MAKE YOUR OWN SHAFT TYPE CONVERSION

Our MILE MARKER KIT is the result of over two years of experimental kits and testing. It has all the advantages of the best shaft type conversion kits, yet it uses all the original parts, with no new yokes necessary. It has none of the disadvantages of the crown type kits by being one unit. No thrust is applied to the bearing. Our bearing serves as a spacer to keep the chain sprocket clear of the planetary ring. No elbow for extra oil. Simple-Easy Installation. Fits all 203 Transfer Cases. Fits All Transfer 203 Cases.

- Increase Gas Mileage Up To 30%
- Improve Tire Life
- Get Better Handling
- Extend Drive Train Life
INSTALLATION INSTRUCTIONS FOR TRANSFER CASE CONVERSION

(NOTE: THERE ARE TWO STYLES OF OUTPUT SHAFTS USED ON THE PN 203, OUR DIRECTIONS ONLY COVER THE BOLT TOGETHER STYLE)

TOOLS NEEDED:
- 1 5/16 Socket with Breaker Bar
- 9/16 Socket with Extension and Rachet
- 10” Crescent wrench or Channel Locks
- Rubber Mallet
- Gasket Sealer

DIRECTIONS:

1. Unbolt the rear drive shaft from the transfer case yoke, wrap tape around the U-joint cups and wire the drive shaft up and out of the way of the tail housing.

2. Unscrew the speedometer cable retaining nut, then remove the cable from the side of the tail housing.

3. Remove yoke with 1 5/16 socket and breaker bar. (Figure 1)

4. Unbolt the 8 bolts that retain the tail housing assembly to the Transfer Case. Remove entire tail housing (tap with a rubber mallet to loosen, if necessary). (Figure 2)

CAUTION: Some oil will spill.

Note: On Ford 203 Transfer Cases with optional lock-out light switch in the differential housing, both the switch and the poppet ball plug, spring, etc., must be removed before the housing can be removed from the chain housing.

5. Remove near output shaft. (Figure 3)

Note: 15 needle bearings will fall out. Catch these in your hand. Save these.

6. Remove planetary gear ring by pulling straight back. (Figure 4)
7. On 1973 and early 1974 models, remove the spacer from shaft and replace with later model (74-80) spacer. The correct spacer measurements are 1.74 in O.D., 1.51 in I.D., 0.31 in wide. (Figure 5)

**Note:** On all models, this spacer must be used; never reassemble without it.

8. Install 3 piece spacer assembly. Dip in clean oil before installing. (Consist of one steel ring + roller bearing + another steel ring or one thick steel ring [install first] + roller bearing + thin steel ring.) (Figure 6)

9. Disassemble planetary gear ring; set aside spider gears, curved washers, needle bearings. Reassemble as in Figure 7 and 8. Torque the 4 bolts holding the assembly together to 35 ft lbs. (Figure 7 and 8)

**Note 1:** The cross piece (Figure 9) must have the long side facing the rear output shaft when you install the transfer case wedges.

**Note 2:** The unit will fit together snug. However, if you have excessive wear, it may be necessary to make and install thin shims behind he wedges.

10. Install needle bearings (15) in rear output shaft. Install unit on main output shaft. (Figure 10)

**Note:** Leave all stock shims on shaft behind speedometer gear.

To ensure adequate lubrication to all non-moving parts, it is recommended the shifting lock lever be engaged for a few miles, once a week!
OPERATIONS:

11. Clean transfer case and install new gasket (gasket sealer will hold it in place).

12. Install tail housing and tighten all 8 bolts. (Figure 1)

13. Check end play (move rear output shaft in and out). You need .010 to approximately .050. No end play - too much? Remove 6 bolts that hold rear section of tail housing; now remove or add shims from behind speedometer gear as needed and reassemble.

Note: If the transfer case is on a bench, and not installed on a vehicle, the carrier may have dropped. Reach into the case and spin the spider gear while lifting up on it. Feel for the alignment pin to click into place.

