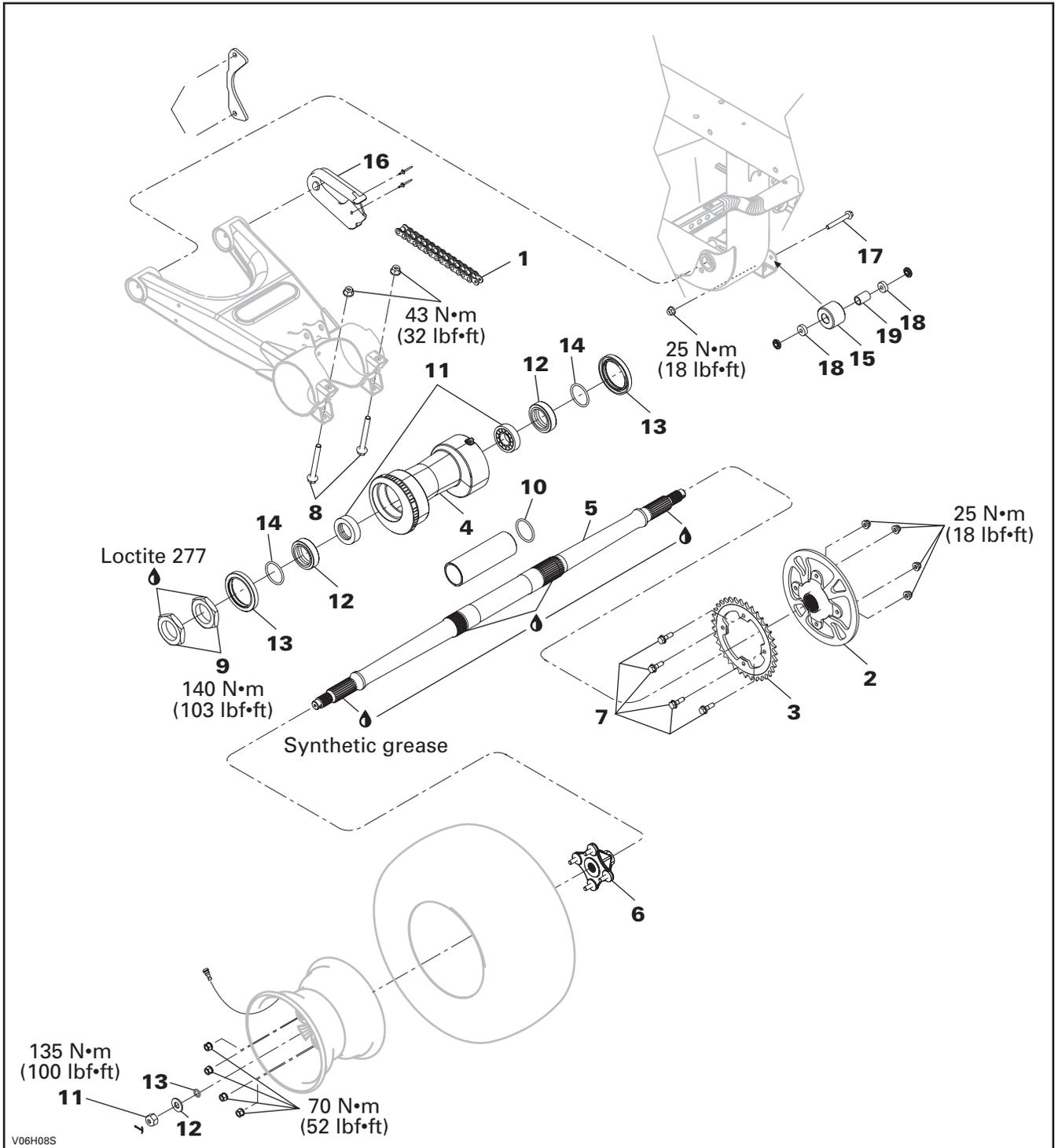


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# REAR AXLE



## Section 06 DRIVE TRAIN

### Subsection 02 (REAR AXLE)

## GENERAL

For installation, use the torque values and Loctite products from the exploded views. Clean threads before using Loctite when installing the 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.

