



# SERVICE KIT INSTRUCTIONS

Part Number 95080

2005+ Ford Super Duty Hublock

## GENERAL SAFETY PRECAUTIONS



As you read these instructions, you will see WARNINGS, CAUTIONS, NOTICES and NOTES. Each message has a specific purpose. WARNINGS are safety messages that indicate a potentially hazardous situation, which, if not avoided could result in serious injury or death. CAUTIONS are safety messages that indicate a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. A CAUTION may also be used to alert against unsafe practice. CAUTIONS and WARNINGS identify the hazard, indicate how to avoid the hazard, and advise of the probable consequence of not avoiding the hazard. NOTICES are messages to avoid property damage. NOTES are additional information to help you complete a procedure. PLEASE WORK SAFELY!



## WARNING

### FALLING OR CRUSHING HAZARD

**Failure to observe these instructions could lead to serious injury or death.**

- **Always** wear eye protection when working on vehicle.
- **Always** properly support vehicle before working beneath it.
- **Never** use a jack to support the vehicle.
- **Always** use jack stands in pairs to support the vehicle.
- **Always** use jacks or jack stands only on a hard, stable, and level surface.
- **Never** exceed the rated capacity of a jack or jack stands.
- **Always** verify that the parking brake is set, the transmission is in park (automatic) or reverse (manual) and the rear wheels are blocked before working on vehicle.

## NOTICE

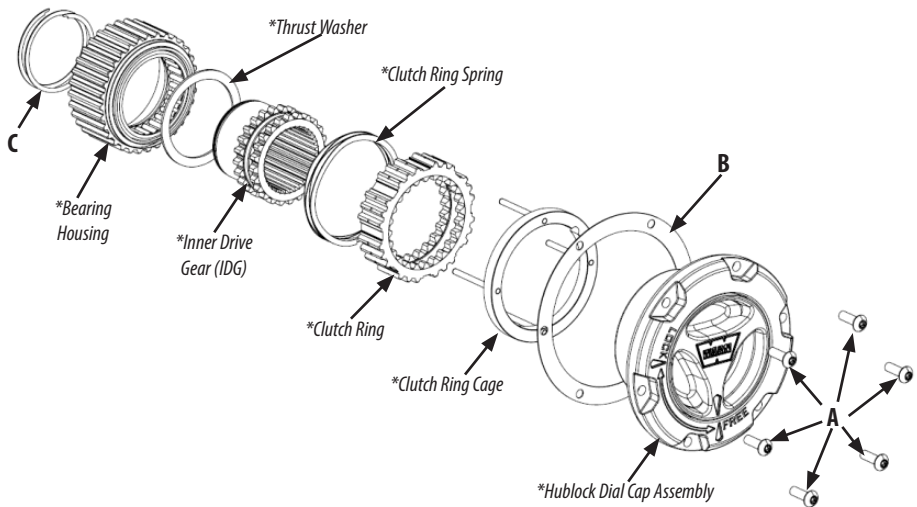
### AVOID EQUIPMENT DAMAGE

- **Always** follow the recommendations and instructions contained in your vehicle owner's manual.
- **Always** set hublock dials to "FREE" and transfer case to 2 - high for all driving that does not require four wheel drive.
- **Never** use pliers to turn dials. Dials should be hand turned to avoid damage to dial.
- **Never** move the vehicle if the hublock dial is between "FREE" and "LOCK" or it will damage the hublocks.
- **Never** drive with only one hublock engaged. This can cause vehicle drivetrain damage.
- **Never** drive with hublocks in "FREE" and transfer case in 4-low or 4-high. This can cause vehicle drivetrain damage.
- **Always** return the transfer case to 2-high before disengaging hublocks.
- **Always** verify that spindle nuts (if applicable) are installed and torqued to manufacturer's specifications. Hublock damage will occur if spindle nuts or wheel bearings are loose.
- **Always** use MILD FORCE when removing retaining rings. **DO NOT** use a hammer as it may burr the retaining ring.
- **Never** install hublocks if a vacuum leak above the recommended level is found. Permanent damage and wheel end component failure may occur, including hublock, wheel bearing, spindle bearing, and constant shaft.

