

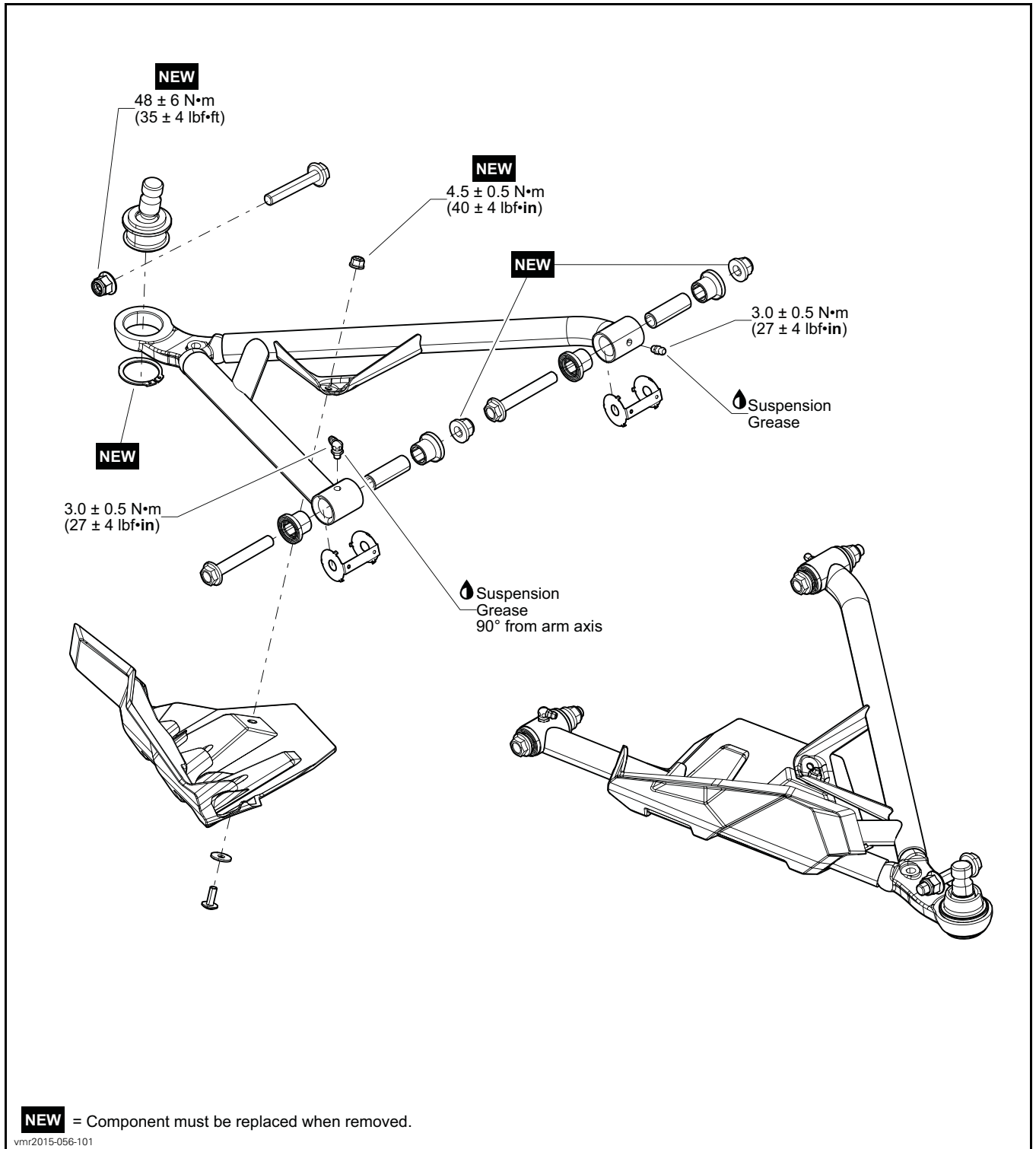
FRONT SUSPENSION

SERVICE TOOLS

Description	Part Number	Page
BALL JOINT REMOVAL TOOL.....	529 036 310	7



LOWER SUSPENSION ARMS AND COMPONENTS



GENERAL

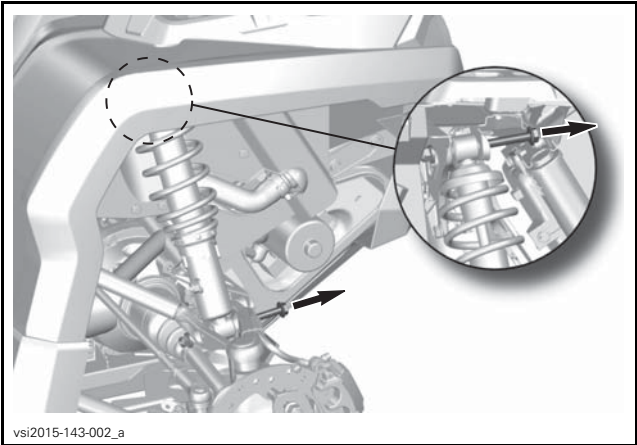
The procedure explained below is the same for the RH and LH sides unless otherwise noted.

PROCEDURES

SHOCK ABSORBER

Shock Absorber Removal

- 1. Safely lift and support the vehicle off the ground.
- 2. Remove screws and nuts retaining shock absorber.

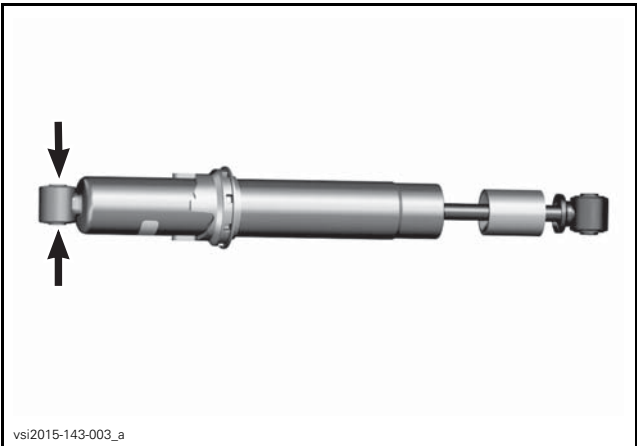


- 3. Remove shock absorber.

Shock Absorber Inspection

Remove spring from shock absorber. Refer to *SPRINGS* in this subsection.

Secure the end of shock body in a vise with its rod upward.



TYPICAL

NOTICE Do not clamp directly on shock body.

Extend and compress the piston several times over its entire stroke. Check that it moves smoothly and with uniform resistance with its rod upward.

