

## Front Drive Halfshafts -

### General Specification

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

### Recommended Lubricant

Item	Specification
Front drive halfshaft (auto only)	Weicon anti-seize grease
Outboard joint	Use grease supplied with replacement boot kit
Inboard joint	Use grease supplied with replacement boot kit

### Torque Specifications

Description	Nm	lb-ft
Extension shaft bearing anchorage to block bolts - 3.2L Petrol	48	35
Extension shaft bearing anchorage to transmission bolts - 3.2L Petrol	25	18
Extension shaft bearing anchorage to block bolts- 2.2L Diesel	65	48
Extension shaft bearing anchorage to transmission bolts - 2.2L Diesel	25	18
Front halfshaft to hub bolt*	45 + 80°	33 + 80°
Heat shield to bearing anchorage	10	7

\* New nuts/bolts must be fitted

Published: 11-May-2011

## Front Drive Halfshafts - Front Drive Halfshafts

Diagnosis and Testing

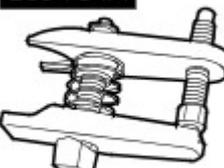
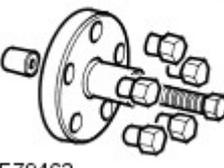
For additional information.

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

## Front Drive Halfshafts - Front Halfshaft LH

Removal and Installation

### Special Tool(s)

 <p><b>204-619</b></p> <p>E82091</p>	<p>204-619 G-Clamp</p>
 <p><b>205-754A</b></p> <p>E45276</p>	<p>205-754A Splitter, Ball Joints</p>
 <p><b>205-857</b></p> <p>E79462</p>	<p>205-857 Remover, Halfshaft</p>

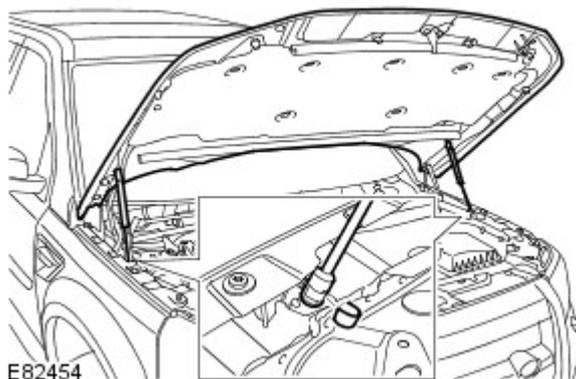
### Removal

**NOTE:** The seal protector is not a special tool but is available from the parts catalogue.

1. Remove the plenum chamber panel.

Refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

2. Release the hood support struts and secure the hood in an upright position.



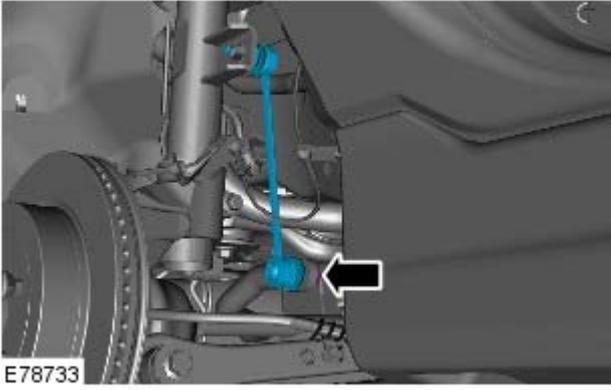
3.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

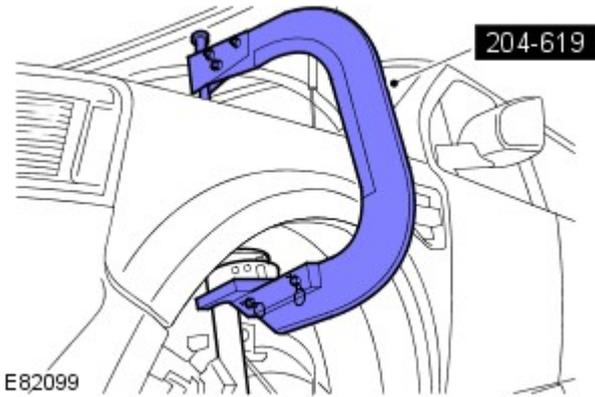
4. Remove the wheel and tire.

