

## Rear Drive Halfshafts -

### General Specification

Item	Specification
Type	Fully floating, solid shafts with inner and outer constant velocity joints

### Recommended Lubricant

Item	Specification
Inboard joint	Use grease supplied with replacement boot kit
Outboard joint	Use grease supplied with replacement boot kit

### Torque Specifications

Description	Nm	lb-ft
Halfshaft nut* +	395	291

\* New nuts/bolts must be fitted

+ Stake nut on completion

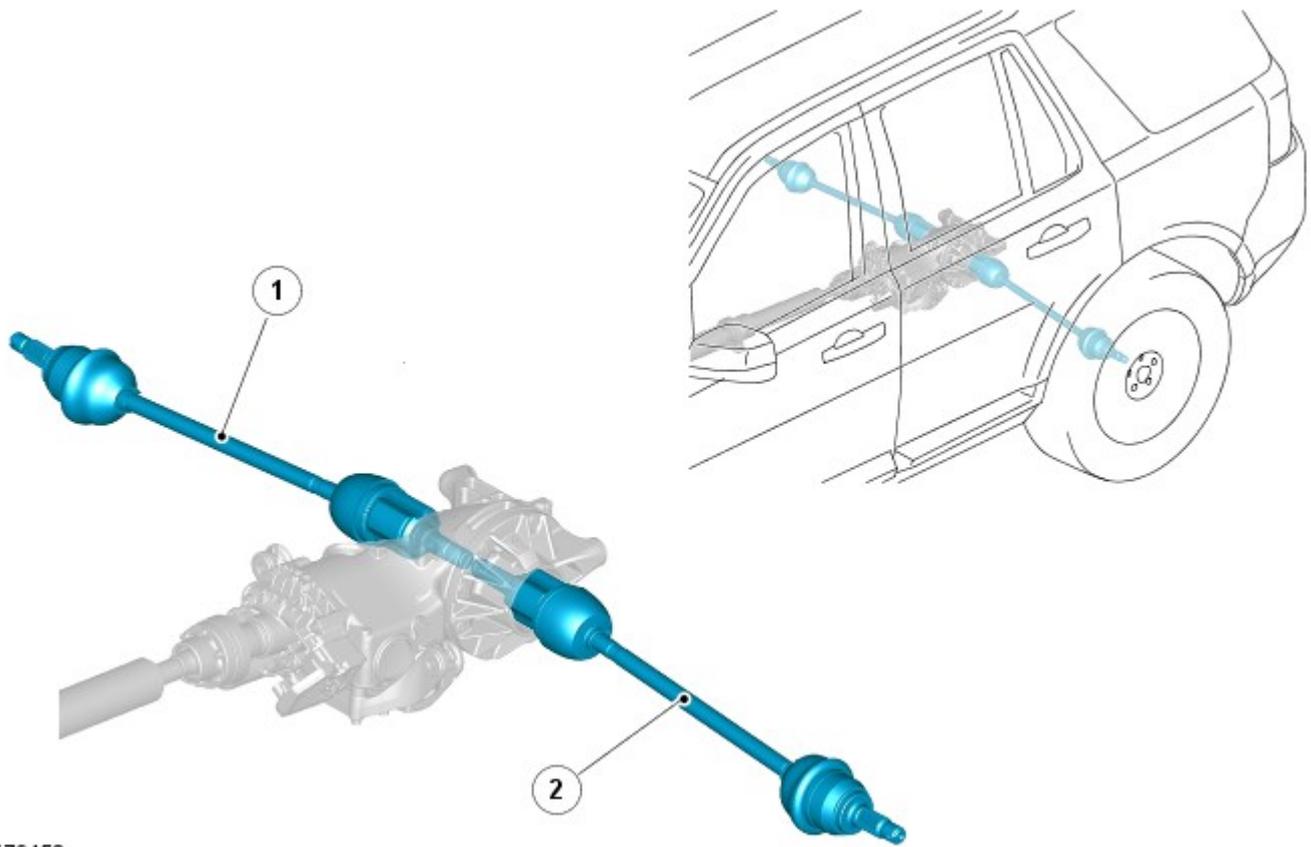
Part Number

Published: 11-May-2011

# Rear Drive Halfshafts - Rear Drive Halfshafts

Description and Operation

## COMPONENT LOCATION



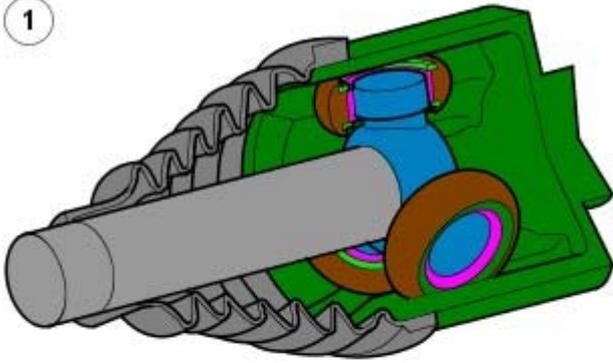
E79453

Item	Part Number	Description
1	-	Halfshaft - RH (right-hand)
2	-	Halfshaft - LH (left-hand)

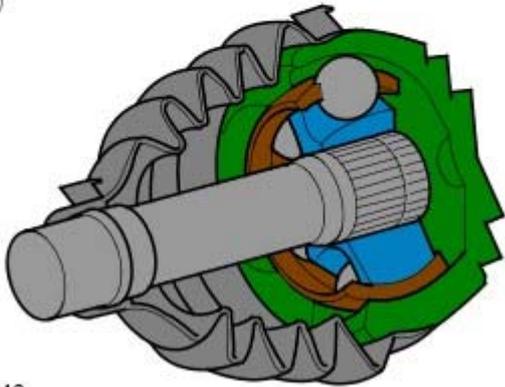
## OVERVIEW

Constant Velocity Joints

1



2



E79446

Item	Description
A	Inner constant velocity joint
B	Outer constant velocity joint

Each halfshaft comprises a solid steel shaft with inner and outer constant velocity joints.

