



# **AJ DUAL LEG**

## **Installation/Operation/Warranty Guide**

Effective October 2010

**EQ009R5**



(800) 846-9659  
EQSystems.us

## AJ SERIES

### Dual Leg Hydraulic Jacks: 15,000 lb.Capacity, 24” Stroke

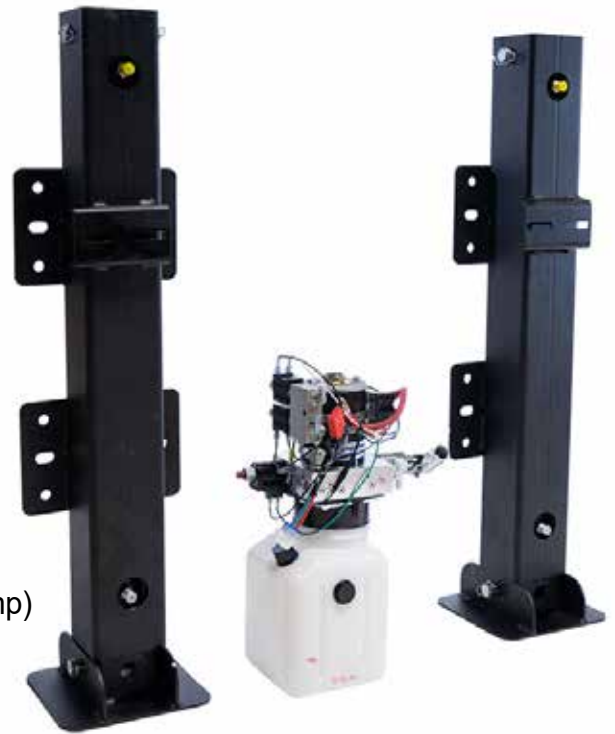
## INSTALLATION

### Tools Required for Installation

- Ratchet, sockets and wrench set
- Wire cutters/crimpers
- Electric drill and bits
- Screw gun bit
- Welding equipment (if welding leg in place)

### Additional Parts Needed for Installation

- # 6 gauge power wire (to connect battery +12V to the pump)
- # 6 gauge ground wire (to connect battery – 12V ground to pump)
- # 6 gauge ring terminals
- Loom clips (to secure switch and harness to the trailer)
- Self tapping screws or pop rivets (to secure loom clips)
- Wire ties
- Automatic transmission fluid (multi purpose or Dexron) (aprox 6 qts)  
to fill the resivior and system



## JACK MOUNTING

The AJ style jacks are available in “bolt on” or “weld on” configurations (depending on the mounting option ordered for the system). Mounting provisions must be designed with adequate strength to sustain trailer weight and jack lifting capacity. If bolting the jack in place, ensure the use of appropriate size for the application ( $\frac{1}{2}$ ” or  $\frac{3}{8}$ ”) and quantity of mounting hardware. The use of Grade 8 bolts is recommended. Welding the jack in place requires sound welding practices.

The jacks should be mounted so that when the trailer is level (while mounted to the tow vehicle) there is a Minimum of 10 inches of Ground Clearance. This is usually achieved by mounting the jacks so that the foot is slightly below the bottom edge of trailer. The bottom of the footpads should not be lower than any other item mounted on the trailer.

## PUMP MOUNTING

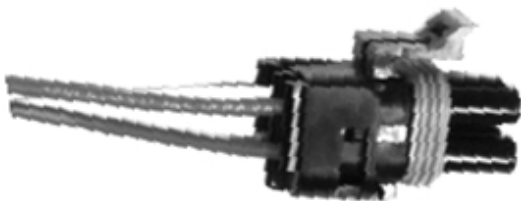
The pump is mounted with threaded studs that are fitted to the pump body. Flange nuts are provided. The pump is designed to be mounted vertically only.

## SWITCH HARNESS AND HYDRAULIC LINES

The AJ jack has been shipped with all necessary switchgear, harnesses and hydraulic lines. These items are specifically engineered to operate your system and should not be altered in any manner. Modification of any factory-supplied item may result in the denial of all warranty claims.

