

Version #1122



BIGFOOT

HYDRAULIC LANDING GEAR

1 POINT & 2 POINT ROUND LEG SYSTEMS

INSTALLATION GUIDE • OWNER'S MANUAL

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Understanding which system you have:

Basic 1point:

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

Standard 1point:

Hard wired weatherproof control switch, one jack, one pump.

Wireless 1point:

Wireless key fob & emergency switch inside tank, one jack, one pump.

Standard Slave:

Hard wired weatherproof control switch, two jacks, one pump, does not adjust side to side.

Wireless Slave:

Wireless key fob & emergency switch inside tank, two jacks, one pump, does not adjust side to side.

Standard 2point:

Hard wired weatherproof control switch, two jacks, two 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:

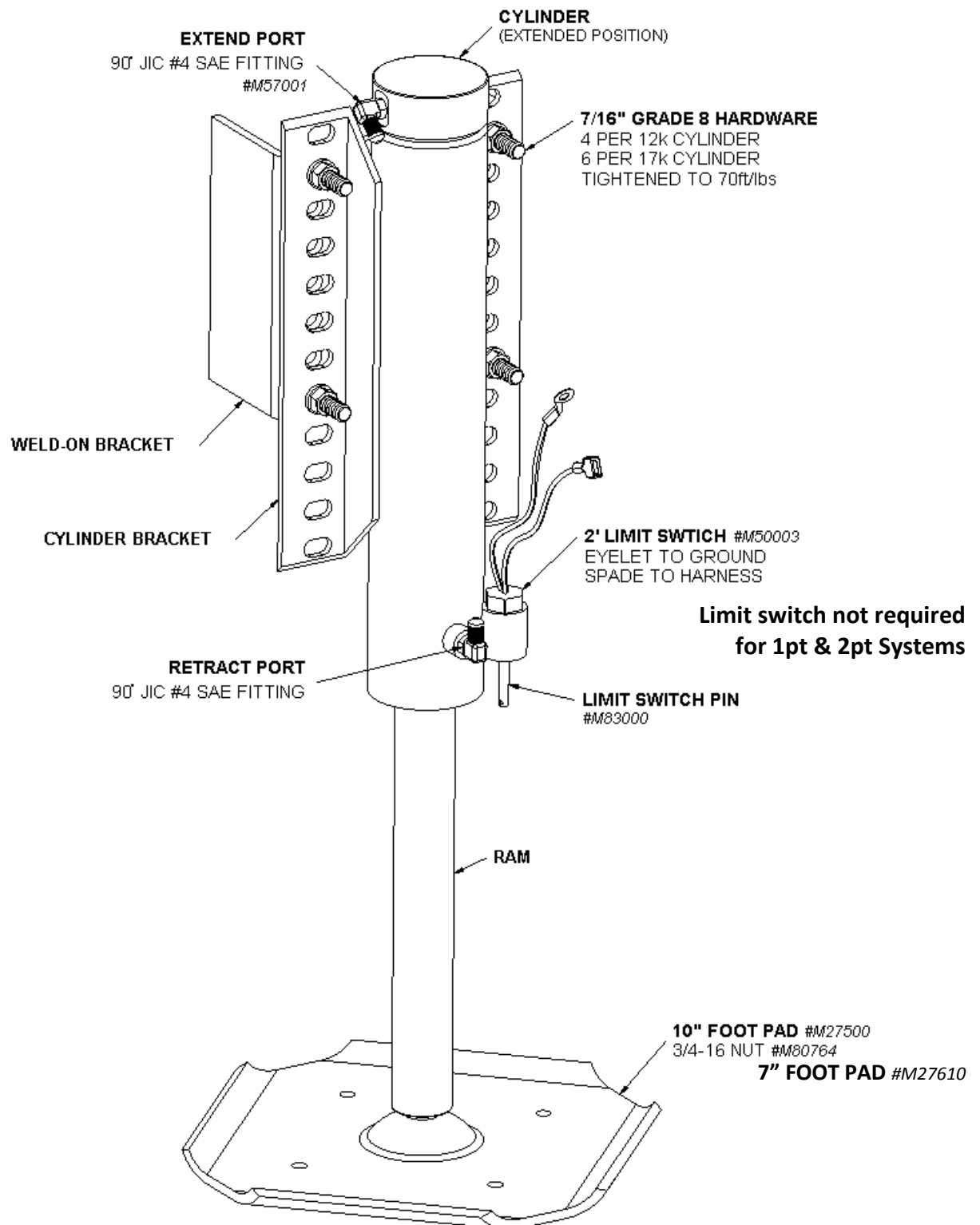
Single or Dual cylinder systems should have the front cylinders on the exposed A-frame of the trailer or on structural frame near the front, take care not to interrupt the ground clearance of the trailer during transportation (pulling into parking lots, etc.).