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

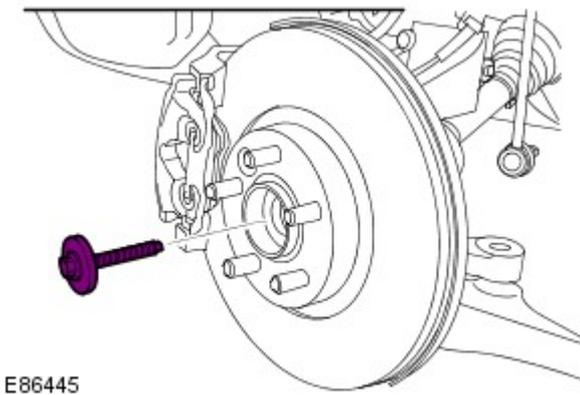
Installation).



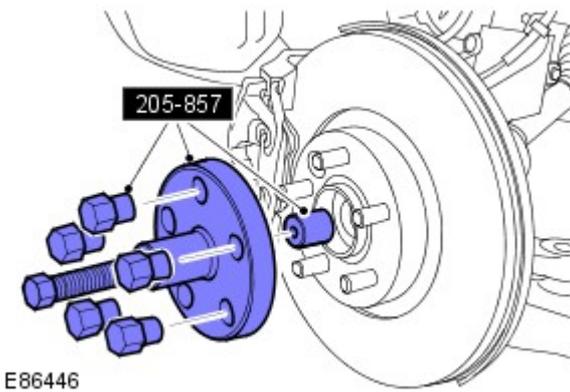
5.  **WARNING:** Make sure that a new nut is installed.  
*Torque:* 60 Nm



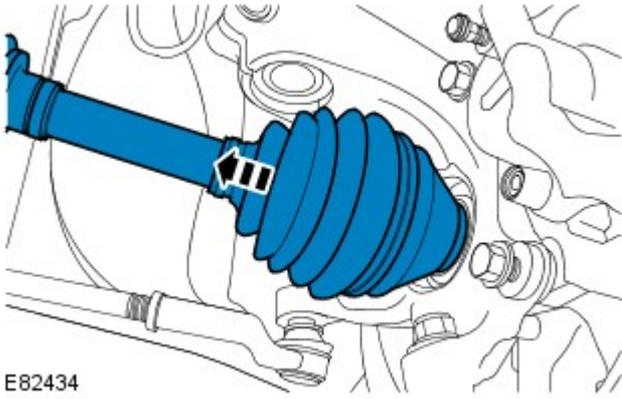
6. **NOTE:** This step requires the aid of another technician.  
Compress the spring and damper assembly.  
*Special Tool(s):* [204-619](#)



7.  **WARNING:** Make sure that a new bolt is installed.  
*Torque:*  
Stage 1: 45 Nm  
Stage 2: 60°

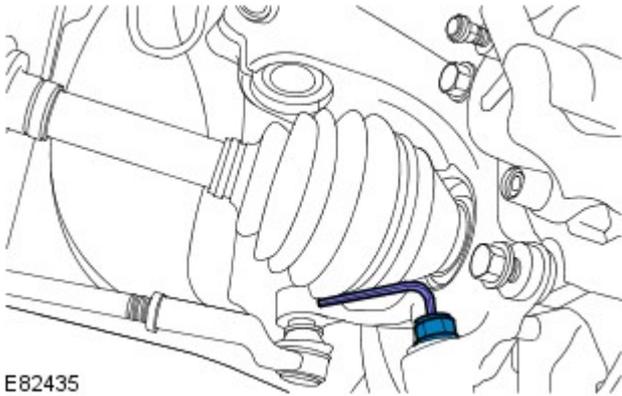


8. Partially release the halfshaft from the wheel knuckle.  
*Special Tool(s):* [205-857](#)



E82434

9.  **CAUTION:** Do not allow halfshafts to hang unsupported at one end or joint damage will occur.
- Partially release the halfshaft from the wheel knuckle.