## SWITCHGEAR

The unit may have been provided with a key switch in the switchgear box (depending on the option ordered). If unit is not supplied with a key switch, the +12v battery lead must be fed through a power disconnect switch to fully isolate the system during travel or inactivity. Minimum switch rating must be 80 ampere DC. Switchgear is plugged into the system harness through a weather resistant connector (shown in Fig.1)



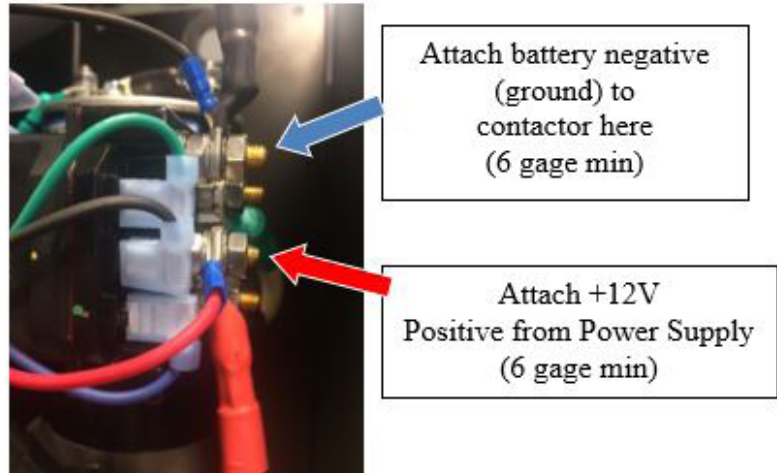
**Fig.1- Weather Resistant Connector**

# BATTERY CONNECTIONS

**Battery Lead (+12volts):** Attach a # 6-gauge (minimum) wire between the positive +12 volt terminal on the battery and the plus ( + ) terminal on the motor contactor; shown in Fig 2. There is a small red wire on this terminal.

If circuit protection is required, install an 80 amp (minimum) circuit breaker.

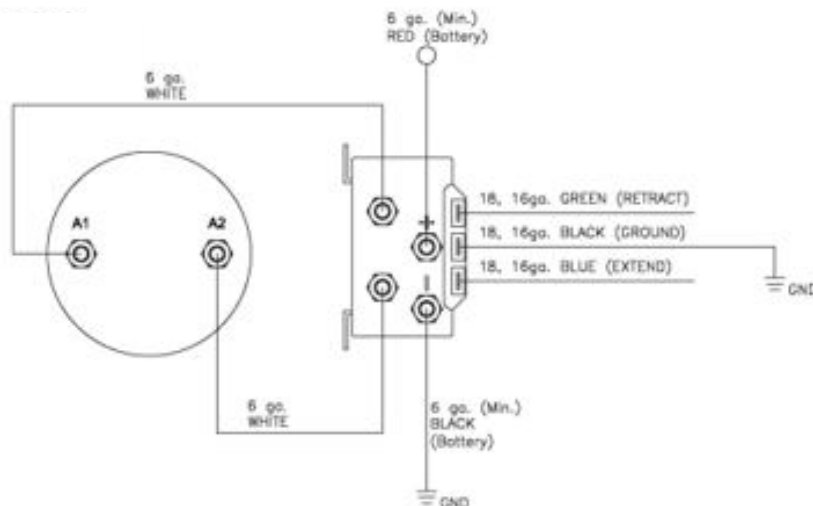
Fig. 2



**Pump Ground** Attach a # 6 gauge (minimum) wire between the negative -12 volt terminal on the battery and the negative terminal on the contactor as shown in Fig.2. These units will not ground thru the mounting. The decribed ground/negative battery to contactor connection must be made.