Check the following conditions that will denote a defective shock:

- A skip or a hang back when reversing stroke at mid travel.
- Seizing or binding condition except at extreme end of either stroke.
- Oil leakage.
- A gurgling noise, after completing one full compression and extension stroke.

Replace if any faults are present.

Shock Absorber Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Install shock absorber screws from front towards rear of vehicle.

Tighten shock absorber nuts to specification.

TIGHTENING TORQUE	
Upper shock absorber nut	61 N•m ± 9 N•m (45 lbf•ft ± 7 lbf•ft)
Lower shock absorber nut	73 N•m ± 7 N•m (54 lbf•ft ± 5 lbf•ft)

SHOCK ABSORBER BUSHINGS

Refer to *SHOCK ABSORBER BUSHINGS* in *REAR SUSPENSION* subsection for complete procedures.

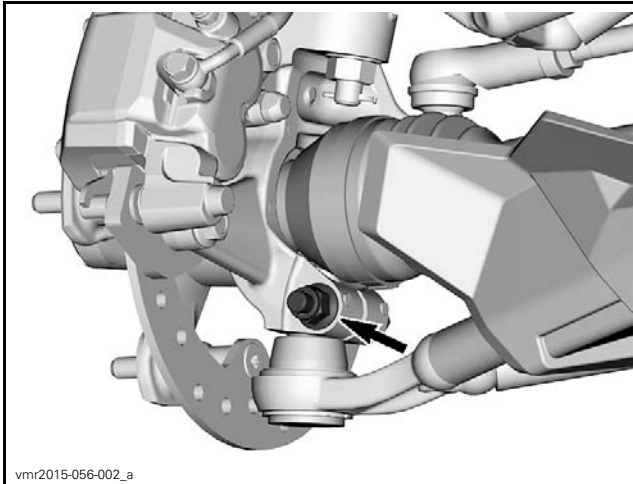
SPRINGS

Refer to *SPRINGS* in *REAR SUSPENSION* subsection for complete procedures.

