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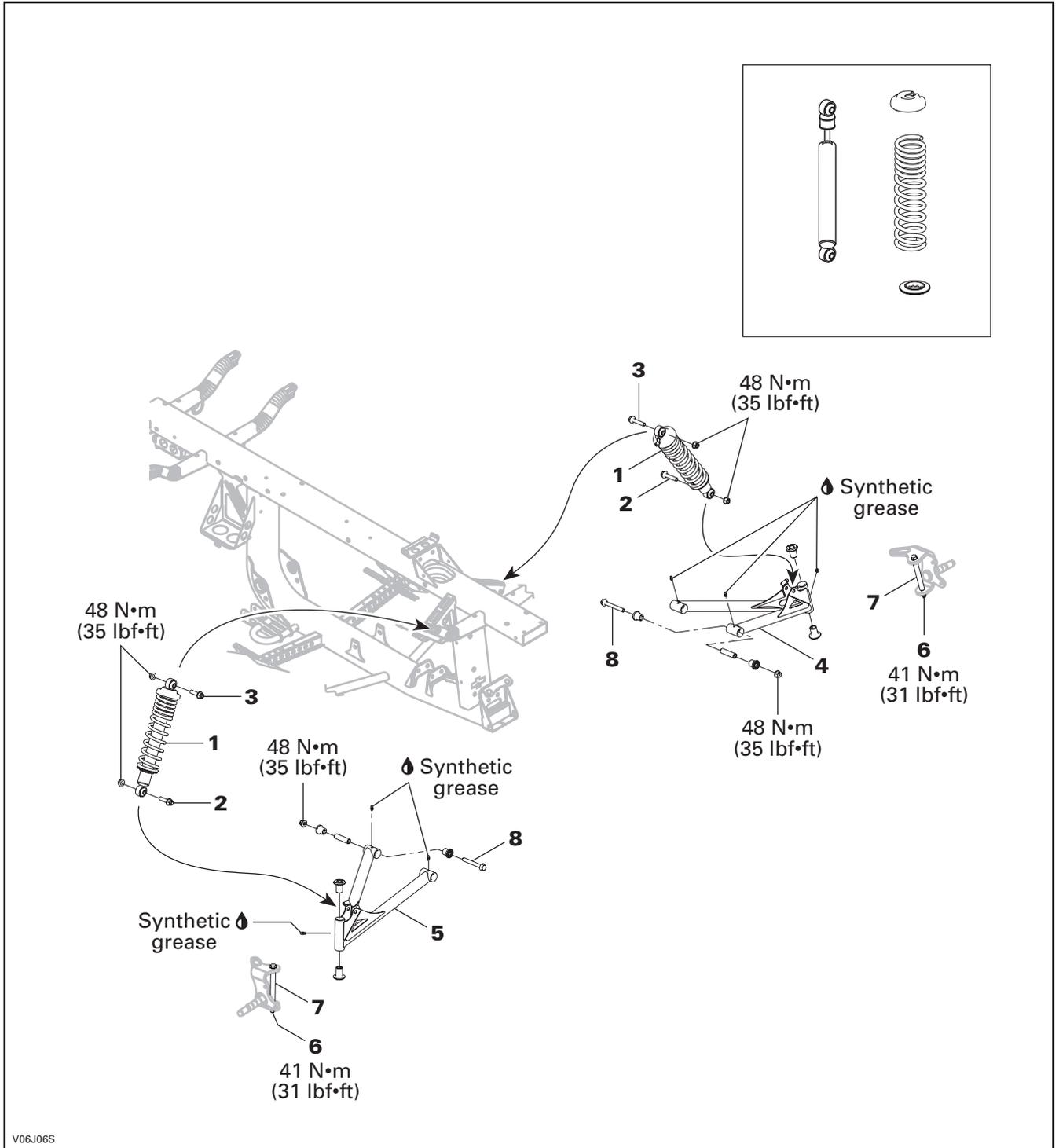
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# FRONT SUSPENSION



## Section 08 SUSPENSION

### Subsection 02 (FRONT SUSPENSION )

## GENERAL

At installation, use torque values and Loctite products from the exploded view. Clean threads before using Loctite products when installing screws.