The inner joint is the 'tripode' type with spherical bushing to reduce sliding resistance; the shaft and inner joint are one assembly.

The outer joint is the 'ball and socket' type, with a splined connection between the joint and the shaft. The joints are packed with grease and protected by gaiters.

The halfshafts are of equal length to eliminate stiffness-related torque-steer.

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## Rear Drive Halfshafts - Rear Drive Halfshafts

Diagnosis and Testing

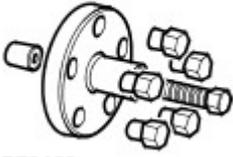
For additional information.

REFER to: [Driveline System](#) (205-00 Driveline System - General Information, Diagnosis and Testing).

## Rear Drive Halfshafts - Rear Halfshaft LH

Removal and Installation

### Special Tool(s)

 <p>205-857 Remover, Halfshaft</p> <p>E79462</p>	<p>205-857 Remover, Halfshaft</p>
 <p>205-858 Remover, Halfshaft Inboard Joint</p> <p>E82951</p>	<p>205-858 Remover, Halfshaft Inboard Joint</p>
 <p>205-928 Remover, Half Shaft Inboard Joint</p> <p>E116450</p>	<p>205-928 Remover, Half Shaft Inboard Joint</p>

### Removal

#### CAUTIONS:



Do not allow halfshafts to hang unsupported at one end or joint damage will occur.



Do not store or install halfshafts with joints at maximum articulation or damage may occur to the joint.



Angularly Adjusted Roller (AAR) joints, used at the inboard end of some halfshafts have no internal retaining mechanism and can separate.

1.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

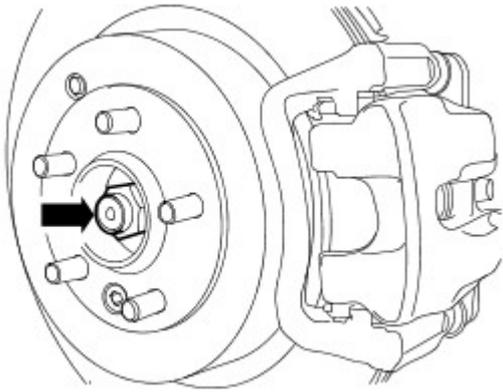
2. Drain the differential lubricant.

Refer to: [Differential Draining and Filling](#) (205-02 Rear Drive Axle/Differential, General Procedures).

3. Remove the wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

4. Loosen the rear halfshaft nut.

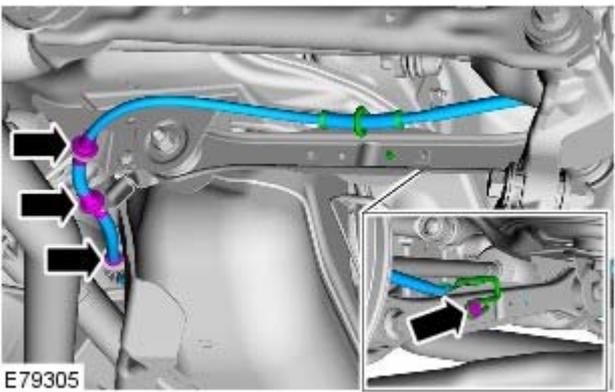


E46796

5. Remove the stabilizer bar link.

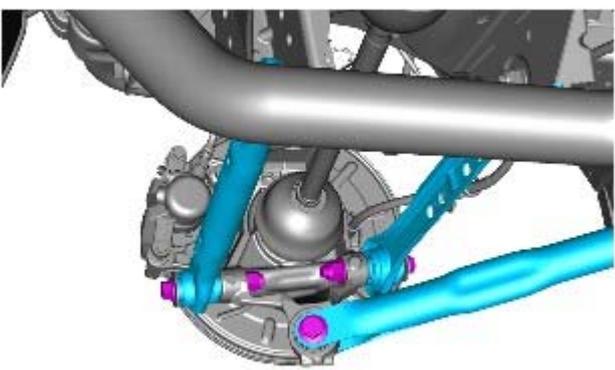
Refer to: [Rear Stabilizer Bar Link](#) (204-02 Rear Suspension, Removal and Installation).

