

Bigfoot 5th Wheel Automatic Leveling System

2nd Generation Version 2



- Auto-Reconnect Memory Feature
- Automatic & Manual Leveling Modes
- Wireless Key Fob
- Individual Pump for all Four Jacks
- Easy To Read LCD Screen
- *NEW single sensor programming for standard size 5th Wheels!*



Operation Instructions

Set-up #1: Programming Your Sensor

1. Turn panel OFF, press FRONT 10 times, then press REAR 10 times.
2. Follow the instructions on the screen for selecting ONE sensor using the arrows on the left side of the panel.
3. Place a carpenter's level on the inside of your trailer (countertop, refrigerator or floor).
4. Manually operate by pressing FRONT, RIGHT, LEFT & REAR buttons to get the trailer level from front to back and side to side.
5. Once level in both directions press ENTER. You're done.

From this point forward when you press AUTO LEVEL your trailer will return to this position.

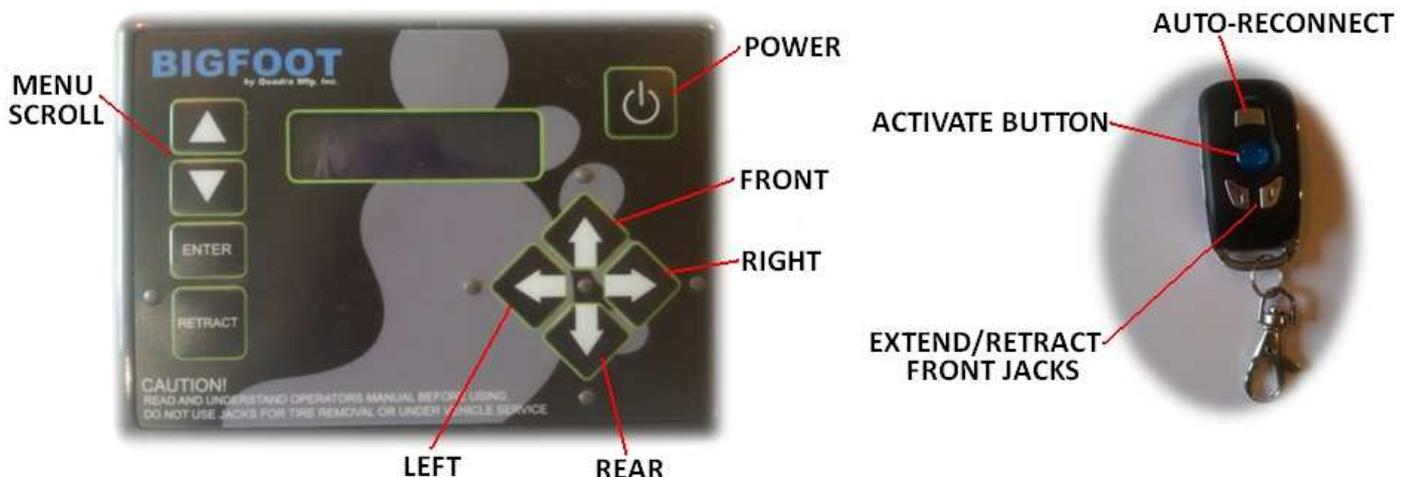
Set-up #2: Programming your key fob to your control panel

1. Turn panel off
2. Press LEFT 5 times, then RIGHT 5 times
3. Press any button on key fob, PROGRAMMED.

The key fob has an automatic shut off after 10 seconds of no use, to activate the fob simply press the BLUE button.

Getting to know your controls...

Use the arrows to scroll through the main menu for function selection.



How to “un-hook” from vehicle:

Using Control Panel:

1. With vehicle parked & hitch disconnected, press the “POWER” button to turn system on.
2. Use the FRONT button to raise the front of the trailer off the vehicle.
3. Pull the vehicle safely away from the trailer.

Using Key fob:

1. Press & hold “ACTIVATE BUTTON” for 5 seconds or until panel beeps.
2. Press the DOWN button to extend the front 2 jacks and lift the front of your trailer.
3. Key fob will shut off automatically after 10 seconds.

How to use the AUTO LEVEL feature:

1. Make sure the vehicle is safely disconnected and out of the way.
2. Scroll through the main menu to AUTO LEVEL, press ENTER.
3. Once the trailer is level, the screen will prompt SUCCESS in the window.

