

# NORTH STAR

## ATV Trailer Assembly Instructions for the SportStar II, IIWG, IIIWG, and Unistar Trailers

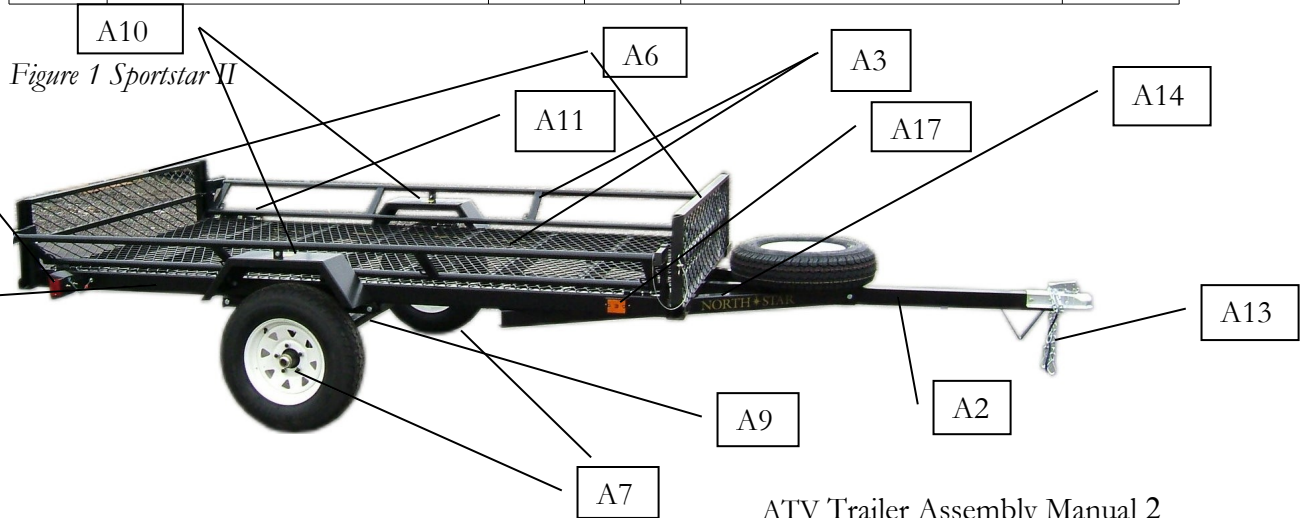


# Two-Place ATV Trailer Parts List

Trailer Parts			Hardware		
No.	Description	QTY	No.	Description	QTY
A1	Trailer Frame	1	1	Tongue M14 x 85 Bolt	6
A2	Trailer Tongue and Coupler	1	2	Tongue M14 Jam Nut	6
A3	Trailer Side Rails	2	3	M10 x 20 Bolt	16
A4	Rear Rail Bracket	2	4	Lock Nut	24
A5	Front Rail Bracket	2	5	M10 x 25 Bolt	30
A6	Ramp	2	6	M10 Lock Washer	30
A7	Wheel/Hub Assembly	2	7	M10 Flat Washer	30
A8	Leaf Spring	2	8	10 U-Bolt	4
A9	Axle	1	9	Spring Plate	2
A10	Fender	2	10	Side Rail 3 x 35 Pin	6
A11	Trailer Rear Light (Left)	1	11	Ramp Bolt with Nuts	4
A12	Trailer Rear Light (Right)	1	12	Ramp Bolt Nut	4
A13	Safety Chain	1	13	Retaining Cable with Pin	4
A14	Tongue Side Brace	2	14	Spare Tire Lug Nut	2
A15	Tail Light Bracket	2	15	Wire Harness Clips	
A16	License Plate Bracket	1	16	Cotter Pins	
A17	Running Lights	2	17	Side Rail Pins	6
A18	Wiring Harness	1			

(On Sportstar II and III WG)

A19	Rear Gate	1	18	Rear Gate Pins	3
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# TRAILER ASSEMBLY INSTRUCTIONS