6. NOTE: RH illustration shown, LH is similar.

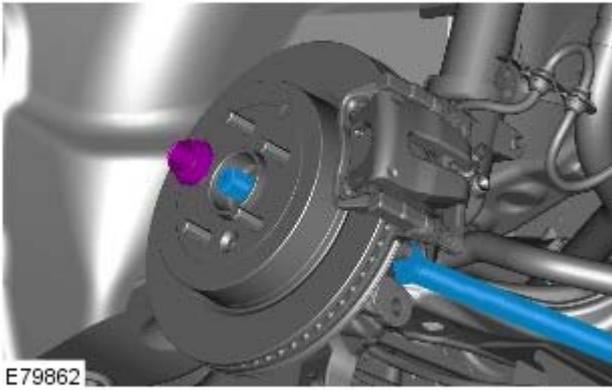


E79305

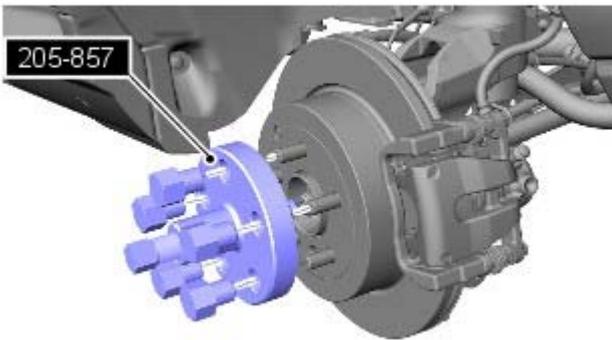
7.



E79861



8. Remove and discard the rear halfshaft nut.

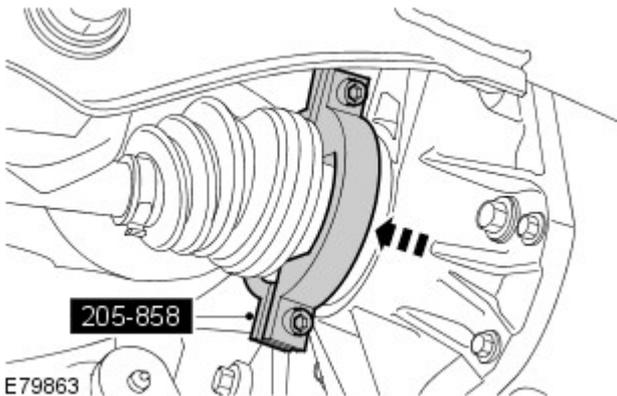


9.  **CAUTION:** Do not use a hammer to detach the halfshaft from the hub assembly, failure to follow this instruction may result in damage to the halfshaft.

Release the rear halfshaft.

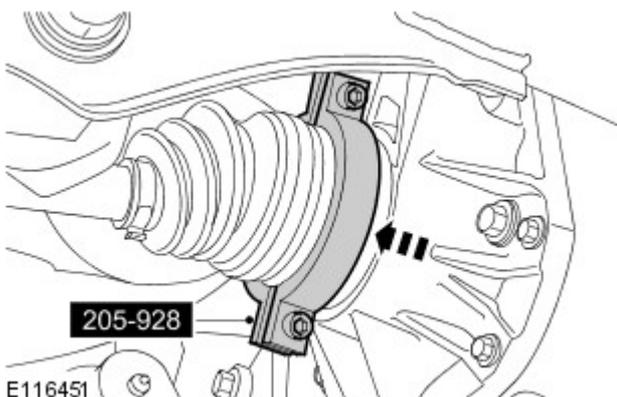
*Special Tool(s):* [205-857](#)

10. Position a container to collect the oil spillage.



11. Install the special tool, to the rear halfshaft inboard joint casing.

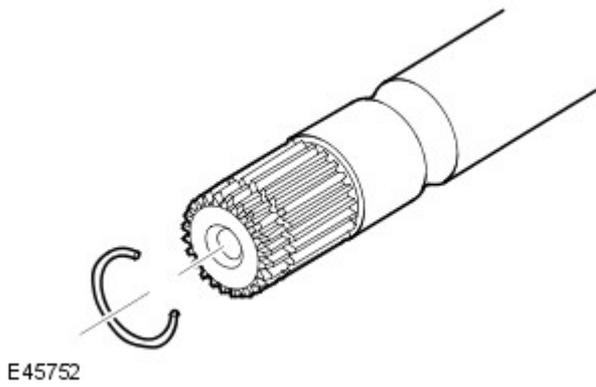
*Special Tool(s):* [205-858](#)



12. Install the special tool, to the rear halfshaft inboard joint casing.

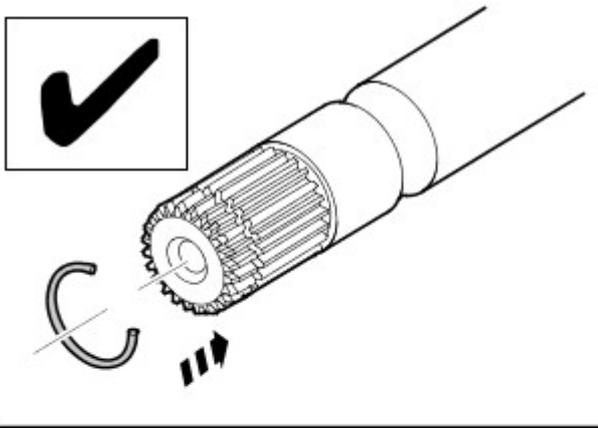
*Special Tool(s):* [205-928](#)

