

Rear Drive Halfshafts -

Recommended Lubricant

Item	Specification
Outboard joint	Use grease supplied with replacement boot kit (Optimol MS139G)
Inboard joint	Use grease supplied with replacement boot kit (Thermax MS141G)

General Specification

Item	Specification
Type	Fully floating, solid shafts incorporating plunging constant velocity joint at inboard end and fixed constant velocity joint at outboard end of shaft

Torque Specifications

Description	Nm	lb-ft
* Lower arm to wheel knuckle nut	275	203
Toe link bolt	175	129
*+ Halfshaft nut	350	258
Road wheel nuts	140	103

*** New nut must be fitted**

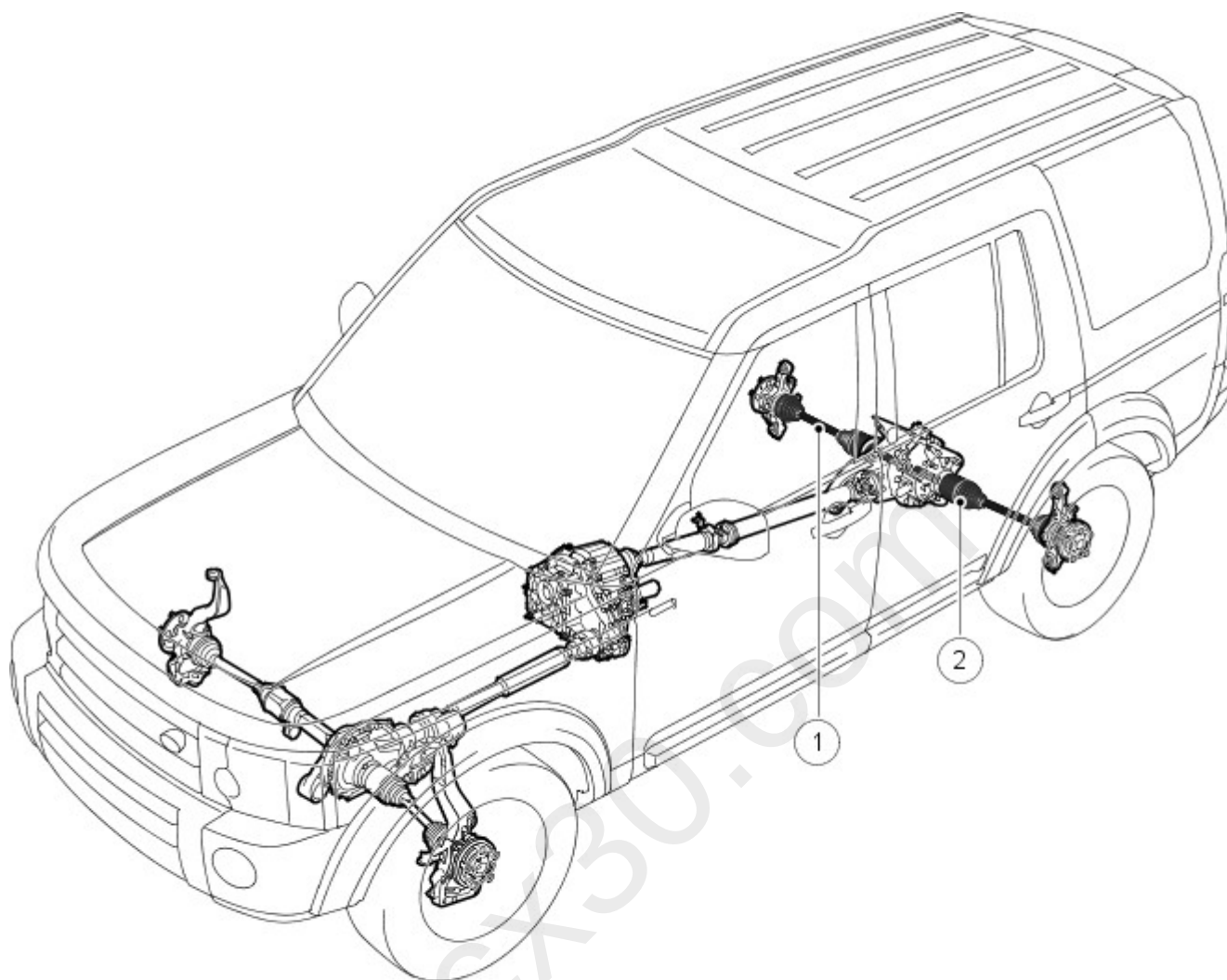
+ Stake nut on completion

mcx30.com

Rear Drive Halfshafts - Rear Drive Halfshafts

Description and Operation

Rear Drive Halfshaft Component Locations



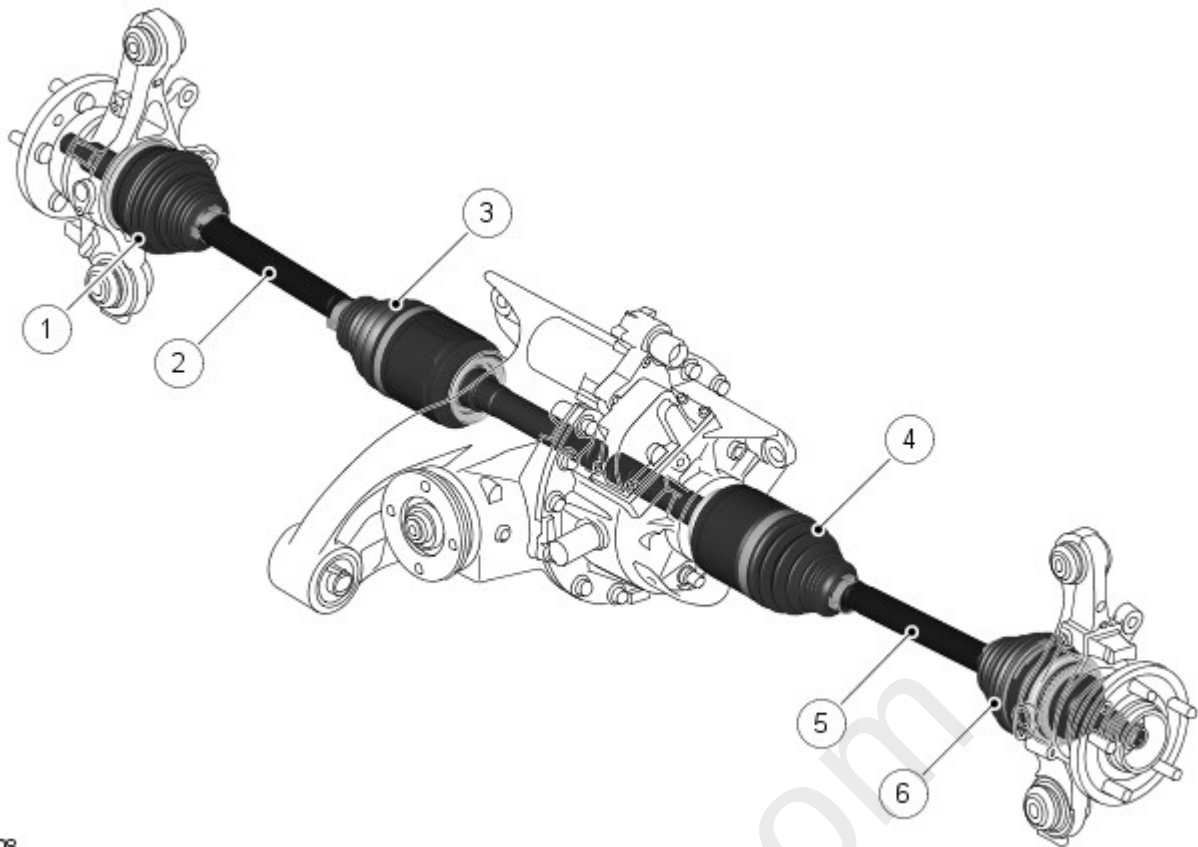
E46407

Item	Part Number	Description
1	-	RH rear drive halfshaft
2	-	LH rear drive halfshaft

GENERAL

The rear drive halfshafts are identical in their construction with a Constant Velocity (CV) joint at each end to allow for suspension movement.