### **⚠ WARNING**

Torque wrench tightening specifications must strictly be adhered to.

Locking devices (ex.: locking tabs, elastic stop nuts, self-locking fasteners, etc.) must be installed or replaced with new ones where specified. If the efficiency of a locking device is impaired, it must be renewed.

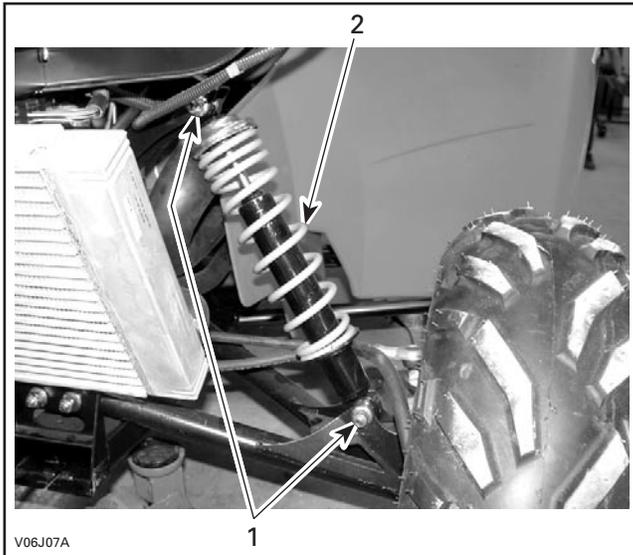
## FRONT SHOCK

### Removal

Lift front of vehicle until rear shock absorbers are fully extended then install a jack stand under the frame to support the vehicle off the ground.

**NOTE:** Do not remove front wheels to remove the front shocks.

Remove lower bolt **no. 3** then upper bolt **no. 2** of shock **no. 1**.

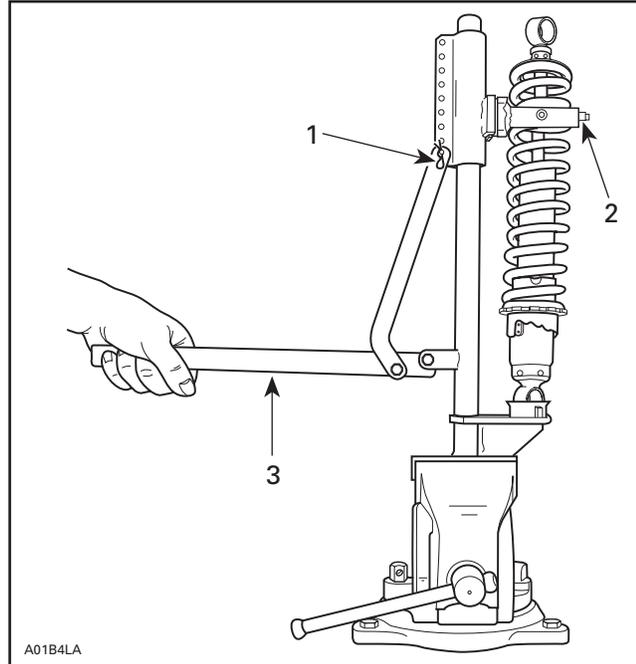


1. Remove bolts
2. Front shock assembly

### Disassembly

For shock spring disassembly use shock spring remover (P/N 529 035 504) in a vise. Mount shock in it and turn shock so that spring coils matched spring compressor.

Close and lock the bar. Adjust the handle horizontal position by changing the position of the clevis pin.



### TYPICAL

1. Clevis pin
2. Bar
3. Handle horizontal

Push down on the handle until it locks. Remove spring stopper then release handle.

