



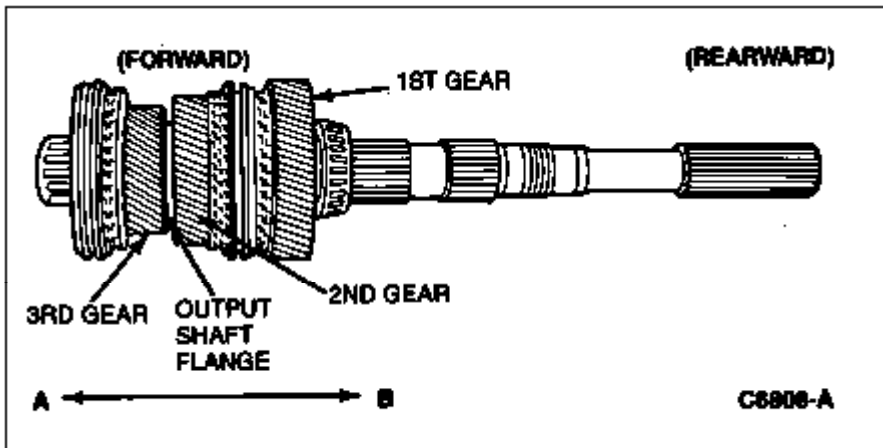
Output Shaft

Tools Required:

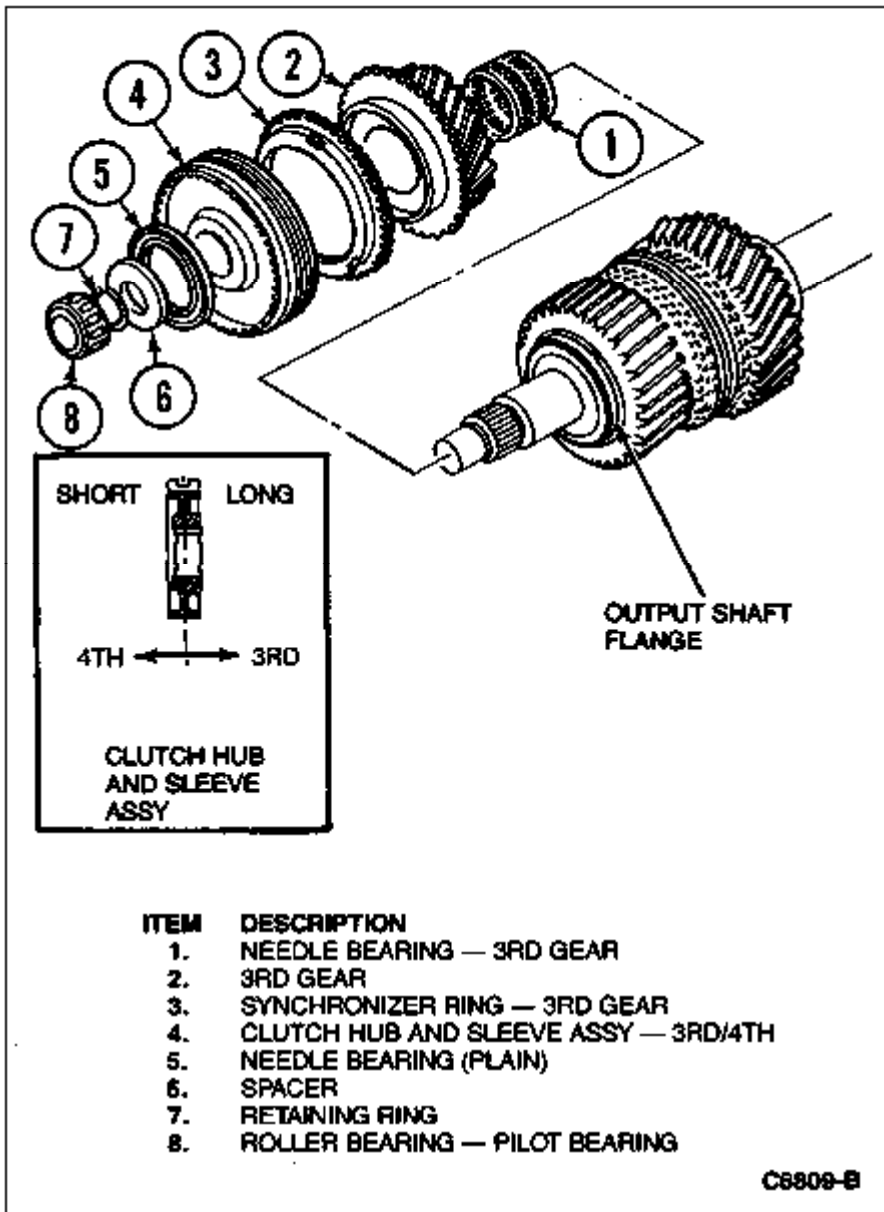
- Axle Bearing/Seal Plate T75L-1165-B
- Remover/Replacer Tube T75L-7025-C

