Assembly Disclaimer

If you are uncertain about your ability to assemble a trailer or find the process challenging, we strongly recommend seeking assistance from a professional with relevant experience.

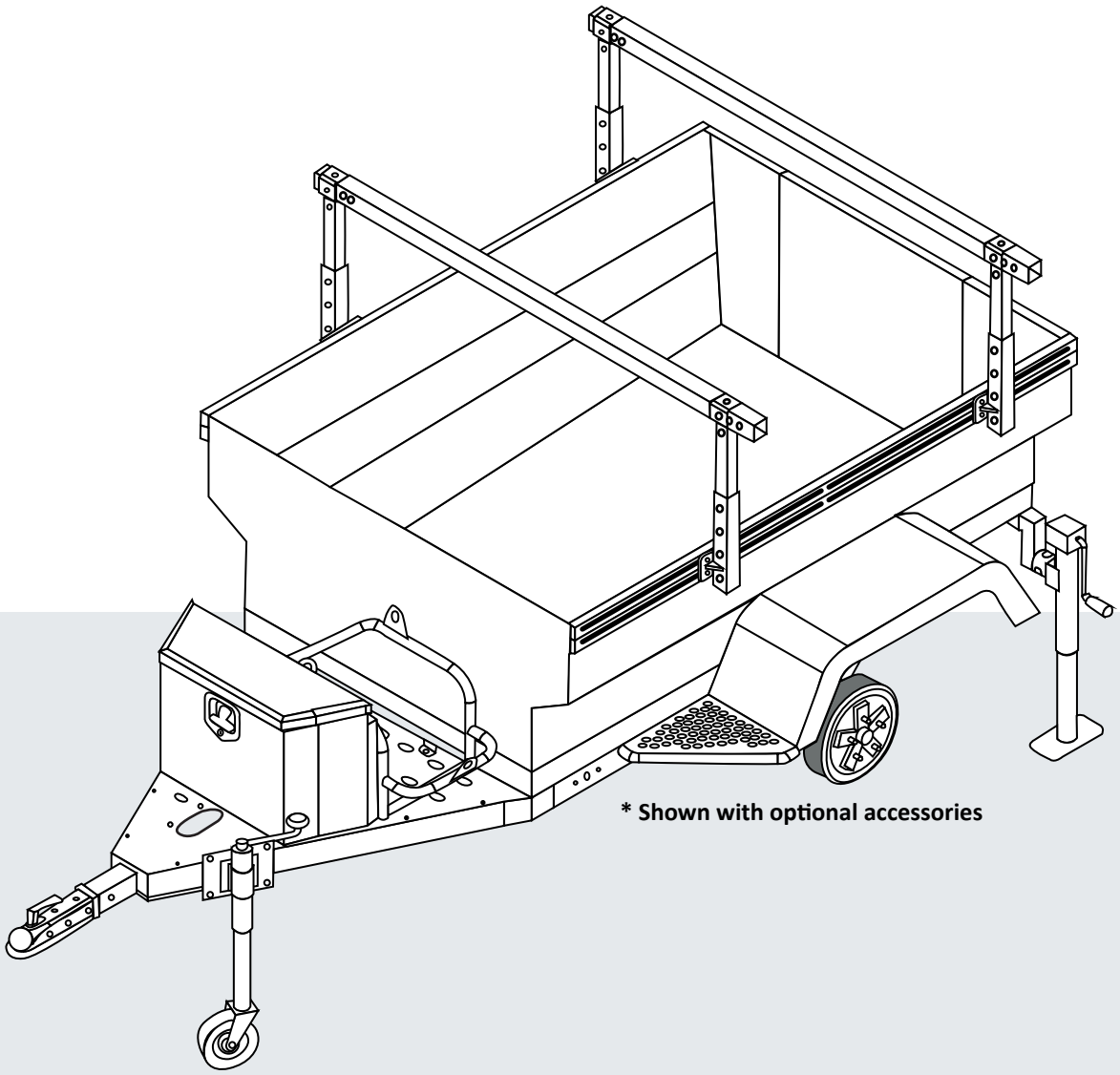
Returns and Exchanges Policy

Please note that we do not accept returns or exchanges once the crate has been opened, during any stage of assembly (partial or complete), or at any point after assembly has been finalized.

For any questions or clarification, please contact us at

sales@overlandvehiclesystems.com.

Military Style Off-Road Trailer Kit



* Shown with optional accessories

CAREFULLY READ INSTRUCTIONS PRIOR TO THE FIRST USE OF THE OFF-ROAD TRAILER

APRIL 2024

GET TO KNOW YOUR OFF-ROAD TRAILER

We recommend you check all parts are included prior to first use.

COMPONENTS NEEDED

Hardware Pack 1

SPECIFICATION	MODEL	QTY	LOCATION
Allen Button Head	M6 x 12mm	6	Fender
Flat Washer		6	
Allen Button Head	M10 x 25mm	12	
Flat Washer		24	
Lock Washer		12	
Hex Nut		10	

Hardware Pack 2

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M16 x 45	2	Chassis
Flat Washer		4	
Lock Washer		2	
Hex Nut		2	
Hex Bolt	M14 x 85	4	
Flat Washer		8	
Lock Washer		4	
Hex Nut		4	
Hex Bolt	M16 x 120	1	
Flat Washer		2	
Lock Washer		1	
Hex Nut		1	

Hardware Pack 3

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M16 x 80	8	Shock
Flat Washer		16	
Lock Washer		8	
Hex Nut		8	

Hardware Pack 4

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M10 x 90	4	Limiter Strap
Flat Washer		8	
Lock Washer		4	
Hex Nut		4	

Hardware Pack 5

SPECIFICATION	MODEL	QTY	LOCATION
Socket Head Cap Bolt	M10 x 30	2	Suspension Arm
Hex Bolt	M16 x 60	8	
Flat Washer		16	
Lock Washer		8	
Hex Nut		8	

Hardware Pack 6

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M10 x 90	3	Spare Tire Carrier
Flat Washer		6	
Lock Washer		3	
Hex Nut		3	

Hardware Pack 7

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M10 x 80	2	Tongue box
Flat Washer		4	
Lock Washer		2	
Hex Nut		2	
Hex Bolt	M10 x 90	1	
Flat Washer		2	
Lock Washer		1	
Hex Nut		1	

Hardware Pack 8

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M10 x 30	8	Tent Uprights
Flat Washer		8	
Lock Washer		8	
Clevis Pin with R-Pin	12mm x 65	4	
Clevis Pin with R-Pin	16mm x 75	4	
Hex Bolt	M12 x 1.75	16	
Flat Washer		16	

Hardware Pack 9

SPECIFICATION	MODEL	QTY	LOCATION
Leveling Jack Pin	M12 x 65mm	2	Rear Jack Support

Hardware Pack 10

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt	M10 x 30	4	Bump Stop
Flat Washer		4	
Lock Washer		4	

Hardware Pack 11

SPECIFICATION	QTY
Hand Brake with Accessories	1

Hardware Pack 12

SPECIFICATION	MODEL	QTY	LOCATION
Hex Bolt SS	M6 x 25mm	4	Brake Away
Flat Washer SS		8	
Hex Lock Nut SS		4	
2 Pin Deutsch Connector		1 Set	
4 Pin Deutsch Connector		1 Set	

Hardware Pack 13

SPECIFICATION	MODEL	QTY	LOCATION
Clevis Pin with R-Pin	16mm x 75	1	Hitch Receiver
Hex Bolt	M12 x 80	2	
Flat Washer		4	
Lock Washer		2	
Hex Nuts		2	

Tools & Equipment Required

2 Floor Jacks		4 Jack Stands		2x 4x4x6 Wood Posts		165 ft/lb Capacity Torque Wrench		Phillips Head Screw Driver		1/2" Drive Ratchet		3/8" Drive Ratchet
13mm Wrenches		12mm Wrenches		10mm Wrenches		8mm Wrenches		7mm Wrenches		3/4" Lug Wrench		Wire Strippers
6mm Allen Wrenches		4mm Allen Wrenches		24mm Wrenches		21mm Wrenches		19mm Wrenches		18mm Wrenches		16mm Wrenches
Small Needle Nose Pliers		Grease Pen		Tape Measure		Wire Cutters		Deutche Crimper (Optional)		Camber Gauge (Optional)		Thread Locker (Optional)

GENERAL WARNINGS

Please thoroughly read and comprehend all provided instructions. Failure to adhere to these instructions may result in injury, electric shock, or fire hazards.

WARNING: The components of this trailer kit are heavy and require careful handling. To prevent muscle strain or back injuries, utilize lifting aids and employ proper lifting techniques during assembly and unpacking. It is recommended to have a minimum of two floor jacks, four jack stands, and assistance from at least two individuals during assembly.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

WARNING: Handling the wiring cord on this product exposes you to lead, a chemical recognized by the State of California to cause cancer, birth defects, or other reproductive harm. It is advised to wash hands thoroughly after handling. The cord has been encased in conduit to minimize exposure.

Note: Photos used in this installation are for illustration only. Actual product may vary, but the installation steps remain the same.

It is essential to acknowledge that the warnings, cautions, and instructions outlined in this manual cannot anticipate all potential circumstances or scenarios. Users must exercise common sense and caution throughout the assembly process.

Notify the carrier of any shipping damages. By accepting the shipment, you absolve the carrier of any freight damages and acknowledge receipt of the item in its current condition. Please note that Overland Vehicle Systems bears no responsibility for shipping damages resulting from mishandling.

Upon unpacking, carefully inspect the product to ensure it is intact and free from damage. Should any parts be missing or damaged, promptly contact Overland Vehicle Systems at 833-226-4863.

Always wear ANSI-approved safety goggles during assembly. Additionally, appropriate protective footwear, clothing, and other safety gear are mandatory.

Ensure that the work area remains clean and dry at all times. Untidy, disorganized, or wet workspaces increase the risk of injury.

Keep children away from the work area. The trailer kit is not a toy, and children should not be permitted to play within its vicinity or the crate.

TRAILER HANDLING GUIDELINES

1. Moderate Speeds and Braking
- Always drive at moderate speeds, never exceeding posted speed limits, to reduce strain on the tow vehicle and trailer.
- Allow for increased braking distances to ensure safe stopping.

2. Avoid Sudden Maneuvers
- Refrain from sudden braking, acceleration, or steering maneuvers to prevent skidding, sliding, or jack-knifing.
- Sudden steering may induce sway and exert excessive side force on the trailer.

3. Off-Highway Caution
- Reduce speed when traveling off-highway, crossing railroad tracks, navigating ditches, or encountering extreme terrain.

4. Extra Space for Turns
- Provide additional space when turning, considering that the trailer's wheels will track closer to the inside of the turn than those of the tow vehicle.
- Choose a path that maintains the trailer in the most level position to minimize obstacles and avoid excessive articulation between the trailer and tow vehicle.

5. Managing Passing Vehicles
- When passed by a large vehicle, reduce speed moderately and maintain a firm grip on the wheel to counter wind turbulence and buffering, which may induce trailer sway.

