Integrated 4-Point Sway Control™ & Weight Distribution Give You Superior Performance

OWNER'S MANUAL

EQUAL-I-ZER HITCH

The Best Protection For Your Journey™



Hitch Ball
Not Included

MADE IN THE U.S.A.

Model	Max tongue weight lb	Max trailer weight lb
90-00-0600	600	6,000
90-00-1000	1000	10,000
90-00-1200	1,200	12,000
90-00-1400	1,400	14,000

Your model # can be found on the spring arm stickers.
Make a note of it here for future reference.

Read the entire manual before starting installation.

Dealers: Please pass this manual on to the end user after hitch installation.

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Tools needed for hitch assembly and installation

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

- 1-1/8" box-end wrench (shank bolts)
- 1-1/8" socket wrench (shank bolts)
- 3/4" box-end or socket wrench (link plates and L-brackets)
- 5/8" socket or box-end wrench (angle set bolt)
- Measuring tape
- Pencil
- Torque wrench capable of 320 ft-lb of torque (shank bolts)
- Torque wrench capable of 75 ft-lb of torque (sway bracket assembly)

Recommended tools for installing the hitch ball

- 1-7/8" thin-wall socket (available from Progress Mfg. Inc.) and 4" extension
- Torque wrench capable of 430 ft-lb of torque (or higher if hitch ball manufacturer specifies)

Attention Hitch Owner

Replacement

For a replacement copy of this manual, download a copy from equalizerhitch.com or by calling Customer Support at 800-478-5578.

Keep this manual

Keep this manual in a safe place as a reference for regular adjustment and maintenance.

Further assistance

If you ever need help with your Equal-i-zer® hitch, contact a qualified Equal-i-zer hitch dealer in your area or Progress Mfg. Inc. Customer Support at: 800-478-5578 or by email at: support@equalizerhitch.com.

Thank you

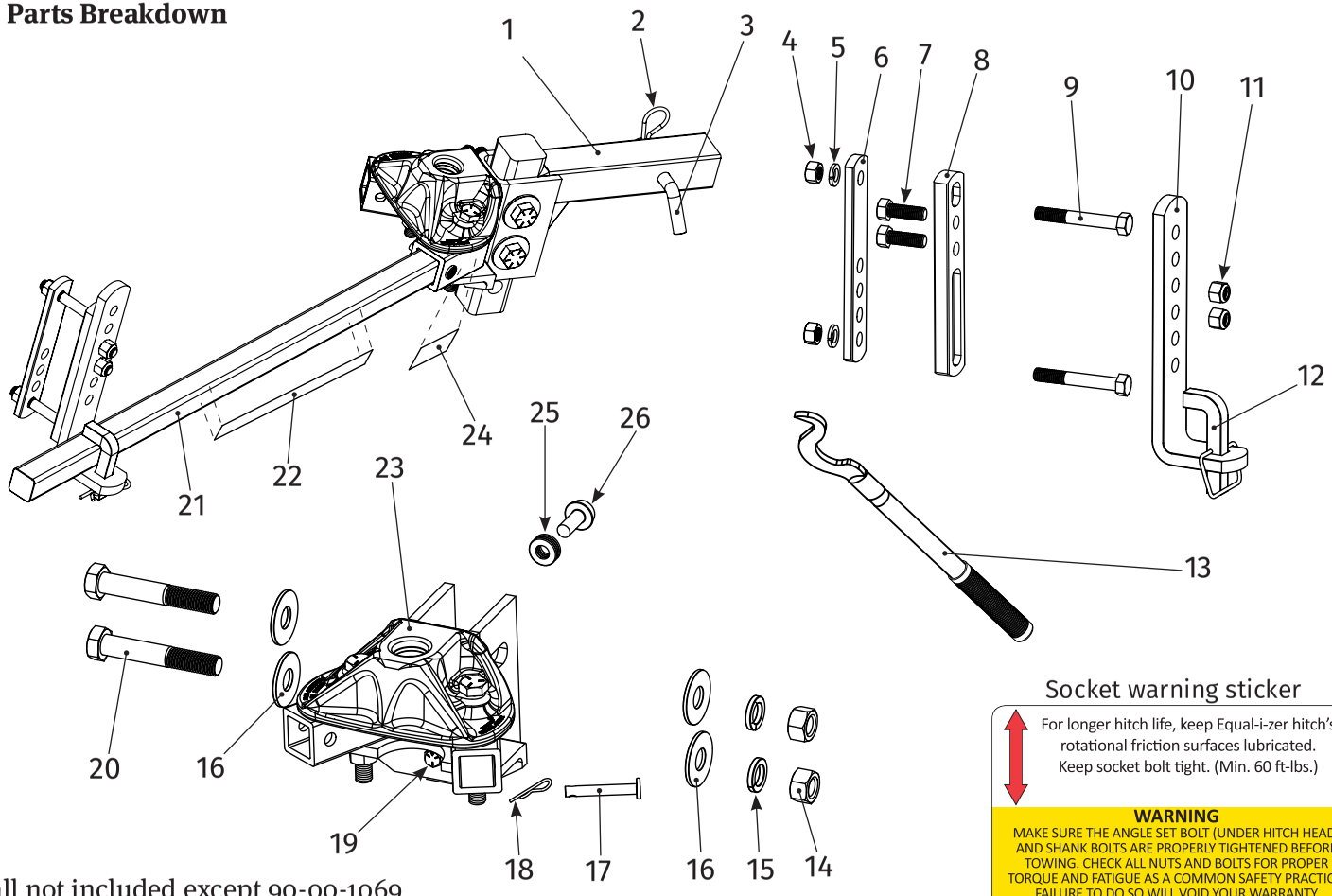
Congratulations on your purchase of The Original Equal-i-zer® Sway Control Hitch, the safest and best performing sway control hitch available. Thank you for your purchase and welcome to the Equal-i-zer hitch family. We appreciate your business and constantly strive to exceed your expectations. Read this owner's manual thoroughly to become familiar with proper setup and maintenance procedures to ensure that your Equal-i-zer hitch will give you maximum performance and years of service.