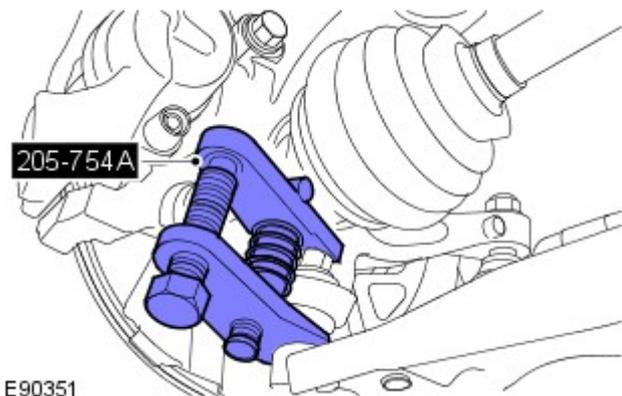


E82435

10.  **WARNING:** Make sure that a new lower arm ball joint nut is installed.

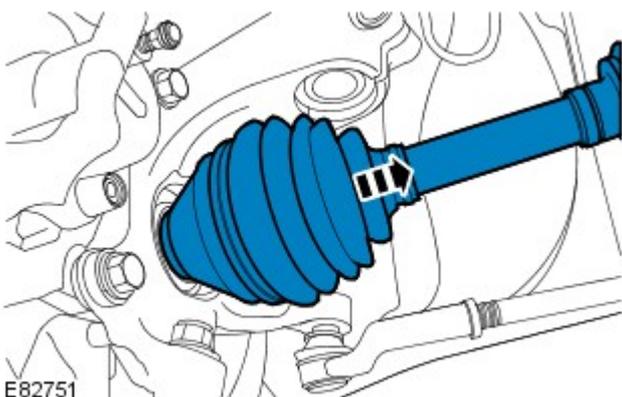
 **CAUTION:** Make sure that the ball joint ball does not rotate.

*Torque:* 100 Nm



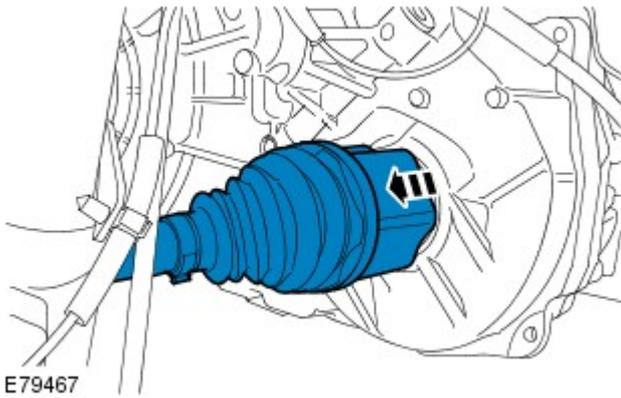
E90351

11. *Special Tool(s):* [205-754A](#)



E82751

12.  **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.
- Remove the halfshaft from the wheel knuckle.



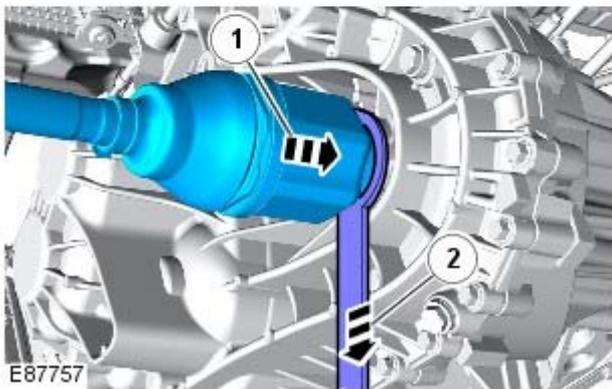
13.  **WARNING:** Manual transmission: Fluid loss is unavoidable, use absorbent cloth or a container to collect the fluid.

## Installation



1. **NOTE:** Do not fully engage the halfshaft until the oil seal protector has been removed.

To prevent oil seal damage use the protector when installing the shaft into the transmission. It is not a special tool but is available from the Parts Catalogue.



2. **CAUTIONS:**

 Install the halfshaft nut finger tight.