### Inspection

Inspect the spring for damage. Replace if necessary.

Inspect shock for oil leakage. Extend and compress the piston several times over its entire stroke. Check that it moves smoothly and with uniform resistance with its rod upwards. Any of the following conditions will denote a defective shock:

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

Replace shock if any of these conditions are found.

## Installation

For assembly, reverse the disassembly and removal procedures.

## LH/RH A-ARM

### Inspection

Check LH and RH A-arm for distortion or damage. Replace as required.

Move A-arm from side to side. There should be no noticeable side play. Replace bushings if necessary.

Move A-arm up and down. There should be any noticeable play. Replace bushings if necessary.

### Removal

**NOTE:** Both LH **no. 4** and RH **no. 5** A-arms can be removed without removing the tie rods.

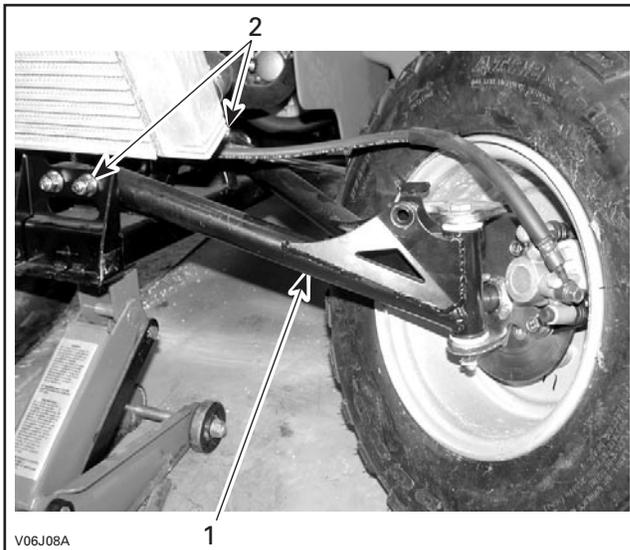
RH A-arm **no. 5** and LH A-arm **no. 4** has the same removal procedure.

Remove bolt **no. 2** retaining the shock absorber **no. 1** to A-arm.

Remove cotter pin on the axle screw and then, remove axle screw **no. 7** from knuckle **no. 6**. Discard the cotter pin.

**NOTE:** Do not remove knuckle **no. 6**, tie rod and brake from the wheel.

Remove bolts **no. 8** retaining A-arm to frame.



1. A-arm
2. Bolts

Remove A-arm from vehicle.

## Installation

Position front A-arm then install bolts and nuts.

Do not torque yet.

Install bolt and nut retaining shock absorber to front A-arm.

Attach front A-arm to knuckle **no. 6**. Install axle screw.

**NOTE:** Do not forget the O-rings between bushings (near knuckle) and A-arm.

Torque all bolts and nuts.

Install a new cotter pin. Both ends of cotter pin must be folded.

Lubricate front A-arm with synthetic grease (P/N 293 550 010).

## A-ARM BUSHINGS

### Removal

#### Frame Side

Remove:

- A-arm (see above)
- inner bushing
- both cushions.

#### Knuckle Side

Remove:

- knuckle from A-arm
- bushings
- O-rings.

## Section 08 SUSPENSION

### Subsection 02 (FRONT SUSPENSION)

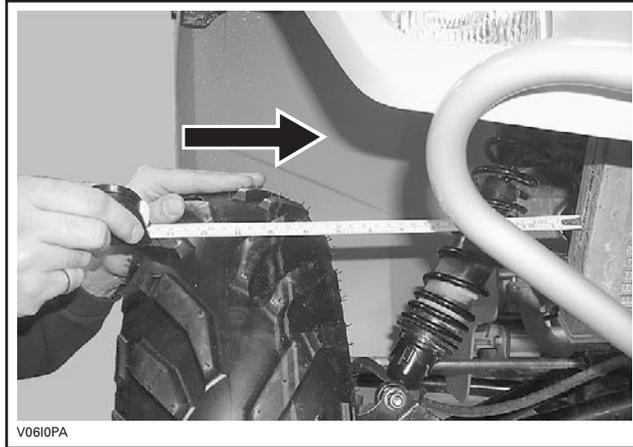
#### Inspection

Check bushings for wear or other damages. To check bushing wear, use the following procedure:

- Lift front of vehicle until front wheels are out of ground.

