

Version 12.24

BIGFOOT

HYDRAULIC SYSTEMS

by Quadra Manufacturing

Single & Dual Point Round Leg Systems

Installation Guide

BIGFOOT
HYDRAULIC
SYSTEMS
...BIGFOOTLEVELER...

Owner's Manual

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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 Quadra 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 which system you have:

- **Basic Single Point:**

Toggle switch mounted on the backside of the tank assembly, 1 jack, 1 pump

- **Standard Single Point:**

Hard wired weatherproof control switch, 1 jack, 1 pump

- **Wireless Single Point:**

Wireless key fob & emergency switch inside tank, 1 jack, 1 pump

- **Standard Slave:**

Hard wired weatherproof control switch, 2 jacks, 1 pump, does not adjust side to side

- **Wireless Slave:**

Wireless key fob & emergency switch inside tank, 2 jacks, 1 pump, does not adjust side to side

- **Standard Dual Point:**

Hard wired weather resistant control switch, 2 jacks, 2 pumps, can level from side to side

Location of your tank assembly:

- **Direct mount:**

This is when the tank assembly is bolted directly to the cylinder bracket either utilizing the cylinder mounting bolts or the supplied full threaded bolts. This set-up is recommended due to the fact that the hoses are shorter decreasing the chances of a hose being damaged.

- **Remote mount:**

If the tank cannot be mounted to one of the cylinders then a remote mount is required. You can choose to directly bolt your tank to the vehicle frame or cross-member, some securely fasten the tank inside a storage box. Or you can choose to order another bracket that can be welded or bolted to the vehicle.

Location of your cylinders:

- **Trailer Front:**

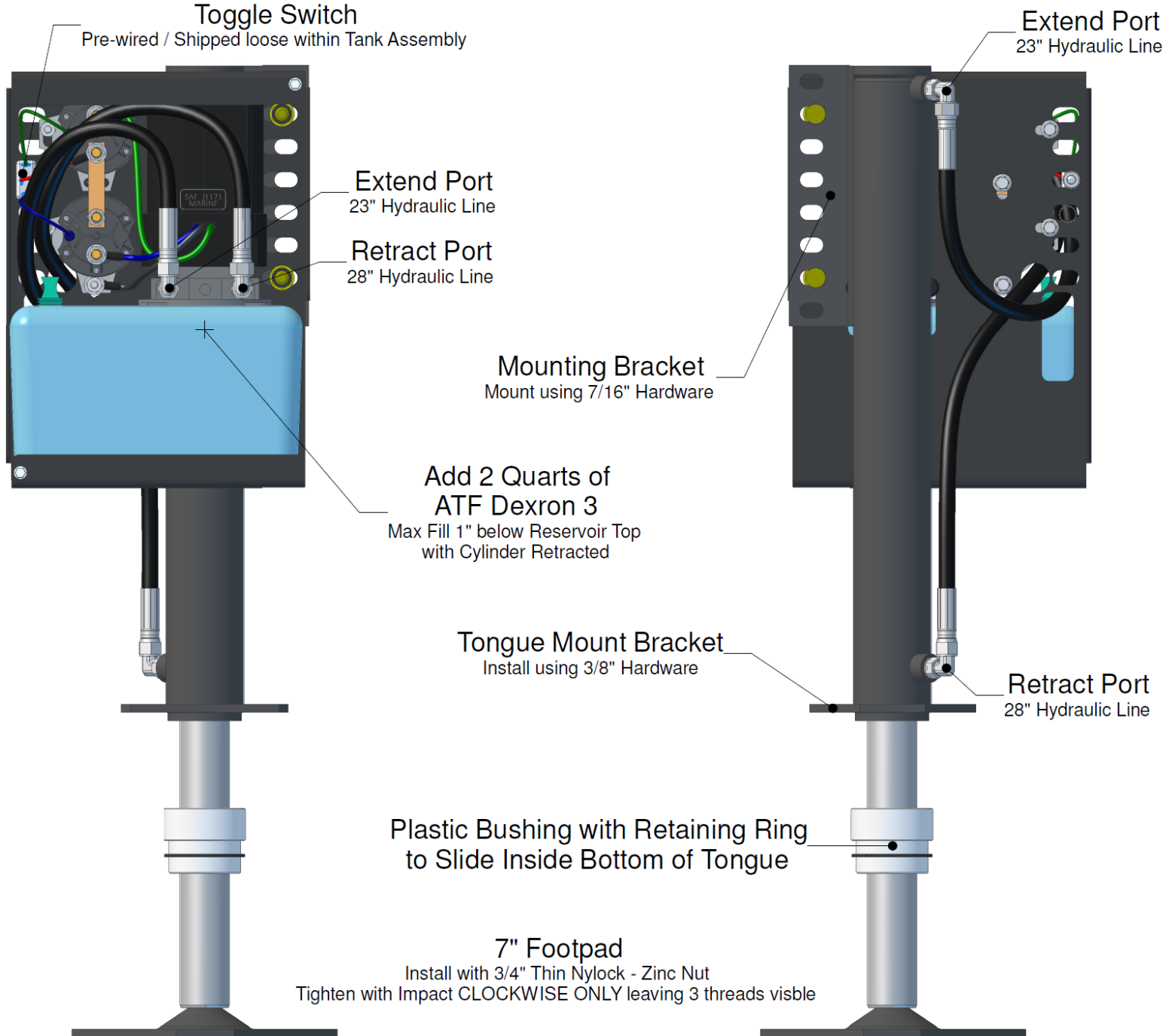
Single or Dual cylinder systems should have the front cylinders on the exposed A-frame of the trailer or the structural frame near the front, take care not to interrupt the ground clearance of the trailer during transportation (pulling into parking lots, etc.).

- **Trailer Rear:**

Mount behind furthest rear axle, tuck as close as possible to axle and axle suspension components without interfering with their moving parts (Ex. Leaf spring perch). Take care not to interrupt the ground clearance of the trailer during transportation (pulling into parking lots, etc.). If there is a slide out on the trailer, modification to the mounting bracket may be necessary or call to order deeper bracket, etc.