Disassembly

1. Position output shaft front flange as illustrated. Use this flange as a reference point and dividing line during Assembly and Disassembly procedures.



2. Remove pilot bearing (needle roller), retaining ring, spacer and needle bearing from front (short side of flange) of output shaft.



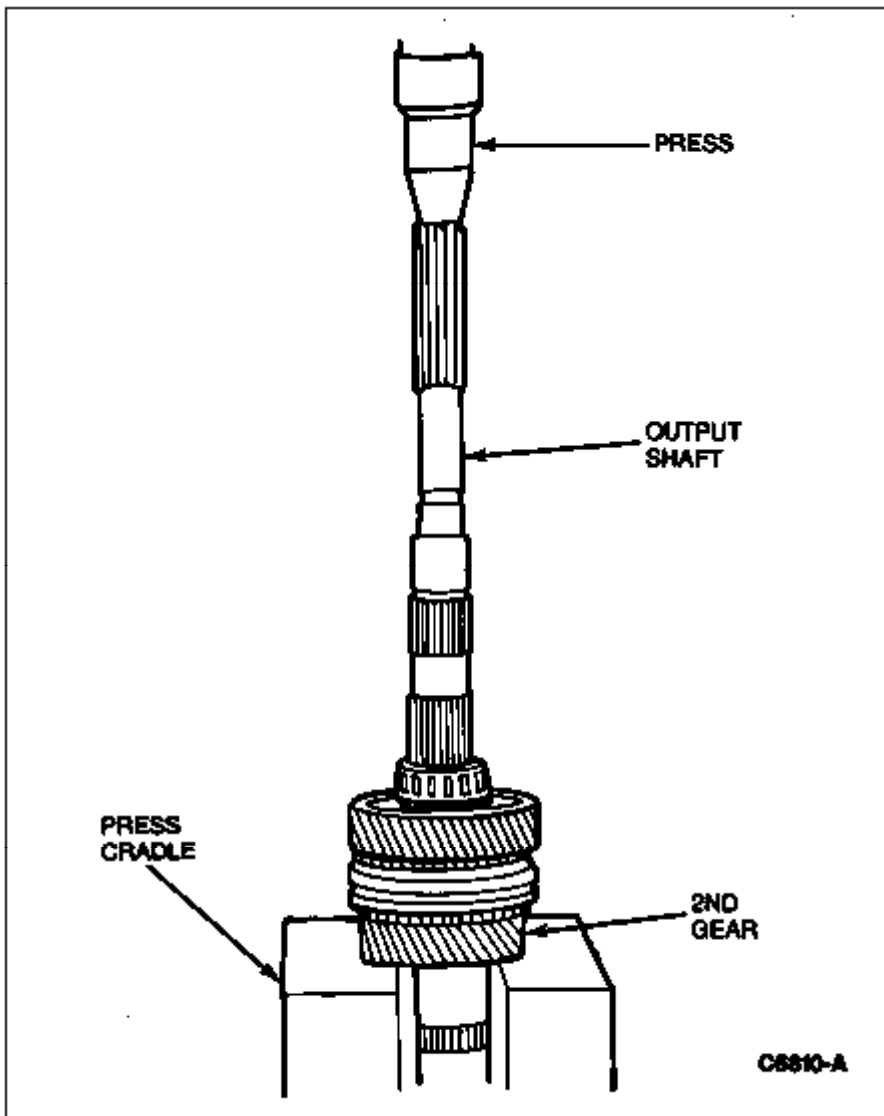
3. Position the front (short side of flange) of output shaft so that it faces upward. Lift off the following components as a unit:
 - Clutch hub and sleeve assembly (third/fourth)
 - Synchronizer blocker ring (third)
 - Third gear
 - Needle bearing
4. Position output shaft with rear end (long side of flange) facing upward. Position output shaft into press with press cradle contacting lower part of second gear.