We wish you safe and happy towing,

-The Employees of Progress Mfg. Inc.

PROGRESS MFG. INC.

Parts Breakdown



Hitch ball not included except 90-00-1069

Socket warning sticker

Item #	Part Number*	Part Description	Qty.
1	90-02-4100	Adjustable shank	1
2	90-04-9224	Hitch pin clip	1
3	90-03-9220	Hitch pin	1
4	90-04-9228	1/2” nut (grade 5)	4
5	90-04-9290	1/2” lock washer	4
6	90-02-5200	Inside link plate	2
7	90-04-9281	1/2” x 1-1/2” bolt (grade 5)	4
8	90-02-5370	Outside link plate	2
9	90-04-9270	1/2” x 3-1/2” bolt (grade 5)	4
10	90-02-5150	L-bracket	2
11	90-04-9286	1/2” nylock nut (grade 5)	4
12	90-03-9230	Snap L-pin	2
13	95-01-6000	Snap-up lever (complete)	1
14	90-04-9126	3/4” nut (grade 8)	2
15	90-04-9120	3/4” lock washer	2
16	90-04-9115	3/4” washer	4
17	90-03-9212	Socket pin	2
18	90-04-9216	Socket pin clip	2

Item #	Part Number*	Part Description	Qty.
19	90-03-9700 90-03-9708	Angle set bolt (6K - 12K) 7/16” x 1-1/2” (grade 5) (14K) 1/2” x 1-3/4” (grade 8)	1
20	90-04-9131	3/4” x 5” bolt (grade 8)	2
21	90-02-0699 90-02-1099 90-02-1299 90-02-1499	6,000 lb spring arm 10,000 lb spring arm 12,000 lb spring arm 14,000 lb spring arm	2
22	BD064 BD104 BD124 BD144	6K arm sticker 10K arm sticker 12K arm sticker 14K arm sticker	2
23	90-02-0600 90-02-1000 90-02-1200 90-02-1400	6K hitch head 10K hitch head 12K hitch head 14K hitch head	1
24	BD035	Socket warning sticker	1
25	90-04-9110	Spacer washer	8
26	90-03-9105	Spacer rivet	1

* Part number displayed is for single (1) individual piece.

Each complete hitch contains two spring arms. These arms are specifically sized for a hitch head of the same rating. Spring arms will not fit a hitch head of a different rating.

Spring arm sticker

ATTENTION

It is the driver's responsibility to read and understand product instructions and proper use, and to make necessary adjustments to their driving habits, trailer, tow vehicle, and towing equipment to avoid trailer sway. Trailer sway has many causes, including: improper trailer loading, tire pressure, driving techniques, speed, passing vehicles, weather conditions, road conditions, and others. There is no 100% qualitative measurement of trailer sway or sway control. Users must exercise caution at all times while towing a trailer and abide by all traffic laws.

4-POINT SWAY CONTROL™

THE ORIGINAL Equal-i-zer® SWAY CONTROL HITCH

MADE IN THE USA
Model# **90-00-1000**
Max. Tongue Weight **1,000 lb**
Max. Trailer Weight **10,000 lb**
Meets SAE J684

Equal-i-zer® is a product of Progress Mfg. Inc. For a copy of the hitch instructions call Progress Mfg. Inc. at 800-478-5578 or visit:
equalizerhitch.com

Important Safety Information

Failure to follow all safety warnings may result in severe injury or death.

⚠WARNING

Read, understand, and follow all safety warnings, setup, use, and maintenance instructions of your trailer, tow vehicle, and hitching equipment before installing your hitch or towing your trailer.

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 and arm sockets.

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

⚠CAUTION

Do not loosen or remove any part of the hitch while the hitch is under load. Use the tongue jack to take the tension off the spring arms before removing L-pins.

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.

Important Hitch Information

Weight Distribution

Weight distribution is the ability of a hitch to transfer load from the rear axle of the tow vehicle to the front axle of the tow vehicle and to the trailer axles. Without weight distribution the tow vehicle "teeter-totters" on the rear axle of the tow vehicle, and unloads 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 4-Point Sway Control™ (ISC) feature of your Equal-i-zer hitch. As the tongue weight gets distributed, it 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 sometimes happens when you encounter a gust of wind or a passing semi-truck. When set up well and properly adjusted for your load, the Equal-i-zer will 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 geometry and suspension. It is not likely that a good setup for one vehicle combination will work well 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 the 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 gray 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 - Getting Things Ready

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.

Ideally, when 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. If

fully-loaded is not possible, set the hitch up for the trailer as-is, and make adjustments later if needed.

Check and inflate the tires on both the tow vehicle and trailer to their proper pressure before setting up the hitch.

Tow vehicle "auto-level" systems should also be disabled or turned off temporarily. Suspension air bags should be inflated to their desired towing pressure **before** hitch setup. Inflating rear axle air bags after setup will most likely decrease the amount of weight distribution provided by the hitch.

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 threaded shank longer than 2-3/8" may damage the Equal-i-zer hitch head and could void your warranty.

Install a properly-sized hitch ball onto the hitch head. The hitch ball diameter must match the 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 diameter 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 top of the hitch ball should initially be placed between 0" and 1" above this height. See Figure 1.