6. Sway Control
- If excessive sway occurs, use the brake controller to apply the trailer brakes moderately. Avoid attempting to control sway by using the vehicle's brakes, as this may exacerbate the situation.

7. Tow Mode Usage
- Utilize the tow-mode setting recommended by the vehicle manufacturer, if available, to optimize towing performance and stability.

8. Backing Up with Short Wheelbase Trailers
- Exercise caution when backing up short wheelbase trailers, as they respond rapidly to steering inputs.
- Use slight adjustments of the steering wheel to control direction effectively.

9. Load Optimization
- Trailer handling improves with a load onboard. An empty trailer may exhibit increased bouncing compared to a loaded one.

By adhering to these guidelines, you ensure safe and controlled handling of the trailer in various driving conditions.

TRAILER PARKING & STORAGE BEST PRACTICES

1. Parking Preparation
- Once the trailer is positioned, apply the parking brake on the trailer and secure wheel chocks on the downhill side of the trailer wheels.
- Engage the tow vehicle's parking brake after shifting it into PARK, then release pressure from the brake pedal.
- This sequential process reduces strain on the tow vehicle's transmission, minimizing the risk of it being stuck in PARK due to excessive load.

2. Stabilizer Jacks Deployment
- Before unhooking the trailer from the tow vehicle, always deploy the tongue jockey wheel and rear stabilizer jacks (if equipped).
- Shifting loads may alter the trailer's balance, so ensure proper load securing to prevent shifting.

3. Trailer Wiring Disconnection
- Unhook the trailer wiring from the tow vehicle to prevent the breakaway brake system from drawing current from the vehicle's battery.
- Avoid using the breakaway system battery to power any other devices, depending on the tow vehicle's trailer wiring setup.

4. Coupler Maintenance
- When parking or storing the trailer, keep the coupler off the ground to prevent dirt buildup in the hitch, ball socket, or articulating hitch.

5. Post-Use Maintenance
- After using the trailer in saltwater environments, promptly wash it with fresh water to prevent corrosion.
- In winter conditions where road chemicals are used to melt snow, wash the trailer with a mild detergent upon reaching your destination to remove any corrosive residues.

By adhering to these best practices, you ensure the longevity and reliability of your trailer, minimizing wear and tear while enhancing safety during parking and storage.

TRAILER ELECTRIC BRAKES ADJUSTMENT & BREAK-IN PERIOD

Electric Brakes Adjustment:
- Adjust the brakes after installation and as necessary throughout the brake system's lifespan.
- Utilize a brake adjustment screw tool to turn the adjustment gear on the inside of the assembly.
- Turn the gear until the brake drum catches on the brake pads sufficiently, preventing easy rotation of the hub by hand.
- Reverse the gear approximately 10 clicks.
- A properly adjusted brake should exert a slight drag on the brake drum.
- Re-adjust the brakes when servicing the bearings, typically every 3000 miles.

Break-In Period:
- A break-in period is essential for the brakes to achieve optimal performance.
- This period is necessary for new axles and whenever new brake shoes and/or magnets are installed during regular maintenance.
- Seat the brakes by applying approximately 8-10 volts to the trailer brakes at an initial speed of 35-40 mph.
- Allow the tow vehicle/trailer combination to slow down to 20-25 mph during brake application, conducting one-mile intervals to prevent overheating.
- Expect a noticeable improvement in brake performance during this period.
- After 10-30 applications, the brake shoes will be fully cured from the heat, achieving close to 100% contact with the brake drum.
- The break-in period also seats the electromagnets within the brakes.

Off-Road Trailer

SET-UP & CARE INSTRUCTIONS

GENERAL NOTES

- Manually adjust the brakes after the first 200-300 miles of operation and periodically thereafter, typically at 3000-mile intervals during bearing servicing.

- Overland Vehicle Systems provides complete brake assemblies; for individual replacement parts, contact your local trailer dealer.

- After river crossings, driving through deep mud, sand, or water, inspect and clean the brakes thoroughly.

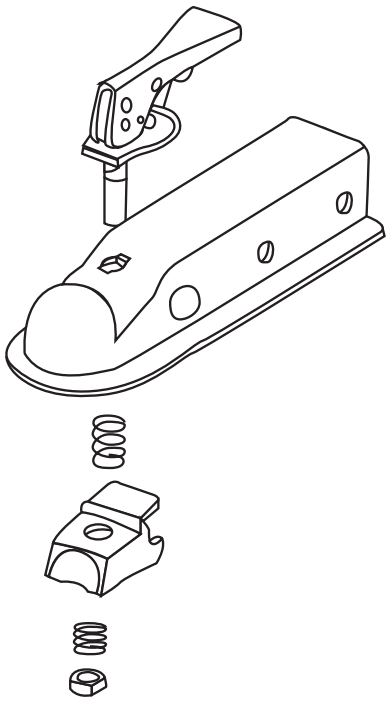
- Failure to clean out mud can quickly wear down brake shoes, drums, and magnets.

- Ensure complete cleaning and drying of brake assemblies before reassembly and always repack axle bearings each time they are disassembled.

- A brake controller is essential for electric brakes. Overland Vehicle Systems recommends the Prodigy P3 electric brake controller, but various high-quality options are available in the market. Select one that best fits your towing needs and preferences.

BALL COUPLER (2" BALL COUPLER IS FOR ON-ROAD USE ONLY)

To adjust the hitch latch on your trailer's coupler, you will want to adjust the nut at the bottom of the latch. This nut may be tightened or loosened depending on what you need for your coupler. The ball needs to be fully secured in the coupler and unable to come off. However, there should be enough room for some play. The hitch ball needs to be able to move inside the coupler so that nothing binds up while you are towing. The trailer needs to be able to move and pivot while moving, so the ball should be secure, but not tight, in the coupler. It is easiest to adjust by using a hitch ball and inserting it into the coupler. Then lock the coupler and adjust. Move the hitch ball around to check for the right tension. Once again, it should be loose enough that it does not bind, but tight enough that it does not come out of the coupler. Make sure to properly grease the ball. Hitch ball grease is available commercially at most auto parts stores, however high pressure wheel bearing grease is acceptable. Failure to properly keep the coupler and ball greased may cause catastrophic failure. Periodically oil pivot points and sliding surfaces of the coupler with SAE 30wt. Motor oil.



TRAILER HUB AND WHEEL BEARING ROUTINE MAINTENANCE

Preparation:
- Carefully remove the wheel hub's dust cap with a chisel and hammer to access the castle nut.
- When disassembling, remove the cotter pin first and then the castle nut. Always use a new cotter pin for reassembly.

Hub and Drum Assembly Removal:
- Gently spin the hub to aid in removing the drum assembly, noting the orientation of seals, washers, and bearings.
- If the hub is stuck, use a mallet to tap the back side in various spots. In case the bearing is frozen to the spindle, apply force to remove the hub, taking care not to damage the spindle. Replace the spindle if damaged.

Bearing Removal:
- Remove the outer bearing followed by the inner bearing by placing the hub on a piece of wood and using a 1" wooden dowel to knock out the inner bearing in a circular motion. The inner seal will be pushed out simultaneously.

Inspection and Replacement:
- Inspect bearings, seals, races, and spindle for any nicks or discoloration, replacing any damaged components.
- Thoroughly clean old grease from bearings before repacking.

Reassembly and Final Adjustment:
- Reinstall parts in the same order they were removed, applying a small amount of grease to the castle nut.
- Back off the castle nut until loose, then snugly tighten it until it stops. Align the cotter pin hole with one of the notches on the nut.
- Rock the hub to ensure proper seating. Adjust the castle nut to achieve minimal play in the hub.
- Install the cotter pin securely, splitting the bottom ends to the left and right.

Finishing Touches:
- Reinstall the dust cover using a mallet. If using a bearing buddy or bearing protector unit, follow the manufacturer's instructions carefully.

By following these routine maintenance steps, you ensure the proper functioning and longevity of your trailer's hub and wheel bearings, enhancing safety and performance during use.

TRAILER SAFETY CHECK BEFORE EACH USE

1. Tire Inspection
- Check all tires for proper inflation and signs of damage.
- Repair or inflate tires if necessary.

2. Wheel Nut Torque
- Verify the torque of all lug nuts.
- Refer to the wheel manufacturer for the appropriate torque specifications.
- Recommended torque for ½ -20 lugs is 85-95ft lbs.

3. Trailer Condition Assessment
- Examine the trailer for loose hardware, structural integrity, and any other conditions that may impact safe operation.
- Do not utilize the trailer kit if any damage is detected until repairs are completed.

4. Lighting System Check
- Ensure all running lights, brake lights, turn signals, and hazard lights are functioning correctly.
- Inspect lights and wiring for damage.
- Replace broken lenses, reflectors, and repair damaged wiring as needed.

5. Breakaway System Evaluation
- Confirm that the breakaway system is charging when connected to the tow vehicle while the vehicle is running.

6. Cargo Security
- Ensure all cargo is securely fastened within and on the trailer.
- Verify that all hitch pins are properly secured with a cotter pin or equivalent securing device.

7. Parking Brake and Safety Chains
- Adjust the parking brake as necessary and verify its functionality.
- Utilize supplemental wheel chocks as recommended to prevent unwanted trailer movement.
- Ensure safety chains are correctly routed, not touching the ground, and allowing for full trailer turning.
- Attach the breakaway tether to the tow vehicle's frame, avoiding attachment to the safety chain loop or hitch ball.
- Adjust the length of the safety chains to prevent activation of the breakaway system unless both the coupler and safety chains fail.

8. Coupler Selection
- Avoid using a 2” ball-style coupler for off-highway use.
- Utilize an articulating coupler, pintle hook and lunette ring, or other suitable articulating coupler for off-highway use.

9. Payload Limits
- Adhere to the trailer's maximum payload capacity of 1700 lbs and other specified capacities recreational rear 2” receiver.
- Ensure compliance with the tent mounting system's dynamic and static load limits.
- Tent mounting system has a max load of 250lbs dynamic and 800lbs static.

10. Towing Vehicle Compatibility
- Ensure that the towing vehicle and hitch are rated to safely tow the trailer and its payload.
- Do not exceed the combined weight of the trailer and payload, which should not exceed 3306 lb.

11. Cargo Positioning and Weight Distribution
- Position cargo items with care, ensuring that tongue weight does not exceed 325 lb(should be 10% of GVW) and is evenly distributed from side to side.
- Adjust tongue weight based on the tow vehicle's capacity.

12. Tow Vehicle Inspection
- Inspect the tow vehicle's hitch, trailer wiring, and hitch hardware before each use.

- Ensure all hardware is properly torqued.

13. Weight Limits and Towing Capacities
- Never surpass the weight limits specified by the hitch manufacturer or the towing capacities of the tow vehicle.
- Consider that towing capacities listed by manufacturers are typically for on-highway use and may vary for off-highway use depending on terrain.

14. Brake Controller Adjustment
- Readjust the brake controller's power setting for each tow to prevent brake lockup and ensure adequate braking power.
****Operational Safety Recommendations****

These operational safety recommendations have been adapted from "TOWING A TRAILER-Being equipped for Safety," published by the NHTSA. For comprehensive guidance, please contact the National Highway Traffic Safety Administration.

