



SQUARE HYDRAULIC LANDING GEAR

INSTALLATION & OPERATOR'S MANUAL



Bigfoot Hydraulic Systems

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WHITE PIGEON, MI 49099

800-752-9815



This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Bigfoot warranty.



- Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.
- During operation of our systems, the vehicle or trailer tires should maintain contact with the ground - moving to a more level area may be required.
- During servicing make sure that the coach is supported according to the manufacturer's recommendation and not our systems, as it is not intended to be used for any work or persons under the vehicle. Lift the coach by the frame and never the axle or suspension. Do not go under the coach unless it is properly supported. Unsupported coaches can fall causing death or personal injury or product or property damage. Use proper personal protective equipment.



- Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.
- Moving parts can pinch, crush, or cut. Keep clear and use caution.

Understanding the available kits and what system you have...

8k Single Point

- One 8k Jack, One Pump, and Weather Resistant Control Box.

8k Slave Kit

- Two 8k Jacks, One Drive Jack with Pump, and Weather Resistant Control Box. One “Slave” Jack that is plumbed to the Drive Jack.
- NO side to side leveling.

12k Single Point

- One 12k Jack, One Pump, and Weather Resistant Control Box.

12k Slave Kit

- Two 12k Jacks, One Drive Jack with Pump, and Weather Resistant Control Box. One “Slave” Jack that is plumbed to the Drive Jack.
- NO side to side leveling.