REAR DRIVE SHAFT ASSEMBLY



E46408

Item	Part Number	Description
1	-	RH outer CV joint
2	-	RH rear drive halfshaft
3	-	RH inner CV joint
4	-	LH inner CV joint
5	-	LH rear drive halfshaft
6	-	LH outer CV joint

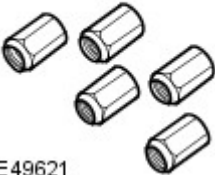
Each outer CV joint has a target wheel on the outer diameter. This target is used by the ABS wheel speed sensor for vehicle and wheel speed calculations.

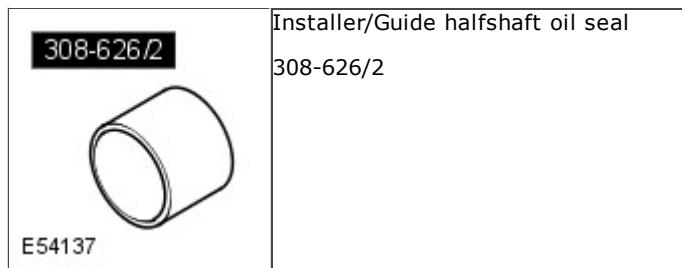
Each rear drive halfshaft comprises two CV joints (inner and outer), boots and a solid barshaft, which is retained in the rear differential by a circlip.

The CV joints used on the rear drive halfshafts share the same design and operating principles as the front drive halfshafts CV joints (see 'Halfshaft Joint' section for more information on CV joints). The rear drive halfshaft inner joint hubs are retained by peening over the lip of the joint body.

Rear Drive Halfshafts - Rear Halfshaft

Removal and Installation

Special Tool(s)	
 204-506/1 E49618	Halfshaft remover/replacer 204-506/1(LRT-60-030/1)
 204-506/5 E49621	Retainers - halfshaft remover/replacer 204-506/5(LRT-60-030/5)
 204-506/3 E49620	Halfshaft remover/replacer 204-506/3(LRT-60-030/3)
 204-506-01 E49622	Halfshaft installer adapter 204-506-01(LRT-60-030/4)
 308-005 E54134	Axle oil seal remover 308-005(LRT-37-004/2)
 100-012 E54135	Impulse extractor 100-012(LRT-99-004)
 308-626/1 E54136	Installer halfshaft oil seal 308-626/1



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.

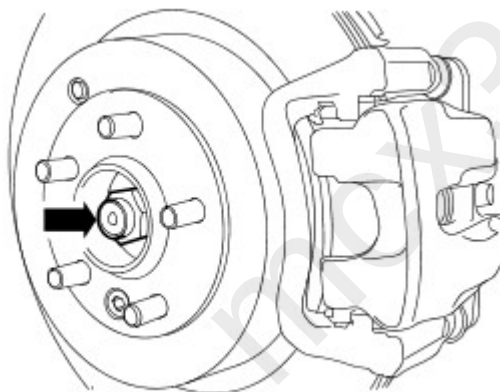


Do not undo or remove the large protruding hexagon on the differential casing.

-  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

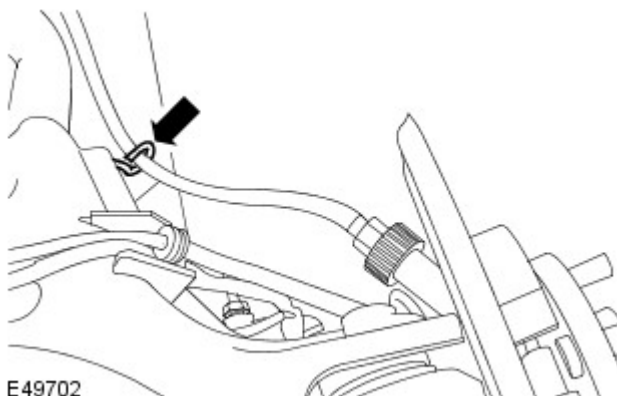
Raise and support the vehicle.

- Drain the differential lubricant.
For additional information, refer to: [Differential Draining and Filling](#) (205-02 Rear Drive Axle/Differential, General Procedures).
- Remove the wheel and tire.
- Loosen the halfshaft retaining nut.
 - Discard the nut.