Familiarize yourself with trailer handling before driving on main roads. Keep in mind that trailers with short wheelbases respond rapidly to changes in steering direction.

Avoid permitting anyone to ride in or on the trailer. Additionally, refrain from transporting animals in this trailer.

Please note that this trailer kit is not a toy. Ensure that children are not allowed to play on or near the trailer kit or crate.

ASSEMBLY INSTRUCTIONS

1. Before taking delivery of trailer kit, inspect for damage. Note all damage and notify shipper.

2. It is recommended for 2 people for Un-crating and assembly. 2 floor jacks, 4 jack stands, 2 - 4”x4” pieces of wood about 12”-16” long (to protect trailer from jack) you may want to use a 6’ piece of 4x4 (optional but makes it much easier to support the front), a metric tool kit (sockets, wrenches, allen keys, etc.), Various screwdrivers and an electrical tool kit. Assemble pieces with all hardware before tightening hardware.

3. Even though the trailer kit uses lock washers and nylock nuts, thread-locker is recommended on all hardware as an extra step to prevent hardware from loosening.

4. Tools required my vary due to product improvements.

5. Use of lifting equipment will aid in the un-crating and assembly.

Off-Road Trailer

SET-UP & CARE INSTRUCTIONS

1 Crate Disassembly

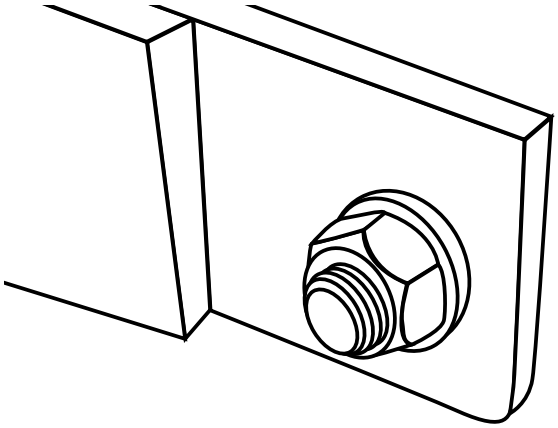
Remove the top square portion of the crate by removing the securing bolts. Tap it up evenly until the square portion is removed from the main crate. This must be done evenly to prevent the legs from binding and becoming difficult to remove.

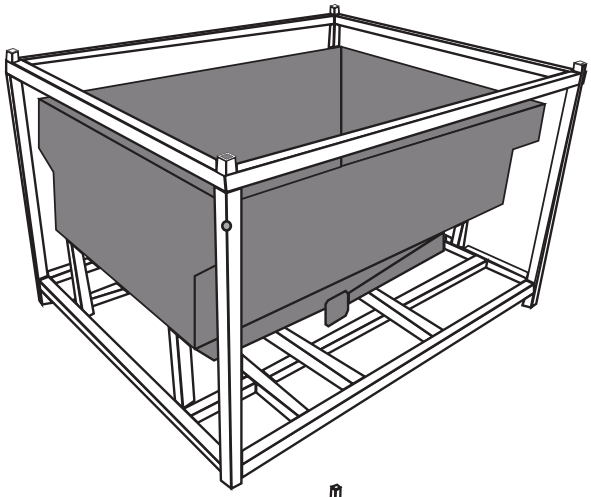
Then unbolt & remove all four uprights.

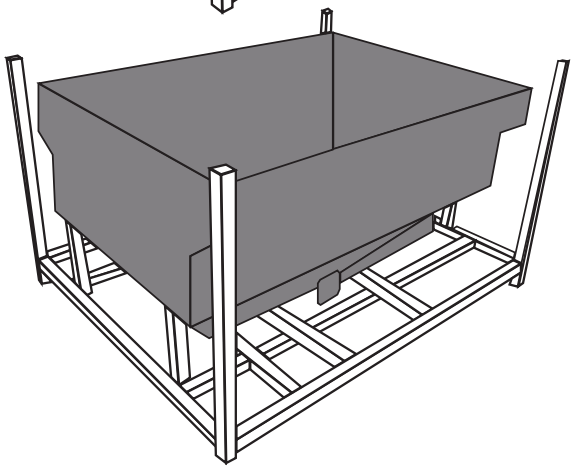
Carefully remove shrink wrap. Be careful to not scratch the trailer when unwrapping.

Remove all components from the trailer tub.

Unpack and lay out all pieces.







2 Trailer Tub Removal

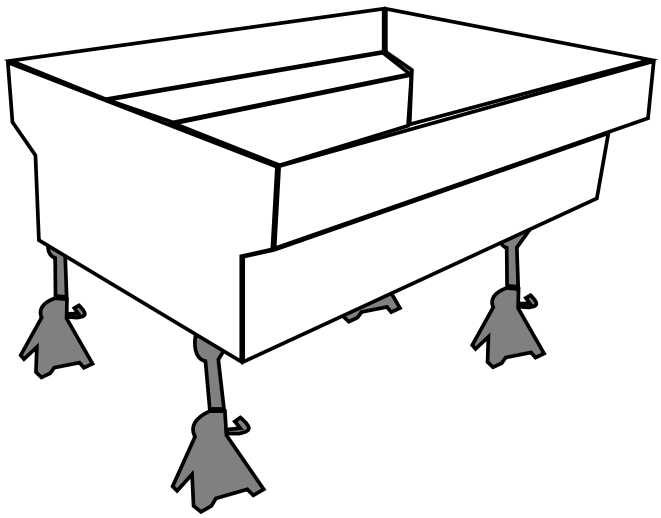
Support the trailer body with jacks and 4x4s. Lift trailer body slightly to take load off the mounting bolts.

Make sure jack stands are outboard of the crate base structure. Unbolt the 4 trailer tub supports.

NOTE: Make sure the trailer body is high enough to be able to slide base structure with tongue out.

Using jacks and jack stands, Support trailer while sliding and removing lower crate base.

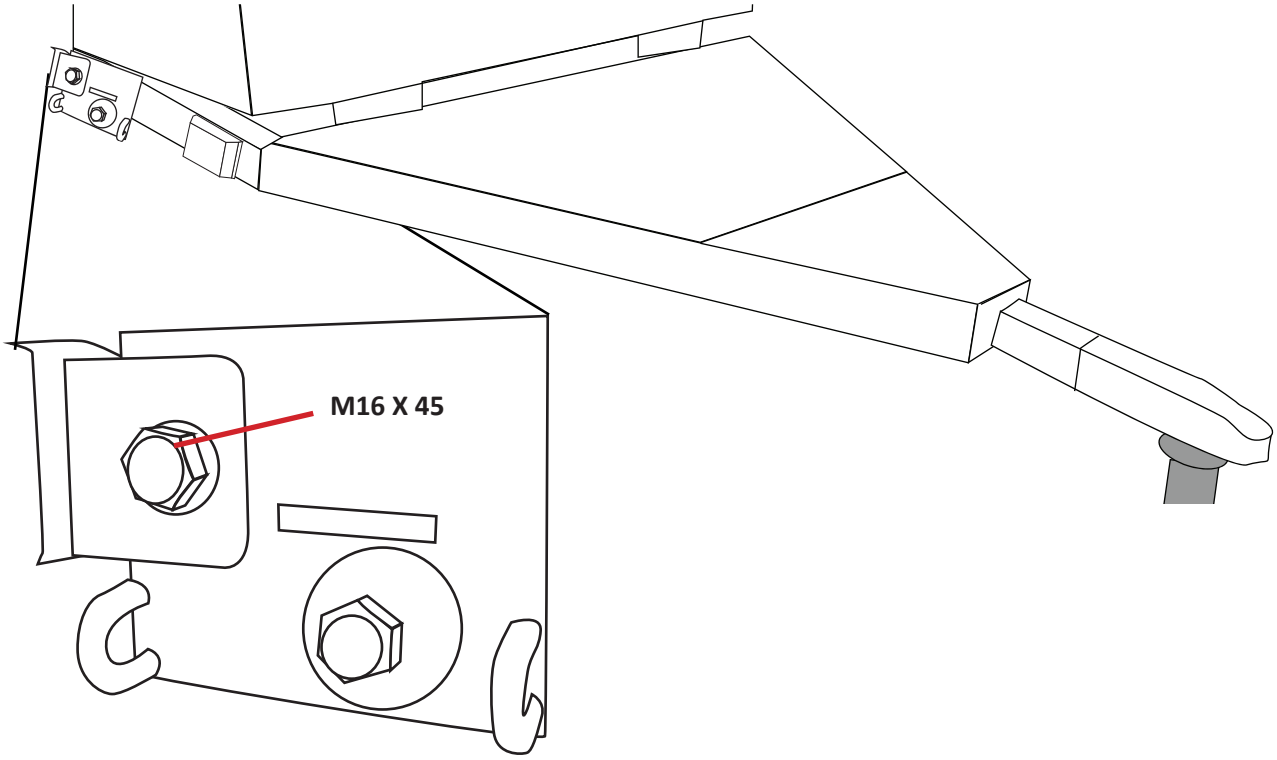
You may have to re-position the front jacks to completely remove the trailer body from the crate. Once the crate is removed, use 4 jack stands to support the trailer body.



3 Tongue Assembly

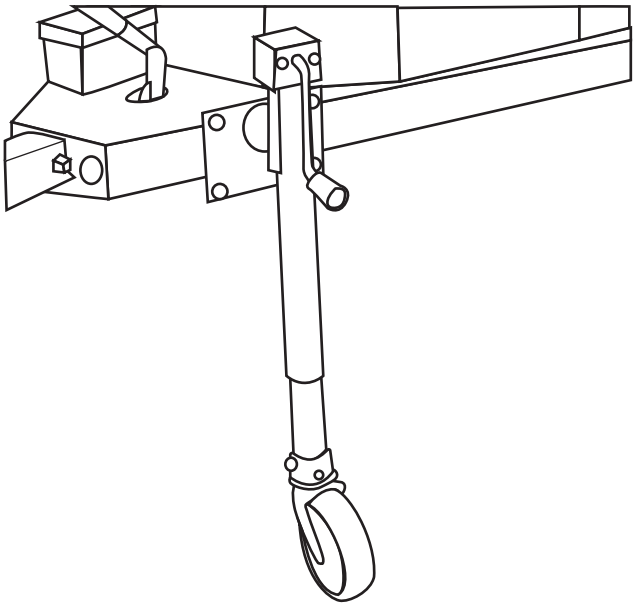
Use Hardware Pack 2.

Loosely attach tongue to trailing arm bracket using M16 x 45 bolts, flat washers, lock washers and nuts. Do not tighten hardware at this time.



It's easiest to slide tongue above bracket. Lift up tongue and install bolts.

Have helper lift up on the tongue, while tongue is raised put the jockey wheel on the mount.



Secure with pull pin so you can use the jockey wheel to lift the tongue into place.

4 **Tongue Assembly Cont.**

While tongue is lifted into place and supported, line up the tongue mounting brackets with the holes in the trailer body.

Fasten tongue to trailer body with M14 x 90 bolts (4 total, 2 per side), flat washers, lock washer and nut.