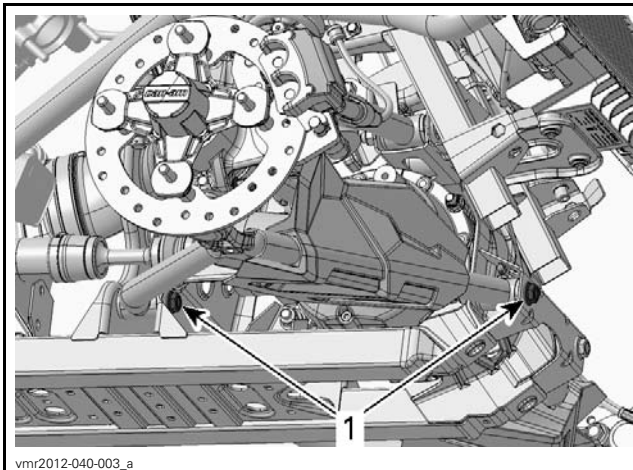
LOWER SUSPENSION ARM

Lower Suspension Arm Removal

- 1. Safely lift and support the vehicle off the ground.
- 2. Remove wheel, refer to *WHEELS AND TIRES* subsection.
- 3. Remove screw and nut securing lower ball joint to knuckle.

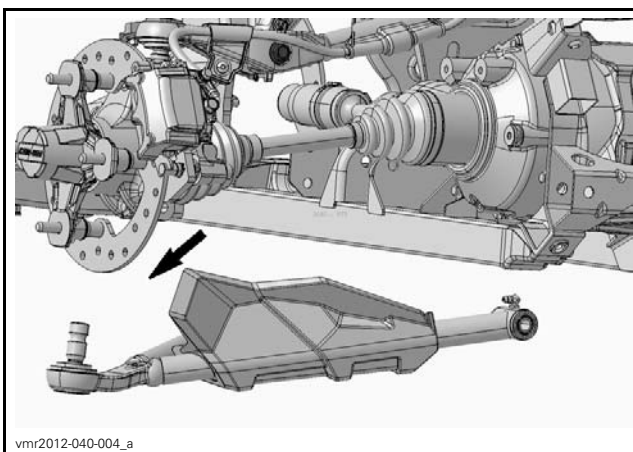


4. Remove screws and nuts securing suspension arm to frame.



1. Suspension arm screws

5. Remove suspension arm.



MOVE OUTWARDS

Lower Suspension Arm Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Lubricate suspension arm. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

Tighten ball joint nut to specification.

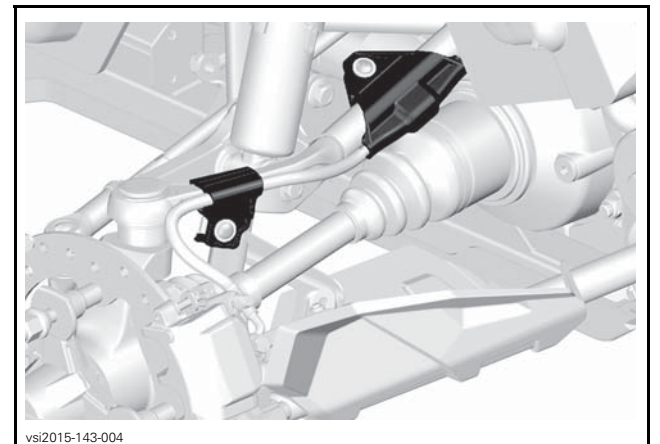
TIGHTENING TORQUE	
Nut securing ball joint to knuckle	48 N•m ± 6 N•m (35 lbf•ft ± 4 lbf•ft)

Perform steering alignment procedure. Refer to *STEERING ALIGNMENT* subsection.