NOTE:

Ensure that output shaft flange does not contact or ride up onto press cradle. Improper positioning of output shaft can cause component damage.

5. Press off the following components as a unit:

- Center bearing
- First gear sleeve
- First gear needle bearing
- First gear
- First gear synchronizer blocker ring
- First/second clutch hub and sleeve assembly
- Second gear synchronizer blocker ring
- Second gear
- Second gear needle bearing



Assembly

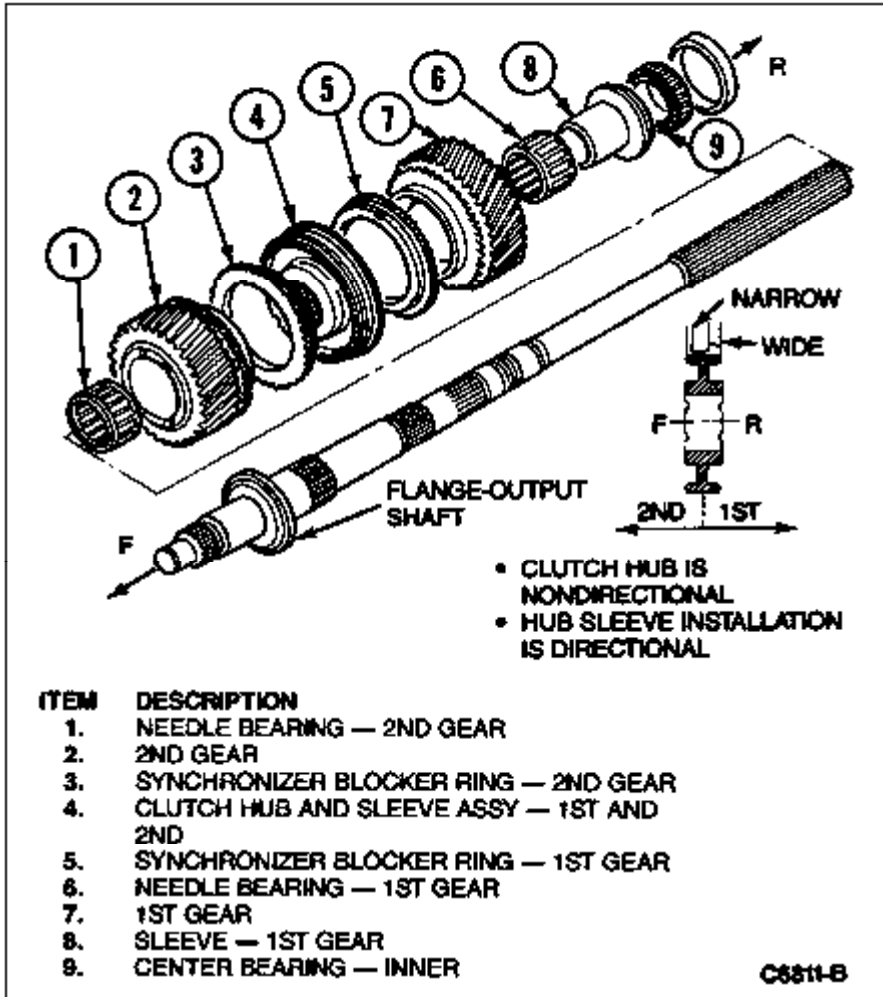
NOTE:

