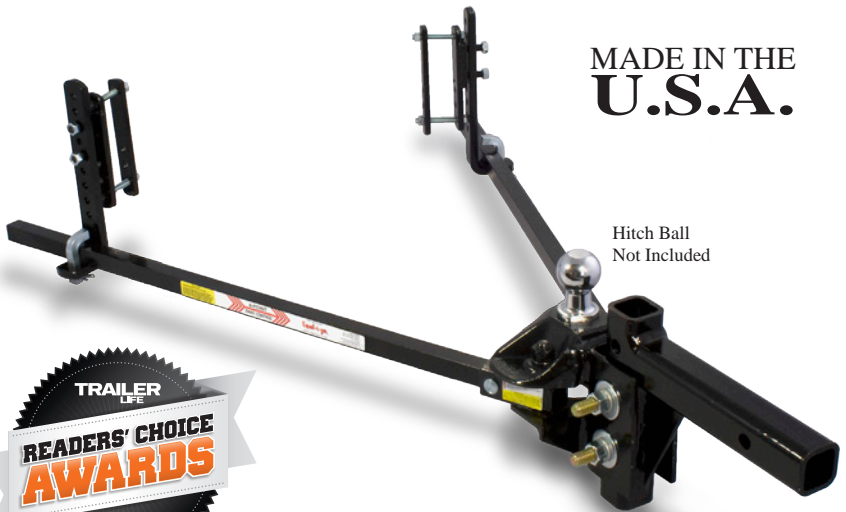




THE ORIGINAL
Equal-i-zer®
SWAY CONTROL HITCH
OWNER'S MANUAL

The Best Protection For Your Journey™



MADE IN THE
U.S.A.

Hitch Ball
Not Included



3-time Trailer Life Magazine
Reader's Choice Gold Winner

90-00-0400 400 lb. max loaded tongue / 4,000 lb. max loaded trailer weight

**DEALERS: PLEASE PASS THIS MANUAL ON TO THE
END USER AFTER HITCH INSTALLATION**

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TOOLS NEEDED FOR INSTALLATION

The following tools will help you to install the hitch properly:

- 15/16" box-end wrench (shank bolts)
- 15/16" socket wrench (shank bolts)
- 9/16" box-end wrench (link plates)
- 9/16" socket wrench (link plates)
- 5/8" socket wrench (angle set bolt and L-bracket)
- (2) 7/16" socket or box-end wrenches (snap-up lever)
- Adjustable wrench
- Measuring tape
- Pencil
- Torque wrench capable of 180 ft-lbs of torque. (shank bolts)

Recommended tools for installing the hitch ball:

- 1-7/8" Thin walled socket and 4" extension
- Torque wrench capable of 430 ft-lbs of torque (or higher if hitch ball manufacturer specifies).

PLEASE KEEP THIS MANUAL AS A REFERENCE FOR
ADJUSTMENT AND MAINTENANCE.

Congratulations on your purchase of The Original
Equal-i-zer® [Sway Control Hitch](#).

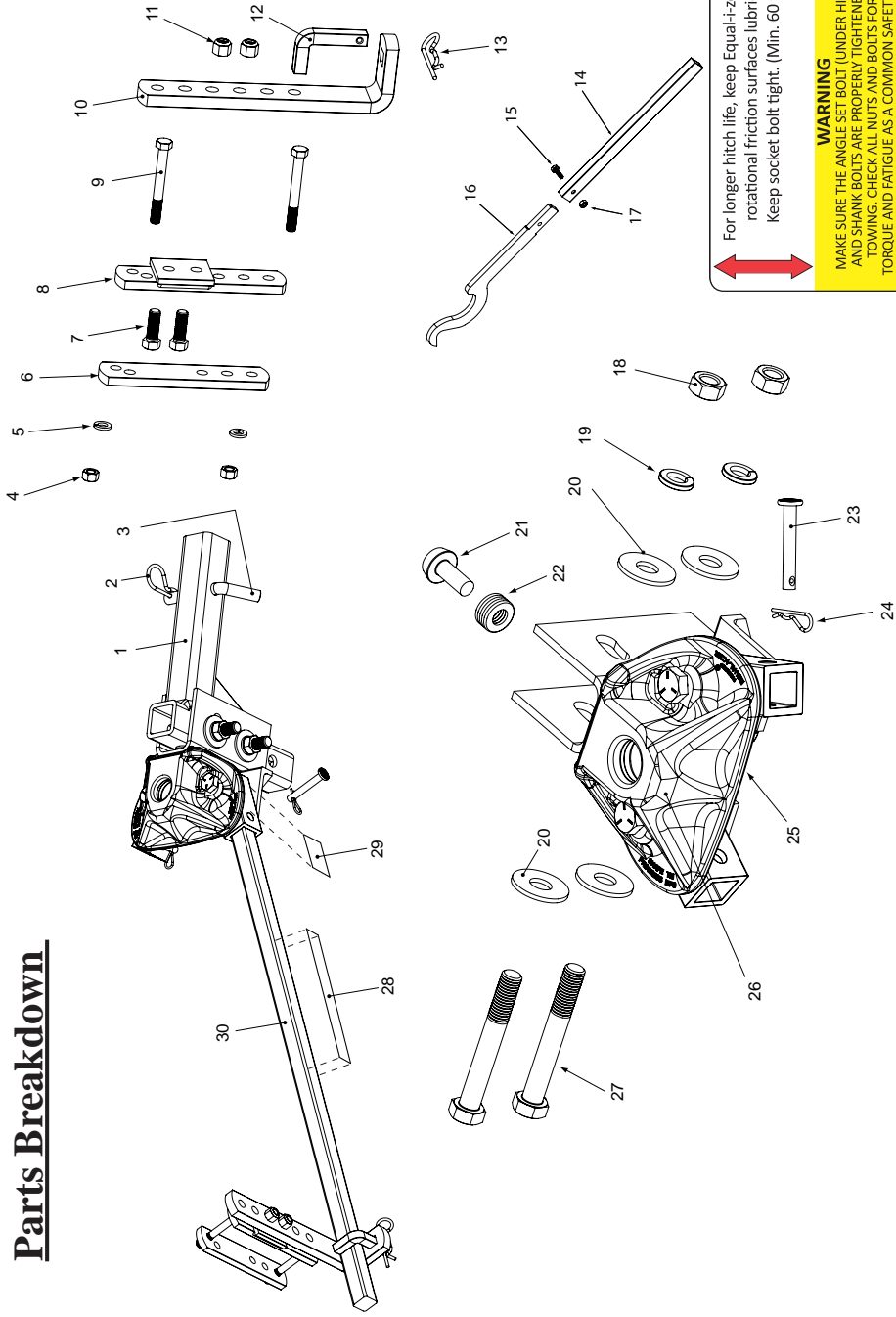
Thank You for your purchase and welcome to
the Equal-i-zer hitch family. We appreciate your busi-
ness and constantly strive to exceed your expecta-
tions.