How to use the MANUAL LEVELING feature:

1. Scroll through the main menu to MANUAL, press ENTER.
2. Press REAR to extend the rear 2 jacks until the trailer moves (each button operates 2 jacks).
3. Raise or lower the front 2 jacks to your preference using the FRONT button.
4. To operate individual jacks... ^{EX.} Driver’s side front leg, press FRONT & LEFT at the same time.

How to “hook-up” to vehicle:

Using Control Panel:

1. Scroll to the AUTO RECONNECT feature on the menu, press ENTER. This will retract the rear jacks and extend the front jacks, lifting your trailer to the same height at which you previously disconnected from (within about 1”).
2. Once this mode is complete, back vehicle into loading position.
3. Press RETRACT, then FRONT until the trailer is placed onto vehicle.

Using Key fob:

1. Press & hold “ACTIVATE BUTTON” for 5 seconds or until panel beeps.
2. Simply press the “AUTO RECONNECT BUTTON” to activate the AUTO RECONNECT feature described above.

Understanding “Lift to Connect” or “Auto Reconnect” mode:

This will retract the rear jacks and extend the front jacks, lifting the trailer to the previous unloading/disconnect position within an inch. This mode can be done by the Panel (Lift to Connect) or by the single grey button above the blue button on the key fob. **This mode will not work if you have not successfully completed the Auto Level Process.** Once this mode is complete, you may back your truck under the unit and lower your front jacks:

1. On your panel, press RETRACT then FRONT until the trailer is lowered on the vehicle safely, then until the jacks are fully retracted.
2. On the key fob, press the “UP” arrow until the trailer is lowered on the vehicle safely, then until the jacks are fully retracted.

Things to remember:

- In Manual mode, if the RETRACT light is “ON” the retract mode is active, so when you call on a pair of cylinders (Front/Right/Left/Rear) they will retract, if the RETRACT light is off, the jacks will extend.
- If you receive an Error mode, a prompt will come up on the screen with instructions or press ENTER to return to normal operation.
- READY – ready to select a feature mode
- LEVEL – auto level completed,
- NOT LEVEL – auto level completed, but unit has been moved from original level position.
- IDLE MODE - feature panel defaults to when not in use but still on; the front jacks can be extended or retracted but the rear jacks can be retracted only. Power off to restart.
- OUT OF TOLERANCE - the trailer is on an area that is to “un-level” and the system cannot compensate for the ground variance, try moving to a more level location for the system to work properly.