E46796

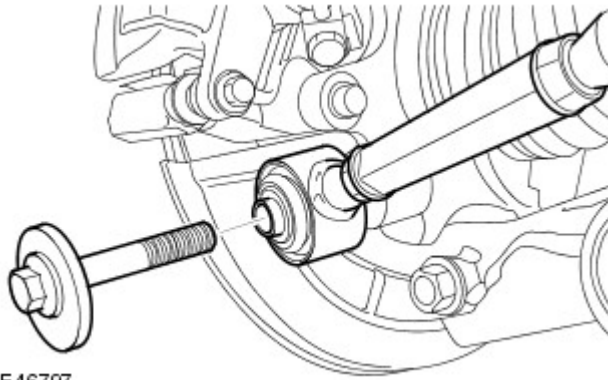
- Remove the stabilizer bar link.
For additional information, refer to: [Rear Stabilizer Bar Link](#) (204-02 Rear Suspension, Removal and Installation).
- Release the parking brake cable from the lower arm.



E49702

7. Disconnect the toe link.

- Remove the bolt.

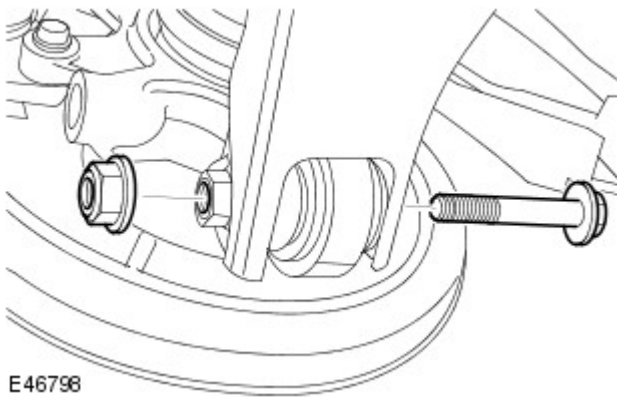


8. Remove and discard the halfshaft retaining nut.

9.  **CAUTION:** Make sure the ball joint seal is not damaged. A damaged seal will lead to the premature failure of the joint.

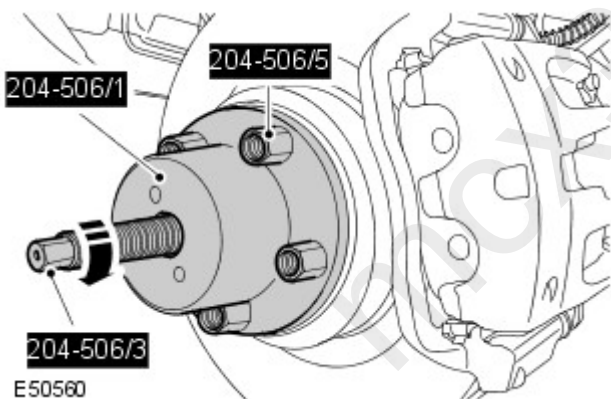
Release the knuckle from the lower arm.

- Remove the bolt.



10.  **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.

Using the special tools, release the halfshaft from the wheel hub.