**CAUTION:** During installation, make sure every part is free from old grease and dirt. This allows for a clean re-assembly and will avoid premature wear caused by dirt contamination.

After each job, ride the vehicle for a few minutes and make sure the job is successful; i.e. axle is not loose, chain is not rubbing on any part or making noise, rear brake operates correctly, etc.

## DRIVE CHAIN

Adjust and lubricate drive chain before each use.

### **⚠ WARNING**

Place ignition switch to OFF before check, adjust or lubricate drive chain.

**CAUTION:** Never operate this vehicle with the drive chain too loose or too tight as severe damage to the drive components can occur.

### Inspection

This ATV is equipped with O-ring sealed permanently greased pins and rollers. Before operating the vehicle, always inspect the drive chain.

Check the free play of drive chain and adjust if necessary.

Check for damage or missing O-ring or rollers.

### Lubrication and Cleaning

**CAUTION:** Never wash the chain with a high pressure washer or gasoline. Damage to the O-ring will result, causing premature wear and drive chain failure.

Clean the side surfaces of the chain with a dry cloth.

**NOTE:** Do not brush chain.

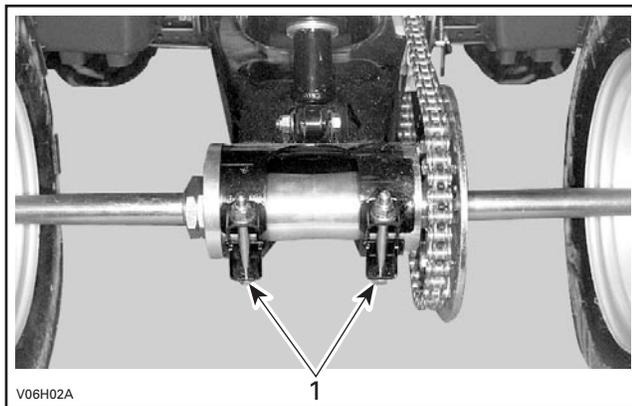
Lubricate only with an approved O-ring chain lubricant. Other commercial chain lubricants may contain solvent which could damage the O-rings.

### Adjustment

**NOTE:** Never adjust drive chain with the driver seated on the vehicle. Remove all load on vehicle.

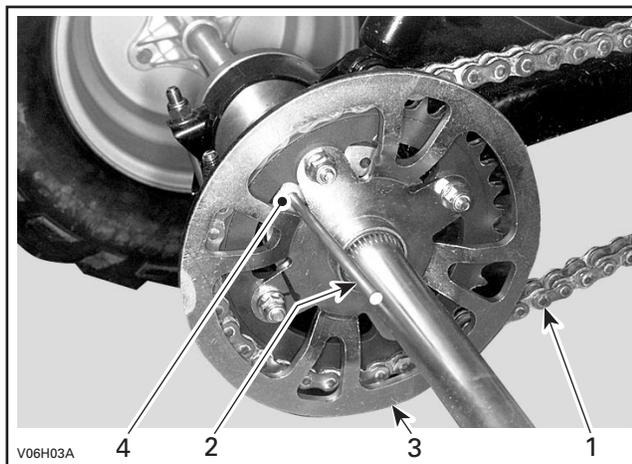
Select a level surface and set transmission to NEUTRAL.

Loosen chain tensioner lock bolts.



1. Chain tensioner lock bolts

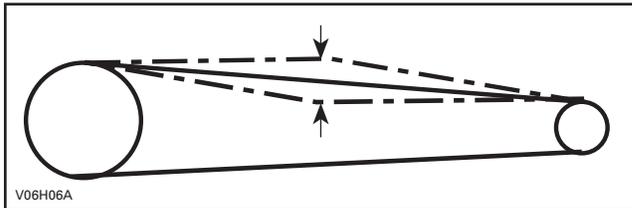
Insert adjuster lock through sprocket hub no. 2 and into chain tensioner.