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

To install, reverse the removal procedure.

3. Manual transmission vehicles only: Check and top-up the transmission fluid level.

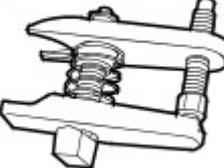
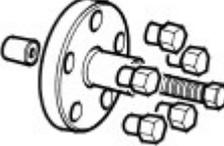
Refer to: [Transmission Fluid Level Check](#) (308-03 Manual Transmission/Transaxle, General Procedures).



## Front Drive Halfshafts - Front Halfshaft RH

Removal and Installation

### Special Tool(s)

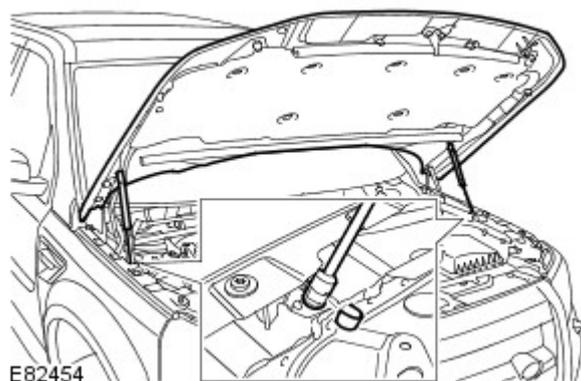
 <p>204-619 G-Clamp</p> <p>E82091</p>	<p>204-619 G-Clamp</p>
 <p>205-754A Splitter, Ball Joints</p> <p>E45276</p>	<p>205-754A Splitter, Ball Joints</p>
 <p>205-857 Remover, Halfshaft</p> <p>E79462</p>	<p>205-857 Remover, Halfshaft</p>

### Removal

1. Remove the plenum chamber panel.

Refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

2. Release the hood support struts and secure the hood in an upright position.

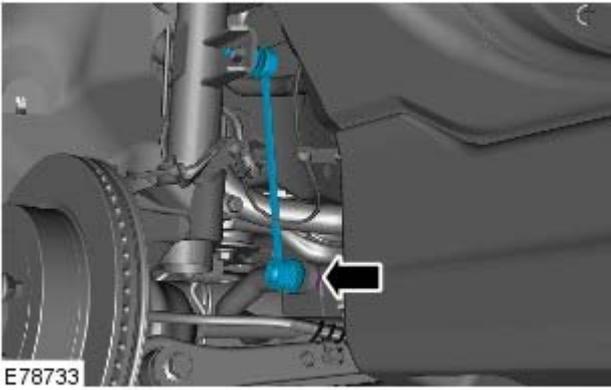


3.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

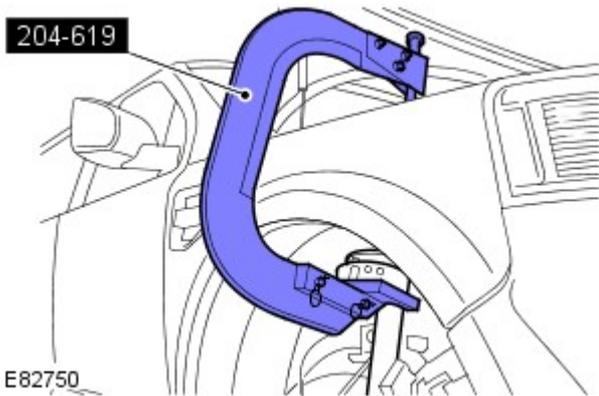
4. Remove the wheel and tire.

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



5.  **WARNING:** Make sure that a new nut is installed.

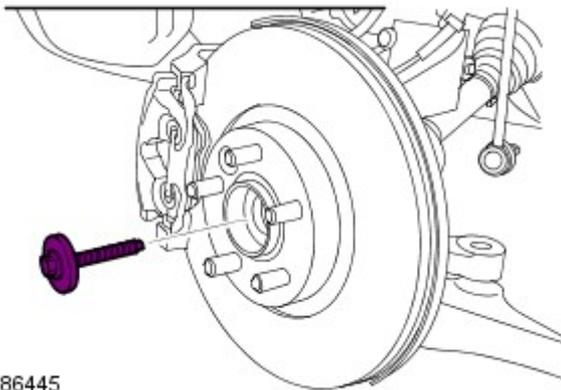
*Torque:* 60 Nm



6. **NOTE:** This step requires the aid of another technician.

