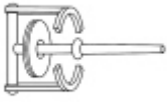




## Forward Clutch

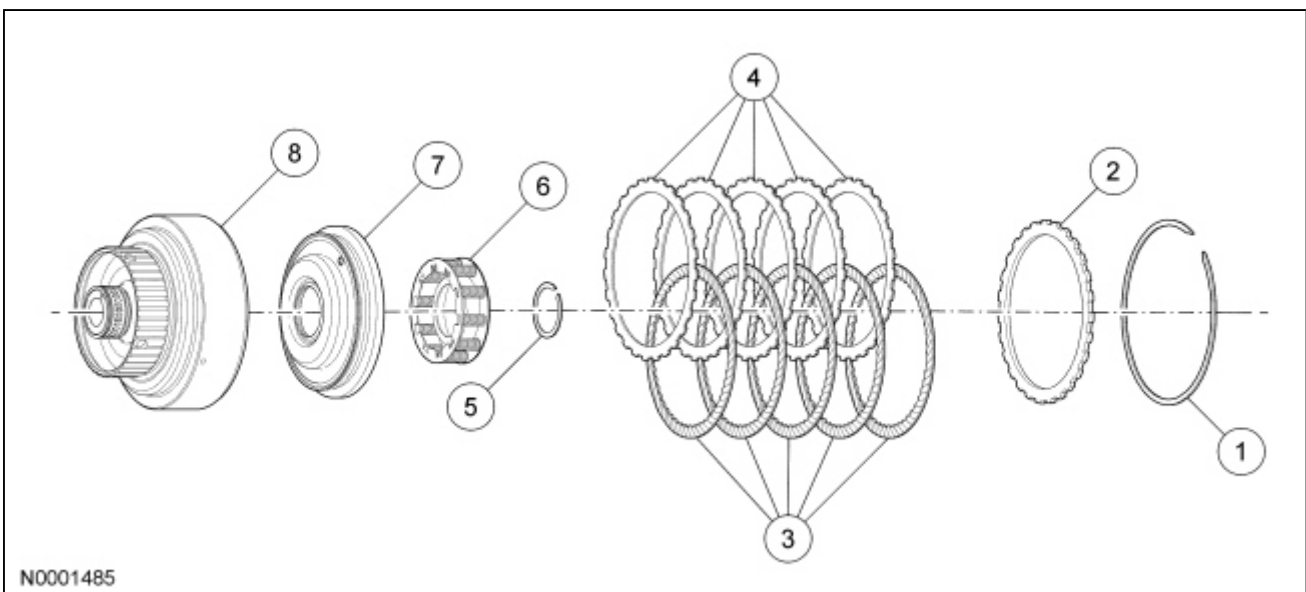
### Special Tool(s)

 <p>ST1190-A</p>	Compressor, Clutch Spring 307-015 (T65L-77515-A)
 <p>ST2534-A</p>	Gauge, Forward Clutch Seal 307-434
 <p>ST1813-A</p>	Protector, Piston Seal 307-051 (T74P-77548-A)

### Material

Item	Specification
MERCON® V Automatic Transmission Fluid XT-5-QM (or XT-5-QMC) (US); CXT-5-LM12 (Canada)	MERCON® V

