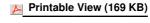
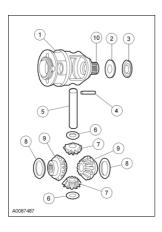
SECTION 307-01A: Automatic Transaxle/Transmission CD4E DISASSEMBLY AND ASSEMBLY OF SUBASSEMBLIES 2005 Escape/Mariner/Escape Hybrid Workshop Manual

Procedure revision date: 06/30/2004

### **Final Drive Carrier and Differential Assembly**





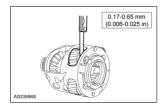
Item	Part Number	Description
1	4204	Differential housing
2	4067	Differential bearing shim
3	4221	Differential housing bearing
4	67847-S	Pinion shaft roll pin
5	4211	Pinion shaft
6	4230	Pinion thrust washer
7	4215	Pinion gear
8	4228	Side gear thrust washer
9	4236	Differential side gear
10		Differential case all wheel drive splines (if equipped)

### Disassembly

- 1. Inspect the differential for wear or damage. Install new components as required.
- 2. **A** CAUTION: Do not disassemble the planet carrier.

**NOTE:** If the measurement exceeds specification, install a new complete final drive carrier. If the measurement is within specification, continue with the diagnostic procedure.

Measure the final drive planet gear end play with a feeler gauge.



3. **NOTE:** Do not remove the final drive pinion shaft retaining ring.

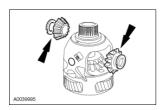
Remove the differential pinion shaft.

### 2005 Escape/Mariner/Escape Hybrid Workshop Manual

- 1. Remove the pinion shaft roll pin.
- 2. Remove the differential pinion shaft.



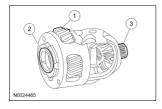
- 4. Remove the pinion gears and thrust washers.
  - Turn the differential pinion gears 90 degrees and remove.



5. Remove the differential side gears and differential side gear thrust washers.



- 6. Clean all parts thoroughly in clean solvent and blow dry with moisture-free regulated compressed air.
- 7. Inspect the differential parts for damage and wear.
  - Gear teeth
  - Thrust washer surface
  - Thrust bearing surface
  - Pinion shaft
- 8. Inspect the final drive planet and carrier.
  - 1. Pinion gear teeth
  - 2. Thrust bearing surfaces
  - 3. Bushing surfaces



### **Assembly**

1. Install the differential side gears and thrust washers.

# 2005 Escape/Mariner/Escape Hybrid Workshop Manual



- 2. Install the differential pinion gears and thrust washers.
  - Rotate the differential pinion gears 90 degrees.



- 3. Install the differential pinion shaft.
  - 1. Push the pinion shaft in place.
  - 2. Install the roll pin.



SECTION 307-01A: Automatic Transaxle/Transmission CD4E DISASSEMBLY AND ASSEMBLY OF **SUBASSEMBLIES** 

2005 Escape/Mariner/Escape Hybrid Workshop Manual

Procedure revision date: 02/15/2005

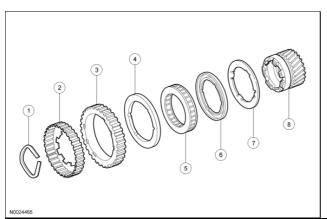
### Reverse One-Way Clutch Sprag Type

Printable View (260 KB)

## Special Tool(s)



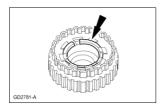
Installer, Transmission Sprag 307-293 (T94P-77000-J)



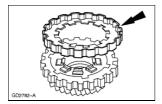
Item	Part Number	Description
1	7C122	Coast clutch hub retaining ring
1	/C122	Coast clutch hub retaining thig
2	7H214	Coast clutch hub
3	7G439	Forward one-way clutch outer race
4		Forward one-way clutch end cap (part of 7H218)
5	7H218	Forward one-way clutch sprag assembly
6		Forward one-way clutch end cap (part of 7H218)
7	7H219	Forward one-way clutch retainer
8	7H229	Low and intermediate sun gear, race and bushing assembly

## Disassembly

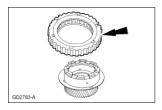
1. Remove the coast clutch hub retaining ring.



2. Remove the coast clutch hub.

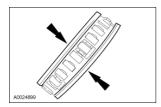


3. Remove the forward one-way clutch outer race and sprag assembly with end caps.

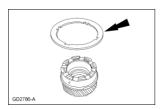


4. **NOTE:** Orientation of end caps to sprag assembly. New design end caps are the same thickness and interchangeable (but not reversible).

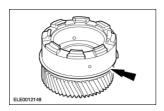
Remove the forward one-way clutch end caps from the sprag assembly.



5. Remove the forward one-way clutch retainer.



6. Remove the retaining ring down over the gear.



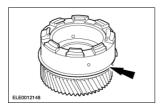
7. A WARNING: Air pressure must not exceed 138 kPa (20 psi). Wear safety glasses when using compressed air. Failure to follow these instructions can result in personal injury.

Clean all parts thoroughly in clean solvent and blow dry with moisture-free compressed air.

- 8. Inspect the forward one-way clutch parts for damage and wear.
  - Outer race
  - Sprag assembly and end caps
  - Inner race and low-intermediate sun gear assembly
  - Lube holes
  - Coast clutch hub

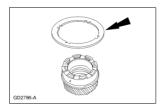
### **Assembly**

1. Install the retaining ring.

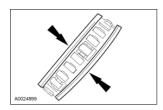


2. **NOTE:** The tabs on the retainer face downward.

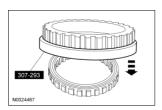
Install the forward one-way clutch retainer.



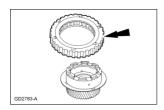
3. Install the forward one-way clutch end caps onto the sprag assembly.



4. Using the special tool, install the one-way clutch bearing into the one-way outer race.

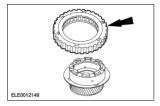


5. Install the sprag assembly and end caps in the outer race.

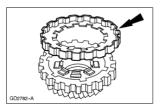


6. **NOTE:** Lube grooves face upward (away from the sun gear).

Rotate the outer race and sprag assembly (with end caps) over and install it on the forward one-way clutch inner race.



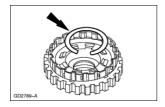
7. Install the coast clutch hub.



8. **NOTE:** The ends of the retaining ring should point toward the coast clutch hub.

**NOTE:** Make sure the retaining ring is fully seated upon installation.

Install the coast clutch hub retaining ring.



- 9. Check the operation of the forward one-way clutch with the low/intermediate sun gear facing upward.
  - Hold the outer race firmly.
  - Rotate the low/intermediate sun gear clockwise.
  - The low/intermediate sun gear should rotate with a slight drag without attempting to rotate the outer race.
  - Rotate the low/intermediate sun gear counterclockwise. The low/intermediate sun gear should rotate the outer race.