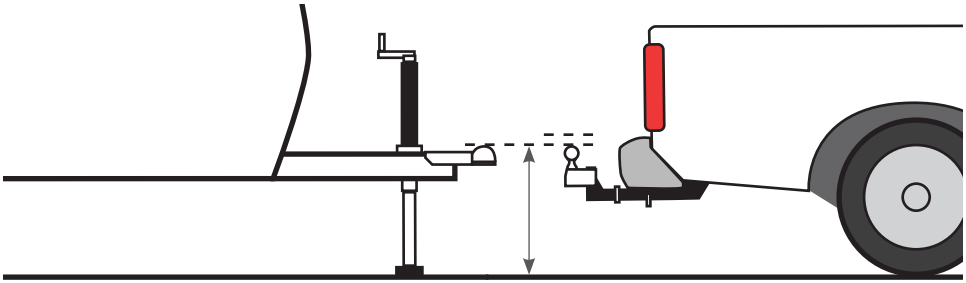


Figure 1 - Set top of hitch ball height between 0" and 1" above the top of the coupler height with trailer parallel to the ground.

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. See Figure 2. 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 (e.g. TW > 900 lb on a 1,000 lb hitch), you may want to start with 6 spacer washers or more as the tongue weight approaches the maximum hitch rating. Some setups with lighter tongue weights may only need 4 spacer washers.

Slide the bolt channel around the shank and hold the hitch head so that the top of the hitch ball is between 0" and 1" above the top of the coupler height.

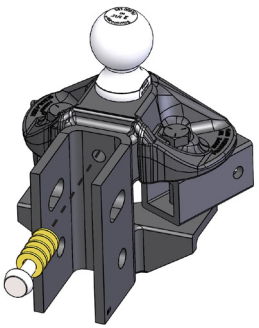


Figure 2

In some cases, the shank may need to be turned upward, or a specialty length shank may be needed so that the ball can be placed at the correct height. See Figure 3.

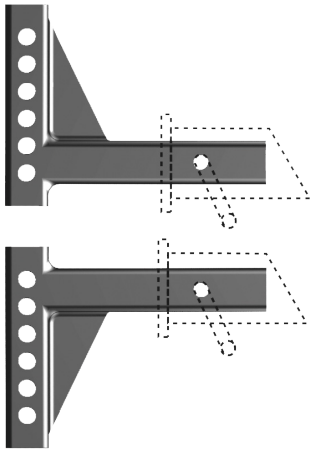


Figure 3

Insert a 3/4” shank bolt with a flat washer through the bottom 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 finger tighten them. Then repeat this process for the top shank bolt. See Figure 4.

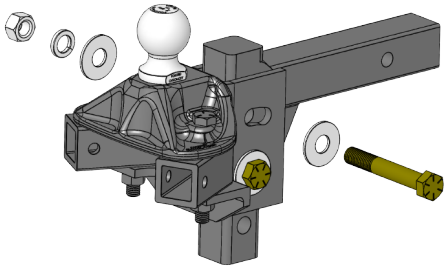


Figure 4

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.

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

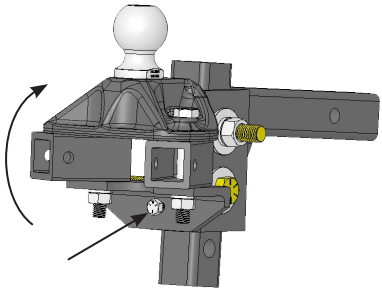


Figure 5

Extended bumper guards, truck campers, or rear mounted spare tires can limit turning radius and may lead to a collision between tow vehicle and trailer in a tight turn unless a longer shank is used. If you are not able to turn tightly with the standard length shank, consult with your dealer about purchasing a longer specialty shank.

Step 4 - Sway Bracket Assembly

Sway Bracket Location

Measure from the center of the coupler along 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 easily moved, like a battery rail or propane tank support, the ink plates may be moved forward toward the coupler to a minimum distance no closer than 27" from the coupler center. See Figure 6.

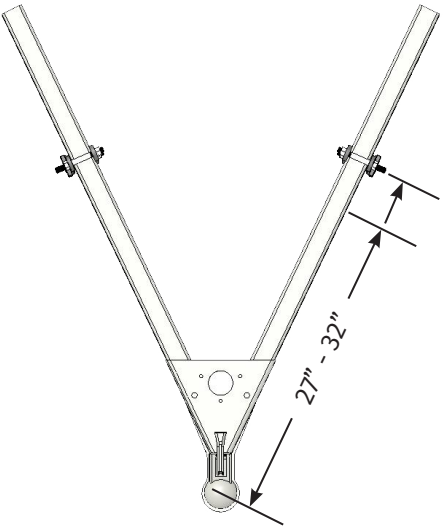


Figure 6 - 32" is optimum. Forward to 27" is acceptable in some cases.

⚠CAUTION

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

Assemble Link Plates

Insert two 1/2" x 1-1/2" bolts through the outside link plate from the back side. The head of the bolts should fit completely inside the pocket on the back. See Figure 7.

Insert one 1/2" x 3-1/2" bolt through the single hole on the outside link plate, and the single hole on the inside link plate. The head of the bolt should fit into the pocket of the outside link plate.

Slide on a split washer, and then thread on the 1/2" nut a few turns.

Identify your coupler style. See Figure 8.

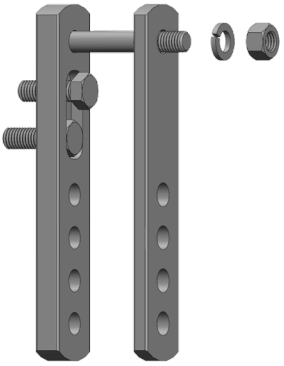


Figure 7

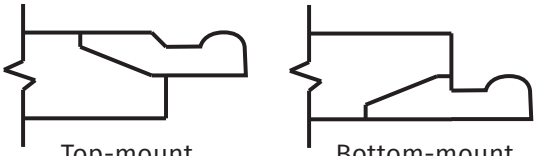


Figure 8

Top-mount

If your trailer has a top-mounted coupler, place the 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 9.

