Installation Instructions
Dual Cam II

Part Number(s):

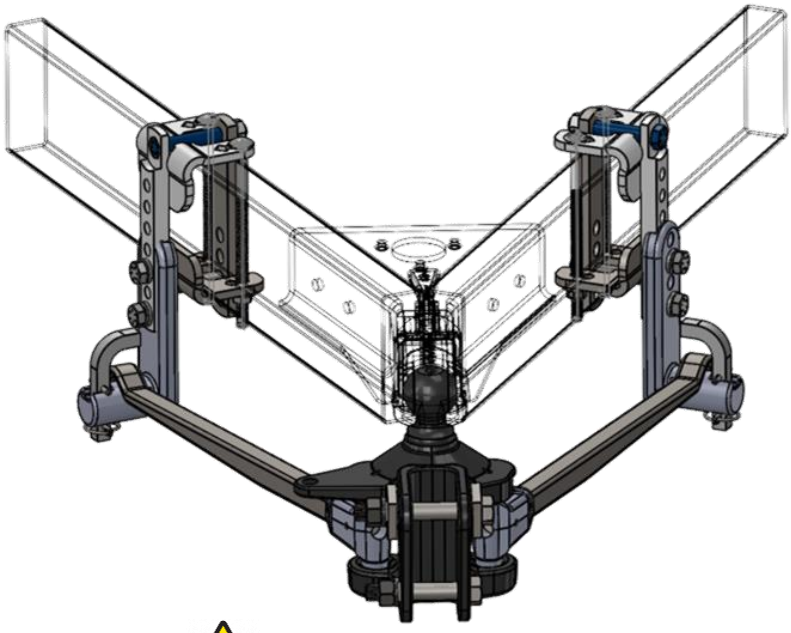
66091, 66092, 66093

⚠WARNING

Under no circumstances should the towing vehicle manufacturer's recommended vehicle towing capacity be exceeded. Failure to follow instructions for installation and use may cause property damage, injury or death.

READ ALL INSTRUCTIONS BEFORE STARTING THE INSTALLATION OR USE

WEIGHT DISTRIBUTION			
Kit Number	**Spring Bar Weight Rating**	**Max Tongue Weight**	**Max Gross Weight (GVWR)**
66091	600	600	12,000
66092	800	800	12,000
66093	1,200	1,200	12,000
WEIGHT CARRY (WITHOUT SPRING BARS)			
Max Tongue Weight		1,000	
Max Gross Weight (GVWR)		10,000	



Shank not included. Please Use Appropriately Rated Shank.

Tools and Equipment Required to Install:

- **1-1/8" socket**
- **1-1/8" wrench**
- **15/16" socket**
- **15/16" wrench**
- **¾" Socket**
- **¾" Wrench**
- **Torque wrench capable of going up to 450 ft-lbs**
- **Tape measure**

Scan QR code For Questions

Please Visit **https://qr.towingproducts.net** **for the most updated version of the Installation Instructions**
Or call Technical Service at: 1-800-632-3290

THANK YOU

For purchasing the Reese Dual Cam II, Reese's premium Weight Distribution Kit. Please read the Instruction manual carefully & follow all Safety Guidelines.

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Experience the ultimate in sway control and weight distribution. The Dual Cam II, High Performance System continually works to ensure the highest level of towing safety. The stronger the sway force, the more the Dual Cam II System works to stop it. It's the difference between active sway and passive sway control where our unique design literally forces the trailer to stay in a straight line behind the tow vehicle. The newly redesigned Dual Cam II system is now easier than ever to install and offers even broader application coverage to work with the most popular trailer frames.

- Fully automatic, active sway control system forces trailer to stay straight behind tow vehicle
- No Drill installation
- No need to relocate items on top of A-Frame to install Dual Cam II High-Performance Sway Control
- Simple installation and adjustment
- Hooking up spring bars automatically hooks up sway control
- No U-bolts to interfere with bottle racks or another A-Frame mounted items
- Limited lifetime warranty
- Reduced noise when traveling
- Rated for weight carry of 10,000 lbs
- Includes pre-torqued 2-5/16" hitch ball
- Works with both 1-1/2" and 2" frame widths
- Works with frame heights of 4"-7"

Frequently asked questions:

- What is a Weight Distribution Kit / Hitch?

Ans: Weight distribution kit or hitch is a system where it acts as a leverage between the tow vehicle & the trailer causing the Tongue weight to be carried by all axles of the tow vehicle & trailer.

- What is Gross trailer weight , Tongue weight & FALR?

Ans: Gross trailer Weight: Weight of a fully loaded trailer, inclusive of cargo.
Tongue Weight: The downward force that is exerted on the hitch ball by the trailer coupler.
FALR: Front Axle Load Restoration

- Is a Sway Bar needed with this kit?

Ans: The kit is built in with a Sway prevention. Sway bars are not required.

- Can the Kit be used on an Aluminum trailer?

Ans: Yes, the kit can be installed on an aluminum trailer. However, an Isolator shall be used to avoid Galvanic corrosion. Polypropylene tape or a heavy-duty Packaging tape maybe used as an Isolator.

- Can a lower rating Spring bars be used to tow higher load?

Ans: No, Higher loads cannot be towed with a lower rated Spring Bars.