### Forward Clutch Assembly

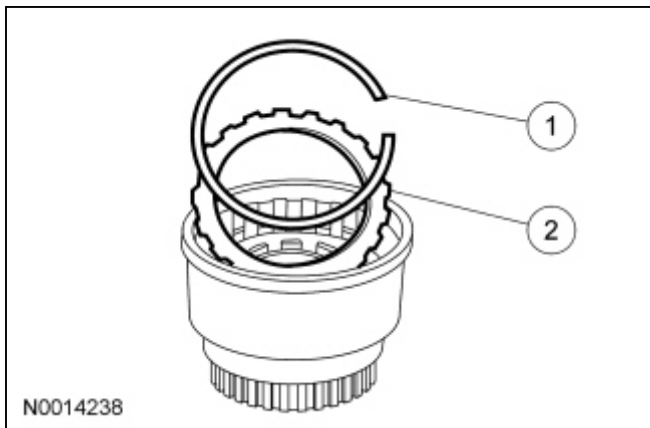


Item	Part Number	Description

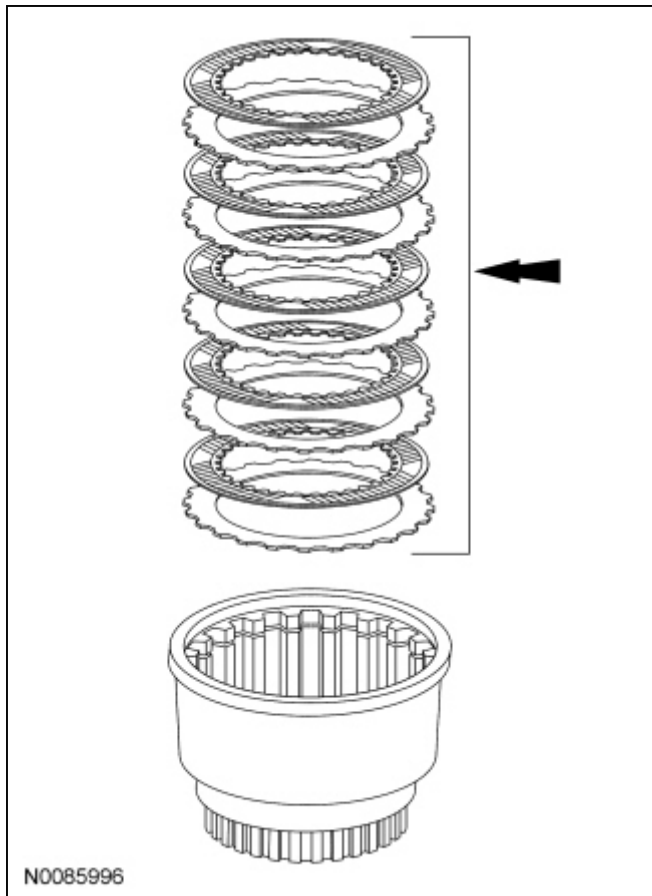
1	7D483	Forward clutch retaining ring (select fit)
2	7B066	Forward clutch pressure plate
3	7B164	Forward clutch internal plates — friction (vehicle-dependent)
4	7B442	Forward clutch external plates — steel (vehicle-dependent)
5	E860109	Forward clutch retaining ring
6	7G229	Forward clutch spring assembly
7	7A262	Forward clutch piston
8	7A360	Forward clutch cylinder assembly


## Disassembly

1. Remove the pressure plate.
  1. Remove the forward clutch retaining ring.
  2. Remove the pressure plate.



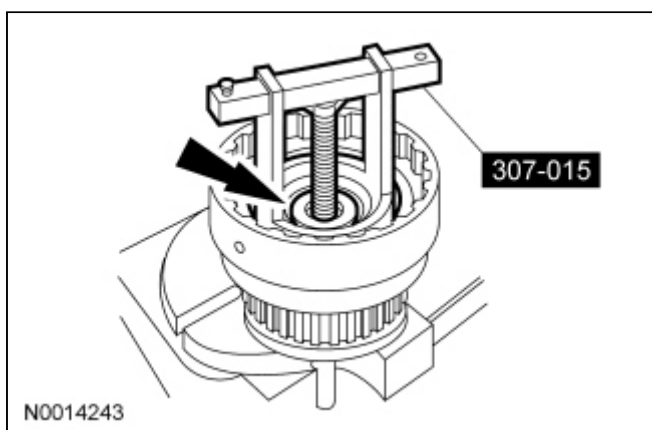
2. Remove the forward clutch disc pack.
  - Inspect the forward clutch plates for wear, damage or overheating.