Read this owner's manual thoroughly to become fa-
miliar with proper setup and maintenance procedures
to ensure that your Equal-i-zer hitch will give you
maximum performance and years of service.

Happy Towing,
The Employees of Progress Mfg. Inc.



Parts Breakdown



Item # 29 - Socket Warning Sticker

<u>Item #</u>	<u>Part Number</u>	<u>Part Description</u>	<u>Qty.</u>
1	90-02-4140	Adjustable Shank	1
2	90-04-9224	Hitch Pin Clip	1
3	90-03-9220	Hitch Pin	1
4	90-03-9475	3/8" Nut	4
5	90-03-9490	3/8" Lock Washer	4
6	90-02-5240	Inside Link Plate	2
7	90-03-9480	7/16" x 1-1/4" Bolt	4
8	90-02-5340	Outside Link Plate	2
9	90-03-9470	3/8" x 3-1/4" Bolt	4
10	90-02-5140	L-Bracket	2
11	90-03-9486	7/16 Nylock Nut	4
12	90-03-9460	L-Pin	2
13	90-04-9208	L-Pin Clip	2
14	90-03-6200	Snap-up Handle	1
15	90-04-9240	1/4" Snap-up Bolt	1
16	90-03-6140	Snap-up Hook	1
17	90-04-9244	1/4" Snap-up Nut	1

Item# 28 - Spring Arm Warning Sticker

<u>Item #</u>	<u>Part Number</u>	<u>Part Description</u>	<u>Qty.</u>
18	90-03-9425	5/8" Nut	2
19	90-03-9420	5/8" Lock Washer	2
20	90-03-9415	5/8" Washer	4
21	90-03-9105	Spacer Rivet	1
22	90-04-9110	Spacer Washer	6
23	90-03-9212	Socket Pin	2
24	90-04-9216	Socket Pin Clip	2
25	90-03-9700	Angle Set Bolt	1
26	90-02-0400	400 / 4,000 lb. head	1
27	90-03-9410	5/8" x 4-1/2" Bolt	2
28	BD043	Arm Warning Stickers 4,000 lb. arm sticker	2
29	BD035	Socket Warning Sticker	2
30*	90-02-0499	4,000 lb. Spring Arm	2

* Each package contains two (2) spring arms. These arms are specifically sized for your hitch head. Spring arms will not function with a hitch head of a different rating.

ATTENTION
 READ THE OWNER'S MANUAL AND UNDERSTAND PROPER INSTALLATION AND PROPER USE. IT IS THE DRIVER'S RESPONSIBILITY TO MAKE THE NECESSARY AND CORRECT ADJUSTMENT TO AVOID TRAIL SWAY, TRAIL VELOCITY AND TRAIL SHOCK. ALWAYS WEAR YOUR SEATBELT. ALWAYS USE THE PROPER TIE DOWN TECHNIQUE. ALWAYS TRAIL BRACING THROUGH THE HITCH. CONTACT YOUR DEALER FOR A TRAILER TIE DOWN KIT. CONTACT YOUR DEALER FOR A TRAILER TIE DOWN KIT. ALWAYS WEAR YOUR SEATBELT. ALWAYS USE THE PROPER TIE DOWN TECHNIQUE.



**4-POINT
 SWAY CONTROL™**

THE ORIGINAL
Equal-i-zer®
 SWAY CONTROL HITCH

Operator Safety

WARNING

Read and understand all safety warnings, setup, use, and maintenance instructions of your trailer, tow vehicle, and hitching equipment before installing your hitch or towing your trailer. Failure to follow these instructions may result in severe injury or death.

Never cut, weld, grind, bend, or modify hitch components in any way.

It is the driver's responsibility to adjust equipment and driving habits to match towing conditions. The driver is responsible for their own safety and the safety of passengers.

Never exceed the specified weight ratings for the trailer, tow vehicle, hitch, hitch ball, or any other towing equipment.

No hitch setup guarantees that trailer sway will be altogether avoided.

Always load trailer correctly. Follow trailer and tow vehicle manufacturers' recommendations for placement and quantity of cargo.

Towing with a tongue weight more than 15% or less than 10% of gross trailer weight greatly increases the likelihood for loss of vehicle control.

Always use a hitch ball with a rating that equals or exceeds the trailer Gross Vehicle Weight (GVW). Always use a hitch ball size that correctly matches your trailer coupler size and make sure it is coupled securely before towing.

Measuring weight distribution setup well does not ensure safe towing. The operator is responsible for making necessary adjustments to the hitch to optimize weight distribution and sway control. Each trip is different, and the weight distribution setup and towing performance should be evaluated by the operator and adjusted when necessary.

Never tow with your hitch adjusted incorrectly.

Check all hardware before each trip. Do not tow your trailer until all bolts and nuts have been checked for wear and fatigue, are properly tightened, and all pins and clips are securely in place.

Do not tow with your hitch engaged on rough roads, through profound ditches, dips and swales, or while launching a boat. Excessive strain on the spring arms and hitch head may cause hitch fatigue or failure.

If your dealer installed your hitch, make sure to verify that it is still adjusted correctly after loading your trailer and tow vehicle for your trip.

Replace worn, faded, or unreadable warning stickers on the spring arms.

Do not transfer hitch to a different tow vehicle or trailer without re-adjusting the hitch for proper weight distribution.

⚠ CAUTION

Do not loosen or remove any part of the hitch except the L-pins and L-pin clips while the hitch is under load.

Always secure tow vehicle and trailer with parking brake and wheel chocks before setting up or adjusting hitch.

Disengage weight distribution before towing or backing the trailer where there is a significant transition in grade which puts excessive strain on the hitch, e.g. backing from a flat street to a steep uphill driveway.

About Your Hitch

Weight Distribution:

Weight distribution is the ability of a hitch to transfer some of the tongue weight of the trailer from the rear axle of the tow vehicle to the front axle of the tow vehicle, and backward to the trailer axles. Without weight distribution the tow vehicle “teeter-totters” on the rear axle of the tow vehicle, and unweights the front axle. Proper weight distribution transfers weight back to the front steering axle, forcing it back to the ground.

Proper weight distribution also adds performance to the Integrated Sway Control™ (ISC) feature of your Equal-i-zer® hitch. The Equal-i-zer hitch performs best when the tongue weight is at least 10% of gross trailer weight. This tongue weight gets distributed, and helps generate the friction needed to reduce trailer sway.

Sway Control:

ISC is a built-in, patent pending feature of your Equal-i-zer hitch. Once the spring arms are tensioned, the sway control is in force.

ISC works through the connection between your spring arms and L-brackets, and between the sockets and hitch head. The Equal-i-zer hitch takes advantage of the steel-on-steel friction generated at these points to help reduce trailer sway.