**NOTE:** Move the tire and check if the knuckle moves with the wheel (at the same time). If not, replace the bearing wheel before checking the bushing wear. If so, continue the procedure.

- Place the handlebar straight.
- Using a tape, measure the distance between the middle of the tire and the radiator side. Note this measure.



*PUSH TOWARD VEHICLE*

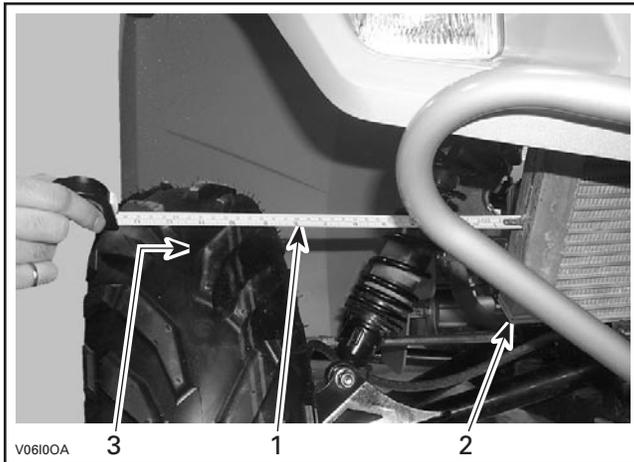
- The difference between both measurements must be lower than  $8 \text{ mm} \pm 1 \text{ mm}$  ( $.315 \text{ in} \pm .039 \text{ in}$ ).
- If the difference is out of specification, replace the both bushings, O-rings and the pivot bushing.

Check if O-rings are brittle, hard or otherwise damaged.

Replace all defectives parts.