Compress the spring and damper assembly.

*Special Tool(s):* [204-619](#)

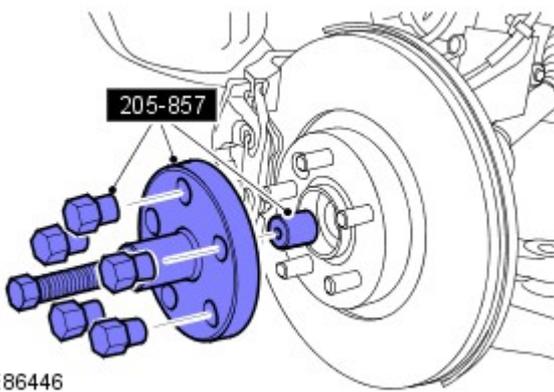


7.  **WARNING:** Make sure that a new bolt is installed.

*Torque:*

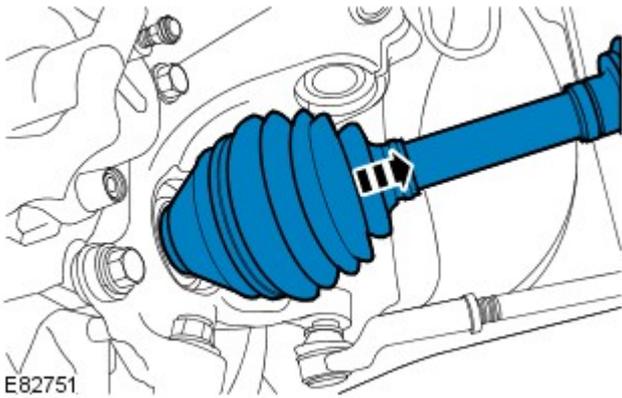
Stage 1: 45 Nm

Stage 2: 60°

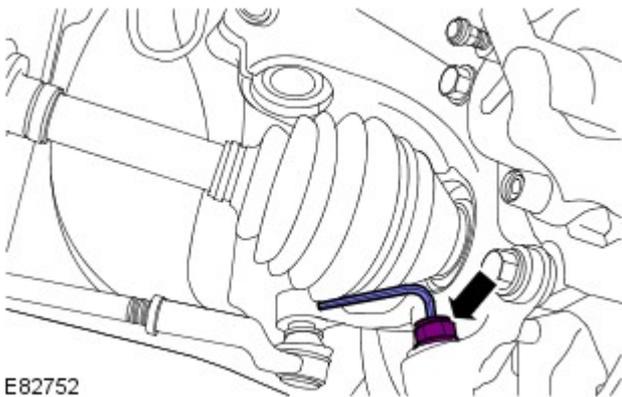


8. Partially release the halfshaft from the wheel knuckle.

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

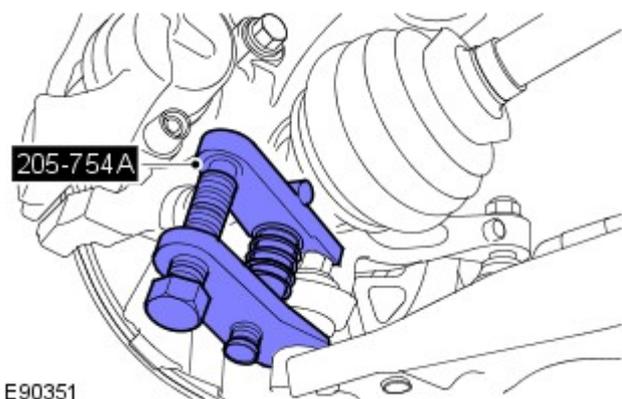


9.  **CAUTION:** Do not allow halfshafts to hang unsupported at one end or joint damage will occur.
- Partially release the halfshaft from the wheel knuckle.