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

Adjust chain deflection by slowly moving the ATV forward so any slack that may have previously been on the under part of the chain is now on the top of the chain. The bottom part of the chain should be taught during adjustment.

The deflection should be between 10 and 20 mm (3/8 and 3/4 in).



Turn the axle forward to increase or backwards to decrease chain free play.

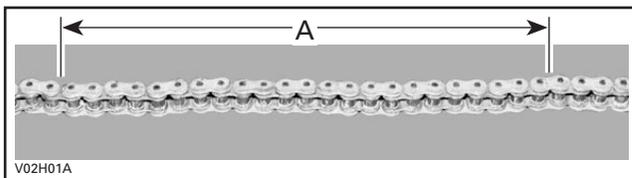
Tighten the chain tensioner lock bolts to 43 N•m (32 lbf•ft).

**CAUTION:** Never operate this vehicle with the drive chain too loose or too tight as severe damage to the drive components can occur.

When the adjustment is done, repeat the above procedure to check the deflection several times at different spots on the chain.

## Replacement

With the chain installed on vehicle, measure the distance between a span of 13 links from pin center to pin center. Change drive chain if the distance exceeds the service limit.



A. 404 mm (15-29/32 in)

**CAUTION:** Replace chain, engine sprocket and rear sprocket together to prevent rapid chain and sprockets wear. Install a new tab washer each time the engine sprocket is removed.

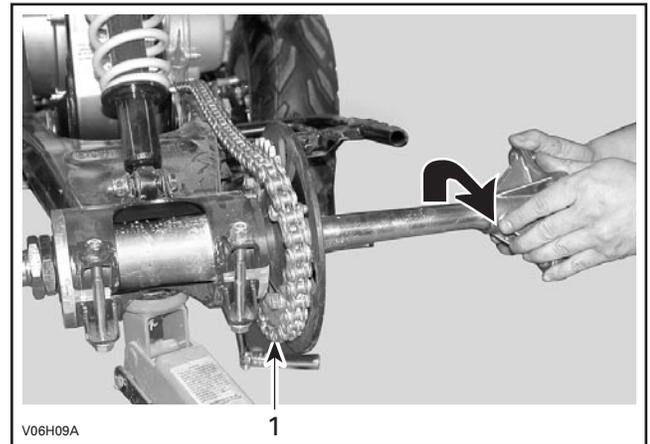
## REAR SPROCKET

### Removal

Lift rear of vehicle and install jack stands under the frame to support the rear of vehicle off the ground.

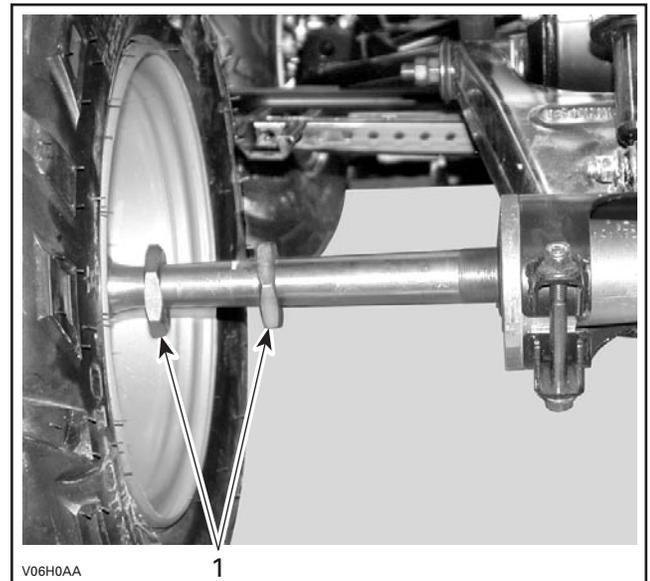
Remove RH rear wheel and wheel hub **no. 6**.