#### Installation

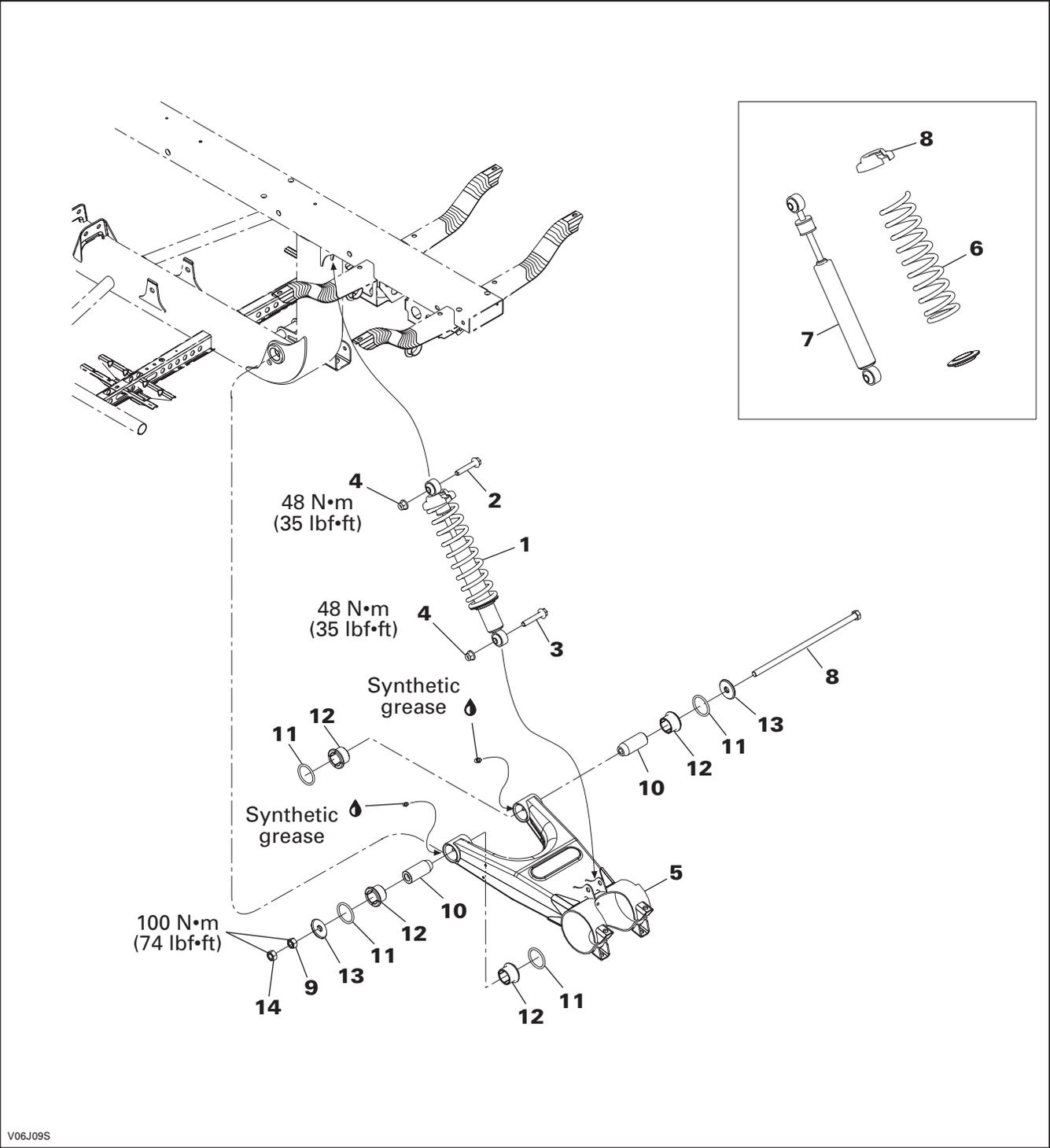
The installation is the reverse of the removal procedure. Pay attention to the following details. Apply synthetic grease (P/N 293 550 010) on inner bushing before installation. Lubricate front A-arms with synthetic grease (P/N 293 550 010).



1. Tape
2. Radiator
3. Middle of tire

- Push on the top side of tire until all play is eliminated (without moving handlebar).
- Measure the distance between the middle of tire and radiator side.

# REAR SUSPENSION



## Section 08 SUSPENSION

### Subsection 03 (REAR SUSPENSION)

## GENERAL

At installation, use torque values and Loctite products from the exploded view. Clean threads before using Loctite products when installing screws.

### **⚠ WARNING**

Torque wrench tightening specifications must strictly be adhered to.

Locking devices (ex.: locking tabs, elastic stop nuts, self-locking fasteners, etc.) must be installed or replaced with new ones where specified. If the efficiency of a locking device is impaired, it must be renewed.

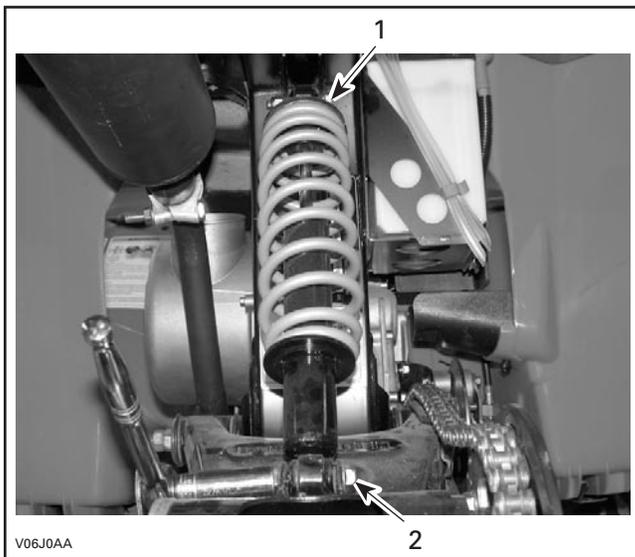
## REAR SHOCK

### Removal

Lift rear of vehicle until rear shock absorber **no. 1** is fully extended.