QT16-8k & Tank Assembly

Direct Mount Configuration

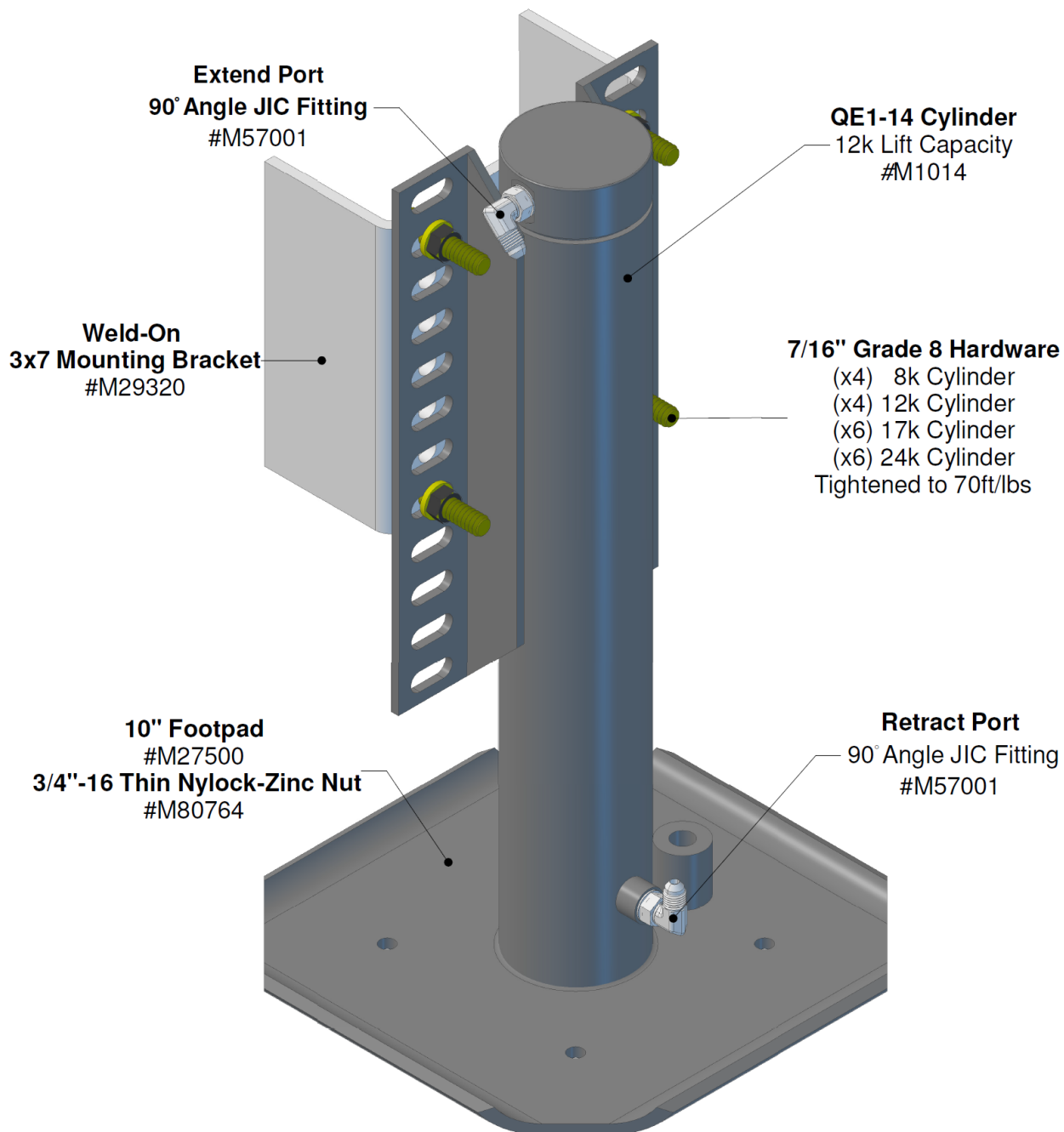


Overview of Tongue Jack Installation:

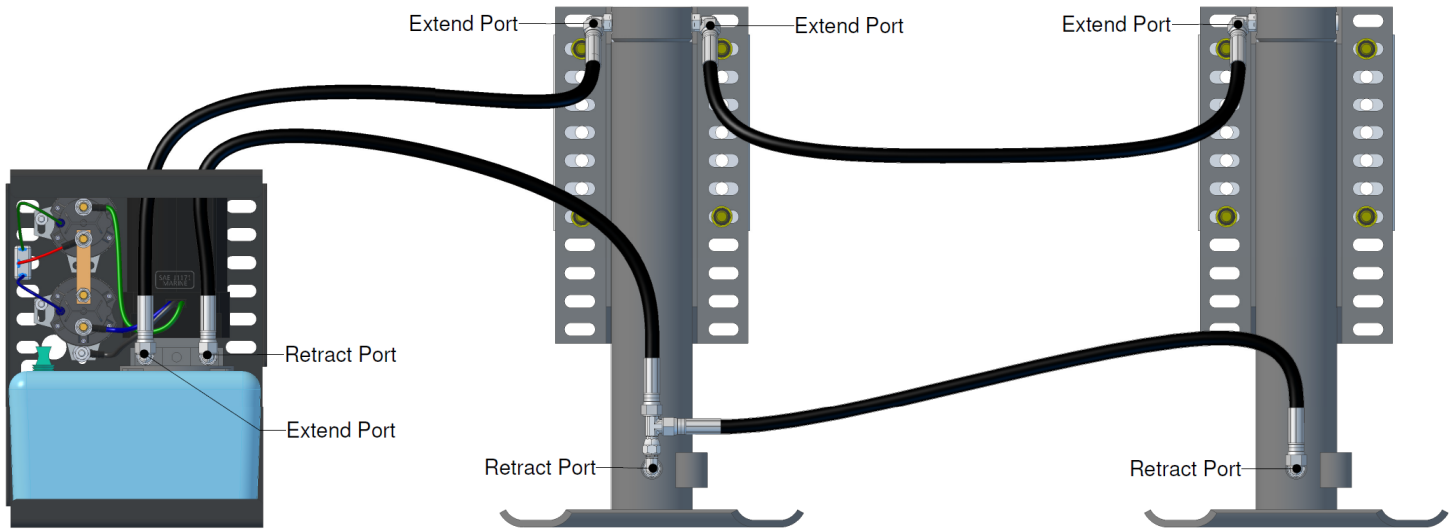
1. Mount assembly to trailer A-frame using included 3/8" hardware
2. Connect pump to trailer battery (*See Standard Tank Wiring Diagram*)
3. Add 2 quarts of ATF Dexron 3 to pump reservoir
4. Fully extend cylinder and let sit for 15-30 minutes to bleed any air trapped in system

