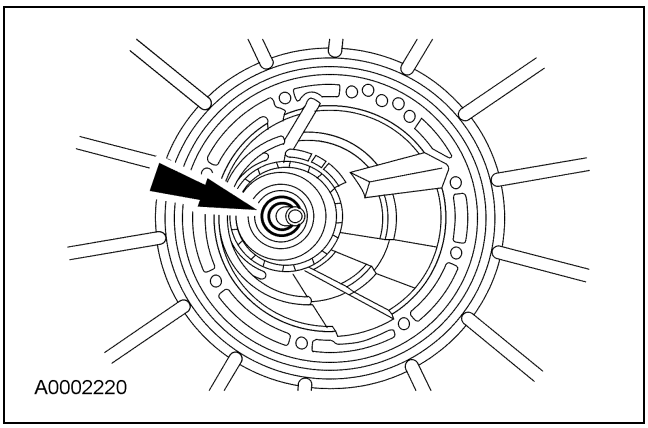
    While holding the output shaft, remove and discard the output shaft retaining ring.



66. Remove the output shaft ring gear and hub.



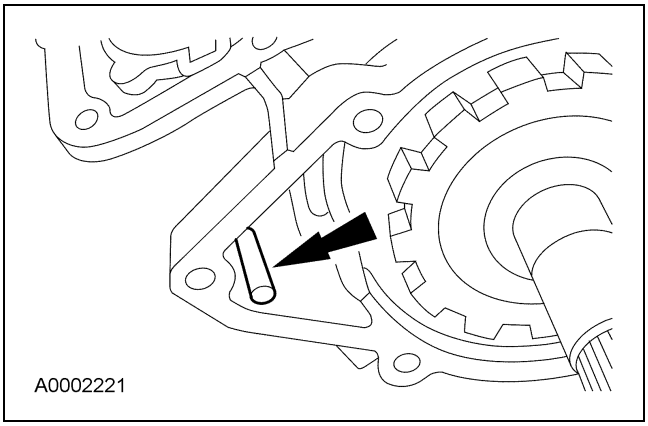
67. Remove the No. 10 low intermediate sun gear bearing.



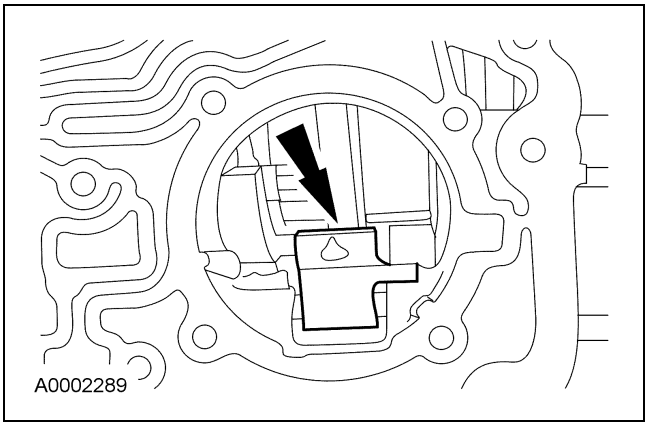
68. **⚠ CAUTION: Do not pry on the outer edge of the case. Damage to the gasket sealing surface could occur.**

    NOTE: It may be necessary to grind flat spots on the edges of the reverse band actuating lever shaft in order to remove it.

    Using a pair of vice grips, hold the flat spots on the reverse band actuating lever shaft, wiggle it back and forth and remove the reverse band actuating lever shaft.



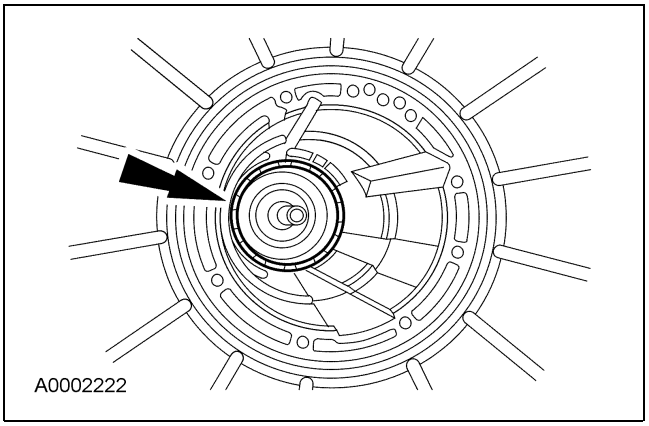
69. Remove the reverse band actuating lever assembly.



