

Version #0521



SQUARE HYDRAULIC JACK

INSTALLATION & OWNER'S MANUAL

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**Quadra Manufacturing
Bigfoot Leveling Systems**

**305 US 131 SOUTH WHITE
PIGEON, MI 49099**

800-752-9815

***Maintenance, Service &
Tech Support page 13***

THERE ARE ***FIVE*** KITS AVAILABLE:

12k Standard Single Point

- One 12k Jack, One Pump, and Weatherproof Control Box.

12k Wireless Single Point

- One 12k Jack, One Pump, and Wireless Key Fob & Emergency Switch Inside Tank.

12k Standard Slave Kit

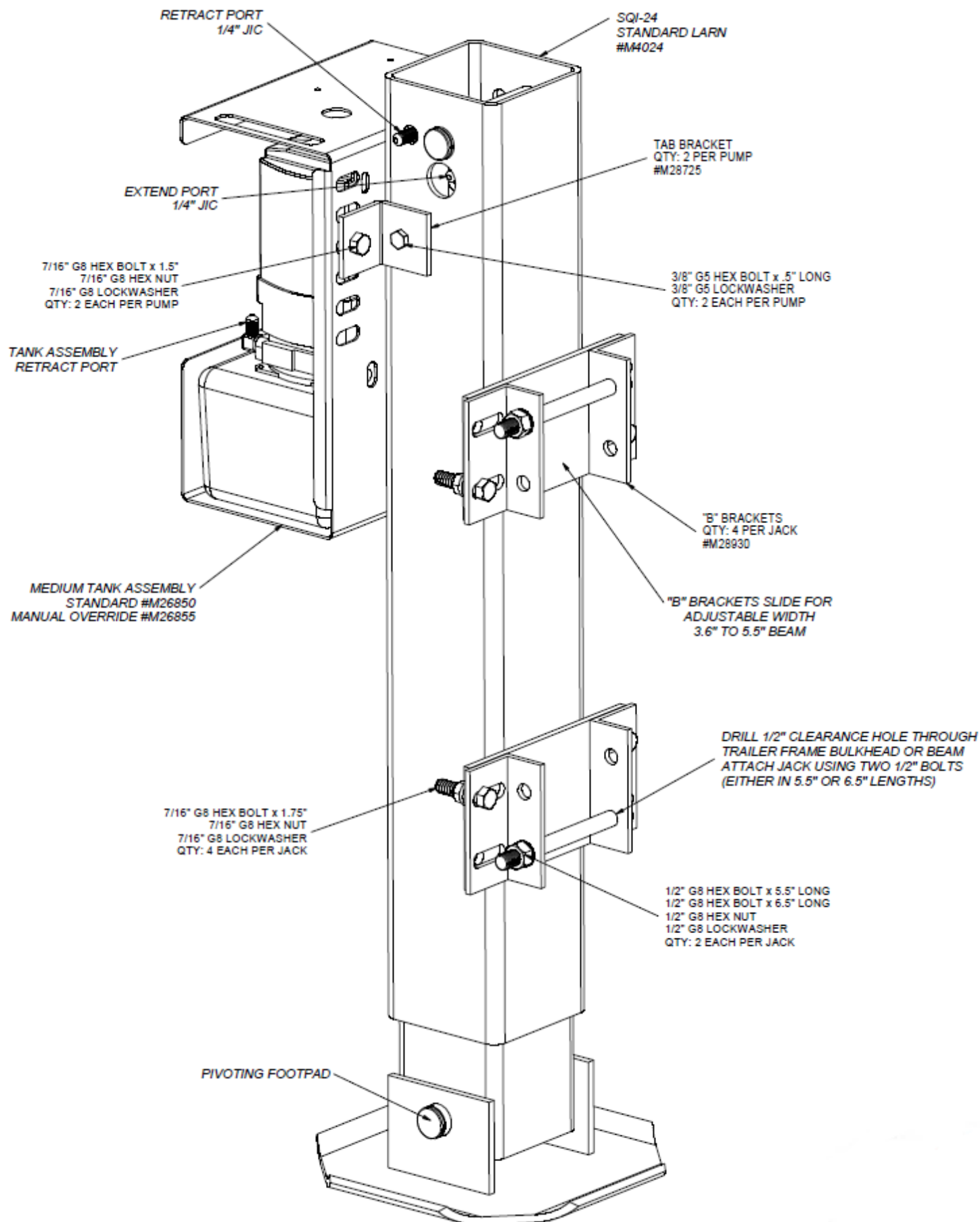
- Two 12k Jacks, One Pump, and Weatherproof Control Box,
- NO side to side leveling.