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# PARTS LIST



| Ref. | Part Number | Description                         | Qty. |
|------|-------------|-------------------------------------|------|
| A    | 92612       | Screws                              | 12   |
| B    | 89956       | Hublock Cap Assembly Gasket         | 2    |
| C    | 94340       | Retaining Ring                      | 2    |
| D    | 93380       | Grease Packet <i>(not shown)</i>    | 1    |
| E    | 93381       | Anti-Seize Pouch <i>(not shown)</i> | 1    |
| F    | 94361       | Instructions <i>(not shown)</i>     | 1    |

*\*Items with asterix are not included in kit.*

## TORQUE SPECIFICATIONS

| FASTENER SIZE | FASTENER TORQUE |         |
|---------------|-----------------|---------|
|               | lb-in           | (N.m)   |
| M5            | 20-30           | 2.3-3.4 |

## TOOLS REQUIRED

- T-25 Torx Bit
- Torque Wrench
- Small Pick Tool (Snap-on SGASA204A)
- Jack stands
- Pry bar/ Lug Wrench
- Pliers or Thin Flathead Screwdriver
- Vacuum Pump
- Vacuum Gauge

## NOTES

- This sheet provides guidelines on how to install WARN 2005+ Ford Super Duty Hublocks.
- Read these instructions thoroughly.
- There are WARNINGS, CAUTIONS and NOTICES which should be followed during installation to avoid possibility of personal injury or damage to the vehicle. During installation, standard safety precautions and equipment should be used where appropriate.

## BEFORE YOU BEGIN

### Preparation:

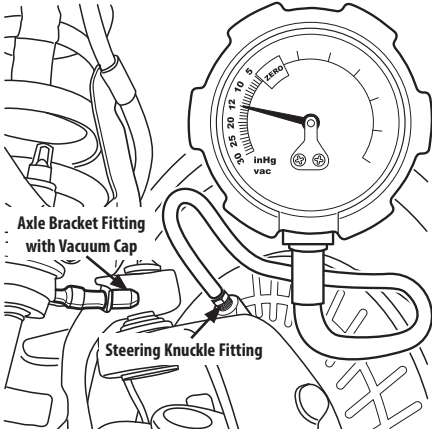
1. Make sure vehicle is on flat level ground.
2. Turn the ignition key OFF.
3. Put transmission in Park (automatic) or Reverse (manual).
4. Set the parking brake and block the rear wheels.
5. Following manufacture's instructions, jack the front of the vehicle up to allow wheels to freely spin.  
***\*Make sure that your jack is rated for the weight of your vehicle.***
6. Check the wheel bearing and ball joints per the Ford service manual. ***If the wheel bearings or ball joints show looseness, replace the worn components with authorized Ford service parts prior to hub lock installation.***

# INSTRUCTIONS

## Section 1: Perform Vacuum Check

The knuckle cavity is sealed from environmental containments. To avoid the damaging effects of dust, debris and other elements it is important to verify the seal is intact.

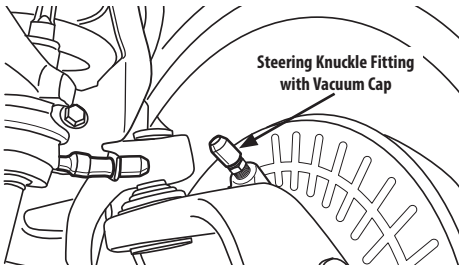
1. Attach a hand vacuum pump to the steering knuckle fitting.
2. Pull 12 in/Hg with the pump.



3. There should be no more than a 2.0 in/Hg loss in 60 seconds.
4. If more than 2.0 in/Hg is lost in 60 seconds then that means there is a leak in that wheel end and service is needed before you proceed.

**NOTE:** Sometimes the hub dial may not seat properly, allowing a vacuum leak. Make sure the dial is properly seated by rotating the dial from free to lock at least three times and re-check.

5. Once you have verified that no leak exists, Install vacuum cap on the knuckle fitting.



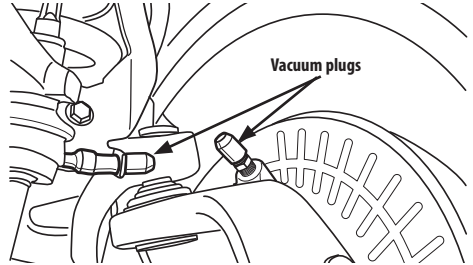
6. Repeat steps 1-6 for other side.