DISASSEMBLY (Continued)

70. **NOTE:** The inner race of the rear one-way clutch is not removable. It is repaired in the case.

    Remove the low/reverse brake drum and one-way clutch assembly by rotating it clockwise.



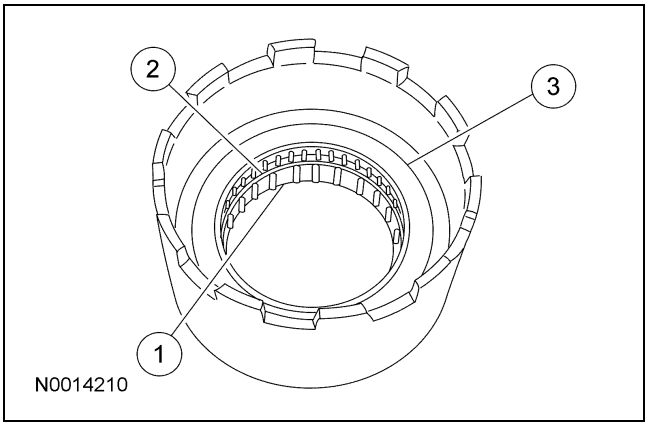
71. **NOTE:** The reverse one-way clutch is part of the reverse brake drum assembly. Install a new reverse brake drum as an assembly only.

    Inspect the reverse brake drum assembly and install a new reverse brake drum assembly if damaged.

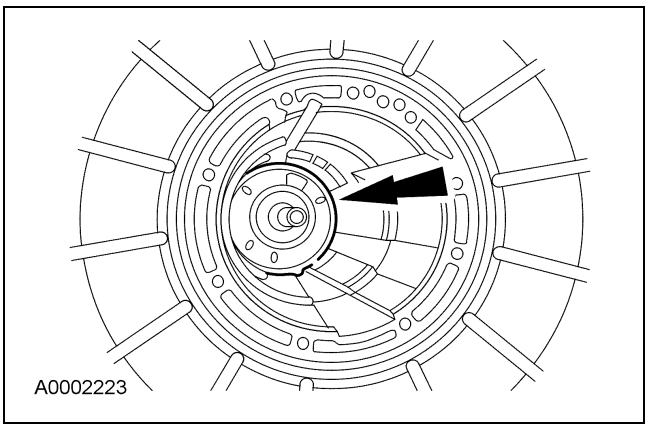
    1 Inspect the reverse brake drum sprags.

    2 Inspect the reverse brake drum rollers.

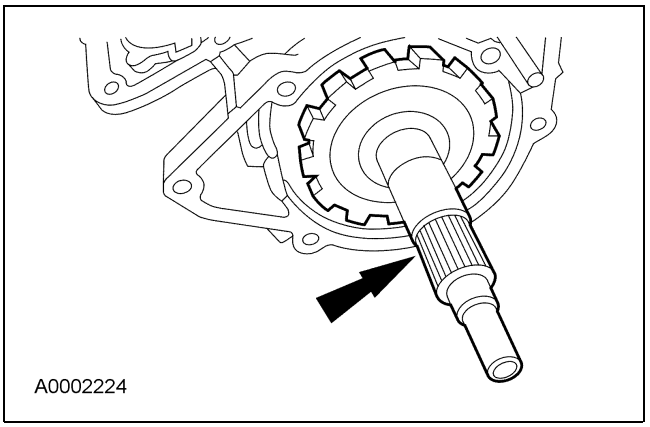
    3 Inspect the reverse brake drum.



