



# 1pt & 2pt

# STABILIZING SYSTEMS

## INSTALLATION & OWNER'S MANUAL



VISIT OUR WEBSITE @  
[WWW.BIGFOOTLEVELER.COM](http://WWW.BIGFOOTLEVELER.COM)

***Quadra*** Mfg. Inc.

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1-800-752-9815

## *Understanding which system you have:*

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### **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.

## *Understanding your application & mounting options:*

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### **Sprinter chassis mounting brackets:**

Sprinter chassis vehicles have a lighter, “clamshell” designed frame structure so we make special brackets to support the frame for this particular application. This requires drilling.

### **Sprinter chassis bolt-on application:**

Some Sprinter chassis vehicles have RV factory frame extensions or “add-ons”. This allows for the cylinders to be bolted directly to steel frame. One example is the Forest River Solera motor home.

### **Universal weld-on applications:**

This application is for everything else, this requires the supplied brackets to weld to the vehicle frame & then bolt the cylinder on separately.

## *Location of your tank assembly:*

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### **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:**

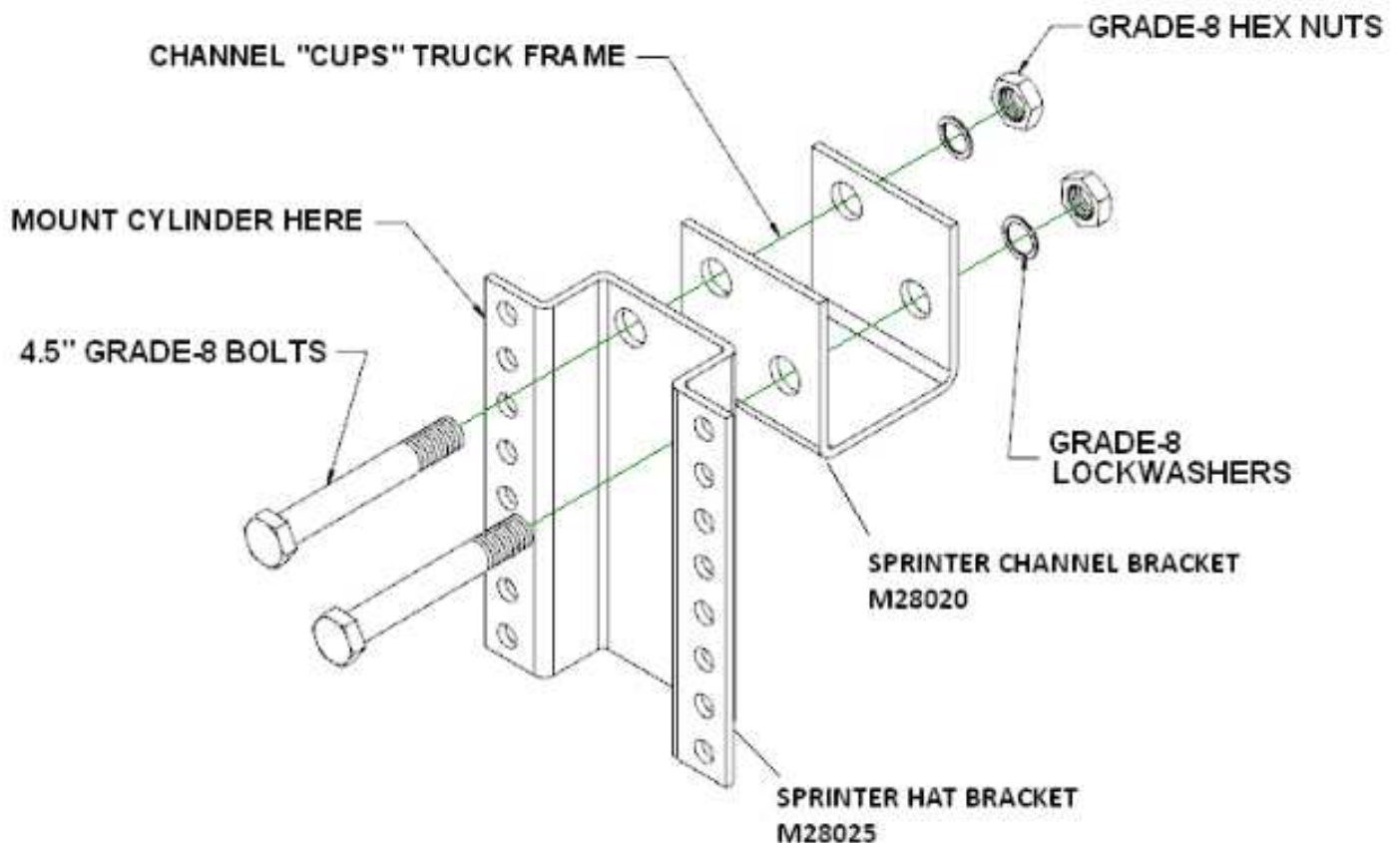
If the tank cannot be mounted to one of the cylinders then a remote mount is required. You can choose to directly bolt your tank to the vehicle frame or cross-member, some securely fasten the tank inside a storage box. Or you can choose to order another bracket that can be welded or bolted to the vehicle.