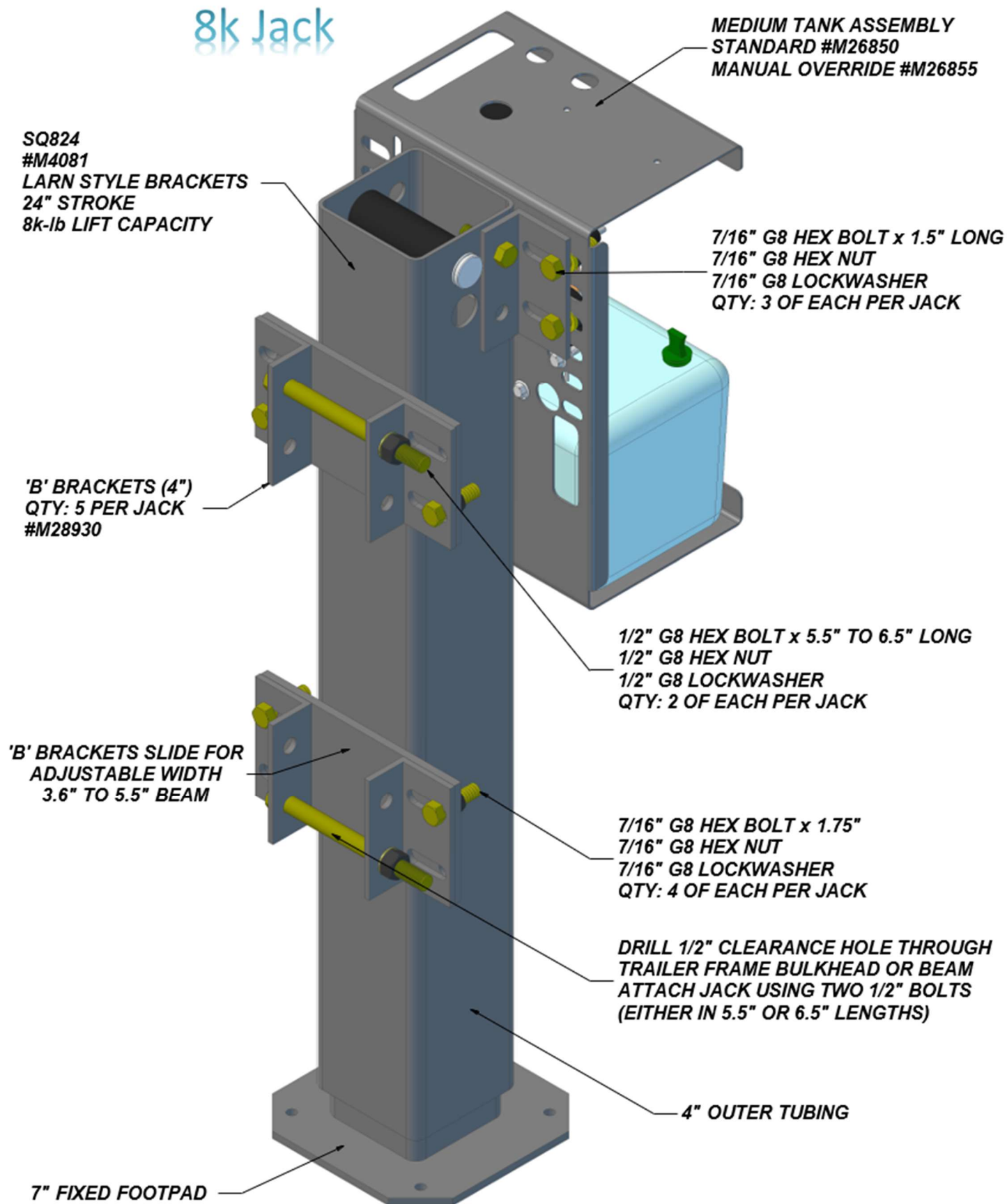
12k Dual 2^{PT} Kit

- Two 12k Jacks, Two Pumps, and Weather Resistant Control Box.
- Jacks can run individually, so side to side leveling can be achieved.

