



Towing and Suspension Solutions

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StowMaster complete repair kit

part number 910003-20

This kit contains the components to replace the StowMaster shoulder and yoke bolt, inner and rear bushings and Autowlk™ assemblies.

All specifications are subject to change without notice.

Installation instructions – shoulder and yoke bolt replacement

Note: follow the instructions on this page to replace the StowMaster shoulder and yoke bolt. To replace the bushings and Autowlk assemblies, see pages two through four.



WARNING

Read the instructions before installing the kit components. Failure to understand how to install these products could result in property damage, personal injury or even death.



Shoulder and yoke bolt replacement components

Use the following components to replace two StowMaster collar shoulder bolts and one yoke shoulder bolt –

- (2) collar shoulder bolts (3) Nylock nuts
- (1) yoke shoulder bolt
- (2) $\frac{3}{4}$ " diameter acetyl washers

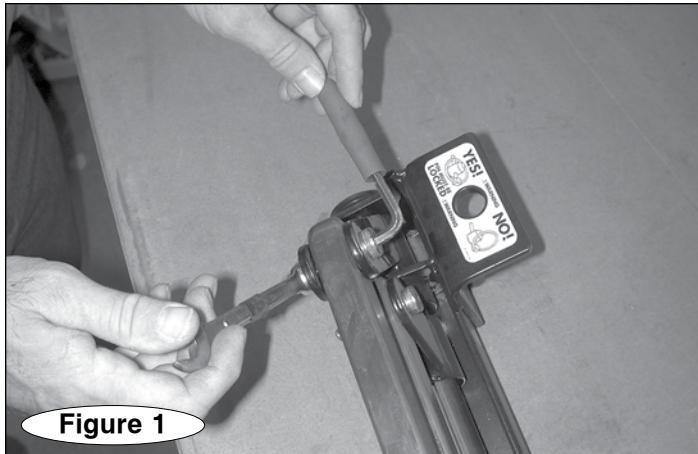


Figure 1

Required tools for this procedure

One 9/16" socket wrench

One 1/4" Allen wrench

Installation instructions

1. Using the 1/4" Allen wrench and 9/16" socket wrench, remove one of the original collar shoulder bolts (Figure 1); install the replacement bolt and Nylock washer. Repeat for the other collar shoulder bolt.

2. Remove the yoke shoulder bolt (Figure 2), position the replacement acetyl washers in the grooves on either side of the tow bar arm (inset, Figure 2) and attach the replacement yoke shoulder bolt and Nylock nut.

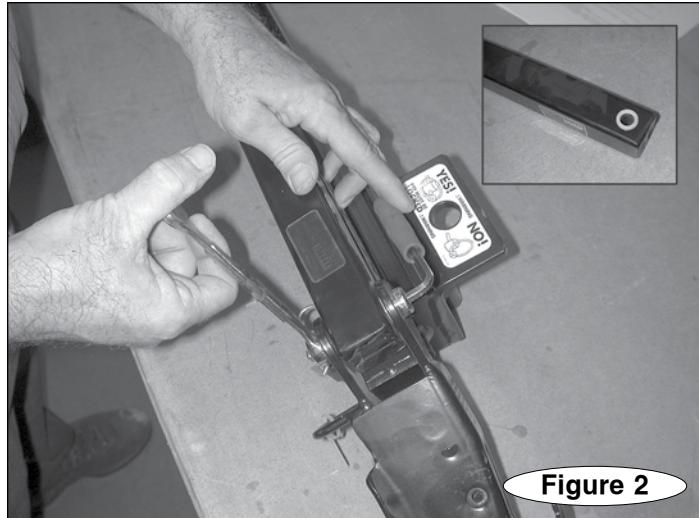


Figure 2

IMPORTANT NOTICE!

Safety Definitions

These instructions contain information that is very important to know and understand. This information is provided for **safety** and to **prevent equipment problems**. To help recognize this information, observe the following symbols:



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in property damage, serious personal injury or even death.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in property damage, or minor or moderate personal injury.