Mounting the Cylinders

Make sure weld-on bracket is mounted vertically. It is easiest to bolt the cylinder to the bracket, then place up to the frame with a floor jack, verify that the jack is at appropriate height (typically 9-11" off the ground) and vertically level. Then proceed to getting full weld from bracket to frame. Cylinders may also be bolted directly to the frame, however included hardware may not be long enough, make sure you replace with 7/16" grade-8 hardware, minimum of four for 8k and 12k jacks, and six for 17k and 24k jacks. For slave systems you have options for plumbing, you can place the "tee" fittings on the pump or you can place them both on one of the jacks. Cylinder, mounting bracket, weld-on bracket and footpad may vary from application to application. For different brackets, cylinders or footpads feel free to call!



Slave System Hydraulic Hose Plumbing Diagram



Hydraulic Hose Plumbing

Single Point or Drive Leg: If the tank hoses are not already connected to the leg, the right fitting on the tank assembly goes to the bottom fitting on the cylinder.

Dual Point Slave Legs: Install "T" fittings at the drive leg's ports, run the short hoses from the tank assembly to the "T" fittings, run the longer hoses to the slave or driven leg.

The "T" fittings may also be installed on the tank assembly fittings or in-line if preferred.

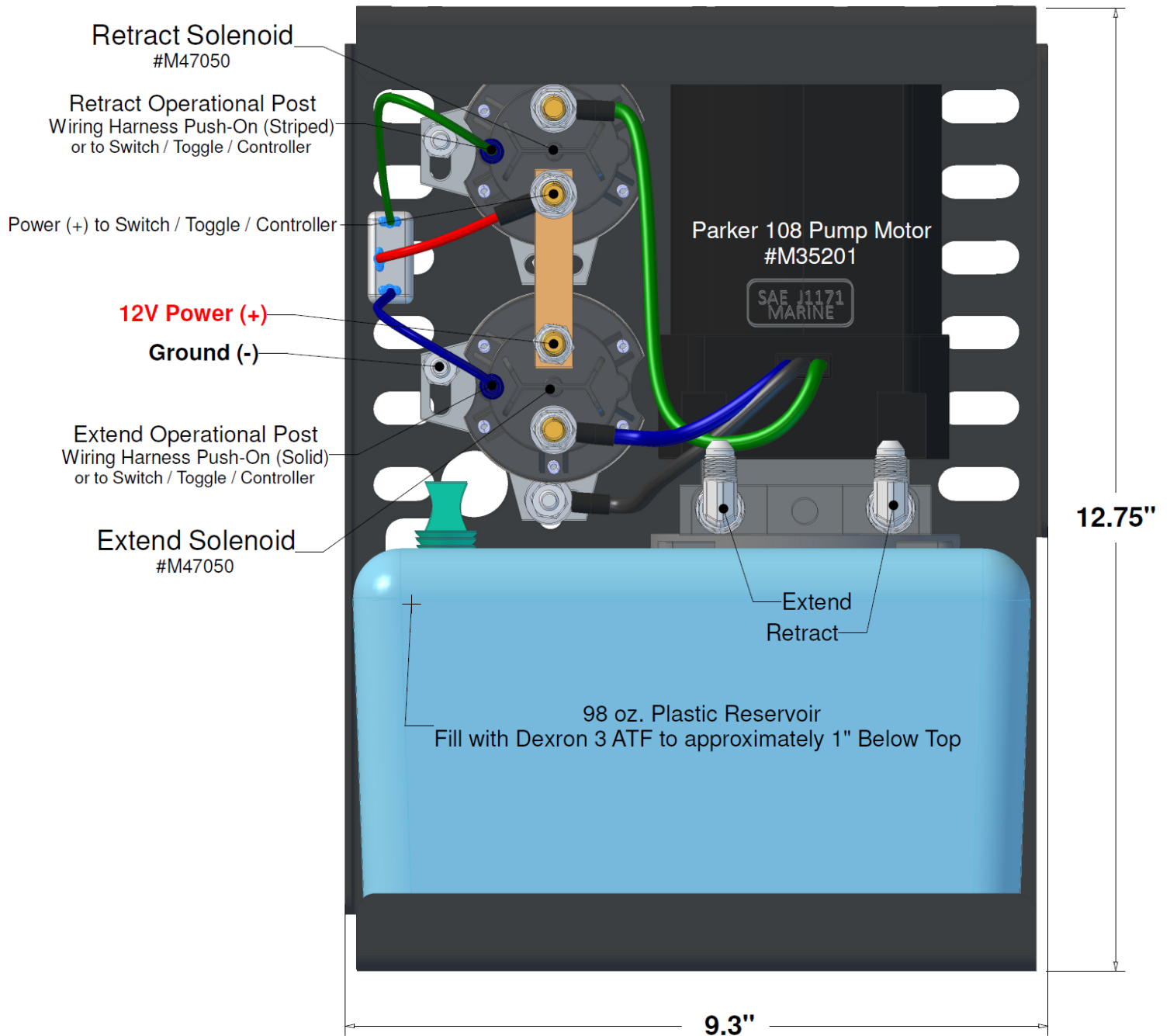
Install hydraulic hoses with 15mm wrench, fittings on cylinders/pump require 9/16" wrench. Hoses are generic for the kit and may be setup for a direct mount setup (pump mounted to cylinder's angle bracket, two 7/16" bolts per pump). If you need longer hose, call Quadra and order longer or go to local hardware store and get 1/4" hose with #4 JIC Female fittings, hose rated for 2,500 psi.