Assemble your trailer in the following order:

1. Axle and wheel assembly
2. Frame wiring
3. Light attachment
4. Axle attachment
5. Tongue assembly attachment
6. Coupler adjustment
7. Trailer rotation
8. Side rail attachment
9. Ramp (or gate) attachment

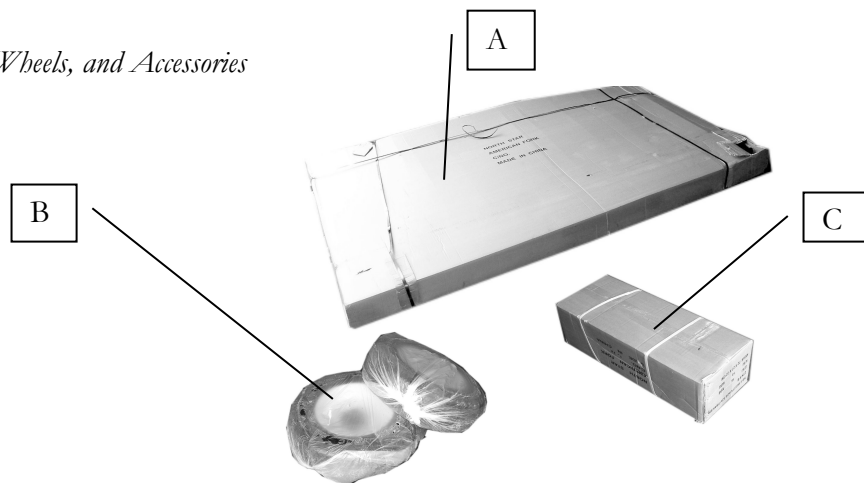
**Important:** Before assembling your trailer, remove all parts from the packaging and lay them out to ensure you have all parts. If any parts are missing, contact your seller.

**Important:** Due to the weight of the trailer, obtain help to turn the trailer over when you have completed all the inverted assembly.

**The two-place ATV Trailer comes with the following packages:**

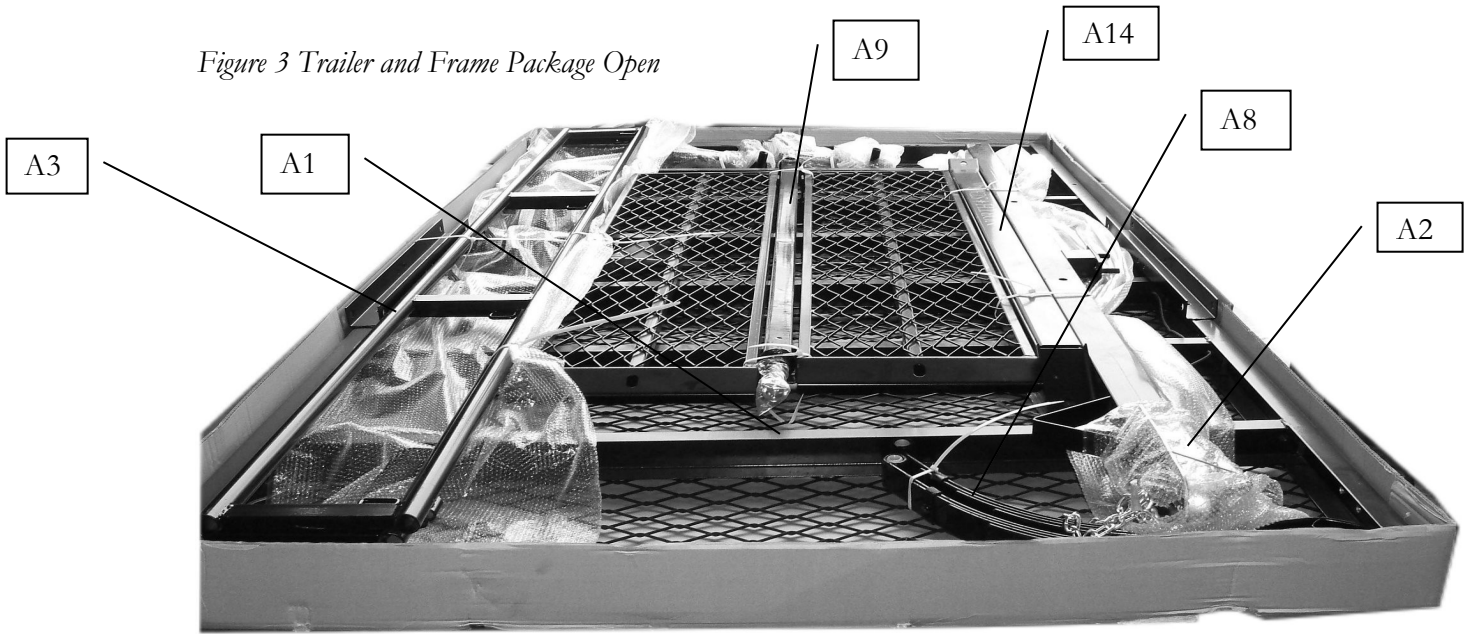
- A. Trailer Frame and Parts
- B. Accessories and Fasteners
- C. Tires and Wheels