## Reversing Contactor Wiring Pump 3041 and 3201

**Note:** on pump # 3201KS the Blue and green wires are reversed

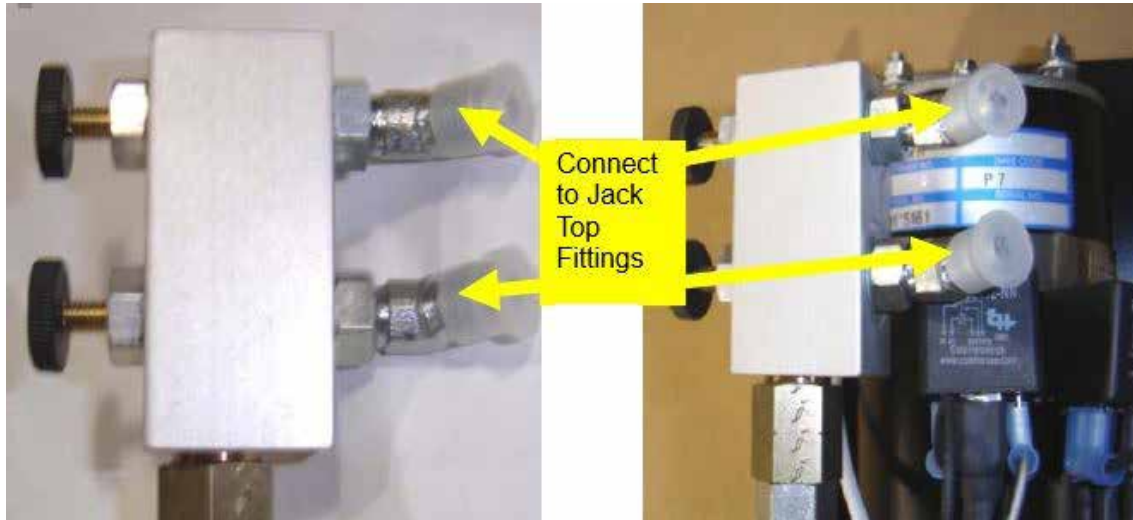


# HYDRAULIC HOSE CONNECTIONS

## **Connections to Top/ Extend Jack Port:**

If equipped with a manual selector valve:

The extend port on the pump is fitted with a manual selector valve extending from the manifold block. The Selector Valve has Twist Turn Knobs to select jack operation. The hoses are to be connected from the selector valve to the top fittings (cap or closed end) of each jack leg.



## **If not equipped with manual selector valve:**

The extend port on the pump is fitted dual connection assembly (see below). Hoses are routed from this assembly to the top fitting (cap or closed end) of each jackleg. The port is marked with a "T" or "A" near the reservoir.



## **Hose Connections Bottom/ Retract Jack Port:**

The pump retracts port is equipped with a TEE fitting. The port is marked with a "B" near the reservoir. This fitting is connected to the bottom fitting of each jack (rod end). It does not matter which one is left or right.

# SYSTEM PURGING

Following component installation, this procedure must be performed with the initial running of hydraulic system. All electrical and hose connections must be completed before the purging process.

- 1) Fill the reservoir with Dexron Automatic Transmission Fluid.
- 2) Make sure the manual selector valves (black trumpet valves), if equipped, are fully pushed in to the IN/OPEN position to allow proper fluid flow.
- 3) Remove the Bottom (Retract) hoses from the TEE fitting at the pump and place them into a clean container. Cap the ends of the TEE fitting on the pump to ensure that no air or debris can enter.
- 4) With the Bottom hoses placed in a container, run the pump to fully EXTEND the jacks(s). Maintain the fluid level in the reservoir approx  $\frac{1}{2}$  full. Do not allow reservoir to run empty. If jacks(s) will not fully extend, crack loose the upper hose(s) at the jack(s) and run pump to extend until all the air is expelled. Retighten the hoses and complete the extension of the jack(s).  
Continue to maintain the fluid level in reservoir at  $\frac{1}{2}$  full. Note: normally only air will be expelled from the disconnected bottom hoses, however, it is possible some residual oil will be expelled.
- 5) Reconnect the Bottom (Retract) hoses to the Tee fitting at the pump.
- 6) Run the pump to RETRACT the jack(s). Maintain the fluid level in reservoir at  $\frac{3}{4}$  full. Do not fill to full until after the legs are fully retracted.
- 7) If fluid in reservoir appears to be aerated (foaming), allow unit to sit until foam dissipates (approx 5- 10 minutes).
- 8) Fully extend and retract jack leg(s) a minimum of 3 times. Allow the air in the foamed oil to dissipate as needed. Maintain the fluid level in the reservoir as needed.

# RESERVOIR BREATHER CAP

Once the system is purged, install the fill/breather cap. Failure to do so will allow unwanted debris or water into the system.

**Fluid Level:** When the jack is fully retracted, the fluid level in the reservoir should be approximately one inch below the fill cap. If fluid needs to be added, use Dexron III automatic transmission fluid (the same as used for a GM automobile).

# OPERATION

To raise and lower the jacks, activate the keyed switch (if equipped), then push and hold the rocker switch in the up or down position. TRAILER UP to extend the jacks or TRAILER DOWN to retract. If the system is equipped with a manual selector valve:

1. Twisting the knob counter clockwise to opens the valve for the desired jack operation. By turning both knobs out (counter clockwise), the jacks will operate in tandem. To operate only one jack, close the valve (turn it fully clockwise) to the jack that is to remain stationary.
2. Operate the switch in the desired direction. Trailer up to extend jacks or trailer down to retract jacks.
3. Twist the valve knobs to the IN/Closed (clockwise) position for storage or travel.

When finished, remove the key or operate the manual disconnect to prepare the system for travel.

The jack will “hold” a position by releasing the switch at any time. There is no need to take the “weight” off the jack when storing the trailer. Positive check valves in the system will not allow the jack to “bleed down”.