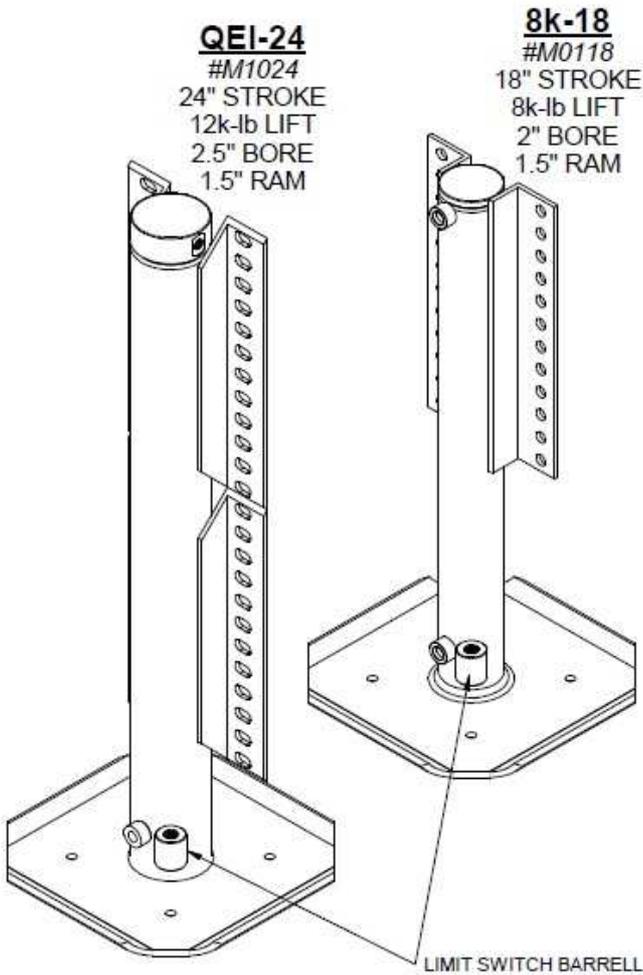
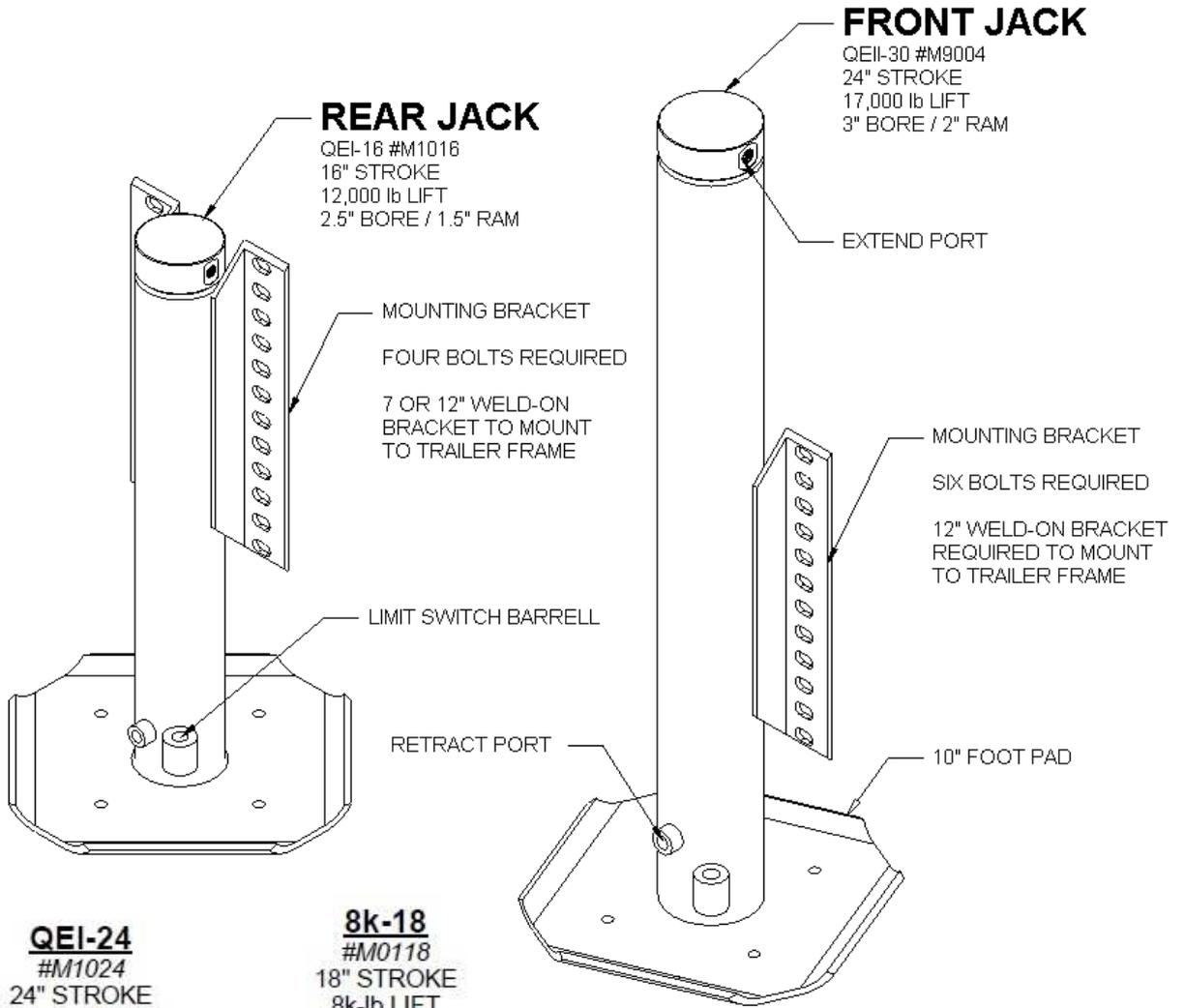
Basic Installation Instructions

Rear jack assembly: bracket may vary depending on application. Rear jack location should be within 5 ft behind the rear axle on the outside of the frame. If it is a six point the “center” row of jacks should be in front of the rear axle. Typical installation includes mounting the jacks to the weld-on bracket then welding the assembly to the frame. Attach the jack with a minimum of four 7/16” x 1.75” bolts, nuts & lock washers per jack, tighten to 70 ft/lbs. Prior to welding the assembly to the desired location, make sure the jack is straight and level and also between 8” and 11” of ground clearance from the bottom of the jack to the ground. Make sure there is a minimum of 4” of good weld per side of each bracket.