*Figure 2 Trailer Frame Parts, Wheels, and Accessories*



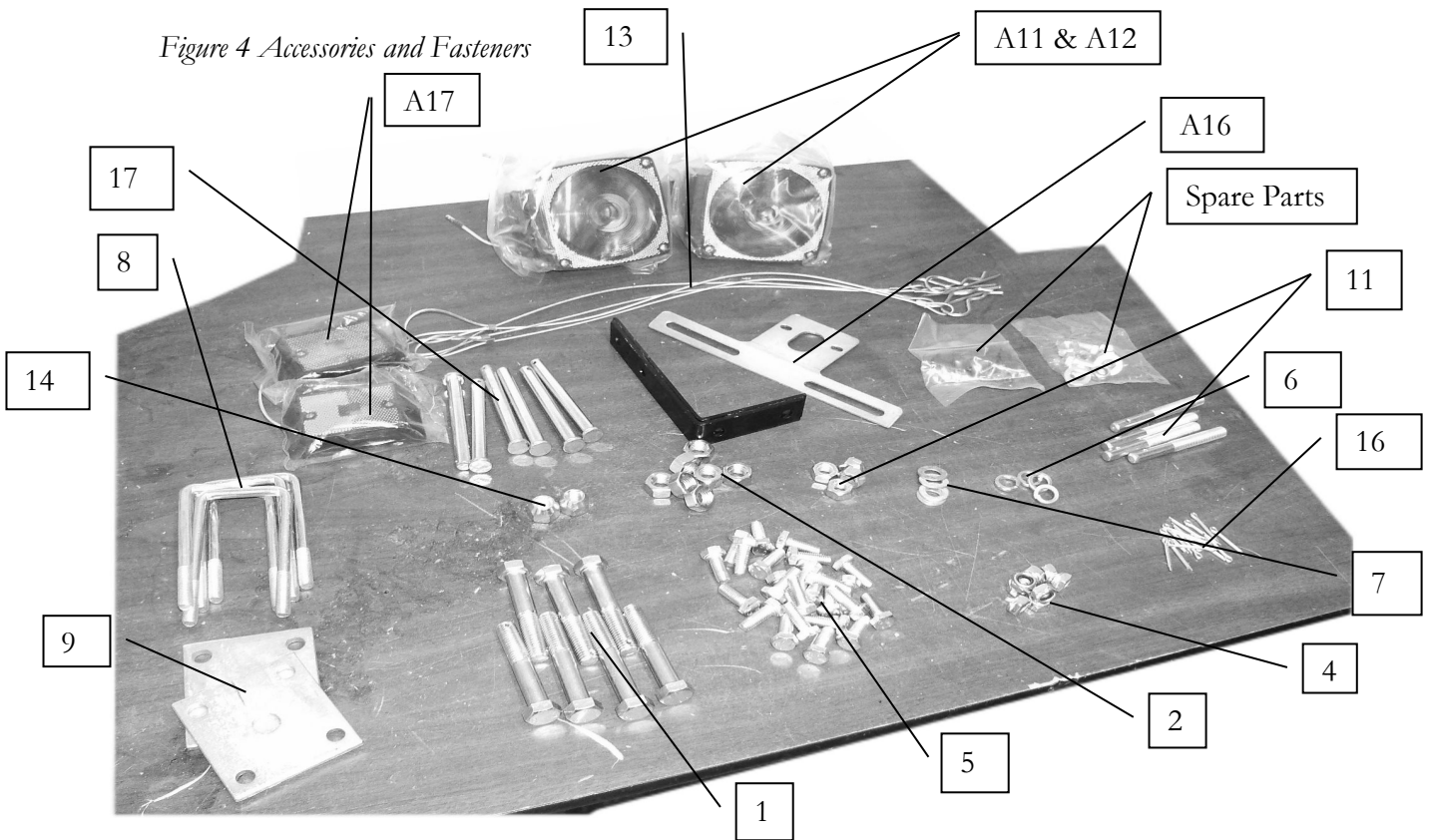
The following figure displays the trailer and frame box opened with its contents.