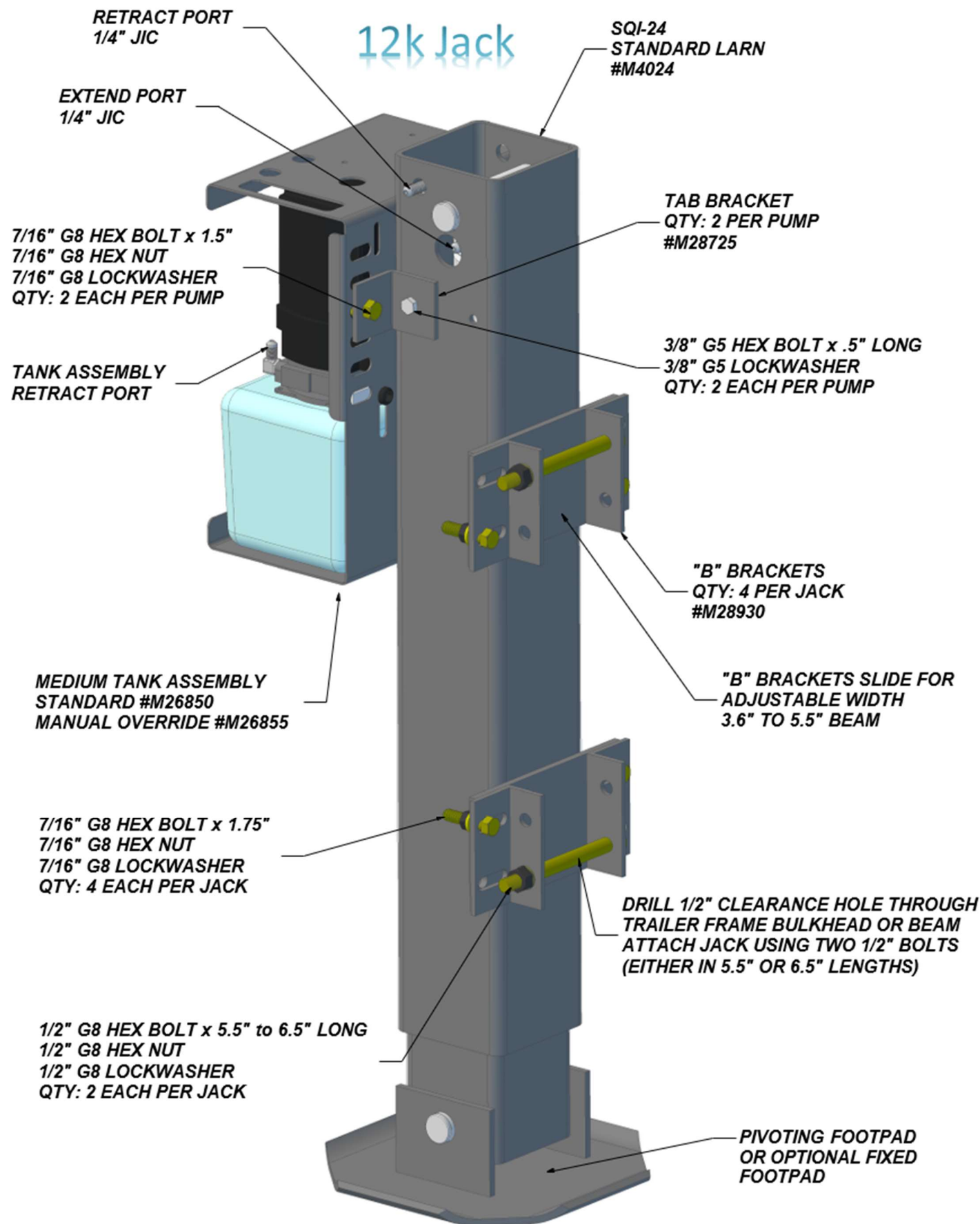
17k and 24k Jacks

- Available in Single and Dual configurations

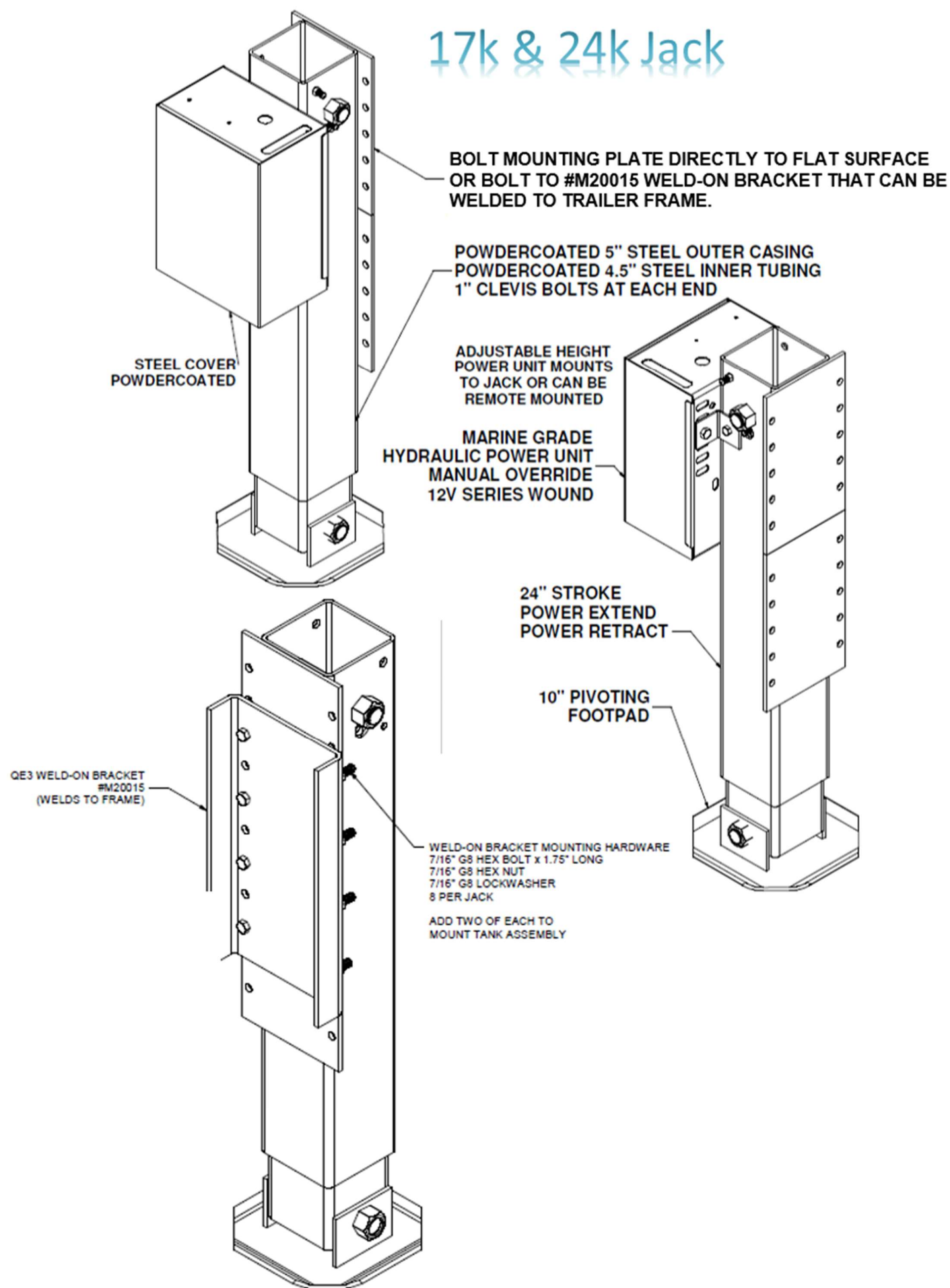
8k Jack



12k Jack

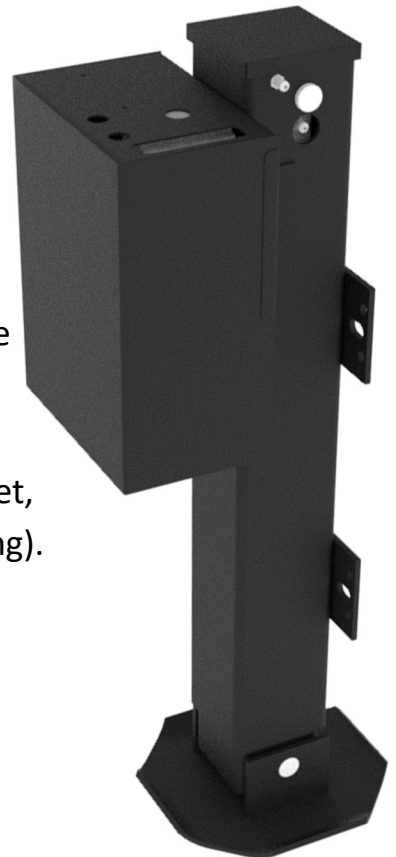


17k & 24k Jack



Hydraulic Jack Mounting

- Set trailer on jack stands at typical or near travel height or near level on flat surface.
- Note existing landing gear ground clearance, then unbolt and remove existing landing gear jacks.
- Set the Bigfoot jack temporarily to desired placement.
(Recommended Ground Clearance: Minimum of 8-10 inches from the ground with trailer at ride height attached to tow vehicle, typically match old jack height if replacing existing jack)
- If you are mounting the jack directly to the frame, place jack in place against the frame (support with jack stand) and mark your holes, require minimum of four 7/16" bolts (not full thread) or two 1/2" grade-8 bolts. The standard hardware included may not be long enough for your trailer frame. If mounting 17k or 24k jack, eight 7/16" grade-8 bolts (not full thread) are required.
- If bolting jack to a vertical bulkhead frame section (4" rectangle/square tube frame), see jack diagrams, mount the four B-brackets to the jack with four 7/16" bolts (one 7/16" bolt per bracket, keep loose). Then place jack against frame (support with floor jack) and mark your holes to slide one 1/2" bolt through the top pair of B-brackets and the bulkhead frame section of the trailer, and another 1/2" bolt through the bottom pair of brackets and frame. If existing holes in bulkhead do not match the Bigfoot jack's hole pattern, drill holes using a 17/32 drill bit.
- Then bolt the jack assembly to the bulkhead frame of the trailer using the 5 1/2" & 6 1/2" long bolts (1/2" hardware).
- Tighten to 7/16" bolts to 70 ft/lbs., 1/2" bolts to 90 ft/lbs.