During installation, apply Synthetic MERCON® Multi-Purpose Automatic Transmission Fluid E6AZ-19582-B (ESR-M2C163-A2) or equivalent to all rotating or sliding parts.

1. Position output shaft so that the rear end (long side of flange) faces upward. Lubricate all bearing journals. Install the following parts in the order listed.

NOTE:

To install components onto output shaft, position components as shown. Press components into position using Remover/Replacer T75L-7025-C and Axle Bearing/Seal Plate T75L-1165-B.



- Second gear needle bearing
- Second gear
- Second gear synchronizer blocker ring

NOTE:

When installing first/second clutch hub and sleeve, ensure that smaller width of sleeve faces second gear (front) side. Ensure that reference mark faces rear of transmission; the mark references synchronizer key installation position.

- First/second clutch hub and sleeve assembly

NOTE:

Align first and second synchronizer blocker rings with synchronizer insert keys.

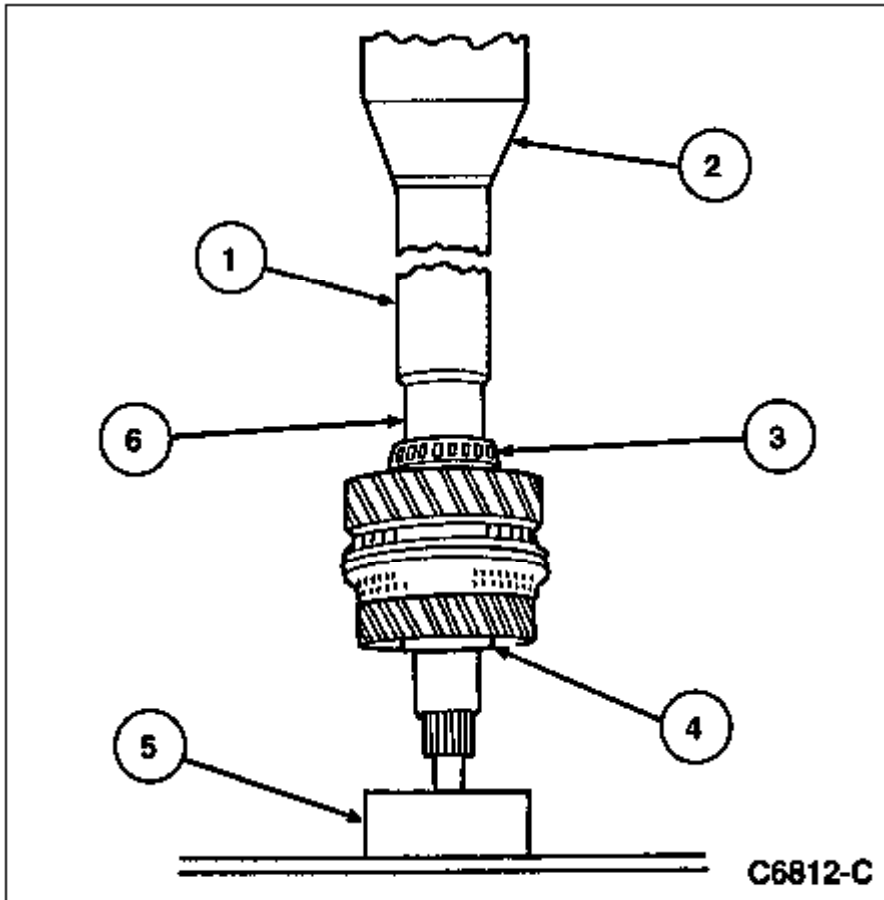
- First gear synchronizer blocker ring
- First gear needle bearing to first gear sleeve

- First gear
- First gear sleeve and needle bearing assembly

NOTE:

Ensure that center bearing race is installed completely onto output shaft.