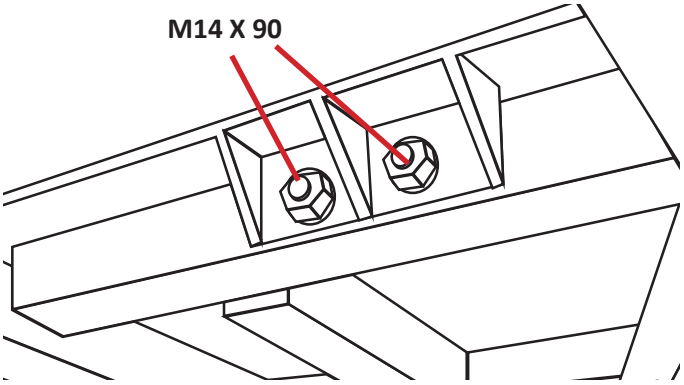
Install the M16 x 120 center bolt using flat washer, lock washer, and nut.

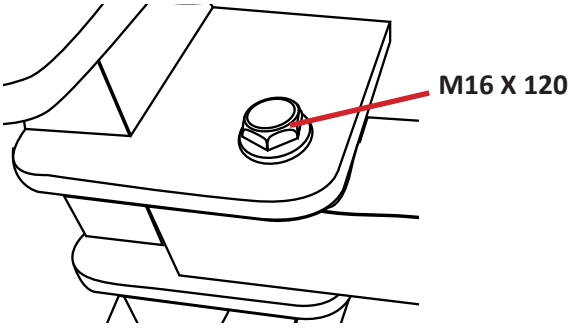
Once all 7 tongue support bolts are installed, properly torque all tongue hardware.

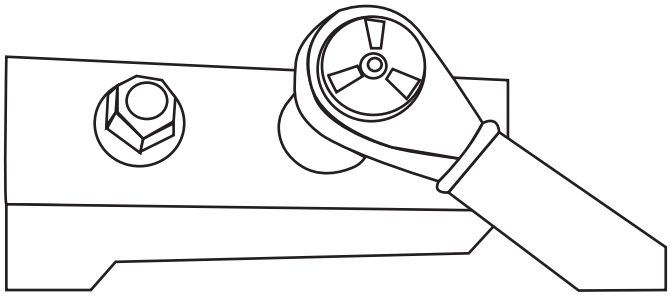
Torque M14 hardware to 120 ft/lb.
Torque M16 hardware to 165 ft/lb.

NOTE: Use thread-lock on the chassis & suspension hardware

Secure the connection of the tongue wiring and the box wiring on the passenger side.







SUSPENSION ASSEMBLY

5 **Bump Stop Install**

Use a jack below the trailing arm, raise trailing arm slightly to take pressure of the wires holding up the arm.

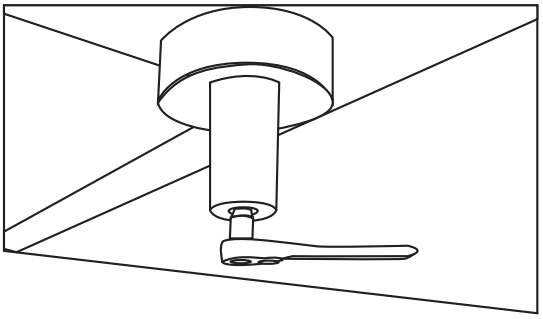
Remove wires and gently lower control arm to allow for access to bump stop mounts.

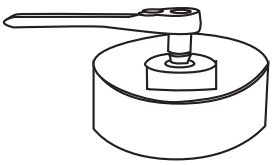
Secure longer bump stop to the upper spring cup using M10 hardware.

Secure smaller bump stop to the lower spring cup using M10 hardware.

You may fully tighten the bump stop hardware to 40 ft/lb.

NOTE: Use optional thread-locker on bolts





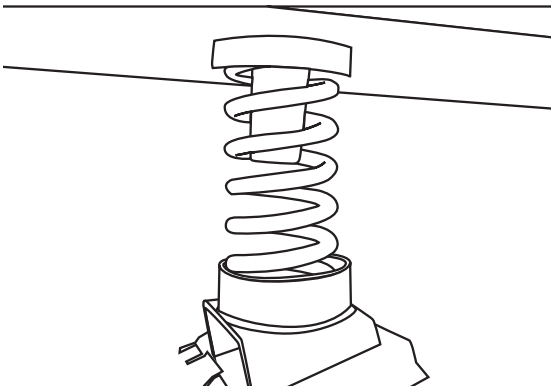
6 Coil Spring install

Install coil springs with isolators on top and bottom of the spring.

Place each spring inside spring cups.

Use jack to compress suspension once the spring is installed into the cup, as you raise the suspension be sure to line up the spring with the cups.

Make sure coil is seated inside the rubber isolator.



7 Shock and Limit Strap Install

With lower control arm supported by jack, Install limit strap into middle mounts on trailing arm and trailer body. Use M10 hardware.

NOTE: Its easiest to put the limit strap into position, then insert bolt into mount.

The bolt will go in at a slight angle when first started. Torque to 30 ft/lb and take care to not over tighten.

NOTE: Apply optional thread locker to threads.

Lube bushings and the area in which bushings make contact with trailer body and trailing arm mounts with lithium based grease.

Install shocks into the outer mounts on the trailer arm and trailer body. The larger diameter of the shock goes toward the top.

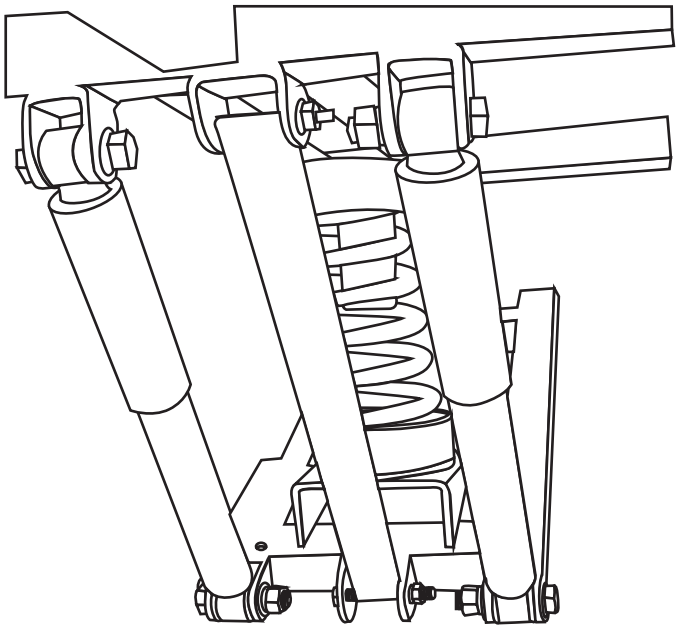
Use M16 x 80 hardware to attach. Loosely install and do not torque at this time.

Torque shock bolts, once wheels and tires are installed, to 85 ft/lb.

NOTE: It is best to tighten after the tires and wheels have been installed and are supporting the trailer.

If shocks are tightened without weight of trailer on suspension you will bind the bushings which may cause squeaking and will accelerate wear on the bushings.

NOTE: Apply optional thread locker to threads.



8 Wheel Hub Assembly

NOTE: Wheel hubs are tagged left and right, with left being driver side, and right being passenger side.

NOTE: The orientation of the brake actuator lever. This should pull towards the front of the trailer and be towards the 12 O'Clock Position of the axle.

Attach wheel hub to trailing arm using M16 x 60 bolts, flat washers, lock washers and nuts.

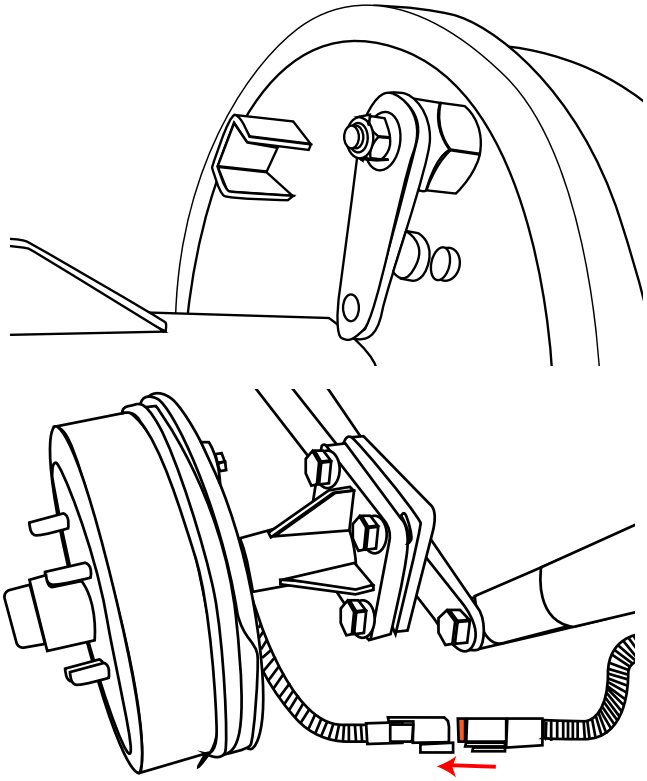
Install all 4 bolts prior to tightening.

Tighten bolts in a crisscross pattern. Once all 4 bolts are in place, torque bolts to 165 Ft/lb.

NOTE: Use optional thread locker. It is highly recommended green thread locker after nuts and bolts are torqued.

Connect the brakes deutch connector from hub to the socket on the trailing arm.

NOTE: Optional dielectric grease can be used on the pins. Zip tie wiring to prevent it from hanging.



9 FENDER ASSEMBLY

Install fenders using M10 hardware and M6 hardware.

Loosely install all bolts to ensure proper alignment. Once all 9 holes are aligned, tighten to secure fender.

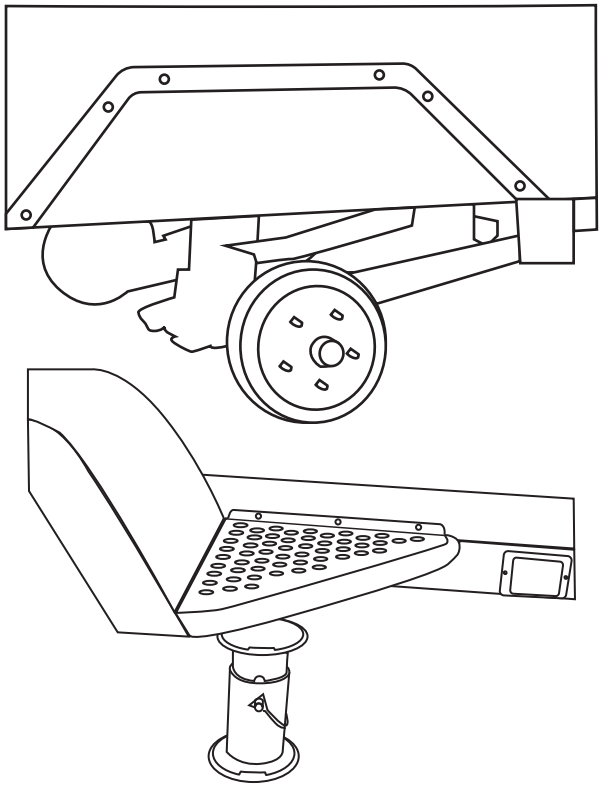
NOTE: It may be required to use a jack to support the fender to help with alignment of the 3x M6 Hole locations

You will insert the button head bolts from the inside of the tub to the outside using the M10 hardware. This gives the interior smoother walls. The bottom most forward and rear fender mounting bolts will be installed from the outside inward. End will thread into the body.