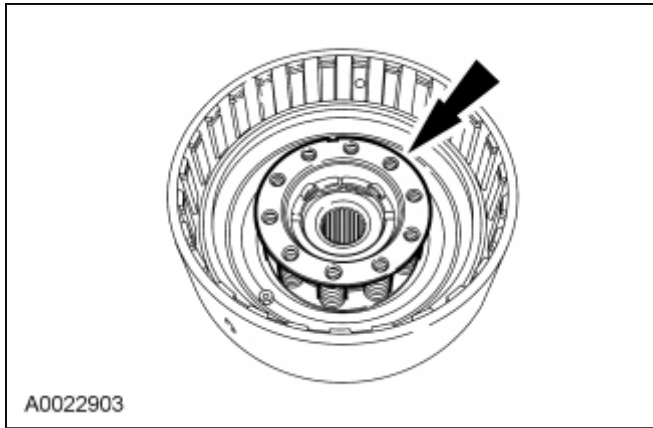
3.  **WARNING:** While removing or installing the retaining ring, slowly release tool pressure on clutch piston springs. Failure to follow this instruction may cause the assembly to separate forcefully, resulting in serious personal injury.


**NOTICE:** Do not fully depress the Clutch Spring Compressor or damage to the spring retainer may occur.

Using the Clutch Spring Compressor, remove the forward clutch piston retaining ring.



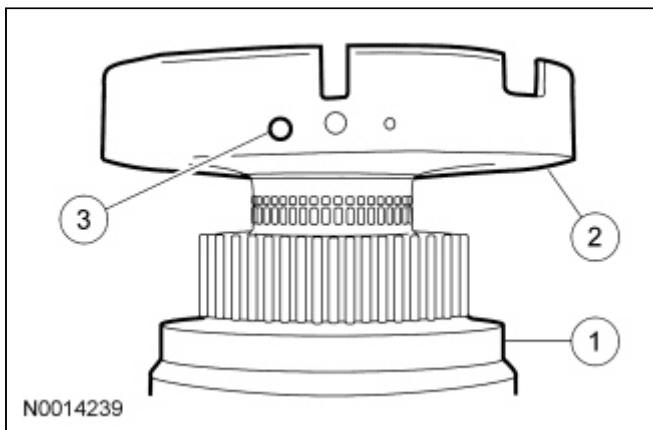
4. Relieve the forward clutch spring tension and remove the tool.
5. Remove the forward clutch piston spring assembly.



6.  **WARNING:** When using compressed air, never let air pressure exceed 138 kPa (20 psi) and always wear safety glasses. Compressed air may cause foreign material or parts to become airborne. Failure to follow this instruction may result in serious personal injury.

Remove the forward clutch piston.

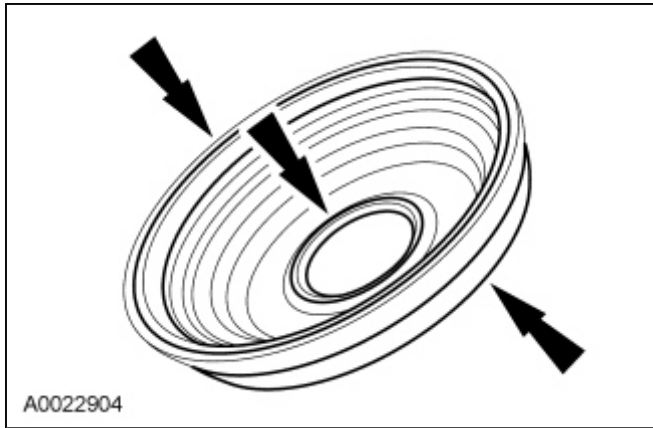
1. Place the forward clutch cylinder with forward clutch piston facing down.
2. Install the center support on the forward clutch cylinder.
3. Apply air pressure to the left port of the center support.