Trailer Rear:

Mount behind furthest rear axle, tuck 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.

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!



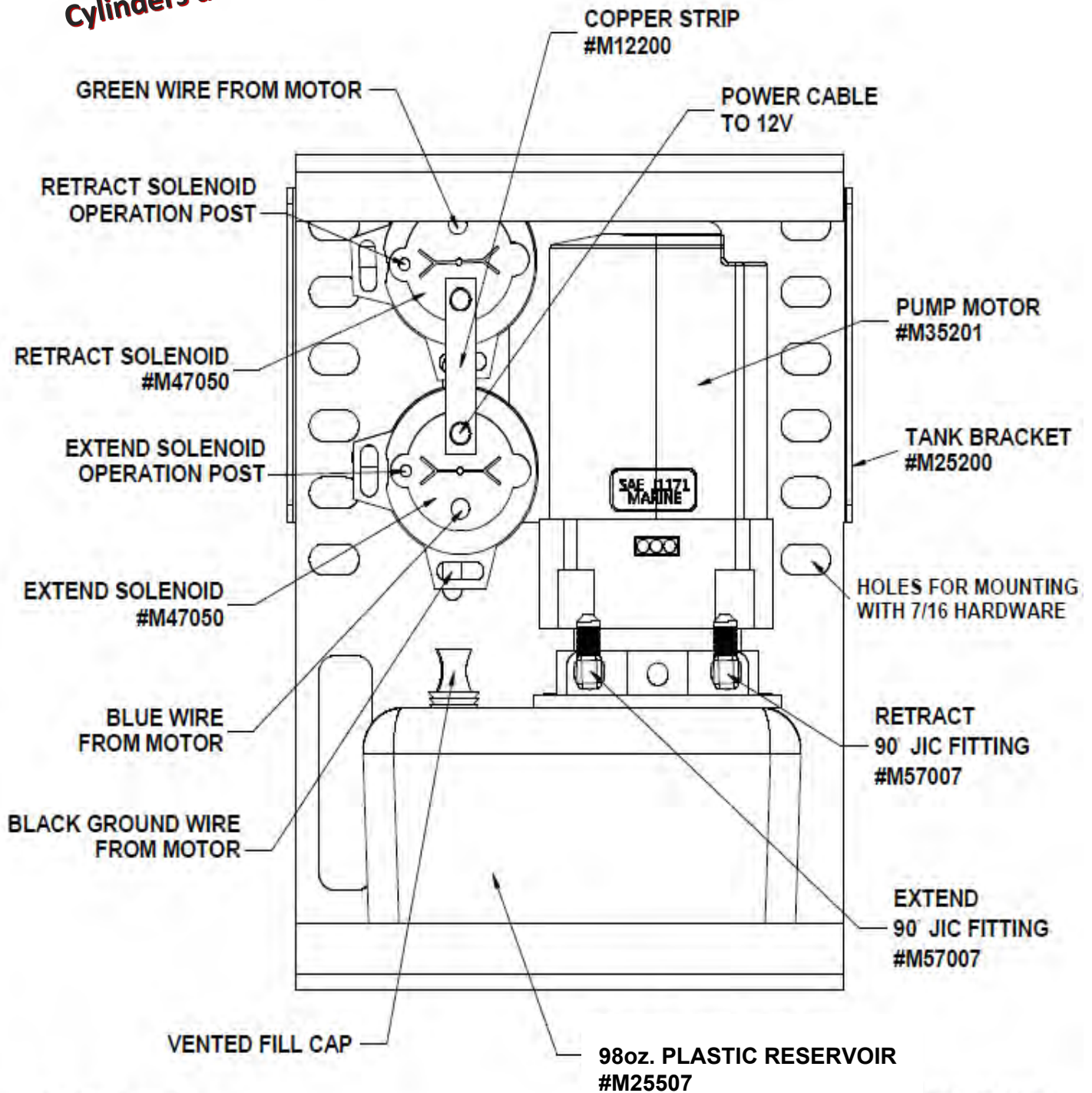
**You will need to add fluid to the reservoir,
two quarts per reservoir:
ATF Dexron III or VI**