Hydraulic System Bleeding Process

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!

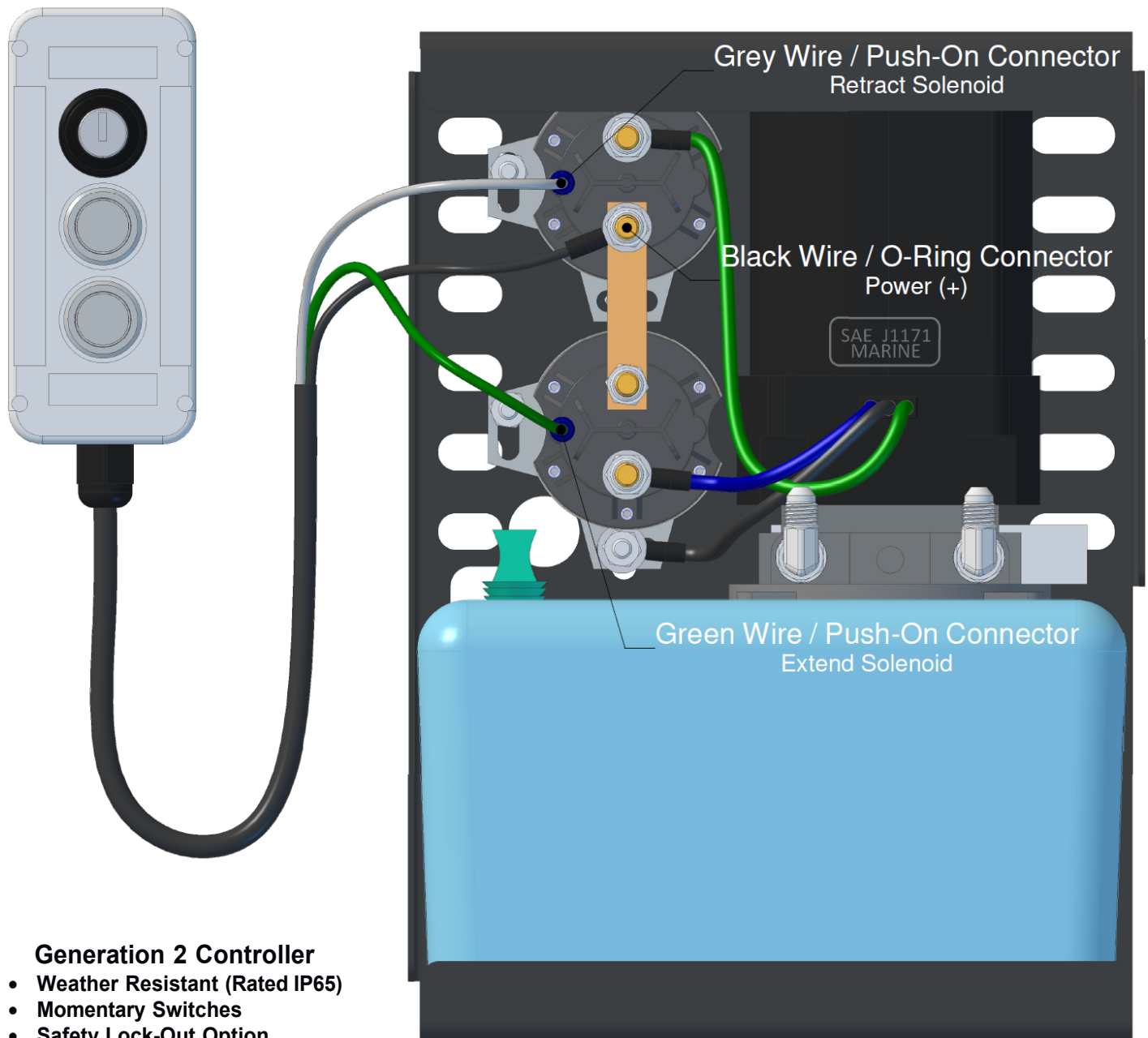
Standard Tank Assembly

#M26850
Wiring Diagram



Weather Resistant Controller Wiring Diagram

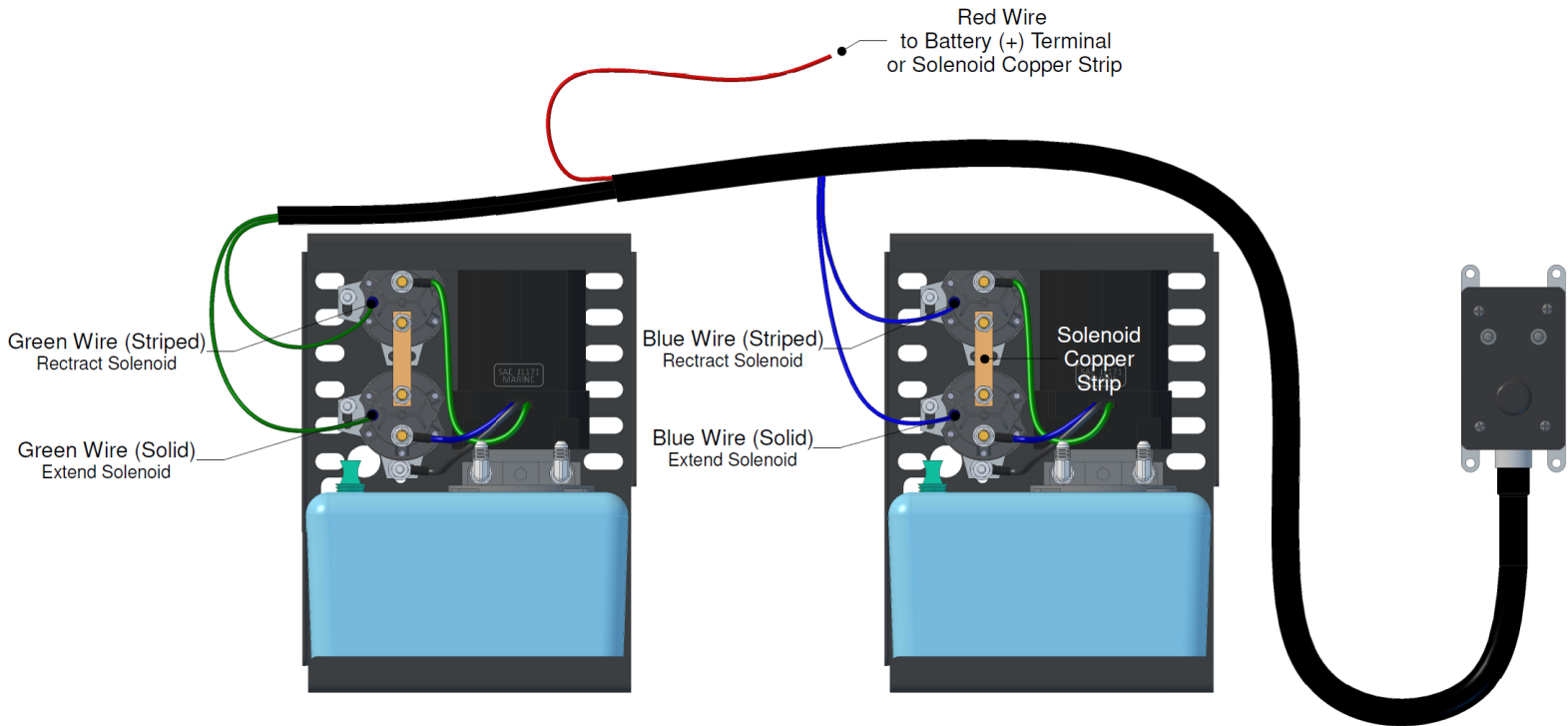
Single Point & Slave Systems



Generation 2 Controller

- Weather Resistant (Rated IP65)
- Momentary Switches
- Safety Lock-Out Option
- Magnetized Box

2 Point Controller Wiring Diagram



2 Point Controller

- Weather Resistant (Rated IP65)
- Dual Toggle Switches
- Safety Lock-Out Option

Controller Installation:

1. Mount weather resistant control box assembly in a convenient location making sure to allow enough wire harness to reach the tank assemblies.
2. Route the harness from the switch box through the grommet on the back of the pump.
3. Connect the green (or blue) wire with the white strip to the small post on the top solenoid (make sure to use the push-on connector if supplied).
4. Next, connect the solid green (or blue) wire to the small post on the bottom solenoid.
5. You may now connect the battery cable to the battery.

Gen 3 Wireless Control Operation



Replacement Transmitter #M37098

Replacement Transmitter & Receiver #M37029

Operation:

Depress the On/Off button on the transmitter to activate. The blue LED light on the top right corner should turn on. The transmitter should be in the off position when the unit is not in use, but is equipped with a safety feature that shuts off if not being used after 3 minutes.

On the transmitter, press and hold the Extend button to lift your unit to desired height. To lower the unit or fully retract the jack(s) press and hold the Retract button.

The controls on the receiver operate the same as the transmitter.