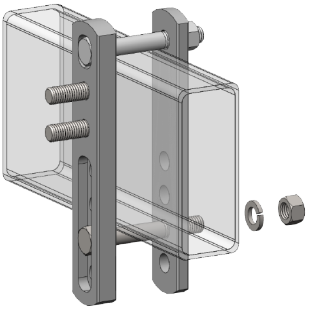


Figure 9

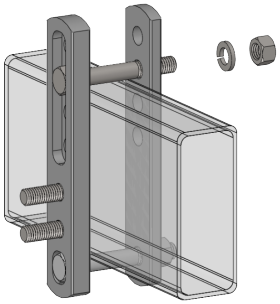


Figure 10

Bottom-mount

If your trailer has a bottom-mounted coupler, is a V-nose trailer, or has some other obstacle that makes installing the link plates in the upright position difficult, install the link plates upside down so that the single hole is below the frame, and the L-bracket studs are toward the bottom of the frame. See Figure 10.

Insert the second bolt through the link plates, slide on a split washer, then thread a 1/2" nut onto the bolt.

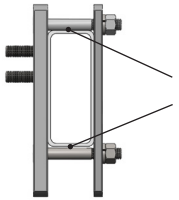
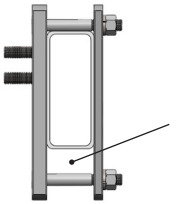
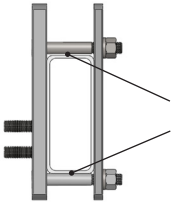
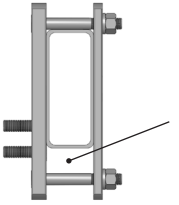
	Correct - No Gaps	Incorrect - Gap Between Frame and Bolt
Top-mount coupler		
Bottom-mount coupler or V-nose trailer		

Figure 11

There should not be a gap between the trailer frame and the link plate bolts above or below the frame. See Figure 11. Move electrical or propane lines if necessary.

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

Tightening only one nut without first pinching the link plates to the frame may cause the inside link plate to bend when torqued completely. It may also give you a torque wrench reading that indicates the link plates are tight, even though they are not. See Figure 13.

After both nuts are finger tight, use a torque wrench to tighten all link plate bolts to 65 ft-lb torque.

L-bracket Installation

To begin setup, slide the L-brackets onto the link plate studs with the studs in the two center holes, the toe facing away from the trailer. They may need to be adjusted up or down later to get good weight distribution.

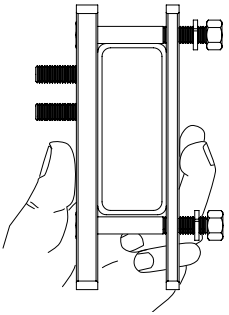


Figure 12

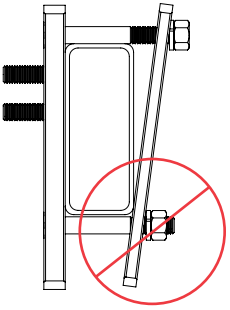


Figure 13

Thread on the nylock nuts and tighten them. See Figures 14 and 15.

When the weight distribution set up is complete these nuts should be torqued to 75 ft-lb.

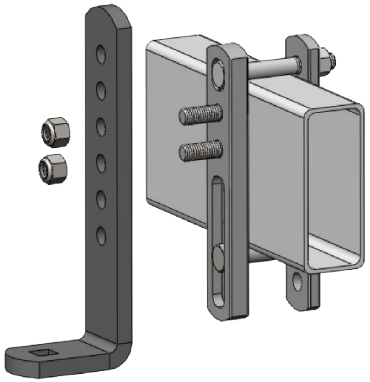


Figure 14 - Setup for top-mounted coupler.

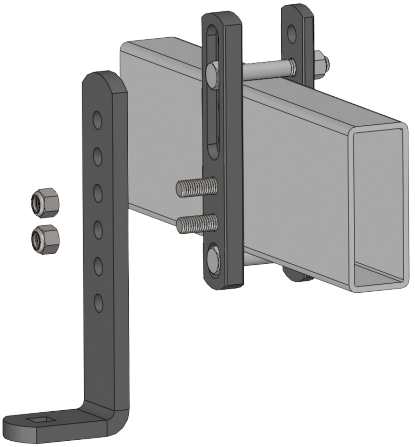


Figure 15 - Setup for bottom-mounted coupler.

Step 5 - Spring Arm Setup

⚠WARNING

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

NOTICE

Do not pound directly on the sockets to move them. Pounding may cause the sockets to crack or chip. 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 the spring arms into the sockets in the hitch head. The arms for the 12K and 14K models are side specific. They are notched slightly off-center, and should be inserted into the socket with the notch on the inside, and with the label facing outward.

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, which will allow the spring arms to be lifted and placed onto the L-bracket more easily.

Step 6 - Weight Distribution Setup

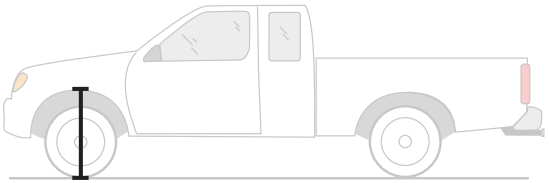
Use the following guidelines to set up and adjust your Equal-i-zer hitch for weight distribution. Good weight distribution is a critical component of the Equal-i-zer hitch setup. A hitch that is set up poorly for weight distribution will not perform like one that is set up well. Every tow vehicle and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

To correctly set up weight distribution you must take three measurements at the front of your tow vehicle. See Figure 16. 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. **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 the ground to the wheel well 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)÷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 Step 7 - Weight Distribution Adjustments.		28” - 29” Good 29” - 30” Need more

Figure 16

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 17. Then retract the jack.