**NOTICE** Never install hublocks if a vacuum leak more than the above recommendation is found. Permanent damage and wheel end component failure may occur, including hublock, wheel bearing, spindle bearing, and constant shaft.

## Section 2: Inspect Vacuum Plugs

1. Confirm vacuum plugs are present at both knuckle fitting and hose end.

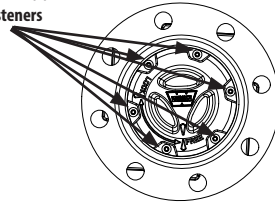
**NOTE:** Does not apply to trucks equipped with factory manual hublocks.



## Section 3: Remove Hublocks

1. Remove the fasteners securing the hublock assembly.

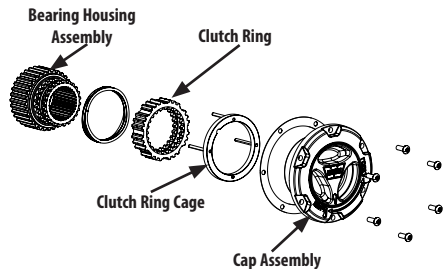
Remove (6) fasteners



**NOTICE** Always use MILD FORCE when removing the hublock assembly.

2. Remove cap assembly, clutch ring cage, clutch ring, spring, and bearing housing assembly.

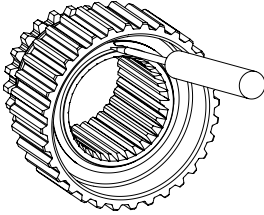
**NOTE:** A small pick may be necessary to remove all pieces.



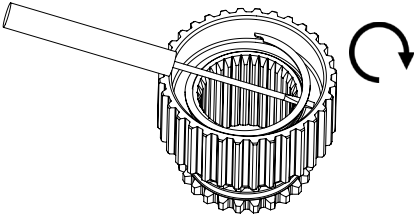
# INSTRUCTIONS

## Section 4: Bearing Housing and Inner Drive Gear (IDG) Disassembly

1. Hook small screwdriver or pry tool under the end of the double turn retaining ring and lift out of slot.



2. Work the tool under the retaining ring and around in a clockwise direction.



3. Continue around until retaining ring is completely free from groove.
4. Separate parts

## Section 5: Inspection

1. Inspect for loose or broken parts. If necessary, tighten or replace any parts immediately. Contact WARN Customer Service at 1.800.543.9276.

## Section 6: Clean

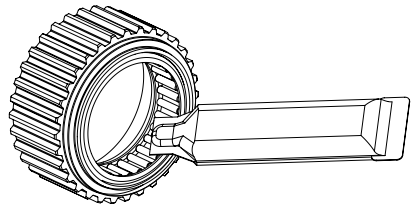
1. Carefully clean sealing surface of wheel end and fastener holes using steel wool and penetrating oil.
2. Using a clean rag, wipe old grease from all parts.
3. Use a solvent to clean the remaining grease from the bearing.
4. Blow dry with compressed air.
5. Check for loose or broken parts.

## Section 7: Bearing Surface Inspection

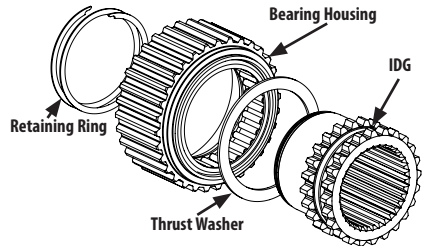
1. Inspect bearing and IDG surface for wear or damage. Replace immediately if wear or damage is noticed. Contact WARN Customer Service at 1.800.543.9276.

## Section 8: Grease Roller Bearing and Install Inner Drive Gear (IDG)

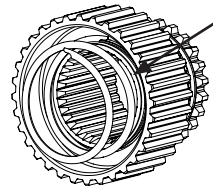
1. Grease the roller bearing. **NOTE: Use only 1/4 of the supplied tube of grease.**



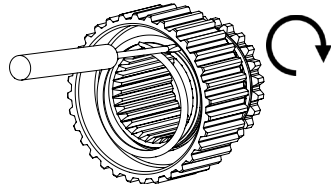
2. Assemble parts as shown below.