13. With assistance, remove the rear halfshaft.



### Installation

1. Clean the components.

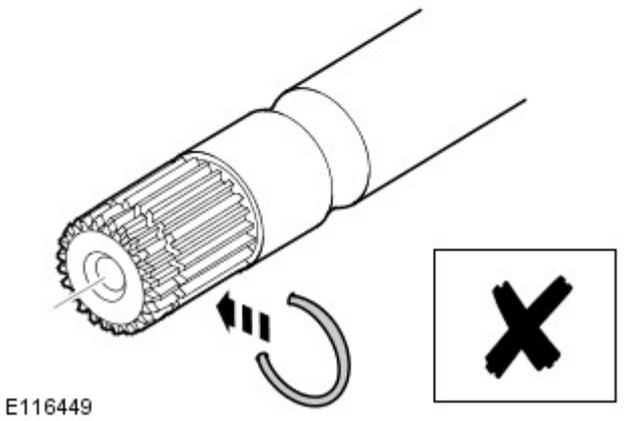


2. CAUTIONS:

 Take extra care not to damage the seal.

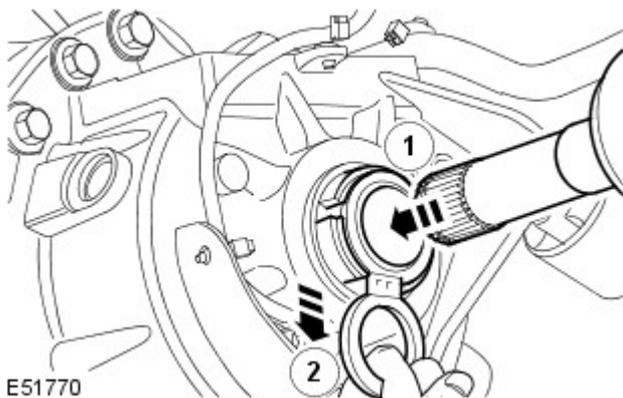
 Make sure that the snap ring is installed from the end of the halfshaft. Failure to follow this instruction may result in damage to the vehicle.

Install a new snap ring to the rear halfshaft and with assistance, connect the inner CV joint to the differential.



3. NOTE: The oil seal protector is designed to break into two pieces.

Remove and discard the rear halfshaft oil seal protector.



4. With assistance, install the rear halfshaft to the hub.

5.  CAUTION: Only tighten the nut finger tight at this stage.  
Install a new rear halfshaft nut, do not fully tighten at this stage.

6.  CAUTION: Only tighten the nuts and bolts finger tight at this stage.  
Connect both lower arms to the hub assembly, do not fully tighten at this stage.

7.  CAUTION: Only tighten the nut and bolt finger-tight at this stage.  
Connect the trailing arm to the hub assembly, do not fully tighten at this stage.

8. Secure the parking brake cable.

9. Support the weight of the vehicle using a jack under the rear hub.

10. CAUTIONS:

 Nuts and bolts must be tightened with the weight of the vehicle on the suspension.

 Do not use air tools to install the nut. Failure to follow this instruction may result in damage to the component.

- Tighten both lower arm nuts and bolts.

*Torque: 175 Nm*

- Tighten the trailing arm nut and bolt.

*Torque: 270 Nm*

- Tighten the rear halfshaft nut.

*Torque:*

Stage 1: 330 Nm

Stage 2: 30°

- Stake the hub nut.

11. Install the stabilizer bar link.

Refer to: [Rear Stabilizer Bar Link](#) (204-02 Rear Suspension, Removal and Installation).

12. Install the wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

13.  CAUTION: Do not fill the differential with lubricant up to the filler plug. The filler plug is only used to fill the differential with lubricant, and not to act as a level indicator.

Fill the differential with the correct amount of lubricant.

Refer to: [Differential Draining and Filling](#) (205-02 Rear Drive Axle/Differential, General Procedures).

## Rear Drive Halfshafts - Rear Halfshaft RH

Removal and Installation

### Special Tool(s)

 <p>205-857 Remover, Halfshaft</p> <p>E79462</p>	<p>205-857 Remover, Halfshaft</p>
 <p>205-858 Remover, Halfshaft Inboard Joint</p> <p>E82951</p>	<p>205-858 Remover, Halfshaft Inboard Joint</p>
 <p>205-928 Remover, Half Shaft Inboard Joint</p> <p>E116450</p>	<p>205-928 Remover, Half Shaft Inboard Joint</p>

### Removal

#### CAUTIONS:



Do not allow halfshafts to hang unsupported at one end or joint damage will occur.



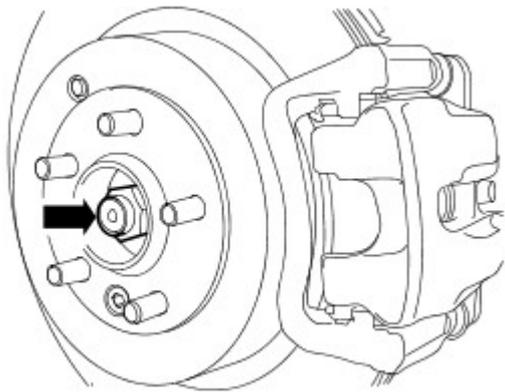
Do not store or install halfshafts with joints at maximum articulation or damage may occur to the joint.