Do not use the fenders as steps.

Route wiring on both fenders using supplied adel clamps, ensuring adequate clearance between tire and fender wiring.

Connect wiring from rear brake lights to tub wiring.



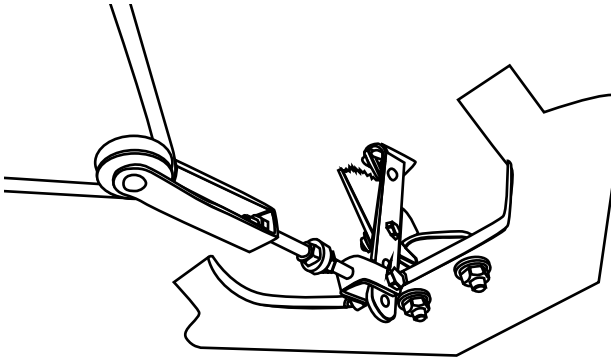
10 Parking Brake Assembly

Make sure parking brake lever is down all the way. Loosely secure the parking brake turnbuckle to the parking brake lever.

Loosen adjustment screw on turnbuckle.

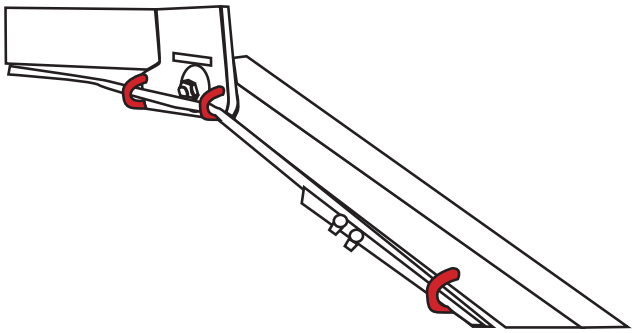
NOTE: You will want the adjustment screw to allow the cable to be tightened, with some adjust-ability to slightly loosen the cable, if needed.

Route parking brake cable through the turnbuckle pulley, through the guide loops on the frame, and control arm. End of cable will go through the loop on the brake actuator arm on the brake drum, then it will loop back on itself on both driver and passenger side.



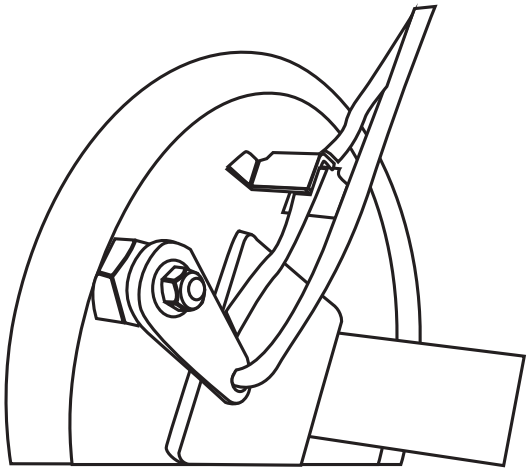
Starting on the driver side, run wire back through control arm guide and secure rope to itself using the 2x U-Bolt hardware.

NOTE: The U-bolt side will go on the dead end of the clip and the saddle will go on the live end. Image to the right, shows correct orientation of the u-bolt and saddle. It is easiest to secure one side then remove slack and secure the opposite side.



Moving to the passenger side, pull the cable as tight as possible through passenger brake actuator arm up back through the control arm guide.

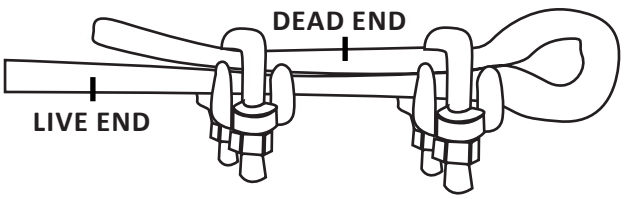
Secure rope to itself using the 2x U-Bolt hardware.



Now that the parking brake line is routed and secured, you will have to adjust tension.

Pull up on parking brake handle as much as possible, then release. This is to pre-stretch the cable and to make sure your U-Bolt hardware is secure and parking line is not slipping. Release brake handle.

NOTE: If there is noticeable slack, re-tension line at the U-bolts.



With the brake handle in the down position, final adjustment will be done at the turnbuckle / pulley underneath the tongue. Tighten long bolt to remove all slack in the line.

Tighten the turnbuckle mounting hardware to secure to the parking brake lever.

Pull up parking brake lever to check for proper function. Further adjustment to tighten the line may be required. Double-check all routing and mounting to make sure there is no interference in the parking brake line.

11 Brakeaway System Assembly

Use the supplied Deutsch connector hardware to install Deutsch connector to the 3 wires coming out of the brake system (use female body 4-Pin connector) and the 2 black wires coming out of the tether system (use female body 2-Pin connector).

Fully wire each of the breakaway system wires, individually to the Deutsch connector to avoid short circuit.

Strip the wire on the breakaway system of the single line you are wiring, approximately 3/16".

Position terminal pin on the wire. There are two sections to crimp. One around the wire insulation and one around the bare wire. You may need to strip more insulation or trim wire to make sure terminal is correctly positioned.

NOTE: It is recommended to use a Deutsch connector crimper, but can be completed carefully with pliers.

Crimp on the terminal pin ensuring a solid connection.

NOTE: Make sure all wires are correctly oriented on the Deutsch connector of the breakaway system.

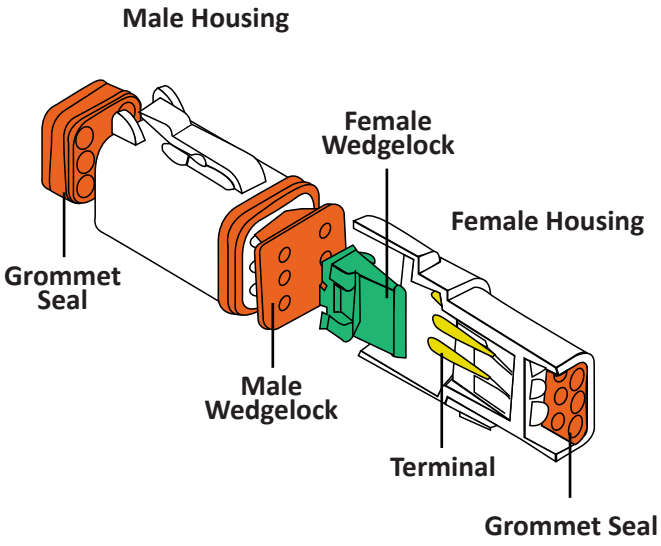
Reference Image to the right for color wire position
Breakaway system White to Trailer White.
Breakaway system Red or Black to Trailer Red.*
Breakaway system Blue to Trailer Blue.

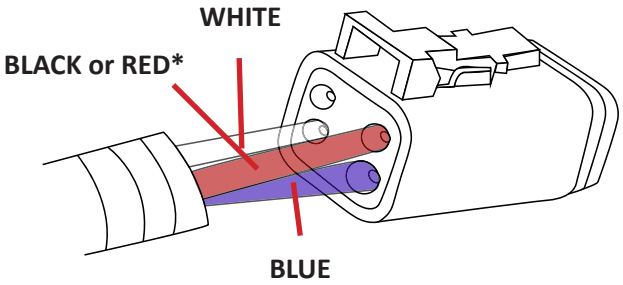
Insert the terminal pin into the connector body, you will hear a "click" when the terminal is inserted into the terminal body, a slight tug will confirm that it is properly locked in place.

NOTE: On the breakaway tether switch, the two black wires are not position sensitive and can be inserted in either hole. Strip and crimp wires using the above steps to the 2-Pin Deutsch connector.

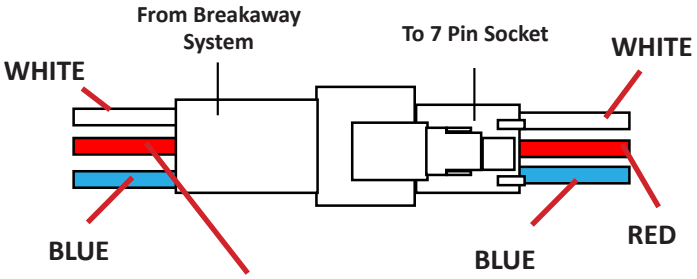
On the male pins, once all the pins are in their proper place, install the female wedge-lock to secure the pins in the terminal.

Install break away brake system to tongue mounting bracket. Use M6 hardware. You will want to run the wires through the tongue plate before bolting the box to the bracket.

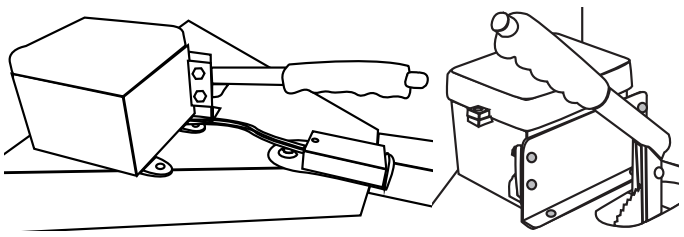




MAKE SURE TO PEEL BACK THE ELECTRICAL TAPE ON YOUR HARNESS TO VERIFY THE PROPER WIRING COLOR CONFIGURATION. ONCE COMPLETE RE-APPLY NEW ELECTRICAL TAPE TO PREVENT DAMAGE FROM ELEMENTS. FOLLOW THE DIAGRAM ABOVE AND BELOW TO ENSURE YOU ARE WIRING THE BREAKAWAY AND 7-PIN SOCKET CORRECTLY.



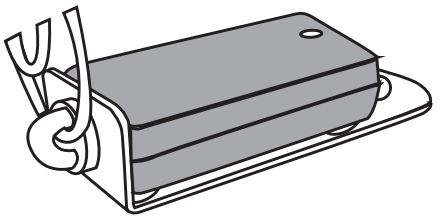
*DEPENDING ON YOUR BREAKAWAY MODEL, THIS MAY BE A RED OR BLACK WIRE



Breakaway System Assembly Cont.

Attach breakaway tether switch to M6 bolt on tongue by removing and re-installing M6 hardware.

Do not over-tighten, the breakaway switch must be able to pivot. Be sure lanyard does not contact the ground. Do not hook the lanyard to the safety chain loop or hitch ball. It is ideal to have it secured directly to the frame of the tow vehicle. Lanyard must be longer than the tow chains and must not bind when maneuvering the trailer.