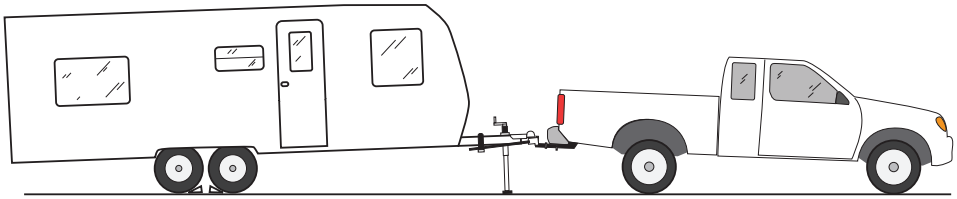


Figure 17 - Raise both tow vehicle and trailer, then move arms into place.

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 to secure the spring arms on the L-brackets. See Figures 18-19.

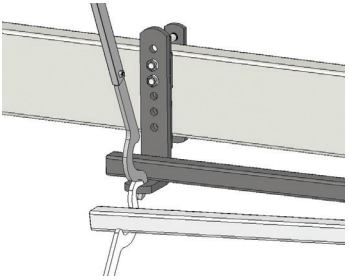


Figure 18

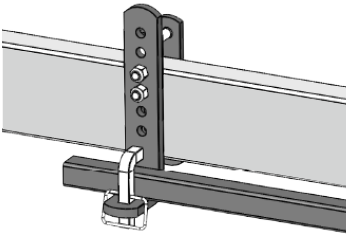


Figure 19

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 20. If necessary, unload the spring arms, then move and re-tighten the sway bracket assembly.

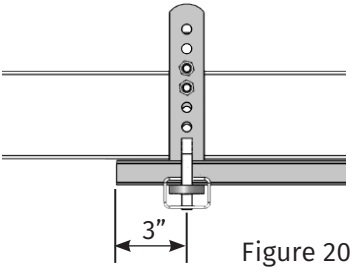


Figure 20

Refer to Appendix B “Weight Distribution Adjustments” on page 31 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.

Step 7 - Weight Distribution Adjustments

⚠WARNING

Weight distribution is only one of many things 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 the 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 21 below. **Line C** should never be lower than **line A**.

You can view a video of this process at youtube.com/equalizerhitch.

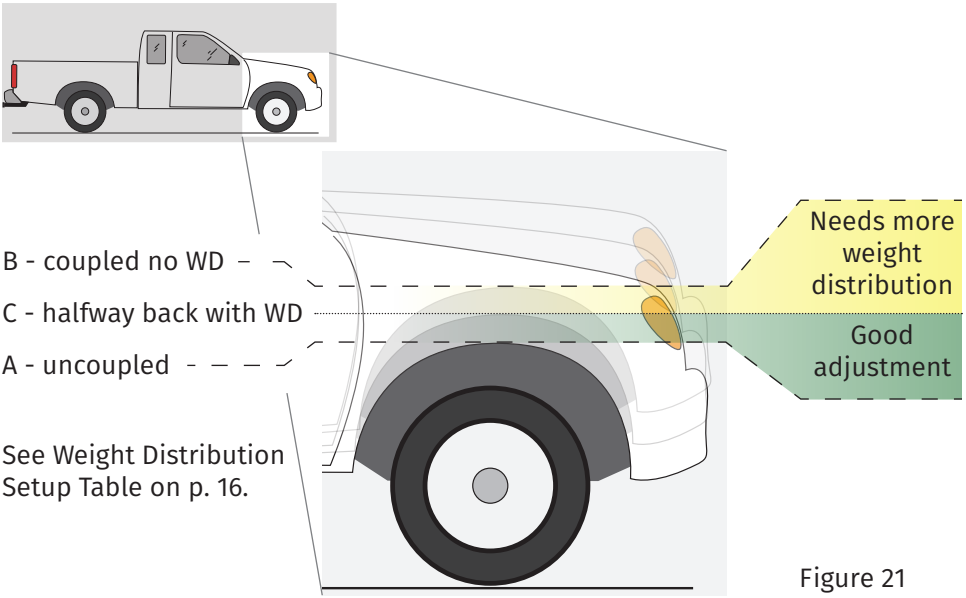


Figure 21

⚠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.

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 returned to the front axles of the tow vehicle. See Figure 22.

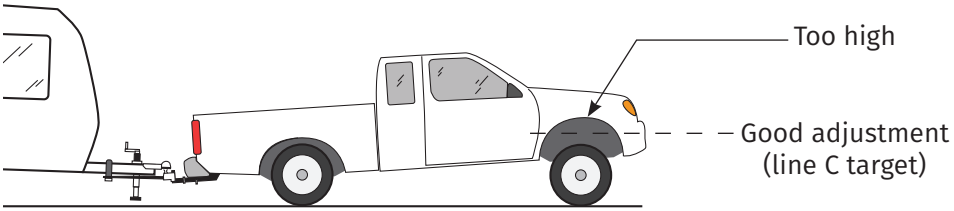


Figure 22 - Under-adjustment

If the measurement for line C is still higher than the calculated halfway point, you need more weight distribution adjustment, (see line C on Weight Distribution Setup Table, Figure 16). With an under-adjusted setup your hitch is not unloading the rear axle sufficiently, giving back as much steering and braking 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 Step 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 1 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 axles of the tow vehicle. See Figure 23.