Tank Assembly Diagram

Assembly with standard motor #M26850

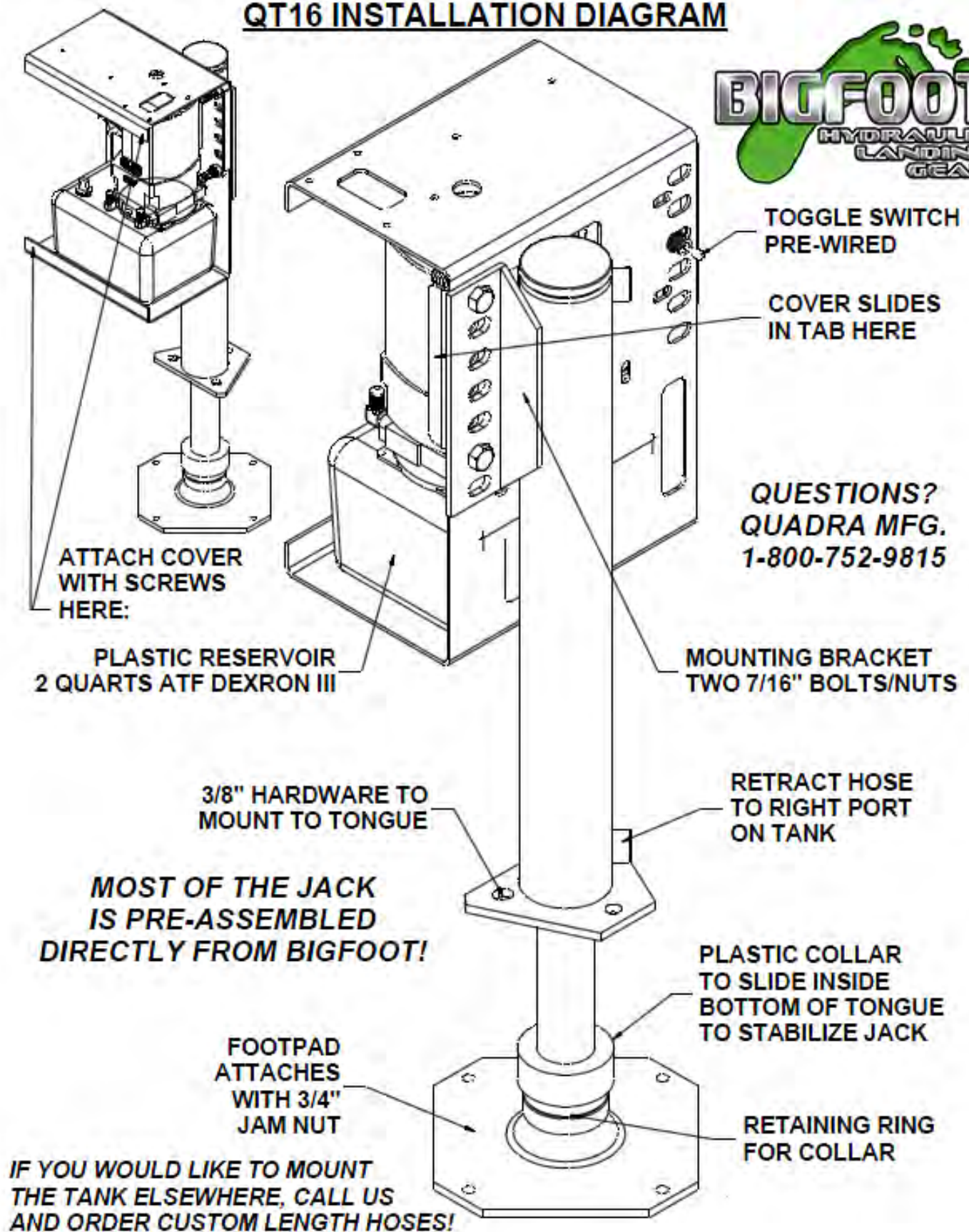
Assembly with manual override motor #M26855

Cylinders are pre-filled and tested for leaks.



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

QT16 INSTALLATION DIAGRAM



To hookup the power attach the supplied eyelet to each end of the supplied 5' battery cable. Attach one end of the cable to the positive battery terminal, place the other end to the lower solenoid post with the copper strip on the tank assembly. Auxiliary ground may be recommended, attach to a solenoid mounting stud on each solenoid and route 10 ga. cable to frame or negative terminal of battery.