12 2" Coupler Assembly

Attach coupler into the front 2” receiver tube using M12 hardware.

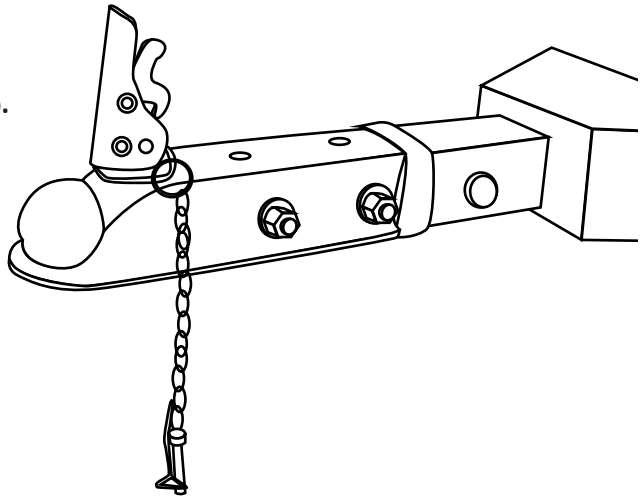
Secure coupler to tongue assembly using 5/8” hitch pin.

Torque ball coupler to hitch receiver tube bolts to 70 ft/lb.

Secure safety chains to tongue eyelets.

NOTE: The supplied standard towing ball coupler is for on-road use only due to its limited range of movement.

Off-road use may cause detachments of the coupler from the ball.



NOTE: The trailer's 2" Receiver may accept many aftermarket articulating style couplers (sold separately).

There are several articulating hitches on the market such as the Max coupler, lock-n-roll, pintle hooks etc.

Do not use any type of weight distribution hitch or load levelers, detachment from tow vehicle or damage may occur.

13 Wheel and Tire Installation

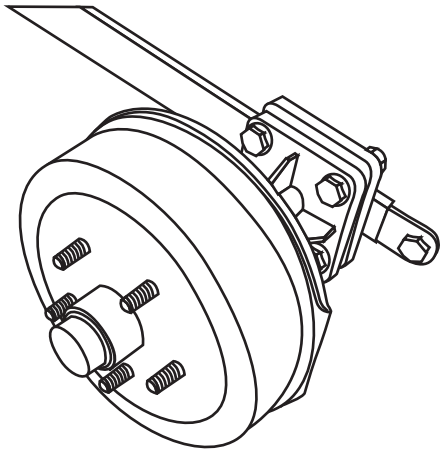
Install tires and wheels on to axles.

The trailer kit comes with 60° conical seat lug nuts, make sure your wheels have a compatible seat.

NOTE: Lug nuts must have at least ½” of thread engagement.

Tighten the lug nuts in a star pattern. Make sure to properly torque the wheels. Then re-torque after the first 25 miles, and then each 50 miles until they hold their torque. Always check wheel manufactures torque recommendations/specifications. Do not exceed 95 ft./lb.

Make sure there is adequate clearance of all components including but not limited to parking brake line, brake wiring, brake light wiring, fender, and chassis.



14 ALIGNMENT

Wheel alignment is necessary, refer to alignment details below. If you choose to not do alignment at home, you still need to properly torque the "alignment cams" (control arm chassis bolts) to 165ft/lbs.

Professional alignment is required. The below steps can be completed prior to taking the trailer to a professional alignment shop.

ALIGNMENT
If possible have the trailers alignment setup with the tow vehicles alignment (6 wheel alignment).

SET TOE
To begin aligning your trailer, first, establish a consistent reference mark on each tire. If your tires have a center seam or mold mark, utilize this for precision. Otherwise, create a mark by raising the wheel off the ground and carefully applying a pen or pencil to the tread, ensuring it remains stationary as you rotate the tire.

If using a mold mark, adjust its position to align with the desired measurement points. Avoid relying solely on sidewalls for reference, as they may not be uniformly level.

Once your reference marks are set, prepare to measure. Utilize jack stands and tape measure, ensuring proper support to prevent tape from sagging.

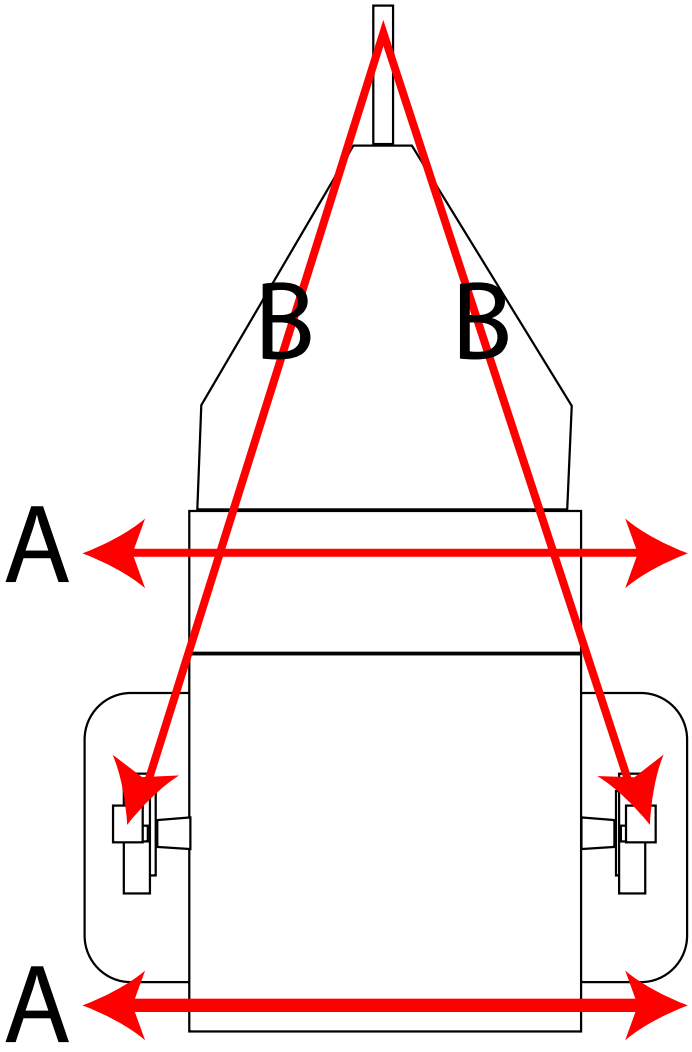
Measure the front and rear of each tire near the midpoint, maintaining consistent height for accurate readings. Measure front and rear measurement, they should be equal. Use inner cam adjustments on the control arm to adjust toe to get measurement to become equal.

Try to get the front about 1/16” less than the rear. This gives a slight toe in and will help track better.

Once adjustments are made, be sure to torque the cam bolts down to 165ft/lbs.

CAMBER
Using a camber gauge, set camber to 0°, then recheck toe. Some may set camber at a very low degree to help trailering. Camber can be adjusted by adjusting the outer cam bolts.

Once alignment is set, torque alignment cams to 165 ft/lbs.



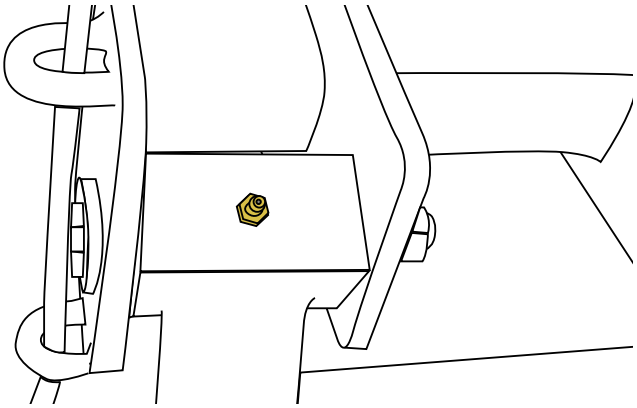
15 Zerk Fitting Assembly

Each trailing arm has two zerk fittings. Lube all zerk fittings with lithium based or sillocone based grease. Always clean zerk fitting before attaching grease gun to fitting.

When greasing bushings, pump in enough grease to push out old grease, keep filling till all the discolored old grease is removed.

NOTE: DO NOT use petroleum based grease as this will damage the bushings.

Stay away from spray lube.



OPTIONAL ACCESSORY ASSEMBLY

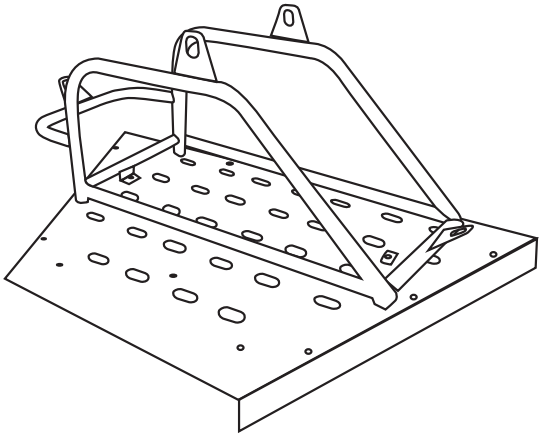
16 Tire Mounting Assembly

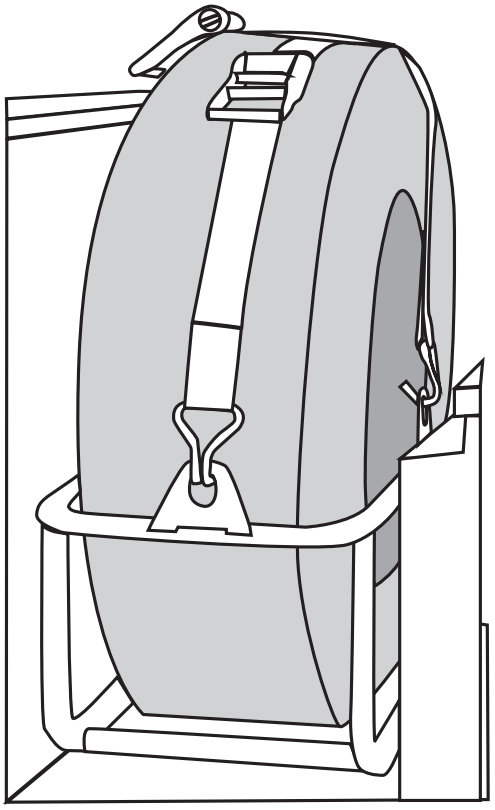
Install optional spare tire mount onto tongue using the provided M10 hardware.

NOTE: Opening face of spare tire carrier will be towards driver side.

Install all M10 bolts before tightening, the longer bolt will be positioned in the center. Make sure all bolts are in place before tightening hardware. Torque to 45 ft/lb.

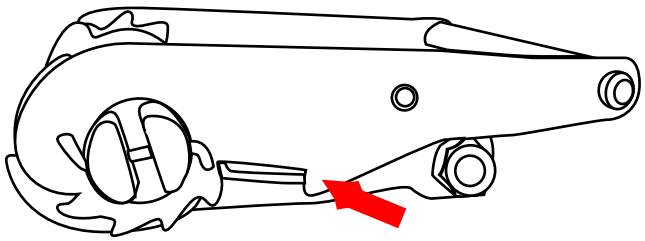
Spare tire carrier comes with two tie downs. One around the tire and one to go over the top.