14. Replace yoke and tighten to 120 ft lbs.

15. Install drive shaft and speedometer cable.

16. Refill transfer case oil to proper level.

WARRANTY INFORMATION:

Mile Marker/Selectro hubs, and Conversion Kits limited warranty

Mile Marker Industries warrants directly to the first purchaser that all Mile Marker Conversion Kits will be free from defect in material and workmanship appearing under normal use and service for a period of one year. Please register your warranty on our website at www.milemarker.com at the time of purchase or within 30 days by the end user. If you discover a hidden defect, Mile Marker will, as its option, repair or replace the product or necessary replacement parts at no charge to you, provided you remove the product from the vehicle and return it prepaid to Mile Marker Industries. If the product was purchased in the United States, the owner must contact our warranty department to get a Return Goods Authorization (RGA) Number before returning the product. If the product was purchased outside the United States, the owner must return the product to the original place of purchase.
Installation Instructions:

BEFORE INSTALLING 4 X 4 LOCKING HUBS REMOVE AND DISCARD THE FOLLOWING:

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<tr>
<th>4 x 4 WITHOUT HUBS</th>
<th>4 x 4 WITH MANUAL HUBS</th>
<th>4 x 4 WITH AUTOMATIC HUBS</th>
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<tbody>
<tr>
<td>1. DUST CAP</td>
<td>1. CAPSCREWS</td>
<td>1. CAPSCREWS</td>
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<tr>
<td>2. RETAINING RING</td>
<td>2. CAP ASSEMBLY</td>
<td>2. CAP ASSEMBLY</td>
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<tr>
<td>3. DRIVE FLANGE</td>
<td>3. LOCK RING</td>
<td>3. LOCK RING</td>
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<tr>
<td>4. SPRING AND OIL SLINGER</td>
<td>4. RETAINING RING</td>
<td>4. BODY ASSEMBLY</td>
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<td></td>
<td>5. BODY ASSEMBLY</td>
<td>5. WASHER</td>
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<td>6. RETAINING RING</td>
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CAUTION: The clearance between the hub and wheel bearing lock nut should be checked. To accomplish this, install the body assembly and large lock ring in the wheel housing. (Step 2 in the installation instructions). Run two of the socket head screws into the body assembly 180 degrees apart. Hold onto these screws and attempt to move the body assembly in and out of the wheel housing. If some looseness or "Float" is evident the installation will be correct. IF NC LOOSENESS IS EVIDENT DO NOT PROCEED WITH THE INSTALLATION UNTIL THE CONDITION IS CORRECTED. To correct the condition, remove the lock ring and the body assembly. Remove the wheel bearing lock nut. The pin in the adjusting nut must be seated into a hole in the washer when installed if the washer is not aligned correctly the lock nut will be approximately .120 inch too far outboard and will interfere with the hub. Tighten the lock nut to manufacturer's recommended torque. Reinstall the hub body assembly and recheck for clearance. If correct, proceed with installation. If not correct, recheck and correct wheel bearing nuts and washer installation.

INSTALLATION: (either hub fits either wheel)

1. Separate body assembly from cap assembly.
2. Install body assembly and large lock ring in wheel housing.
3. Some early model vehicles with Mono Beam Axles may not accept the axle retaining ring. It is acceptable to omit the retaining ring on these vehicles. **All vehicles with independent front suspension MUST have the axle retaining ring installed.** NOTE: If necessary, a pry bar can be inserted into knuckle (universal joints) to hold the axle shaft outboard while installing the axle retaining ring.
4. Place cap assembly on body assembly and secure with six socket head cap screws. Torque to 27-31 in. -lb. (31-35 kg. cm.).

The hubs are not required to seat against the wheel housing when installed, they may move in and out quite easily. This "looseness" is normal and will not affect the sealing or function of the hubs.

SERVICE INSTRUCTIONS: Hubs should be serviced at the same interval as the wheel bearings. They should be cleaned and all internal working surfaces lightly coated with grease. **THE HUBS SHOULD NOT BE PACKED WITH GREASE! TOO MUCH GREASE WILL DAMAGE HUBS.**