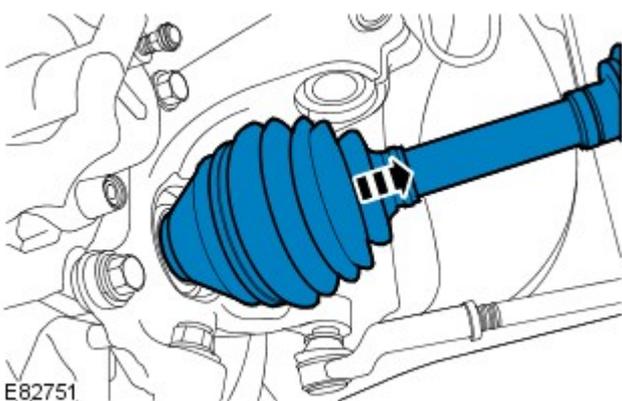


10.  **WARNING:** Make sure that a new lower arm ball joint nut is installed.
-  **CAUTION:** Make sure that the ball joint ball does not rotate.

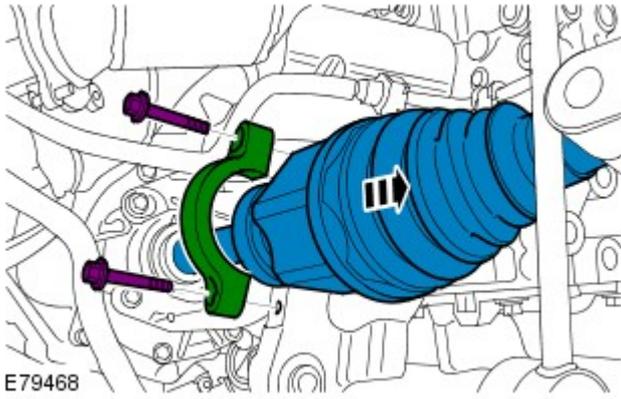
*Torque:* 100 Nm



11. *Special Tool(s):* [205-754A](#)



12.  **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.
- Remove the halfshaft from the wheel knuckle.



13.  **WARNING:** Manual transmission: Fluid loss is unavoidable, use absorbent cloth or a container to collect the fluid.

**NOTE:** Petrol illustration shown, diesel uses studs and nuts. The torque figure is the same for all models.

*Torque:* 25 Nm

## Installation

1. **CAUTIONS:**



Install the halfshaft nut finger tight.



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

To install, reverse the removal procedure.

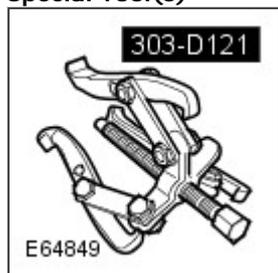
2. Manual transmission vehicles only: Check and top-up the transmission fluid level.

Refer to: [Transmission Fluid Level Check](#) (308-03 Manual Transmission/Transaxle, General Procedures).

# Front 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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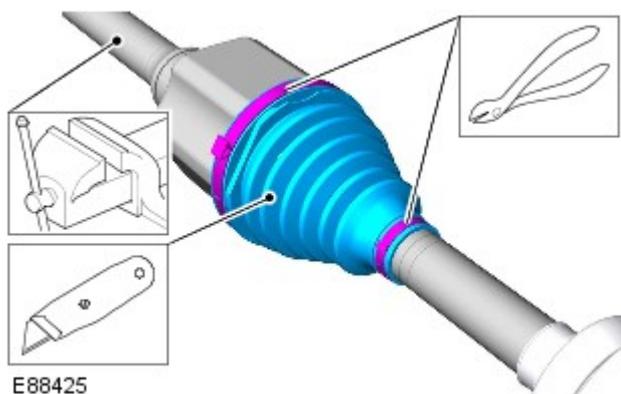
## Removal

NOTE: RH inner constant velocity joint boot shown, LH is similar.