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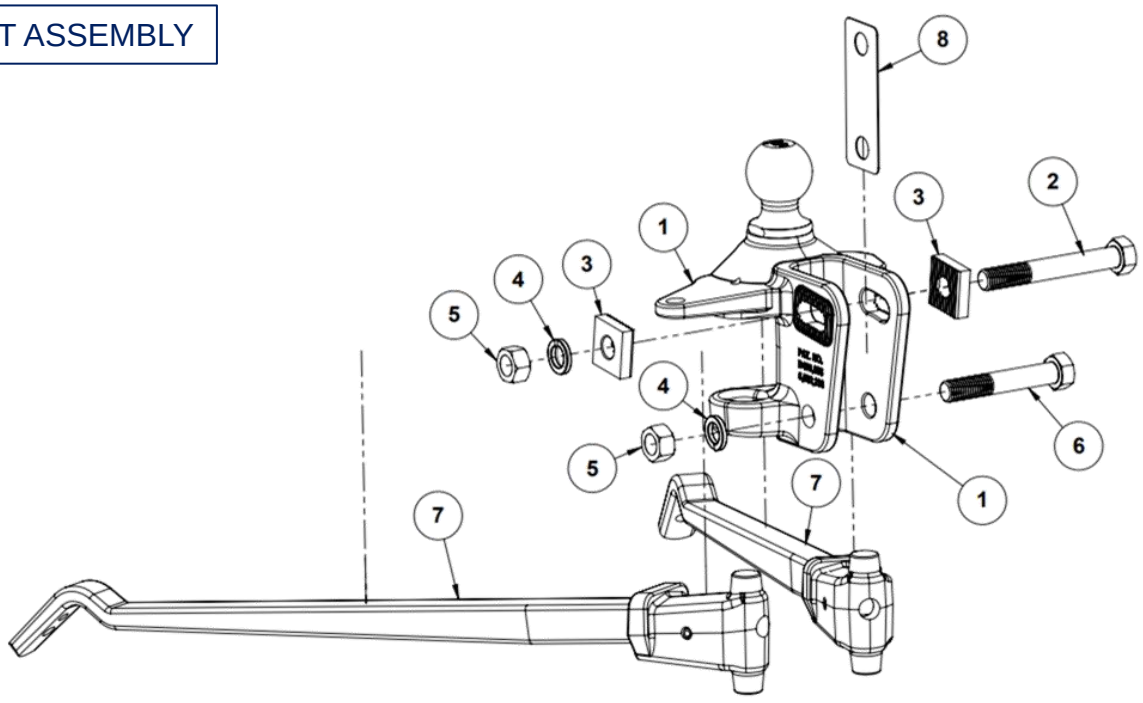
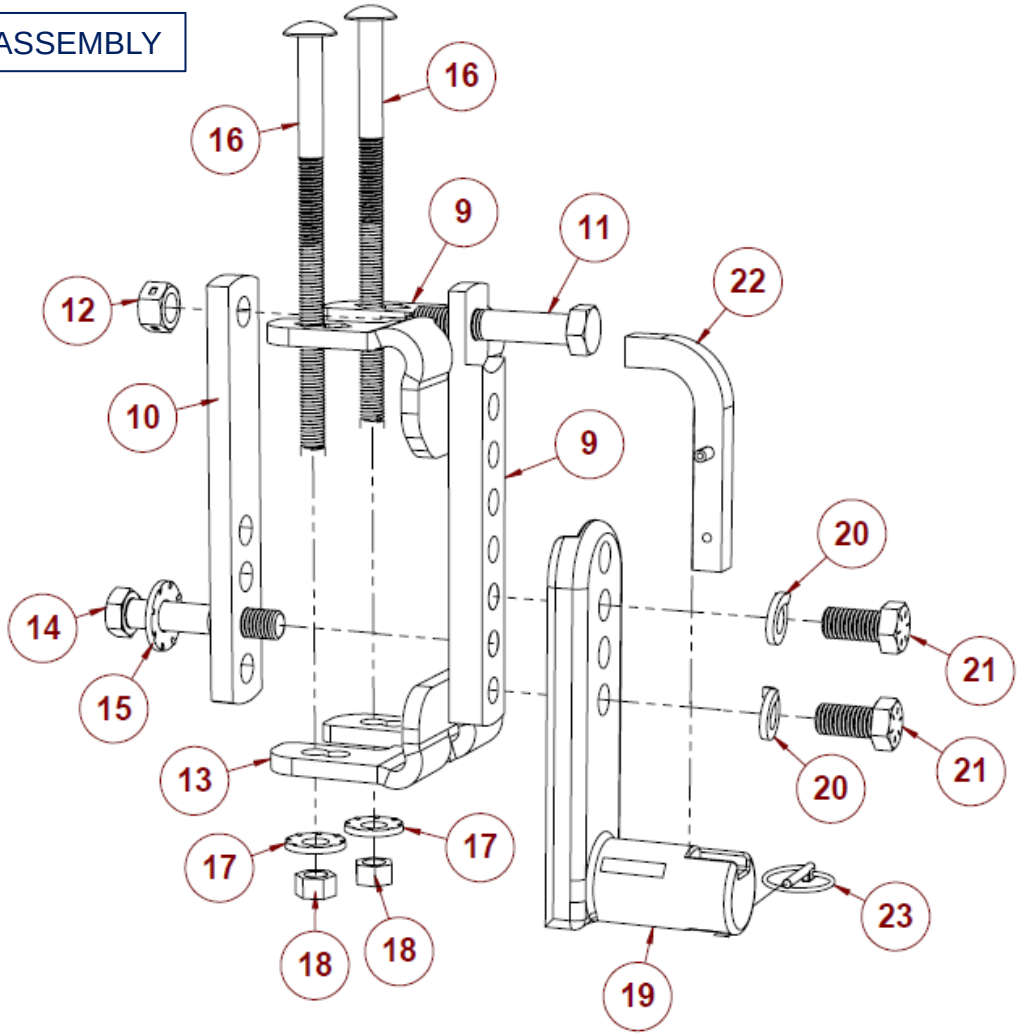
BALL MOUNT ASSEMBLY



CAM & BRACKET ASSEMBLY

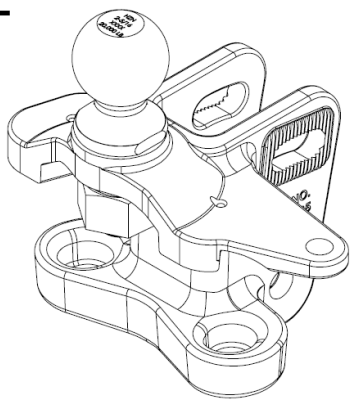


Installation Instructions
Dual Cam II

Part Number(s):

