

# ***Race City RV Products, LLC.***

**ST - HD - HDXL Model**

## **TOOLS REQUIRED FOR ASSEMBLY OF THE TANDEM TOW DOLLY**

**Ratchet Socket Wrench with sockets sizes: 7/16, 9/16", 3/4" & 15/16"**

**7/16" Box or Open End Wrench**

**9/16" Box or Open End Wrench**

**3/4" Box or Open End Wrench**

**3/8" Open End Wrench**

**15/16" Box or Open End Wrench**

**Lug Nut Wrench for 13/16" Lug Nuts**

**Soft Rubber or Plastic Mallet**

## **ASSEMBLY INSTRUCTIONS**

Place the shipping crate containing the Tandem Tow Dolly in a position where there is a 15' x 15' work space and unpack the contents. Included are:

- 1 Main Frame Assembly with Brakes and Hubs.
- 1 each Left and Right Fenders with Tail Lights
- 1 Tongue Assembly
- 2 Tires (plus Spare if ordered)
- 1 Right Side Frame, pre-wired with Side Marker light.
- 1 Left Side Frame, pre-wired with Side Marker Light.
- 2 Loading Ramps.
- 2 Golf Cart Tracks (Optional)
- 1 Motorcycle Track. (Optional)
- 1 Stone Guard (Optional-either 2 ft High or 4Ft High)
- 1 Deck (Optional)
- 1 pkg, Hardware.
- 1 pkg, Assembly Instructions and Owner's Manual.

### **BOLT TIGHTENING TORQUE REQUIREMENTS:**

- 3/8-16 Bolts 30 ft-lbs (dry), 19Ft-lbs (lubed)
- 1/2-13 Bolts 75 ft-lbs (dry), 45Ft-lbs (lubed)
- 5/8-11 Bolts 150 ft-lbs (dry), 90Ft-lbs (lubed)

**1** - Mount the wheels on the Axles. NOTE: Tightening the Lug Nuts to correct torque is not necessary at this time as the tires will need to be removed in step #10 in order to bleed the brakes. (For Surge Brakes only) ( This Assembly may require 2 people)

**2** - Remove the Car Locator Plate from the Main Frame by removing the 1" x 6" Pivot Bolt & Nut and set the Car Locator Plate aside. Use the Large Spanner Wrench supplied to remove this bolt & nut.

**3** – Installing the Tongue Assembly: Before sliding the tongue into the receiver tube, carefully pull the lighting harness (in red)connector and the brake harness connector out the wi Using a second person for assistance, carefully slide the rear end of the Tongue Tube into the Main Frame Receiver Tube. Slide the Tongue in until the (2) 5/8" holes on the sides of the Receiver Tube and the Tongue Tube line up. Guide the lighting connector and the surge brake hose (or Electric Brake Connector) thru the access port in the bottom of the Receiver Tube. Install, but do not tighten, the (2) 5/8-11 x 5" bolts, Flat Washers and Nuts thru the 2 side holes in the Receiver Tube and the Tongue Tube. Then tighten the (2) 1/2"-13 Clamp Bolts at the front end of the Receiver Tube. Finally go back and tighten the (2) 5/8"-11 Bolts that were inserted thru the sides of the receiver tube. Check all bolts for tightness according to the enclosed Bolt Torque chart listed at the beginning of the Assembly Instructions before proceeding to the next step. ( This Assembly may require 2 people)

**NOTE: Pay special attention to the wiring harness and the surge brake line (or Electric Brake Connector) exiting the back of the Tongue Tube. These wires and the brake line will need to exit thru the access port in the bottom of the Receiver Tube after the Tongue Tube is inserted to the correct position.**

**4 – Connecting Brake Line and Wiring:** Carefully extract the lighting connector from the tongue end out thru the access port and plug it into it's mating plug from the main frame plug. This will connect the tail lights to the trailer light connector at the hitch. If this trailer has an Electric braking system carefully extract the brake harness connector from the access port and connect it to the mating brake connector from the main frame. These mating plugs will be marked visibly in red. Connect the surge brake hose protruding from the access port to the "T" connector fitting on the back of the axle. The brake hose fitting will mate into the female threaded opening on the bottom of the "T" connector fitting on the back side of the Axle Tube.