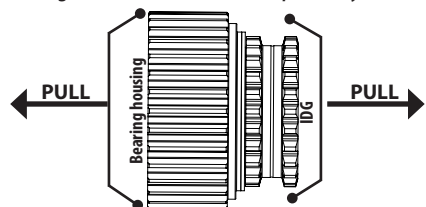
3. Hook end of double turn retaining ring into IDG slot.



4. Work the retaining ring around the IDG in a clockwise direction until completely in and seated.

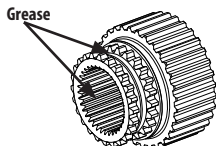


5. Grasp bearing housing and IDG and gently pull outward to confirm correct seating of retaining ring. **NOTE: The IDG should spin freely.**

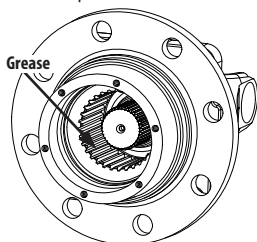


## Section 9: Install New Hublocks:

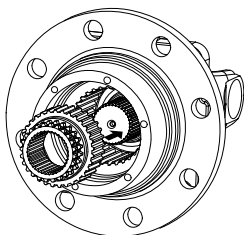
1. Before you begin, familiarize yourself with each of your kit components (see Parts List on page 2). Separate pieces and verify all parts are included.
2. Verify all components from existing hublocks have been removed and debris has been cleared. See *Removal of Existing Hublocks Section* in this instruction.
3. Grease internal and external teeth on bearing house assembly before installing.



4. Grease internal splines inside wheel hub.

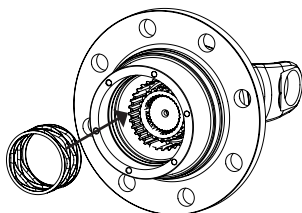


5. Install the new bearing house assembly by lining up splines and gently inserting onto axle shaft until fully seated. **NOTE:** If necessary, rotate wheel to line up splines.

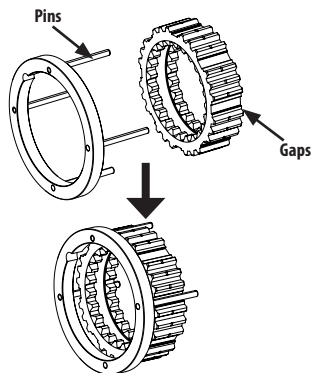


**NOTICE** It is necessary to fully seat bearing house assembly onto axle shaft or hublock damage can occur.

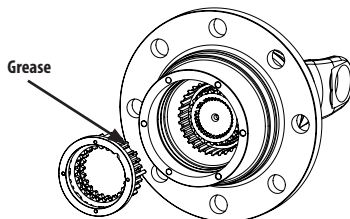
6. Expand spring apart to avoid overlapping coils, then install return spring on top of bearing house assembly.



7. Line up the pins of the clutch ring cage with the larger gaps of the clutch ring. Combine the two pieces to make one piece (clutch ring assembly).

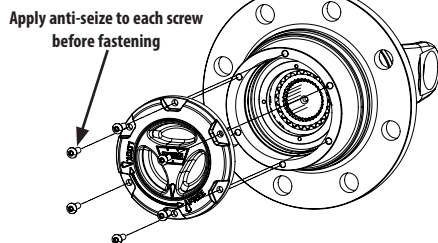


8. Grease the clutch ring assembly's external teeth. While rotating wheel back and forth, install the clutch ring assembly until fully seated. **NOTE:** Try rotating wheel again after installation to snap into place.

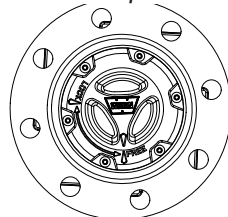


**NOTICE** If clutch ring is not fully seated, you will not be able to fasten hublock dial cap.

8. Remove old cap gasket and replace with new gasket supplied in kit.
9. Place cap assembly over clutch ring assembly. Dab a small amount of anti-seize lubricant on each screw and fasten cap to hub.