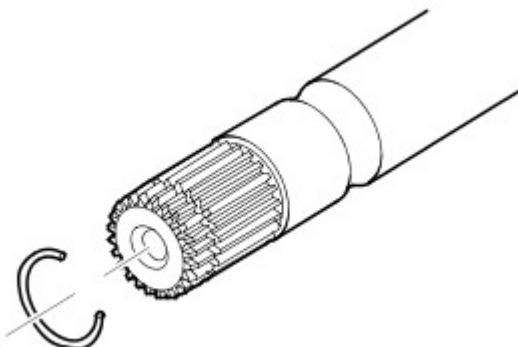


11. Position a container to collect the oil spillage.

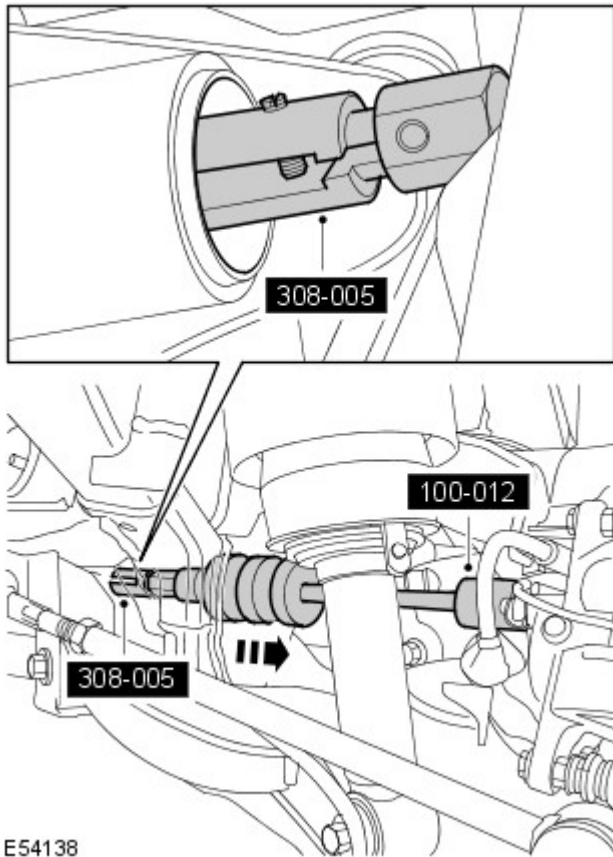
12. Release the halfshaft from the differential housing.

13. With assistance, remove the halfshaft.

- Remove and discard the snap ring.



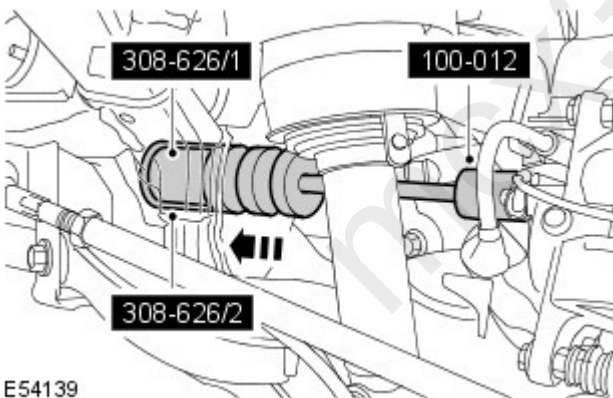
14. Using the special tools, remove and discard the halfshaft oil seal.



E54138

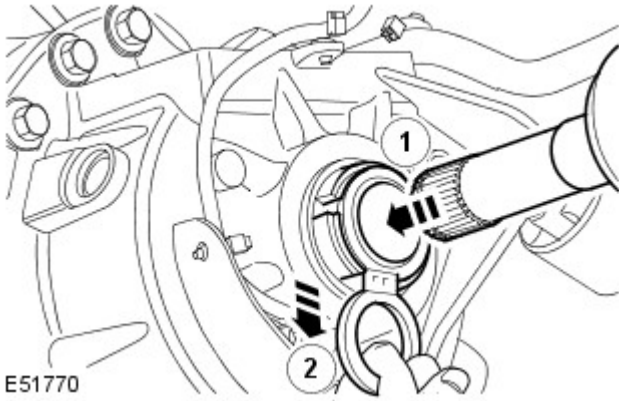
Installation

1. Clean the components.
2. Using the special tools, install a new halfshaft oil seal.
 - The halfshaft oil seal protector must be left in place, until the halfshaft is fully installed.



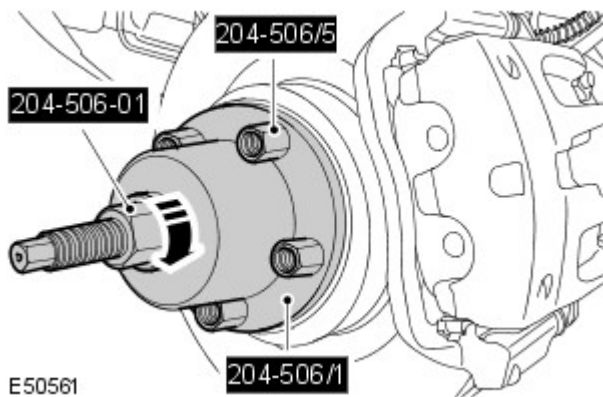
E54139

3. With assistance, install the halfshaft.
 - Install the snap ring.
 - Open the halfshaft oil seal protector.
 - Make sure the snap ring is fully engaged and retains the halfshaft.