Remove drive chain **no. 1**.



1. Remove chain

Unscrew the locking nut **no. 9** by using 51 mm (2 in) crowfoot (P/N 529 035 884) and 51 mm (2 in) open wrench (P/N 529 035 866).



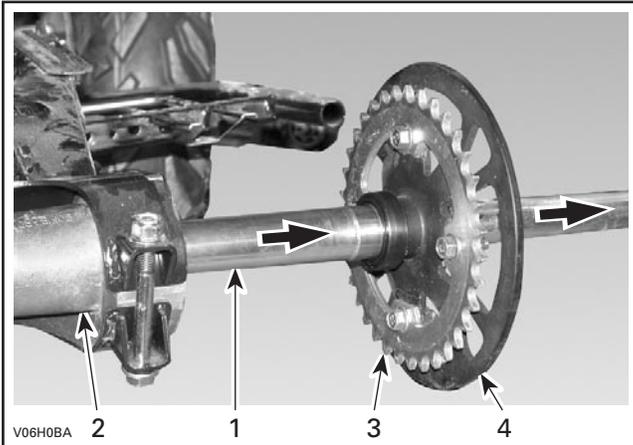
1. Locking nuts

## Section 06 DRIVE TRAIN

### Subsection 02 (REAR AXLE)

Remove LH rear wheel and wheel hub.

Pull out the rear axle with rear sprocket no. 3 from drive chain tensioner no. 4.

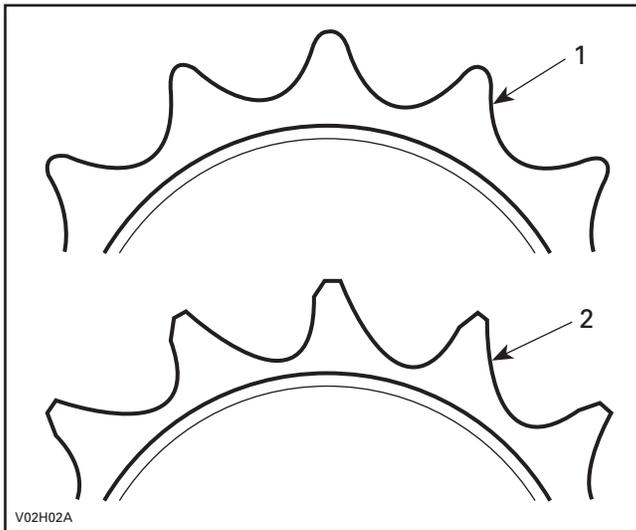


1. Rear axle
2. Chain tensioner
3. Rear sprocket
4. Rear sprocket hub

Unscrew the bolts no. 7 and remove rear sprocket from rear sprocket hub no. 2.

### Inspection

Check the sprocket axle and pinion for distortion, excessive wear or other damages.



1. Good
2. Replace

**CAUTION:** Replace chain, engine sprocket and rear sprocket together to prevent rapid chain and sprockets wear. Install a new tab washer each time the engine sprocket is removed.

**NOTE:** The drive pinion must be installed with the lip toward the outside of vehicle.

### Installation

**CAUTION:** Replace chain, engine sprocket and rear sprocket together to prevent rapid chain and sprockets wear. Install a new tab washer each time the engine sprocket is removed.