Figure 3 Trailer and Frame Package Open



The following figure displays all the accessories laid out and prepared for assembly. (Refer to the part numbers in the parts list above.)

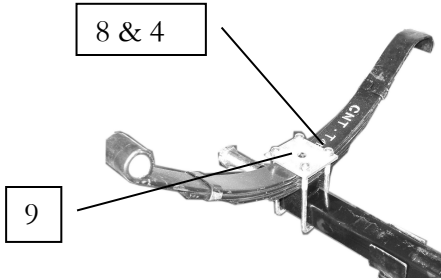
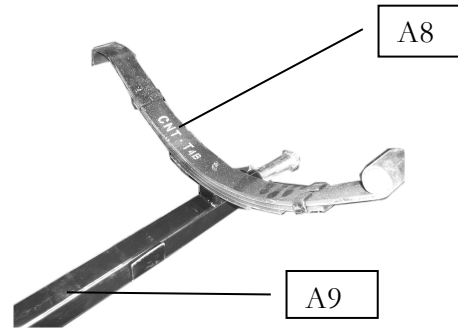
Figure 4 Accessories and Fasteners



## ASSEMBLING THE AXLE

Assemble the axle and tire components in the following order:

1. Lay the axle (A9) on a table or raised flat surface with the threaded portion hanging off each side.
2. Attach the leaf springs (A8) to the spacer welded to the axle.
3. Secure the leaf springs, with the curve upward, by placing the head of the leaf spring bolt into the hole in the spacer.



4. Slide the four U-bolts (8) (two per side) around the axle (one on the left one on the right of the leaf spring) and through the spring plates (9).
5. Thread one lock nut (4) on each end of the U-bolt to finger tightness.
6. Tighten the U-bolt lock nuts in alternating order to assure a level, even tension (and no unbalanced tightness on one lock nut) until all four nuts per spring reach 40 ft-lbs torque.

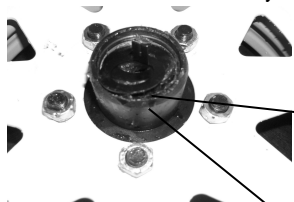
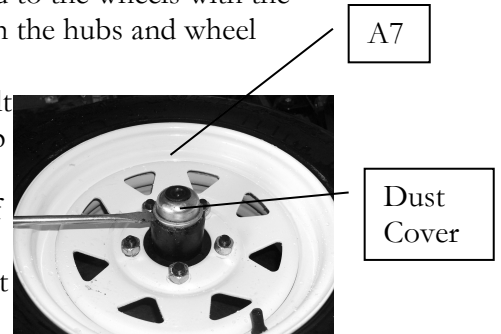
**Note:** Before tightening the nuts on the U-bolts, use a square to make sure that the springs are square to the axle.