**NOTE: Be especially careful that this connection is not "cross threaded" when assembled. Check this fitting connection for tightness.**

**If in doubt about performing this task, have a certified brake mechanic perform this assembly.**

**5 – Completing Brake Line Assembly:** After the wiring is connected and the brake line is connected to the Tee fitting, stow the excess wiring inside the access port of the Receiver Tube.

**6 - Installing The Side Frames and the Optional Deck:** (This Assembly may require 2 people)

**6A-** Take the Right Front Side Frame and locate where it fits between the Brackets against the Main Frame at the rear axle. Slide the Side Frame into position as you also guide the front of the Side Frame against the front side of the Brackets on the Tongue Tube. Install, but do not tighten (2) 1/2"-13 x 3"long Bolts, Flat Washers, and Lock Nuts thru the mounting flanges on the Bottom of Axle tube pans and thru the brackets at the rear of the Side Frame.

**6B-**Then Install, but do not tighten (2) 1/2"-13 x 1"long Bolts, Washers and Lock Nuts at the front of the Side Frame where it mates with the front face of the Tongue Brackets. Follow the same steps to install the Left Side Frame

**6C-**Now lay one of the Golf Cart Tracks across the Side Frames in a position where the front edge of the Cart Track lines up with front edge of the Side Frames. Since the Tracks are the same from each end, put the Tracks in position so that the Reflective Tape on the ends of the Tracks (the Ramp Supports), has the RED part of the tape towards the REAR of the Trailer. In this position the slotted bar of the Golf Cart Track will line up with the holes in the Side Frames. Install (2) 3/8"-16 x 1"long Bolts, Flat Washers and Lock Nuts thru the 2 slotted holes and tighten the Bolts. Now all (8) of the 1/2"-13 Side Frame Bolts that were left loose earlier may be tightened to specifications.(The procedure for Installing and tightening the Side Frames is done in this order to insure that the Side Frames are Level to each other and Level to the Tandem Tow Axle.)

**6D-** Connect the plugs leading to the Side Marker Lights on both sides. Any excess wire may be carefully slid into the Tongue Tube.

**6E-**If a deck is ordered after the Side Frames are leveled and tightened, remove the Golf Cart and/or Motorcycle tracks. Lay the Deck in place and use the supplied 3/8" & 1/4" bolts, nuts and washers to bolt it down.

**7 – Install the Golf Cart Tracks:** (If Ordered) The Golf Cart Track spacing will measure 48” outside to outside unless a special setting was requested. Use 3/8”-16 x 1”long Bolts, Flat Washers and Lock Nuts and tighten to specifications. If you have a Deck installed, there will be 16pcs of 1/4” hex bolts, nuts and washers to install. Check all bolts for tightness according to the Bolt Torque chart listed at the beginning of the Assembly Instructions before proceeding to the next step.

**8 – Installing the Motorcycle Track:** (If Ordered) Place the Motorcycle Track on the trailer. Bolt it into place with (2) 3/8” x 1”long Bolts, Flat Washers and Lock Nuts. . If you have a Deck installed, there will be 16pcs of 1/4” hex bolts, nuts and washers to install. Check all bolts for tightness according to the Bolt Torque chart listed at the beginning of the Assembly Instructions before proceeding to the next step.

**9 – Installing the Stone Guard:** If ordered, set the Stone Guard in place across the front of the Side Frames and resting the center notch cut out over the Tongue Tube. Bolt the Stone Guard in place across the bottom with (4) 3/8” x 3 1/2”long Bolts, Flat Washers and Lock Nuts. If you are installing the 4Ft Stone Guard, the Front Brace Tube must be installed. The Brace slides into the Bracket on the Front of the Stone Guard and into the Bracket on the Tongue Tube near the Brake Actuator. Use (2) 3/8-16 x 1 3/4” long Bolts, Lock Nuts and Washers to fasten the Brace Tube in place. Check all bolts for tightness according to the Bolt Torque chart listed at the beginning of the Assembly Instructions before proceeding to the next step. ( This Assembly may require 2 people)

