



# **Self Contained Hydraulic Jack Installation and Operation Instructions**



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RAM hydraulic jacks are for trailer applications only. They are designed for maximum support of 15,000lb (per leg) and lift capacity of 12,000lb (per leg).

Always load trailer when attached to the tow vehicle.

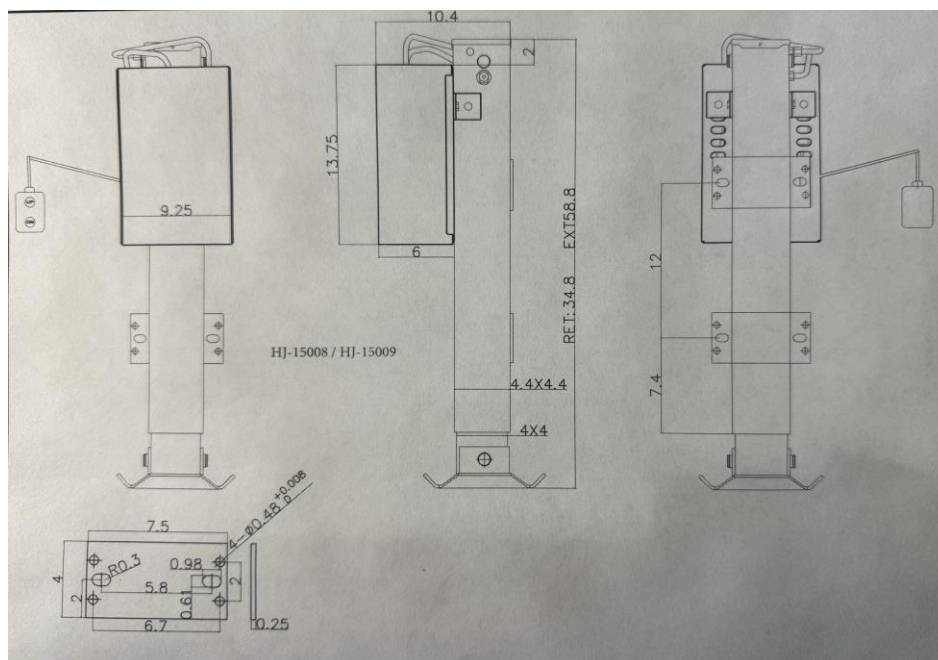
Pacific Rim International/Pacific Trailer Products is not responsible for damages as a result of improper use, installation and care for product.

Maximum pump load to not exceed 3000 psi.

Bolt to trailer frame using the mounting bracket locations as it works for your specific application (hardware not included). (For direct weld applications follow ASTM for welding to carbon and low alloy steel tubes. Weld per specific application. Weld however should not exceed 1" from the top of the outer tube nor 1" from the bottom of the outer tube.

Wear eye protection when working with hydraulic fluid.

Dimensions in these drawings are in inches.



After bolting the jack to the trailer:

With supplied hardware attach the HPU housing and HPU unit to the jack.

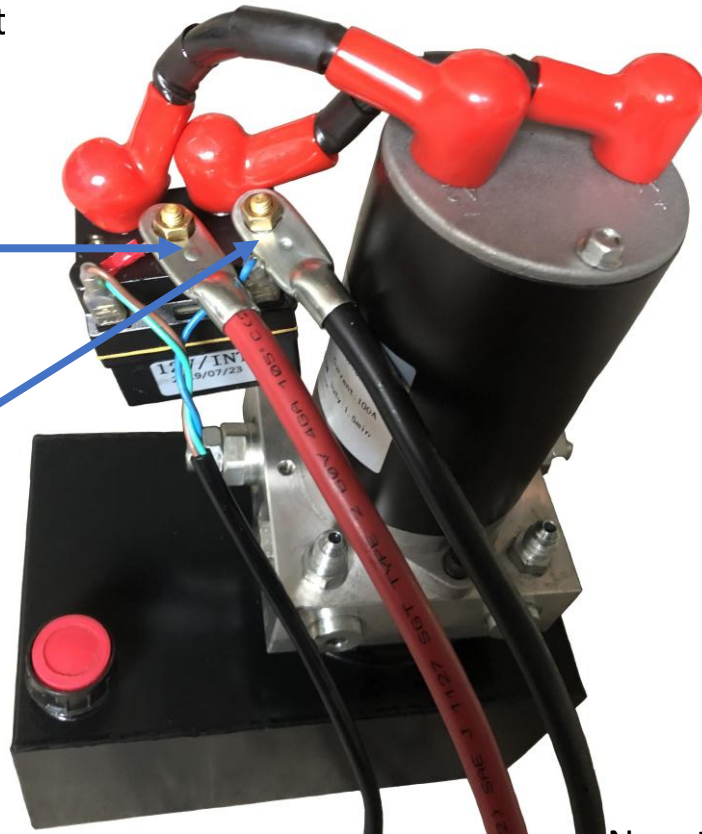
Up body hose is attached to extend port “raising” on hydraulic jack (bottom port on jack). (hose supplied) Attach other end to Port A of HPU unit. Torque both connections to 18 ft lbs.