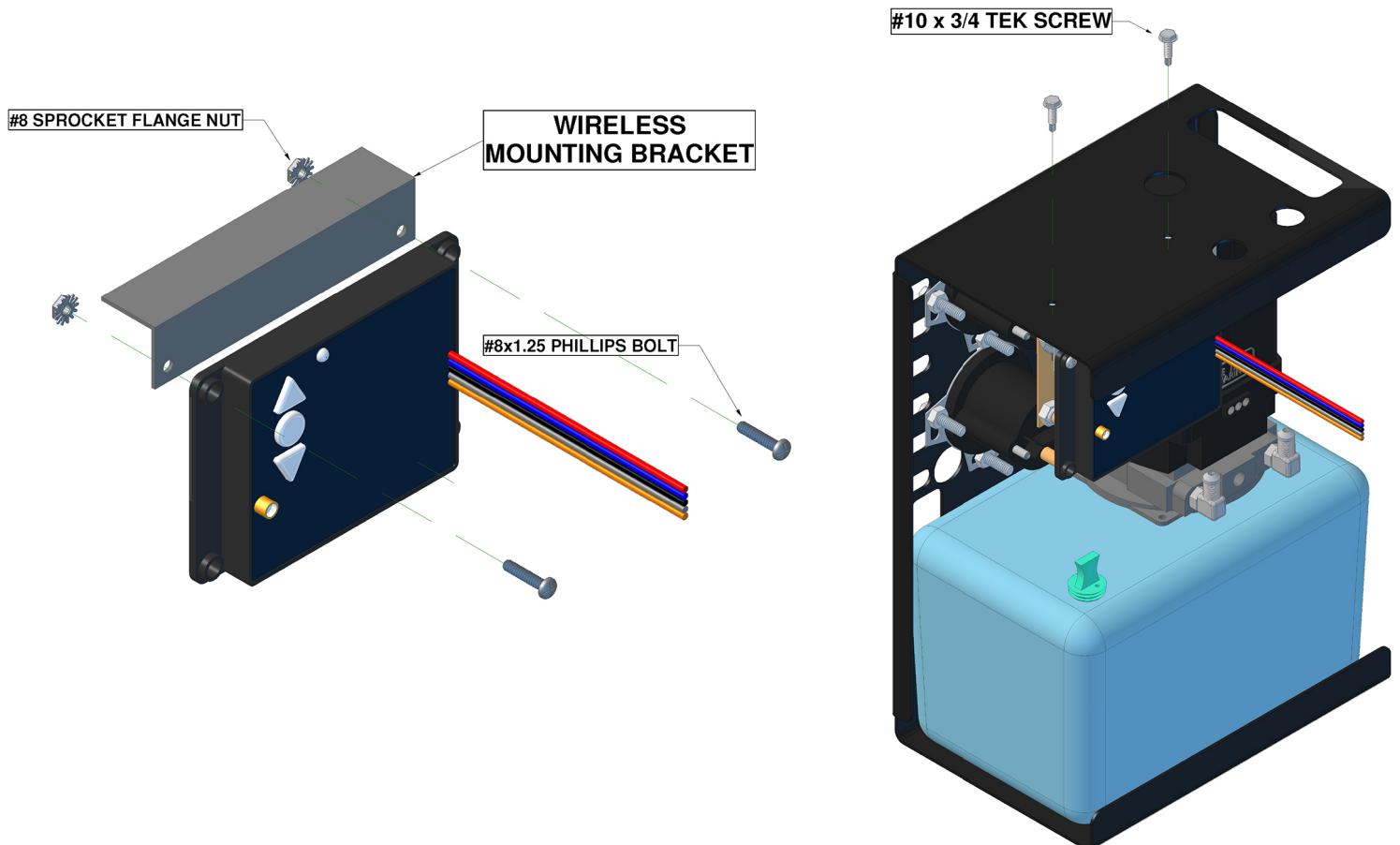
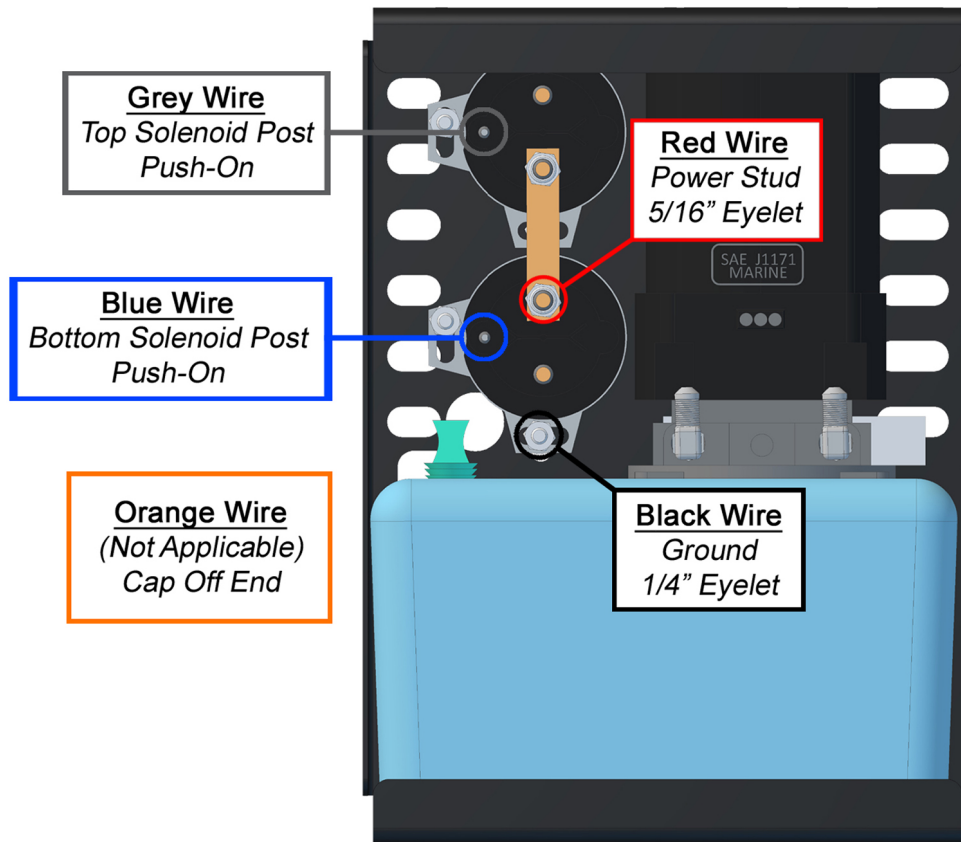
Sync Transmitter:

1. Make sure the receiver and transmitter are off.
2. Press and hold the On/Off button on the receiver until the LED light starts to flash quickly on the receiver, then release.