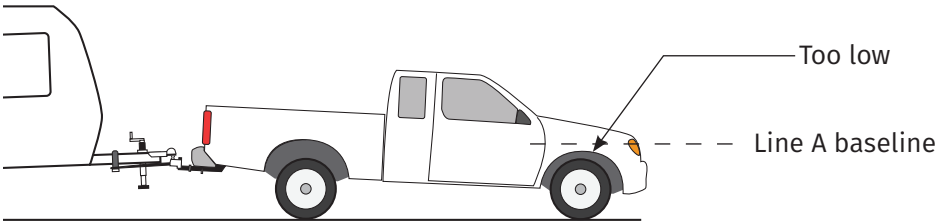


Figure 23 - Over-adjustment

If C is lower than A, you need less weight distribution adjustment (see line C on Weight Distribution Setup Table, Figure 16).

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 1 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. See Figure 24.

Find the difference between the highest and lowest heights.

Trailer Pitch Adjustment Chart		Example
Highest measurement		22”
Lowest measurement	-	- 18”
Difference between highest and lowest	=	= 4”

Figure 24

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 the ball height 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 the difference made by moving the hitch ball height. You may need to try several setups before you get one that shows good 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. Remove 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 3/4" shank bolts to 320 ft-lb.

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 65 ft-lb. Check the nuts holding the L-brackets to make sure they are torqued to 75 ft-lb. The socket bolts should be set between 60-100 ft-lb.

Torque Spec. Summary	
Shank bolts	320 ft-lb
Link plate bolts	65 ft-lb
L-bracket bolts	75 ft-lb
Socket bolts	60 – 100 ft-lb

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.

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

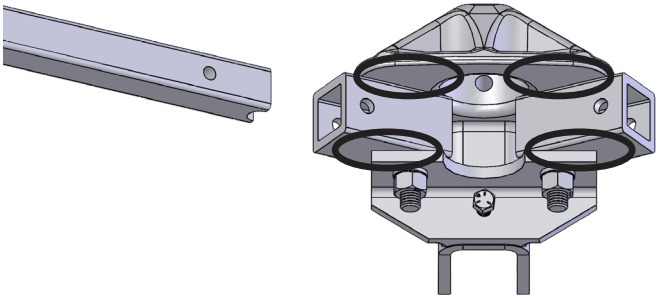


Figure 25 - Grease friction surfaces in hitch head.

The friction surfaces of the head and sockets should be kept clean and well lubricated with a good quality multi-purpose or bearing grease. Lubricate the surfaces where the arm sockets rub against the top and bottom plates of the head. See Figure 25. We recommend Equal-i-zer high performance lubricant.

Friction surfaces 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 be tightened or replaced if necessary.

Pay special attention to the angle set bolt. There is a break-in period unique to each hitch and 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 9. 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 Equal-i-zer hitch for free replacement.

Step 11 - Hitching Up

Chock the wheels on both sides of the trailer.

Place the Equal-i-zer hitch head in the receiver hitch, and pin it into place.

Back the tow vehicle up to the trailer, and align the hitch ball directly under the socket of the trailer coupler.

Set the parking brake.

Insert the Equal-i-zer hitch spring arms into the hitch head on both sides, and pin them into place. See Figure 26.

Spread the spring arms so that they are wide enough to clear the L-brackets as they are raised into place.

Lower the trailer coupler onto the hitch ball, and latch the coupler so that it's locked onto the ball. See Figure 27.

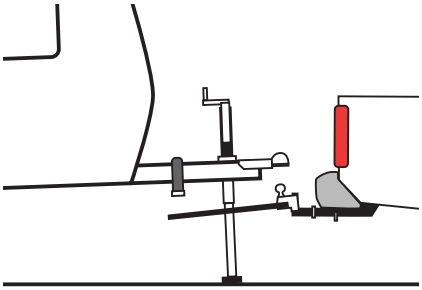


Figure 26

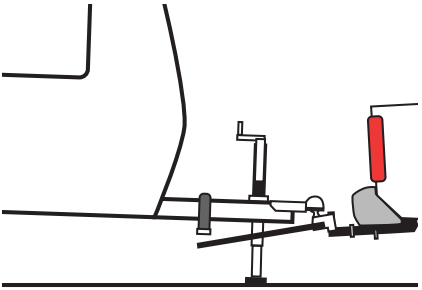


Figure 27

Using the tongue jack, raise the trailer and back of the tow vehicle together. See Figure 28. As you raise them, you will see the far ends of the spring arms raise up in relation to the L-brackets. Raise the trailer until the ends of the spring arms are high enough to be pushed into place over the L-brackets.

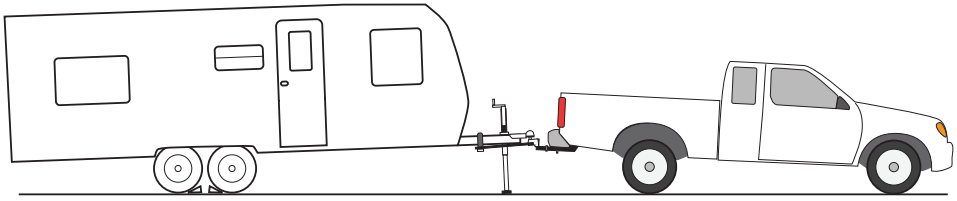


Figure 28

If you reach the end of the jack's travel, you may use the snap-up lever to lift the arms into place. Using a block or a jack extension foot, like the Fastway® Flip™ automatic jack foot, may be helpful to get the spring arms high enough to easily move them into place.

Swing the spring arms into place over the L-brackets, and secure them with the L-pins.