**Warning: With any hydraulic application, holding any position on a cylinder must be done with safety in mind. Failure in the system may cause the leg to retract or extend on its own. When working under or near the trailer, always use jack stands of appropriate rating to support the weight of the trailer.**

The keyed switch must be in the off position and the key must be removed when the jack is not in use and/or when the trailer is in transit. If unit is not supplied with a keyed switch, the +12v battery lead must be fed through a power disconnect switch to fully isolate the system during inactivity or travel. The minimum disconnect switch rating must be 80 ampere DC.

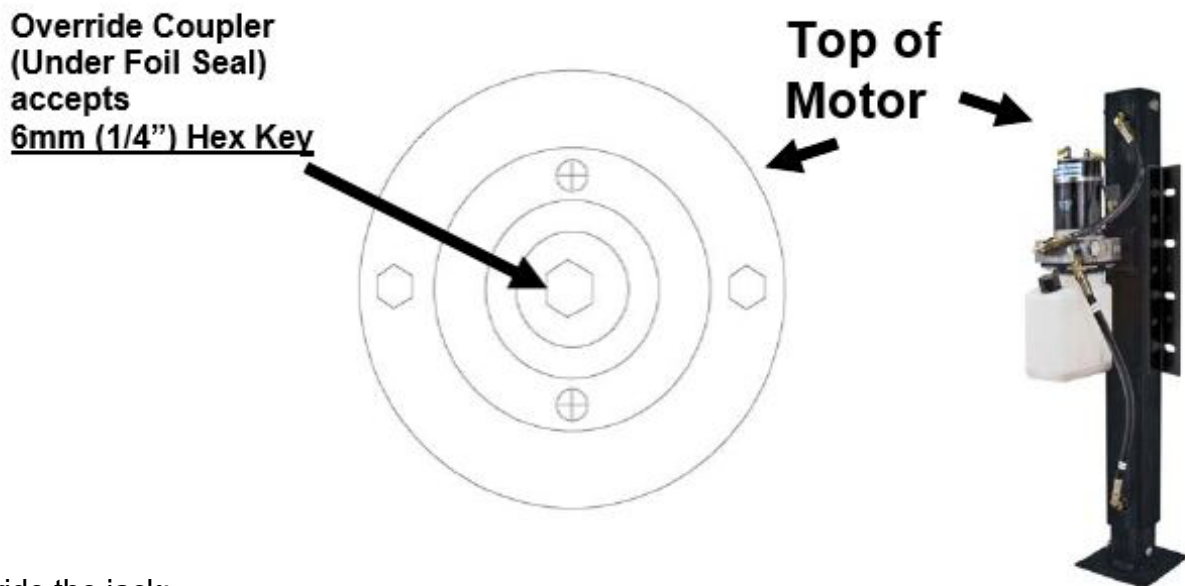
# MANUAL OVERRIDE

The AJ series single jack has provisions for manual override. The following procedure gives systematic instructions on how to operate the manual override to either retract or extend the jacks.

## Required Items:

- Reversible Drill- capable of producing a minimum of 2000 r.p.m. for the pump to develop appropriate pressure output.
- 6mm (1/4") Hex Key (Allen wrench) bit or driver

The hydraulic power unit is equipped with a manual override output shaft. The override shaft is located on the top of the motor in the center under a foil seal.



To override the jack:

Remove the foil seal from the top of the motor. Use a small flat head screwdriver if necessary.

Insert the 6mm (1/4") hex key (Allen) bit on the manual override shaft located at the top of the motor.

To Retract:

Run drill in the clockwise direction at 2000 r.p.m. (minimum). The jack will retract.

To Extend:

Run drill in the counterclockwise direction at 2000 r.p.m. (minimum). The jack will extend.



# PROBLEM SOLVING

**“The jack runs for a few seconds, then stops”** The battery is weak or battery capacity is diminished. Charge the battery fully. It may be necessary to “load test” the battery.

**“The jack only runs in one direction”** Verify appropriate battery voltage. Verify that all wires are attached appropriately. Verify proper function of the switchgear.

**“I push the switch and nothing happens”** Ensure both positive and negative -12V have adequate connection. Ensure full charge on your battery. The vast majority of calls to the EQ Systems Help Desk are related to low battery voltage. Ensure that the unit is properly grounded to the battery with a minimum # 6-gauge wire. Check all associated wiring.