Wireless Control Instructions



1pt & Slave Systems



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

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

Sync Transmitter:

This is usually done by the original installer, but if you have an issue or have a new transmitter follow these simple steps...

Make sure the receiver and the transmitter are off. Enter the "learn mode" by pressing & holding the on/off button on the receiver until the LED light starts to **flash quickly** on the receiver then release.

Now press & hold the on/off button on the transmitter until the LED on the receiver becomes **constant**, then release. Transmitter now "learned".

Re-Program Receiver:

If you are having issues with your controller at all try this before calling for service...

With the transmitter and the receiver off, press & hold the on/off button on the receiver, the LED light will start to flash quickly on the receiver but continue to hold until the light starts to **flash slower**, then release. The receiver module is now cleared of all codes.

Now press & hold the on/off button on the transmitter until the LED on the receiver becomes **constant**, then release. Transmitter now again "learned".

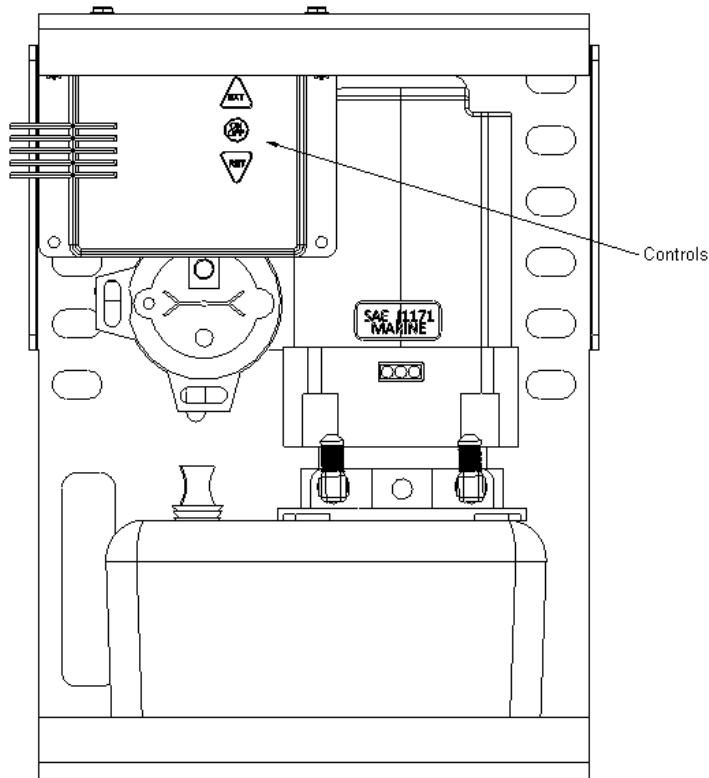
To exit this mode press and release the on/off button on the receiver, the light will become constant. Your controller is now re-programmed and cleared of all error codes.

Wiring Wireless Control to Tank Assembly...

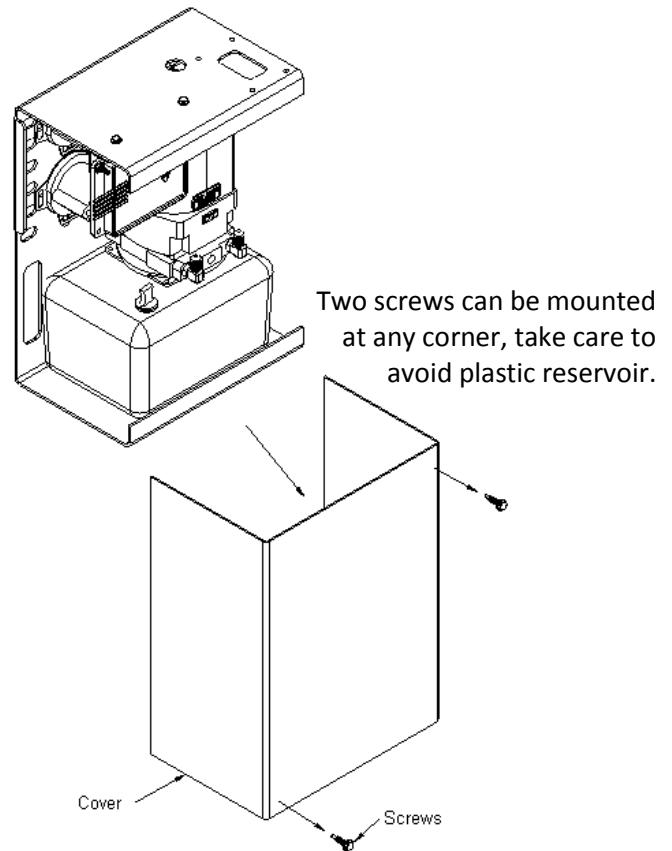
Grey: Retract Solenoid Operation Post, Blue: Extend Solenoid Operation Post, Orange: Cap off (not used), Red: Solenoid Power Stud w/ Copper Strip, Black: Ground (to solenoid mounting stud to tank body).