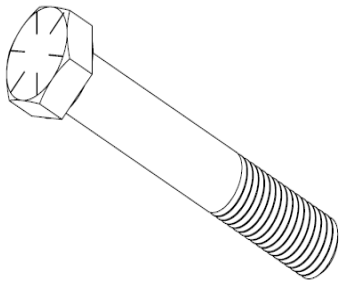
66091, 66092, 66093

1



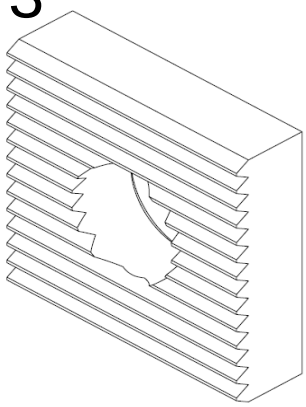
BALLMOUNT . QTY -1

2



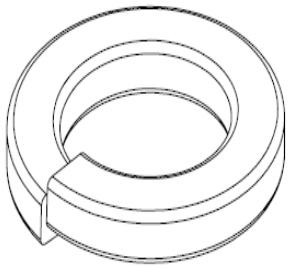
HEX BOLT: ¾” 10x 5-1/2” . QTY -1

3



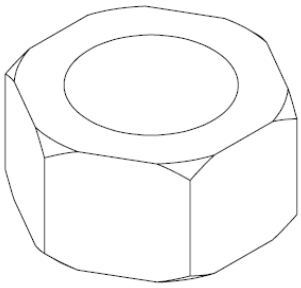
ADJUSTABLE WASHERS. QTY -2

4



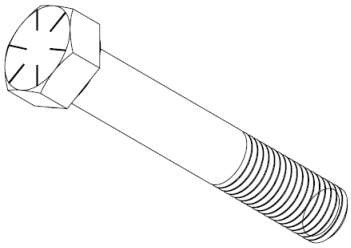
LOCK WASHER: ¾”. QTY -2

5



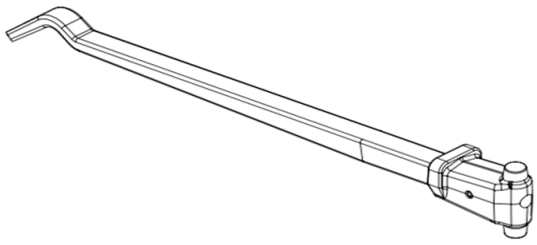
HEX NUT: ¾” -10. QTY -2

6



HEX BOLT: ¾” 10x 4-1/2” . QTY -1

7

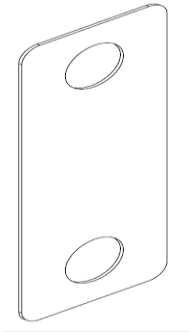


SPRING BARS: 600lbs FOR WD KIT No: 66091. QTY-2

SPRING BARS: 800lbs FOR WD KIT No: 66092.. QTY-2

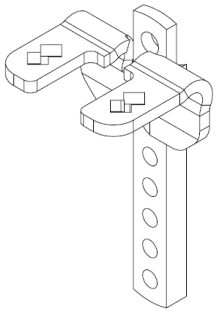
SPRING BARS: 1,200lbs FOR WD KIT No: 66093. QTY-2

8



BALLMOUNT SPACER . QTY -1

9

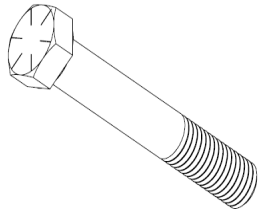


UPPER CAM WELDMENT. QTY -2

10

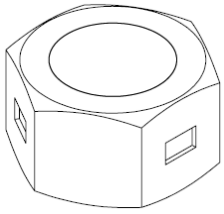
INNER BRACKET. QTY -2

11



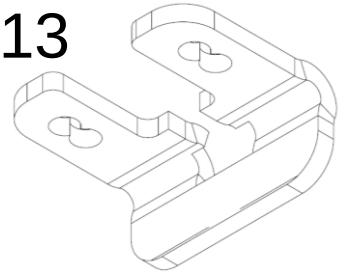
HEX BOLT: 5/8” 11x 4” . QTY -2

12



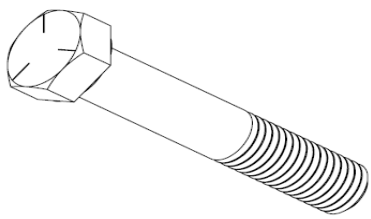
HEX LOCK NUT: 5/8”-11. QTY -2

13



LOWER CAM WELDMENT. QTY -2

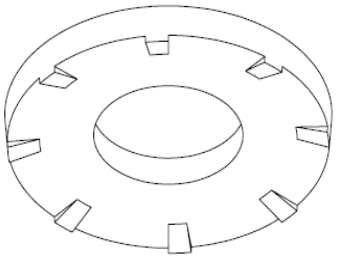
14



HEX BOLT: 5/8” 11x 3-1/2” . QTY -2 (FOR 2” FRAMES)

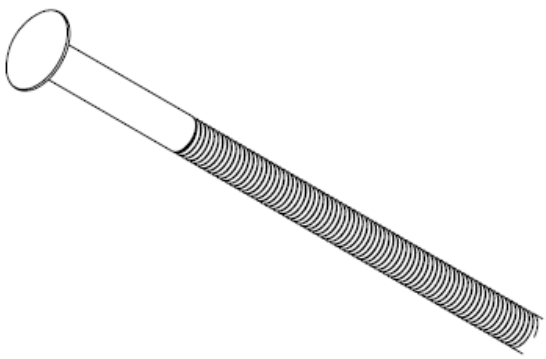
HEX BOLT: 5/8” 11x 3” . QTY -2 (FOR 1-1/2” FRAMES)