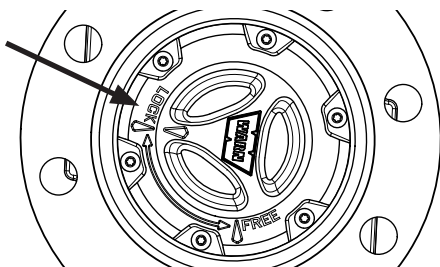


10. Tighten screws to 20-30 lb.in. (2.3-3.4 N-m). **NOTE:** Dial is in "FREE" position.

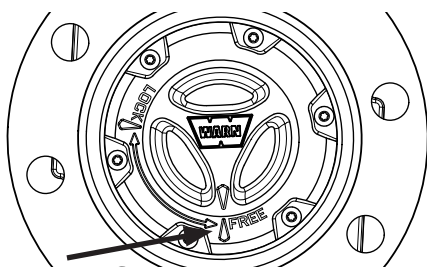


## Section 10: Hublock Function Validation:

1. With dial in “**LOCK**” position, verify that spinning the wheel **WILL** rotate u-joint.

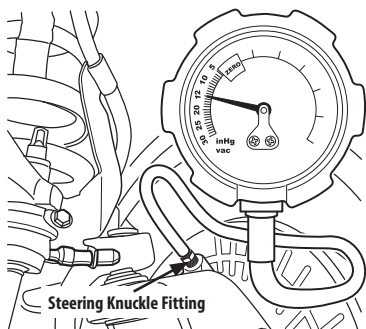


2. With dial in “**FREE**” position, spin the wheel and verify that the axle shaft/u-joint **WILL** rotate independently of the wheel.



## Section 11: Perform Post Vacuum Check:

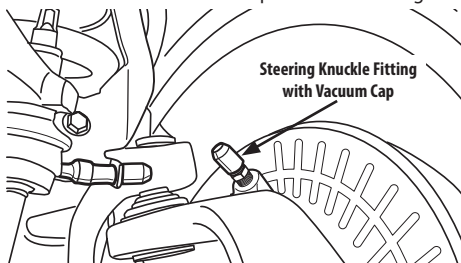
1. Remove the vacuum cap from the steering knuckle and attach a hand vacuum pump to knuckle.
2. Pull 12 in/Hg with the pump.



3. There should be no more than a 2.0 in/Hg loss in 60 seconds..
4. If more than 2.0 in/Hg is lost in 60 seconds then that means there is a leak in that wheel end and service is needed before you proceed.

**NOTE:** Sometimes the hub dial may not seat properly, allowing a vacuum leak. Make sure the dial is properly seated by rotating the dial from free to lock at least three times and re-check.

5. Once you have verified that no leaks exist, re-install vacuum line cap on knuckle fitting.



6. Lower vehicle off jack stands.

## Section 12: Hublock Operating Instructions:

**NOTICE** Always set hublock dials to “**FREE**” and transfer case to 2-high for all driving that does not require four wheel drive.

**NOTICE** Never use pliers to turn dials. Dials should be hand turned to avoid damage to dial.

**NOTICE** Never move the vehicle if the hub dial is between “**FREE**” and “**LOCK**” or it will damage the hublocks.

**NOTICE** Never drive with only one hublock engaged. This can cause drivetrain damage.

**NOTICE** Never drive with hublocks in “**FREE**” and transfer case in 4-low or 4-high. This can cause drivetrain damage.

**NOTICE** Always return the transfer case to 2-high before disengaging hublocks.

**NOTICE** Always follow the recommendations and instructions contained in your vehicle Owner's Manual.

## USING FOUR-WHEEL DRIVE

### 2H (2WD):

Is intended for general on-road driving. Power is supplied to the rear wheels only and should be used for street and highway driving. Provides optimal fuel economy at high speeds.

### 4H (4x4 High):

Is used for extra traction such as in snow or icy roads or in off road situations. This mode is not intended for use on dry pavement.

### N (Neutral):

Is only used when towing the vehicle. No power is provided to the front or rear wheels.