Angularly Adjusted Roller (AAR) joints, used at the inboard end of some halfshafts have no internal retaining mechanism and can separate.

-  **WARNING:** Make sure to support the vehicle with axle stands.  
Raise and support the vehicle.
- Drain the differential lubricant.
- Remove the wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).



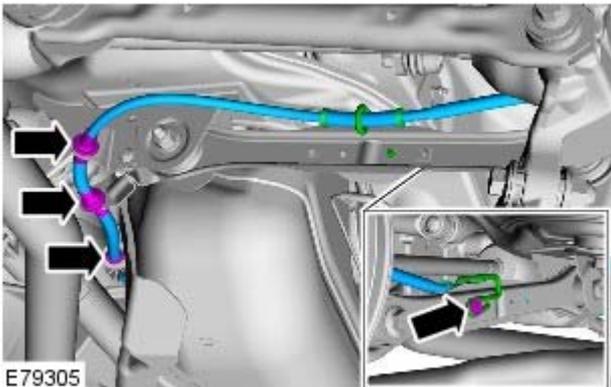
E46796

4. NOTE: LH illustration shown, RH is similar.

Loosen the rear halfshaft nut.

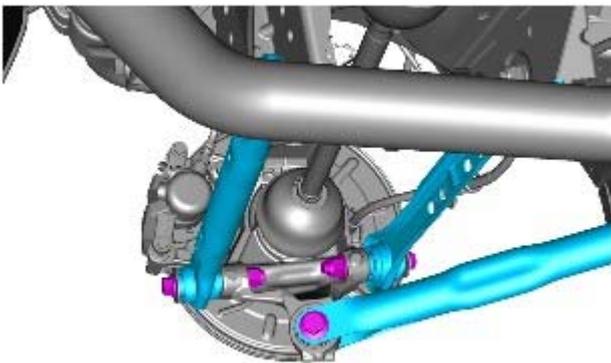
5. Remove the stabilizer bar link.

Refer to: [Rear Stabilizer Bar Link](#) (204-02 Rear Suspension, Removal and Installation).



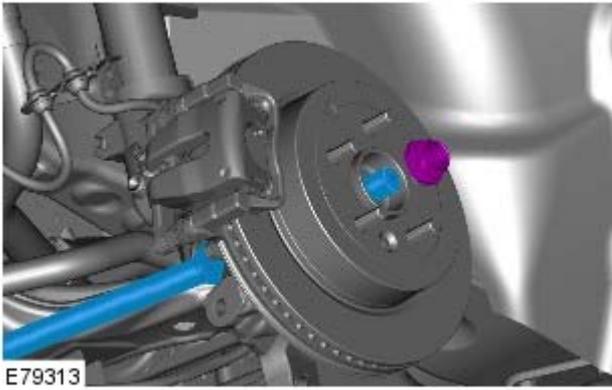
E79305

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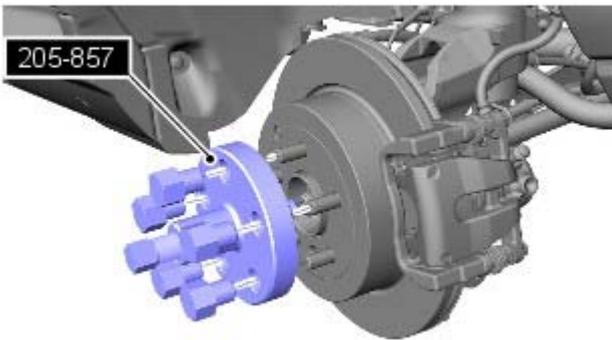


E79861

7. NOTE: LH illustration shown, RH is similar.



8. Remove and discard the rear halfshaft nut.



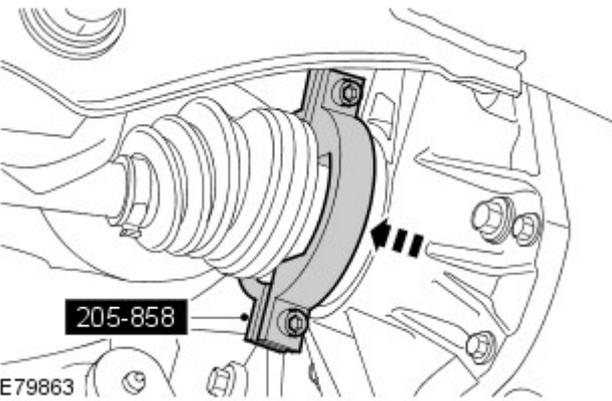
9.  **CAUTION:** Do not use a hammer to detach the halfshaft from the hub assembly, failure to follow this instruction may result in damage to the halfshaft.

**NOTE:** LH illustration shown, RH is similar.

Release the rear halfshaft.