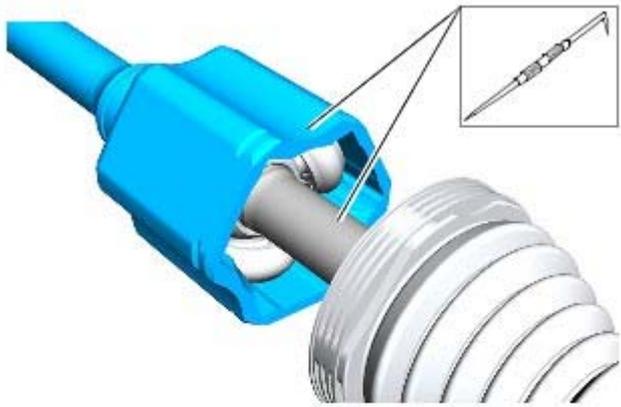
1. Remove the halfshaft.

Refer to: [Front Halfshaft RH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

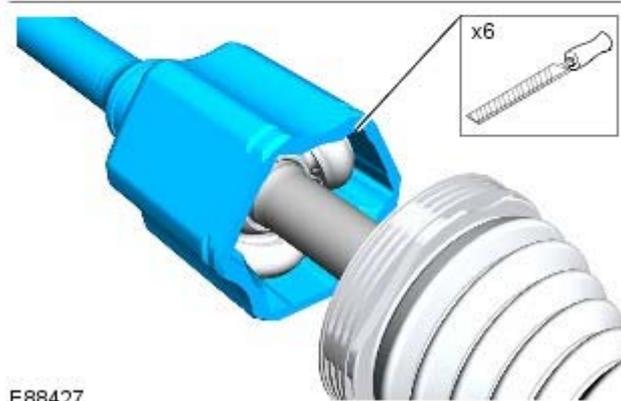
Refer to: [Front Halfshaft LH](#) (205-04 Front Drive Halfshafts, Removal and Installation).



2. NOTE: Discard the retaining clips.



3.  CAUTION: Make sure that filings and swarf do not enter the component.



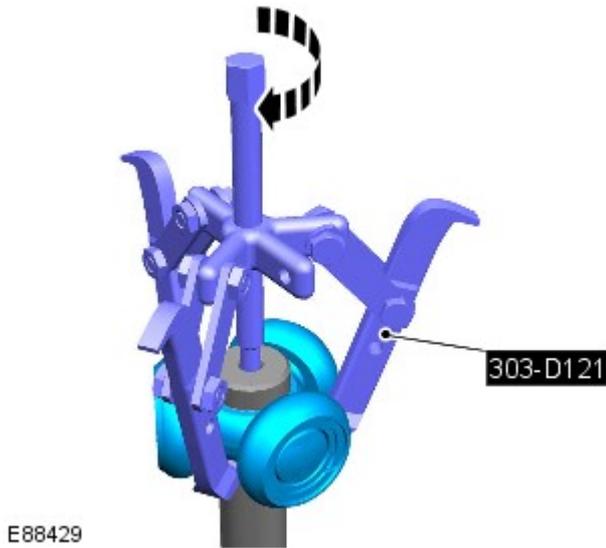
E88427

4. NOTE: Discard the retaining clip.



E88428

5. *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 CV boot 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. **NOTE:** Install new retaining clips.

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

7. Install the halfshaft.

Refer to: [Front Halfshaft RH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

Refer to: [Front Halfshaft LH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

## Front 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 boot have to be removed to allow the outer joint boot to be replaced. The inner and outer boots are supplied together as a kit.

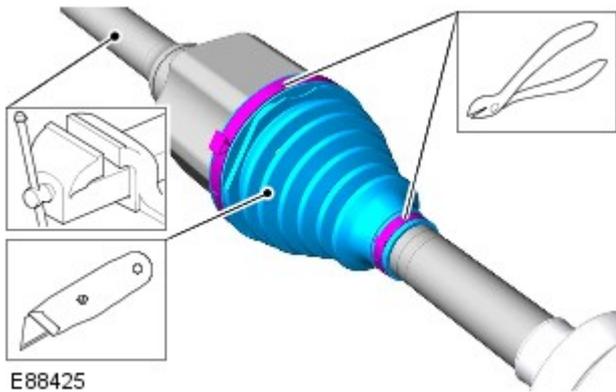
1.  **WARNING:** Make sure to support the vehicle with axle stands.  
Raise and support the vehicle.