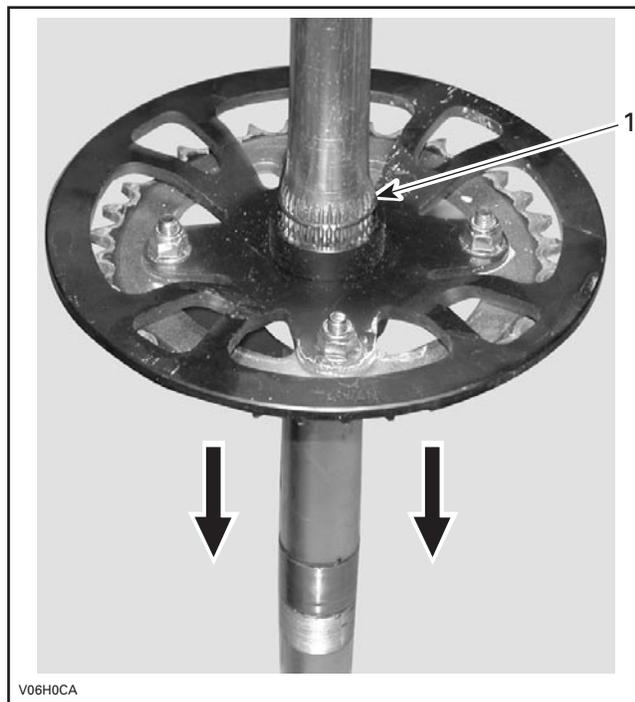
For installation, reverse the removal procedure.

## REAR SPROCKET HUB

### Removal

Lift rear of vehicle and install jack stands under the frame to support the rear of vehicle off the ground.

Push down the rear sprocket hub no. 2 on rear axle to get access of retainer ring no. 10.



1. Retainer ring

Remove retainer ring no. 10 and pull out the rear sprocket no. 3 out with rear sprocket hub no. 2.

### Installation

For installation, reverse the removal procedure.

## REAR WHEEL HUB

### Removal

Lift rear of vehicle and install jack stands under the frame to support the rear of vehicle off the ground.

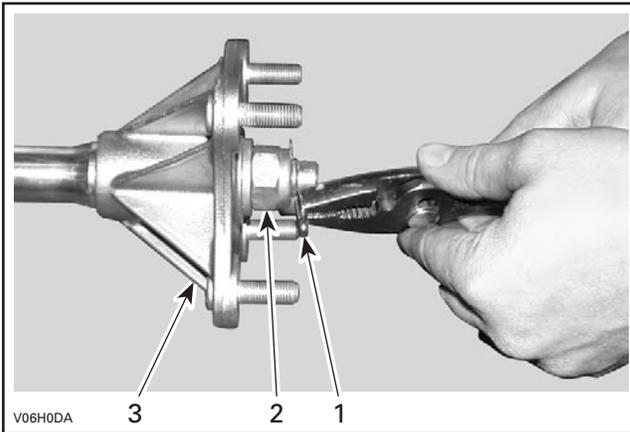
Remove rear wheels.

**NOTE:** Use the same procedure for both wheel hubs.

Remove the wheel.

Remove cotter pin and unscrew elastic nut **no. 11**. Discard the cotter pin.

Remove washer **no. 12** and the O-ring **no. 13**.



1. Cotter pin
2. Elastic nut
3. Rear wheel hub

Pull out wheel hub.

### Inspection

Check wheel hub for cracks splines wear or other damage. Change if necessary.

Check O-ring for damage, if so change it.

### Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Refer to CHAIN TENSIONER BEARING for the proper instructions concerning the bearing pre-load procedure.

Apply synthetic grease (P/N 293 550 019) on splines.

Install wheel hub.

Put the O-ring and washer in place.

Put on the wheel hub nut and tighten.

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

Install both rear wheels.

Put vehicle back on the ground.

With no driver on vehicle, adjust chain tension.

Tighten the chain tensioner lock bolts.

## REAR AXLE

### Removal

Lift rear of vehicle and install jack stands under the frame to support the rear of vehicle out off the ground.

Remove rear wheels.

Remove the LH and RH wheel hubs **no. 6**.

Remove locking nuts **no. 9**.

Unscrew the chain tensioner lock bolts **no. 8**.

Remove the chain roller.

Install adjuster lock and release the drive chain tension.

Remove drive chain from rear sprocket.

Slide out the axle from the right side of the chain tensioner **no. 4**. If the vehicle ran with failed bearings, it may have damaged many parts around the bearing area. It is possible that the axle will not slide out easily if the bearings are seized on it.