# Sprinter Chassis Applications

## UTILIZING UNIVERSAL SPRINTER BRACKETS:

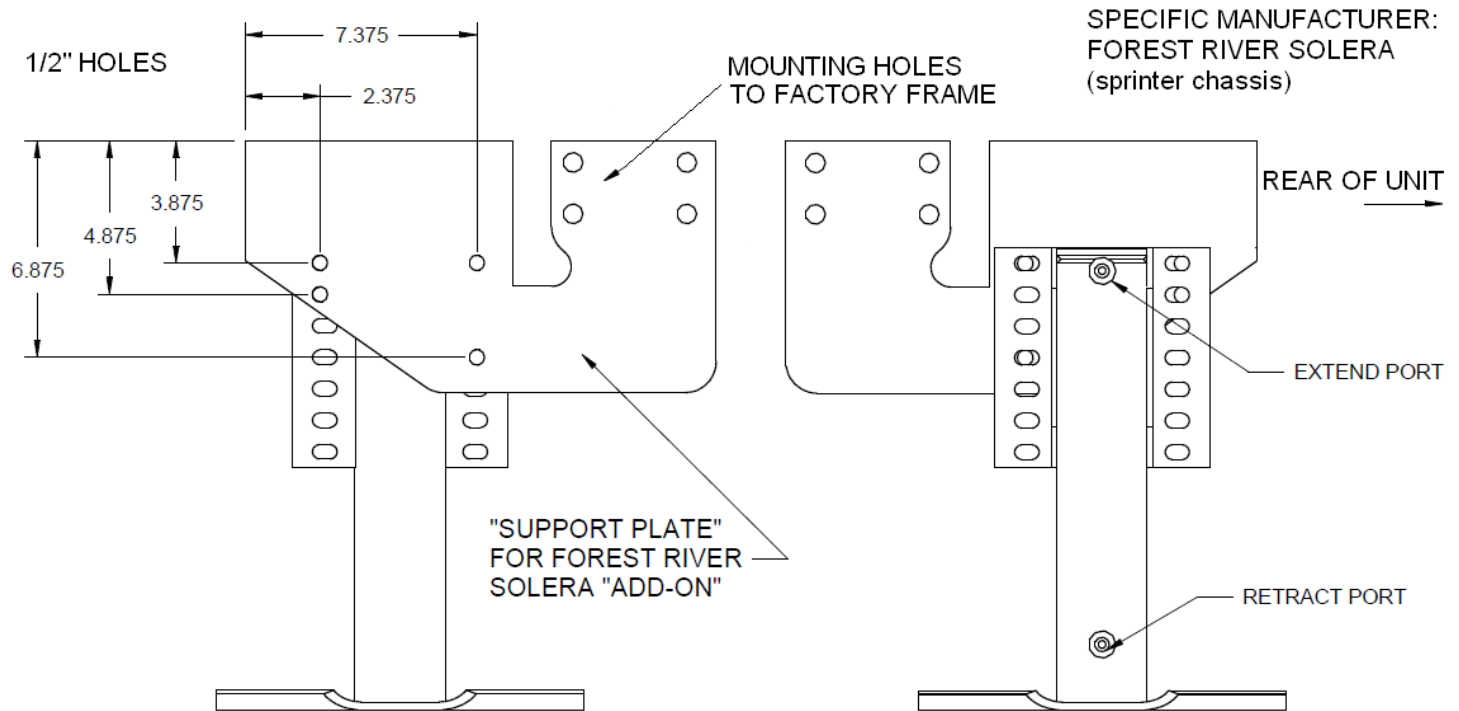
These brackets are designed for use with the factory sprinter truck frame, which requires drilling into the truck frame (lower portion) with the pattern of the “channel bracket” shown below. When marking the holes for drilling, slide the channel bracket over the underside of the frame so the bottom of the bracket supports or cups the truck frame (you may have to grind or sand off the factory compound buildup to do this). Then mark each hole, and drill through both sides with a 5/8” to 3/4” drill bit. Place the brackets in place and fasten with the supplied 5/8” grade 8 bolts. After completing what is shown, use the 7/16 hardware to mount the cylinder to the “hat bracket” use at least 4 bolts per cylinder and make sure the cylinder has at minimum 7” of ground clearance and is level prior to final tightening. Cylinders should be no more than 5 ft behind rear axle. The tank assembly can be mounted to a cylinder, a mounting bracket, to the frame or cross-member, or fastened securely in a storage compartment.





# Sprinter Bolt-On Application: Forest River Solera

The cylinders are to be attached to the vehicle's RV Manufacturer's frame addition or add-on. There should be a plate that allows room for the cylinder to mount with at minimum 4 bolts and one vertical bolt spread of 3". Below is a model of how a Forest River Solera application is done.