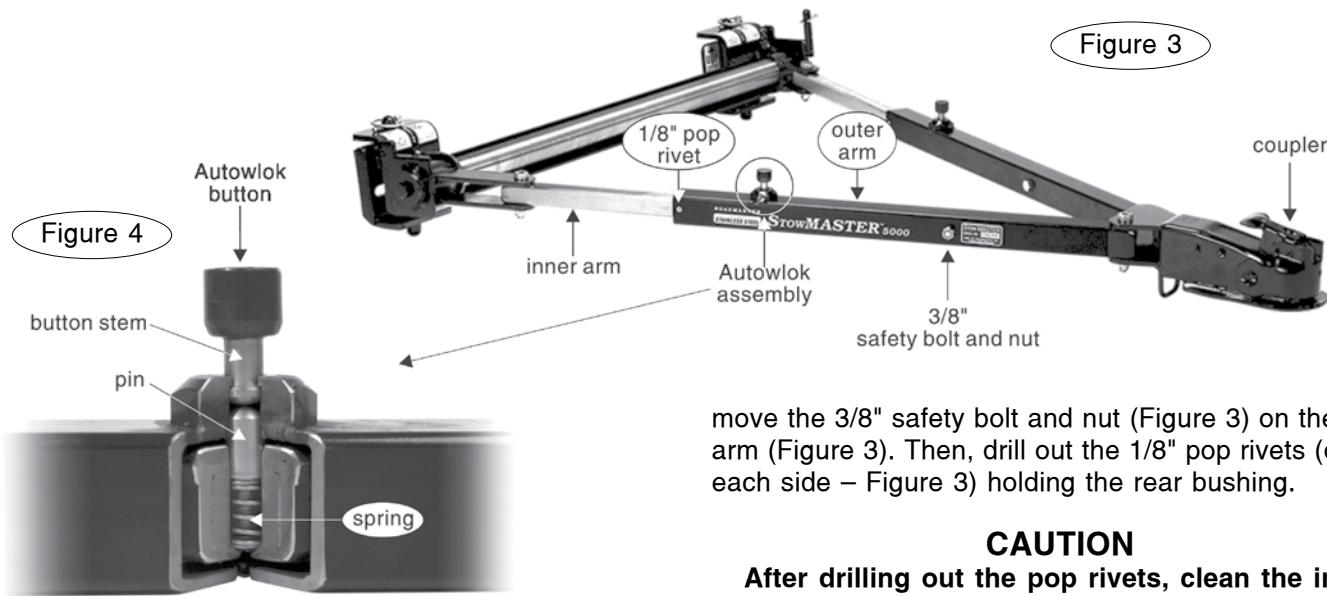
CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE

Refers to important information and is placed in italic type. It is recommended that you take special notice of these items.

Installation instructions – bushing and Autowlok assembly



Note: follow the instructions beginning on this page to replace the StowMaster bushings and Autowlok assemblies. To replace the shoulder and yoke bolt, see page one.

Note: to replace an Autowlok button only, it is not necessary to disassemble the tow bar. See "To replace an Autowlok button" on page four.



WARNING

Read the instructions before installing the kit components. Failure to understand how to install these products could result in property damage, personal injury or even death.



Bushing and Autowlok assembly replacement components

Use the following components to replace the inner and rear bushings and Autowlok assemblies –

- | | |
|-------------------|--------------------------|
| (2) rear bushings | (2) inner front bushings |
| (2) button stems | (2) Autowlok buttons |
| (2) springs | (2) pins |
| (4) pop rivets | |

Required tools for this procedure

drill with 1/8" bit
rubber mallet

grinder
pliers or channel locks

CAUTION

If both Autowlok assemblies will be replaced, work on one tow bar arm at a time. The inner arms are not interchangeable. If the inner arms are not replaced correctly, the tow bar will not center the towed vehicle behind the motorhome, which may cause severe tire damage as well as other consequential, non-warranty damage to the towed vehicle.