This added friction makes it much more difficult for the trailer to sway side-to-side while its being towed, as is usual when you encounter a gust of wind or a passing semi. When set up well and properly adjusted for your load, the Equal-i-zer hitch can noticeably reduce sway.

Important Setup Information:

These instructions are a guideline to aid in setting up your hitch. Every trailer and tow vehicle combination requires a different setup and adjustment because of factors like trailer weight and length, trailer loading, hitch weight, and tow vehicle suspension and wheelbase. It is not likely that a good setup for one vehicle combination will work for another. **If you change tow vehicle and/or trailer, you should check the hitch setup for proper weight distribution and adjust it when necessary.**

You must use your best judgment to determine if changes to this setup are required to ensure a safe and comfortable towing situation. There is no all-inclusive formula for setting up or adjusting a hitch that will accommodate each combination of trailer and tow vehicle possible.

The setup may need to be changed slightly at times to accommodate changes in your towing configuration, perhaps even during the same trip. For example, a trailer that starts with full clean water and propane tanks, may tow differently when that water becomes black and grey water, and the propane tanks are empty. Or, a trailer loaded with gear for a long cross country trip may tow differently than the same trailer loaded for a weekend getaway. The driver must be conscious of these changes, and adjust the hitch accordingly.

Step 1 - Position Tow Vehicle and Trailer:

While installing or adjusting the hitch, the tow vehicle and trailer should be loaded just as they will be while traveling. This includes full propane and fresh water tanks, and any other cargo (passengers & gear) the tow vehicle or trailer will carry, including ATVs for toy haulers. Tow vehicle “auto-level” systems should also be disabled or turned off temporarily. Suspension

air bags should be inflated to their desired towing psi **before** hitch setup. Inflating rear axle air bags after setup will most likely decrease the amount of weight distribution provided by the hitch.

Park the trailer and tow vehicle on level ground and in line with each other. Chock and uncouple the trailer. Pull tow vehicle ahead about 5 feet to allow working area and set the parking brake.

Step 2 - Install the Hitch Ball:

WARNING

Never exceed the specified weight ratings for the trailer, tow vehicle, hitch, hitch ball, or any other towing equipment.

NOTICE

Using a hitch ball with a shank longer than 2-3/8" may damage hitch and could void your warranty.

Install a properly-sized hitch ball (not included) onto the hitch head. Ball diameter must match trailer coupler size.

Select a ball with a **1-1/4" diameter** threaded shank **no longer than 2-3/8"**. Hitch balls with a longer shank may damage the hitch. If your hitch ball has a smaller shank you *must* use an appropriate bushing. Make sure that the ball has a weight rating equal to or greater than your trailer's gross vehicle weight (GVW). Always use a lock washer against the nut, unless otherwise specified by ball manufacturer. Torque nut to ball manufacturer's specifications.

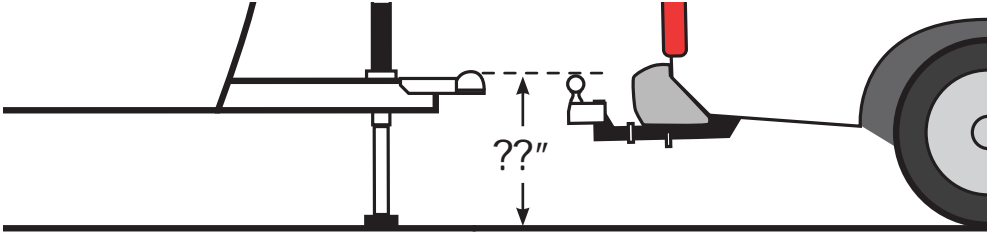
Hitch balls require a 1-7/8" socket and a torque wrench capable of approximately 430 ft-lbs torque for installation. Your nearest Equal-i-zer dealership will have the tools needed and will usually install the hitch ball for a reasonable fee.

Step 3 - Attach Hitch Head to Shank:

Level the Trailer:

Measure to the ground at the FRONT and BACK of the trailer frame, and adjust the trailer to be parallel to the ground (both front and back measurements should be the same).

With the trailer parallel to the ground, measure from the ground to the top of the trailer coupler. The hitch ball should initially be placed as close to this height as possible. See *Figure 1*.



Trailer Coupler Height: _____ . Set hitch ball to this height.

Figure 1

Attach Head to Shank:

Insert the adjustable shank into the receiver on the tow vehicle and secure it with the hitch pin and clip.

Insert the spacer rivet with washers into the back of the hitch head to pre-load the angle of the hitch head. Start with 5 spacer washers for most setups. If your actual tongue weight is higher than 90% of the hitch's max tongue weight rating, (i.e. $TW > 360$ lbs.), you may want to start with 6 spacer washers. Some setups with lighter tongue weights may only need 4 washers.

Slide the bolt channel around the shank and hold the hitch head so that the *top* of the hitch ball measures from the ground as closely as possible to the coupler height.

In some cases, the shank may need to be turned upward, or a specialty length shank may be needed so that ball can be placed at the correct height. See *Figure 2*.

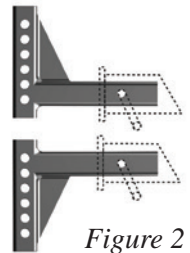


Figure 2

Observe where the **top slot** in the bolt channel aligns with the holes in the shank. See Figures 3a - 3b. If you can see any part of the shank hole that is lower than the bolt channel slot, drop the head down to align these holes for the initial setup. See Figure 3a.

If you cannot see the lower hole in the shank, raise the hitch head so that the top slot aligns with the shank hole slightly above it, and use this hole for the initial setup. See Figure 3b.

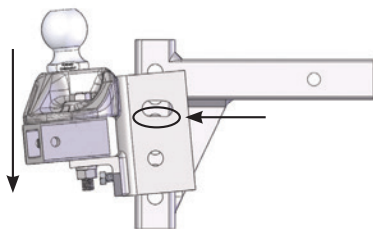


Figure 3a

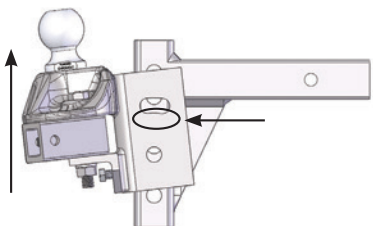


Figure 3b

Insert a 5/8" shank bolt with a flat washer through the top slot in the bolt channel and shank hole to hold the head at the correct height. Slide the flat washer, split (lock) washer, then nut onto the other side of the bolt, and hand tighten them. Then repeat this process for the bottom shank bolt. See Figure 4.

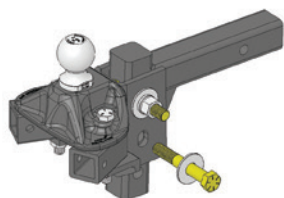


Figure 4

Use a wrench to tighten the angle set bolt until it comes into contact with the shank and lifts the head to where the spacer rivet also comes into solid contact with the shank. Tighten the angle set bolt an additional 1/2 turn. The hitch head should be angled down slightly. See Figure 5.