Retract the jack, lowering both the trailer and tow vehicle together, until the jack is completely retracted and ready for travel. See Figure 29. The spring arms are now engaged, and are distributing weight to the front axle of the tow vehicle, as well as providing the Equal-i-zer hitch's exclusive 4-Point Sway Control™ protection.

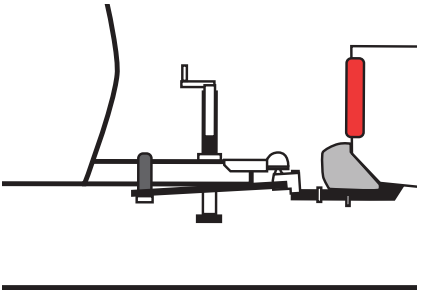


Figure 29

The hitch is now ready to tow.

Secure the safety chains, breakaway cable, and wiring harness. Remove the wheel chocks, and make any other necessary preparations before towing.

Step 12 - Unhitching

Maneuver the trailer into the desired position.

Set the parking brake, and chock the wheels on both sides of the trailer.

Unhook the safety chains, breakaway cable, and wiring harness from the tow vehicle.

With the trailer still coupled to the tow vehicle, extend the tongue jack on the trailer to lift both trailer and tow vehicle enough that the weight is lifted off the end of the Equal-i-zer hitch spring arms, and they are allowed to move freely side to side, without being held by the friction on the L-bracket plate. See Figure 30. A block or jack extension foot like the Fastway Flip automatic jack foot, may be helpful to lift the vehicles high enough to release the tension on the spring arms.

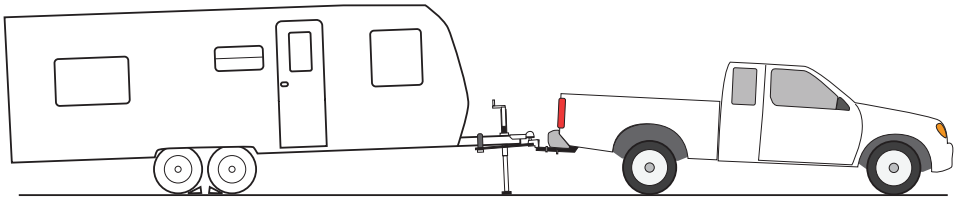


Figure 30

Remove the L-pins.

Swing the spring arms outward, away from the frame, enough that they will easily clear the L-brackets as they are lowered.

Retract the tongue jack, and lower both trailer and tow vehicle back down until enough trailer tongue weight is resting on the hitch ball that the coupler latch can be released. See Figure 31. This is usually indicated by the top of the shank slightly dropping away from the top of the receiver hitch tube.

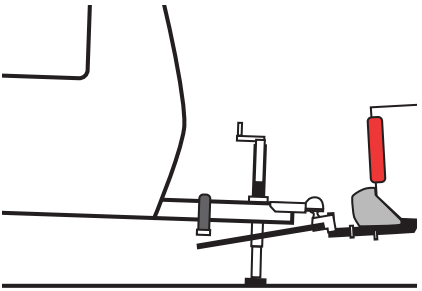


Figure 31

Release the coupler latch of the trailer.

Use the tongue jack to lift the trailer off of the hitch ball. See Figure 32.

Move the tow vehicle away from the trailer.

Unpin the Equal-i-zer hitch spring arms from the sockets in the hitch head, and remove the arms.

Store the spring arms and hitch head in a secure location protected from moisture and theft.

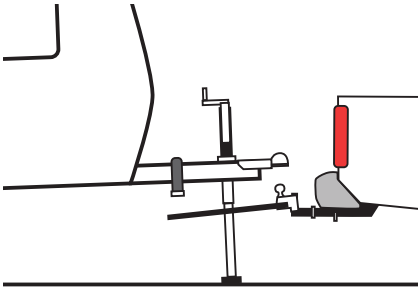


Figure 32

Service Tech and Experienced Installer Checklist

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.
- ☐ Secure the adjustable shank in the receiver 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 between 0" - 1" higher than the coupler height. Use a specialty shank if needed.
- ☐ 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 along the trailer frame. Install the link plates with their centers between 27" and 32", as far back as the frame will permit.
- ☐ Pinch the link plates tight to the frame and tighten the bolts evenly.
- ☐ Install the L-brackets.

Step 5

- ☐ Take initial measurements at the front axle for weight distribution - uncoupled and coupled with no weight distribution.
- ☐ Lift the spring arms onto the L-brackets, retract the jack and engage the weight distribution.

Step 6

- ☐ Check for good weight distribution and make needed adjustments.

Step 7

- ☐ Check the trailer pitch and make needed 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 the owner's manual to the customer.

Appendix A - Troubleshooting Guide

Problem	Possible Cause	Suggested Correction
Trailer Sway Remember that trailer sway is caused by the combined vehicle (tow vehicle/trailer) configuration, loading, or outside forces. If you are unsure what may be causing your sway issues, contact your dealer or Equal-i-zer hitch customer support for assistance.	Light tongue weight	Get gross trailer weight (GTW) and tongue weight (TW). Tongue weight should be at least 10% of GTW. Follow trailer manufacturer's guidelines for tongue weight. Reposition load in trailer as needed to achieve correct TW / GTW ratio. Remove cargo carriers or 2nd trailer from rear of trailer
	Improperly rated or under-inflated tires	Check tires for proper ratings and inflation. Replace and inflate if needed.
	Loose socket bolts	Make sure socket bolts are tightened to a minimum of 60 ft-lb torque.
	Tow capacity exceeded	Make sure your tow vehicle is rated to tow your trailer's TW and GTW. If it is not, DO NOT TOW.
	Hitch undersized	Check to make sure your GTW and TW do not exceed your hitch's ratings. If either does, DO NOT TOW. Purchase an Equal-i-zer hitch with a higher rating.
	Not enough weight distribution	Follow instructions to correct under-adjustment (Step 7) by adding spacer washers or raising L-brackets.
Tow vehicle too high in front		
Front end feels floaty		
Trailer nose is too high or to low	Incorrect shank	Consult your local Equal-i-zer hitch dealer about using a specialty shank.
		Use the Shank Selector Tool on equalizerhitch.com to determine the correct shank for your setup.