After welding, place the ¼” pin into the limit switch barrel and install the limit switch with a 7/8” wrench. Attach the elbow fittings to the top and bottom ports (top port is extend) with a 9/16” wrench (make sure to not over-tighten). Mount the tank assembly to the rear jacks utilizing the same mounting bolts you used to fasten the jacks down or use the 7/16” x 1.5” full threaded bolts on the jack bracket to mount the pump.

Time for plumbing, on four point systems simply install the corresponding length hose from the bottom port on the jack to the right port on the pump and the top extend port on the jack to the left port on the pump. If installing a six point, the two rear jacks will be “slaved” together. This means install the “tee” fittings to the rear jack with the pump attached. Then install the short hoses from the “tee” fittings to the corresponding ports on the pump. The other lines will go from the “tee” fittings to the center row jacks, bottom port to bottom port. The jacks are now slaved. The pump assembly may mount directly to the jack bracket or bolt to the frame. The wires on the limit switch will go to the matching spade connector from the main wire harness and the eyelet will go to a ground on the frame or to a stud on the tank assembly. Diagram for tank wiring on the next page.

Front Jacks will be located at the front of the trailer, usually inside the front storage compartment. You will usually have to remove the existing jacks and their brackets to make room for your Bigfoot jacks. Front installations can be tricky on 5th wheels due to lack of space in those compartments and finding frame to weld too. Make sure you use the QEII-30 or QEI-24 jacks and the 12” long brackets. Get the most weld you can on the front brackets to the frame. Prior to all welding verify jacks are straight and level. Install limit switch, tanks and plumbing as you did for the rear jacks (front jacks are never slaved together). Front jacks need at minimum six 7/16” x 1.75” bolts per jack.



THERE ARE TWO VERSIONS
 OF 5TH WHEEL JACKS...

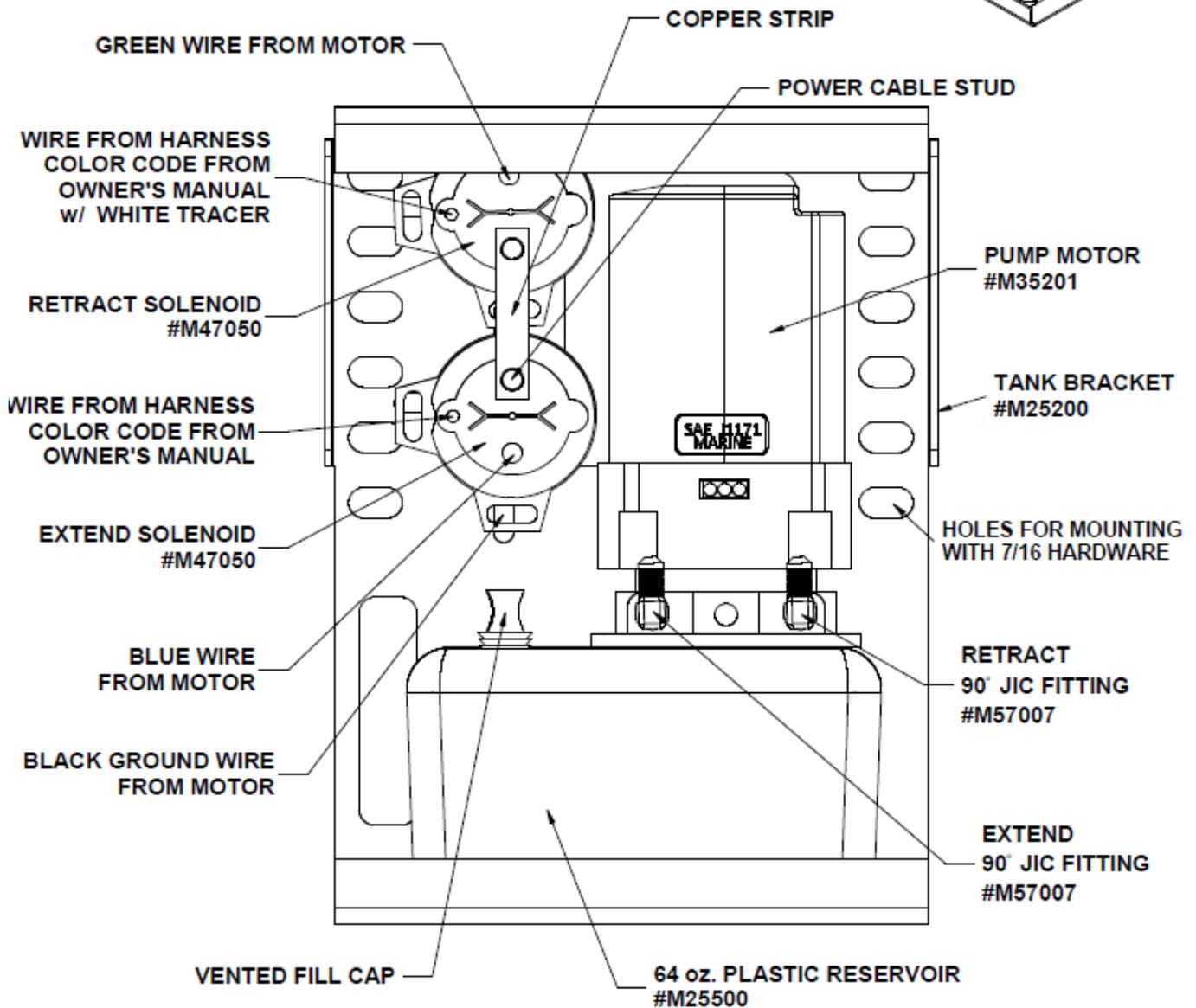
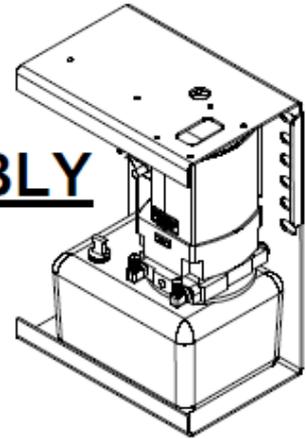
QEII-30 & QEI-16
 OR
 QEI-24 & 8k-18