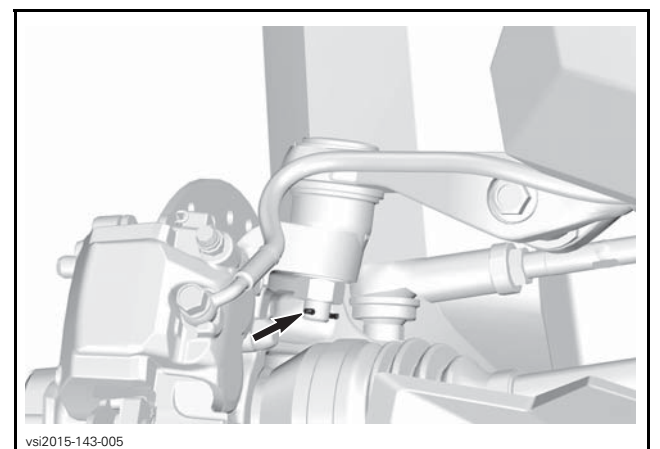
UPPER SUSPENSION ARM

Upper Suspension Arm Removal

1. Safely lift and support the vehicle off the ground.
2. Remove wheel, refer to *WHEELS AND TIRES* subsection.
3. Remove fasteners retaining brake hose to vehicle.

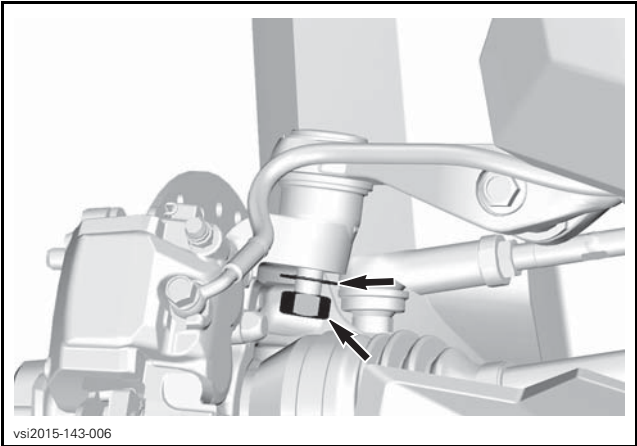


4. Remove and discard cotter pin retaining ball joint.



5. Remove ball joint nut and washer.

Subsection XX (FRONT SUSPENSION)



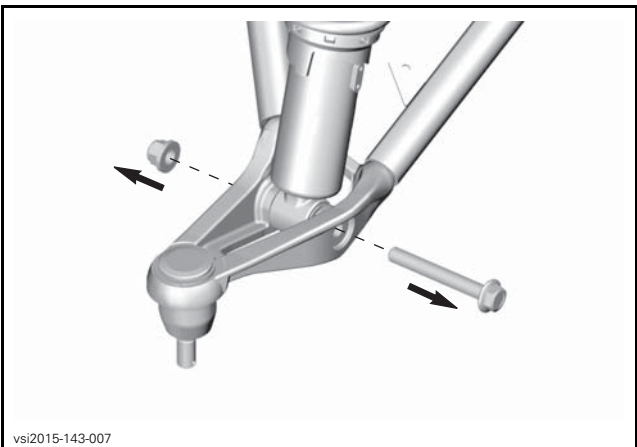
6. Carefully move brake hose aside.
7. Using a plastic hammer, carefully hit on the knuckle side to separate ball joint from knuckle.
- NOTE:** A ball joint remover can be used if the ball joint is jammed into knuckle.

NOTICE Never hit on suspension arm to avoid damaging it permanently.