NOTE: The shank bolts will be fully tightened at the end of the set up and adjustment process.

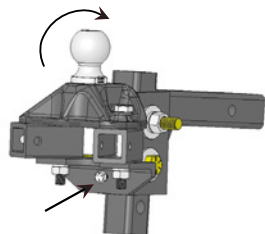


Figure 5

Step 4 - Sway Bracket Assembly:

Sway Bracket Location

Measure from the center of the coupler along the outside of the trailer frame, and place a mark at 32" on both sides. This is the center mark for the sway bracket assembly.

Check around the trailer frame and make sure that there are no gas lines, brake lines, or electrical wiring that could be affected by the installation of the link plates. If so, make sure these are re-routed or avoided and will not be disrupted or damaged by the link plate installation.

Placing the sway brackets centered at 32" back puts the least amount of stress on the trailer and hitch components, and provides the most comfortable ride. Sway brackets should be placed at 32" whenever possible.

In some cases where there is an obstruction at 32" that cannot be avoided, the link plates may be moved forward up to a minimum distance of 25" from the center of the coupler. *See Figure 6.*

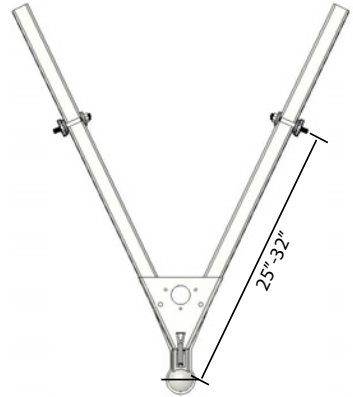


Figure 6

NOTICE

Do not use an impact wrench to tighten link plate or L-bracket bolts

Assemble Link Plates

Insert two 7/16" x 1-1/4" bolts through each outside link plate from the back side. The slot in the back should keep the head of the bolt from rotating.

Thread a 3/8" x 3-1/4" bolt through the single hole of the outside and inside link plates from the outside in. The head of the bolt should be against the outside link plate with the bolt pointing inward. Put a split washer on the bolt and thread a nut onto end of bolt a few turns. *See Figure 7.*

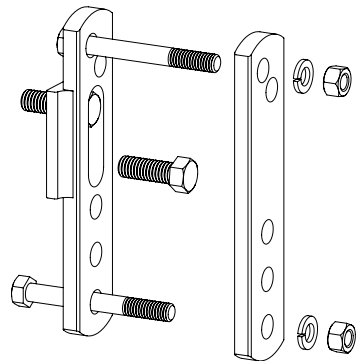


Figure 7

Identify your coupler style. See Figure 8.

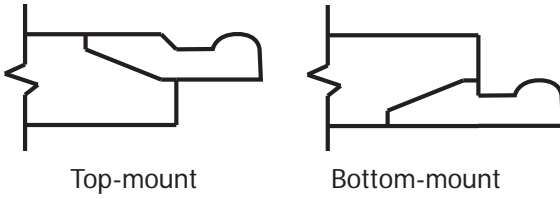


Figure 8

Top-mount: If your coupler is a **top-mount** coupler, place your link plates so that the single hole is above the frame, and the L-bracket studs are toward the top of the frame on the outside. See Figure 9a.

Bottom-mount: If your coupler is a **bottom-mount** coupler, or is a “V-nose” trailer, install your link plates ‘upside-down’ by placing your link plates so that the single hole is below the frame, the L-bracket studs are toward the bottom of the frame, and the bolt is held tightly against the bottom of the frame. See Figure 9b.

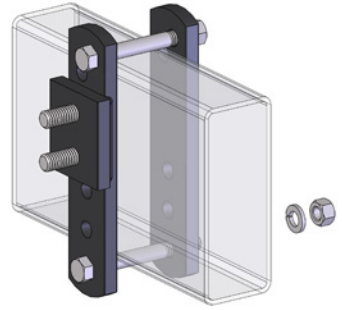


Figure 9a

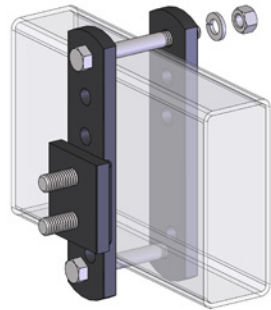


Figure 9b

Thread the second bolt through the link plate hole *closest to the trailer frame* with the head on the outside. See *Figure 10*. Put a split washer on the bolt and thread the nut onto it from the back side. Refer to *Figure 11* for bolt placement based on your trailer frame height.

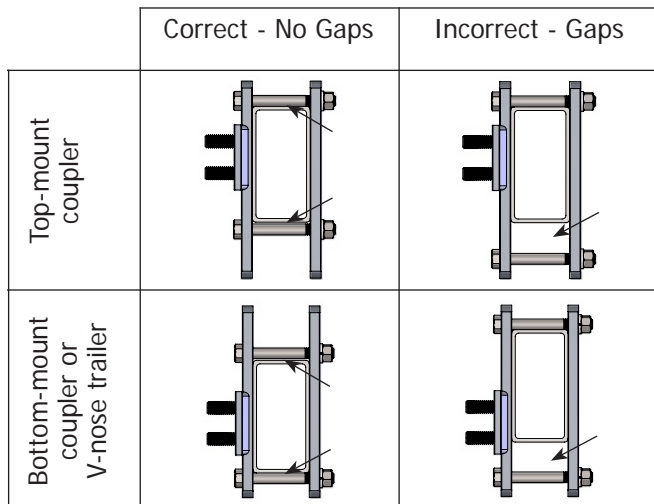


Figure 10

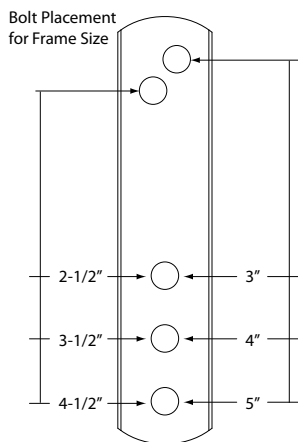


Figure 11

Pinch the link plates tight to the sides of the frame and hand tighten the nuts on the inside. See *Figure 12a*.

Tightening only one nut without first pinching the link plates to the frame may cause the inside link plate to bend when torqued completely. See *Figure 12b*.

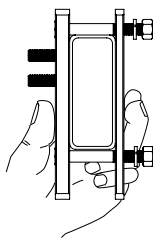


Figure 12a

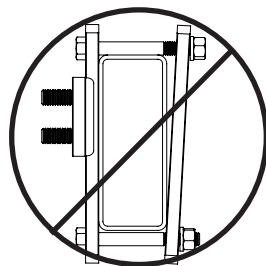


Figure 12b

After both nuts are finger tight, use a torque wrench to tighten all link plate bolts to 25-30 ft-lbs torque.