Install jack stands or blocks under the frame to support the vehicle.

Remove upper **no. 2** and lower **no. 3** bolts and nuts **no. 4** retaining shock absorber.



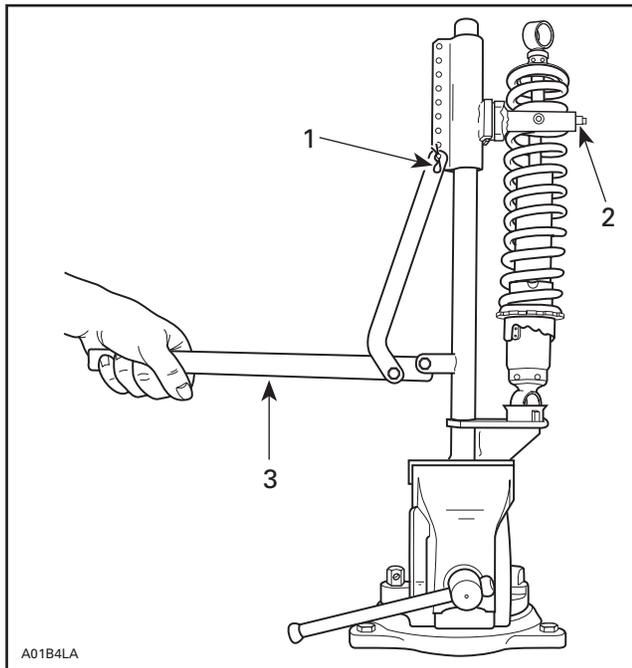
1. Upper bolt
2. Lower bolt

### Disassembly

Use shock spring remover (P/N 529 035 504) and put it in a vise. Mount shock in it and turn shock so that spring coils **no. 6** match spring compressor.

Close and lock bar. Adjust handle horizontal by changing position of clevis pin.

Push down on handle until it locks. Remove spring stopper and cap then release handle.

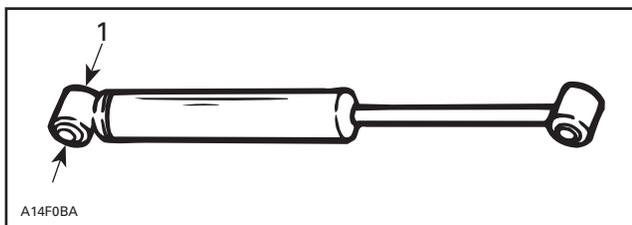


#### TYPICAL

1. Clevis pin
2. Bar
3. Handle horizontal

### Inspection

Secure the shock body end **no. 7** in a vise with its rod upward.



#### TYPICAL

1. Clamp here

**CAUTION:** Do not clamp directly on shock body.

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

Pay attention to 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.

## Section 08 SUSPENSION

### Subsection 03 (REAR SUSPENSION)

- Oil leakage.
  - A gurgling noise, after completing one full compression and extension stroke.
- Renew if any faults are present.

### Installation

Assembly and installation are essentially the reverse of disassembly and removal procedures.