*Special Tool(s):* [205-857](#)

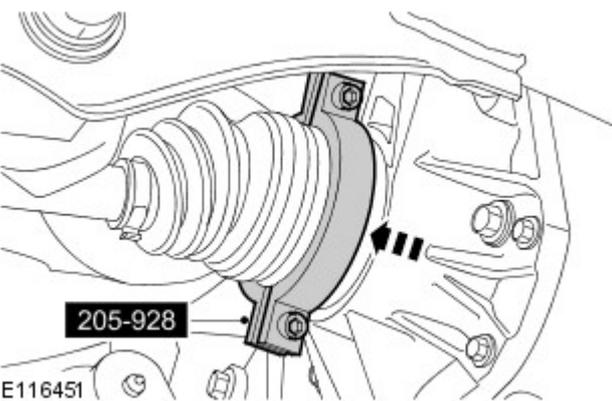
E87291



10. Install the special tool, to the rear halfshaft inboard joint casing.

*Special Tool(s):* [205-858](#)

E79863



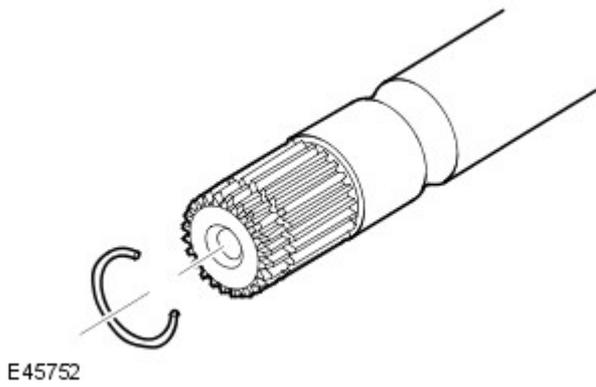
11. Install the special tool, to the rear halfshaft inboard joint casing.

*Special Tool(s):* [205-928](#)

E116451

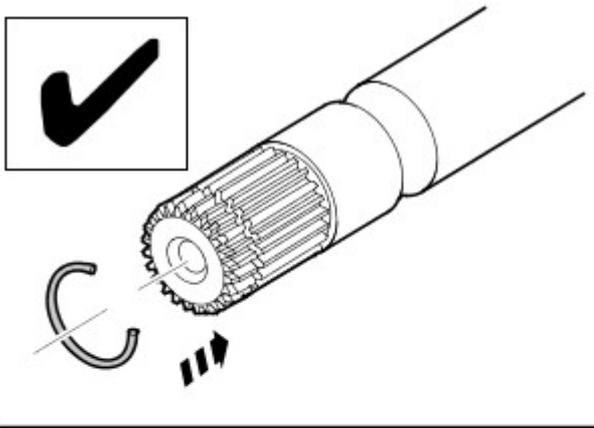
12. Position a container to collect the oil spillage.

13. With assistance, remove the rear halfshaft.



### Installation

1. Clean the components.

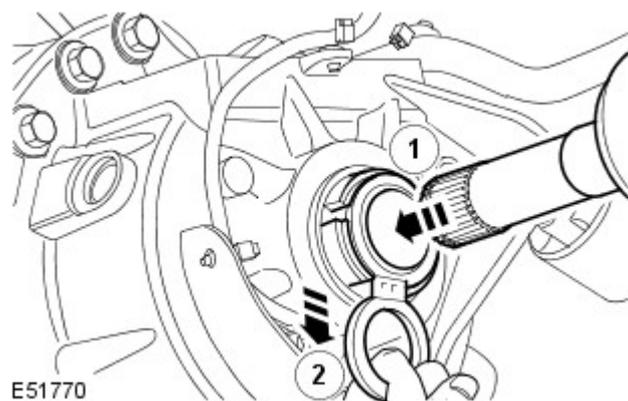
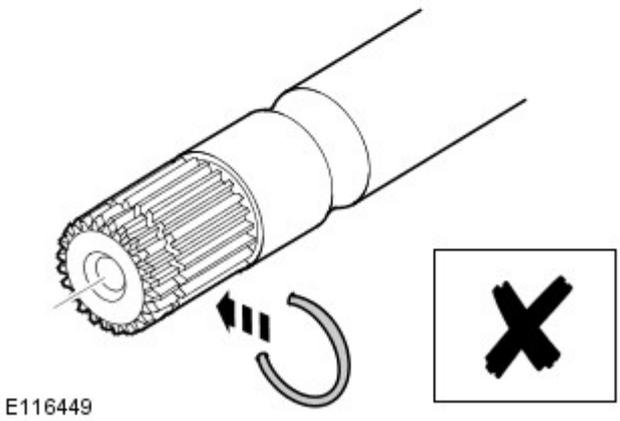


2. CAUTIONS:

 Take extra care not to damage the seal.

 Make sure that the snap ring is installed from the end of the halfshaft. Failure to follow this instruction may result in damage to the vehicle.

Install a new snap ring to the rear halfshaft and with assistance, connect the inner CV joint to the differential.



3. NOTE: The oil seal protector is designed to break into two pieces.

Remove and discard the rear halfshaft oil seal protector.

4. With assistance, install the rear halfshaft to the hub.

5.  CAUTION: Only tighten the nut finger tight at this stage.  
Install a new rear halfshaft nut, do not fully tighten at this stage.

6.  CAUTION: Only tighten the nuts and bolts finger tight at this stage.  
Connect both lower arms to the hub assembly, do not fully tighten at this stage.

7.  CAUTION: Only tighten the nut and bolt finger-tight at this stage.  
Connect the trailing arm to the hub assembly, do not fully tighten at this stage.

8. Secure the parking brake cable.

9. Support the weight of the vehicle using a jack under the rear hub.

10. CAUTIONS:

 Nuts and bolts must be tightened with the weight of the vehicle on the suspension.