2. Remove the halfshaft.

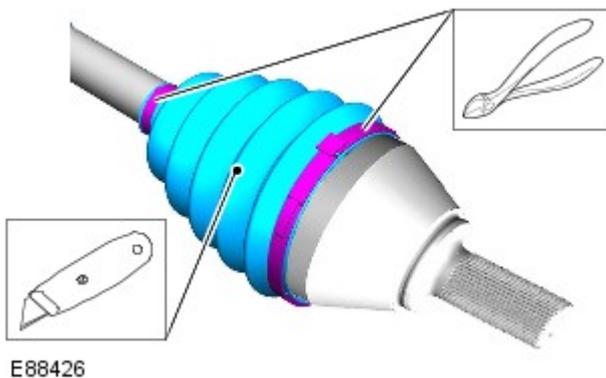
Refer to: [Front Halfshaft RH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

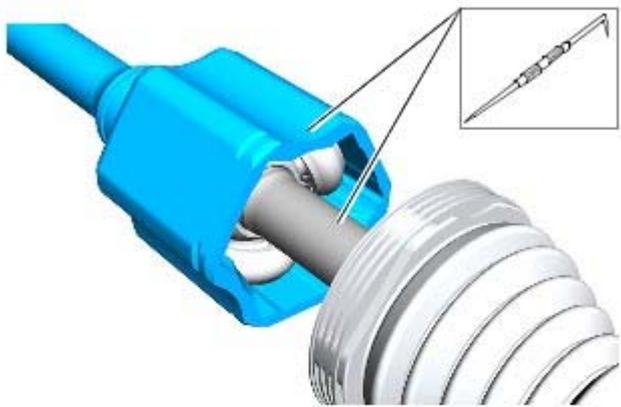
Refer to: [Front Halfshaft LH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

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

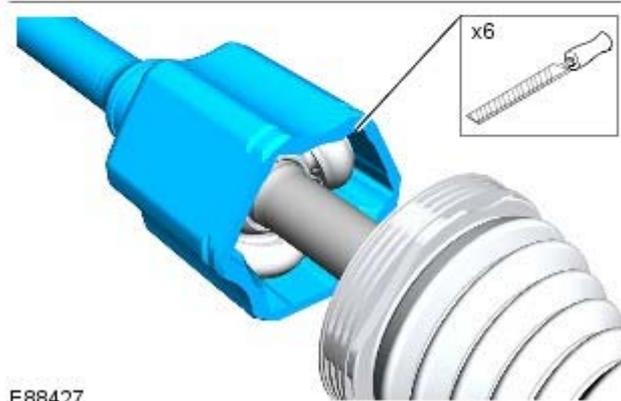


4. **NOTE:** Discard the retaining clips.





5.  CAUTION: Make sure that filings and swarf do not enter the component.



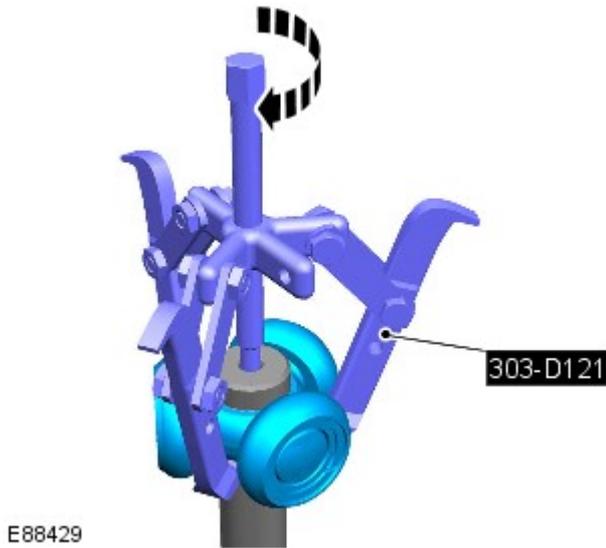
E88427

6. NOTE: Discard the retaining clip.



E88428

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 RH halfshaft.

Refer to: [Front Halfshaft RH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

Refer to: [Front Halfshaft LH](#) (205-04 Front Drive Halfshafts, Removal and Installation).