Operating your Jack with the Emergency Controls:

- 1.) Remove cover screws (two)
- 2.) Remove the cover
- 3.) Press ON/OFF switch
- 4.) Press EXTEND or RETRACT



Primary Control for the Jack is your Key Fob, but if that is misplaced, there is still a way out!



Plumbing of Hydraulic Lines...

- ▶ **1pt or Drive Leg:** If the tank hoses are not already connected to the leg, the left fitting on the tank assembly goes to the bottom fitting on the Bigfoot Jack, (the longest hose.)
- ▶ **2pt 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.

Hydraulic Line Bleeding Process...

Prior to hooking up both slave leg hydraulic lines; **install the retract line only, leave the extend line unattached 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!

1pt Weatherproof Box

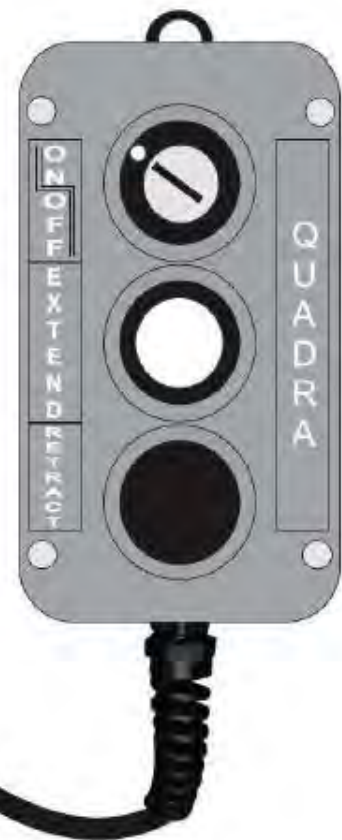
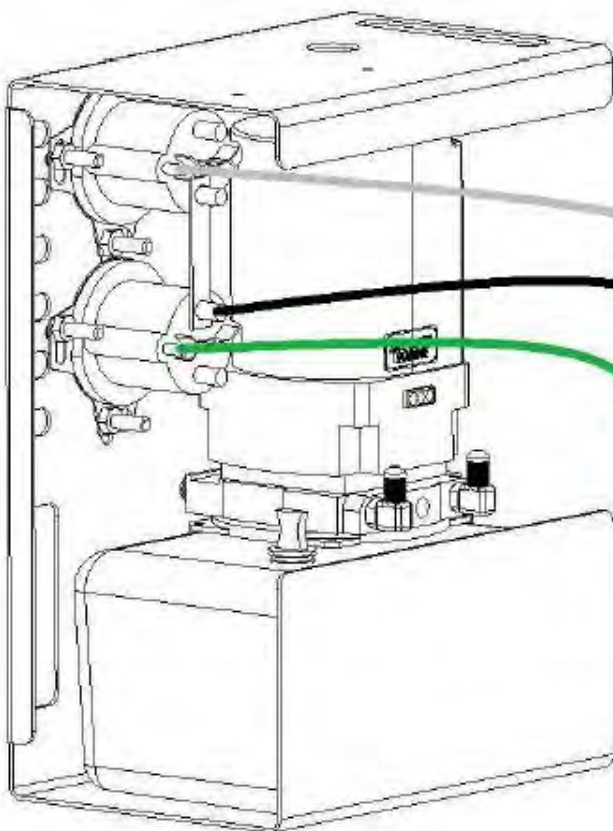


Wiring Diagram

Generation 2 Control Box:
Weatherproof Construction
Momentary Switches
Safety Lock-Out Option
Magnetized Box