When tightening ratchet strap, make sure the ratchet mechanism is in the fully closed position to ensure it stays enclosed while traveling.

NOTE: Depending on tire size you may want to trim the excess strap material. If you do, seal the end of the strap using a lighter to prevent fraying

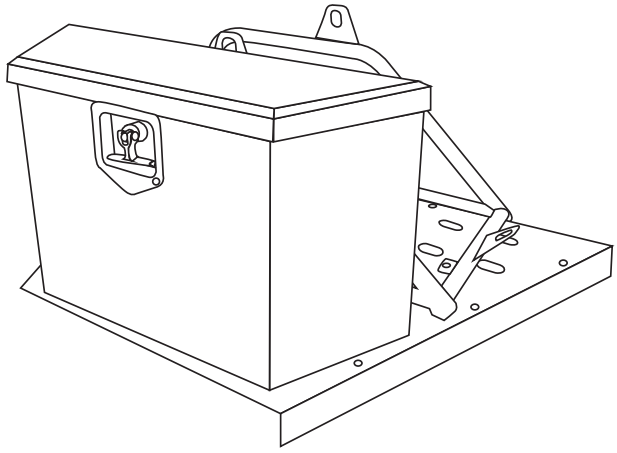


17 Tongue Box Assembly

Install optional tongue box onto tongue using the provided M10 hardware.

Install all M10 bolts before tightening, the longer bolt will be positioned in the center.

Make sure all bolts are in place before tightening hardware. Torque to 45 ft/lb.



18 Stabilizer Jack Assembly

Attach stabilizer jack mounts to the rear of the trailer, with stainless steel pull pin.

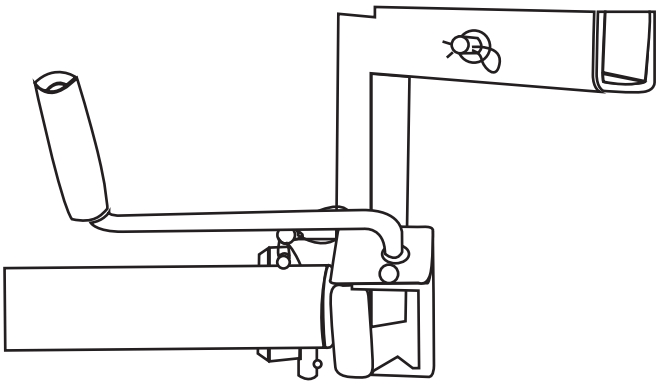
Install jack onto jack mount and secure with pin.

Use the jam bolt at the bottom of the mount to take up slack of the jack mount. Always tighten jam bolt before using jacks.

When stowed in the up position, jacks can remain on trailer during driving, if further clearance is required remove jack and jack mount and stow in trailer.

When using the jacks on soft surfaces it is recommended to use some form of base to prevent the jack from sinking.

Use jacks to level the trailer using minimal lift heights. Excessive unevenness of the trailer should be leveled with wheel ramps.



19 Tent Mounting Crossbar System Assembly

Install optional tent crossbars, using the supplied 4 Base uprights.

Remove the plate cover to access the side rail mounting system, using a 4mm allen key.

Feed 2 M12 x 1.75 nut plates into both top and bottom channels on both driver and passenger sides.

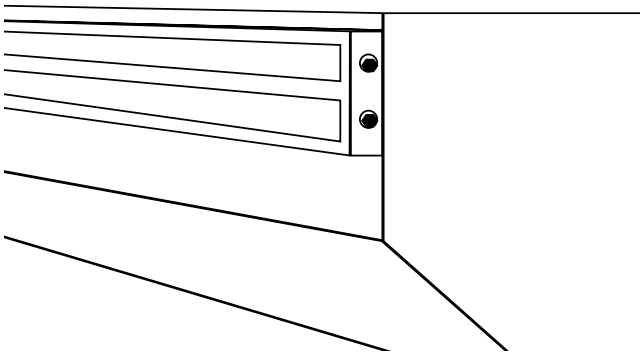
Align 1 bottom and 1 top M12 x 1.75 nut plate and loosely install upright with rubber pad in desired location. Repeat on other side measuring to make sure they are in the same location.

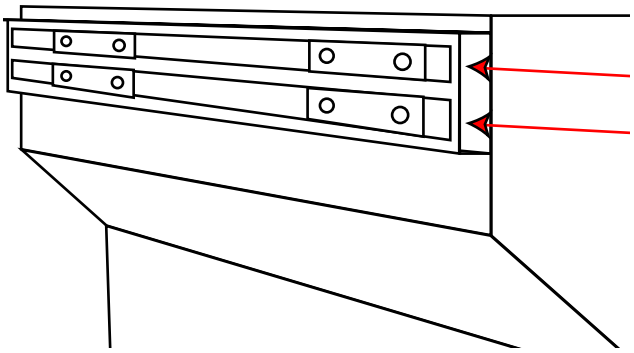
Install the adjustment upright and secure with pin and install crossbars loosely.

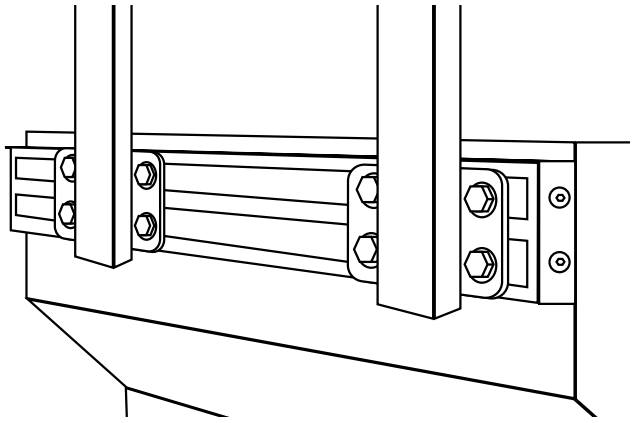
Ensure entire rack is leveled and square.

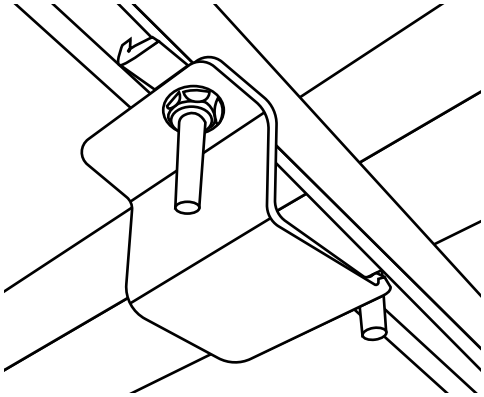
Install tent on top of crossbars. You may want to use the included tent brackets and mounting hardware to secure tent to crossbars.

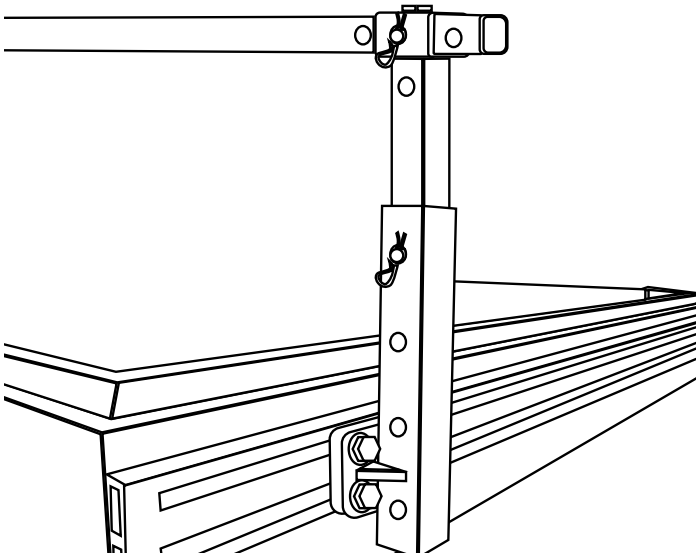
NOTE:
STATIC WEIGHT CAPACITY IS 1200 LBS.
DYNAMIC WEIGHT CAPACITY IS 400 LBS.











Off-Road Trailer

SET-UP & CARE INSTRUCTIONS

How to Register your Off-Road Trailer

1. Finish assembly of your new Off-Road Trailer
See instruction manual.

2. Remove tent, as some states might classify this as a camper or domicile if there is a tent.

3. Visit your local DMV.

4. Register/Title your Off-Road Trailer.

Your local DMV may require:

- **Purchase invoice**

- **Cash register receipt or bill of sale showing the purchase and retail sales tax or use tax collection by the retailer.**

- **MCO (Manufactures Certificate Of Origin) Some states this will act as your title or included pink slip.**

- **Make sure your receipts cover the trailer kit, tires and wheels, trailer brake controller, and any other parts that were to be used with the construction of the trailer. (Keep all receipts for your records).**

- **DMV or law enforcement inspection/ verification of trailer.**

IMPORTANT:
These instructions are a general guideline. Regulations and requirements will vary by state or province. Please consult your State/Province Department of Motor Vehicles for additional information or guidance on licensing, registration, or titling. If you believe that your vehicle has a defect, which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Overland Vehicle Systems

Some states/ provinces may require the trailer kit be registered with the local DMV. Some states/ provinces may consider that this trailer kit is a specially constructed or a homemade vehicle for registration, licensing and/or titling purposes. The M.C.O. (Manufactures Certificate of Origin) supplied with your trailer kit may be needed for registration and may need to be notarized depending on state/ province. Your dealer may sign and notarize your MCO. When licensing your trailer, you may need the signed Manufacturer's Certificate of Origin, a purchase invoice, cash register receipt, or bill of sale showing the purchase and retail sales tax or use tax collection by the retailer. Keep all receipts for parts used to build your trailer. Take these to your local Department of Motor Vehicles and upon payment of the appropriate State fees, you will be issued a title, registration and license plate. Some states/provinces will require inspection of the assembled and finished trailer kit before issuing a title/registration/license. If you require additional information or guidance on licensing, registration, or titling, please consult your State/Province Department of Motor Vehicles. If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National highway traffic Safety Administration (NHTSA) in addition to notifying Overland Vehicle Systems If NHTSA receives similar complaints. It may open an investigation. If it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer. To contact NHTSA, you may either call the Auto Safety Hotline tool-free at 800-327-4236 or 202-366-4000 or write to NHTSA, 12000 New Jersey Ave SE, West Building, Washington, DC 20590. You may also obtain other information about motor vehicle safety from the Hotline.

Off-Road Trailer

SET-UP & CARE INSTRUCTIONS

Warranty

Tires are not covered by Overland Vehicle Systems' warranty. Contact Kenda Tires or other tire manufacture for warranty information. Tires used on trailers do not carry a mileage warranty but will typically carry the manufactures defect warranty. Wheels are not covered by Overland Vehicle Systems' warranty. Contact Overland Vehicle Systems or other wheel manufacture for warranty information.