## INSTALLING HUB ASSEMBLY TO AXLE

The hubs (part of the wheel and hub assembly, A7) come attached to the wheels with the pre-lubricated bearings and washers inside the hub caps. To attach the hubs and wheel assemblies to the axle, do the following:

1. Remove the dust covers from hubs by inserting a long bolt or punch into the hole of the hub and driving the dust cap off. Alternatively you can use a screwdriver on the face side of the hub to gently pry the dust cover off.

**Important:** Be careful to not drop the bearings or get them dirty.



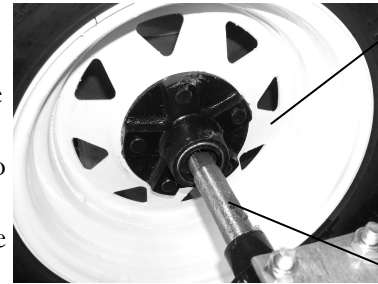
2. Remove the bearings and lock washer from inside the hub.

Bearing  
and



- Carefully slide the hub assembly and wheel onto the threaded end of the axle.
- Slide the bearings into the hub carefully to not remove the grease.

- Place the two washers onto the axle, flat washer first.
- Align the flat surface of the axle with the flat of the washers.
- Tighten axle nut to 35 ft-lbs.
- Loosen the crown nut two notches.
- Align a notch with the one of the tabs of the tabbed washer.



A7

A9

- Use a screwdriver to bend only one of the tabs of the tabbed washer into the crown nut notch.
- Replace dust covers by tapping gently with a rubber mallet.

**Important:** Be careful to not damage the dust covers.

- Use a grease gun on the Zerk fitting to fill the hubs with grease.



Dust Cover

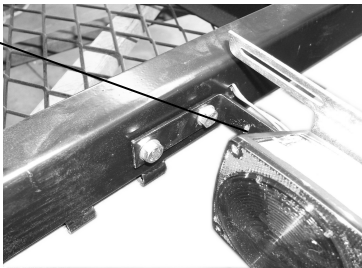
**Note:** The owner must take responsibility to re-pack and adjust the bearings within the first 100 miles

## WIRING THE FRAME AND ATTACHING THE LIGHTS

Run the wiring harness (A18) and wires before assembling other parts to do so with the fewest number of snags and problems. To run the wire through the frame, do the following:

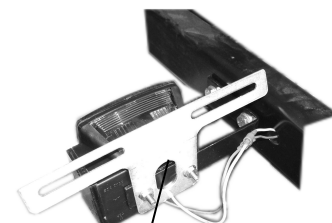
- Lay Trailer Frame flat upside down on a table or other raised, flat surface large enough to support the frame.
- Use two M10 x 20 (3), with attached M10 lock washers (6), to attach the taillight L-brackets (A15).
- Place the license plate bracket under the tail light for the driver's side of the trailer.
- Slide the studs on the light through the license plate bracket (A16) and then through the taillight L-

A15



Bracket.

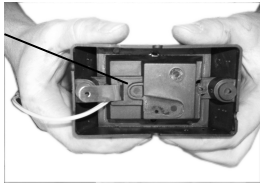
**Important:** Make sure when you tighten on the license plate bracket, you tighten the wires for the taillight between the license plate and the taillight to avoid twisting and breaking the wires.



A16

5. Feed the wiring through the trailer according to the wiring diagram available with this manual and in the owner's manual. Use the wiring harness clips to secure the wiring harness.
6. Leave the wiring main connection near the location for the end of the tongue. Make sure that the wiring for the taillights runs through the loops and holes on the trailer.
7. After mounting the taillights, connect the wiring with the bullet connectors. Press firmly to ensure a good connection.

A17



8. Before fastening the running lights (**A17**) to the trailer, start one screw through the mounting hole and through the ground lead on the same side.
9. Press the wires firmly together in the wiring connector.
10. Fasten the running lights onto the trailer.