72. Remove the reverse band.

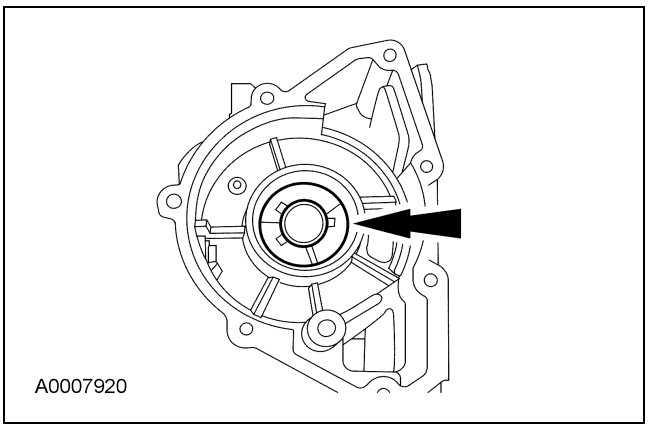


73. Remove the output shaft and park gear.



74. **NOTE:** Tag and identify the No. 11 output shaft thrust washer.

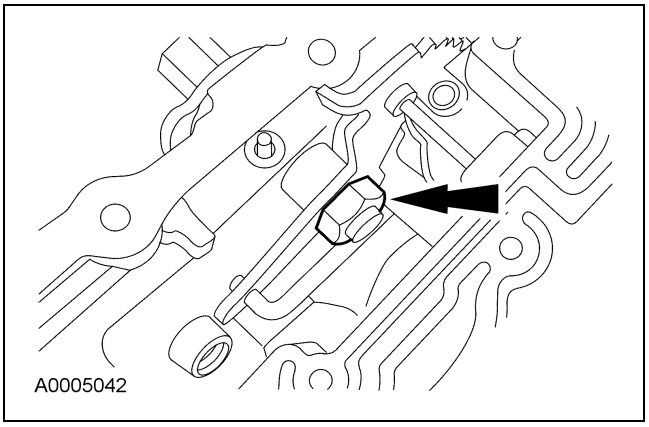
    Remove the output shaft thrust washer.



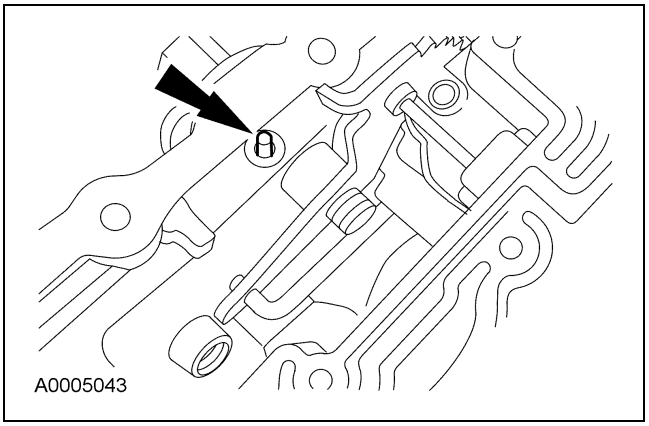
DISASSEMBLY (Continued)

75. **CAUTION: To avoid damage, make sure the wrench does not strike the manual valve inner lever pin.**

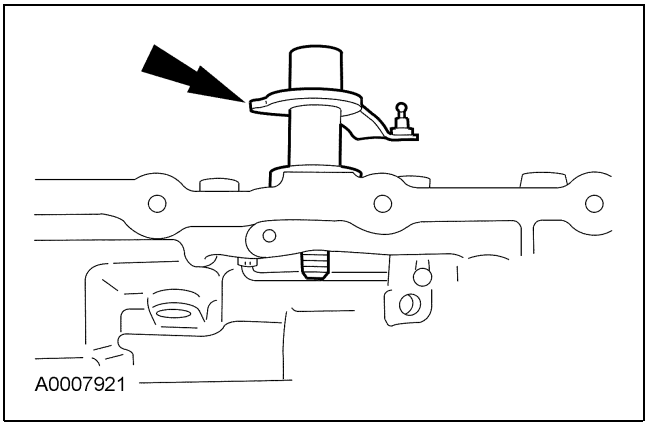
    Remove the nut.