3. Next, press and hold the On/Off button on the transmitter until the LED on the receiver becomes constant, then release. The transmitter is now synced.

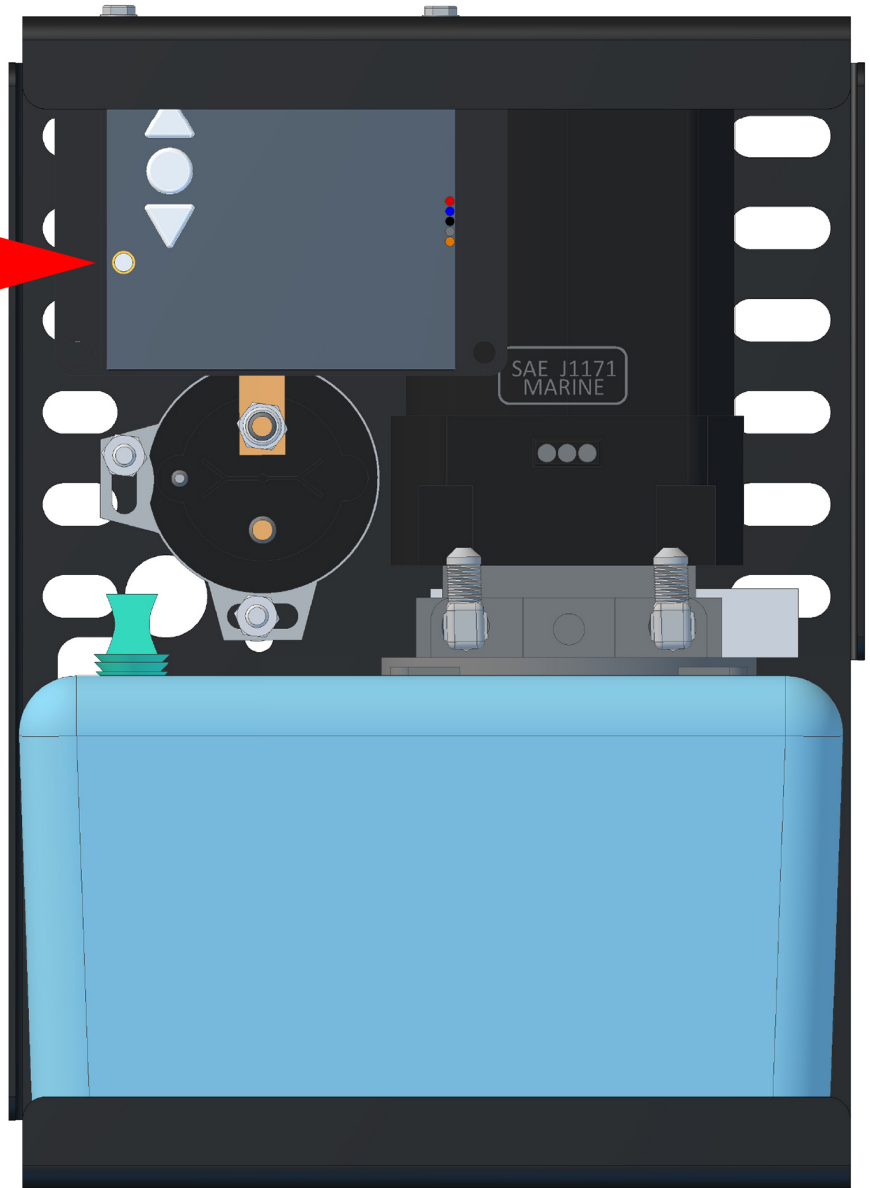
Program Receiver:

1. Make sure the receiver and transmitter are off.
2. Press and hold the On/Off button on the receiver, the LED light will start to flash quickly. Continue to hold until the light starts to flash slower, then release.
3. Next, press and hold the On/Off button on the transmitter until the LED on the receiver becomes constant, then release.
4. Finally, press and release the On/Off button on the receiver, the LED will become constant. The receiver is now programmed.

Gen 3 Wireless Controller Installation



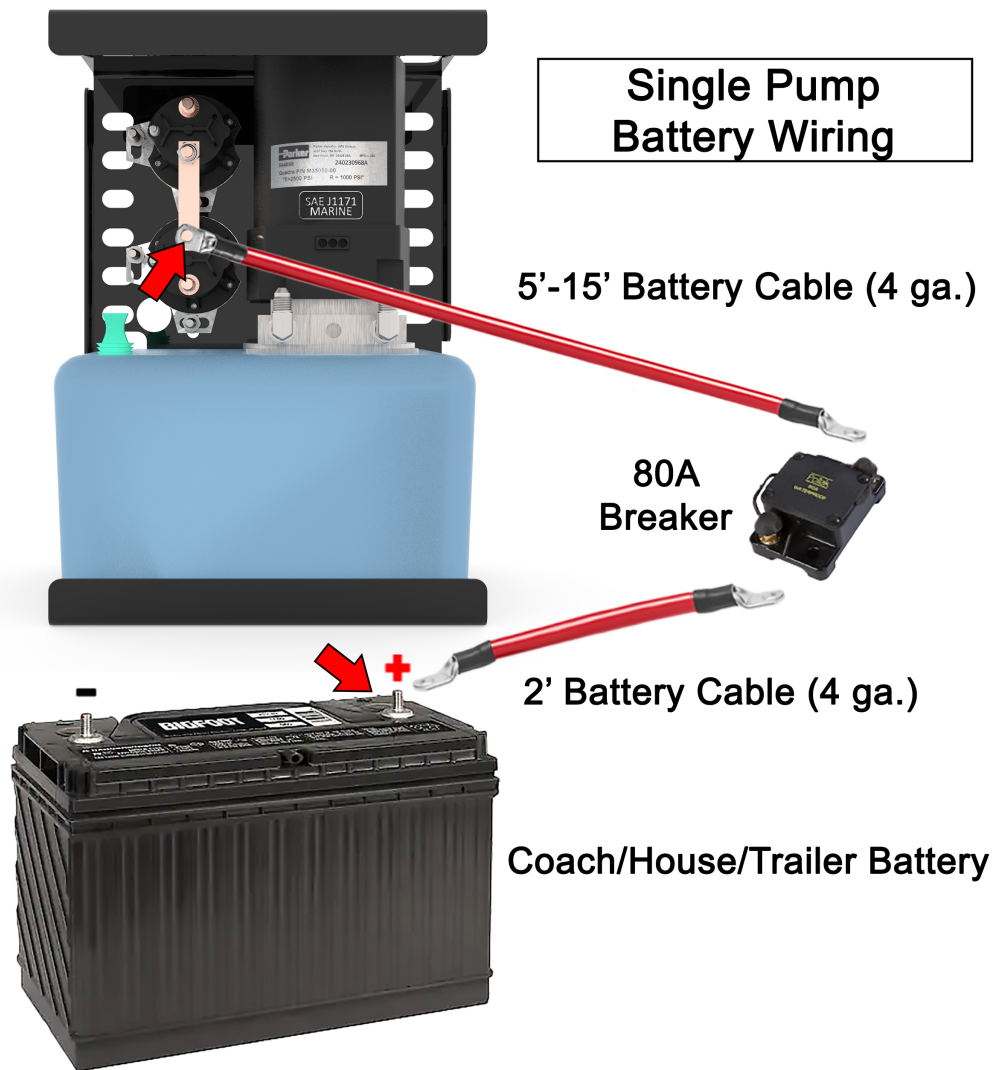
ANTENNA PORT



ATTENTION: Antenna must be installed in a location outside of the pump assembly.

Primary Control for the jack is the Key Fob, but if this is misplaced, use the Emergency Controls located on the Wireless Receiver.





The hydraulic system requires 12 volt battery - use at least a 4 gauge battery cable for the power.