- Center bearing (inner)



Item	Part Number	Description
1	T75L-7025-C	Remover/Replacer Tube
2	-	Press
3	-	Center Bearing
4	-	Output Shaft Flange
5	-	Press Plate
6	T75L-1165-B	Axle Bearing/Seal Plate

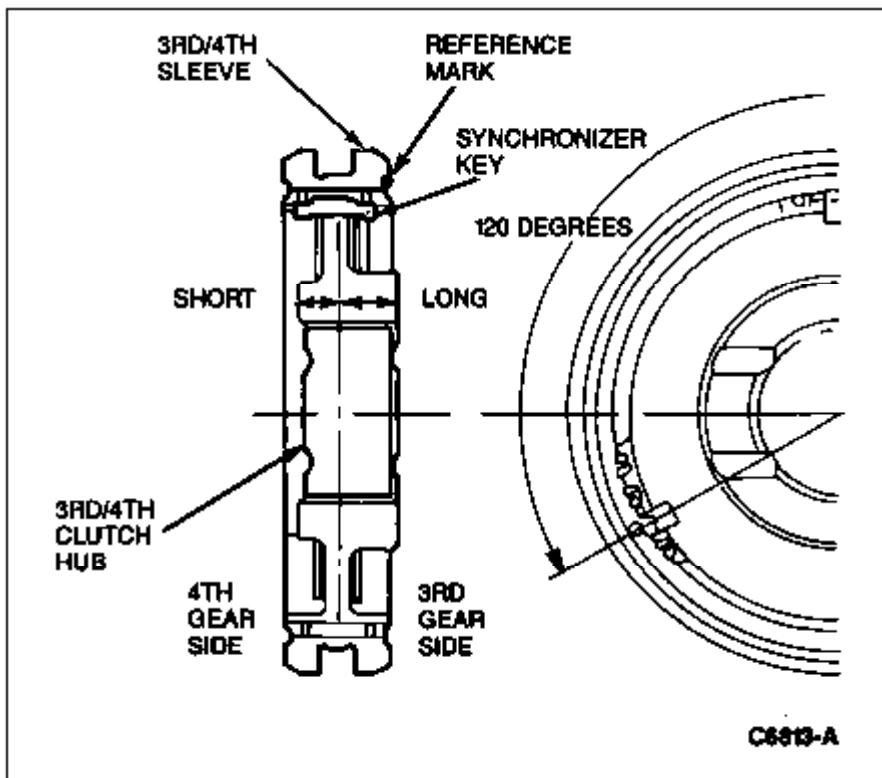
2. Install third/fourth gear assembly as follows:

- Position output shaft so that front (short side) of output shaft flange faces upward. Install the following parts in the order listed.