### Inspection

Check axle for bending, torsion or other damage. Change if necessary.

Check axle for spots of rust. A spot of rust indicates a possible damage to axle. Change axle if necessary.

If bearings are seized on the axle, the axle must be replaced or its surface cleaned. Bearings must still have a slide fit on the axle, otherwise it will result in a faulty re-assembly and a failure may occur. Bearing races on the axle must be in good condition.

If the sprocket hub **no. 2** has been damaged, replace it also.

If wear sleeves **no. 12** are damaged replace them.

### Installation

Insert the axle assembly into the swing arm from the right side.

Apply Loctite 277 on locking nut threads then install them.

## Section 06 DRIVE TRAIN

### Subsection 02 (REAR AXLE)

Using open wrench (P/N 529 035 866) and crow foot (P/N 529 035 884) torque each nut to 140 N•m (103 lbf•ft).

Install the rear wheel hubs. See the procedure above.

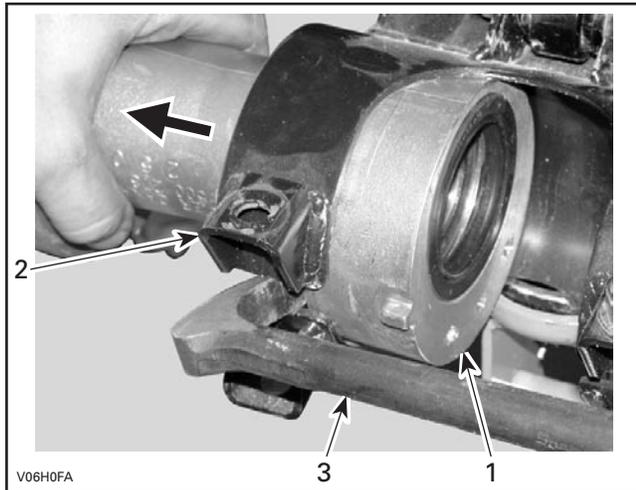
## CHAIN TENSIONER

### Removal

Remove the rear axle.

Slide out the chain tensioner from the left side of the swing arm.

**NOTE:** To pull out the chain tensioner, the protrusion should be aligned with the swing arm groove.



1. Chain tensioner
2. Swing arm
3. Pry bar

### Inspection

Look at the chain tensioner for damage. The bore must be free of scratches in order to receive new bearings and seals.

### Installation

Installation takes place in the reverse order of removal.

Carefully slide the chain tensioner over the axle and seat it against the sprocket hub; the 3 hole side of the chain tensioner goes toward right side.

**NOTE:** Make sure it is fully seated.

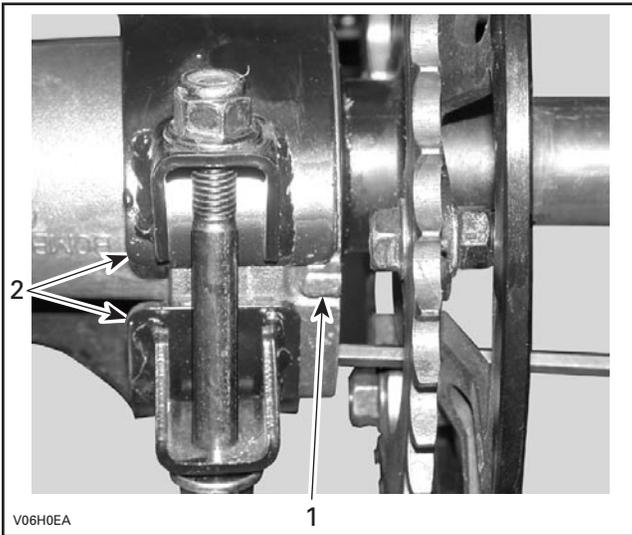
Install all other parts.

## CHAIN TENSIONER BEARINGS

### Inspection

The chain tensioner should turn smoothly and quietly. If not, change the bearings.