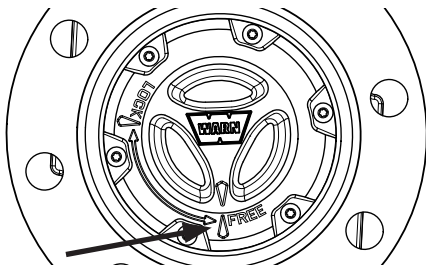
### 4L (4x4 Low):

Uses extra gearing to provide maximum power to all 4 wheels at reduced speeds. Intended only for off road applications such as deep sand, steep grades or pulling heavy objects.

### 2H (2WD) Operation:

1. Stop the vehicle and place the transmission in P (Park).

2. Rotate both hub lock control dials to "FREE".

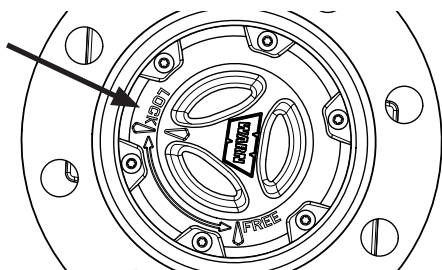


3. Disengage the transfer case by moving the floor mounted shifter to 2H or rotating the control dial on the instrument panel to 2H.
4. Place the transmission in D (Drive) or R (Reverse).

#### 4H (4x4 High) Operation:

Manual Shift on Stop (MSOS) 4WD system (if equipped):

1. Stop the vehicle and place the transmission in P (Park).
2. Rotate both hub lock control dials to "LOCK".

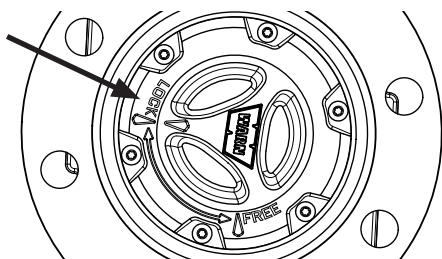


3. Place the transmission in D (Drive).
4. Engage the transfer case by moving the floor mounted shifter to 4H.

**NOTE:** It is recommended to allow the vehicle to roll at a speed below 3 mph (5km/h) when shifting into 4H.

**Electronic Shift-On-the-Fly (ESOF) 4WD system (if equipped):**

1. Stop the vehicle and place the transmission in P (Park).
2. Rotate both hub lock control dials to "LOCK".

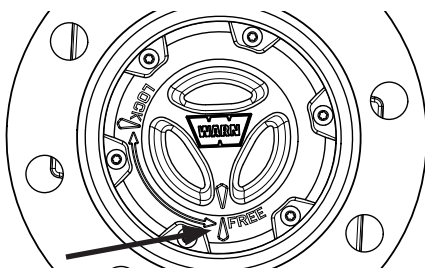


3. Place the transmission in D (Drive).
4. From the instrument panel, shift to 4H.

**NOTE:** With (ESOF), you can shift from 2H to 4H at a stop or while driving. Do not perform this operation if the rear wheels are slipping or during tight turning operations.

#### N (Neutral) Operation:

1. Stop the vehicle and place the transmission in P (Park).
2. Rotate both hub lock control dials to "FREE".



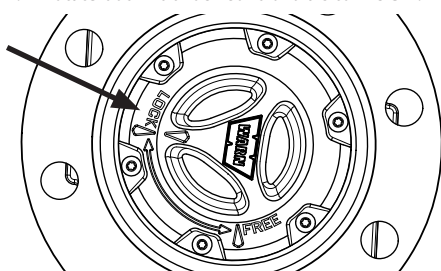
3. Disengage the transfer case by moving the floor mounted shifter to N (Neutral).

**⚠ WARNING** Never leave the vehicle unattended with transfer case in the N (Neutral) position.

**⚠ WARNING** Always set the parking brake fully and turn off the ignition when leaving the vehicle. This position should only be used when towing the vehicle.

#### 4L (4x4 Low) Operation:

1. Stop the vehicle and place the transmission in P (Park).
2. Rotate both hub lock control dials to "LOCK".



3. Place the transmission in N (Neutral).
4. Engage the transfer case by moving the floor mounted shifter to 4L or rotating the control dial on the instrument panel to 4L.
5. Place the transmission in D (Drive) or R (Reverse).

**NOTE:** It is recommended to lock both hublocks for a minimum of one mile each month to ensure lubrication of front axle.