12k Wireless Slave Kit

- Two 12k Jacks, One Pump, and Wireless Key Fob & Emergency Switch Inside Tank,
- NO side to side leveling.

12k Dual 2^{PT} Kit

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



Mounting Instructions (SEE DIAGRAM PAGE 3)

- Attach the “B” brackets (4” long angle brackets with slots in them, shipped loose) to the backside of the jack’s plates using the 7/16” hardware, two 7/16” bolts per bracket is OK, B-bracket face with slot to back of jack mounting plate for adjustability. Brackets will form a clamping design to the trailer frame’s bulkhead (vertical, rectangular frame section exposed on front of trailer). If no bulkhead, bolt jack directly to frame and bypass the “B” brackets all together with supplied 7/16” bolts (4 per jack minimum) or two to four 1/2” or 5/8” bolts (not included).
- Level trailer (typical ride height) and support front of the trailer with jack stands.
- Unbolt and remove existing jack (and brackets).
- Set the Bigfoot jack temporarily to desired placement.
(Recommended Ground Clearance: Minimum of 8 inches, typically match old jack height)
- Make sure new jack is level then mark placement of mounting holes on the frame also called the bulkhead (rectangular 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 ½” & 6 ½” long bolts (½” hardware). Tighten to 70 ft/lbs.

Plumbing of hydraulic lines:

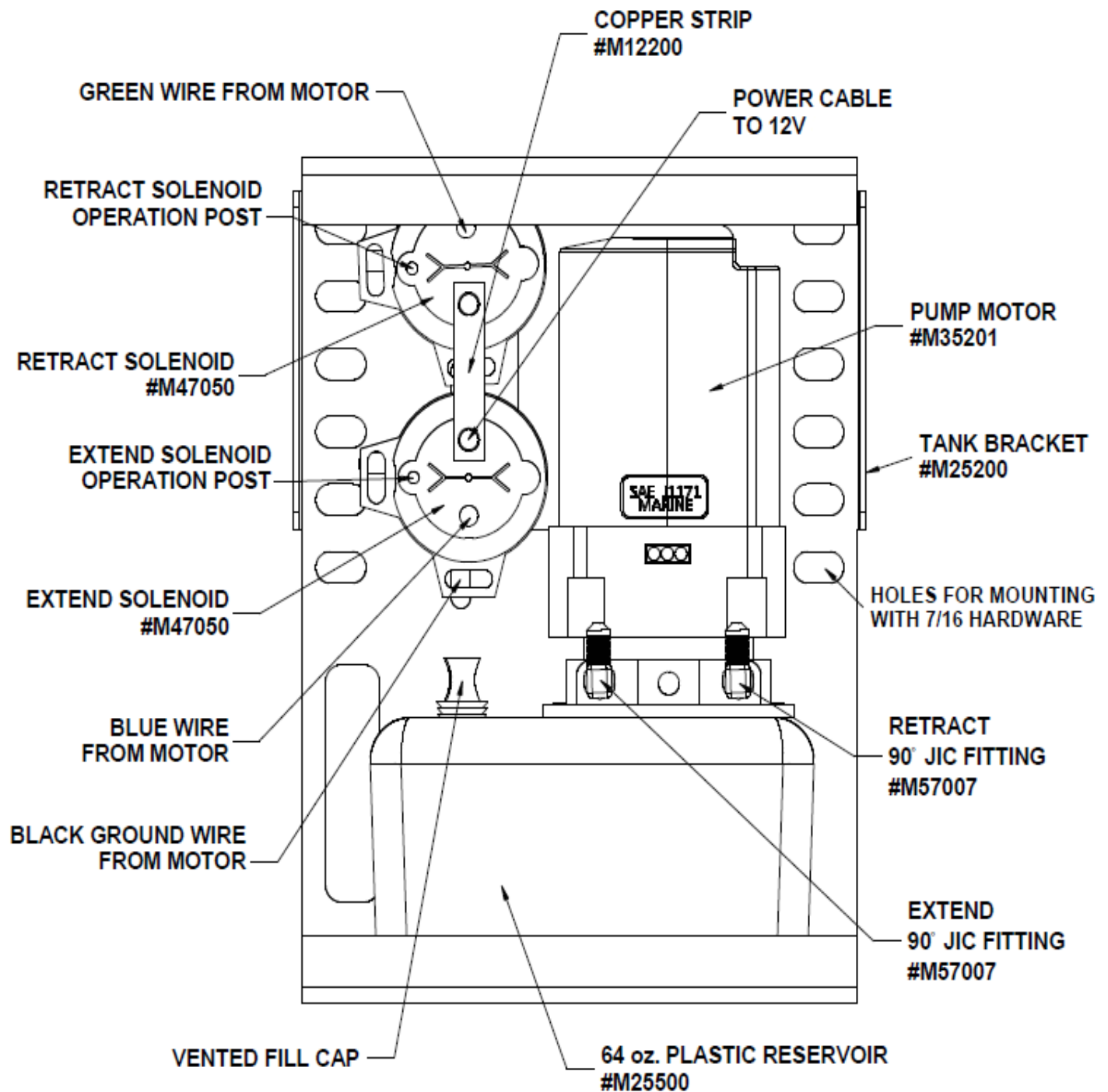
- **1pt or Drive Leg:** If the tank hoses are not already connected to the leg, the left fitting on the tank assembly goes to the bottom fitting on the Bigfoot Jack, (the longest hose.)
- **2pt Slave Legs:** Install “T” fittings at the drive leg’s ports, run the short hoses from the tank assembly to the “T” fittings, run the longer hoses to the slave or driven leg.

Recommended Hydraulic Line 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!

Tank Assembly Diagram

Fill with 2 quarts Dexron III ATF (automatic transmission fluid) only!



NOT PICTURED:

TANK COVER (BLACK TEXTURED PLASTIC) #M12002

Replacement Assembly Standard motor: #M26850

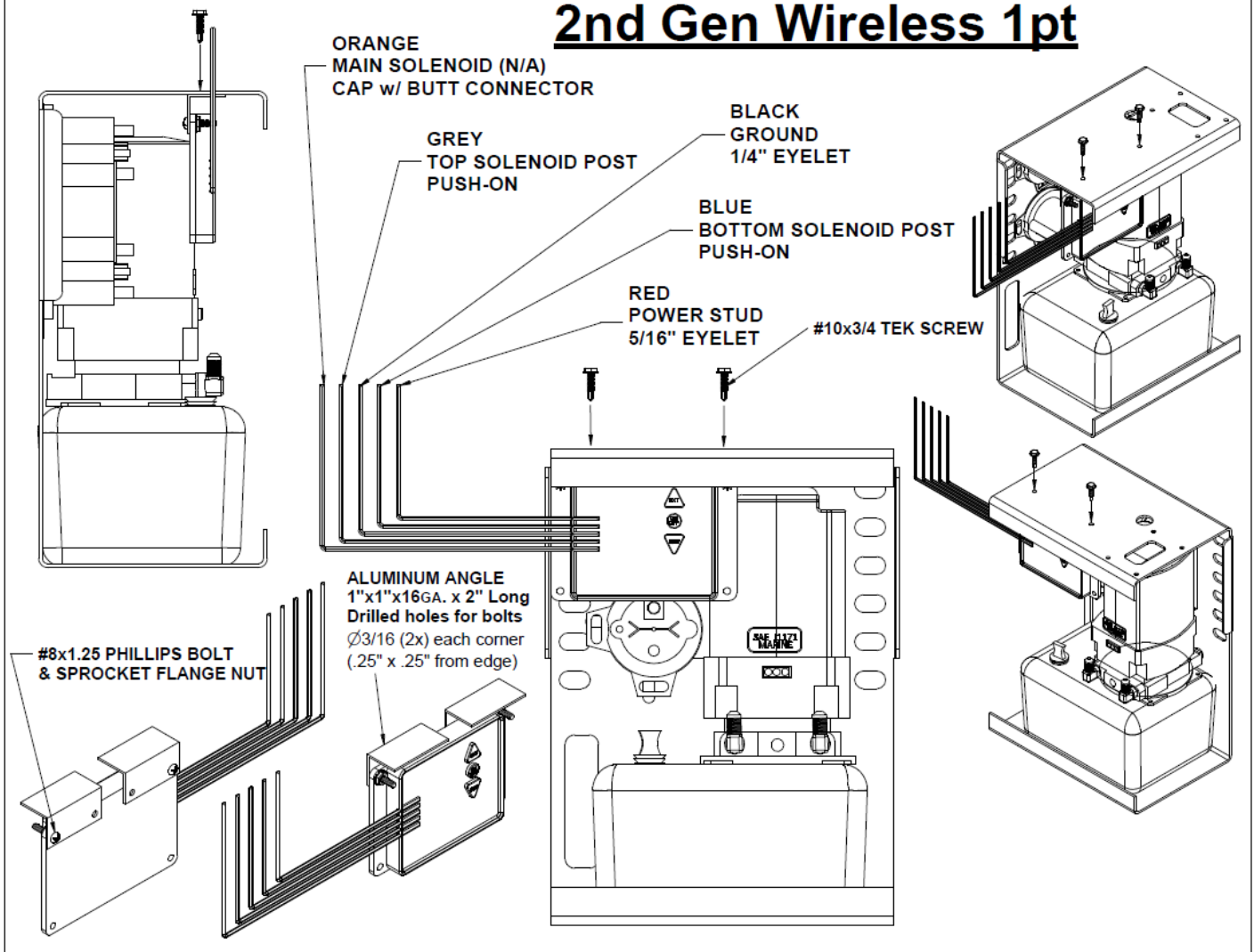
Replacement Assembly Manual Override motor: #M26855

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

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 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 grommet on the back of the pump. 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) 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 that is done lower your system and enjoy your brand new **BIGFOOT LEVELER**.