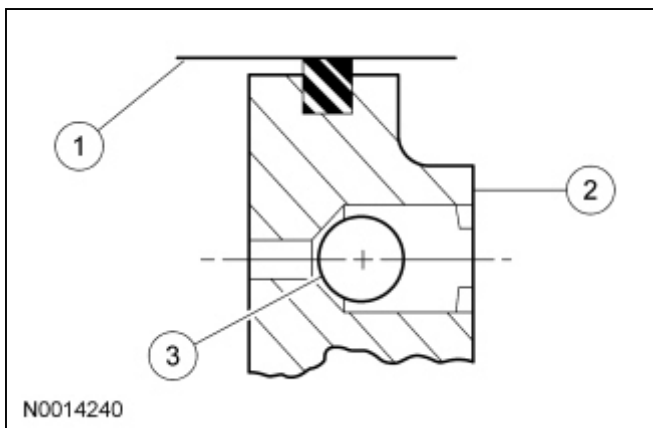
### Assembly

1. Inspect the clutch components for damage or wear. Install new components as necessary.
  - Check the fluid passages for obstructions. All fluid passages must be clean and free of obstructions.
  - Inspect the clutch plates for damage.
  - Inspect the clutch springs.
  - Inspect the needle bearing and seal rings for damage.
  - Check clutch hub thrust surfaces for damage.
  - Check clutch plates for flatness and fit on the clutch hub serrations.
2. **NOTE:** If the seals on the forward clutch piston show any signs of damage, a new forward clutch piston will need to be installed.

Inspect the forward clutch piston and seals.

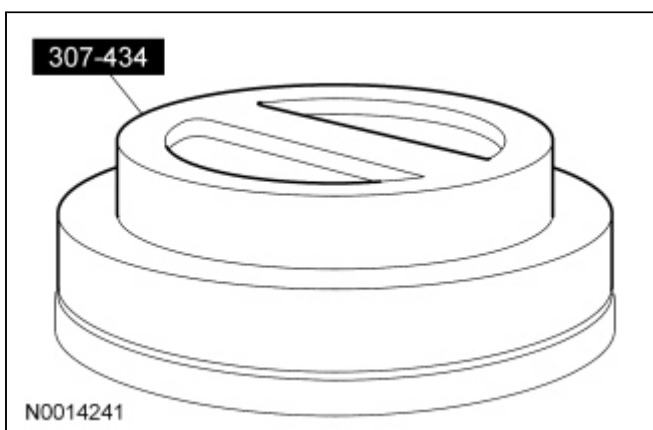


3. Inspect the forward clutch drum assembly.
  1. Inspect the forward clutch cylinder surfaces for scores or burrs.
  2. Inspect the forward clutch piston for scores or burrs.
  3. Verify the check ball is free to move in the piston.



4. **NOTE:** The Forward Clutch Seal Gauge must be installed on the forward clutch piston for a couple of minutes prior to installing it into the forward clutch cylinder.

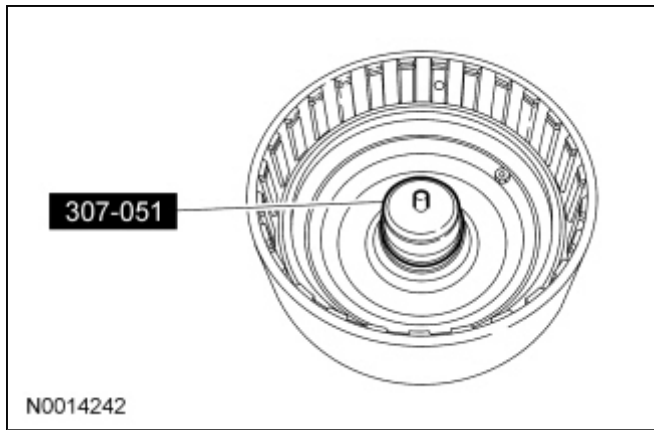
Install the Forward Clutch Seal Gauge on the forward clutch piston.



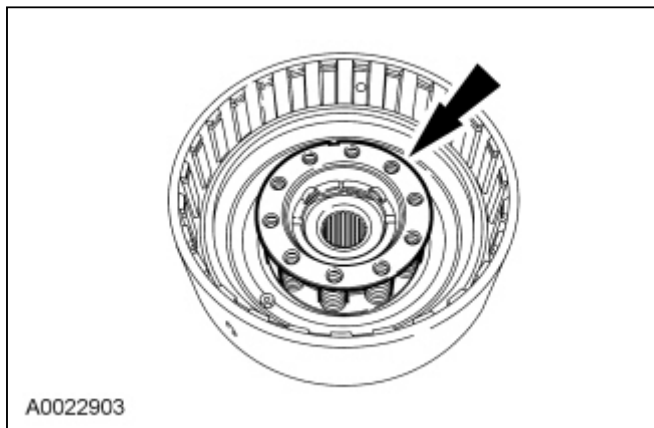
5. **NOTICE:** Care must be taken to prevent damage to the seals.