The battery cable needs to run from the positive battery post to the 80 amp breaker post marked BAT the from the AUX post on the breaker to the "bottom solenoid post top stud".

The tank assembly can be mounted directly to the cylinder utilizing the same hardware & bracket, or it can be mounted directly to the vehicle frame or cross-member. It may also be mounted securely inside a storage compartment.

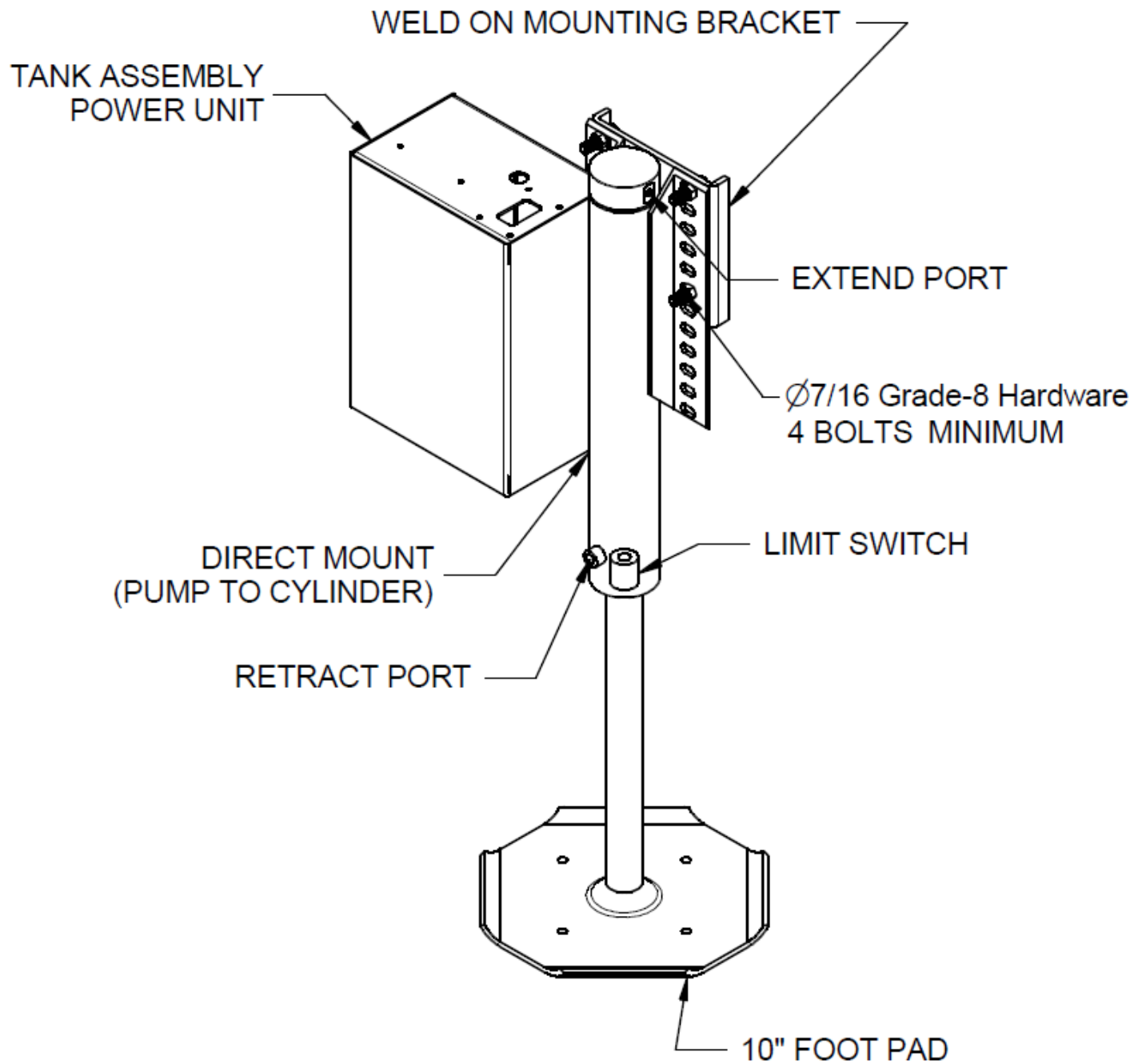
Plumbing: (this is a slave system which means one pump runs two cylinders)

You have two options:

Run the pair of hoses to the closest leg, attach the "tee" fittings to that leg so that it will allow two hoses from the tank and two hoses to go to the other cylinder. You are supplied Two 90 degree fittings & Two straight fittings to do this.

The other option you have is to place the "tee" fittings right on the ports from the tank and route one extend & one retract hose to each cylinder.