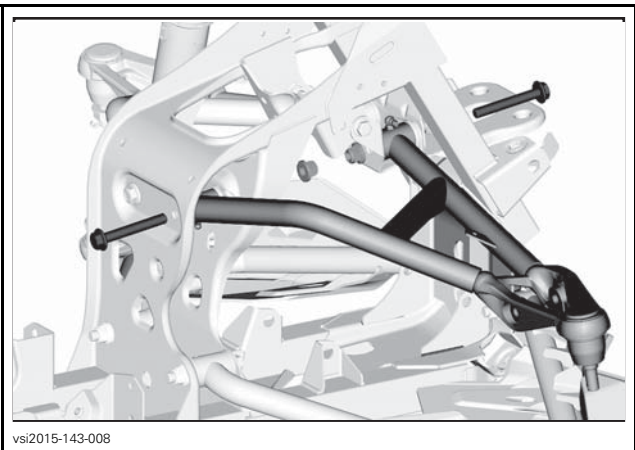


TYPICAL - CAREFULLY HIT ON KNUCKLE SIDE

8. Remove screw and nut securing suspension arm to shock absorber.



9. Remove screws and nuts securing suspension arm to frame.



10. Remove suspension arm.

Upper Suspension Arm Installation

The installation is the reverse of the removal procedure. However, pay attention to the following. Lubricate suspension arm. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection. Install a **NEW** cotter pin to secure ball joint nut. Both end of cotter pin must be folded. Tighten shock absorber nut to specification.

TIGHTENING TORQUE	
Lower shock absorber nut	73 N•m ± 7 N•m (54 lbf•ft ± 5 lbf•ft)

Tighten ball joint nut to specification.

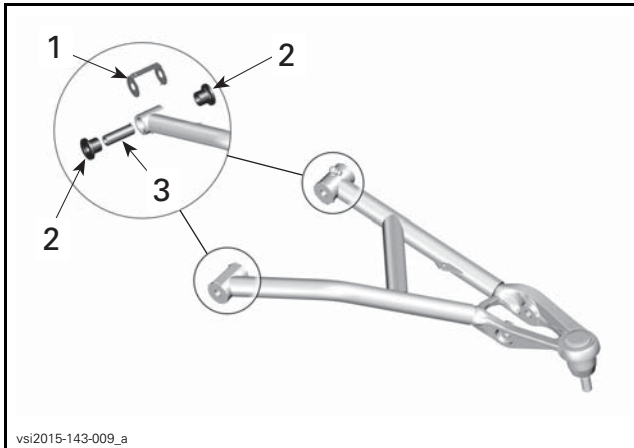
TIGHTENING TORQUE	
Ball joint nut	45 N•m ± 5 N•m (33 lbf•ft ± 4 lbf•ft)

Perform steering alignment procedure. Refer to *STEERING ALIGNMENT* subsection.