L-Bracket Installation

Slide the L-brackets onto the link plate studs with the spring arm plate facing away from the trailer. For the initial setup, leave 2 holes showing at the top above the studs and two below. *See Figure 13.* They may need to be adjusted up or down later to get good weight distribution. Thread on the nylock nuts and tighten them. When weight distribution is complete, these nuts should be torqued to 45 ft-lbs.

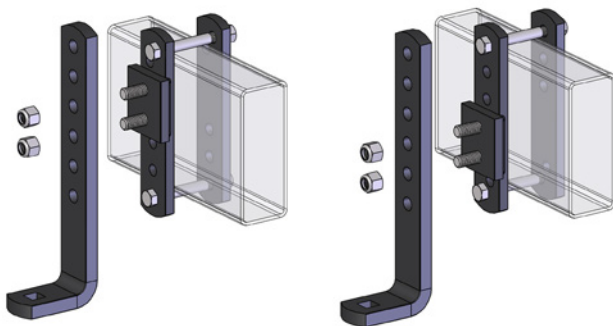


Figure 13

Step 5 - Spring Arm Setup:

⚠ WARNING

Never tow with loose socket bolts. Tighten socket bolts to a minimum of 60 ft-lbs torque before each towing session.

NOTICE

Do not pound directly on the sockets to move them. Pounding may cause the sockets to crack or break. Use only the lever force of the spring arm to move tight sockets. Loosen the socket bolt if required. Re-tighten them once the socket has been moved.

Insert spring arms into the sockets in the hitch head. Insert the socket pin through the hole in the socket and spring arm, and secure it with the socket pin clip. You may need to use the spring arm as a lever to spread the sockets open. This is to allow the spring arms to be lifted and placed onto the L-bracket.

Step 6 - Weight Distribution Setup:

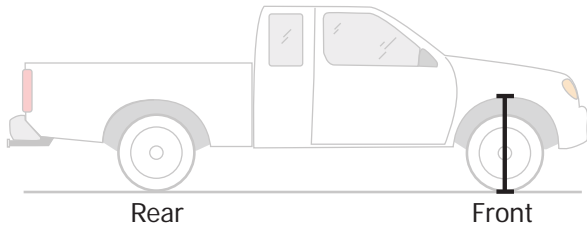
Use the following guidelines to set up and adjust your Equal-i-zer hitch for weight distribution. Good weight distribution is a critical component of the Equal-i-zer hitch setup. A hitch that is set up poorly for weight distribution will not perform like one that is set up well. Every tow vehicle and trailer combination will react differently to weight distribution.

To correctly set up weight distribution you must take 3 sets of measurements on your tow vehicle. First, measure without the trailer coupled. Next, measure with the trailer coupled, but with no weight distribution. Third, measure with the trailer coupled and the weight distribution bars tensioned.

Start by measuring the distance from the ground to the wheel well directly above the front axle with the trailer uncoupled. *See Figure 14.* Ideally, measure both driver and passenger sides, and use the average of these two.

Record this on **Line A** of the weight distribution setup table.

Measure from ground to fender through the center-line of the axle.



Weight Distribution Setup Table		FRONT	Example
A	Tow vehicle loaded for trip but still uncoupled from trailer		28"
B	Tow vehicle coupled but NO weight distribution		30"
Calculate height halfway between A and B $(A+B) \div 2 =$			29"
C	Tow vehicle coupled with weight distribution engaged. Should be at least halfway back to Line A . Higher than this may still be under adjusted. Lower than Line A is over adjusted. See Figure 19.		28"-29" Good <hr/> 29"-30" Need More

Figure 14

Back the tow vehicle to the trailer and lower the coupler onto the ball. Lock the coupler and retract the tongue jack until it raises off the ground about 1" so that the full tongue weight of the trailer is resting on the hitch.

Measure the tow vehicle height again exactly above the front axle, to the same point that you measured to earlier when uncoupled. Record this on **Line B** of the weight distribution setup table on page 16.

With the tow vehicle still coupled to the trailer, use the tongue jack to **lift both vehicles** until you can swing the spring arms into place over the L-brackets. See Figure 15. Then retract the jack.

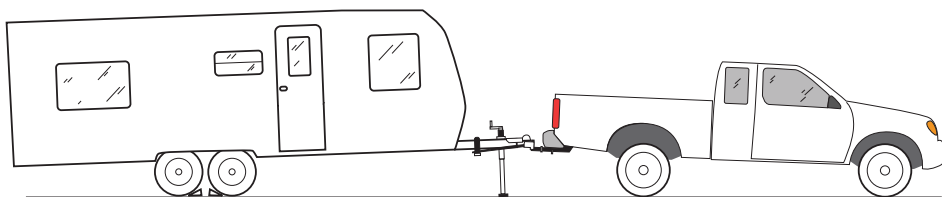


Figure 15

Assemble the snap-up lever. See Figure 16. Do not try to lift the spring arms into place with only the hook part of the lever.

If you reach the top of the jack before the spring arms will swing into position, you can use the Snap-up Lever to lift the spring arms up and onto the L-brackets. Use the L-pins and clips to secure the spring arms on the L-brackets. See Figure 17-18.

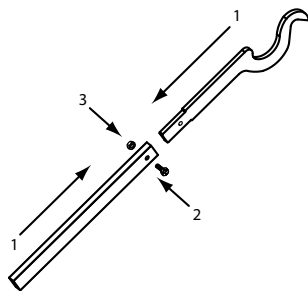


Figure 16

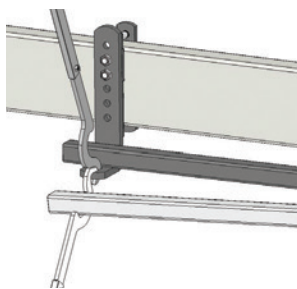


Figure 17

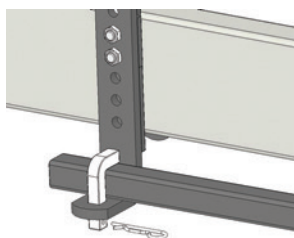


Figure 18

With the spring arms resting on the L-bracket and the trailer and tow vehicle in line with each other, check to make sure that there is a minimum of 3" from the end of the spring arms to the center of the link plates. See *Figure 19*. If necessary, unload the spring arms, then move and re-tighten the sway bracket assembly.

NOTE: Refer to Appendix B, "Weight Distribution Adjustments" on page 28 for a more detailed description of factors that influence weight distribution setup and adjustment.

With the trailer coupled and weight distribution engaged (spring arms in place and jack retracted), re-measure the front wheel well height exactly as done before for lines A and B. Record this new measurement on **Line C** of the weight distribution setup table on page 16.