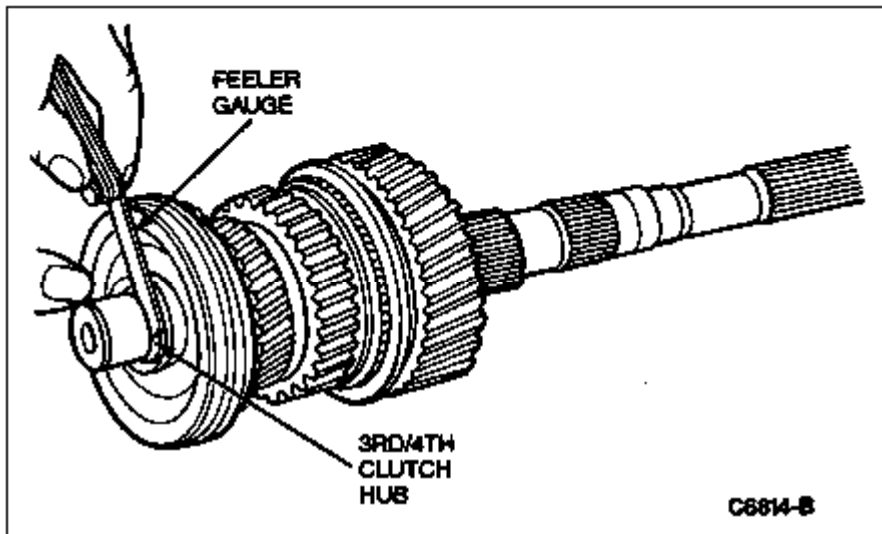
- Third gear needle bearing
 - Third gear
 - Third gear synchronizer blocker ring
- b. Install third/fourth clutch hub and sleeve as follows:
- Mate clutch hub synchronizer key groove with reference mark on the clutch hub sleeve. The mark should face rearward.
 - Install longer flange on clutch hub sleeve toward third gear (rear) side.

NOTE:

The front and rear sides of the clutch sleeve are the same except for the reference mark on one side.



- c. Install the following parts in the order listed.
- Spacer
 - Needle bearing--install with rollers facing away from flange (visible)
 - Retaining ring
- d. Install original retaining ring. Check clutch hub end play using a feeler gauge.



- e. If necessary, adjust third/fourth clutch hub end play to 0.00-0.05mm (0.00-0.0019 inch) by selecting required retaining ring according to the Retaining Ring Selection Chart. Install a new retaining ring if necessary.

Part Number	Thickness	Part Number	Thickness
E8TZ-7030-A	1.50mm (0.059 inch)	E8TZ-7030-F	1.75mm (0.0688 inch)
E8TZ-7030-B	1.55mm (0.061 inch)	E8TZ-7030-G	1.80mm (0.0708 inch)
E8TZ-7030-C	1.60mm (0.0629 inch)	E8TZ-7030-H	1.85mm (0.0728 inch)
E8TZ-7030-D	1.65mm (0.0649 inch)	E8TZ-7030-J	1.90mm (0.0748 inch)
E8TZ-7030-E	1.70mm (0.0669 inch)	E8TZ-7030-K	1.95mm (0.0767 inch)

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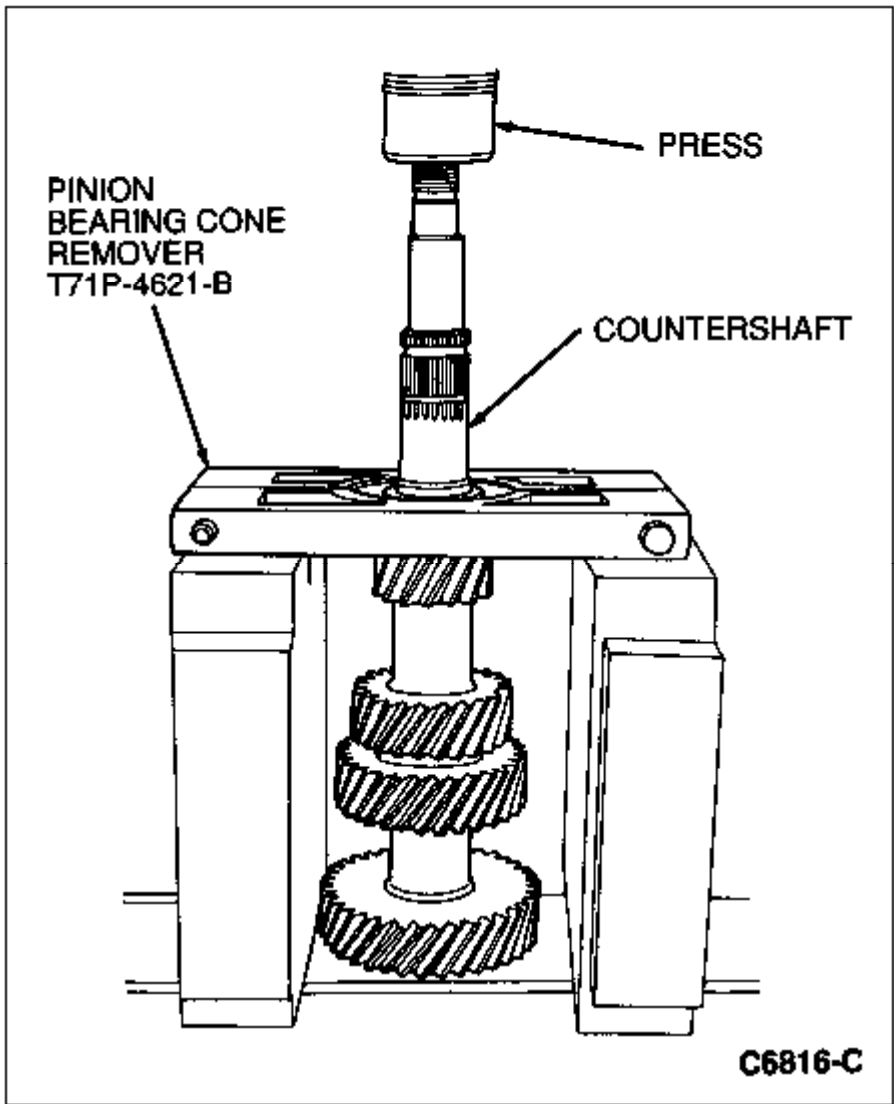
Countershaft