## SWING ARM

### Lubrication

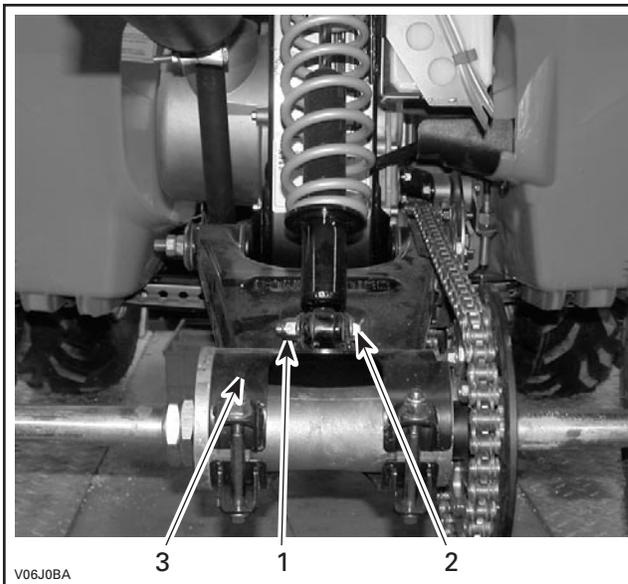
Lubricate swing arm. Use synthetic grease (P/N 293 550 010). There is two grease fittings on the swing arm.

### Removal

Lift rear of vehicle until rear shock absorber **no. 1** is fully extended.

Install a jack stands or a blocks under the frame to support the vehicle.

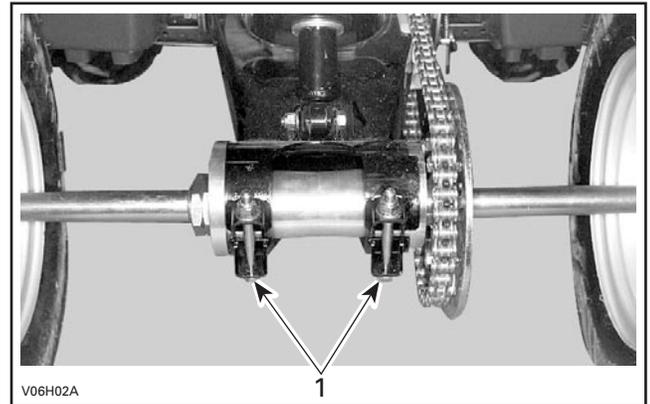
Remove lower nut **no. 4** and bolts **no. 3** retaining shock to swing arm.



1. Lower nut
2. Lower bolts
3. Swing arm

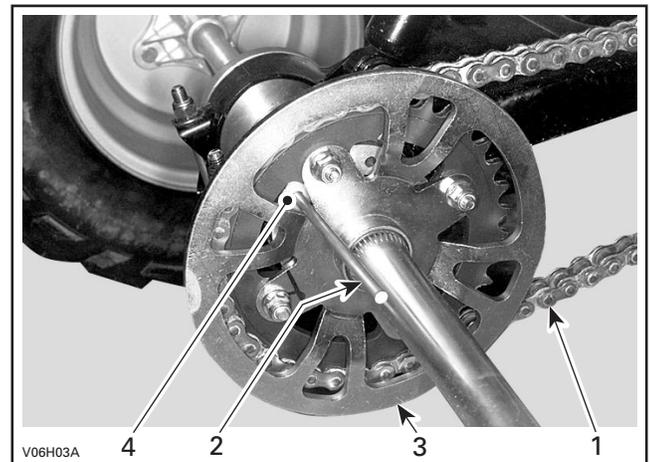
Remove RH footwell (refer to **BODY**).

Loosen chain tensioner lock bolts.



1. Chain tensioner lock bolts

Insert adjuster lock through sprocket hub and into chain tensioner.



1. Drive chain
2. Adjuster lock
3. Sprocket hub
4. Chain tensioner

Slack drive chain.