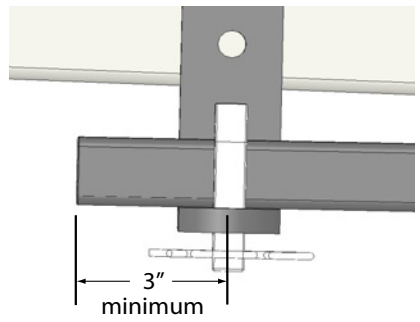
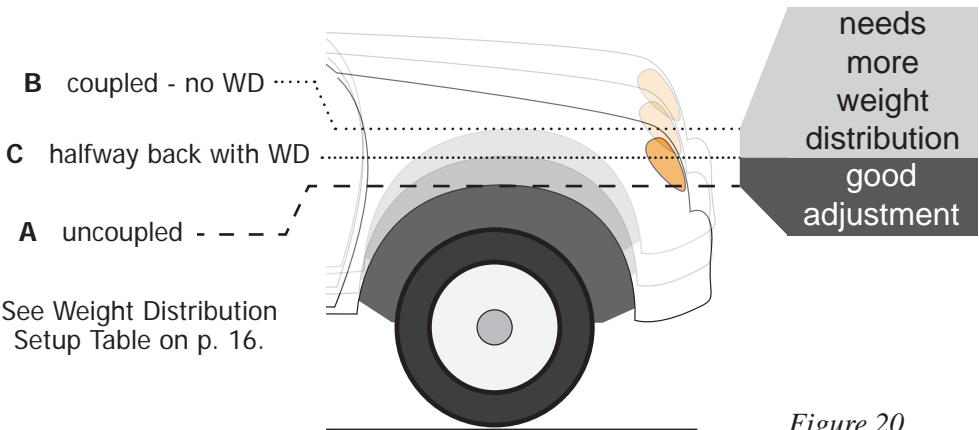
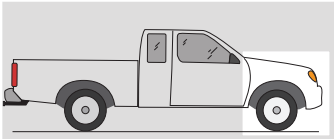


Figure 19



See Weight Distribution Setup Table on p. 16.

Figure 20

Step 7 - Weight Distribution Adjustments:

WARNING

Weight distribution is only one of many factors that influence sway. The operator is responsible for making necessary adjustments to all contributing factors in order to minimize sway.

Good adjustment:

You have most likely achieved good weight distribution adjustment if your measurement on Line C of the weight distribution setup table shows that front wheel well measurement is **at least halfway back** to the original uncoupled measurement. *See Line C on Weight Distribution Setup Table (p. 16) and Figure 20 (p. 18).* It should never be lower than Line A.

WARNING

Over or under adjusted weight distribution decreases tow vehicle stability.

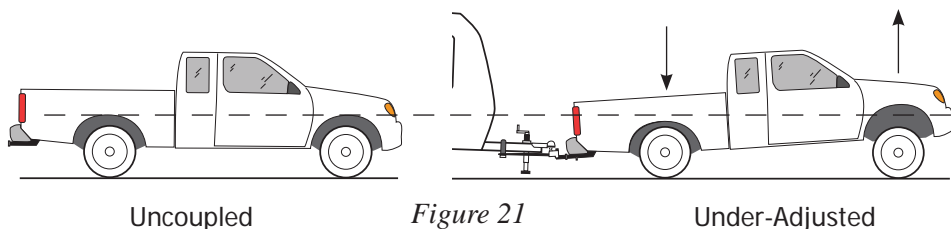
Under or Over Adjustment:

If the hitch is transferring too little or too much weight you must make adjustments to the hitch setup. For changes during the initial setup we recommend adding or removing spacer washers first to try and keep the spring arms parallel with the trailer frame. This gives you more adjustment options later if needed, and may also reduce some noise.

Once the maximum (8) or minimum (4) number of spacer washers has been reached, further adjustments can be made by raising or lowering the L-brackets. Minor adjustments later for changes in loading can usually be done by moving only the L-brackets.

NOTE: The distance from the tow vehicle rear axle to the hitch ball significantly affects how the tow vehicle reacts to weight distribution adjustments. The same washer or L-bracket change will have varying results on different vehicles.

Under adjustment occurs when there is not enough weight being transferred to the front axle of the tow vehicle. See Figure 21.



If C is still HIGHER THAN the calculated halfway point, you need MORE weight distribution adjustment. See Line C on Weight Distribution Setup Table, Figure 14. With an under-adjusted setup your hitch is not unloading the rear axle sufficiently, giving back as much steering control as it could, nor is it providing as much friction as it could to help reduce trailer sway.

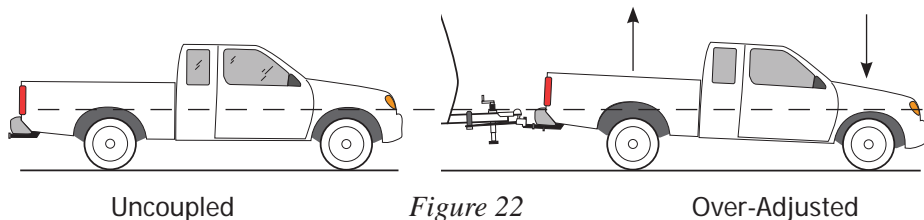
To correct under adjustment you must add more weight distribution force to the hitch by adding spacer washers, or raising the L-brackets.

If this is the initial set up, use the tongue jack to unload the spring arms. Remove the spring arms from the hitch head. Uncouple the trailer and pull tow vehicle forward. Remove the hitch head and *add* a spacer washer. Repeat Steps 6 and 7 to re-adjust and check weight distribution.

If you have reached the maximum number of spacer washers, or if adjusting temporarily due to a change in vehicle loading, use the tongue jack to unload the spring arms. *Raise* the L-brackets one hole. Move the spring arms back over the L-brackets and retract the tongue jack. Re-measure the wheel wells and check for proper weight distribution.

Repeat Steps 6 and 7 until the measurements show that the hitch is distributing weight well.

Over adjustment occurs when there is too much weight being transferred to the front axle of the tow vehicle. See Figure 22.



If C is LOWER than A, you need LESS weight distribution adjustment. See Line C on Weight Distribution Setup Table, Figure 14.

Over adjustment is a very dangerous situation where loss of control and jack-knifing is possible, especially in wet or slick road conditions.

To correct over adjustment you must take some of the weight distribution force out of the hitch by removing spacer washers, or lowering the L-brackets.

If this is the initial set up, use the tongue jack to unload the spring arms. Remove the spring arms from the hitch head. Uncouple the trailer and pull vehicle forward. Remove the hitch head and *remove* a spacer washer. Repeat Steps 6 and 7 to re-adjust and check weight distribution.

If you have reached the minimum number of spacer washers, or if adjusting temporarily due to a change in vehicle loading, use the tongue jack to unload the spring arms. Lower the L-brackets one hole. Move the spring arms back over the L-brackets and retract the tongue jack. Re-measure the wheel wells and check for proper weight distribution.