15



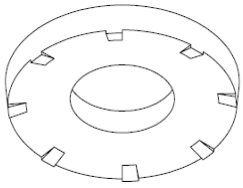
CONICAL WASHERS: 5/8 .
QTY -2

16



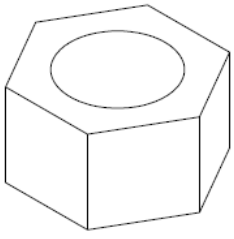
CARRIAGE BOLT: ½" – 13X 8-1/2" . QTY -4

17



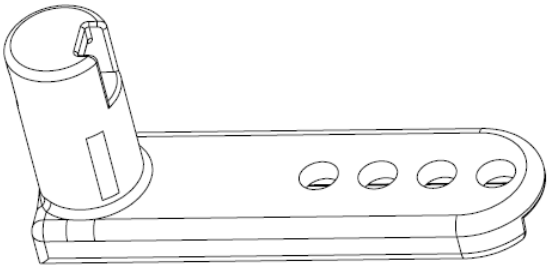
CONICAL WASHERS: ½" .
QTY -4

18



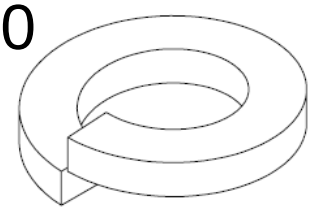
HEX NUT: ½ " -13. QTY -4

19



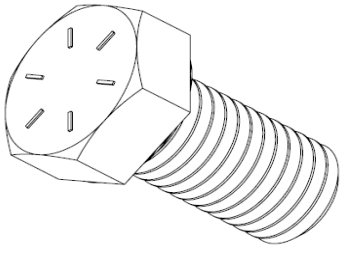
BOLT ON CAM. QTY -2

20



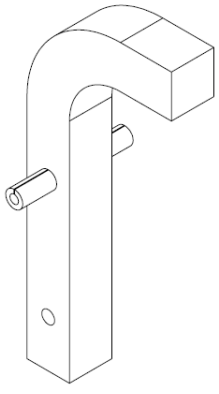
LOCK WASHER: 5/8".
QTY -4

21



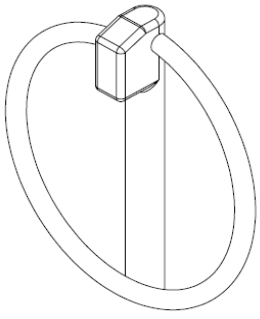
HEX BOLT: 5/8" 11x 1-1/4" .
QTY -4

22



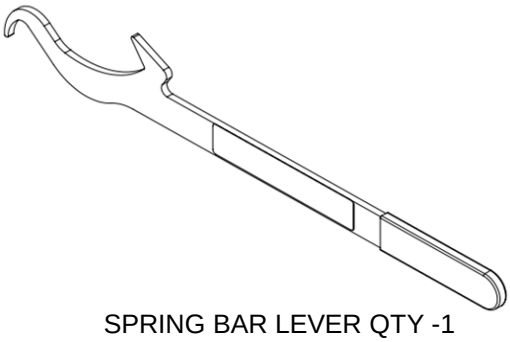
BAR RETAINER. QTY -2

23



LYNCH PIN . QTY -2

24



SPRING BAR LEVER QTY -1

REQUIRED TOOLS

- 1-1/8" SOCKET
- 1-1/8" WRENCH
- 15/16" SOCKET
- 15/16" WRENCH
- 3/4" SOCKET
- 3/4" WRENCH
- TORQUE WRENCH: UP-TO 450 ft-lbs
- TAPE MEASURE

Assembly and Installation

⚠WARNING

Failure to read warnings and follow instructions may result in serious personal injury or death, vehicle crash, and/or property damage.
- **Do not modify.**
- **Do not tow one trailer behind another (Tandem Towing).**

Avoid putting any part of your body under the trailer or between the truck and trailer. Unexpected or accidental movement of the truck or the trailer can cause serious injury or death

If you must place any part of your body under the trailer or between the truck and trailer you MUST perform ALL the following steps:
- **Check that the truck transmission is in park**
- **Check that the emergency brake is set**
- **Block in front of and behind all trailer tires**
- **Check that the trailer landing gear are resting on firm ground**

Hitch balls may have reduced load rating. Ball rating must equal or exceed trailer GVWR.

INITIAL SET-UP: BALL MOUNT

1.

- Line up tow vehicle and trailer on level pavement, in a straight line, uncoupled.
- Make sure trailer is level both sides (Front to Back)

2.

- To achieve proper Weight Distribution, Measure the height of the front truck fender to the ground and record that height.

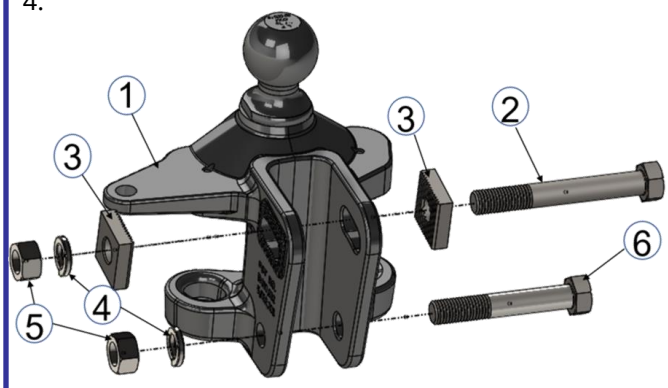
Note:
If the truck is equipped with Air Bags, It may be necessary to turn off the system & wait for 20 minutes to make sure the air bags are deflated. Please refer to your vehicle's owner's manual for proper towing before Installation. Weight Distribution between the truck & trailer may be improper if the air bags deflate instructions are not followed.

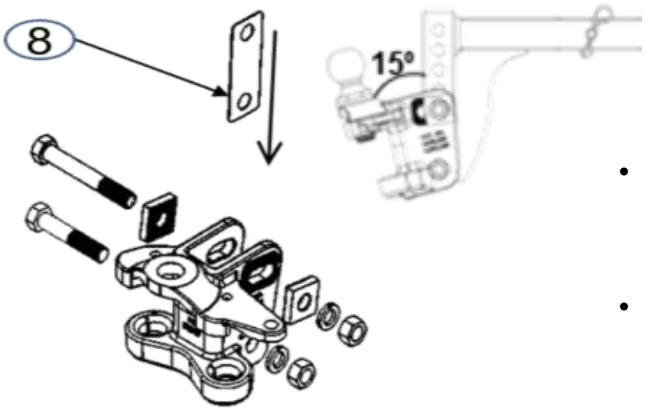
3.

- Install the appropriate Hitch Bar (Not provided with the Kit) in the truck receiver, and secure with the hitch bar pull pin & retainer clip (Not provided with the kit). Depending on the towing setup the Hitch Bar can be used in Rise or Drop position.

Note: Dual Cam II WD Kit does not include Hitch Bar. Reese part number: 3357 (2-Inch Hitch Bar) is shown in the picture as reference.

4.

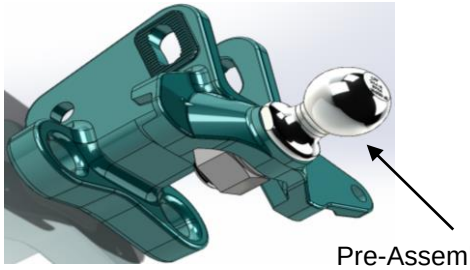




- Slide the Ball mount (1) from the top or bottom of the Hitch Bar, aligning the holes until the top of the Ball is ~1 from the top of coupler

- Insert the 5-1/2” long bolt (2) through the adjustment washer (3), the ball mount (1), the hitch bar, the second adjustment washer (3), lock washer (4), and nut (5). Also insert the bottom 4-1/2” bolt (6) through the ball mount (1), the shank, lock washer (4), and nut (5).The adjustment washers and ball mount slot allow for up to 15º of adjustment . Hand tighten Upper & lower nuts onto bolt.

- **Note: If needed fill any gap between the Ball mount (1) & the Hitch Bar with a Ball mount spacer provided (8).**
- **This kit comes with a 2-5/16” ball pre-assembled on the Ball mount. Confirm that the trailer coupler is 2-5/16” or replace the hitch ball on the ball mount. This ball mount requires a ball with a 1-1/4” shank thread size**.