- You may weld the B-brackets to the trailer as well, just make sure you get as much weld on each 4" bracket as possible.
- Quadra does not recommend welding the jack directly to the trailer, we do offer a more heavy duty weld-on bracket, call to order bracket #M20015 (C-channel, 1/4" thick x 16" long).



Hydraulic Plumbing and Bleeding

Plumbing of hydraulic lines:

- **1pt or Drive Leg:** If the tank hoses are not already connected to the leg, the left extend elbow fitting on the tank assembly (when facing the pump/solenoids) goes to the lower fitting on the Bigfoot Jack, (the longest hose.) The right fitting goes to the upper fitting on the jack. See pages 2, 3 and 7.
- **2pt Slave Legs:** Install “T” fittings at the drive leg’s fittings, run the short hoses from the tank assembly to the “T” fittings, run the longer hoses from the “T” to the slave or driven leg proper fittings.
- **Routing Hydraulic Lines:** Connect one end of the hose first before routing, tighten fitting as much as possible by hand, then ¼ turn with wrench to seal (15mm wrench on hose, 9/16” on fittings), do NOT overtighten as components in fitting will crack and cause leaks (Quadra not responsible for broken fittings). Route each line through the back or top holes of the pump assembly housing. Take care to avoid tight radiuses and hoses rubbing too much against sharp surfaces or moving parts. Hoses should have a little slack and tied down using zip ties so they are not flopping during transportation.

Hydraulic Line Bleeding Process for 1pt System (one jack, one pump):

Finish installation and electrical components, check all hardware and fittings tight prior to operation. Extend the jack completely, may want to place wheel chocks behind tires. Leave at full extension for 30 minutes, then retract completely (place trailer on jack stands).

Hydraulic Line Bleeding Process for 2pt Slave System (one pump, two jacks):