**Cross-member is necessary for this application!**  
**Call Quadra prior to installing this system.**

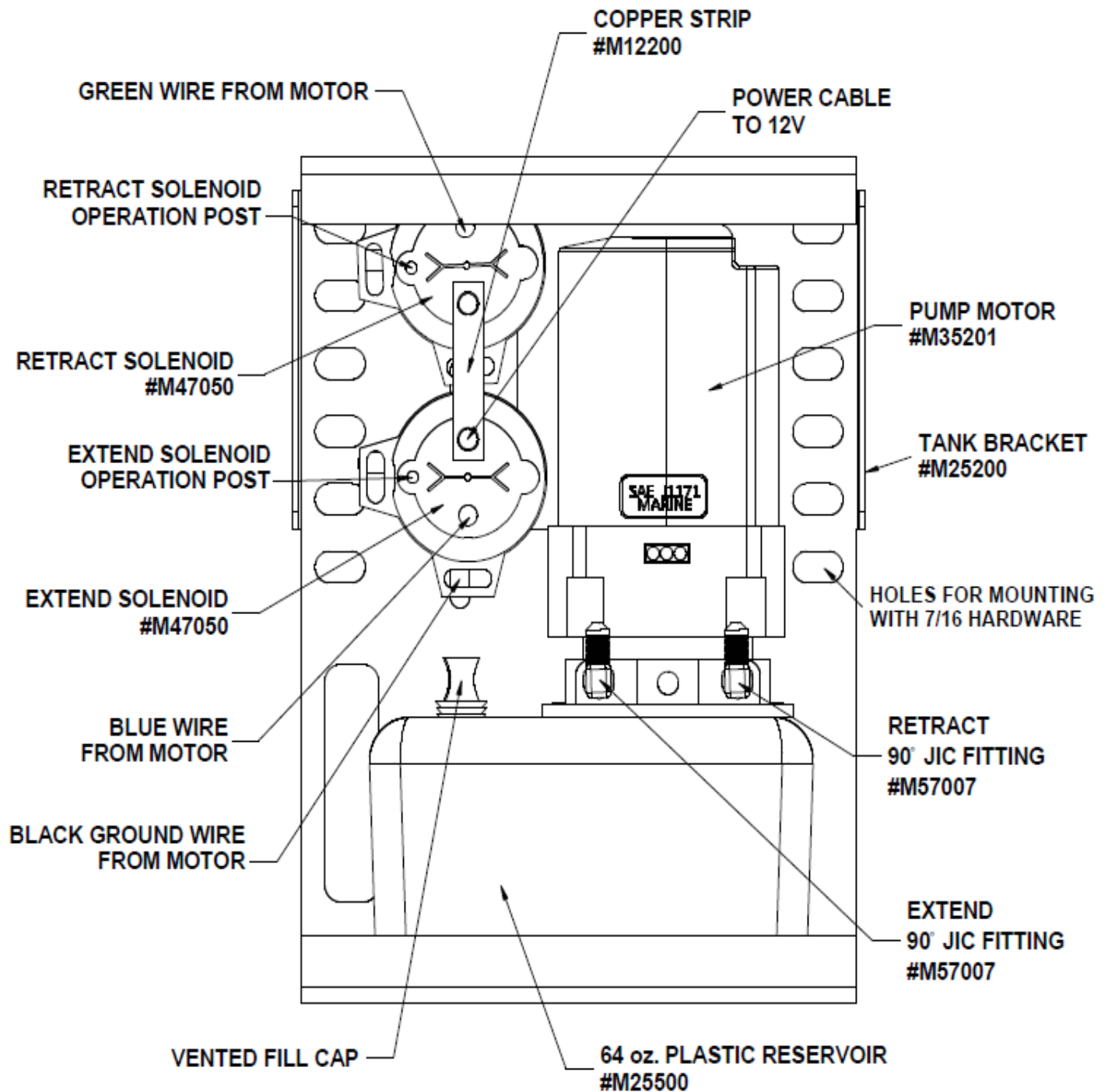


Make sure weld-on bracket is mounted vertically, it is easiest to bolt the cylinder to the bracket, then place up to the frame with a floor jack, verify that the jack is at appropriate height (7-10" off ground) and vertically level, then proceed to getting full weld from bracket to frame.

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.

Brackets and footpads may vary per customer's request, for different brackets, cylinders or footpads feel free to call!