COLOR: BLACK
LOCATION: POWER STUD SOLENOID
CONNECTOR: 5/16" EYELET

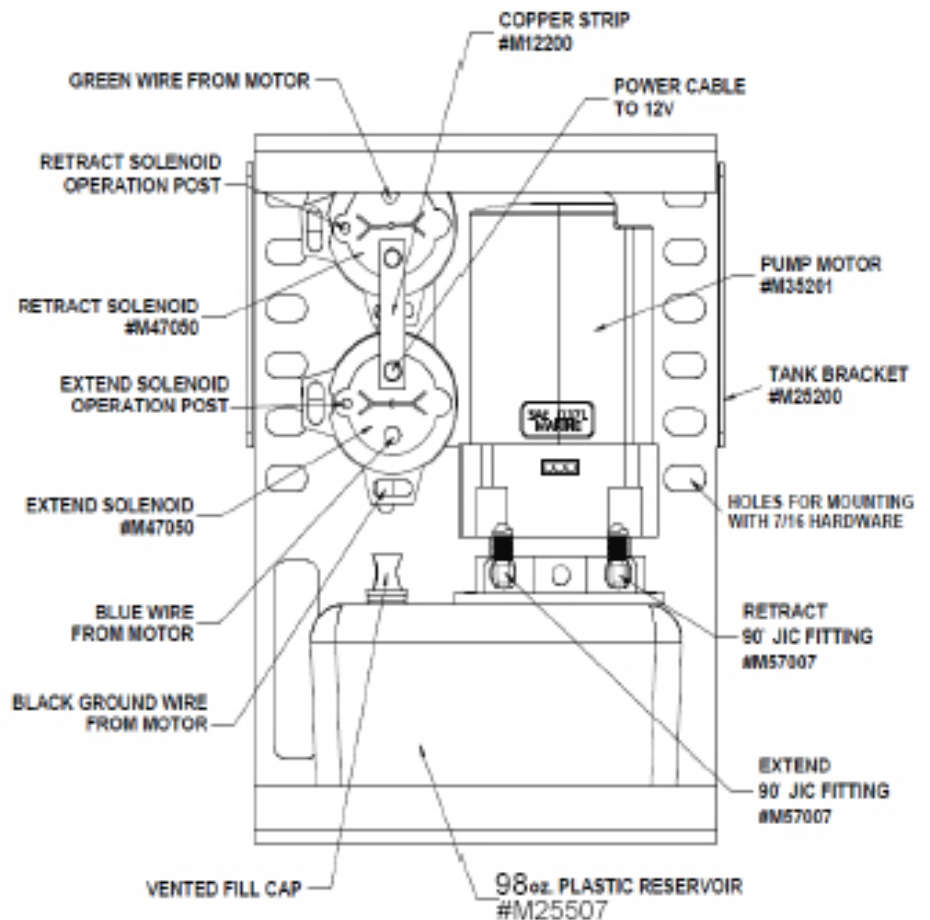
COLOR: GREY
LOCATION: RETRACT SOLENOID
CONNECTOR: 3/16" FEMALE PUSH-ON



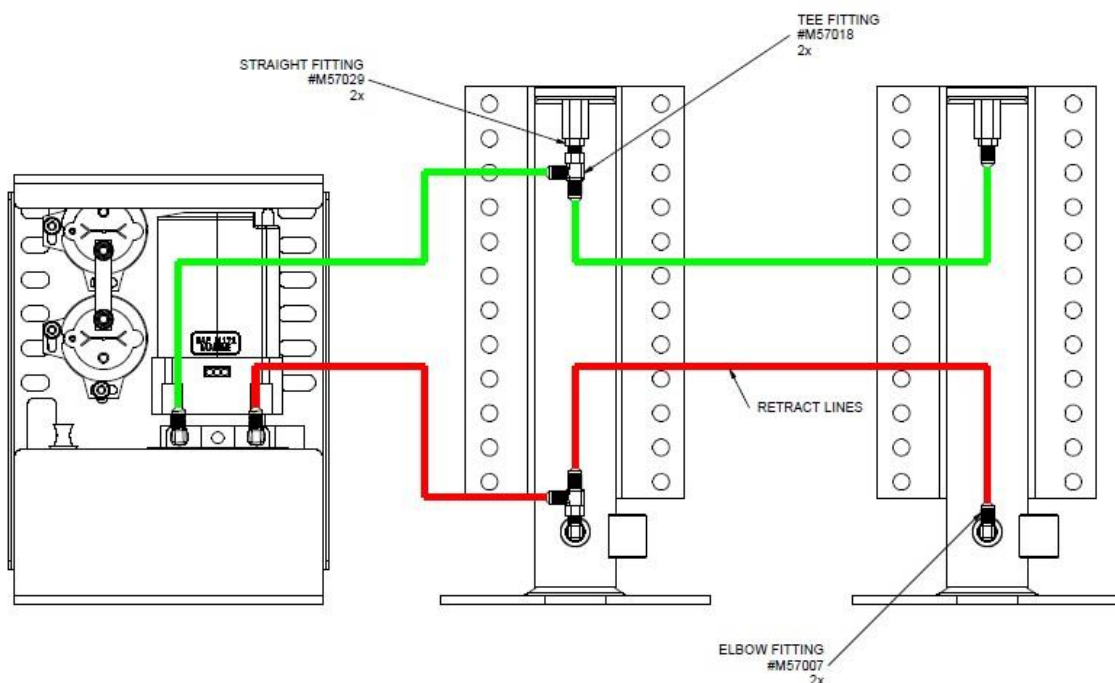
COLOR: GREEN
LOCATION: EXTEND SOLENOID
CONNECTOR: 3/16" FEMALE PUSH-ON

ROCKER SWITCH CONTROLS

Included is a harness (#M43800) that routes from the tank assembly to the rocker control switch. The red wire is the 12V power, this goes from the power stud on the tank assembly (on copper strip with 5/16" studs from solenoids) to the center post on the switch. The black wire is ground & is not needed for this switch. The grey wire goes from the retract operation