If bearings **no. 11** are seized on the axle, the axle must be replaced or its surface cleaned. Bearings must still have a slide fit on the axle, otherwise it will result in a faulty re-assembly and a failure may occur. Bearing races on the axle must be in good condition.



1. Chain tensioner protrusion
2. Swing arm groove

Dirt inside the swing arm may cause resistance during removal procedure. Use a soft tool to hammer out the chain tensioner if required.

Use pry bar to open the swing arm groove to push the chain tensioner out from the swing arm.

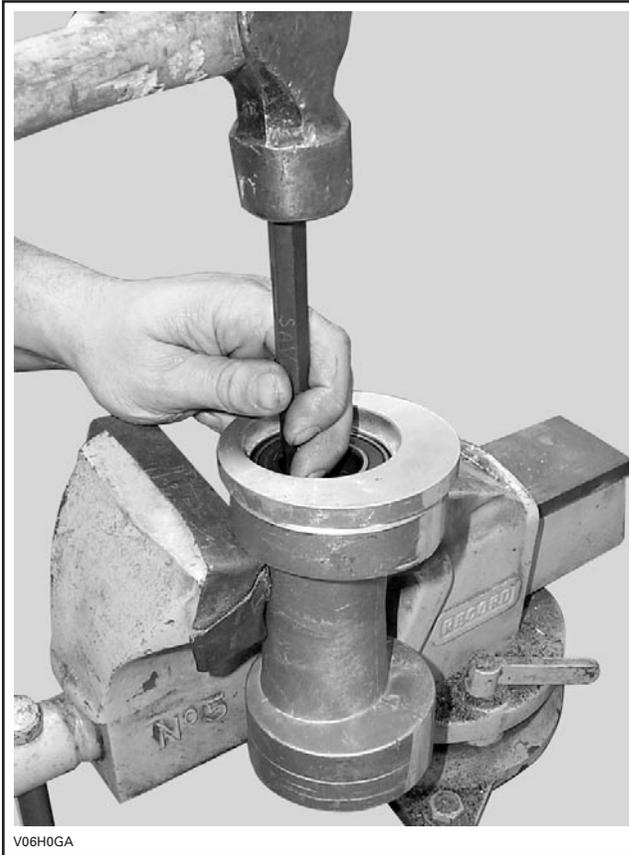
## Removal

**NOTE:** Bearings and seals must be replaced if removed.

Remove O-ring **no. 14**.

Pry out drive axle seals **no. 13**. Be careful not to damage seal bore or chain tensioner.

Use a punch and drive bearings cup outward from opposite end of housing.



## Installation

Place new bearings in a freezer for 10 minutes before installation.

To ease the assembly of bearings, it is possible to heat the chain tensioner at 212°F (100°C), 30 minutes in oven.

## **WARNING**

Clean all grease, outside and inside, from eccentric housing before putting in oven.

Press the bearing into the chain tensioner.



The seal must press into a dry bore. Use brake cleaner to make sure the bore is free of grease where the seal goes.

**CAUTION:** If the seal is pressed into a slippery bore, it will misalign or pop out when the vehicle will be running, which will lead to a bearing failure.

Press the seal in place. Properly installed, it is flush with the edge of the chain tensioner.

Install all other parts.

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## **Section 06 DRIVE TRAIN**

### **Subsection 02 (REAR AXLE)**

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#### **SLIDER-SHOE**

##### **Removal**

Remove swing arm. Refer to **REAR SUSPENSION**.

Remove slide-shoe **no. 16**.

##### **Installation**

Installation takes place in the reverse order of removal.

#### **CHAIN ROLLER**

##### **Removal**

Unscrew bolt **no. 17** retaining the chain roller **no. 15**.

Remove the chain roller with ball bearings **no. 18** and bushing **no. 19**.

##### **Installation**

For installation, reverse the removal procedure.

Torque bolt **no. 17** to 25 N•m (18 lbf•ft).