 Do not use air tools to install the nut. Failure to follow this instruction may result in damage to the component.

- Tighten both lower arm nuts and bolts.

*Torque: 175 Nm*

- Tighten the trailing arm nut and bolt.

*Torque: 270 Nm*

- Tighten the rear halfshaft nut.

*Torque:*

Stage 1: 330 Nm

Stage 2: 30°

- Stake the hub nut.

11. Install the stabilizer bar link.

Refer to: [Rear Stabilizer Bar Link](#) (204-02 Rear Suspension, Removal and Installation).

12. Install the wheel and tire.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

13.  CAUTION: Do not fill the differential with lubricant up to the filler plug. The filler plug is only used to fill the differential with lubricant, and not to act as a level indicator.

Fill the differential with the correct amount of lubricant.

# Rear Drive Halfshafts - Inner Constant Velocity (CV) Joint Boot

Removal and Installation

## Special Tool(s)

 <p>303-D121 E64849</p>	<p>303-D121 Puller, General Purpose</p>
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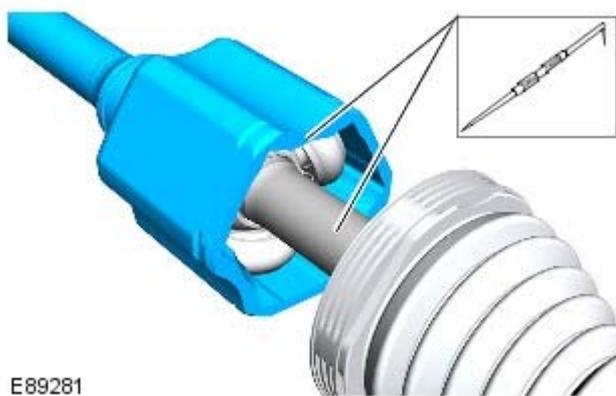
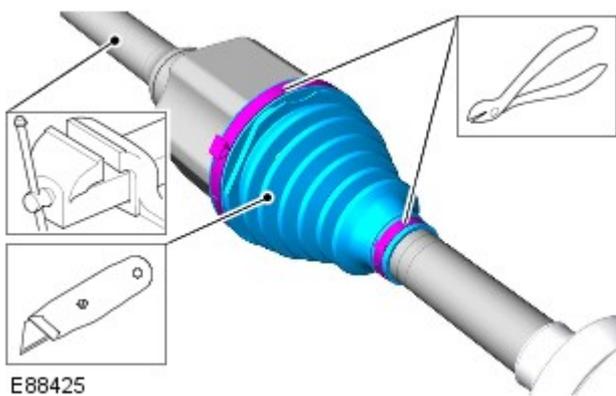
## Removal

1.  **WARNING:** Make sure to support the vehicle with axle stands.  
Raise and support the vehicle.

2. Remove the halfshaft.

Refer to: [Rear Halfshaft LH](#) (205-05 Rear Drive Halfshafts, Removal and Installation).

3. **NOTE:** Discard the retaining clips.



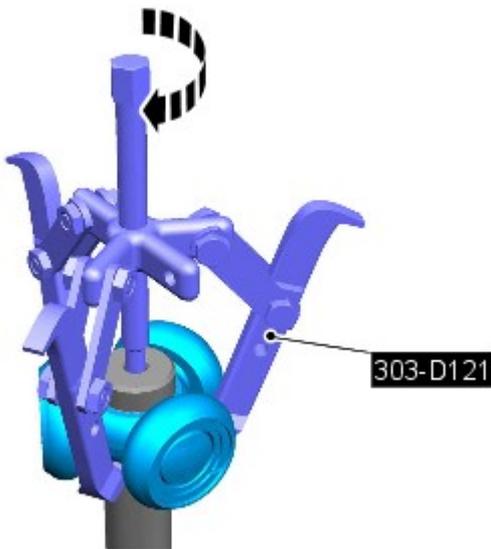
- 4.

- NOTE: Discard the retaining clip.



E88428

- Special Tool(s): [303-D121](#)



E88429

## Installation

-  **CAUTION:** Extreme cleanliness must be exercised when handling these components.  
Clean and inspect the components for deterioration.
- Install the inner CV boot onto the halfshaft.
- NOTE: Install a new retaining clip.  
Install the inner CV joint inner onto the halfshaft.
-  **CAUTION:** Make sure that these components are installed to the noted removal position.  
Install the inner CV joint outer onto the halfshaft.
- Pack the inner CV joint with the grease supplied.
- NOTE: Install new retaining clips.  
Secure the inner CV joint boot to the inner CV joint.

7. Install the halfshaft.

Refer to: [Rear Halfshaft LH](#) (205-05 Rear Drive Halfshafts, Removal and Installation).