***All warranties are null and void if used in any manner of commercial activity.**

Limited Warranties

Wear and tear items will not be covered by the Overland Vehicle Systems' warranty, including:

- **Wheels**
- **Tires**
- **Brakes**
- **Wheel Hubs/Wheel Bearings**
- **Suspension Components**
- **Textured Powder Coat Finish**

Overland Vehicle Systems' products are covered under the following limited warranties only. Not that the duration of the limited warranty differed according to the material and finish of the product purchased. Suject to the duration and conditions of the limited warranty stated below, Overland Vehicle Systems warrants to the original retail purchaser that its products are free from defects in material and workmanship. All other warranties are representations express or implied, are hereby disclaimed, including fitness for me chantability and buyer's intended use or purpose. All parts are sold "as is" except for the limited warranties granted herein. Buyer assumes all risks as to the selection, suitability and performance of all goods and products selected. This limited warranty does not cover road or off-road hazards, product modification, improper or inadequate cleaning and/or maintenance. Overland Vehicle Systems is not responsible for items damaged during shipping. This warranty is not transferable from the original buyer. For the original buyer to be eligible for the limited warranty coverage, the Buyer must provide proof of purchase. Due to the intended use, this item carries NO finish warranty. Customer's remedy hereunder shall be limited only to repair or replacement (at Overland Vehicle Systems' option) of any defective part(s) returned to Overland Vehicle Systems at customer's expense. The determination of whether or not a returned part is defective or subject to coverage under the limited warranties stated herein shall be made at Overland Vehicle Systems' sole discretion.

To assure product quality, Overland Vehicle Systems reserves the right to change product design, material, specification and finishes without prior notice to customers. Overland Vehicle Systems reserves the right to discontinue product lines and substitute products, or provide other remedies than those listed in this limited warranty for those discontinued products.

Off-Road Trailer

SET-UP & CARE INSTRUCTIONS

CLEANING

After-Use Wash:

- Wash the trailer with warm water and standard car wash soap after each use to maintain cleanliness.

Appropriate Waxing Products:

- Avoid waxes containing carnauba, abrasives, or those requiring polishing/buffing, as they may leave a residue on the fine textured finish.
- Opt for power coat safe cleaning products without petroleum-based ingredients.
- Recommended products include 303 Speed detailer or Lucas slick mist, providing a UV resistant coating.

Washing Method:

- Hand wash the trailer under low-pressure water; avoid using high-pressure spray washers to prevent damage to seals, suspension bushings, finish, and tires.

Paint Touch-Up:

- Touch up any damaged paint areas using commercially available satin black aerosol paint.
- Conduct a color matching test in a small, inconspicuous area before application;
- Rust-oleom Textured Fine Textured Finish is recommended.

Undercoating Maintenance:

- Touch up undercoating with commercially available spray undercoating, suitable for application directly over damaged/raw/rusty metal.
- Promptly clean undercoating stains resulting from soil/road chemicals encountered during use.
- Note that some undercoatings may have a tacky, sticky, or oily finish even after curing; test a small area before full application to ensure satisfaction with the final finish.

By adhering to these cleaning guidelines, you can preserve the appearance and integrity of your trailer, ensuring its longevity and performance.

STORING

- Fully inflate all tires and cover them to shield from UV rays.
- Place a base larger than the tire footprint beneath each tire to achieve good ground contact.
- Ideally, store tires off the trailer during long-term storage to avoid flat spots. If tires remain on the trailer, periodically move it to prevent flat spots.

Wheel Chocking and Positioning:

- Chock the wheels both front and rear with the parking brake off.
- Angle the tongue upward to help with snow and water runoff.

Storage Environment:

- Preferably, store the trailer under a covered area to protect it from the elements.
- Avoid parking under trees or in areas prone to grass and weed growth.
- If using a cover, ensure it is breathable to prevent mold and mildew formation.

Cleaning and Inspection:

- Wash the exterior of the trailer and thoroughly clean the interior.
- Inspect all body seams for cracks or openings.

Locks and Hinges Maintenance:

- Service all locks with graphite lubricant and work the key in and out.
- Lubricate all hinges with high-grade lubricant like Break-Free CLP.

Greasing and Lubrication:

- Lubricate all zerk fittings with lithium/silicon-based grease, avoiding petroleum-based or graphite grease.
- Apply hitch ball grease to the hitch coupler and lubricate all pivots and sliding points with SAE 30wt. motor oil.
- Ensure electrical contacts are lubricated with dielectric grease for optimal performance.

⚠ WARNINGS

Please thoroughly read and comprehend all provided instructions. Failure to adhere to these instructions may result in injury, electric shock, or fire hazards.

The components of this trailer kit are heavy and require careful handling. To prevent muscle strain or back injuries, utilize lifting aids and employ proper lifting techniques during assembly and unpacking. It is recommended to have a minimum of two floor jacks, four jack stands, and assistance from at least two individuals during assembly.

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Handling the wiring cord on this product exposes you to lead, a chemical recognized by the State of California to cause cancer, birth defects, or other reproductive harm. It is advised to wash hands thoroughly after handling. The cord has been encased in conduit to minimize exposure.

Photos used in this installation are for illustration only. Actual product may vary, but the installation steps remain the same.

It is essential to acknowledge that the warnings, cautions, and instructions outlined in this manual cannot anticipate all potential circumstances or scenarios. Users must exercise common sense and caution throughout the assembly process.

Notify the carrier of any shipping damages. By accepting the shipment, you absolve the carrier of any freight damages and acknowledge receipt of the item in its current condition. Please note that Overland Vehicle Systems bears no responsibility for shipping damages resulting from mishandling.

Upon unpacking, carefully inspect the product to ensure it is intact and free from damage. Should any parts be missing or damaged, promptly contact Overland Vehicle Systems at 833-226-4863.

Always wear ANSI-approved safety goggles during assembly. Additionally, appropriate protective footwear, clothing, and other safety gear are mandatory.

Ensure that the work area remains clean and dry at all times. Untidy, disorganized, or wet workspaces increase the risk of injury.

Keep children away from the work area. The trailer kit is not a toy, and children should not be permitted to play within its vicinity or the crate.

DO YOU NEED OUR HELP?

CUSTOMER SUPPORT 833-226-4863

SALES@OVERLANDVEHICLESYSTEMS.COM

WANT TO SHOW US YOUR RIG? CHECK OUT OUR SOCIAL!

@overlandvehiclesystems

Off-Road Trailer

SET-UP & CARE INSTRUCTIONS

WHEEL RECOMMENDATIONS

Wheels are required to have a center bore of at least 2.55"

Recommended Wheel Size: 17" x 8" with 4.5" back spacing.

- **Maximum backspacing of 4.75"**
- **Minimum backspacing of 4.25"**

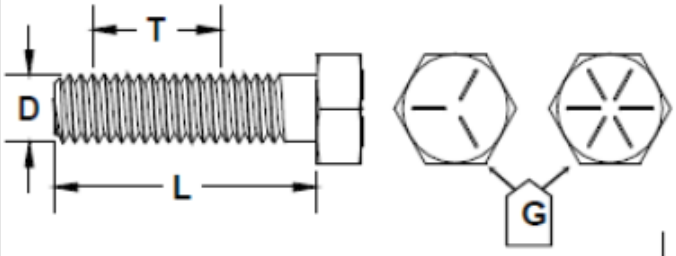
Always check for adequate clearance between tire and trailer body.

Always use the correct lug nut for your particular wheels. Check with wheel manufacture for lug nut recommendation.

- **5x5 Hubs use 1/2" by 20" Lug Nut**
- **6x5.5 Hubs use M12-1.5 Lug Nut**

Bolt Torque and ID

Decimal System			Metric System			
All Torques in Ft. Lbs.						
Bolt Size	Grade 5	Grade8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15	20	M6	5	9	12
3/8	30	45	M8	18	23	27
7/16	45	60	M10	32	45	50
1/2	65	90	M12	55	75	90
9/16	95	130	M14	85	120	145
5/8	135	175	M16	130	165	210
3/4	185	280	M18	170	240	290



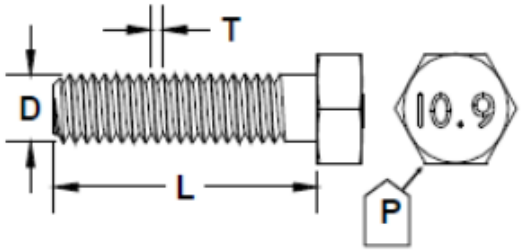
1/2-13x1.75 HHCS

D T L X

Grade 5 **Grade 8**

(No. of Marks + 2)

G = Grade (Bolt Strength)
D = Nominal Diameter (Inches)
T = Thread Count (Threads per Inch)
L = Length (Inches)
X = Description (Hex Head Cap Screw)



M12-1.25x50 HHCS

D T L X

P = Property Class (Bolt Strength)
D = Nominal Diameter (Millimeters)
T = Thread Pitch (Thread Width, mm)
L = Length (Millimeters)
X = Description (Hex Head Cap Screw)

TROUBLESHOOTING

TRAILER LIGHTS NOT WORKING
Double check all connections starting from the 7 pin to the vehicle. The wiring connection from the tongue to the trailer body and the trailer connection on each of the taillights to the body wiring. Inspect all wiring for wear. All the trailer wiring runs through the passenger side.

TIRES SHOWING UNEVEN WEAR OR TRAILER NOT TRACKING STRAIGHT BEHIND VEHICLE
Check alignment with your local off-road shop. Check your control arm bushings for excessive wear.

SQUEAKING FROM SUSPENSION
Ensure you have torqued all of the components when you have full weight on the trailer suspension. Confirm coil spring isolators are properly installed. Lube all shock and control arm bushings.

BRAKES NOT GETTING FULL POWER
Brake shoes need to be adjusted. Check brake shoes and brake magnet for wear. Re-adjust brake controller.

BEARING NOISE
Repack with grease or replace bearings. Outer bearings use Timken set 12, inner bearings use Timken set 13 (or comparable). Inner axle seal is a Timken 168233.

EXCESSIVE PLAY IN TENT POST
Tighten securing bolt. Ensure nut plates are being used inside of tubing.

TAILGATE LATCHES NOT STAYING OPEN
Adjust roll pin so that it sits into latch retainer.

Frequently Asked Questions

PACKAGED TRAILER WEIGHT 1302 LBS.

CARGO WEIGHT CAPACITY: 2004 LBS.

REAR HITCH TONGUE CAPACITY: 200 LBS.

TIRE SIZES: 265/70/17

UPRIGHT WEIGHT CAPACITY STATIC: 1200 LBS.

UPRIGHT WEIGHT CAPACITY DYNAMIC: 400 LBS.

TAILGATE WEIGHT CAPACITY: 150 LBS.

WHAT TYPE OF GREASE SHOULD BE USED ON THE CONTROL ARM BUSHINGS?
White lithium grease or silicone.

WHAT TYPE OF GREASE SHOULD BE USED ON WHEEL BEARINGS?
High-Temperature Synthetic Bearing Grease.

WHAT TYPE OF GREASE SHOULD BE USED ON THE TONGUE AND STABALIZER JACKS?
Marine Grease