# Tank Assembly Diagram



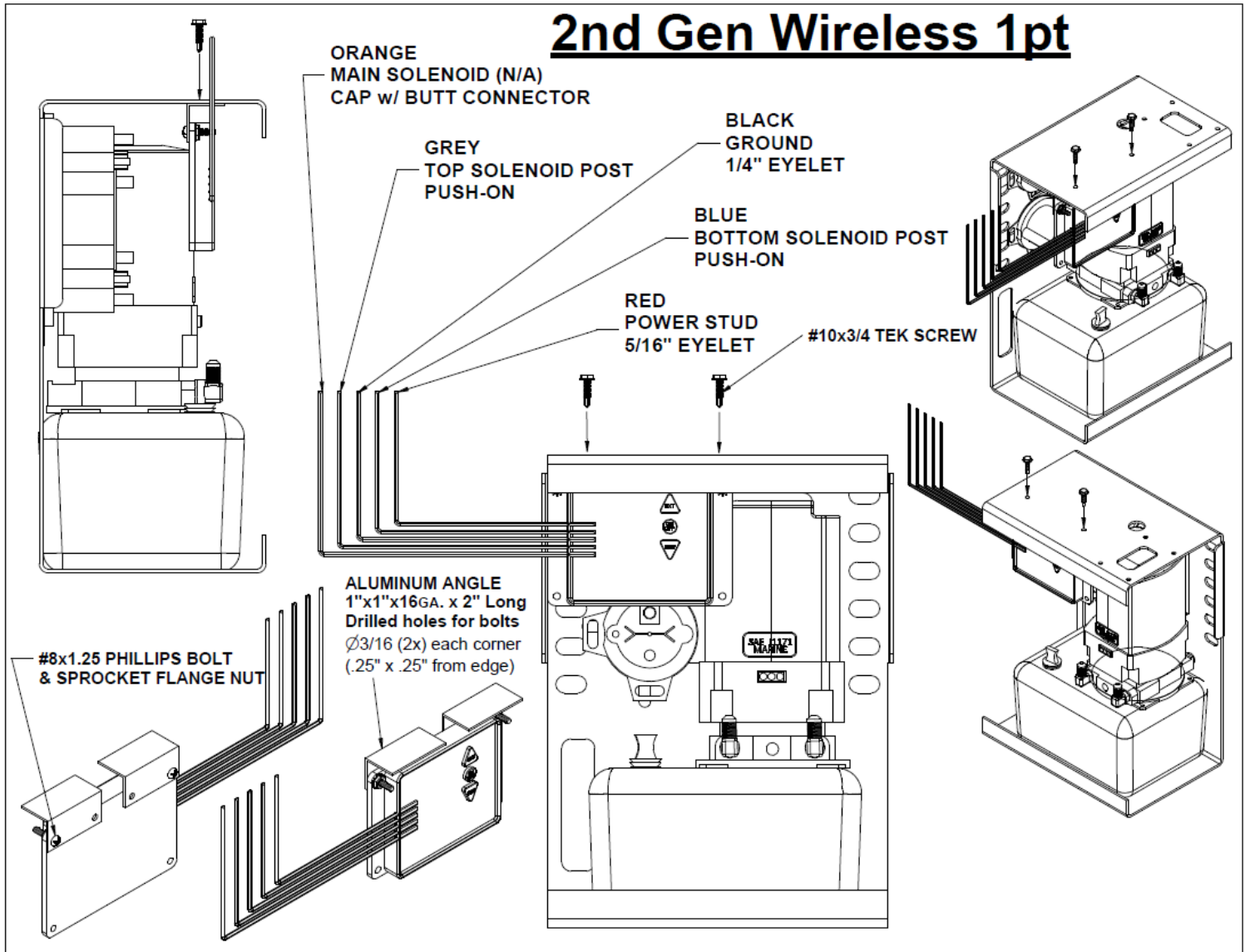
## NOT PICTURED:

TANK COVER (BLACK TEXTURED PLASTIC) #M12002

## OVERALL DIMENSIONS:

9" WIDE  
12.5" TALL  
5.75" DEEP

## 2nd Gen Wireless 1pt



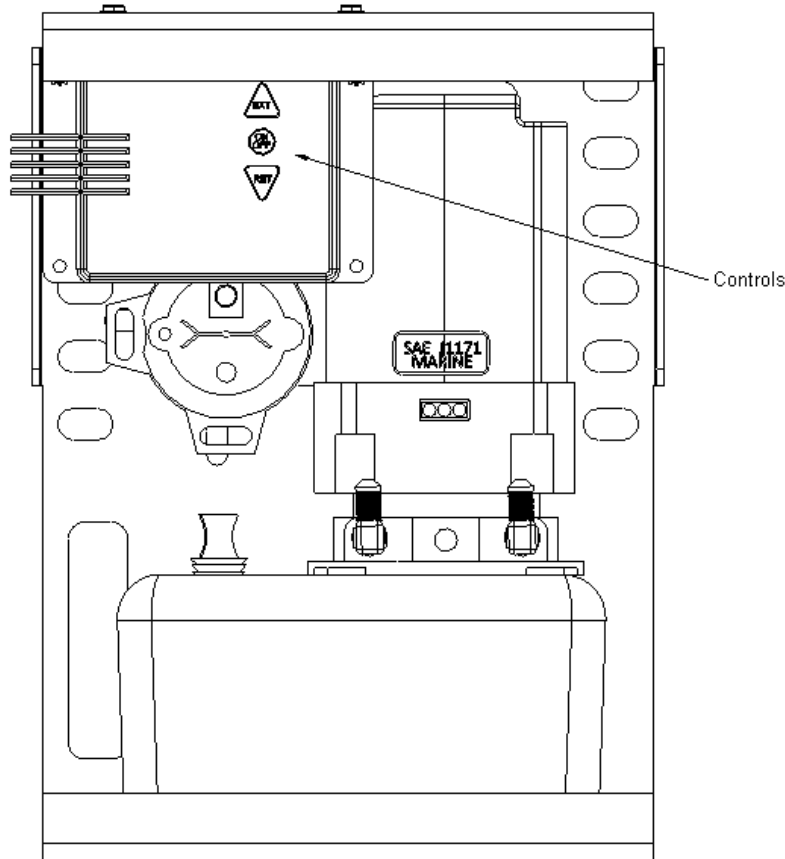
A weatherproof key fob is included in this kit as well. To sync the key fob to the receiver box, hold down the on/off button on the receiver until the light blinks, then press the on/off button on the fob. Your fob is now synced!