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

Remove and discard the halfshaft oil seal protector.



5. Using the special tools, install the halfshaft in the wheel hub.

6. ⚠ CAUTION: Make sure the ball joint seal is not damaged. A damaged seal will lead to the premature failure of the joint.

Connect the lower arm to the wheel knuckle.

- Tighten to 275 Nm (203 lb.ft).
- Tighten the new nut to 275 Nm (203 lb.ft).

7. ⚠ CAUTION: Install the halfshaft nut finger tight.

Install a new halfshaft retaining nut and lightly tighten.

8. Connect the toe link.

- Tighten the bolt to 175 Nm (129 lb.ft).

9. Secure the parking brake cable to the lower arm.

10. Install the stabilizer bar link.

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

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

Tighten the new halfshaft retaining nut to 350 Nm (258 lb.ft).

- Stake the nut to the halfshaft.

12. Install the wheel and tire.

- Tighten the wheel nuts to 140 Nm (103 lb.ft).

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.

For additional information, refer to: [Differential Draining and](#)

[Filling](#) (205-02 Rear Drive Axle/Differential, General Procedures).

mcx30.com

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

Removal and Installation

Removal

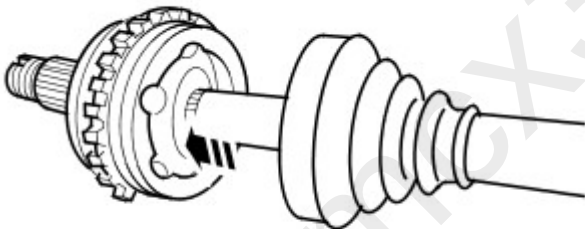
1.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

2. Remove the wheel and tire.
3. Remove the halfshaft.
For additional information, refer to: [Rear Halfshaft](#) (205-05 Rear Drive Halfshafts, Removal and Installation).
4. Clamp the halfshaft in a vise.
5. Remove and discard the CV joint boot retaining clamps.



6. Slide the CV joint boot along the halfshaft to gain access to the joint.
7. Using a drift against the inner part of the CV joint, remove the CV joint from the halfshaft.
 - Remove and discard the snap ring.



8. Remove the outer CV joint boot.

Installation

1. Clean the components.
2. Install the CV joint boot.
3. Install the outer CV joint.
 - Install the snap ring.
 - Position the CV joint on the halfshaft, press the snap ring into its groove and push the CV joint fully on to the halfshaft.
 - Pull on the CV joint to ensure the snap ring has fully engaged.
4. Pack the CV joint with the grease supplied.
5. Install the CV joint boot to the CV joint.
 - Secure with the new clamps.

6. Install the halfshaft.

For additional information, refer to: [Rear Halfshaft](#) (205-05 Rear Drive Halfshafts, Removal and Installation).

7. Install the wheel and tire.

- Tighten the wheel nuts to 140 Nm (103 lb.ft).

mcx30.com

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

Removal and Installation

Removal

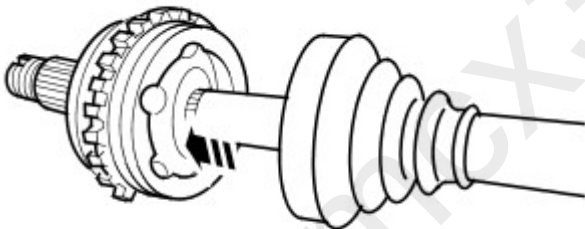
1.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

2. Remove the wheel and tire.
3. Remove the halfshaft.
For additional information, refer to: [Rear Halfshaft](#) (205-05 Rear Drive Halfshafts, Removal and Installation).
4. Clamp the halfshaft in a vise.
5. Remove and discard the CV joint boot retaining clamps.



6. Slide the CV joint boot along the halfshaft to gain access to the joint.
7. Using a drift against the inner part of the CV joint, remove the CV joint from the halfshaft.
 - Remove and discard the snap ring.