To replace an entire Autowlok assembly...

1. Disconnect one of the inner arms (Figure 3) – first, re-

move the 3/8" safety bolt and nut (Figure 3) on the outer arm (Figure 3). Then, drill out the 1/8" pop rivets (one on each side – Figure 3) holding the rear bushing.

CAUTION

After drilling out the pop rivets, clean the interior of the outer arm to remove any metal shavings from the interior of the outer arm. The shavings may impair the operation of the sliding arms, as well as score or otherwise damage the plastic bushings.

2. Hold a piece of cloth over the end of the outer arm. Press the Autowlok button (Figure 4) down and slide the inner arm out of the outer arm.



CAUTION

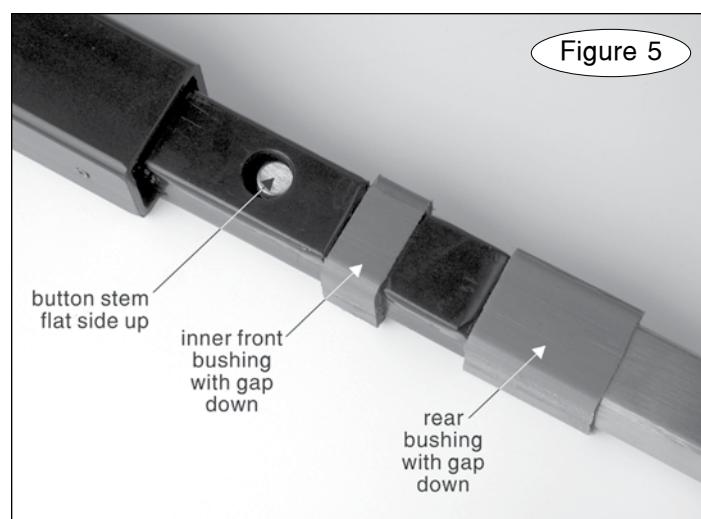
The spring inside the Autowlok assembly is under pressure. It will eject a pin when the spring and pin clear the outer arm and the pressure is released.

To avoid injury, hold a cloth over the end of the outer arm and stand to one side, clear of the pin and spring, as the Autowlok assembly clears the outer arm.

3. Discard the old spring and pin (Figure 4).

4. If the button stem (Figure 4) will not be replaced, proceed to step 5.

If the button stem will be replaced – first, insert the
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new button stem flat side up (Figure 5), into the opening near the inner front bushing. Then, slide the inner arm into the outer arm until the top of the button stem is visible through the hole in the outer arm.

Turn the tow bar arm over and move the inner arm forward or backward slightly, if necessary, until the button stem drops through the hole in the outer arm. Then, draw a straight line with a pencil across the bottom of the inner arm (Figure 6), 3/4" from the edge of the outer arm.

Slowly close the inner arm until the edge of the outer arm is even with the pencil line you drew. This position will stabilize and support the button stem.

Turn the tow bar arm back over and attach the Autowlok button to the button stem, following steps 6 through 8 under "To replace an Autowlok button..." on page four.

After the button has been attached, slide the inner arm out of the outer arm.

5. Remove the old inner front bushing (Figure 5). Apply a light coat of lubricant to the inside of the new inner front bushing. Use a dry silicone aerosol, such as LubeMaster (part number 747).

CAUTION

Do not use petroleum-based products to lubricate the tow bar. Petroleum will attract dirt and dust, which will impede the operation of the inner arms and/or other components. Certain petroleum products may also corrode non-metallic components.

With the gap in the new inner front bushing facing down (Figure 5), slide the bushing into position (Figure 5) on the inner arm.

Test the fit – insert the inner arm into the outer arm and slide the inner arm forward and backward, to its fullest extent.