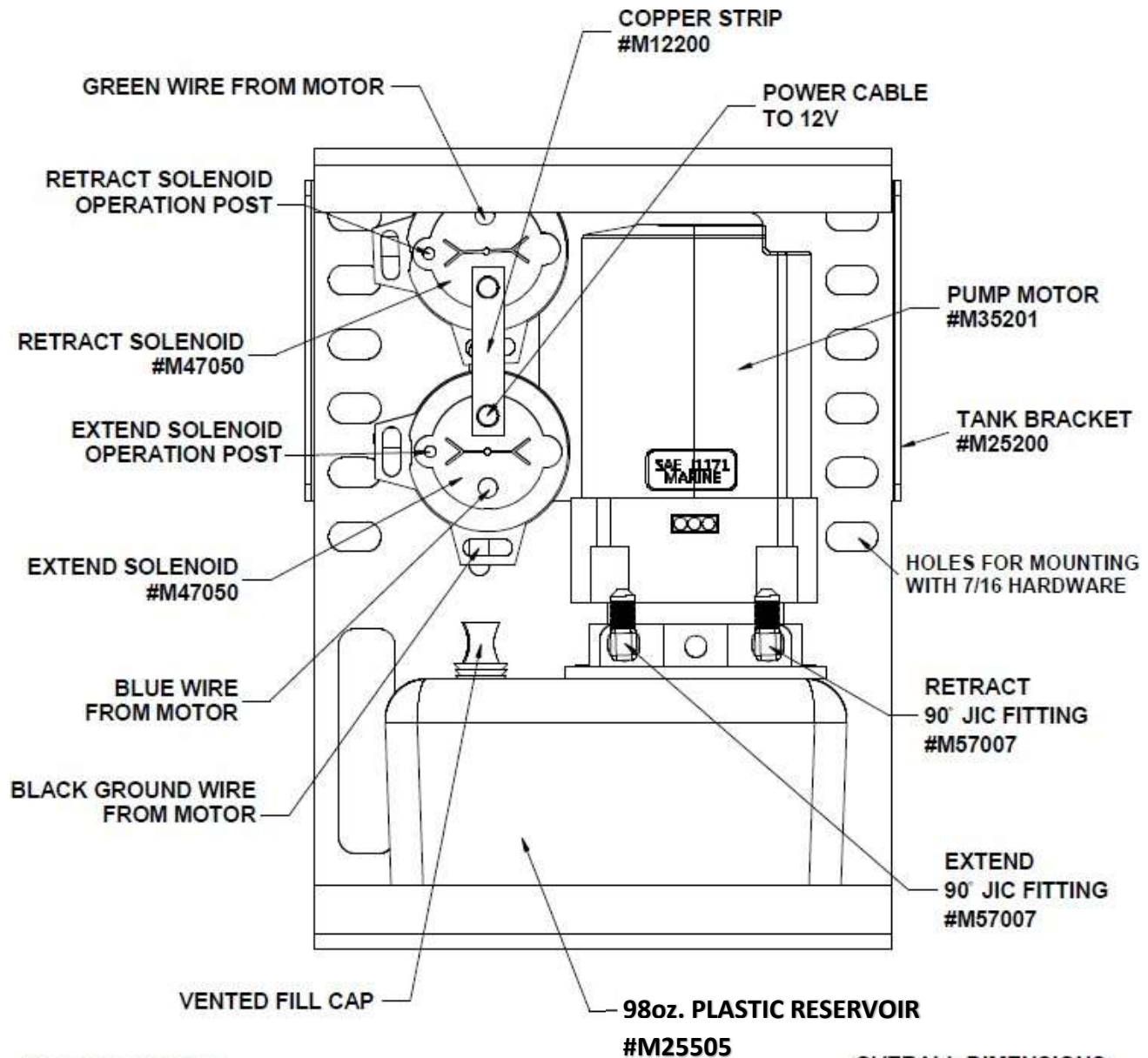
Finish installation and electrical components, check all hardware and fittings tight prior to operation. Prior to hooking up both slave leg hydraulic lines; **install the retract line only, leave the extend line un-attached at the slave leg and place the line in a container** (the same container used for filling the reservoir works well). After filling the reservoir and installing the controls and power (may be temporary), **press the extend button on the control to extend the jacks for a moment until the container starts to be filled with the fluid from the slave leg’s extend line. This means all the air is removed from that line and cannot be internally trapped in the system.** Install the extend line to the slave leg and continue to run the jacks to full extension and leave for a moment (typically 15 minutes) and back down again. After doing so, top off the hydraulic reservoir and process complete!

Hydraulic Line Bleeding Process for 2pt Dual System (two jacks, two pumps):

Finish installation and electrical components, check all hardware and fittings tight prior to operation. Extend the jack completely, may want to place wheel chocks behind tires. Leave at full extension for 30 minutes, then retract completely (place trailer on jack stands).

Hydraulic Pump Assembly Diagram

Fill each reservoir with 2 quarts Dexron III or IV ATF (automatic transmission fluid) only, fluid level should be 3/4" from the top with jack(s) retracted.