**NOTE:** Lubricate the forward clutch piston inner and outer seal with automatic transmission fluid.

Using the Piston Seal Protector, install the forward clutch piston assembly into the forward clutch cylinder.

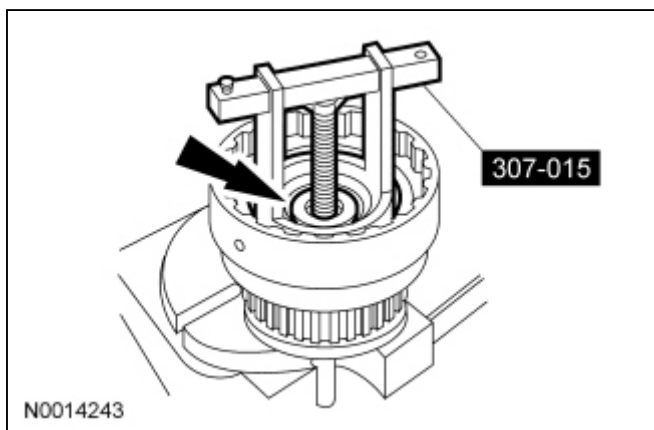


6. Install the forward clutch piston spring assembly.



7. **NOTICE:** Do not fully depress the Clutch Spring Compressor or damage to the spring retainer may occur.

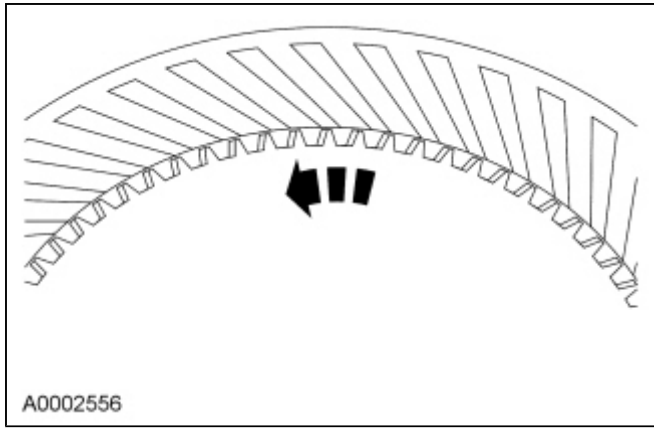
Using the Clutch Spring Compressor, install the forward clutch piston spring retaining ring.



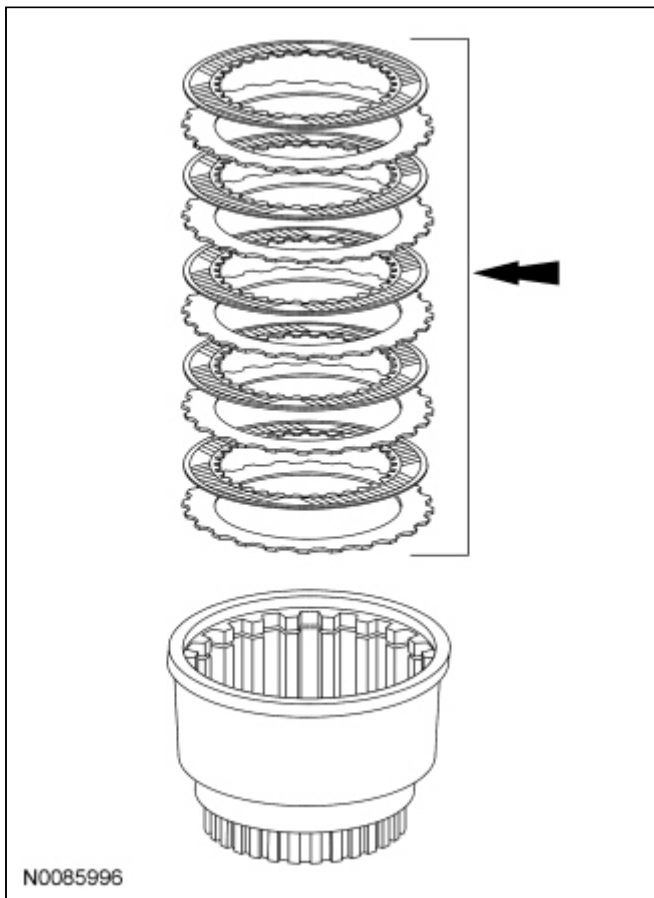
8. **NOTICE:** The forward clutch friction plates are directional and must be installed with grooves pointing counterclockwise, otherwise transmission damage can occur.