Tools Required:

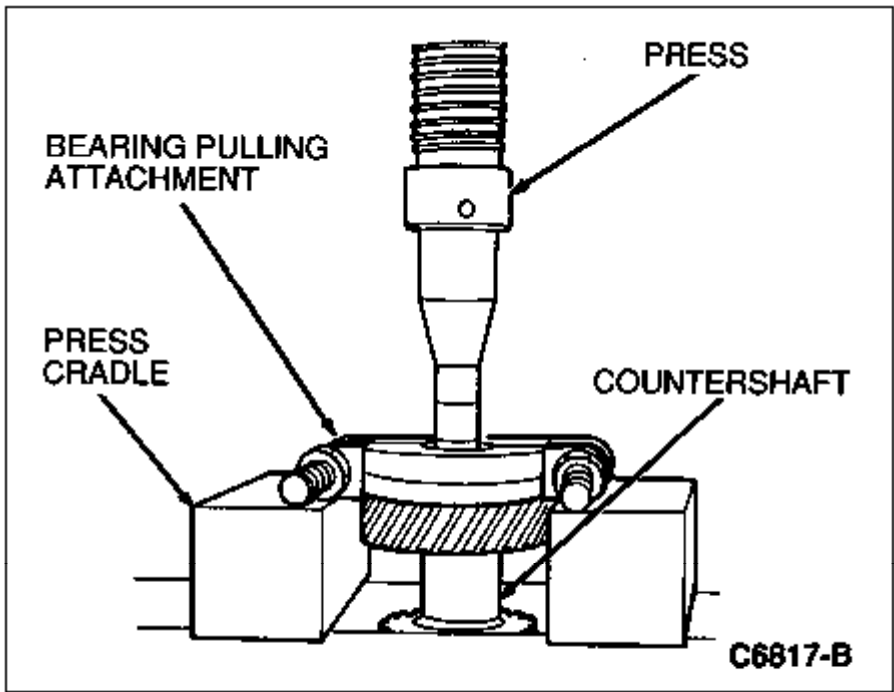
- Pinion Bearing Cone Remover T71P-4621-B
- Axle Bearing/Seal Plate T75L-1165-B
- Bearing Remover/Replacer T75L-7025-C
- Countershaft Front Bearing Replacer T77J-7025-L
- Bearing Pulling Attachment D84L-1123-A

