



EQUALIZER
S Y S T E M S

Elkhart, Indiana

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www.equalizersystems.com

Electric and Hydraulic Lifting Systems

Installation

Operation

Warranty

Single Leg
AM - 20, 24, and 30

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

- #4 gauge power wire (to connect battery +12V to the pump)
- #4 gauge ground wire (to connect battery ground to pump)
- #4 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

LEG

The AM leg may have been provided with a mounting flange or bracket (depending on the mounting option ordered for your system). When bolting the jack leg to the trailer we recommend using **Grade 8** bolts. Welding the jack in place requires sound welding practices.

The leg 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 leg so that the foot is slightly below the bottom edge of trailer. The bottom of the foot pad should not be lower than any other item mounted on the trailer.

Switch Harness and Hydraulic Lines

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

Switchgear

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 100 amps DC.

Battery Connections for Oildyne Style Pump

Pump Ground (-12volts): Attach a #4 gauge wire between the negative 12volt terminal on the battery and the ground stud at the rear of the pump mounting plate. **Note:** The black ground wire from the pump is mounted on the front side of this stud. It is not acceptable to allow the jack mounting bolts or the weld to be the sole grounding connection.

Battery Lead (+12volts): Attach a #4 gauge wire between the positive 12volt terminal on the battery and one of the center terminals on the solenoids that are tied together via the large copper bus bar. **Do not fuse this lead.**

NOTE: Make the connection of the +12 volt cable at the battery the very last connection. Check all other connections and have the switchgear mounted and connected to the pump prior to applying power.

Reservoir Breather Cap for Oildyne Style Pump

Remove the red fill plug from reservoir and discard. Replace with the yellow colored breather cap. Failure to do so will cause the jack to operate erratically.

Battery Connections for MTE Style Pump with Manual Override

Pump Ground (-12volts): Attach a #4 gauge wire between the negative 12-volt terminal on the battery and the ground stud located directly in front of the motor. It is not acceptable to allow the jack mounting bolts or the weld to be the sole grounding connection.

Battery Lead (+12volts): Attach a #4 gauge wire between the positive 12-volt terminal on the battery and the large post on the solenoid opposite the black motor wire on the solenoid. **Do not fuse this lead.**

NOTE: Make the connection of the +12-volt cable at the battery the very last connection. Check all other connections and have the switchgear mounted and connected to the pump prior to applying power.

Reservoir Breather Cap for MTE Style Pump with Manual Override

With the jack installed in the vertical position, remove the 1-1/8 inch round flush mounted fill plug from the top of the reservoir and discard. Replace with the 1-1/16 inch 6-sided breather cap. Failure to do so will cause the jack to operate erratically.

OPERATION

To raise and lower the leg, simply push and hold the rocker switch in the up or down position. The leg will “hold” a position by releasing the switch at any time. There is no need to take the “weight” off the leg when storing the trailer, as the positive check valves in the system will not allow the leg to “bleed down”.

***Note:** When the leg 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 Dextron III automatic transmission fluid (the same as used for a GM automobile).

***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 stand of appropriate rating to support the weight of the trailer.**

*****CAUTION*****

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 switch rating must be 100 ampere DC.

*****CAUTION*****

MANUAL OVERRIDE

Your AM series single leg jack is available with a manual override, depending on the specific unit ordered. If your unit is equipped with the override option, it is operated as follows:

To **extend** your jack:

1. Install a handle in the hand pump. Pump the handle to extend the jack. You may have to pump 10-20 times before you build enough pressure and the jack begins to extend.

To **retract** your jack:

1. Locate the red knurled knob on the directional valve*. Pull it out and turn 1/2 turn. The knob will remain in the “out” position.
2. Install a handle in the hand pump. Pump the handle to retract the jack. You may have to pump 10-20 times before you build enough pressure and the jack begins to retract.

***Note:** The normal operating position of the directional valve is the “in” position. The only time the valve should be shifted manually is when attempting to retract the jack via manual override.

PROBLEM SOLVING

“The leg runs for a few seconds, then stops” Your 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 that all wires are attached appropriately. Note that the green wire on the motor is the +12v “extend” lead and the blue wire on the motor is the +12 “retract” lead for the bi-directional Oildyne pump.

For the MTE style pump, the jack will only run in the extend direction if the battery does not have enough capacity to operate the motor and shift the directional valve.

“I push the switch and nothing happens” Ensure both positive and negative 12V have adequate connection. Ensure full charge on your battery. 9 out of 10 calls we receive are related to a discharged battery. Ensure that the battery is grounded to the trailer chassis with a minimum #8 gauge wire. Check all associated wiring.

“The leg 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 Equalizer Systems for assistance.

WARRANTY

The Equalizer System shall have the following warranty coverage:

100% parts coverage for all defective parts for a period of three (3) years and 100% labor coverage for replacement of any defective parts, including shipping, for a period of one (1) year. This warranty period shall begin on the date when the Equalizer System enters into service. If the part is found to be defective, Equalizer Systems shall pay parts and shipping expense for the defective part for a period of one year. Equalizer Systems reserves the right to authorize repair, parts, replacement, shipping costs, and/or any expense having to do with warranty service, prior to any work or shipping expense is incurred. Equalizer Systems also reserves the right to authorize the location and technician to perform the service.

In the event that service must be performed, Equalizer Systems will provide labor coverage only for the allotted time issued on the "Equalizer Systems Parts Replacement Schedule" at a reasonable shop rate. Reasonable shop rates will be determined by Equalizer Systems.

Equalizer Systems will not be responsible for improper installations, any damage due to improper installation or service, performed by parties other than Equalizer Systems. Equalizer Systems will not be responsible for any damage due to abuse, neglect, misuse, negligence, misapplication, error of operation, accidental or purposeful damage. This warranty extends to the Equalizer System only, and does not extend to the vehicle to which the Equalizer System is attached or any other apparatus or property, loss of time, manufacturing costs, labor, material, loss of profits, consequential damages, direct or indirect or incidental damages, whether due to rights arising under this warranty or otherwise, and whether a claim for damages is based on contract, tort, or warranty.

Written permission for any warranty claim return must be first obtained from authorized Equalizer System personnel. All warranty parts must be accompanied by a complete written explanation of claimed defects and the circumstances of failure.

Products manufactured or sold by Equalizer Systems are not warranted expressly or by implication for merchantability or fitness for a particular use, notwithstanding any disclosure to Equalizer Systems of the use to which the product is to be put. This express warranty is the sole warranty of Equalizer Systems. Equalizer Systems does not authorize the sale of its products under any other warranty or guarantee, expressed or implied.

This warranty voids all previous issues. Effective date: November 1, 2002. Any questions concerning this product warranty should be directed to:

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