If the inner arm does not slide smoothly, or if the new bushing is too wide to fit, use a grinder to trim a small amount from the edges touching the inside of the outer arm. Trim an equal amount from each side, test-fit the inner arm and trim more, if necessary, until the inner arm slides forward and backward easily.

6. Remove the old rear bushing (Figure 5).

7. Insert one of the new springs (Figure 4) into the opening near the inner front bushing.

8. Lubricate the bottom of one of the new pins (Figure 4) thoroughly. As before, use a dry silicone aerosol. Then, position the new pin, rounded side up (Figure 7), on the new spring.

9. Hold the pin down flush to the top of the inner arm, and insert the inner arm into the outer arm. Slide the arm forward until the Autowlok button snaps into the locked position (Figure 8).

10. Apply a light coat of lubricant to the inside of the new rear bushing. As before, use a dry silicone aerosol. Then, with the gap in the bushing facing down (Figure 5), slide the new rear bushing onto the inner arm and forward, until the edge of the bushing is flush to the edge of the outer arm, as shown in Figure 8.

If the new bushing is too wide to fit into the outer arm, use a grinder to trim a small amount from the edges

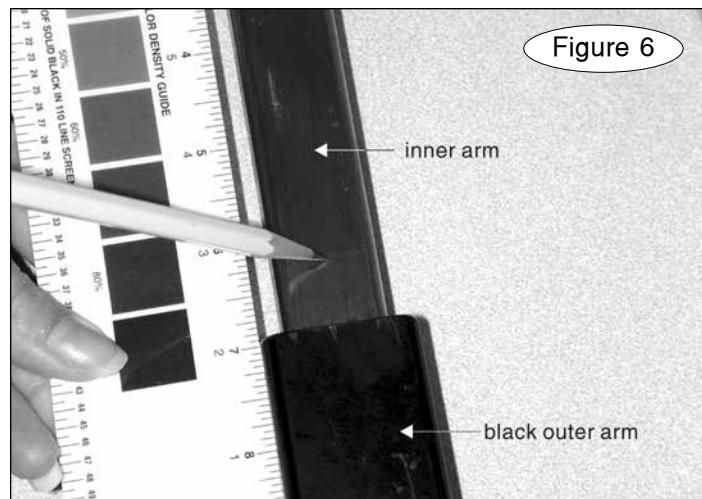


Figure 6

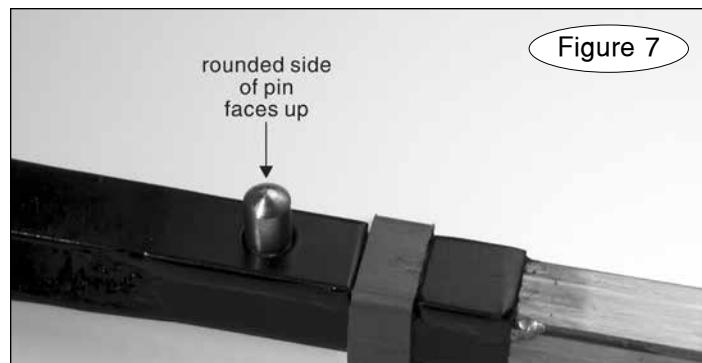


Figure 7

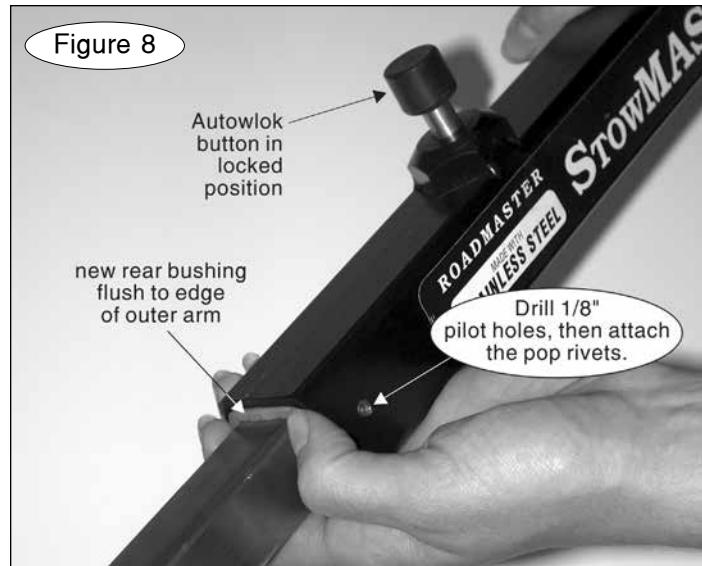


Figure 8

touching the inside of the outer arm. Trim an equal amount from each side, test-fit the bushing and trim more, if necessary, until the bushing fits.

11. With the Autowlok button in the locked position, reattach the 3/8" safety bolt and nut you removed in step 1.

WARNING

Ensure that the arm is locked before replacing the 3/8" safety bolt and nut. Unless the arm is locked before the bolt and nut are replaced, the Autowlok mechanism will not function – the tow bar arm will not lock when the tow bar arm extends for towing, and

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the inner arm will separate from the outer arm.

The towed vehicle will not be held in place if the tow bar arm separates, which may cause a loss of vehicular control, a traffic accident or loss of the towed vehicle, resulting in property damage, personal injury or even death.

12. With the safety bolt attached, test the operation of the inner arm – press the Autowlok button down and slide the inner arm forward and backward, to its fullest extent.

If the inner arm does not slide smoothly, trim the rear bushing – remove the 3/8" safety bolt, press the Autowlok button down and slide the inner arm out.

As before, trim an equal amount from each side of the bushing. Then test the operation of the inner arm and trim more, if necessary, until the inner arm slides forward and backward smoothly.