Disassembly

1. Using a press and Pinion Bearing Cone Remover T71P-4621-B, remove the countershaft center bearing inner race.

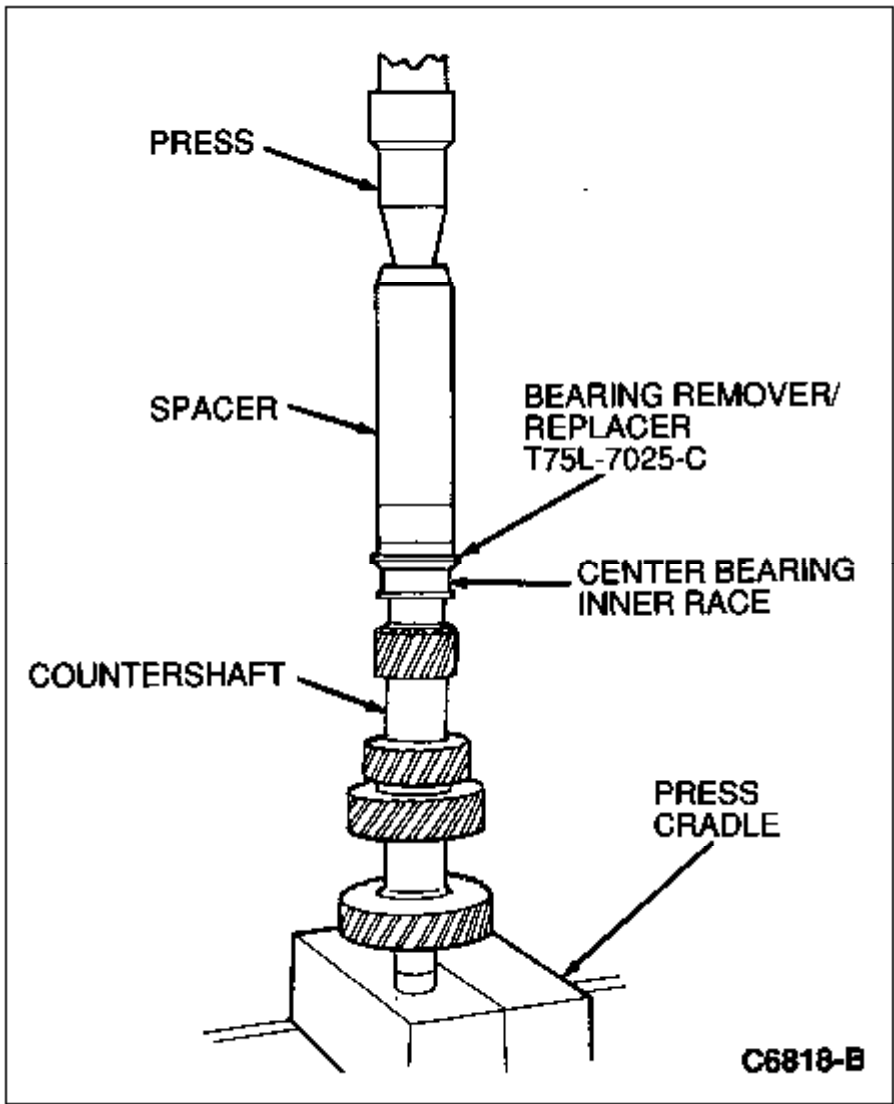


2. Using a press and Bearing Pulling Attachment D84L-1123-A or equivalent, remove the countershaft front bearing inner race.



Assembly

1. Using a press, a suitable spacer, Bearing Remover/Replacer T75L-7025-C and Axle Bearing/Seal Plate T75L-1165-B, install center bearing inner race.



2. Using a press, suitable spacer, Bearing Remover/Replacer T75L-7025-C, Axle Bearing/Seal Plate T75L-1165-B, and Countershaft Front Bearing Replacer T77J-7025-L, install countershaft front bearing inner race.