11. Tighten the wiring away from the lights towards the tongue mount point.

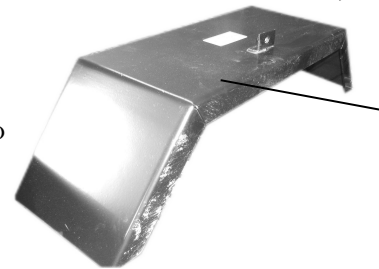
### ATTACHING THE AXLE

With the wiring run and the axle assembly prepared, secure the fenders to the frame before attaching the axle assembly.

1. Align the holes in the fenders (**A10**) with the fender bolt holes on the trailer frame, located alongside the axle channels.
2. Use two bolts and lock washers on each fender to secure both fenders in place.



3. Install axle assembly into axle channels with the leaf spring eye to the front of the trailer.
4. Install four bolts and four nuts in the frame to



A10

secure the leaf spring and axle.

5. Tighten the nuts until a cotter pin can be slipped through the hole in the bolt.
6. Bend at least one leg of the cotter pin.



### ATTACHING THE TONGUE

Next, attach the tongue, with its attached coupler to the trailer using the following steps:

1. Align the tongue (**A2**) in place.
2. Line up the bolt holes, extend the wiring coupler through the base.

A2

**Warning:** Be sure to slide the bolts through the holes without pinching or cutting the wires.

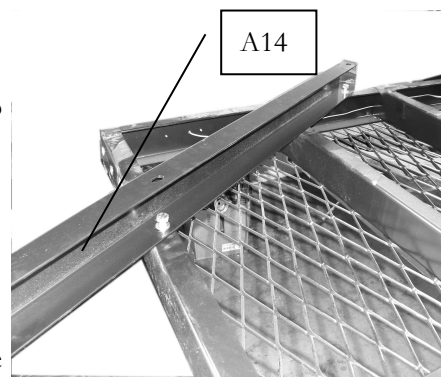


3. Use the longest two bolts to secure the trailer tongue to trailer frame.
4. Wait until you have attached the tongue side braces before tightening the bolts completely.
5. Place the side braces (A14) on the frame meeting on either side of the tongue so that the Northstar name reads upside-down, it reads correctly

when you rotate the trailer onto its wheels.

6. Use a bolt and lock washer to secure the braces to the frame.
7. Use a long bolt to secure the fronts of the braces together.
8. Tighten the nuts until a cotter pin can be slipped through the hole in the bolt.
9. Bend at least one leg of the cotter pin.

**Warning:** Be sure to slide the larger bolt through the hole without pinching or cutting the wires.

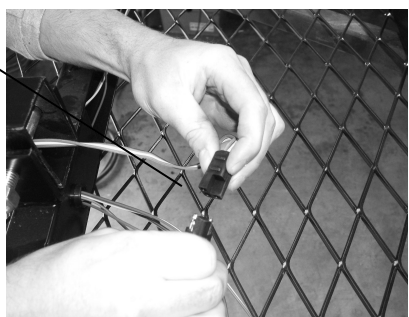


A14

### FINAL WIRING ADJUSTMENT

Before you turn over make the following wiring adjustments:

Main Wiring Harness



1. Connect the wiring harness to the wiring main connector.
2. Tuck the wiring main connector into the base of the tongue.
3. Make sure the tow-vehicle connector and wires extend from the tongue through the rear of the coupler.
4. Make sure to leave enough wire slack to tow

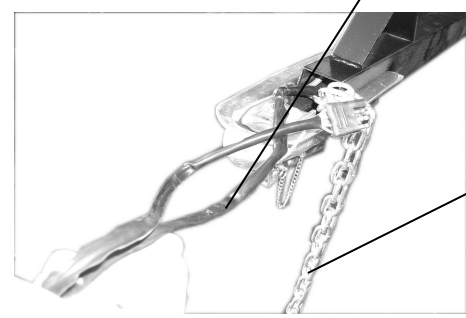
Vehicle Connector

the trailer.