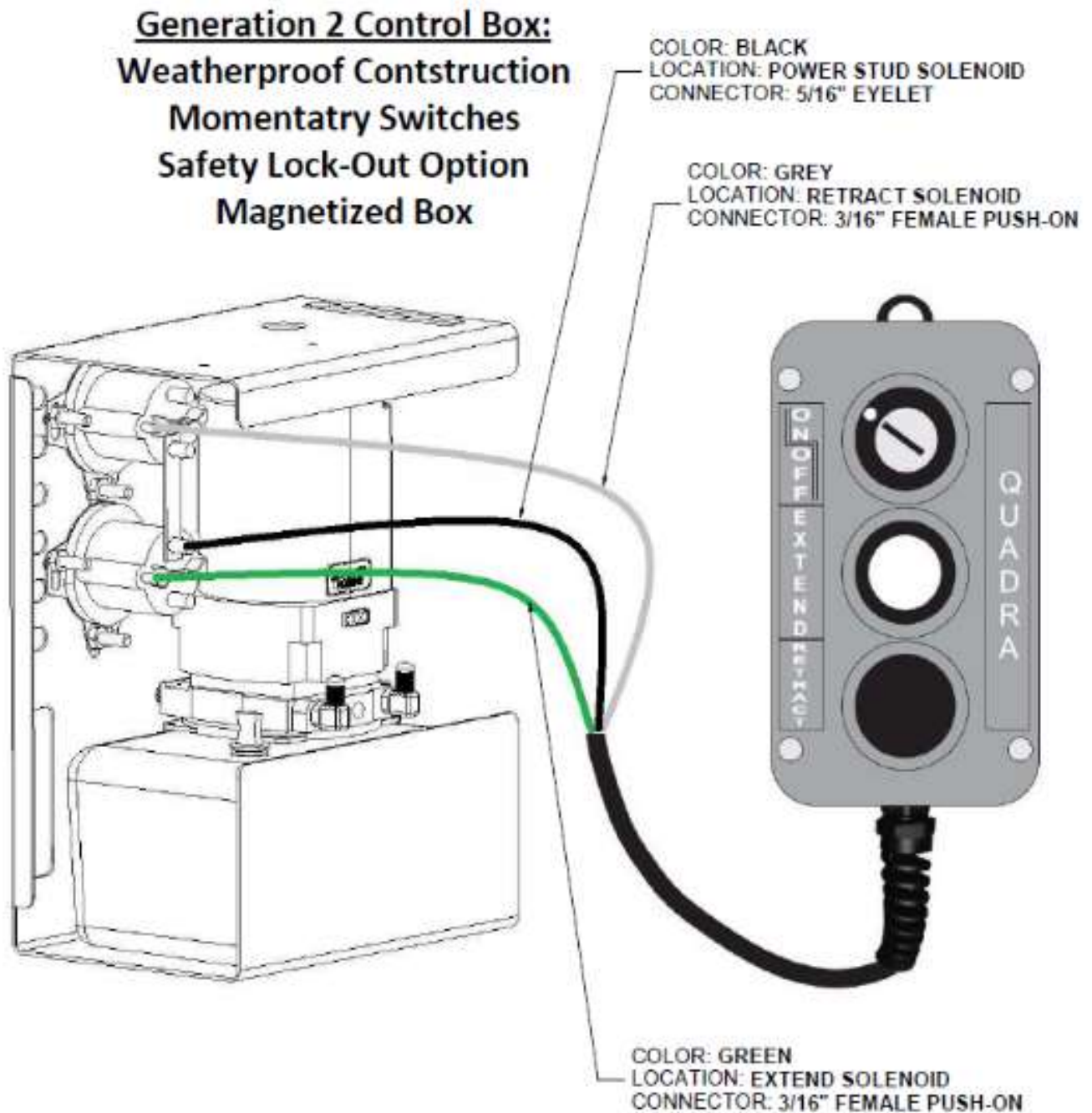
NOT PICTURED:

Powdercoated Steel 3-sided Cover #M12013
Black ABS 3-sided Cover #M12002

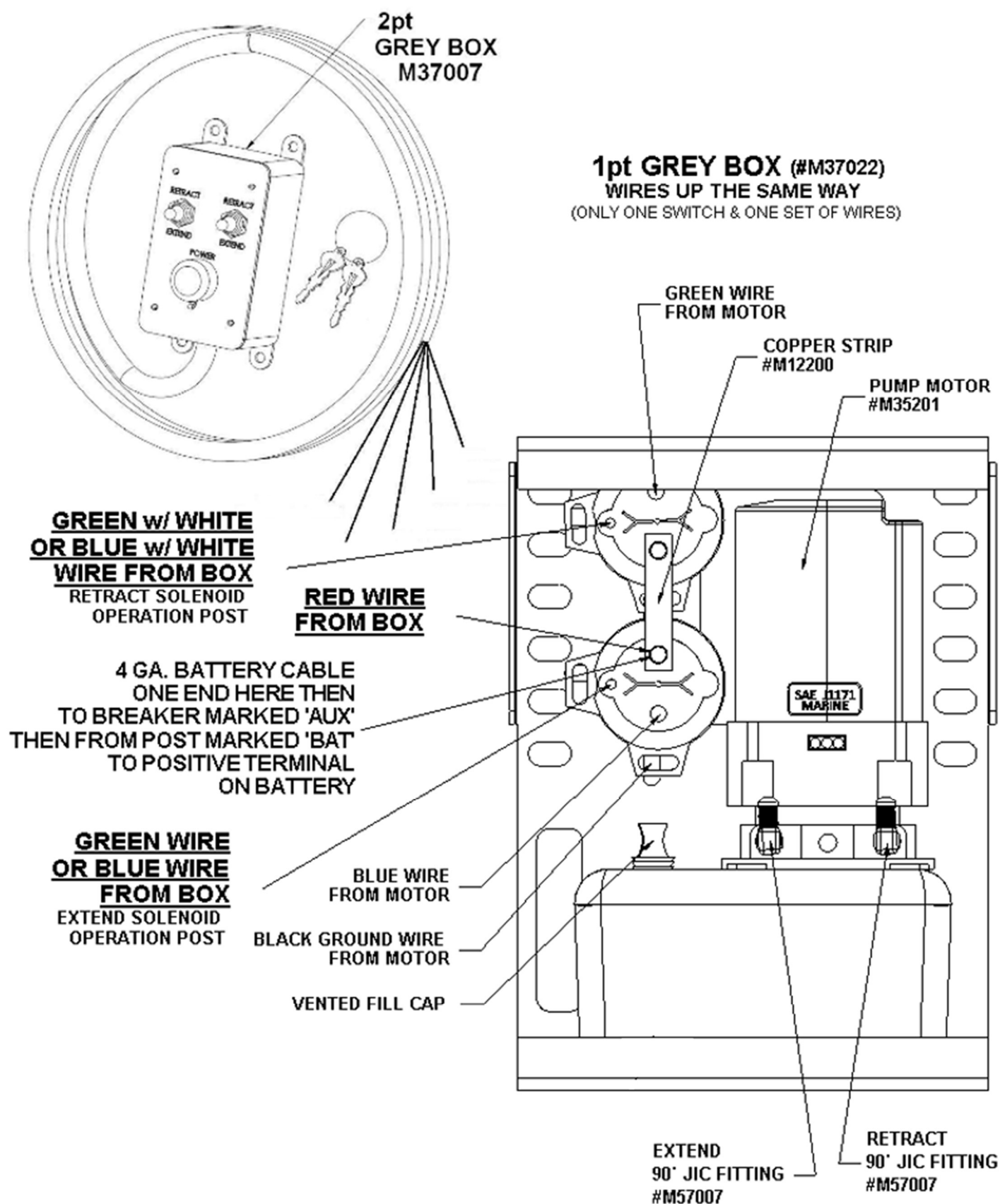
Replacement Assembly Standard motor: #M26850
Replacement Assembly Manual Override motor: #M26855

OVERALL DIMENSIONS:
9" WIDE
12.5" TALL
5.75" DEEP

1pt Control...



2pt Dual Control...



Final Electrical Steps...

- Hydraulic jack requires 12 volt battery; make sure you use at least a 4 gauge battery cable for the power to the jack.
- Remove plastic or metal cover from pump assembly (if installed).
- (Standard kits) Mount weather proof control box assembly in a convenient location making sure to allow enough wire harness to reach the pump assembly.
- Most trailers have the battery mounted on the front of the trailer in a box; install the 80 amp breaker (if equipped) using the self tapping screws in-line somewhere between the jack and the battery.
- Hooking up the breaker: Using the battery cable (if equipped); attach one end of the cable to the bottom solenoid on the lug with the copper strip. Route the cable through the grommet holes in the marked AUX then attach the other cable (if equipped) to the circuit breaker post marked BAT and route the cable to the battery (DO NOT CONNECT UNTIL THE REST OF THE TANK WIRING IS COMPLETE)
- (Standard kits) Route the harness from the switch box through the back of the pump assembly body. Connect the green wire with the white strip to the small post on the top solenoid (make sure to use the crimp on push on connector if supplied). Next, connect the solid green wire to the small post on the bottom solenoid. You may now connect the battery cable to the battery.
- In the event the Tank Assembly **is not** attached or mounted to steel; it is necessary to attach the AUX Ground from tank assembly to frame. (If tank Assembly **is** mounted to steel, the ground is reached thru the tank body and frame of vehicle.)
- At this point add fluid (ATF, Dexron III) to the pump reservoir, remove green plug, make sure you fill the tank so that the fluid is 1" to 1 ½" below the top with the jack retracted.
- Time to bleed the air out of the lines, see page 5.
- Install the three side tank cover, black steel or ABS, install by placing over the top of the vertical lip at the top and bottom of the tank body and tucking each side into the flanges located at the side of the tank body. Insert the screws into the front vertical lips TAKE CARE TO AVOID THE RESERVOIR.
- Once that is done lower your system and enjoy your brand new **Bigfoot Jack!**

Troubleshooting Guideline

#1 issue is poor battery or ground connection or low battery charge, so check that first!