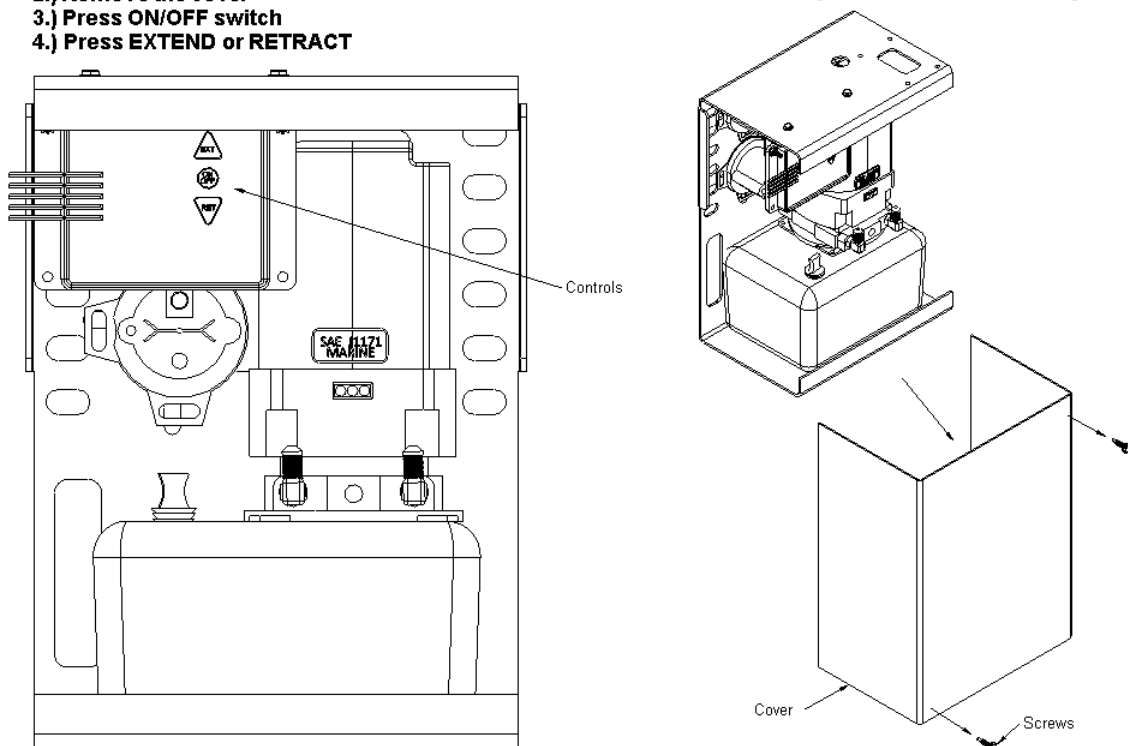
2nd Gen Wireless 1pt



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!



Wireless Control Instructions



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.

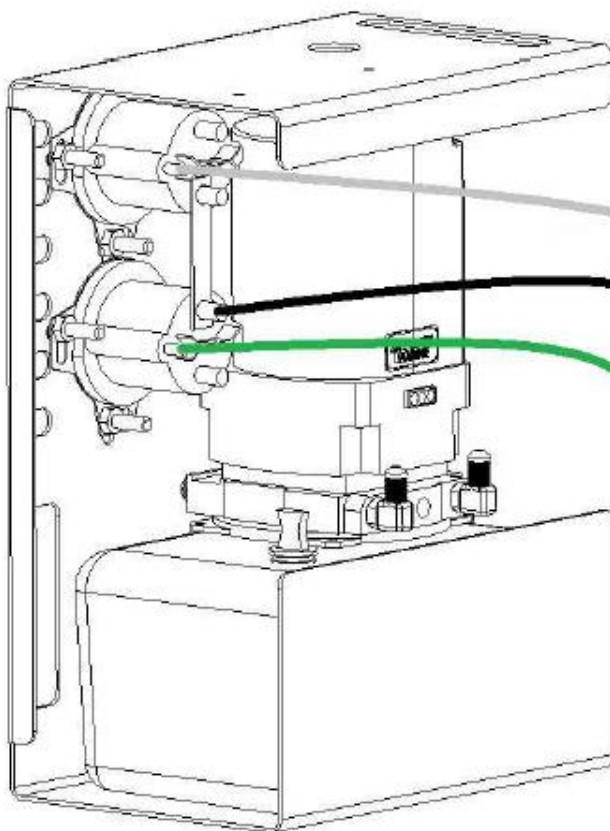
Now press & hold the on/off button on the transmitter until the LED on the receiver becomes **constant**, then release. Transmitter now again "learned".

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.