### FIRST COUPLER ADJUSTMENT

Perform the first coupler adjustments including attaching the safety chain (A13) and trailer tongue stand. Perform the following steps to attach these devices prepare the trailer to be turned over to its upright position:

1. Remove the second bolt forward from the side of the coupler.



A13

2. Locate the middle of the safety chain (**A13**).
3. Slide the bolt back in one hole, through the chain, and out the other hole.

**Warning:** Be sure to slide the bolt through the hole without pinching or cutting the wires.

4. Reattach the washer and lock nut.

## ROTATING THE TRAILER

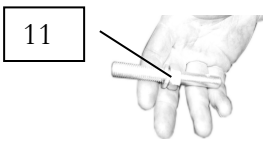
Rotate the trailer to an upright position with the tires now on the ground.

**Warning:** The trailer is very heavy, be sure to have help to rotate the trailer into position.

## ATTACHING THE SIDE RAILS

With the trailer right side up you can install the side rails(**A3**). Perform the following steps to install the side rails:

### PREPARING THE SIDE RAIL SUPPORT BRACKETS



1. Install the ramp locating pins (**11**) on the front (**A5**) and rear (**A4**) support brackets.
2. Tighten a nut onto a ramp locating pin all the way to the end of the threads.

3. Slide a lock washer up against the nut on the ramp locating pin.
4. Thread the ramp locating pin into the front (or rear) support bracket until it fits snug.

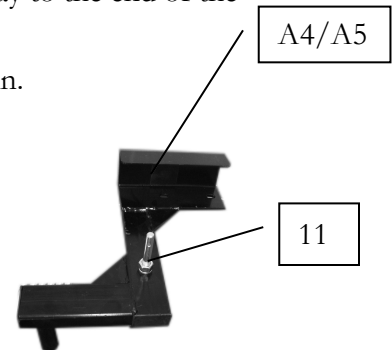
**Hint:** You can use the smooth side of the ramp locating pin to give you more leverage to get the ramp locating pin snug.

**Warning:** Do not grip the smooth side too hard with a tool to avoid bending the ramp locating pin.

5. Stop tightening the ramp locating pin with the holes in the ramp retaining pin side running straight up and down (in direction with the installation direction of the rail bracket).

This helps keep the ramp retaining pin secure during trailer operation.

6. Use a wrench to tighten the nut against the front (or rear) support bracket.
7. Repeat the above steps for each side rail bracket.



### ATTACHING THE SIDE RAILS

1. Install the rear support brackets before installing the front brackets.

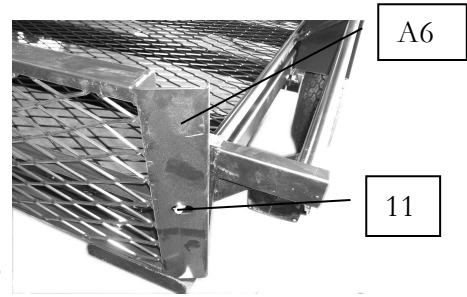
**Note:** You can exchange the front bracket for the rear bracket on the Two-Place ATV Trailer.

2. Use two bolts (5) and lock washers (6) for each rear support bracket.
3. Do not completely tighten the bolts; leave about 1/8 of an inch space before being fully tightened.
4. Align the side rails to their appropriate side.
5. Slide the cable loop of the ramp retaining pin over the rail pin on the rear support bracket.
6. Slide the side rail onto the rail pin.
7. Make sure that all the side rail bottom pin slots align as well.
8. Align the side rails by making sure that the bolt tab on top of the fender lines up with the bolt tab on the side rail.
9. Insert a bolt with lock washer into the bolt tab on the fender to hold the side rail in place.
10. Insert all the side rail pins along the bottom edge of the side rail.
11. Secure each side rail pin with a cotter pin with at least one leg bent.

**ATTACHING THE FRONT BRACKETS**

1. Use two bolts and lock washers to attach the front support bracket on either side.
2. Place the cable loop for the rail retaining pin around the front rail pin.
3. Slide the rail pin of the front support brackets into the side rails.
4. Tighten all the bolts for the front and rear support brackets after attaching all front supports.