**9 – Installing the Car Plate:** Place the Car Plate back into position in the most forward hole in the Tandem Tow frame for the 1”x 6 Swivel Bolt. Using the supplied Spanner Wrench, install the Bolt, Washer and Lock Nut and tighten until there is just slight resistance to rotating the Car Plate. (This Assembly may require 2 people) **NOTE: The 1” x 6” Bolt must have at least 3 threads showing below the Lock Nut after this installation. The Lock Nut must be stiff as it is rotated when screwed onto the Bolt to insure that it does not come loose during Trailer operation.**

#### **FOR ELECTRIC BRAKE EQUIPPED TRAILERS - SKIP TO STEP 11.**

**10 – Filling Brake Reservoir and Bleed Brakes:** The brake system must have brake fluid (DOT 3 only) added to the Master Cylinder and the system be bled of air before any trailer operation. The instructions for performing this operation are included in the Brake Coupler Instructions included in the Owners Manual. Follow those instructions completely to insure that your brakes are operating properly before using the trailer. Call Race City RV Products at 1-866-223-1016 if any assistance is required.

**NOTE: If in doubt about performing this task, have a certified brake mechanic perform the fluid installation and brake bleeding operation. Use DOT 3 fluid only.**

**11 – Installing Fenders:** After completion of the brake line bleed procedure, the Left and Right Fenders can be mounted. In order to more easily reach the Fender Mounting bolts it may be necessary to remove both tires from the trailer. Once the trailer is blocked up with the tires removed, the Fenders will bolt onto the inside (side nearest the towed car) of the spindle plates. There are 3/8-16 x 1 1/4” bolts, nuts and washers available there to fasten the Fenders into place with. Install each Fender according to the Tail Lite locations. Once the Fenders are securely bolted in place, plug the Tail Lite Wires into the mating plugs of the axle on each side.

**12** - Mount the Tires: Install wheels and tighten the Lug Nuts to 90-110 Ft-Lbs in a staggered pattern. The Owners Manual has a diagram on page 44 showing the tightening order for 5 & 6 Lug Nut wheels. Install the chrome Hub Caps by lining up the caps with the wheel Lug Nuts and “snapping” the Hub Caps on.

**13** - The Trailer lighting must be checked for correct operation. Connect the Tandem Tow Dolly to your tow vehicle and perform a test of STOP, TURN and RUNNING lights. Do not use the Tandem Tow dolly unless all lights are operating properly.

**14** - For Electric Brake equipped Tandem Tow Dollies, two brake tests are necessary.

**14A-** Operational Brake Test: connect the 7 Pin plug to the Tow vehicle, then observe that the Backup Battery is either fully charged, or is charging, by viewing the LED panel on the Backup Battery Box. Then, by jacking up one wheel at a time off the ground, engage the towing vehicle brakes, and by attempting to spin each wheel, check for brake engagement. Do this test for each wheel.

**14B-** Emergency Braking Operation Test. First, unplug the Trailer cord from the Tow Car and then pull the brake away switch cable fully out of the trailer receptacle. If the breakaway switch is operating correctly, both wheels will have full brake actuation. It is the owner’s responsibility to insure that the above tests are performed and that the brakes operate correctly. If any problem is encountered, please contact Race City RV Products for assistance.

**15** - This completes the initial assembly of the Tandem Tow Dolly System.

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**The Following are reminders for safe operation, read your Owners Manual for complete operational and safety related instructions.**

**1** - Check the air pressure in the Tires before towing. Follow the manufacturer's specifications for tire pressure imprinted on the sidewall of the Tires. To prevent excessive bouncing on the road while towing the dolly without a load, drop the tire pressure to approx. 10psi.

**2** - Check the Lug Nuts by tightening to the specifications provided in your Owner’s Manual.

**3** - It is the user's responsibility to read and follow the instructions in the Owner's Manual. User is required to follow the instructions for the maximum weight restrictions and correct use of the weight distribution feature of the Tandem Tow dolly system.

**4** - The Car Locator Plate must be adjusted to provide the correct tongue weight for the load carried. Become familiar with the towed weights for your use, and adjust the weight distribution to suit your tow vehicle requirements. (See Car Plate information in the back of your Tandem Tow Owner’s manual)

**5** - Check your vehicle tie down straps often, especially after the first 50 miles of towing. Check your secondary vehicle straps often for tightness. Check all Straps for any cuts, abrasion or physical damage. Replace immediately if any damage is seen.