13. With the safety bolt attached, the Autowlock button in the locked position (Figure 8) and the rear bushing flush to the edge of the outer arm (Figure 8), drill two 1/8" pilot holes for the pop rivets (Figure 8).

Secure the bushing in place with two 1/8" pop rivets (one on each side).

14. If necessary, repeat steps 1 through 13 for the other tow bar arm.

To replace an Autowlok button...

1. It is not necessary to disassemble the tow bar to replace an Autowlok button.

First, open the tow bar and extend both arms until the buttons on both arms snap into the locked position.

Note: if the button is missing, it will be necessary to lift the button stem (Figure 4) up slightly as you extend the arm, so that the button stem will clear the inner arm weldment and inner arm bushing.

2. Set the coupler on any object that will allow the tow bar arms to rest at a convenient height to work on the button.

3. With the arms fully extended and locked, draw a straight line with a pencil across the top of the inner arm (Figure 6), 3/4" from the edge of the black outer arm (Figure 6).

4. Depress the button (or the button stem, if the button is missing) and slowly close the arm until the edge of the black outer arm is even with the pencil line you drew in the previous step.

This position will stabilize and support the button stem so that the new button can be properly attached.

5. Remove the old button (if present) with pliers or channel locks, being careful not to scratch the button stem.

6. Clean any residue that may be on the exposed surface of the button stem.

Note: for easier attachment to the button stem (step 7, below), drop the button in boiling water for five minutes. The heat will make the button more flexible.

If you choose this method, dry the button completely before applying the glue.

7. Follow the instructions on the supplied package of epoxy glue to mix and activate the glue, then apply enough to lightly cover the inside of the button. Next, apply enough glue to

completely fill the grooves at the top of the button stem.

Within 30 seconds, position the button over the top of the button stem, and tap the button down over the stem, as far as it can go, with a rubber mallet.

CAUTION

Ensure that the button is tapped completely down, as far as it can go. If the button is not completely down, it will not depress the pin and spring far enough to lock or unlock the tow bar arm.

8. Allow 24 hours for the epoxy glue to set. The button can be depressed and released after approximately 10 minutes, but do not pull on the button for 24 hours.

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