Repeat Steps 6 and 7 until the measurements show that the hitch is distributing weight well.

Step 8 - Trailer Pitch Adjustment:

After achieving a good weight distribution setup you may need to adjust the pitch (angle or attitude) of the trailer. Step back and look at the trailer to see if the front appears to be tipped up or down excessively.

Measure the FRONT and REAR of the trailer again at the same points you did when setting the trailer parallel to the ground in Step 3. Record these measurements on the *Trailer Pitch Adjustment* chart below.

Find the difference between the highest and lowest heights.

Trailer Pitch Adjustment		Example
Front Measurement		22"
Back Measurement		- 18"
Difference between highest and lowest		= 4"

If the difference between the highest and lowest measurement is 1-1/4" or more, you should try adjusting the hitch ball height. If it is less than 1-1/4" different, complete Step 9 and tow a short distance with this setup to see how it handles before making any adjustments.

If the *higher* measurement is the front of the trailer, move the hitch head down 1 hole position on the shank. If the *lower* measurement is the front of the trailer, move the hitch head up 1 hole position on the shank.

Adjustments made to ball height directly affect how weight is distributed. Moving it **up slightly decreases** the amount of weight distribution you get from a particular setup. Moving it **down slightly increases** the weight distribution from that same setup.

After making an adjustment to the ball height, return to Step 6 and check the weight distribution measurements again. Re-adjust the weight distribution if necessary until it falls within the guidelines. Re-check the trailer pitch again to see what difference has been made. You may need to try several setups before you get one that has a good combination of weight distribution and trailer pitch.

Step 9 - Final Tightening:

WARNING

Do not tow your trailer until all bolts and nuts have been checked and properly tightened, and all pins and clips are securely in place.

Towing with loose bolts for an extended period of time can cause abnormal stress on the hitch resulting in accident, severe injury, and property damage.

After you have made proper adjustments to the hitch to give your setup good weight distribution and trailer pitch, all bolts on the hitch must be tightened completely.

Use your tongue jack to lift the trailer and tow vehicle, and disconnect the spring arms. Lower the tongue jack and uncouple the trailer from the tow vehicle. Pull the tow vehicle forward a few feet to give yourself working room to tighten the hitch bolts.

Remove the pins and clips from the spring arms, and remove the spring arms from the hitch head. Remove the hitch pin and clip. Slide the hitch head and shank from the receiver, turn the assembly upside-down, and place it back into the receiver tube. Replace the hitch pin to secure it temporarily.

Use the torque wrench to tighten both 5/8" shank bolts to 180 ft-lbs.

Snug the angle set bolt to the shank again if needed. Do not over-tighten the angle set bolt.

Check that all link plate bolts are tightened to between 25 and 30 ft-lbs.

Check the nuts holding the L-brackets to make sure they are torqued to 45 ft-lbs.

Remove the hitch pin, and return the head and shank to the upright position. Replace the spring arms, and secure them with the socket pins and clips. Couple the trailer again to the tow vehicle, and put the spring arms back in place on the L-brackets. Secure each with an L-pin and clip.

You are now ready to take the trailer out for a tow. Remember to connect the breakaway cable, safety chains, and electrical cables. Make sure your trailer brake control is correctly adjusted. Retract the jack completely. Tow carefully at first and pay attention to how it feels. Follow the **Troubleshooting Guide in Appendix A** which suggests ways that can help improve your towing experience if needed.

Step 10 - Regular Maintenance:

The friction surfaces of the head and sockets should be kept clean and well lubricated with a good quality multi-purpose or bearing grease. We recommend Equal-i-zer® high performance lubricant. These are the surfaces where the arm sockets rub against the top and bottom plates of the head.

See *Figure 23*.

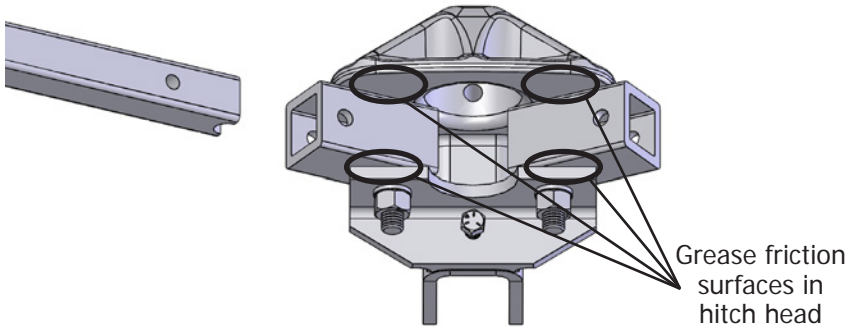


Figure 23

They should be lubricated before each trip. Check for damage or abnormal wear at the beginning of each towing day and replace if necessary. Clean dirt and road grit from all friction surfaces regularly.

All nuts and bolts should be checked before each towing day and re-tightened or replaced if necessary.

Pay special attention to the angle set bolt. There is a break-in period for each hitch and towing configuration. This period is not the same for every towing configuration. With use, the spacer washers and rivet may compact

slightly leaving a small gap between the angle set bolt and the shank. The bolt should be checked carefully through the break-in period and re-tightened as explained in Step 8. You will notice that over time the need to re-tighten the angle set bolt will decrease, but you should still check it regularly before each towing day as part of your hook-up routine.

Store your hitch out of the weather when not in use. Keep it clean and free from rust. From time to time, use a good quality rust inhibiting spray paint to touch up the finish and keep it looking good. Do not paint over the warning stickers. If the warning stickers become worn or unreadable, contact Progress Mfg. Inc. for free replacement.

Noise:

Noise is a normal occurrence when towing a trailer and using any weight distribution or sway control hitch.

The majority of hitch noise can be eliminated by lubricating the friction surfaces of the head as shown in *Figure 23*.

Service Tech and Experienced Installer Check List

Step 1	
	Park the loaded tow vehicle and trailer on a level surface.
Step 2	
	Install the hitch ball. If already installed, check that the ball is in good condition and is tight on the hitch head.
Step 3	
	Measure from the ground to the trailer coupler (step 3).
	Insert the adjustable shank into the receiver and secure it with the hitch pin and clip.
	Insert the spacer rivet with washers into the back of the hitch head to pre-load the angle of the hitch head.
	Slide the hitch head bolt channel around the shank and hold the hitch head so that the top of the hitch ball measures from the ground as close as possible to the coupler height. (step 3)
	Insert the shank bolts, washers, and nuts to attach the head to the shank. Tighten the angle set bolt.
Step 4	
	Determine which coupler style you have before installing the link plates.
	Measure 32" from the coupler on the trailer frame. The link plate centers should be installed between 25"-32" on the trailer frame.
	Pinch the link plates tight to the frame and tighten bolts evenly.
	Install the L-brackets.
Step 5	
	Take initial measurements at the front axle for weight distribution.
	Lift spring arms onto the L-bracket.
	Retract tongue jack until the weight of the trailer rests on the tow vehicle.
Step 6	
	Use Step 6 to check for good weight distribution and make needed adjustments.
Step 7	
	Use Step 7 to check the trailer pitch and make adjustments.
Step 8	
	Check that all bolts and nuts have been properly tightened and that all pins and clips are securely in place.
Step 9	
	Give Owner's Manual to customer.