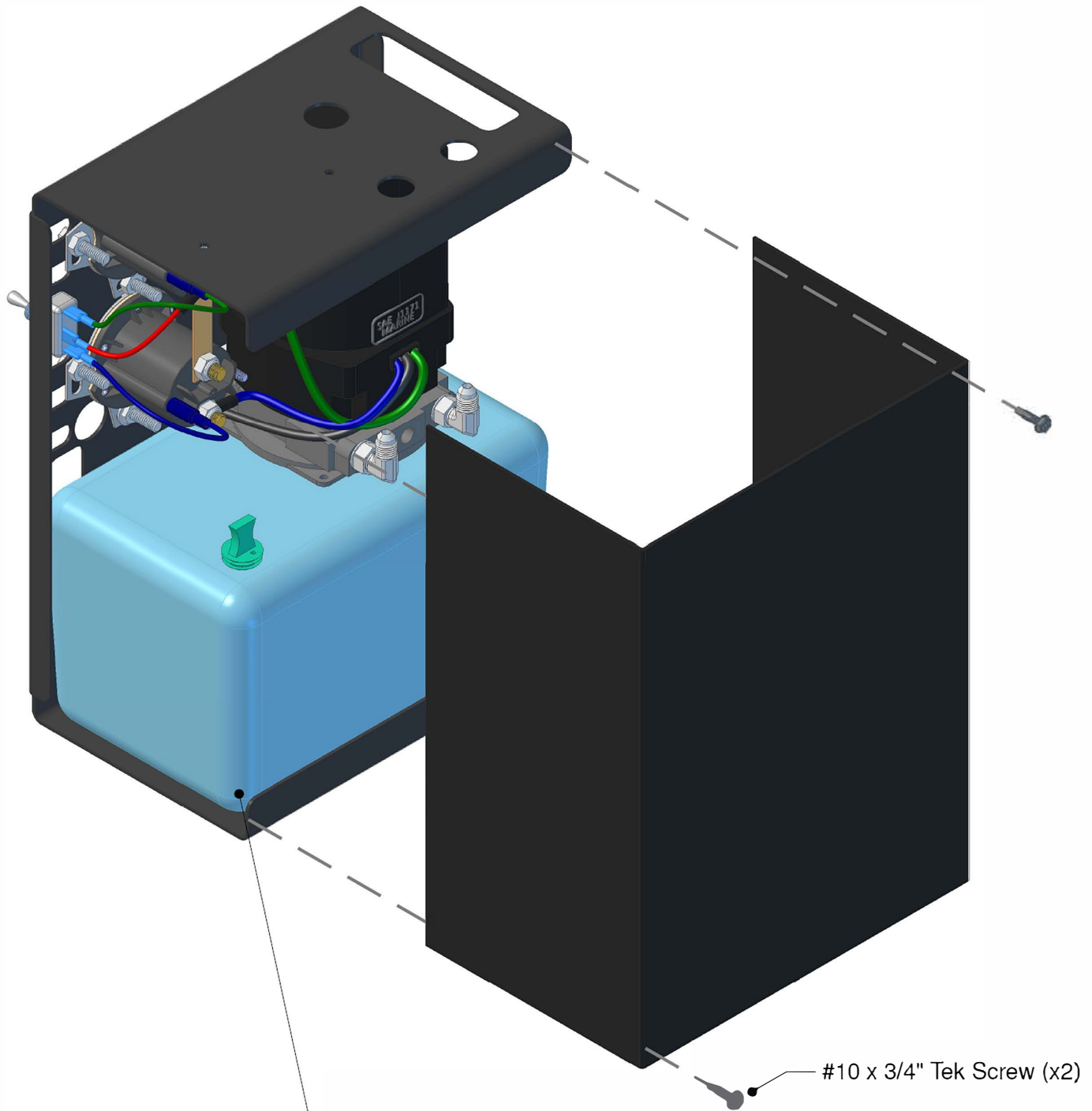
To hookup the power:

1. Attach the supplied eyelets to each end of the supplied 5' battery cable.
2. Attach one end of the cable to the lower solenoid's post with the copper strip.
3. Route cable to the battery or 80A breaker (if equipped), avoiding moving parts or other hazards that could cause damage. If equipped with a breaker, connect 5' cable end to one side and then a 2' cable to the other and route to battery.
4. The **final step** is to connect the 5' cable from the pump or 2' cable from the breaker to the positive (+) battery terminal.

An auxiliary ground may be required if tank body does not have a sufficient ground from mounting method alone. If needed, attach a 10 ga. cable to a solenoid mounting stud on either solenoid and route to the frame or negative terminal of battery.

For dual pump systems, run an additional 4 ga. cable from the copper strip on pump 2 to the copper strip on pump 1, or to the breaker if preferred.

Tank Cover Installation Diagram



ATTENTION:

Use caution when installing self-tapping tek screw to avoid damaging the tank reservoir.

Troubleshooting Guide

#1 issue is poor battery connection or low 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
- Check for air in the lines, extend system completely, let stand for 30 minutes

"I push 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

"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 approximately 1" below top of reservoir)
- Incorrect hose installation

"The cylinders creep down when not in use"

- Check fluid level
- Bleed system to remove any air in the system

"Hydraulic fluid on footpad or on ground around cylinder"

- Check for loose fittings
- Check hydraulic hoses for damage

"Cylinders don't hold pressure when lifting coach"

- Check fluid level
- Bleed system to remove any air in the system

"Plastic foaming of fluid or overflow from reservoir"

- Check fluid level in tank, should be approximately 1" below top of reservoir when cylinders are fully retracted.

What Hydraulic Fluid do I use?

Automatic Transmission Fluid (ATF): Dexron II, Dexron III, ATF+4, Mercon, Mercon V

WARRANTY GUIDE

Owner must activate warranty! Via Phone or Website

Single & Dual Point Round Leg Stabilizing Systems: 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.

Quadra is NOT responsible for:

- Freight on warranty parts.
- 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. Effective date: 12/1/2024

OWNERSHIP MUST BE REGISTERED WITHIN 30 DAYS FROM THE DATE OF PURCHASE TO ACTIVATE WARRANTY. Do it 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 Quadra 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 Quadra service representative.

Provide the system serial number here _____