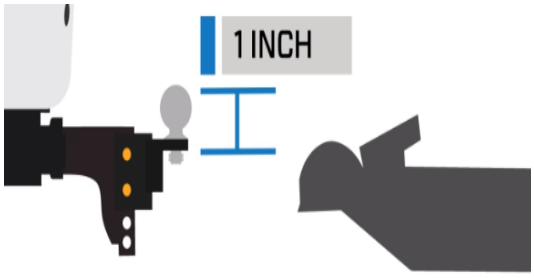


Pre-Assembled Ball
(**Torqued** to 450 ft-lbs)

CAUTION

Ball must be torqued to 450 ft-lbs.
Please check before each use.

5.



- Coupler’s Height adjustment:-
  Level the trailer. Measure & record the distance from the ground to the top of the coupler ball socket.

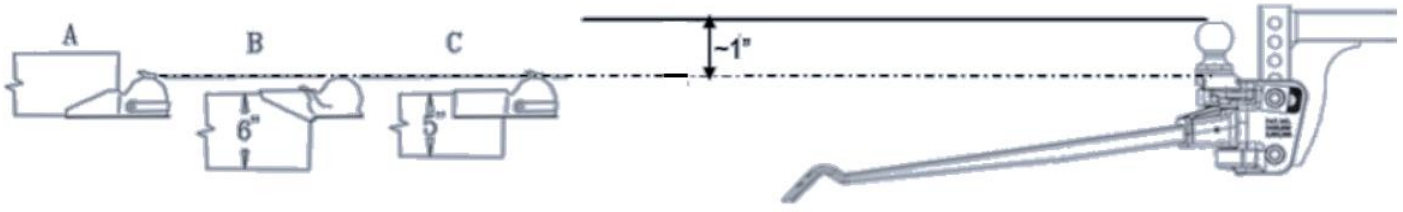
THE HEIGHT OF THE HITCH BALL NEEDS TO BE ~1 INCH ABOVE THE COUPLER. THIS IS TO COMPENSATE FOR VEHICLE SQUAT WHEN THE TRUCK & TRAILER ARE CONNECTED

6. 

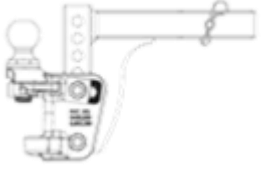
- Install Spring Bars (7) into Ball mount (1) by rotating the bars horizontally, slipping the lower trunnion posts into the pockets, then rotating the bars into position parallel to trailer frame rails

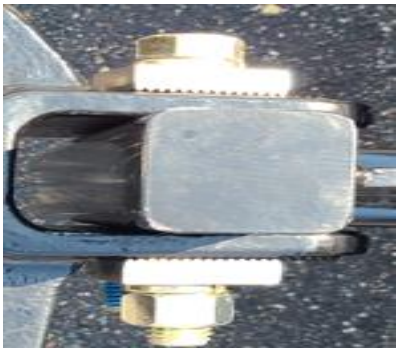
7. 

- Manually lift the bars until the Ball mount aligns straight up to the upright position.
- Note the tooth position of the adjustment washers on the Ball mount when the Spring bars are lifted to the max height. This should be the positioned where the adjustment washers need to be tightened to achieve the proper Ball mount angle.
- Make sure that the hitch ball is ~1” above the trailer's coupler



Note: Height of the Coupler may vary based on the type of the couplers.

8. 



- Ensure the adjustment washers are in the same tooth position on either side of the ball mount by counting the number of exposed teeth on either side. Washer teeth must be parallel to ball mount teeth for proper engagement. Secure the ball mount pitch by tightening the top bolt to **300 ft-lbs of torque**. Then tighten the bottom bolt to **300 ft-lbs of torque**

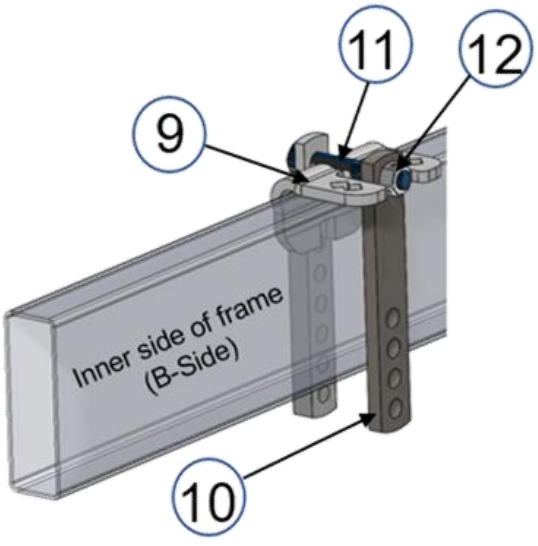
⚠ CAUTION

Note: At max tilt adjustment of the ball mount (1) not all teeth on the adjustment washers may mate to all teeth on the ball mount .This may be a common scenario.

9.

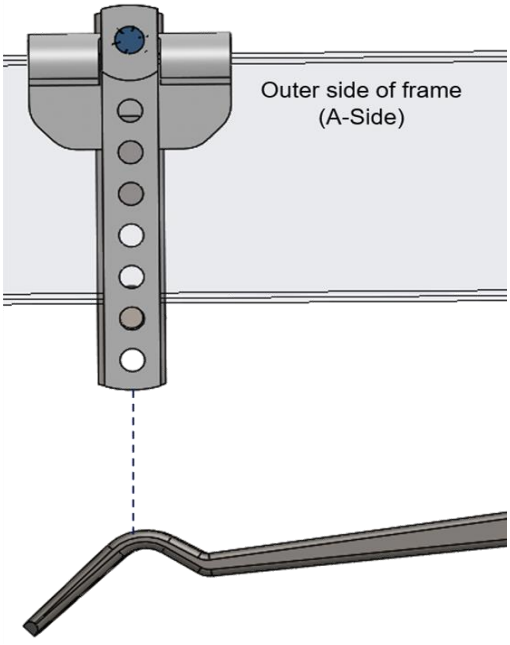
- For proper bracket positioning, couple the trailer to the truck. Make sure to secure the coupler on to the ball mount with the lock.
- Reinstall the Spring Bars

10.



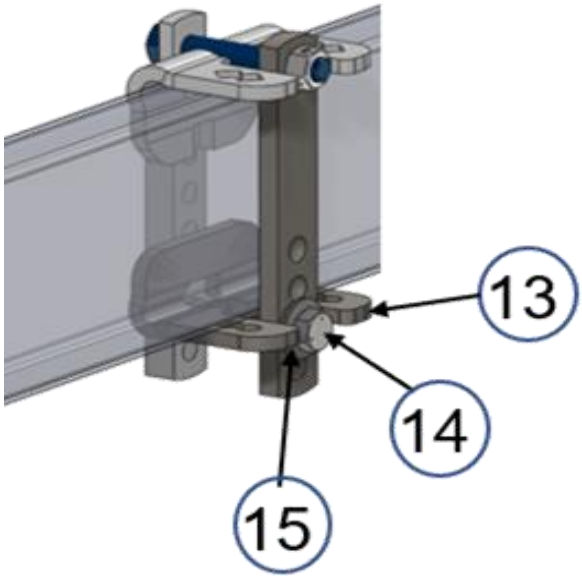
- Using Brackets fastener kit . For one side of the trailer, loosely assemble, Upper Cam Weldment (9), inner frame bracket (10) upper bracket hex bolt (11)(4” long for 2” wide frames 3-1/2” long for 1-1/2” wide frames,), and lock nut (12).