The jack runs for a few seconds, then stops...

- The battery is weak or the battery capacity has diminished.
- An auxiliary ground is needed from the tank assembly to the trailer's frame.

The jack only runs in one direction...

- Check battery voltage.
- Check all wire connections & for proper plumbing.

Press the switch but nothing happens...

- Check both positive & negative 12V connections.
- Check for full charge of battery.
- Check that tank assembly has proper ground.
- Check wiring connections.

Power failure: If equipped with Manual Override, insert 1/4" hex key in top of motor with drill to run jacks. OR, place jumper cables to AUX side of breaker near battery OR apply 12V directly to pump unit's copper strip between solenoids... (see page 6 & 11) Jump retract top solenoid (grey or white wire). Jump extend bottom solenoid (green or blue wire).

The jack is jerky when retracting...

- There may be air in the system, see bleeding procedure earlier in the booklet.
- Low fluid level (Must be 3/4" below top of reservoir)
- Incorrect hose installation.
- To purge system, add necessary fluid and extend/retract leg completely.

Cylinders "creep" down when not in use... Check fluid level, OR Bleed System (air in the system)

Hydraulic Fluid on footpad or on ground around cylinder... Loose fitting or broken hydraulic line.

Cylinders "creep" down or don't hold pressure when lifting/holding coach...

- Air in the system, see bleeding procedure.
- Check fluid level, should be 3/4" below top of reservoir with jacks retracted completely, ATF Dexron III.
- Check for leaks in hydraulic lines/fittings... if lines damaged, replace.
- Possibly plumbed backwards
- Relief Valves have failed on pump motor... replace motor/tank assembly
- Hydraulic seal failure... replace/return cylinder OR seal kit

Plastic Foaming of fluid or overflow in reservoir....

- Check fluid level of reservoir with legs retracted (should be 3/4"-1" below top).

Semi-Annual Service Required: Bleeding the system

Every six months, extend both jacks completely and leave for a minimum of 30 minutes, then return to standard position.

This is our basic bleeding process, if you have issues with air in the system (Lifting or holding trailer weight issues) see below for a more detailed process...

1. Disconnect extend hose fitting on the slave jack (jack without pump).
2. Place hose in bucket, run EXTEND on control until smooth fluid flow, stop.
3. Re-connect extend hose fitting on slave jack.
4. Extend both jacks completely (listen to pump), leave for 30 minutes, retract to normal position.

Warranty Guide



Owner must activate warranty! Via Phone or Website

Landing Gear: 1 year parts and labor

*Should the product be defective due to workmanship and/or material flaws,
we will repair/replace the defective material.*

Core charges may be applied and refunded on certain components.

Bigfoot Systems is NOT responsible for FREIGHT on Warranty parts and the following:

- Replacing footpads, bolts, loose or bent brackets or fluids lost as a result of failure to maintain the system, Ex. loose/missing footpads, loose mounting brackets/hardware from not re-torquing after initial use, etc.
- Damages caused by abuse, misuse, negligence, misapplication, error of operation, accidental or purposeful damage or faulty installation, including but not limited to hoses, fittings & wiring components. Example, bent limit switch pins from hitting ground while driving, missing SnapPads, operating system with rear tires off the ground, modification to system, etc.
- Liability for loss to the vehicle, or apparatus or property, loss of time, manufacturing costs, labor, material, loss of profits, consequential damages (direct or indirect).
- For transportation to and from a service center, onsite service calls to or from the customer, damage from road hazard, loss of salaries, commissions, lodging, towing charges, bus fares, car rentals, fuel expense, telephone charges, inconvenience compensation while repairing or replacing a defective part or material.

This warranty voids all previous issues, regardless of provided manual version. Effective date: **7/1/2025**

Owner must register within 30 days from the date of purchase to activate warranty. Call or online at bigfootleveler.com

Prior to any work being done an **authorization number must be obtained** by calling 269-483-9633 for Warranty Parts or Service Labor. For full warranty transcript just contact us!

Service labor based on a flat rate schedule determined by Bigfoot for authorized work performed will be reimbursed. This will eliminate much diagnostic time and avoid refusal of unauthorized claims. Many problems may be resolved by contacting a Bigfoot service representative or visiting our support documentation on our website at bigfootleveler.com

Write down your system serial number here _____

Serial # located on the white sticker on the system controller or call us, starts with # 8.....