For operation, simply press the on/off button on the fob and then press & hold the extend button to lift the trailer and the retract button to lower the trailer. If you lose your key fob, or the fob battery runs out, follow the instructions on the next page.

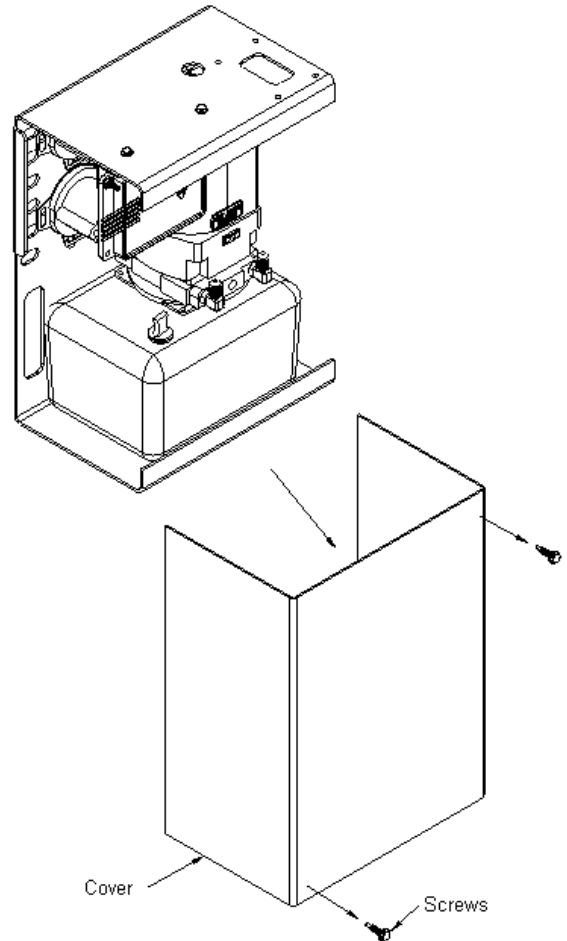
# 1pt or Slave Wireless Emergency Controls

## 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!**



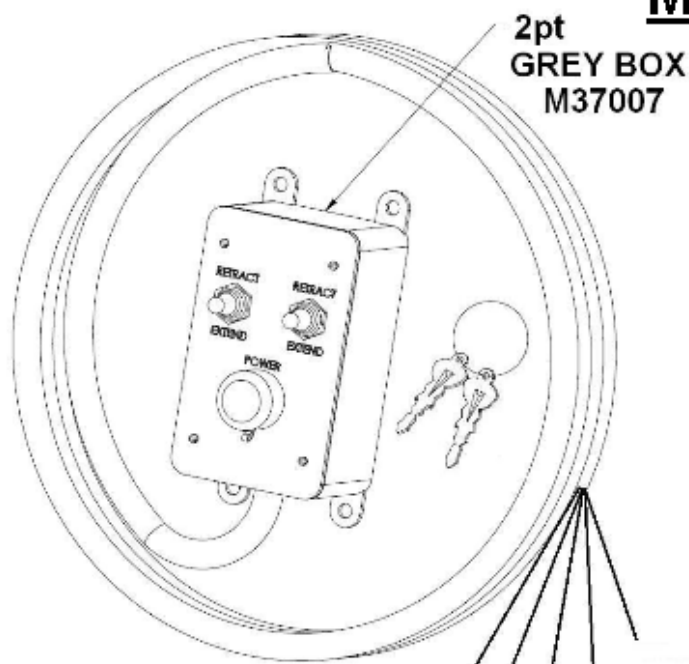
### To sync your key fob to the receiver...

1. Press & Hold the on/off button on the receiver until the light on the receiver starts to flash.
2. Press & Hold the on/off button on the key fob until the light on the receiver turns constant.
3. Now synced!