Appendix A - Troubleshooting Guide

Problem	Possible Cause	Suggested Correction
<p>Trailer Sway</p> <p>Remember, trailer sway is caused by the combined vehicle (tow-vehicle / trailer) configuration, loading, or outside forces.</p>	Not enough weight distribution	Follow “under-adjustment” guidelines to add spacer washers or raise L-bracket.
	Light tongue weight	Weigh loaded trailer and tongue weight. Tongue weight should typically be at least 10% of Gross Trailer Weight. Follow trailer mfg. guidelines for tongue weight. Reposition load in trailer as needed. Remove cargo carriers or 2nd trailer from rear of trailer.
	Improperly rated or Underinflated tires	Check tires for proper rating and inflation. Replace and inflate if needed.
	Loose socket bolts	Make sure socket bolts are tightened to between 60 and 100 ft-lbs torque.
	Tow capacity exceeded	Make sure your tow vehicle is rated to tow your trailer’s Tongue Weight and Gross Vehicle Weight. If it’s not, DO NOT TOW.
	Hitch Undersized	Check to make sure your Gross Trailer Weight and Tongue Weight do not exceed your hitch’s ratings. If either does, DO NOT TOW. Purchase an Equal-i-zer® hitch with a higher rating.
Tow Vehicle Too High in Front	Not enough weight distributed	Follow “under-adjustment” guidelines to add spacer washers or raise L-bracket.
Front End Feels “Floaty”	Not enough weight distributed	Follow “under-adjustment” guidelines to add spacer washers or raise L-bracket.

Trailer is Too Low or Too High in Front (More than 1-1/2" from level)	Incorrect shank causes improper hitch ball height	Consult your local Equal-i-zer hitch dealer about using a specialty length shank.
	Improper hitch ball height with correct shank	Follow Step 8 - Trailer Pitch Adjustment section to change ball height.
Bent or broken L-bracket, L-pin, or Link Plate	Link Plates installed too far back from hitch ball center	Follow Step 4 and set center of Link Plates between 25"- 32" from the center of the coupler.
	Link Plates not installed "upside down" for bottom-mount coupler	Follow Step 4 to install Link Plates correctly.
"Walking" Sway Bracket Assembly	Link Plates not tight enough	Follow Step 4 to tighten Link Plates correctly.
Creaking and Groaning Noise	Dirty or dry friction surfaces in hitch head.	Clean and lubricate friction surfaces of head and sockets using Equal-i-zer High Performance Lubricant (Step 10).
	Normal	Some noise will always be present with the use of an Equal-i-zer Integrated Sway Control hitch. It means you are getting a lot of good sway-dampening friction.

Appendix B - Weight Distribution Adjustments:

You should carefully consider the following items and their effects when setting up initially and when adjusting your hitch before each trip:

- **Rear axle to hitch ball distance:** A longer distance here will transfer less weight distribution than a shorter distance with the same washer and L-bracket settings.
- **Vehicle suspension:** Soft suspensions, such as an SUV will react farther and faster to weight distribution adjustments than stiff suspensions like a 3/4 ton pickup. For a smoother ride, some vehicle suspensions are designed to be very soft with the first few pounds of payload, and to then stiffen as the load increases. This means that initially the suspensions move a long way with very little weight applied, then later move much less, even with a significant change in applied weight.
- **Trailer length:** Longer trailers will try to force distributed weight forward to the tow vehicle before absorbing it into the trailer suspension. Shorter trailers absorb more of the distributed weight into their suspensions.
- **Tongue weight:** To operate effectively, your Equal-i-zer hitch should have a good measure of tongue weight. This provides the sway resisting friction force on the L-brackets and head sockets of the hitch that give it the ability to resist movement and thus to resist trailer sway.
- **Trailer loading:** This is one of the most significant factors that influences trailer sway. Most trailers are designed to have a tongue weight of between 10% and 15% of the overall trailer weight. Always follow the trailer manufacturer's guidelines for tongue weight. Trailers that are "back-end heavy" can often cause trailer sway. Trailer loading changes tongue weight dramatically, and loading can change dramatically from one trip to the next, or even during the course of a short weekend trip.

For example: full water and propane tanks that are tongue weight when you leave can become full waste tanks that subtract tongue weight for the return trip. Shifting just 40 gallons of water from the front to the back of your trailer can change 330 lbs. of positive tongue weight to 330 lbs. of negative tongue weight. Toy haulers without toys are designed to have very heavy dry (empty) tongue weights so that when they are loaded with toys they become a more balanced load.

Cargo carriers, bike racks, and second trailers attached to the rear bumper of a trailer add weight to the rear of the trailer that automatically subtracts tongue weight. We recommend that you do not add weight of any form to the rear bumper of your trailer. We also recommend that you do

not tow a second trailer under any circumstance.

- Trailer coupled attitude: Attitude or pitch refers to the angle that the trailer is tipped to. It is generally accepted that a trailer should be towed sitting parallel to the ground, or with the front (coupler) tipped slightly down. The front tipped too far up or down may be an indication of improper trailer loading, or a need to adjust the ball height or weight distribution settings.
- Vehicle weight ratings: Each trailer and tow vehicle has a maximum Gross Vehicle Weight Rating (GVWR). The tow vehicle and towing equipment, including receiver, shank, hitch, and hitch ball all have maximum weight ratings for tongue weight and trailer weight. Tow vehicle and trailer also have maximum axle weight ratings. NEVER exceed any of these ratings.

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- Puts itself away
- No pins to pull or insert
- No bending over or kneeling down



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THE ORIGINAL
Equal-i-zer[®]
SWAY CONTROL HITCH



High Performance Lubricant

Easy application tube lets you put just the right amount of lubricant right where you need it without making a mess. Great for hitch ball and Equal-i-zer[®] arm socket applications.



Replacement Pins & Clips

OEM replacement pins and clips come in a convenient clamshell package. Keep an extra set on hand just in case one goes missing. Parts available include: L-pins, Socket pins, hitch pins, and clips.

FASTWAY
Trailer Products

The **Fastway**[®] **ONEstep**[™] is convenient and easy to use while standing. Simply grasp the cable handle and step down on the scissor arms to firmly lock your trailer in place. Lean the cable against the tire. To remove pull up on the cable and the chock slides right out. Quickly and easily adjusts from 16" to 24" long to fit most tandem axle trailers. Great for travel trailers, 5th wheels, boats, cargo and horse trailers.



ONEstep[™]
tandem axle wheel chock