11.



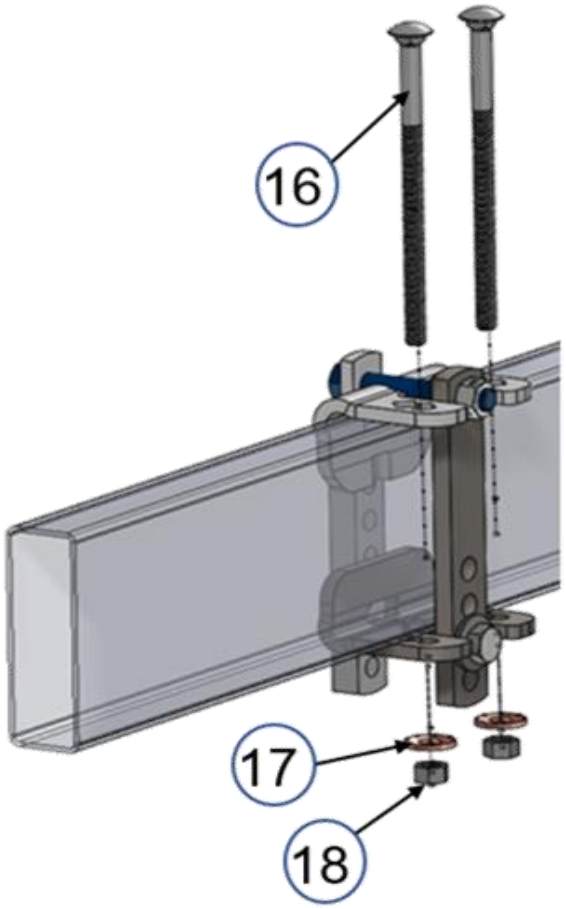
- Slip brackets over the trailer frame so that the center of the brackets is in line with center of the convex portion of the Cam (19) in the Spring Bars as shown in the picture.
- Repeat the step on the other side of the trailer frame.

12.



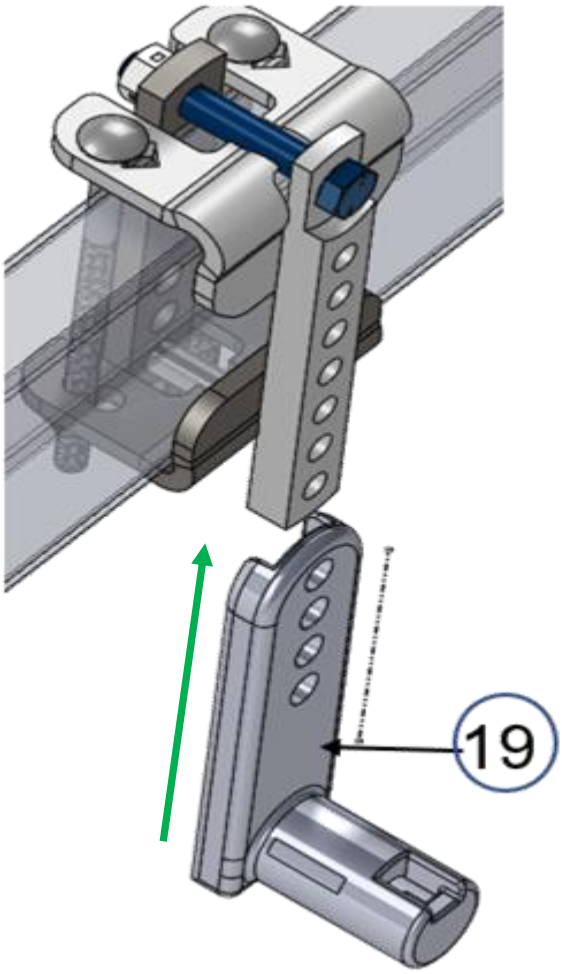
- Slide the lower frame bracket (13) around the inner frame bracket (10), between the outside of the trailer frame and the outer frame bracket as shown in picture. Secure the lower bracket with the appropriate lower bracket bolt (14)(3” long for 1-1/2” wide frames, 3-1/2” long for 2” wide frames) & conical washer (15).
- Partially tighten upper (11) and lower bracket bolts(14) until both brackets become flush with inside and outside surfaces of the trailer frame. Allow for some sliding to position the brackets and cam correctly for the spring bars to rest on the Cam.
- Repeat the step on the other side of the trailer frame.

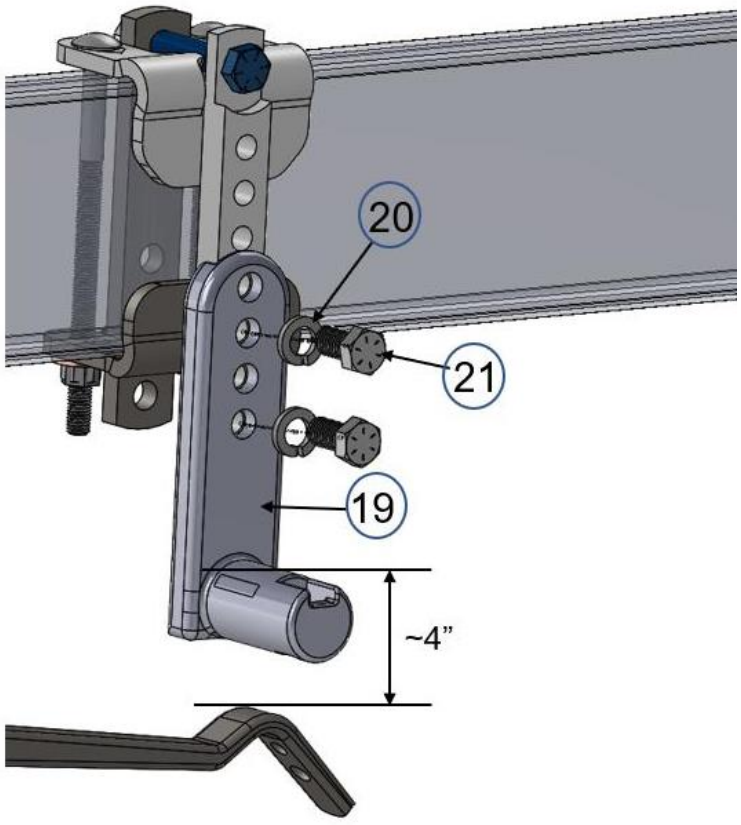
13.