5. Mount the ramps on the ramp locating pins, one ramp per end.
6. Use the ramp retaining clips attached to the cables to secure the ramps to the ramp locating pins.
7. Tighten all bolts on the

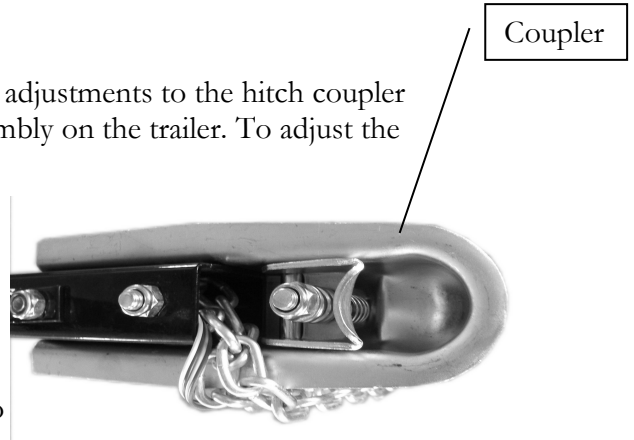


**Note: The owner bears responsibility to tighten all bolts and nuts on trailer to ensure safe operation.**

#### Final Coupler Adjustment

The customer bears responsibility to perform the final adjustments to the hitch coupler before operation. Adjust after you finish all other assembly on the trailer. To adjust the coupler, do the following steps:

1. Remove the coupler pin.
2. Unlock the coupler latch.
3. Place coupler over a 2-inch ball.
4. Use a wrench to tighten the coupler latch nut to where the latch securely locks the coupler to the hitch.

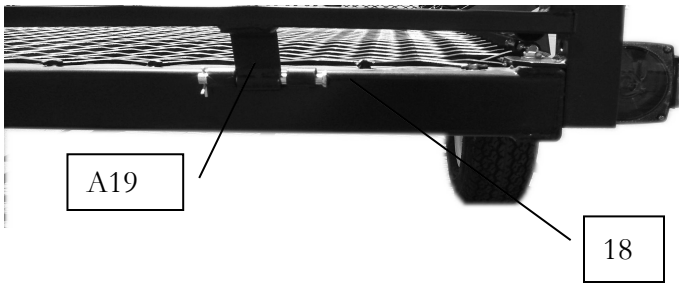


**Warning:** Do not over-tighten the coupler to avoid premature wear to the ball.

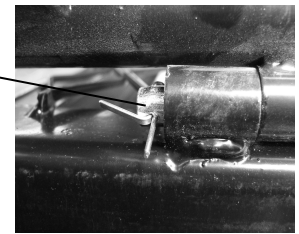
## INSTALLING THE REAR GATE (ON A SPORTSTAR IIWG, SPORTSTAR IIIWG, AND UNISTAR TRAILERS)

On the Sportstar IIWG, Sportstar IIIWG, the rear brackets differ from the front brackets: The rear brackets do not use a ramp retaining pin. And, both ramps mount on the front ramp pins. Install the rear brackets using the same method as above mentioned for the rear brackets.

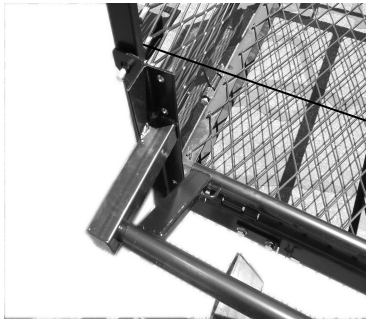
**Important:** Install the rear brackets and side rails before installing the gate. Once you complete the rear brackets and side rails installation by securing the front rail brackets, you can attach the gate using the following steps:



1. Align the gate hinge.
2. Insert gate hinge pin.
3. Insert a cotter pin through the hole in the gate hinge pin and bend at least one leg.



4. Repeat the process with the other side.



5. Close the gate and verify the latches close firm on each gate.

Gate Latch