Down body hose is attached to retract port “lowering” on hydraulic jack (upper port on jack). (hose supplied) Attached other end of hose to Port B of HPU unit. Torque both connections to 18 ft lbs.

Using full size 12 volt group 27 deep cycle RV/Marine battery (**not supplied**) run battery positive (red) and negative (black) battery cables (not supplied) to the HPU unit. Should also install insulating boots (not supplied) after connecting battery cables to HPU Unit

Positive electrical supply  
(red) Battery connections  
torque to 3 ft lbs

Negative electrical supply  
(black) Battery  
connections torque to 3 ft  
lbs



Negative electrical supply  
(black) Battery  
connections torque to 3 ft  
lbs

Positive electrical supply  
(red) Battery connections  
torque to 3 ft lbs

Alternate Version



## After making all the connections then:

- Remove the filler/breather cap and fill the reservoir with hydraulic fluid approximately 1" from the top (see hydraulic fluid recommendations)
- Connect the remote pendant/power switch unit using the quick connects provided
- Keep an eye on the fluid level in the reservoir when operating the power unit. Insure the that the fluid level doesn't go lower than ½ full during initial startup. When the cylinder is fully extended on the jack and/or hoist reservoir should be about ½ full.
- See bleed cycle procedure when operating the hydraulic system for the first time. Air will be induced into the system and that air needs to be removed.
- If needed refill the reservoir so it is approximately 1" below the top of the reservoir
- Replace the fill/breather cap
- Best to store the remote pendant/power switch in the tow vehicle when not in use to help preserve this piece

## Hydraulic Fluids

See top of reservoir for instruction to ensure optimum performance and system life. **Do not use biodegradable hydraulic fluid. Do not mix hydraulic fluids.**

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**⚠ CAUTION: RECOMMENDED HYDRAULIC OILS**

RAM recommends using Dexron rated ATF (Automatic Transmission Fluid) as hydraulic oil.

In the case of extremely cold conditions (-20° F and below) an ISO 15 Hydraulic Oil is recommended.

12V

**⚠ ATTENTION: CHECK BATTERY VOLTAGE BEFORE USE. LOWER VOLTAGE WILL COMPROMISE UNIT PERFORMANCE.**

**⚠ WARNING: MIXING HYDRAULIC OILS IS ABSOLUTELY NOT RECOMMENDED AND WILL VOID WARRANTY.**

## Battery Cables

To minimize voltage drop, increase the gauge size of the battery cables as the length of the positive and ground cables increase. Low voltage will cause the motor to run higher amps causing damage to other electrical components.

Cable Length	Wire Gauge	Nominal OD (in.)
1 to 2 feet	4 gauge	0.43
3 to 4 feet	2 gauge	0.49
5 to 7 feet	1 gauge	0.56
8 to 9 feet	1/0 gauge	0.61
10 to 12 feet	2/0 gauge	0.66
13 to 15 feet	3/0 gauge	0.72
16 to 19 feet	4/0 gauge	0.78

## Bleed Cycle Instructions

- Remove the breather cap to view the hydraulic fluid while operating the hydraulic power unit
- Press the up button on the remote pendant and run hydraulic jack or hoist cylinder 1/3 of the way up. You may see fluid returning into the reservoir. If you see air pockets or aeration of the fluid, stop and allow the fluid to settle and continue to raise 1/3 way up.
- Once 1/3 of the way up, press the down button to return fully seated position of the hydraulic jack or hoist cylinder.
- Make sure the fluid level does not drop below the half full level of the reservoir while running the power unit
- Press the up button again on the remote pendant and run hydraulic jack or hoist cylinder 2/3 of the way up. Once 2/3 of the way up is reached, press down button on the remote pendant to a fully seated position again.
- Again make sure the fluid level doesn't drop below the half full level of the reservoir
- Press the up button again on the remote pendant and run hydraulic jack or hoist cylinder to full stroke
- While running and if you see any air pockets or aeration of the fluid in the reservoir, stop and let the fluid settle, then continue to raise the hydraulic jack or the hoist cylinder
- You may have to repeat this process more than once to completely purge all the air out of the system

## **15K Hydraulic Jack Operation and Maintenance**

Before operating hydraulic jack, make sure trailer is on a flat/even surface. Make sure that surface is capable of holding the weight of the trailer.

Do not lubricate tubes on jacks. It can attract dirt which could affect operation of jack.

After all steps are completed, using supplied hardware attach the front metal panel over HPU housing.

***If loss of power this jack has a manual override feature. See next page for instructions.***

### **Troubleshooting**

If jack is not extending or retracting check the following:

- Make sure all electrical connections are secure and battery is fully charged and grounded.
- Make sure hydraulic fluid is flowing from the HPU unit and through the lines. Check to make sure there are no leaks or pinch points in the hoses and all hydraulic connections are secure.
- If jack retracts after leveled to desired location, check fluid level in the HPU unit and all connections are secure.



## Manual Override

Use a ¼" hardened hex male drive bit and a power drill to retract or extend the jack. Powering the drill in one direction will extend the jack and the other will retract the jack. Caution, **DO NOT USE AN IMPACT DRIVER OR HAMMER DRILL.** That action would damage the motor / pump assembly.