MEDIUM TANK ASSEMBLY

#M26850

OVERALL DIMENSIONS:

9" WIDE
12.5" TALL
5.75" DEEP



4 PT WIRING HARNESS COLOR CODE DIAGRAM:
LEFT FRONT: GREEN/WHITE & GREEN
RIGHT FRONT: BLUE/WHITE & BLUE
LEFT REAR: GREY/WHITE & GREY
RIGHT REAR: BROWN/WHITE & BROWN

NOT PICTURED:
TANK COVER
(BLACK TEXTURED PLASTIC)
#M12002

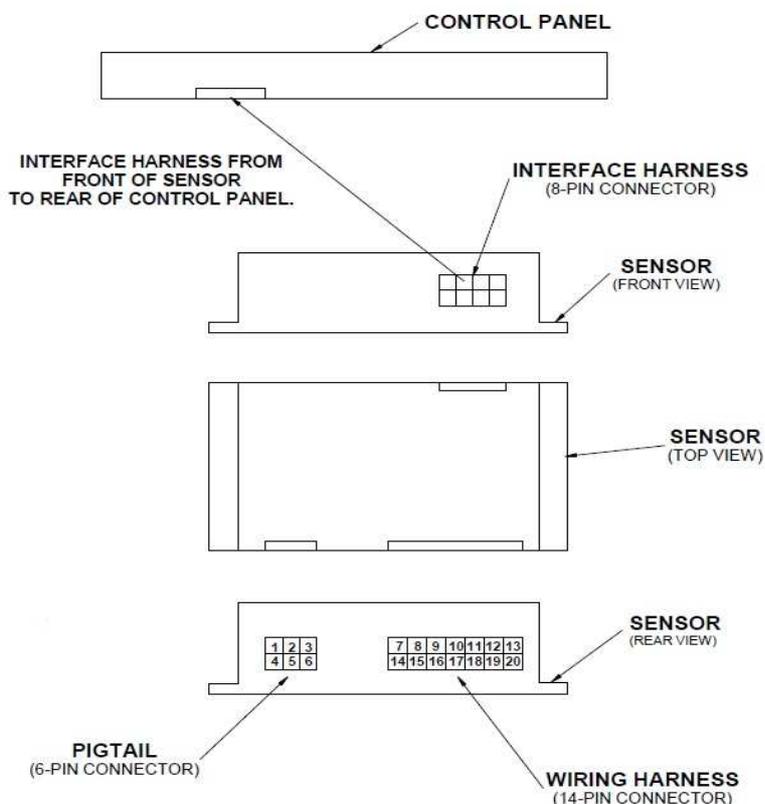
Wiring Instructions

Installing the breaker: The system will utilize the trailer's house batteries not the vehicle battery. Install the 120 amp breaker in-line somewhere between the jack and the battery, usually in battery box.