Trailer nose is too high or to low	Improper hitch ball height	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 the hitch ball center	Follow Step 4 and set center of link plates between 27" and 32" from the center of the coupler.
	Link plates not installed upside down for bottom-mount coupler	Follow Steps 4 and 9 to install and tighten link plates correctly.
'Walking' sway bracket assembly	Link plates not tight enough	Follow Steps 4 and 9 to tighten link plates correctly.
Creaking and groaning noise	Dirty or dry friction surfaces in the hitch head	Clean and lubricate the friction surfaces of head and arm sockets (Step 10) using Equal-i-zer High Performance lubricant.

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 25.

In some cases the friction on the L-brackets can generate noise. Lubricating this joint is not recommended. A better solution is a set of official Equal-i-zer brand Sway Bracket Jackets™. They quiet the ride and reduce wear without the mess of using a lubricant.

Customer Support:

For customer support, replacement parts and accessories we recommend that you visit your local dealership that is familiar with Equal-i-zer® brand products whenever possible. If at any time you need customer support and are unable to reach a dealership, please call our toll free customer support line at 800-478-5578, or visit us online at equalizerhitch.com.

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 springs move a long way with very little weight applied, then later move much less, even with a significant change in applied weight.

Trailer axle to coupler distance: Trailers with longer distances will try to force distributed weight forward to the tow vehicle before absorbing it into the trailer suspension. Trailers with shorter distances absorb more of the distributed weight into their own suspensions.

Tongue weight: To operate effectively, your tongue weight should be at least 10% of the gross trailer weight. This makes the trailer more stable and helps provide 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 fresh water tanks that are tongue weight when you leave can empty and 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 lb of positive tongue weight to 330 lb of negative tongue weight.

Rear-load toy haulers are designed to have very heavy dry (empty) tongue weights so that when they are loaded with toys they become a more balanced load.

Front-load toy haulers are exactly the opposite. They have very heavy tongue weights with toys loaded and much lighter tongue weights without toys. You must be careful not to exceed receiver hitch and tow vehicle rear axle ratings when towing a front-load toy hauler.

All toy haulers may require significant changes to weight distribution setups between towing loaded and towing unloaded.

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.

Notes

Warranty

Limited Lifetime Warranty: Progress Mfg. Inc. warrants the Equal-i-zer® hitch against latent defects in materials and workmanship under normal use and service, ordinary wear and tear is excepted, from the first date of purchase at retail for the ownership life of the original purchaser. If this product is latently defective it will be replaced or repaired when a proper return authorization is obtained and the product is returned with transportation charges prepaid to the Progress Mfg. Inc. manufacturing plant. Progress Mfg. Inc. shall not be required to replace or repair any products damaged as a result of improper installation, alteration, unreasonable use, or improper maintenance including, without limitation, loading the product beyond the factory rated load capacity. This warranty does not include labor charges nor does it include transportation charges for returning the product to the consumer. To the extent allowed by law, Progress Mfg. Inc. shall not be liable for any incidental, consequential, or any other damages including, without limitation, breach of any implied warranty, merchantability, or fitness for a particular purpose of any Equal-i-zer product. In no event shall Progress Mfg. Inc. be liable for any damages other than the replacement or repair of the affected part. Authorization and warranty procedure may be obtained by calling Progress Mfg. Inc. customer support at 800-478-5578.

Go to equalizerhitch.com to register your hitch warranty online.

More great towing products from Progress Mfg.

FASTWAY TRAILER PRODUCTS®

ONESTEP™
STABILIZING WHEEL CHOCK



The Fastway® ONESTEP™ wheel chock positively locks both wheels in place, allowing you to freely move in your trailer, with virtually no wheel movement. No other wheel chock delivers more wheel stabilization than the ONESTEP.

ZIP™
BREAKAWAY CABLE



The Fastway® ZIP™ breakaway cable provides a safer and more effective connection to your trailer, because it doesn't rust, fray or become damaged while towing. This keeps you and your trailer safer when towing. It meets or exceeds all DOT requirements, and protects your fingers from loose, sharp wires.

FLIP™
AUTOMATIC
JACK FOOT

The Fastway FLIP™ automatic jack foot extends your trailer jack by up to six inches, eliminating 50 cranks both up and down, saving you time and effort. It provides more safety and stability for your trailer, and eliminates the time and effort it takes to search for and store wood blocks to put under your tongue jack.



FORTRESS™
COUPLER LOCK

The Fastway FORTRESS™ coupler lock fits virtually all 1-7/8", 2" and 2-5/16" trailer couplers. The wide shackle has deep teeth for a strong locking mechanism, and the super-hardened steel keeps your trailer safe.



Visit fastwaytrailer.com

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. A clean and easy way to keep your hitch ball protected and the Equal-i-zer hitch head maintained.





Replacement Pins & Clips

OEM pins and clips keep your Equal-i-zer hitch performing like it was new, and upgrade it to make it even better. Look for snap L-pins, socket pins, hitch pins, and other accessories like Sway Bracket Jackets and socket pins with thumb clips.

Visit equalizerhitch.com

Equal-i-zer®, and Fastway® are products of

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