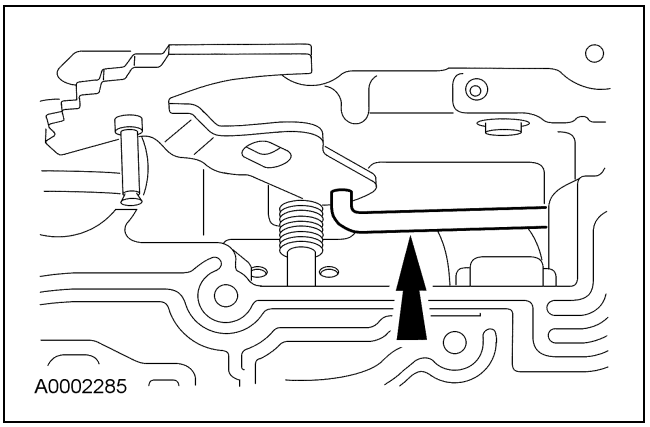
76. Remove the manual shaft retaining pin.



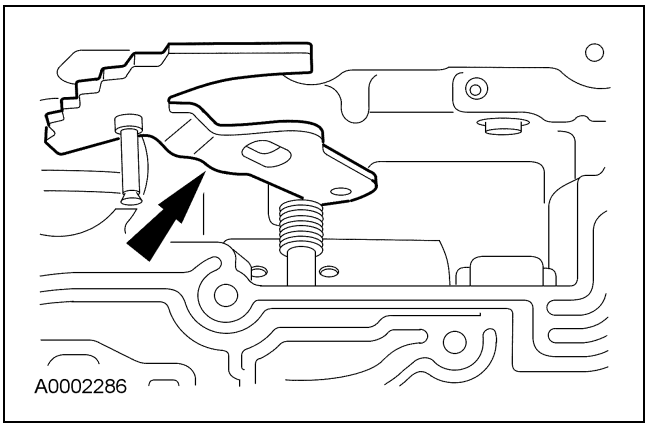
77. Remove the manual control lever shaft.



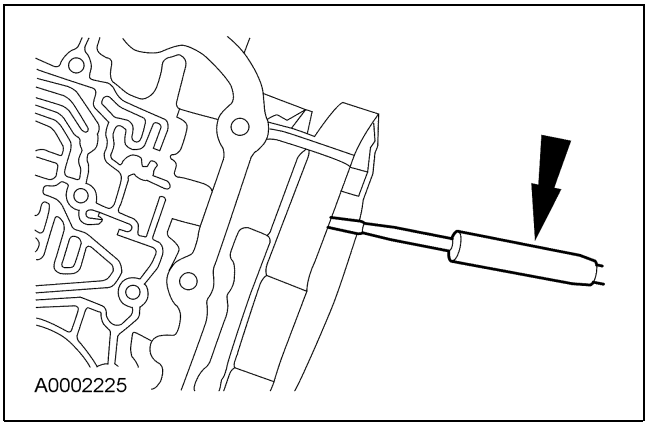
78. Disconnect the manual valve inner lever from the parking lever actuating rod.



79. Remove the manual valve inner lever.

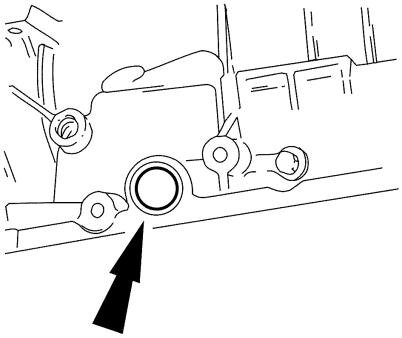


80. Remove the parking lever actuating rod.



DISASSEMBLY (Continued)

81. ⚠ **CAUTION: Do not damage the bore.**
Remove the manual control lever seal.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