1pt Weatherproof Box

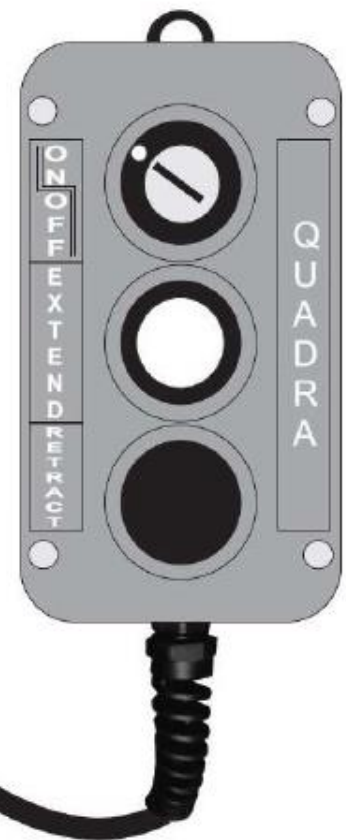
Wiring Diagram

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

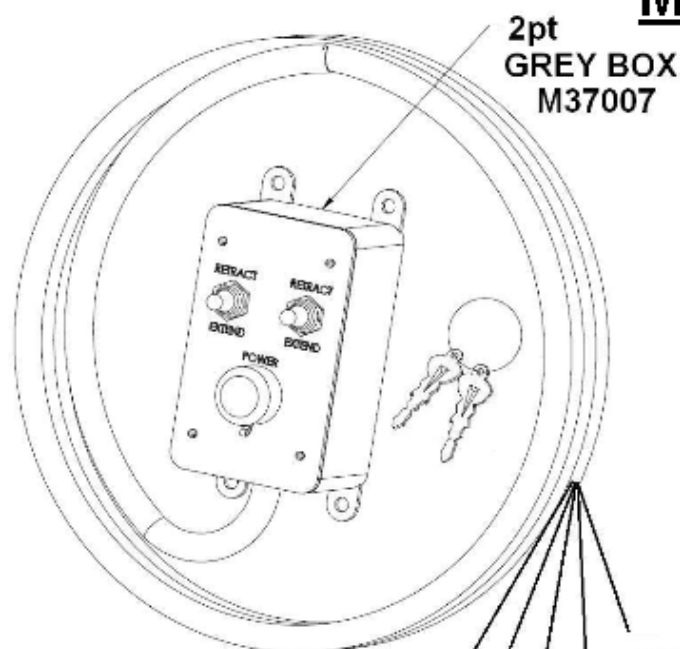


COLOR: GREEN
LOCATION: EXTEND SOLENOID
CONNECTOR: 3/16" FEMALE PUSH-ON

2pt Dual Control...

MEDIUM TANK ASSEMBLY

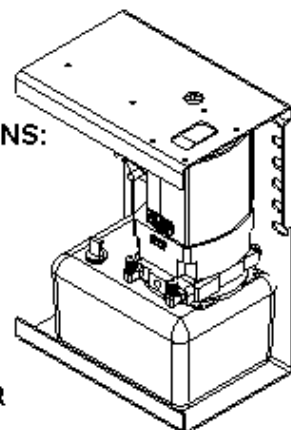
#M26850



2pt
GREY BOX
M37007

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)

64 oz. PLASTIC
RESERVOIR
#M25500

EXTEND
90' JIC FITTING
#M57007

RETRACT
90' JIC FITTING
#M57007

NOT PICTURED:

TANK COVER (BLACK TEXTURED PLASTIC) #M12002

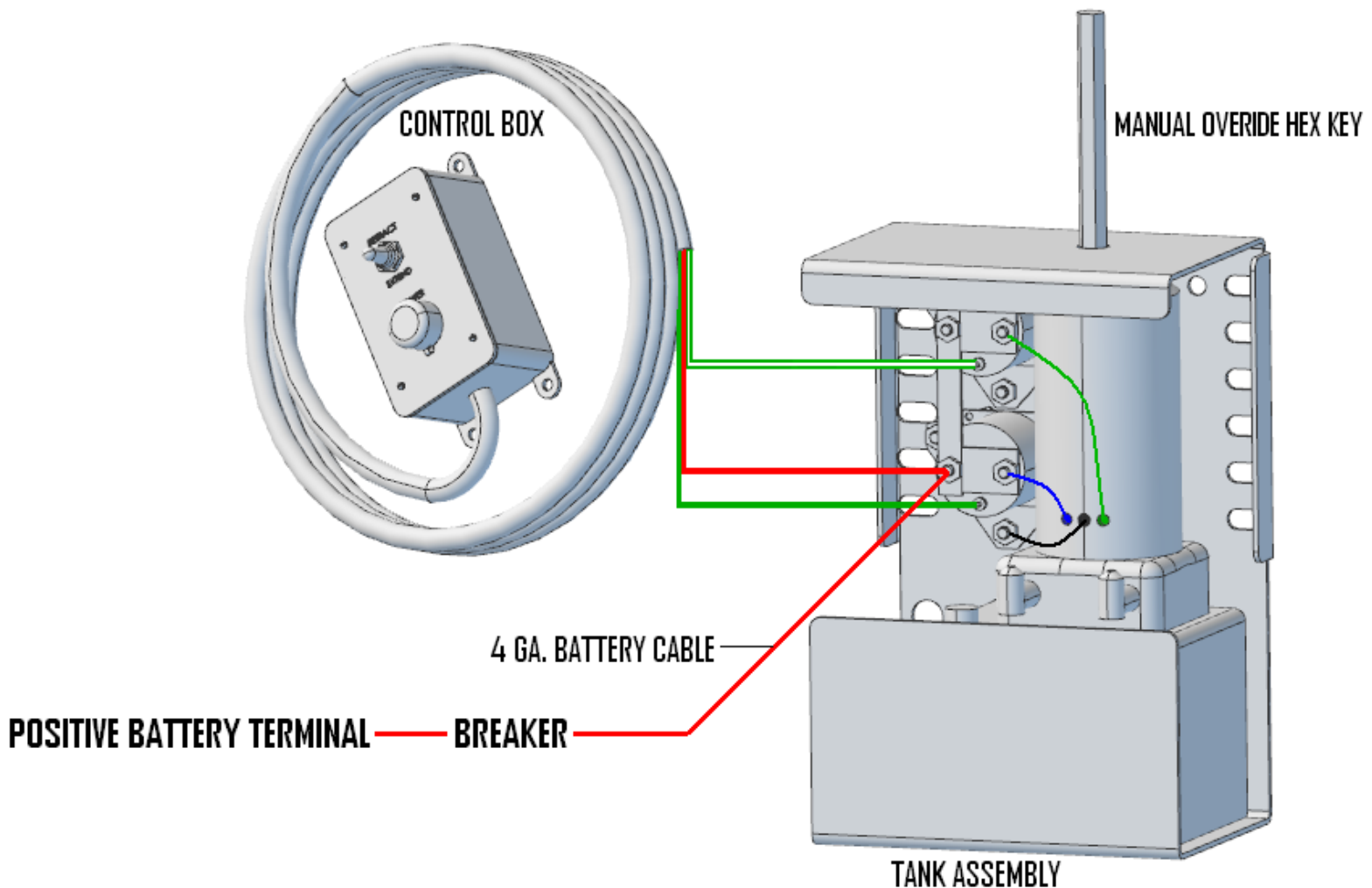
5/9/11

QUADRA
MANUFACTURING

MANUAL RETRACT & TOGGLE SWITCH WIRE DIAGRAM

MANUAL RETRACT (if equipped)

- If your jack is equipped with **manual retract** there will be a 6" hex bit in with your kit, there will also be a hole in the top of your tank assembly to access the drive at the top of the pump.
- Use a drill to retract or extend cylinder, this is not a quick operation but will work in case of emergency.



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.

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 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

1 & 2pt Square Leg Systems:

Limited 5 years cylinders, 2 years on parts and 1 year on labor.

Should the product be defective due to workmanship and/or material flaw, we will repair or replace the defective material. Core charges and refunds may apply for specific 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 _____.