Hooking up the breaker: Attach the corners of the supplied battery cable harness to each tank assembly's lower solenoid post (with the copper strip) and route to the lead of the harness to the house batteries. Cut the cable at chosen breaker location to insert the in-line breaker (additional battery lugs are supplied). Attach the one end of the cut cable to the AUX stud on the breaker, attach the other end of the cut cable to the BAT stud on the breaker. The final end attaches to the POSITIVE terminal on the house battery. (DO NOT CONNECT TO THE BATTERY UNTIL THE REST OF THE INSTALLATION IS COMPLETE)

Installing the main wire harness and the battery cable harness: The main wire harness will have three wires for each corner: One wire goes to the limit switch (has spade connector) (the limit switch has two wires coming from it, the wire with the eyelet goes to ground, the spade connects to harness). The other two wires (same color except one has a tracer) have female push-on connectors that plug into the operation posts on each solenoid. The battery harness has eyelets at each corner that attaches to the power stud on the lower solenoid (with the copper strip). **See the "Medium Tank Assembly" diagram earlier in the booklet.**

The main harness lead has a 14-pin connector at the end, this end will need to route to the sensor location. Attach the wire harness to the frame rail (usually inside of driver's side rail with other wiring) with p-clips or zip ties safely routing away from any moving suspension parts or exhaust (complying RVIA regulations).



Installing the Sensor & Panel: Fasten the sensor to a secure structure (sensor bracket) ensure that it is mounted level and the arrow on top of the sensor is facing the correct way. Typical location of the sensor is in the front main compartment near the front jacks. Plug the 14-pin & 6-pin from the harnesses into the back side. The 6-pin connector only has two wires that need to be hooked up: red and black. The red wire needs to attach to a fused 12V power source (7.5 amp fuse). The black wire is ground. After doing so attach the interface harness (8-pin connector) to the front of the sensor and attach to the Control Panel. The control panel may be mounted in the access panel or in a safe location such as a panel somewhere inside the coach, or inside Quadra's optional plastic box assembly with the harness loosely coiled in a storage box.

Final Step.... Bleed the System!

Make sure to fill the reservoirs with Dexron III ATF up to $\frac{3}{4}$ " from the top. Do not completely fill or overfill. All that is required on "quad pump" systems is to enter "Manual mode" on your panel, Run all four jacks to full extension (you will hear the pumps whine), leave the system for 15 to 30 minutes, then retract the system.

Troubleshooting

If your **ALL UP** light is not coming on and you hear the **buzzing sound from your panel** it might be a limit switch on one of the jacks. Sometimes all you have to do is get a "vacuum cap" for the $\frac{1}{4}$ " diameter pin to help the limit switch mechanism mate and complete the circuit, if this doesn't work you could have a bad limit switch. Or it could be one of the foot pads are loose, remove $\frac{3}{4}$ " nut & re-tighten with impact wrench.

If the **LEFT & RIGHT** lights are flashing that means the program "timed out", which may mean the coach is on too un-level ground or there was too much movement in the coach during the automatic leveling program. Try again.

If rear jacks are hanging too low to the ground with the jacks retracted fully, check underneath the coach and check to see if the jack can slide up one row of holes. If this can be done, make sure you raise both rear jacks the same height and tighten each mounting bolt to 70 ft/lbs. If your coach is equipped with an airbag system, just increase air pressure slightly to raise the coach.

What Hydraulic Fluid do I use?

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

Panel won't turn on, system won't run, clicking noise, FRONT & REAR lights flash...

Battery low, panel won't turn on = coach battery, the system relies on the house battery. The battery needs to be nearly 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, if the battery is good, then the unit might have a ground issue.

Must un-plug/re-plug the interface cable to clear code on panel regardless.

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, $1\frac{1}{2}$ " is good (Manufacturing defect).

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

Cylinders "creep" down when not in use... Check fluid level, OR Bleed the system, OR Pump valve failure.

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...
- Possibly plumbed backwards... (Bottom port on cylinder tube connects to right port on pump, etc.)
- 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

Right Front jack not working properly... Check blue wire connection at 14-pin connector from the harness to sensor.

Warranty Guide

4pt Automatic Systems: Lifetime Cylinders, 2 years parts and 1 year 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, 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 afterhours emergency service please call our normal office number
269-483-9633 and follow the instructions.