## Rear Drive Halfshafts - Outer Constant Velocity (CV) Joint Boot

Removal and Installation

### Special Tool(s)

 <p>303-D121 Puller, General Purpose</p>	<p>303-D121 Puller, General Purpose</p>
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### Removal

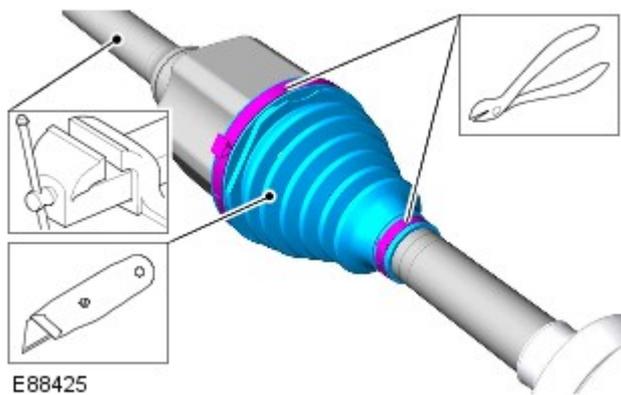
**NOTE:** The outer Constant Velocity joint must not be removed from the shaft. The inner joint and gaiter have to be removed to facilitate gaiter replacement of the outer C. V. gaiter. The inner and outer gaiters are supplied together as a kit.

1.  **WARNING:** Make sure to support the vehicle with axle stands.  
Raise and support the vehicle.

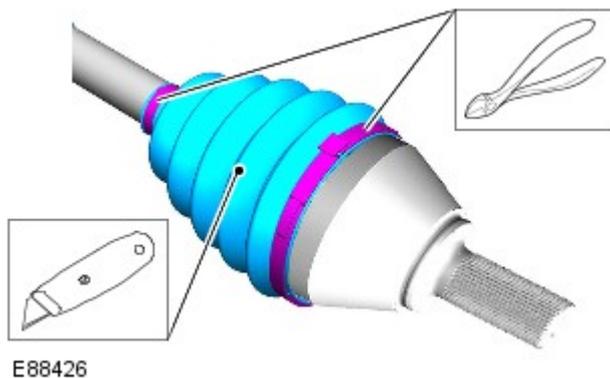
2. Remove the halfshaft.

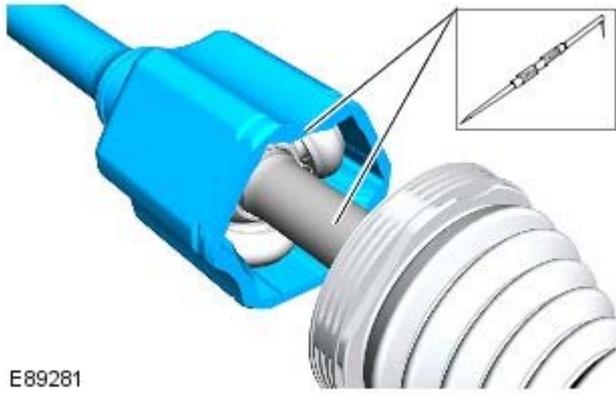
Refer to: [Rear Halfshaft LH](#) (205-05 Rear Drive Halfshafts, Removal and Installation).

3. **NOTE:** Discard the retaining clips.



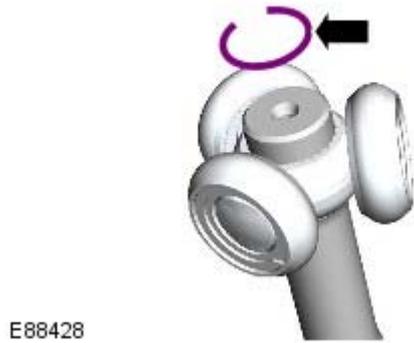
4. **NOTE:** Discard the retaining clips.



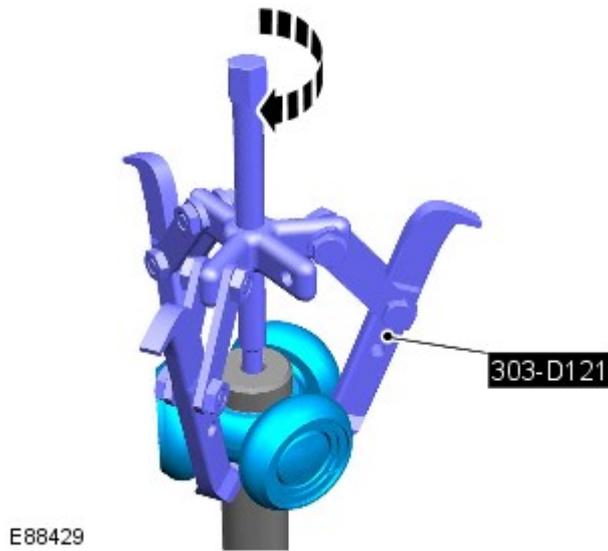


5.

6. NOTE: Discard the retaining clip.



7. Special Tool(s): [303-D121](#)



## Installation

1.  CAUTION: Extreme cleanliness must be exercised when handling these components.

Clean and inspect the components for deterioration.

2. Install the inner and outer CV boots onto the halfshaft.

3. NOTE: Install a new retaining clip.

Install the inner CV joint inner onto the halfshaft.

4.  CAUTION: Make sure that these components are installed to the noted removal position.

Install the inner CV joint outer onto the halfshaft.

5. Pack the inner CV joint with the grease supplied.
6. Pack the outer CV joint with the grease supplied.
7. NOTE: Install new retaining clips.

Secure the inner CV joint boot to the inner CV joint.

8. NOTE: Install new retaining clips.

Secure the outer CV joint boot to the outer CV joint.

9. Install the halfshaft.

Refer to: [Rear Halfshaft LH](#) (205-05 Rear Drive Halfshafts, Removal and Installation).