**NOTICE:** If new plates are used, they should be soaked in automatic transmission fluid before assembly, otherwise transmission damage can occur.

If reusing plates, grooves must be installed counterclockwise. Install the forward clutch disc pack.



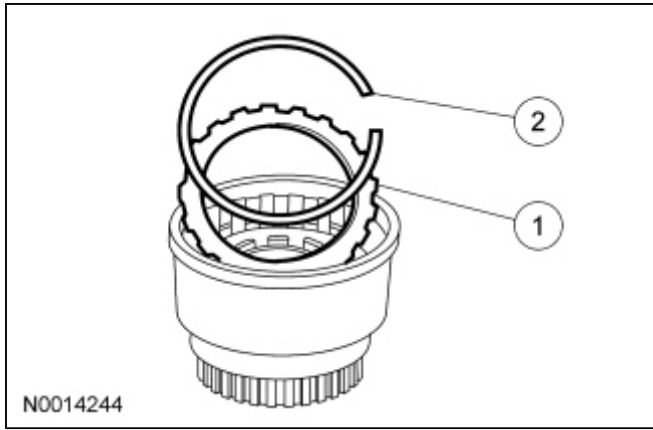
9. Install the steel clutch plates and friction clutch plates in alternating order starting with a steel clutch plate.




10. **NOTE:** The retaining ring is a select fit.

Install the original selective retaining ring.

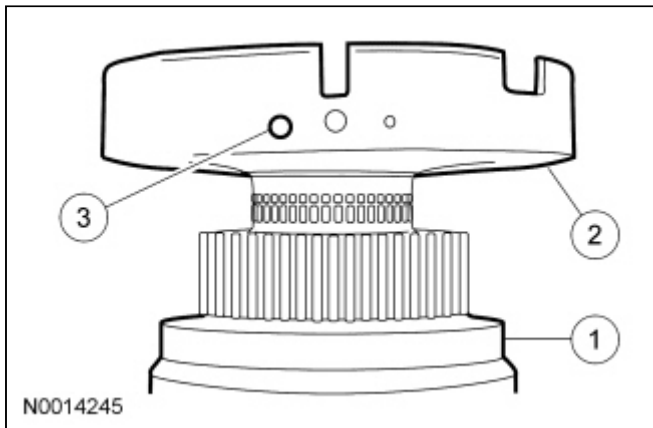
1. Install the forward clutch pressure plate.
2. Install the original selective retaining ring.



11.  **WARNING:** When using compressed air, never let air pressure exceed 138 kPa (20 psi) and always wear safety glasses. Compressed air may cause foreign material or parts to become airborne. Failure to follow this instruction may result in serious personal injury.

Air check the forward clutch piston.

1. Place the forward clutch cylinder with the forward clutch piston facing down.
2. Install the transmission center support on the forward clutch cylinder.
3. Apply air pressure to the left port of the center support.



12. Check the forward clutch disc pack free play.
1. Press down on the forward clutch disc pack.
  2. Using a feeler gauge, check the gap between the forward clutch retaining ring and the forward clutch pressure plate.
    - If the clearance is not within specifications, install the correct size retaining ring.

Part Number	Thickness		Diameter	
	mm	Inch	mm	Inch
XW4Z-7D483-AB	1.73	0.068	141.45	5.568
XW4Z-7D483-AC	2.08	0.081	141.45	5.568
XW4Z-7D483-AD	2.44	0.096	141.45	5.568