post on the retract solenoid to the post labeled "1" on the switch. The blue wire goes from the extend post on the extend solenoid to the post labeled "3" on the switch. The switch is not waterproof & must be installed inside the coach.



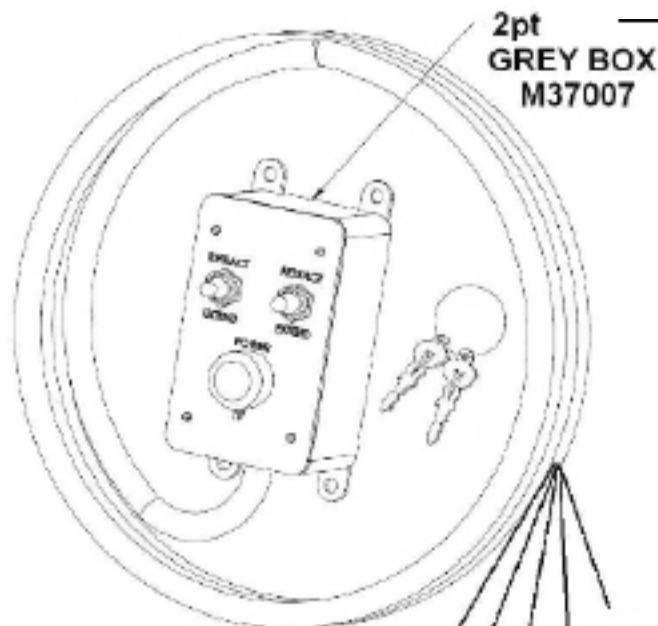
Typical Plumbing For 2 Point "Slave" Systems (one pump, two jacks)



VERSION #1: (SHOWN) THE "TEE" FITTINGS MOUNTED TO THE DRIVE JACK.

VERSION #2: INCLUDES MOUNTING THE "TEE" FITTINGS TO THE PUMP FITTINGS.

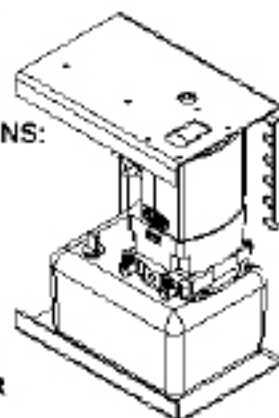
VERSION #3: RUNNING TWO LINES FROM THE PUMP AND PLACING THE "TEE" FITTINGS IN-LINE, THEN RUNNING INDIVIDUAL LINES TO EACH JACK FROM THE "TEE" FITTINGS.