8. Remove the inner CV joint boot.

Installation

1. Clean the components.
2. Install the inner CV joint boot.
3. Install the inner joint.
 - Install a new snap ring.
 - Position the CV joint on the halfshaft, press the snap ring into its groove and push the CV joint fully on to the halfshaft.
 - Pull on the CV joint to ensure the snap ring has fully engaged.
4. Pack the joint with the grease supplied.
5. Install the boot to the joint.
 - Secure with the new clamps.

6. Install the halfshaft.

For additional information, refer to: [Rear Halfshaft](#) (205-05 Rear Drive Halfshafts, Removal and Installation).

7. Install the wheel and tire.

- Tighten the wheel nuts to 140 Nm (103 lb.ft).

mcx30.com

Rear Drive Halfshafts - Halfshaft Bearing

Removal and Installation

Special Tool(s)	
 E54134	Axle oil seal remover 308-005 (LRT-37-004/2)
 E54135	Impulse extractor 100-012 (LRT-99-004)
 E54141	Halfshaft bearing installer 205-819

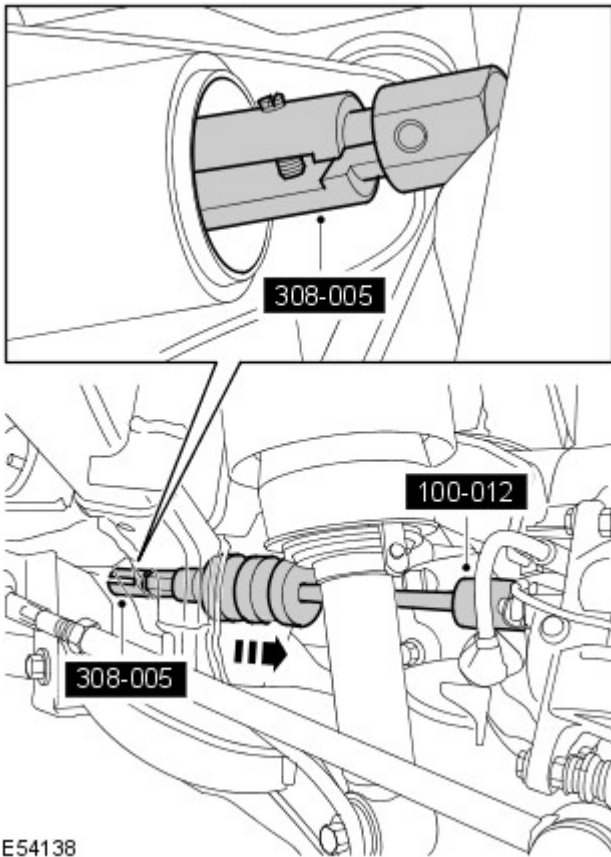
Removal

1.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

2. Remove the wheel and tire.
3. Remove and discard the halfshaft oil seal.
For additional information, refer to: [Rear Halfshaft](#) (205-05 Rear Drive Halfshafts, Removal and Installation).

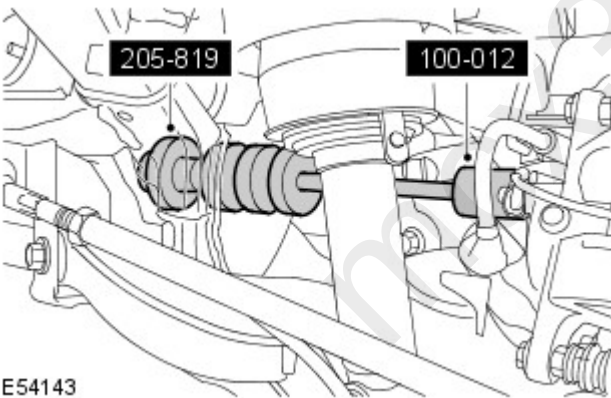
4. Using the special tool, remove and discard the halfshaft bearing.



E54138

Installation

1. Using the special tools, install a new halfshaft bearing.



E54143

2. Install a new halfshaft oil seal.
For additional information, refer to: [Rear Halfshaft](#) (205-05 Rear Drive Halfshafts, Removal and Installation).
3. Install the wheel and tire.
 - Tighten the wheel nuts to 140 Nm (103 lb.ft).