- Select carriage bolts (16) , ½” nuts (18) and ½” washers (17). Slide in the carriage bolts through the upper cam weldment (9) as shown. Bolts shall pass through the square holes of the lower cam (13). Install the fasteners as closely to the frame as possible. Tighten bolts and nuts until the lower frame bracket is held securely against the bottom of the frame.
- Do not fully torque the carriage bolts. Allow for some sliding of the assembly brackets to position the brackets correctly so that the spring bars shall align on to the Cam.
- Repeat the step on the other side of the trailer frame.

14.





- Slide Cam (19) over Upper Cam Weldment (9). Position the bottom of the Cam (19) surface ~ 4” above the top of the spring bar surface.

- Bolt the cam in position using the 5/8” bolts (21) and lock washers (20).

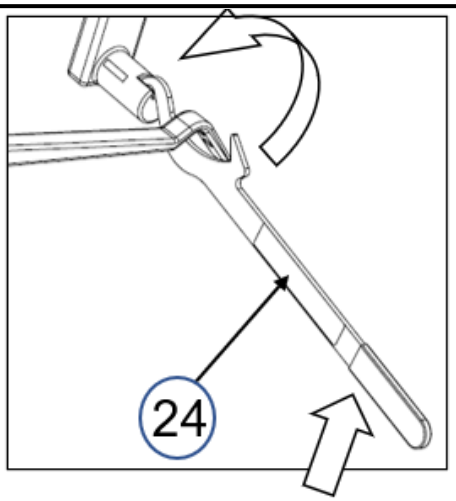
- **Ensure bolts do not use the same threaded hole as the lower frame bolt. Cam bolts may have either 1 or 2 open holes between then. Both bolts need to be installed in threaded holes**

- **Torque both the Carriage Bolt (16) fasteners to 130 ft-lbs.** ⚠ CAUTION

- **Torque both the Cam (19) fasteners to 100 ft-lbs.** ⚠ CAUTION

- Repeat the step on the other side of the trailer frame.

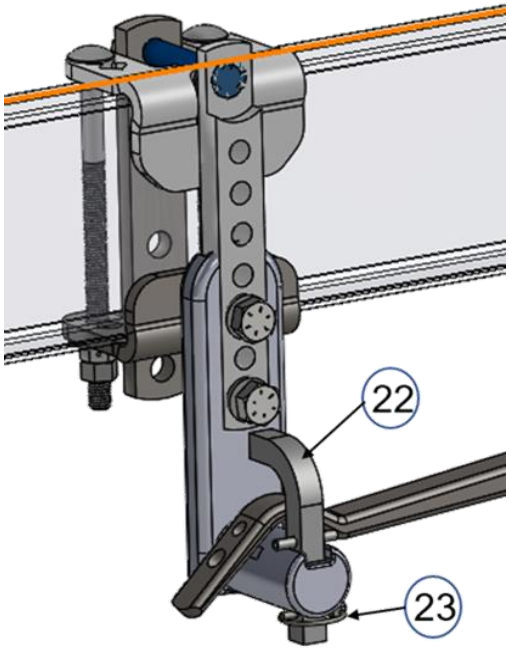
15.



- With the trailer coupled to the Ball mount, use the trailer jack to lower the trailer to remove the load on the spring bars so that the spring bars can be swung on top of the cams without any excessive force. Sometimes a block may be required under the jack to get the required jack extension length.
- With the Spring bars being loaded & installed over the Cam, use the trailer jack to raise the trailer to its original position.

Note:
In some applications the trailer jacks may not available or could not be used. In such cases, Springs bars shall be installed manually using the spring bar lever (24). Extreme caution needs to be followed while installing the Spring bars.

16.



- Install the spring bar retainer (22) and secure it with Lynch pin (23).
- Repeat the step on the other side of the trailer frame.

Lynch Pin Orientation:

Note: (Raise up the jack)

- **Remeasure the distance between the Fender & the ground to make sure the weight is evenly distributed. The measurement needs to be the same as measured before installing the Weight Distribution system.**
- **In case of Higher measurements: The Front Axle Load may be lower. Which says the system needs additional weight distribution loads. This could be done by adjusting the Cam hole position. Raise the Cam by one bolt hole to restore the Front Axle Load.**
- **In case of Lower measurements: The Front Axle Load may be higher. To lower the front axle load, lower the Cam by one bolt hole & fasten the bolts.**
- **Please make sure to double check all the bolts of the system are securely fastened**

⚠WARNING

- **LOADED BALL HEIGHT SHOULD NEVER BE GREATER THAN UNCOUPLED BALL HEIGHT. Front wheel overload and loss of rear wheel traction can result, and can lead to unstable handling, reduced braking ability, and a tendency to "jackknife" when turning and braking at the same time.**
- **IF LOADED BALL HEIGHT IS GREATER THAN UNCOUPLED HEIGHT, reduce take-up on spring bars and re-measure until proper height is obtained. When backing trailers in tight areas use caution not to jackknife trailer or similar conditions. Trunnion bars swing left and right a limited amount and can damage ball mounts if over rotated (remove if necessary)**

INITIAL SET-UP: Measurement and adjustment

- After reviewing all fasteners and brackets, ensuring spring bars are properly seated in the ball mount and on the cam brackets, retract the trailer jack until the jack foot plate lifts off the ground.
- Measure the same truck fender location measured in Step 1 Initial Set-up: Ball Mount. If the fender height is:
    a. Higher than unloaded: Increase front axle load restoration by raising the cams (19) one bolt hole or adjusting the ball mount (1) so that the spring bar cam ends are lower.
    b. Lower than unloaded: Decrease front axle load restoration by lowering the cams (19) one bolt hole or adjusting the ball mount (1) so that the spring bar cam ends are higher.

OPTIONAL BALLMOUNT SPACER KIT

Use the Ball mount spacer provided when needed to fill any gap between the ball mount and shank.

It is easier to install the shim from the top. In doing so, you will encounter one of three scenarios:

a. Ball mount spacer will align with both holes. If this is the case, use the entire spacer in the gap.