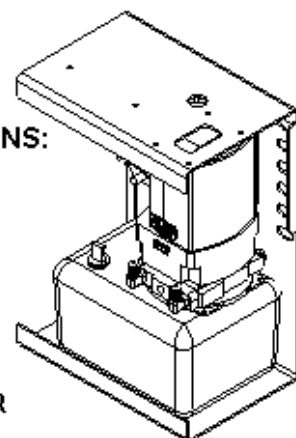
# MEDIUM TANK ASSEMBLY

#M26850



OVERALL DIMENSIONS:

9" WIDE  
12.5" TALL  
5.75" DEEP



**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)

64 oz. PLASTIC  
RESERVOIR  
#M25500

EXTEND  
90° JIC FITTING  
#M57007

RETRACT  
90° JIC FITTING  
#M57007

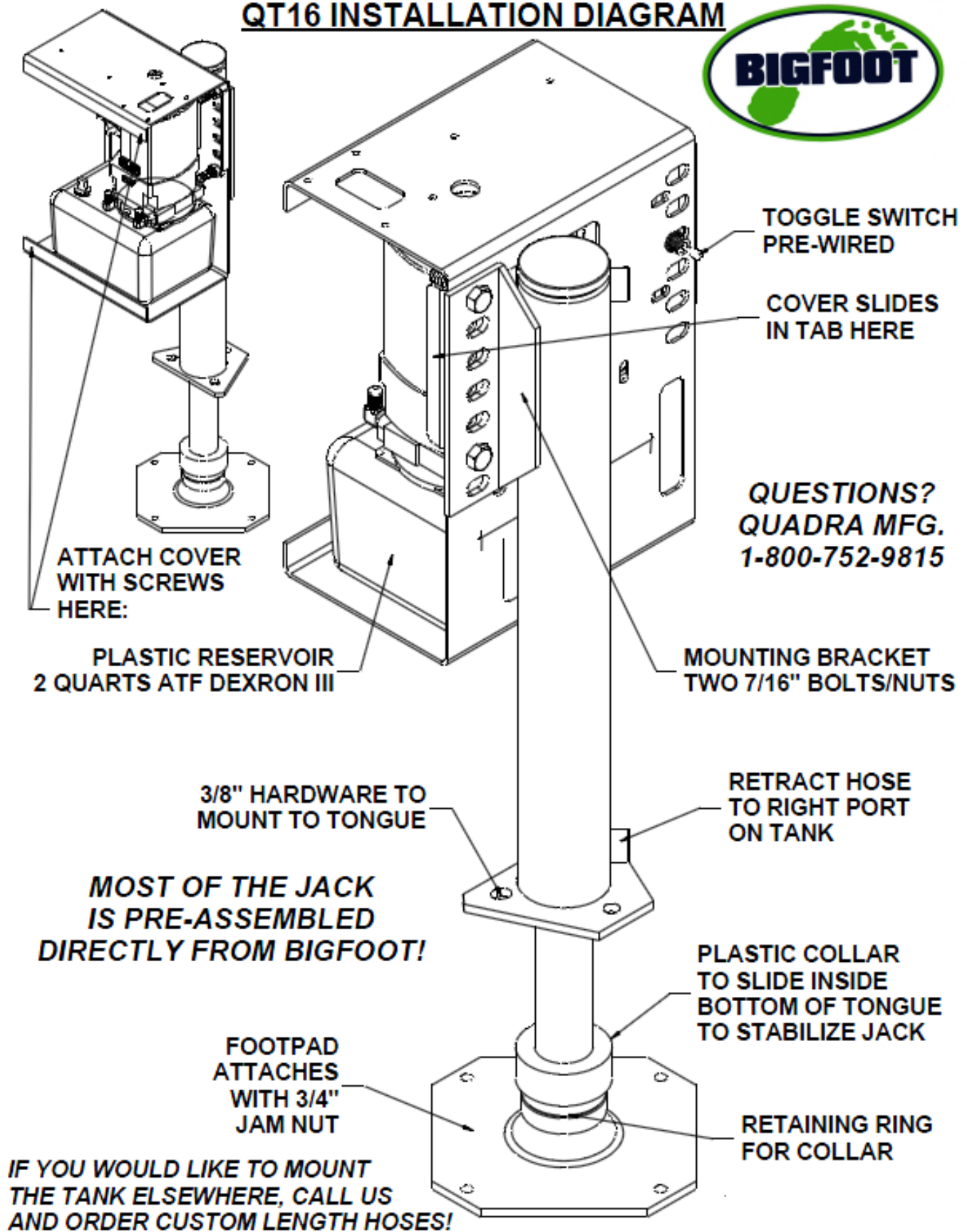
**NOT PICTURED:**

TANK COVER (BLACK TEXTURED PLASTIC) #M12002

5/9/11

**QUADRA**  
MANUFACTURING

## 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.

# 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 plastic cover from tank 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 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.
- ▶ 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 AUX Ground 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) to the pump (red fill cap) make sure you fill the tank so that the fluid is  $\frac{3}{4}$ " below the top.
- ▶ 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.
- ▶ Once this is done, lower your jacks & enjoy your new **BIGFOOT LEVELING SYSTEM!!**

# Trouble Shooting

## ***“The jack runs for a few seconds, then stops”***

- The battery is weak or the battery capacity has diminished.