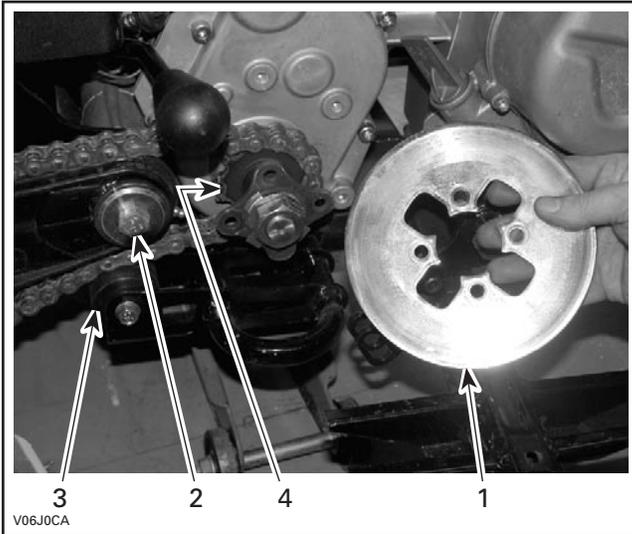
Remove rear brake (refer to **BRAKES**).

Remove swing arm bolt **no. 8** and nuts **no. 9** and **no. 14**.

## Section 08 SUSPENSION

### Subsection 03 (REAR SUSPENSION)

Remove chain roller.



1. Brake disc
2. Swing arm bolt
3. Chain roller
4. Sprocket

Pull back rear drive train assembly to detach swing arm assembly with drive chain from the frame.

If necessary, remove rear axle from swing arm. Refer to **REAR AXLE**.

### Inspection

Check swing arm for distortion, rust, cracks, bend or other damages. Change if necessary.

Check bushings **no. 10** and cushions **no. 12** for wear or damages. Replace if necessary.

Check if the O-rings **no. 11** is brittle, hard or otherwise damaged.

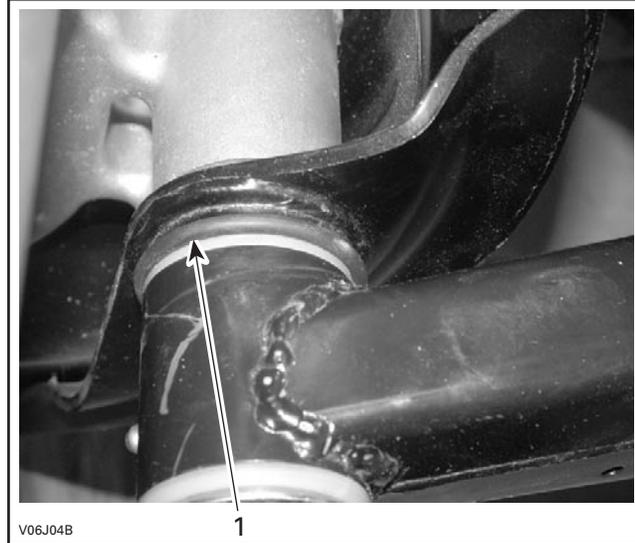
### Installation

Installation is the reverse of removal procedure. However, pay attention to the following details.

Insert O-rings **no. 11** in the groove into frame.

Place cushions **no. 12** and bushings **no. 10** then install the swing arm.

Install the swing arm bolt **no. 8** with washers **no. 13** then push the O-rings **no. 11** between frame and bushings.



1. O-ring

Install nuts **no. 9**. Torque to 100 N•m (74 lbf•ft).

**NOTE:** Check if the swing arm moves freely.

Install the other nut **no. 14** and torque to 100 N•m (74 lbf•ft).

**NOTE:** Take the first nut with a key when the second nut is torqued.

Install rear shock and drive chain. Torque nut **no. 4** to 48 N•m (35 lbf•ft) to install rear shock.

If necessary, join the rear axle and the swing arm together. See the **REAR AXLE** section for the proper procedure.

Apply synthetic grease (P/N 293 550 010) to swing arm.

Reinstall brake. Check brake pedal adjustment. Refer to **BRAKES** for complete adjustment procedure.

Install RH footwell (refer to **BODY**).