SUSPENSION ARM BUSHINGS

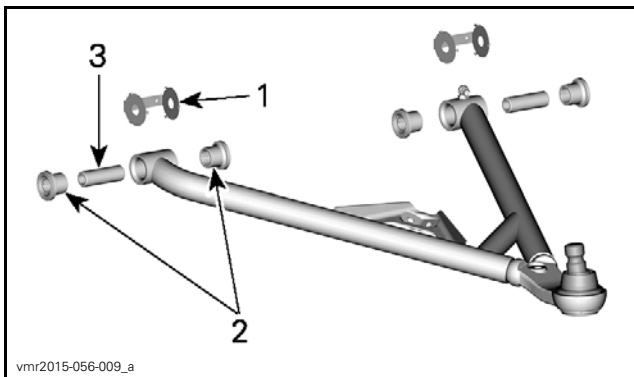
Suspension Arm Bushings Removal

1. Remove wear plates, bushings and sleeves from suspension arm.



UPPER SUSPENSION ARM

1. Wear plates
2. Bushings
3. Sleeves



LOWER SUSPENSION ARM

1. Wear plates
2. Bushings
3. Sleeves

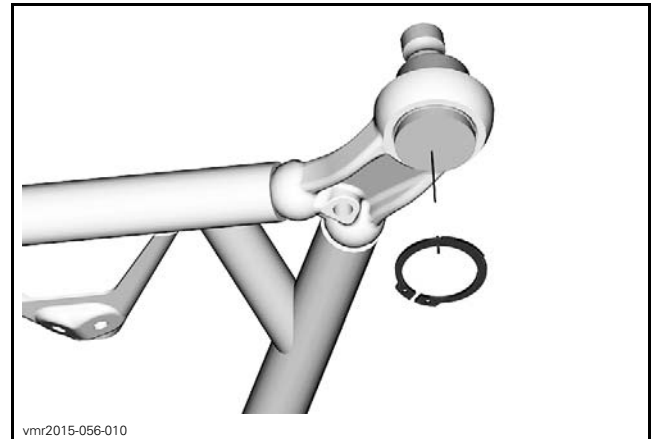
Suspension Arm Bushings Installation

The installation is the reverse of the removal procedure. However, pay attention to the following. Lubricate suspension arm. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

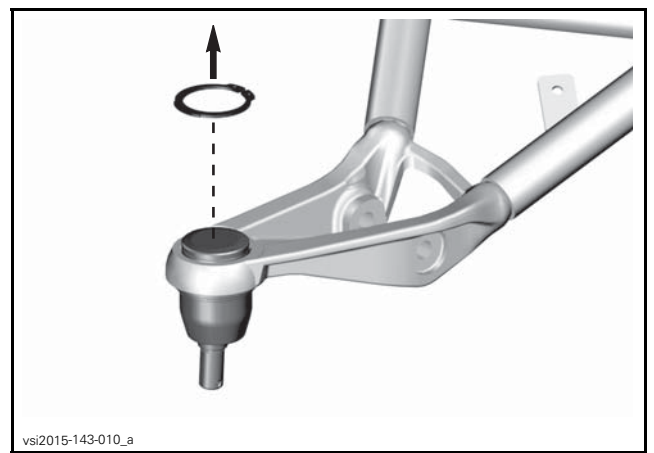
BALL JOINTS

Ball Joint Removal

1. Remove suspension arm from vehicle. Refer to *SUSPENSION ARM REMOVAL* in this subsection.
2. Remove circlip from ball joint.



LOWER BALL JOINT



UPPER BALL JOINT

3. Install suspension arm on a press.

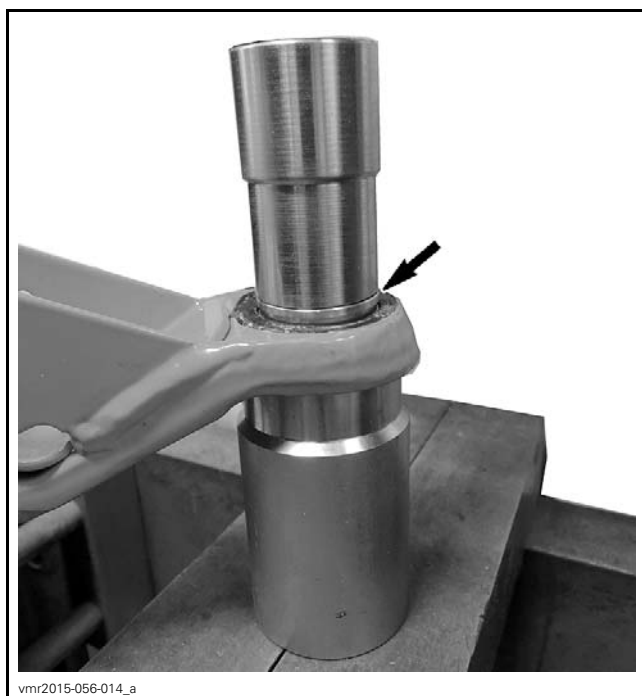
NOTICE Pressing on the center or on the lip of the ball joint will damage it.



DO NOT PRESS THERE

NOTE: The BALL JOINT REMOVAL TOOL (P/N 529 036 310) is design to apply force only on the outside edge of the ball joint.

Subsection XX (FRONT SUSPENSION)



CONTACT BETWEEN TOOL AND BALL JOINT ON THE OUTSIDE
EDGE ONLY

4. Remove ball joint from suspension arm.

NOTICE Make sure that suspension arm is properly supported on the press during ball joint removal.

Ball Joint Installation

The installation is the reverse of the removal procedure. However, pay attention to the following. Install a **NEW** circlip to secure ball joint.