## ***“The jack only runs in one direction”***

- Check battery voltage.
- Check all wire connections.
- Check plumbing.

## ***“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 diagrams.

## ***“The jack is jerky when retracting”***

- There may be air in the system... Fully extend both jacks leave for 30 minutes... Lower jacks.
- Low fluid level (Must be 3/4" below top of reservoir)
- Incorrect hose installation.
- To purge system, add necessary fluid and run up & down a few times.

**The #1 issue is poor battery connection or power...**

**So check that first!**

**Otherwise give us a call!**

**(269) 483-9634**

**[service@quadraleveler.com](mailto:service@quadraleveler.com)**

## What Hydraulic Fluid do I use?

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

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## Panel won't turn on, system won't run, clicking noise...

Battery low, panel won't turn on = coach battery, the rest of system relies on house battery. The battery needs to be 100% charged for the system to work, it doesn't make a difference if the coach is new, that doesn't mean the battery is fully charged or even good. Battery's don't charge instantaneously, so one can't just expect to hook it up to a charger and the system will work immediately, they can un-plug/re-plug their battery gauges to show the true charge.

If the battery does for sure sound good, then the unit might have a ground issue.

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## Cylinders won't retract...

Broken/crushed limit switches, bent or broken clevis pins (especially rear jacks on fifth wheel)

Limit Switch barrels mounted too low, 1" is bad, 1 1/8" is good (Manufacturing defect).

Need new Limit Switches, Clevis pins & Limit Switch Washers (one of each per cylinder).

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## Medium Tank Assembly (Plastic Reservoir)

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

- Check fluid level of reservoir with legs retracted (should be 3/4"-1" below top).
  - Rear jacks on fifth wheel?.... Does it have red caps?.... Send Blue Caps
  - The blue cap might be down too far into the hole of the reservoir... This blocks the air ventilation and causes the fluid to foam or overflow... Most of the cap should be sticking above the hole; it just needs to be "snug".
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## 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)

**Cylinders make loud "squeaking" noise while operating...** Spray rams with Teflon spray (or dry lubricant).

**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 cylinder tube should connect to right port on pump)
- Relief Valves have failed on pump motor... replace motor/return it to Quadra
- Hydraulic seal failure, check for oil around bottom of cylinder... replace/return cylinder OR seal kit

## Control Panel

**Panel won't turn on...** Coach battery is low OR Check vehicle fuse panel (check all fuses).

**No "All Up" light...** Loose footpad or Limit Switch has failed (either bad switch / broken pin / mounted too low)

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### Panel is on, but...

**Clicking sound under coach...** House battery low OR circuit breaker has tripped, Pre-2001 then there is a manual switch on the breaker to reset, After 2001 then it is automatic and just wait a moment and it will reset by itself.

**No diagnostic cycle (when lights flash clockwise around Bigfoot logo)...** If it won't work then the Ignition switch is on, if just the "All Up" light is on then it could be bad sensor.

**Front & Rear lights flashing...** House battery low (at least when system is operating), charge battery & unplug interface cable (harness from sensor to panel) at the sensor for 5 seconds, plug back in.

**Left & Right lights flashing...** Sensor timed out (make sure there is no movement while leveling) OR the cylinders have "stroked out", (front could be too high on 5<sup>th</sup> wheel) Turn system off/on. OR check fuses

**All lights are flashing...** Panel needs to be re-programmed, see manual for instructions OR sensor bracket isn't tightened down or fastened correctly, check/re-tighten.

**Won't go into Manual Mode...** Press/hold Manual button for 4 seconds, if still won't work new panel (auto/man)

**Only "Emergency Retract" light flashes...** try unplugging sensor for 30 mins, if still won't work replace panel/sensor

**Panel Buzzer sounds with engine running...** Loose footpad or Bad Limit Switch; Do a visual check to verify all levelers are all the way up before moving coach, OR unplug/re-plug 14-pin harness from sensor. "All Up" light must be on for system to work in automatic mode.

**AIR DUMP & ALL UP lights flash...** Communication error... Replace interface cable/sensor/panel.

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## Limit Switches

- Installation: Apply Dielectric Grease to the limit switch ball & surrounding area & the clevis pin itself.
- Maintenance: Spray clevis pin with Teflon Spray or apply grease again. You should **annually** detach the limit switch assembly and re-grease the ball.

## Tank Assembly

- Installation: Apply a separate ground wire directly to frame (unpainted) to get the best ground possible.
- Fluid: Check fluid levels (3/4" to 1" below top) ATF

# Warranty Guide

**1 & 2pt Systems:** Limited 2 years on parts and labor.

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

## 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 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.**

This warranty voids all previous issues. Effective date: 9/1/11

**OWNERSHIP MUST BE REGISTERED WITHIN 30 DAYS FROM THE DATE OF PURCHASE TO  
ACTIVATE WARRANTY.**

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**\_\_\_\_\_.

## **Emergency Service**

For after hours emergency service please call our normal office number  
**269-483-9633** and follow the instructions.