NOTE: It is conceivable in rare combinations, two spacers could be used. In these cases, contact Customer Service at 800-632-3290 for a free additional spacer service kit part number 58207.

a. Ball mount spacer will not fit between the ball mount and shank. In this case, discard the spacer and continue with installation.

b. Spacer will not go in far enough to reach both holes. In this case, cut shim in half and use only the top half of the spacer for the top bolt hole. Discard the cut spacer remnants.

Maintenance Recommendations: **NOTICE**

- **Trunnions, Ball & Cam (Spring bar & Cam interface) shall be lubricated the first 250 miles with lithium grease or heavy oil. Make sure to wipe clean the rag before lubricating. This allows the bars to "embed" properly in the cams.**
- **Its also recommended to mark the spring bars so you know which one is the driver's side or passenger side. Switching sides with the bars every trip is not recommended and can cause excessive noise.**

Note:

- Metal to metal contact may result in noises, especially at slower speeds.
- Spring bars & Cams are not expected to be at the same angle.
- Springs bars may not necessarily sit flat on the Cams.

IMPORTANT INFORMATION ON TOWING

WARNING

Failure to heed warnings and follow instructions may result in serious personal injury or death, vehicle crash, and/or property damage.

- **Do not modify.**
- **Do not tow one trailer behind another (Tandem Towing).**

- **DO NOT TOW MULTIPLE TRAILERS:**
  Do not attempt to tow any type of trailer behind another trailer. Towing multiple trailers may cause severe instability, loss of control and/or structural failure, and may result in vehicle accident, property damage and personal injury. Towing multiple trailers is illegal in many jurisdictions.

- **MAINTENANCE BEFORE EVERY TRIP:**
  Keep trunnions and sockets in head assembly free of dirt/debris and well lubricated. Excessive wear in this area may indicate overload or inadequate lubrication. Some elongation of socket openings ("seat in“) is normal.

- Keep head assembly exterior clean, especially the trunnion sockets. Do not allow dirt or debris to lodge between trunnions and head.
- Keep hitch painted to prevent rust and maintain a good appearance. (Do not paint over labels)

- **AT THE BEGINNING OF EVERY TRIP:**

a) Clean ball and coupler socket and coat ball lightly with grease.

b) Check spring bars and bolts for wear. Replace any component before becoming worn halfway through.

c) Check to see that all bolts are properly tightened, and hitch pin and clip are securely in place.

d) Check to see that electrical hookups are in working order, and that safety chains are securely connected.

TOWING TIPS

- **DRIVING:** Good habits for normal driving need extra emphasis when towing. The additional weight affects acceleration and braking, and extra time should be allowed for passing, stopping, and changing lanes. Signal well in advance of a maneuver to let other drivers know your intentions. Severe bumps and badly undulating roads can damage your towing vehicle, hitch, and trailer, and should be negotiated at a slow steady speed. IF ANY PART OF YOUR TOWING SYSTEM "BOTTOMS" OUT, OR IF YOU SUSPECT DAMAGE MAY HAVE OCCURED IN ANY OTHER WAY, PULL OVER AND MAKE A THOROUGH INSPECTION. CORRECT ANY PROBLEMS BEFORE RESUMING TRAVEL.

- **CHECK YOUR EQUIPMENT:** Periodically check the condition of all your towing equipment and keep it in top condition.

IMPORTANT INFORMATION ON TOWING

- **TRAILER LOADING:**
  Proper trailer loading is important. Heavy items should be placed close to the floor near the trailer axle. The load should be balanced side-to-side and firmly secured to prevent shifting. Tongue weight should be about 10-15 percent of the gross trailer weight for most trailers. Too low a percentage of tongue weight will often produce a tendency to sway. Excess weight on the tongue can also lead to sway and damage hitch and/or tow vehicle.

- **TIRE INFLATION:**
  Unless specified otherwise by the towing vehicle or trailer manufacturer, tires should be inflated to their maximum recommended pressure.

- **TOWING VEHICLE AND TRAILER MANUFACTURER'S RECOMMENDATIONS:** Review the owner's manual for your towing vehicle and trailer for specific recommendations, capacities, and requirements.

- **POLE (STRAIGHT) TONGUE TRAILERS:**
  If your trailer has a straight tongue (instead of an A-frame tongue), it will be necessary to use a pole tongue adapter. This adapter attaches to the trailer tongue, providing a place to attach the bracketry.

- **PASSENGERS IN TRAILERS:**
  Trailers should NOT be occupied while being towed, under any circumstances.

- **TRAILER LIGHTS, TURN SIGNALS, AND ELECTRIC BRAKES:**
  Always hook up trailer lights, turn signals, electric brakes and break-away switch connection (if equipped) even for short trips.

- **REMOVE SPRING BARS WHEN BACKING UP:**

  It is recommended to remove the spring bars while backing up into campsites, driveways, etc.

- **REMOVE HITCH WHEN NOT TOWING:**
  Remove hitch from towing vehicle receiver when not towing, to prevent contamination of head sockets, reduce chance of striking hitch on driveway ramps or other objects, and minimize damage in the event of a rear-end collision.

REESE

Product Instructions:

Dual-Cam II

Part Number Purchased:
Place of Purchase:
Date of Purchase:
Part Manufactured Date (located on the ball mount):

Product Registration:
www.reeseprod.com/support/products/registration

NOTES:

LIMITED LIFETIME WARRANTY

1. **Limited Lifetime Warranty (“**Warranty”**).** Horizon Global (“We” or “Us”) warrants to the original consumer purchaser only (“You”) that the product will be free from material defects in both material and workmanship for a period of lifetime of ownership, ordinary wear and tear excepted; provided that installation and use of the product is in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. This warranty is not transferable.

2. **Limitations on the Warranty.** This Warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

3. **Obligations of Purchaser.** To make a Warranty claim, contact Us at 47912 Halyard Drive Suite 100, Plymouth, MI, 48170, 1-800-632-3290, identify the product by model number, and follow the claim instructions that will be provided. Any returned product that is replaced by Us becomes our property. You will be responsible for return shipping costs. Please retain your purchase receipt to verify date of purchase and that You are the original consumer purchaser. The product and the purchase receipt must be provided to Us in order to process Your warranty claim.

4. **Remedy Limits.** Product replacement is Your sole remedy under this Warranty. We shall not be liable for service or labor charges incurred in removing or replacing a product or any incidental or consequential damages of any kind.

5. **Assumption of Risk.** You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

6. **Governing Law.** This Warranty gives You specific legal rights, and You also may have other rights which vary from state to state. This Warranty is governed by the laws of the State of Michigan, without regard to rules pertaining to conflicts of law. The state courts located in Oakland County; Michigan shall have exclusive jurisdiction for any disputes relating to this Warranty.

Horizon Global America, Inc

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