**“The jack is jerky when retracting”** This may be caused by air in the system, low fluid level, or incorrect hose installation. To purge leg, add fluid as necessary and run the leg to full extension and retraction at least twice. If problem persists, call EQ Systems for assistance.

**Fluid Level:** When the jack is fully retracted, the fluid level in the reservoir should be approximately one inch below the fill cap. If fluid needs to be added, use Dexron III automatic transmission fluid (the same as used for a GM automobile).



## TRAILER WARRANTY

### **EQ Systems (Equalizer Systems) Limited Warranty Policy**

**May 2022**

1. EQ Systems (Equalizer Systems) warrants slide out and hydraulic jack components for a period of **two year** from the date of original sale of the vehicle. This warranty covers defects in material and workmanship only. EQ Systems (Equalizer Systems) is not liable for any damage due to abuse, neglect, misuse, negligence, misapplication, error of operation, accidental or purposeful damage or damage due to an "act of God" such as, wind or rain damage, flood, lightning, or other natural occurrence of the like. EQ Systems (Equalizer Systems) limited warranty is applicable to the EQ Systems (Equalizer Systems) components only and does not apply to the vehicle, apparatus, or property to which it is attached. Warranty parts will be shipped at no charge if the repair is authorized by an EQ Systems (Equalizer Systems) representative. Purchased components used in authorized warranty repairs will be reimbursed at the original purchase price.
2. Labor and freight expenses due to warrantable parts defects or workmanship will be reimbursed for a period of **one year** from the date of original sale of the vehicle. Freight expenses will either be prepaid by EQ Systems (Equalizer Systems) or reimbursed at the UPS Ground rate only. Any additional shipping charges or requirements are the obligation of the vehicle owner or service center performing the warranty repair. The owner or service center's obligation may include overseas shipping charges, border fees, brokerage fees and any other additional fee of the like.
3. Warranty labor will be reimbursed only for claims that have prior written or verbal authorization from an EQ Systems (Equalizer Systems) representative. Warranty labor compensation is required to correspond with the "OEM Warranty & Procedure Manual" published by EQ Systems (Equalizer Systems). Any warranty repair not listed on this guideline will require prior authorization from an EQ Systems (Equalizer Systems) representative. A reasonable time allowance will be determined by the EQ Systems (Equalizer Systems) representative. Any warranty repair that is not listed on this guideline that is performed without prior authorization will be denied without exception. Time associated with learning about the repair or excessive diagnostic and installation time will not be reimbursed. Warranty labor will be reimbursed at the authorized service center's published shop rate if the rate is reasonable for that region. Overtime labor will not be reimbursed without exception.
4. Labor, parts, and freight credit (if applicable) will be sent when the parts are tested, and the warranty claim is validated. Returned parts that are found to be in normal operating condition are not warrantable and will be charged to the owner or service center. EQ Systems (Equalizer Systems) reserves the right to charge back the service center for labor claim payments previously submitted if the installation of the warranted part is found to be inadequate at a later date.
5. Claims will be denied if the date submitted is greater than 120 days from the repair date.
6. Prior authorization is required before parts may be sent back to EQ Systems (Equalizer Systems). A Return Authorization Number is required for items to be accepted.
7. Complete systems are not warranted unless authorized by an EQ Systems (Equalizer Systems) representative. There are absolutely no exceptions to this clause.
8. Warranty coverage for parts or systems sold by non-authorized resellers (such as live or internet auctions) will be at the discretion of EQ Systems (Equalizer Systems).
9. EQ Systems (Equalizer Systems) is not liable for loss of time, manufacturing costs, labor, material, loss of profits, direct or indirect damages incurred by the vehicle manufacturer.
10. Excessive warranty labor resulting from inadequate access to the EQ Systems (Equalizer Systems) product will not be reimbursed.
11. EQ Systems (Equalizer Systems) will not pay a markup on warranty parts unless required by law.
12. Travel expenses, hotel, telephone, fuel, or any other expenses of the like are not covered under warranty.

#### **Replacement Parts:**

1. Replacement parts are warranted under the same guidelines listed above for the remainder of the original warranty or 90 days, whichever is longer. Proof of warranty repair date and original vehicle purchase date are required. No additional warranties, expressed or implied, are authorized by EQ Systems (Equalizer Systems)

This warranty voids all previous issues.

**Questions concerning this warranty should be directed to:**

**EQ Systems (Equalizer Systems) | 19300 Grange Street, Cassopolis, MI, 49031  
574-264-3437 | (800) 846-9659**

**To activate your warranty, please visit our website at [www.eqsystems.us/activate-warranty/](http://www.eqsystems.us/activate-warranty/)**