#M26850

OVERALL DIMENSIONS:

9" WIDE
12.5" TALL
5.75" DEEP



GREEN WIRE
FROM MOTOR

COPPER STRIP
#M12200

PUMP MOTOR
#M35201

**GREEN w/ WHITE
OR BLUE w/ WHITE
WIRE FROM BOX**
RETRACT SOLENOID
OPERATION POST

**RED WIRE
FROM BOX**

4 GA. BATTERY CABLE
ONE END HERE THEN
TO BREAKER MARKED 'AUX'
THEN FROM POST MARKED 'BAT'
TO POSITIVE TERMINAL
ON BATTERY

**GREEN WIRE
OR BLUE WIRE
FROM BOX**
EXTEND SOLENOID
OPERATION POST

BLUE WIRE
FROM MOTOR

BLACK GROUND WIRE
FROM MOTOR

VENTED FILL CAP

1pt GREY BOX (#M37022)
WIRES UP THE SAME WAY
(ONLY ONE SWITCH & ONE SET OF WIRES)

98oz. PLASTIC
RESERVOIR
#M25507

EXTEND
90° JIC FITTING
#M57007

RETRACT
90° JIC FITTING
#M57007

NOT PICTURED:

TANK COVER (BLACK TEXTURED PLASTIC) #M12002

Three Sided Tank Cover

(Fastens with 2x #10 self-tapping screws, take care not to hit reservoir)

Steel #M12013, Black ABS #M12002

6/8/11

QUADRA
MANUFACTURING

Component & Electrical Final Preparations...

- Hydraulic jack requires 12 volt battery; make sure you use at least a 4 gauge battery cable for the power to the jack.
- Remove three sided cover from tank assembly (if installed).
- Install hydraulic lines 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 ¼" hose with #4 JIC Female fittings, hose rated for 2,700 psi.
- (Standard kits) Mount weather proof control box assembly in a convenient location making sure to allow enough wire harness to reach the tank 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(s) and the battery. If your jack kit did not come with a breaker, it probably does not require one.
- Hooking up the breaker: Using a 4 gauge battery cable (if equipped); attach one end of the cable to the bottom solenoid on the lug with the copper strip. Route the cable to the breaker at the post marked AUX. Then attach the other cable (if equipped) from the breaker post marked BAT and route the cable to the battery positive (DO NOT CONNECT UNTIL THE REST OF THE TANK WIRING IS COMPLETE).
- (Standard kits) Route the harness from the switch box through the grommet on the back of the pump. 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). Next, connect the solid green (or blue) 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 Auxiliary Ground cable from tank assembly to the 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 DexIII) to the pump (green fill tapered plug) make sure you fill the tank so that the fluid is 1"-1 ½" below the top (two quarts per pump).
- Check all hardware and fittings to make sure they are tight.
- Then you must press the extend button and fully extend the jack(s) until it reaches full extension. Let it set this way for 30 minutes, this bleeds the air from the lines.

Troubleshooting Guideline

#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 3/4” below top of reservoir)
- Incorrect hose installation.
- To purge system, add necessary fluid and extend leg completely and leave for 30 mins.

What Hydraulic Fluid do I use?

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

Medium Tank Assembly (Plastic Reservoir)

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

- Check fluid level of reservoir with legs retracted (should be ¾”-1” below top).
-

Cylinders *(Prior to 2008, cylinders only have 5 year warranty)*

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...

- Check fluid level
- Check for leaks in hydraulic lines/fittings... if lines damaged, have them measure and order replacements from Quadra
- Possibly plumbed backwards... (Bottom port on jack should connect to left port on pump)
- Relief Valves have failed on pump motor... replace motor/tank assembly
- Hydraulic seal failure, check for oil around bottom of cylinder... replace/return cylinder OR seal kit

WARRANTY GUIDE

Effective Date: 1/1/2022

(This warranty voids all previous versions.)

1 Point & 2 Point Systems: Limited 1 year on parts and labor.

- Should the product be defective due to workmanship and/or material flaw, we will repair or replace the defective material.
- Core charges may be applied / refunded.

Quadra is NOT responsible for:

- **Freight on warranty parts.**
- **Replacing footpads, bolts, or fluids lost as a result of failure to maintain the system (Loose footpads should be tightened at owner's expense).**
- **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.**
- **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.**

<p>OWNERSHIP MUST BE REGISTERED WITHIN 30 DAYS FROM THE DATE OF PURCHASE TO ACTIVATE WARRANTY.</p>

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.

Credit card payment arrangements at time of order will be nullified upon our receipt of your defective parts.

All returned parts need to have the repair authorization number and be received within 30 days of original order to avoid charges.

Provide the system serial number here: _____